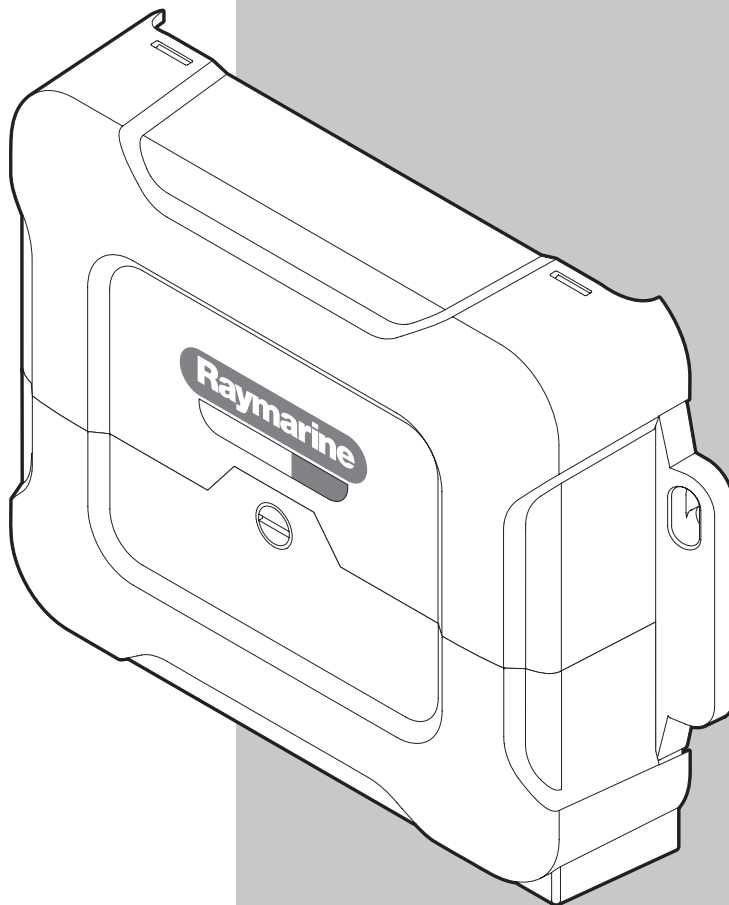


SmartPilot X-10, X-30, X-CAN & X-SOL

Service Manual



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Contents

Chapter 1:Introduction	6
Safety notices	6
About this manual	6
Product disposal	6
Waste Electrical and Electronic (WEEE) Directive	6
Chapter 2:Testing & Diagnostics.....	7
2.1 Course computer	7
Requirement.....	7
Equipment and tools.....	7
Initial inspection checks.....	7
Test system	7
Test procedures	8
Power checks	8
Rate gyro.....	9
Compass	9
Rudder Reference (if fitted).....	9
H-Bridge	9
NMEA	9
Receive	9
Transmit	9
EEPROM Test.....	9
2.2 Fluxgate Compass.....	10
Repair	10
2.3 Course Computer	11
Test rig	11
Functional test	11
Repair	11
Chapter 3:Spares and assembly.....	12
3.1 SmartPilot X-10, X-30, X-CAN and X-SOL assembly	12
SmartPilot X-10, X-30, X-CAN and X-SOL spare parts list	13
3.2 Fluxgate Compass Transducer assembly	14
Fluxgate Compass Transducer spare parts list.....	14
Chapter 4:SmartPilot X-10 PCB	15
SmartPilot X-10 PCB - Sheet 1 of 12	15
SmartPilot X-10 PCB - Sheet 2 of 12	16
SmartPilot X-10 PCB - Sheet 3 of 12	17
SmartPilot X-10 PCB - Sheet 4 of 12	18
SmartPilot X-10 PCB - Sheet 5 of 12	19
SmartPilot X-10 PCB - Sheet 6 of 12	20
SmartPilot X-10 PCB - Sheet 7 of 12	21
SmartPilot X-10 PCB - Sheet 8 of 12	22
SmartPilot X-10 PCB - Sheet 9 of 12	23
SmartPilot X-10 PCB - Sheet 10 of 12	24
SmartPilot X-10 PCB - Sheet 11 of 12	25
SmartPilot X-10 PCB - Sheet 12 of 12	26

SmartPilot X-10 PCB - Components - Sheet 1 of 3	27
SmartPilot X-10 PCB - Components - Sheet 2 of 3	28
SmartPilot X-10 PCB - Components - Sheet 3 of 3	29
SmartPilot X-10 PCB - Components, Parts List	30
Chapter 5:SmartPilot X-30 PCB	40
SmartPilot X-30 PCB - Sheet 1 of 12	40
SmartPilot X-30 PCB - Sheet 2 of 12	41
SmartPilot X-30 PCB - Sheet 3 of 12	42
SmartPilot X-30 PCB - Sheet 4 of 12	43
SmartPilot X-30 PCB - Sheet 5 of 12	44
SmartPilot X-30 PCB - Sheet 6 of 12	45
SmartPilot X-30 PCB - Sheet 7 of 12	46
SmartPilot X-30 PCB - Sheet 8 of 12	47
SmartPilot X-30 PCB - Sheet 9 of 12	48
SmartPilot X-30 PCB - Sheet 10 of 12	49
SmartPilot X-30 PCB - Sheet 11 of 12	50
SmartPilot X-30 PCB - Sheet 12 of 12	51
SmartPilot X-30 PCB - Components - Sheet 1 of 3	52
SmartPilot X-30 PCB - Components - Sheet 2 of 3	53
SmartPilot X-30 PCB - Components - Sheet 3 of 3	54
SmartPilot X-30 PCB - Components, Parts List	55
Chapter 6:SmartPilot X-CAN PCB	65
SmartPilot X-CAN PCB - Sheet 1 of 12	65
SmartPilot X-CAN PCB - Sheet 2 of 12	66
SmartPilot X-CAN PCB - Sheet 3 of 12	67
SmartPilot X-CAN PCB - Sheet 4 of 12	68
SmartPilot X-CAN PCB - Sheet 5 of 12	69
SmartPilot X-CAN PCB - Sheet 6 of 12	70
SmartPilot X-CAN PCB - Sheet 7 of 12	71
SmartPilot X-CAN PCB - Sheet 8 of 12	72
SmartPilot X-CAN PCB - Sheet 9 of 12	73
SmartPilot X-CAN PCB - Sheet 10 of 12	74
SmartPilot X-CAN PCB - Sheet 11 of 12	75
SmartPilot X-CAN PCB - Sheet 12 of 12	76
SmartPilot X-CAN PCB - Components - Sheet 1 of 3	77
SmartPilot X-CAN PCB - Components - Sheet 2 of 3	78
SmartPilot X-CAN PCB - Components - Sheet 3 of 3	79
SmartPilot X-CAN PCB - Components, Parts List	80
Chapter 7:SmartPilot X-SOL PCB	90
SmartPilot X-SOL PCB - Sheet 1 of 12	90
SmartPilot X-SOL PCB - Sheet 2 of 12	91
SmartPilot X-SOL PCB - Sheet 3 of 12	92
SmartPilot X-SOL PCB - Sheet 4 of 12	93
SmartPilot X-SOL PCB - Sheet 5 of 12	94
SmartPilot X-SOL PCB - Sheet 6 of 12	95
SmartPilot X-SOL PCB - Sheet 7 of 12	96
SmartPilot X-SOL PCB - Sheet 8 of 12	97
SmartPilot X-SOL PCB - Sheet 9 of 12	98

SmartPilot X-SOL PCB - Sheet 10 of 12 99
SmartPilot X-SOL PCB - Sheet 11 of 12 100
SmartPilot X-SOL PCB - Sheet 12 of 12 101
SmartPilot X-SOL PCB - Components - Sheet 1 of 3 102
SmartPilot X-SOL PCB - Components - Sheet 2 of 3 103
SmartPilot X-SOL PCB - Components - Sheet 3 of 3 104
SmartPilot X-SOL PCB - Components, Parts List 105

Chapter 1: Introduction

Safety notices

**WARNING: Electrical safety**

Make sure you have switched off the power supply before you service this product.

About this manual

This manual is provided to assist authorized Raymarine Service Engineers when servicing the following Raymarine SmartPilot X systems.

- E12198, SPX-10
- E12199, SPX-30
- E12200, SPX-CAN
- E12205, SPX-SOL

As much of this information is commercially sensitive, it should not be disclosed to anyone other than Raymarine employees and authorized Raymarine service agents.

To the best of our knowledge, the information in this manual was correct when it was published. However, as details of product build, components etc can change at short notice, in pursuance of our policy of continuous product improvement, this manual may not always reflect the build state of the product being serviced, and so is provided on an 'information only' basis. If there is any doubt about the applicability of the information in this manual to the product being serviced, refer to the Raymarine Technical Support Department for clarification.

Raymarine cannot accept liability for any inaccuracies or omissions in this manual.

Product disposal

**Waste Electrical and Electronic (WEEE) Directive**

The European WEEE Directive requires that waste electrical and electronic equipment is recycled.

Products carrying the crossed out wheeled bin symbol (illustrated above) must not be disposed of in general waste or landfill, but in accordance with local regulations for such products.

Although the WEEE Directive does not apply to all Raymarine products, we support its policy and ask you to be aware of the correct method for disposing of such products.

Please contact your local dealer, national distributor or Raymarine Technical Services for information on product disposal.

Chapter 2: Testing & Diagnostics

Use this chapter to investigate faults in the Raymarine SmartPilot X-10, X-30, X-CAN and X-SOL Course Computer.

2.1 Course computer

Requirement

Equipment and tools

- ST6001/2 Control Head or ST70 Pilot Head
- Rudder Reference Transducer
- Fluxgate Compass
- C/E Series unit
- Digital Volt Meter (DVM)
- Ammeter with at least 10 A full scale deflection (fsd)
- 12V dc 10A PSU (*Power Supply Unit*)
- Type 1 pump

Initial inspection checks

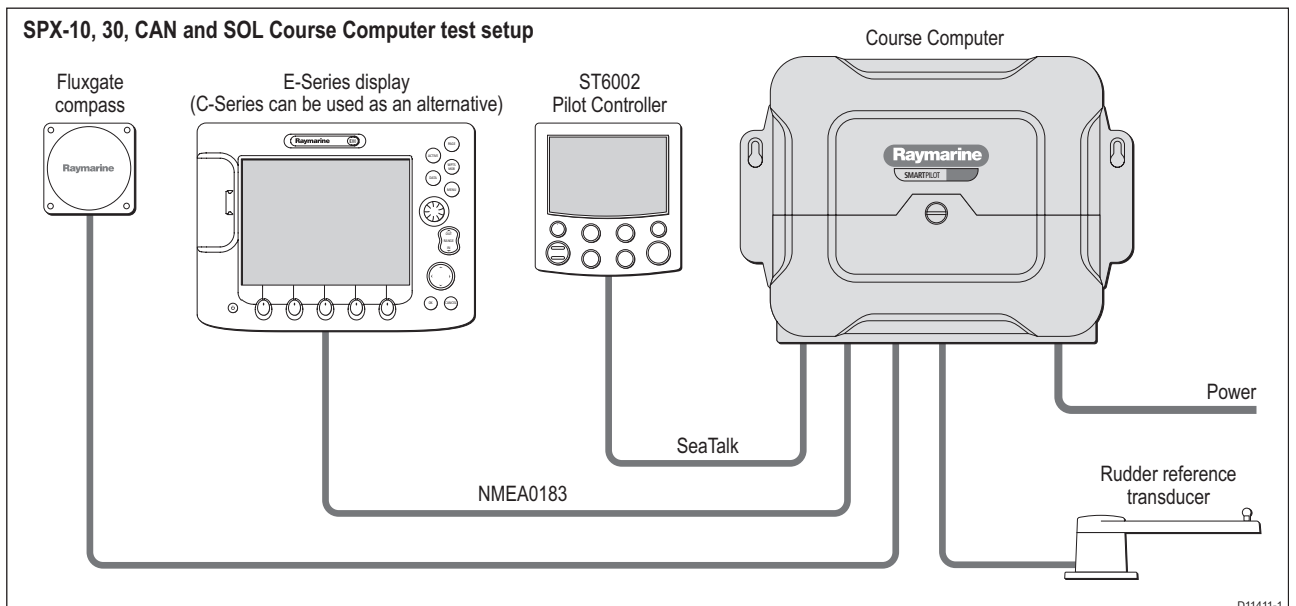
Carry out following visual inspection, **before applying power to the Course Computer**:

1. Remove the connector cover.
2. Remove and retain the PCB retaining screw and slide the PCB out of the case.
3. Check that the two fuses, F1 (15A), F2 (2A) are the correct rating and not blown.
4. Inspect the PCB for any obvious signs of component damage or overheating, paying particular attention to the FETs and main power components.

If the PCB appears to be satisfactory, replace and secure it in the case.

Test system

Ensure power is switched off, then connect the Course Computer to be tested to a known serviceable pilot Controller, Fluxgate Compass, Rudder Reference Transducer and either a Raymarine C- or E-series display. Refer to the relevant installation instructions as necessary.



Switch on power to the Course Computer and confirm that SeaTalk is functioning correctly by checking that the controller display shows:

- A compass heading (any value).
- A rudder angle bar.

Test procedures

Test the Course Computer by carrying out the following tests:

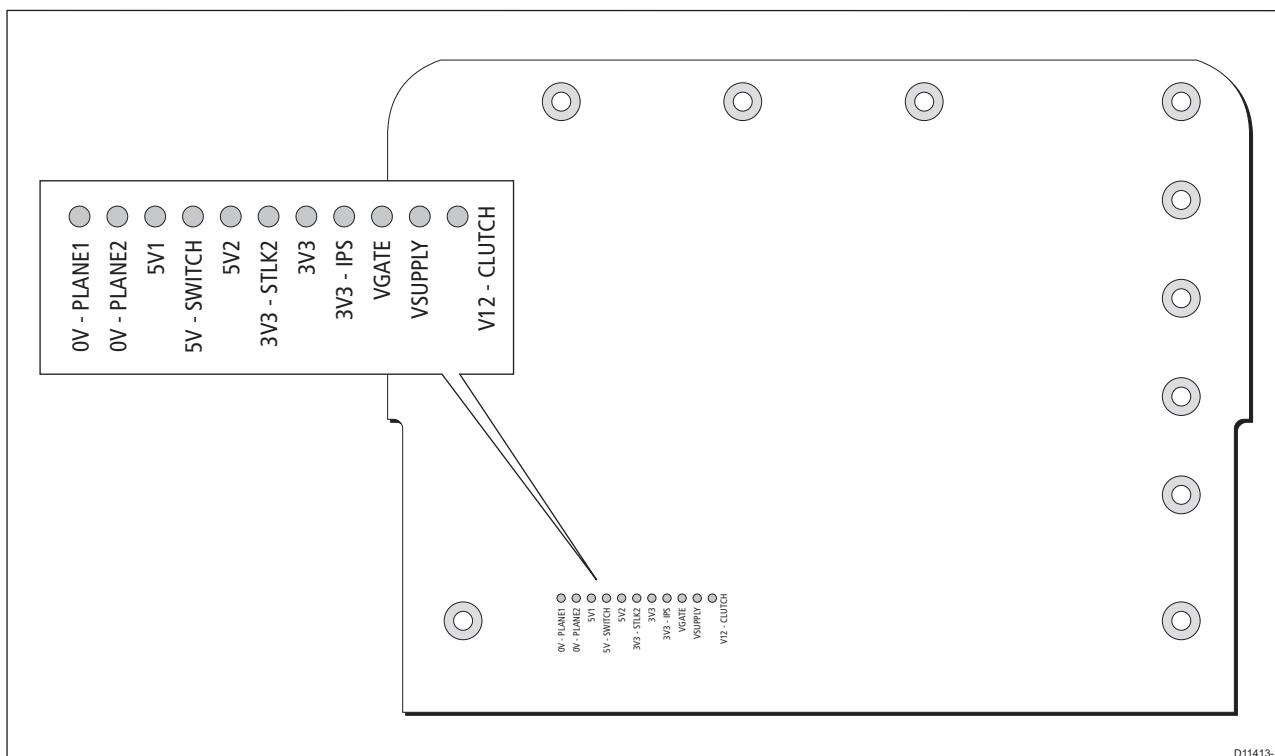
1. Power checks.
2. Rate gyro.
3. Compass
4. Rudder Reference.
5. H Bridge
6. NMEA.
7. EEPROM.

Detailed procedures for these tests are given below. If the Course Computer fails any test, return the PCB to Raymarine and obtain a service exchange unit. Component replacement must only be carried out by the factory.

Power checks

Check the voltages at the following locations are correct:

Test point	Function	Voltage
	0V - PLANE1	4.8 V to 5.2 V SEE DAVE
	0V - PLANE2	4.8 V to 5.2 V SEE DAVE
	5V1	3.2 V to 3.4 V SEE DAVE
	5V - SWITCH	3.2 V to 3.4 V
	5V2	1.7 V to 1.9 V
	3V3 - STLK2	4.8 V to 5.2 V
	3V3	10 V to 12.2 V
	3V3 - IPS	SEE DAVE WELCOME
	VGATE	SEE DAVE WELCOME
	VSUPPLY	SEE DAVE WELCOME
	V12 - CLUTCH	SEE DAVE WELCOME



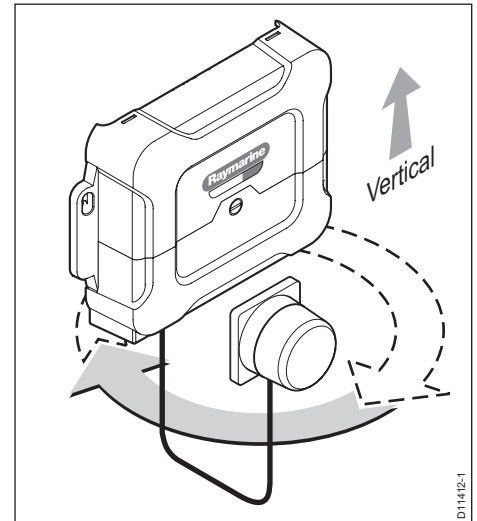
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Rate gyro

1. Using a DVM, measure the voltage at the rate gyro output (LTP13). If the rate gyro is serviceable, the nominal reading is $2.5\text{ V} \pm 0.3\text{ V}$.
2. With the DVM still connected, turn the Course Computer slowly, first clockwise, then counterclockwise.
3. If the rate gyro is functioning correctly, the voltage should increase (from 2.5 V) as the Course Computer is turned in one direction and decrease (from 2.5 V) as it is turned in the opposite direction.

Compass

1. Position the compass so the cable is at the bottom, then slowly rotate the compass and Course Computer clockwise..
2. As they turn, check that the displayed heading reading on the associated control head increases steadily, with no sudden changes in the reading.
3. Continue rotating the compass and Course Computer and checking the heading reading, until a full 360° turn has been completed.

**Rudder Reference** (if fitted)

1. Check that the rudder offset value is set to zero. (To adjust, use the Dealer Calibration screens.)
2. Move the rudder reference into the central position.
3. Check that the rudder bar on the display is in the central position.
4. Move the rudder reference to the left and check that the rudder position bar on the display moves to the left.
5. Move the rudder reference to the right and check that the rudder position bar on the display moves to the right.

Note: If the rudder bar display moves the wrong way, turn off the power, reverse the red and green wires connected to the RUDDER inputs on the Course Computer, switch on the power and re-check.

H-Bridge

At the control head:

1. Press **auto**.
2. Press **+10** twice, the motor should spin.
3. Press **standby**, the motor should stop.
4. Press **auto**
5. Press **-10** twice, the motor should spin in the opposite direction
6. Measure HD-PWR whilst the motor is running (Check this against the table in Step 1).

NMEA**Receive**

1. Enter a new waypoint into the C/E Series unit.
2. Perform a "Goto Waypoint" command on the C/E Series unit.
3. Verify that the waypoint information has been sent to the Course Computer by viewing the XTE, DTW and BTW data pages on the Control Unit.

Transmit

Check that the heading displayed on the C/E Series display is the same as displayed at the pilot controller.

EEPROM Test

This test checks that the calibration settings are being stored correctly.

1. Using the calibration screens, change the Drive Type to a different value.
2. Save the setting and exit calibration.
3. Remove and re-instate power to the Course Computer.
4. Verify that the new drive type is still active.

2.2 Fluxgate Compass

Correct operation of the Fluxgate Compass depends on correct linearization and setup, as described in the *SPX-5 Installation & Setup Guide*, to minimize magnetic deviation. If the Fluxgate Compass is changed or moved from its original mounting position, carry out the linearization again before using the Fluxgate Compass.

If the displayed deviation is greater than ± 15 degrees the Fluxgate should be re-sited.

If the problem remains, test the Fluxgate Compass as follows:

1. Ensure the SPX system power is switched off.
2. Disconnect the Fluxgate Compass from the Course Computer, then check continuity as follows:

Check between (wire colors)	Correct resistance
Screen to blue	< 10 ohms
Red to green	< 5 ohms
Red to yellow	< 5 ohms
Red to screen	Open circuit

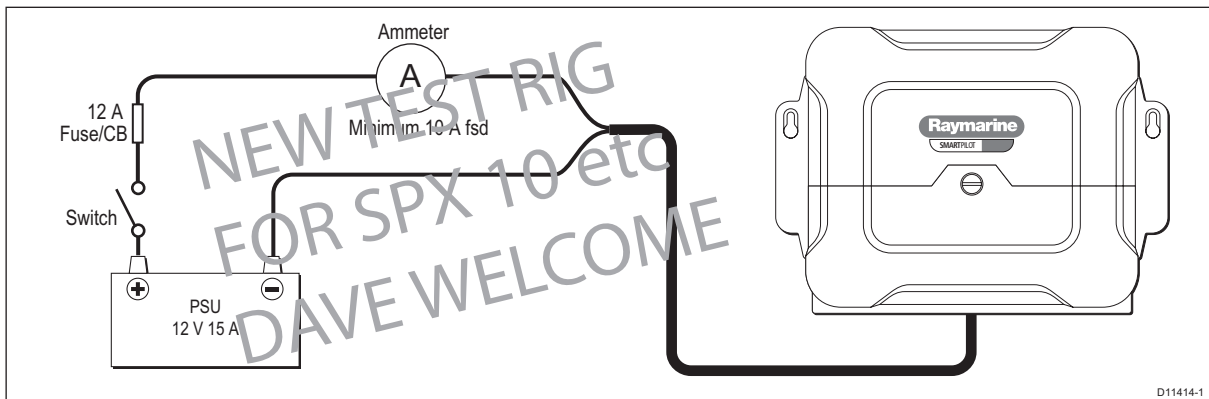
Repair

For assembly / disassembly of the fluxgate compass, refer to *Chapter 3: Spares and assembly*.

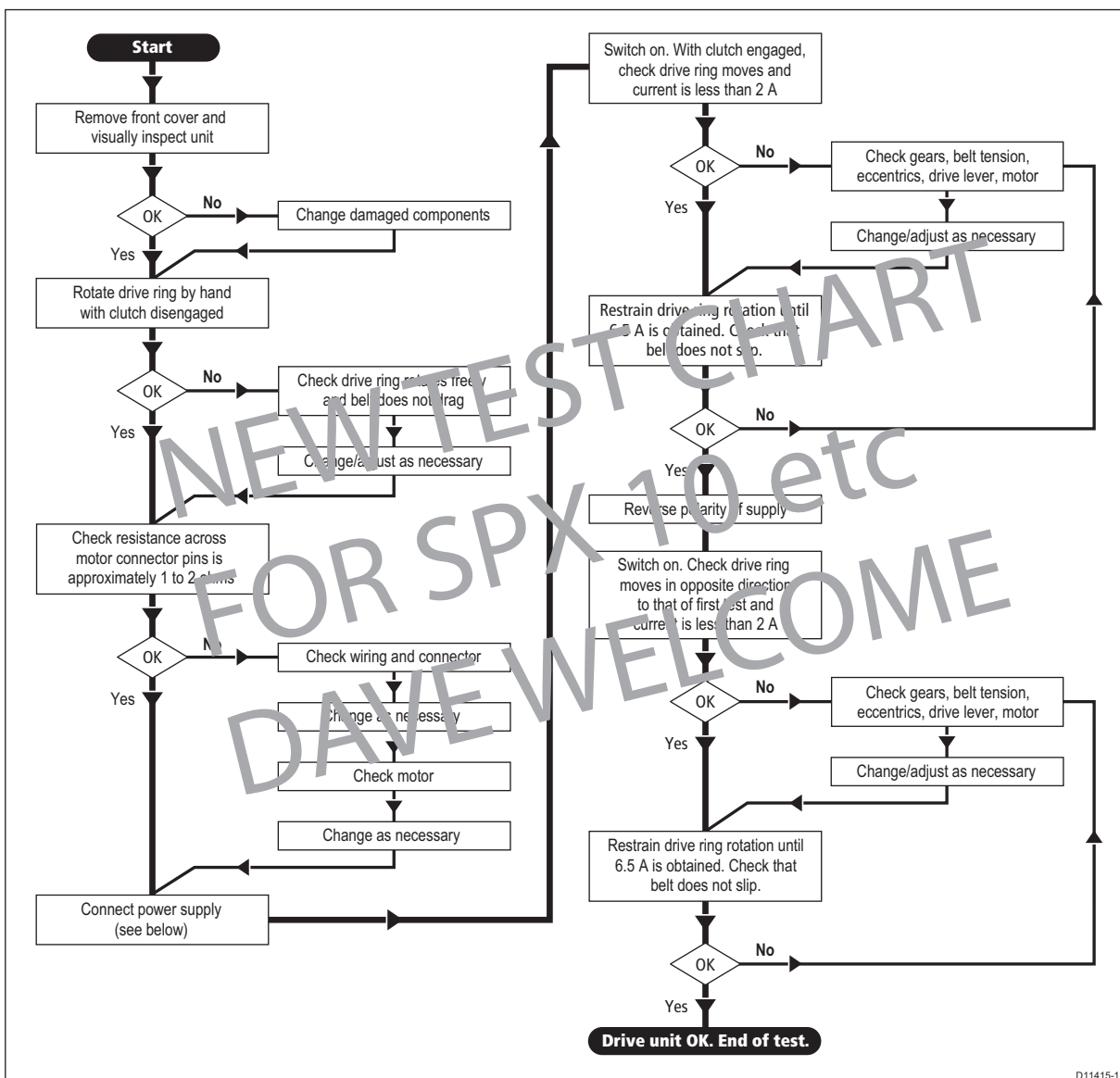
2.3 Course Computer

If the Course Computer is not operating correctly, assemble a test rig and carry out a functional test, as described below.

Test rig



Functional test

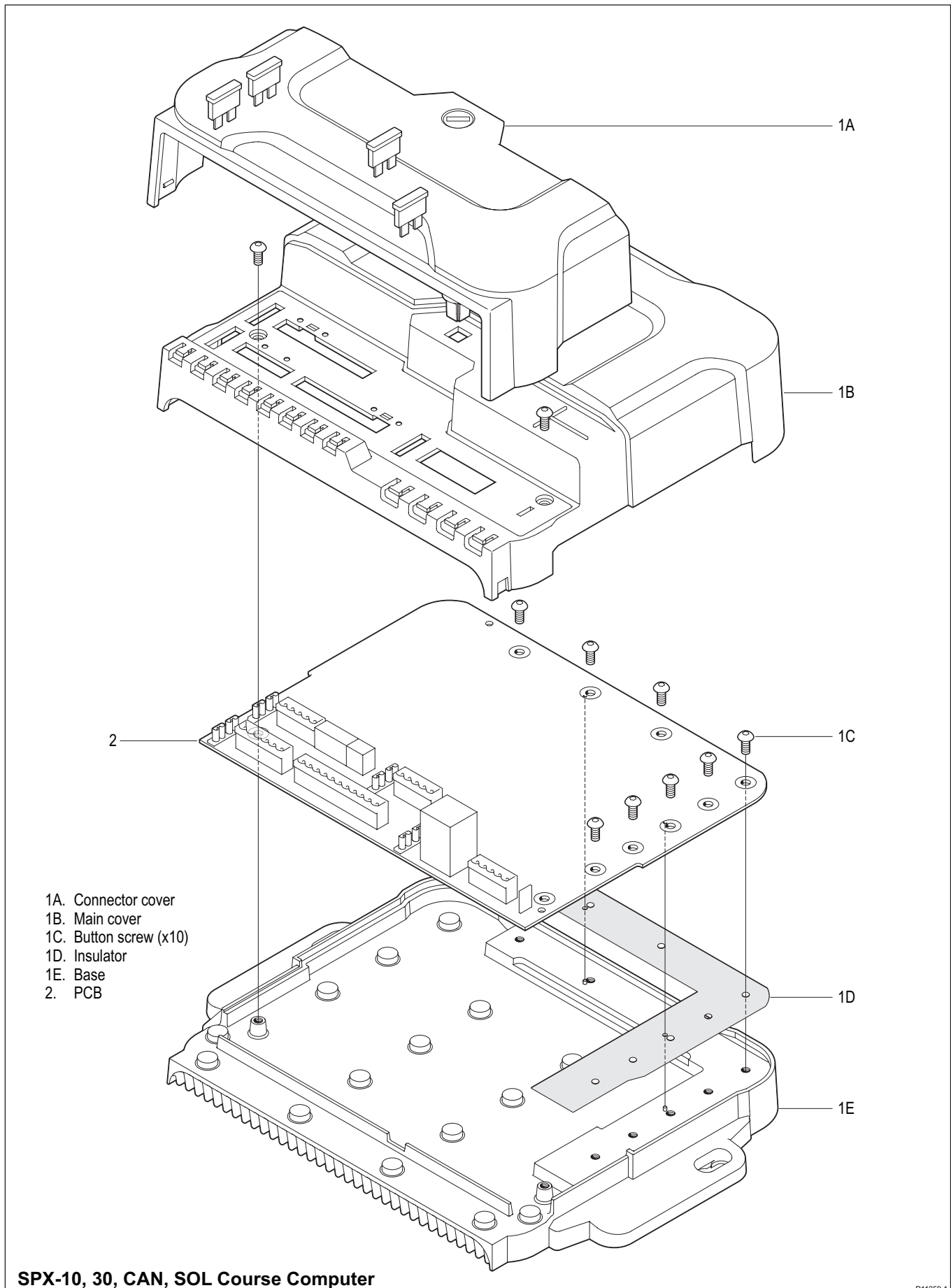


Repair

For assembly / disassembly of the course computer, refer to *Chapter 3: Spares and assembly*.

Chapter 3: Spares and assembly

3.1 SmartPilot X-10, X-30, X-CAN and X-SOL assembly

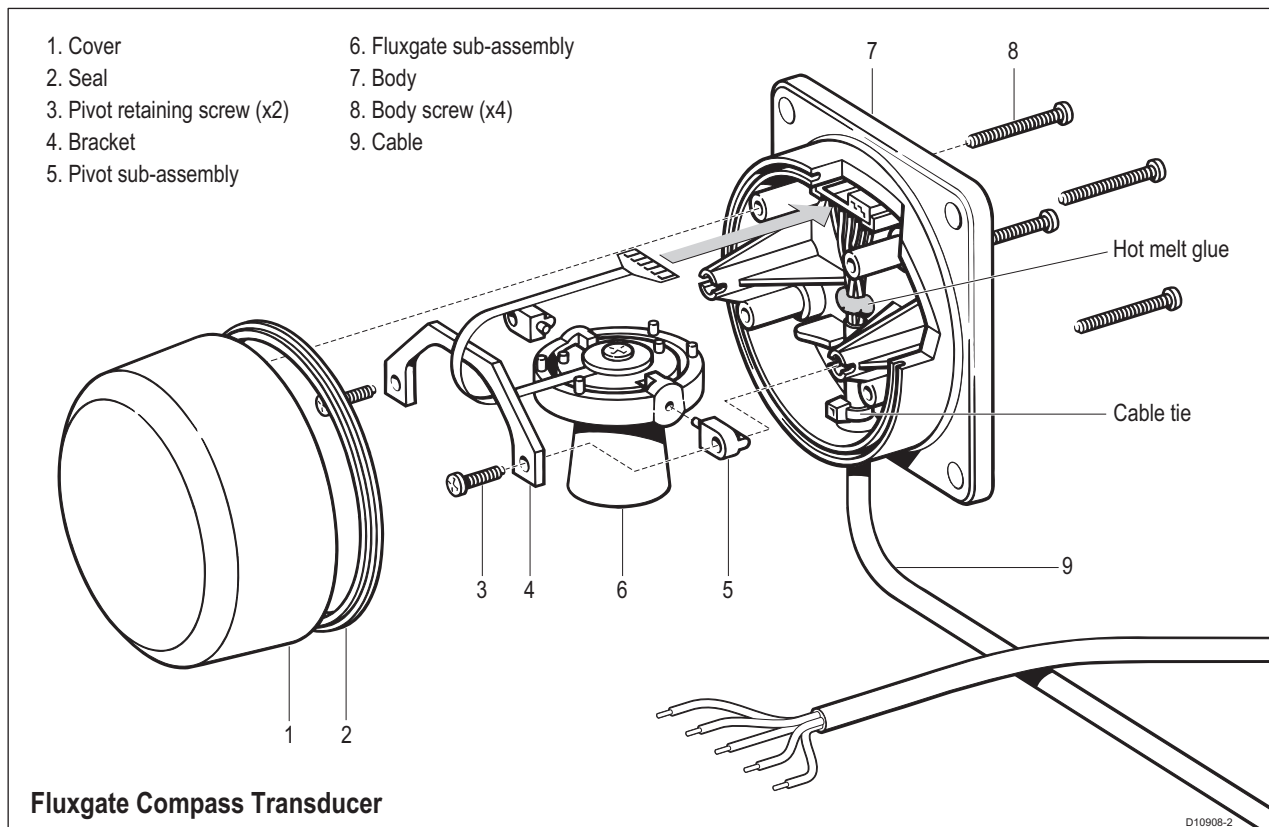


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SmartPilot X-10, X-30, X-CAN and X-SOL spare parts list

Item	Spare description	Part No.
-	SmartPilot X-10 course computer	R18154
-	SmartPilot X-30 course computer	R18157
-	SmartPilot X-CAN course computer	R18175
-	SmartPilot X-SOL course computer	R18160
-	SmartPilot X-10 case assembly	R18155
-	SmartPilot X-30 case assembly	R18158
-	SmartPilot X-CAN case assembly	R18176
-	SmartPilot X-SOL case assembly	R18161
Each SmartPilot case assembly consists of:		
1A	Connector cover	
1B	Main cover	
1C	Button screw (x10)	
1D	Insulator	
1E	Base	
2	SmartPilot X-10 course computer PCB	R18156
2	SmartPilot X-30 course computer PCB	R18159
2	SmartPilot X-CAN course computer PCB	R18177
2	SmartPilot X-SOL course computer PCB	R18162

3.2 Fluxgate Compass Transducer assembly

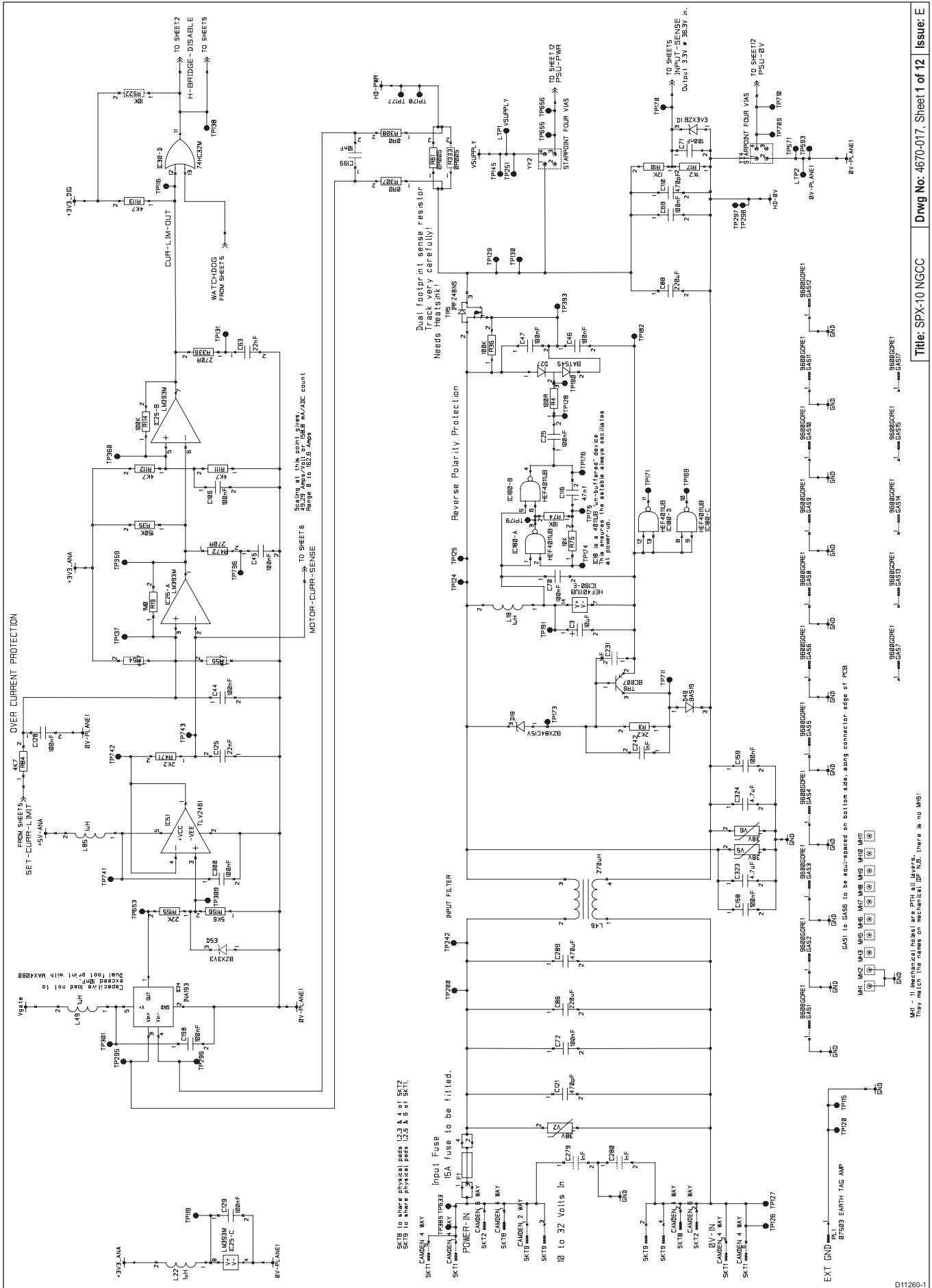


Fluxgate Compass Transducer spare parts list

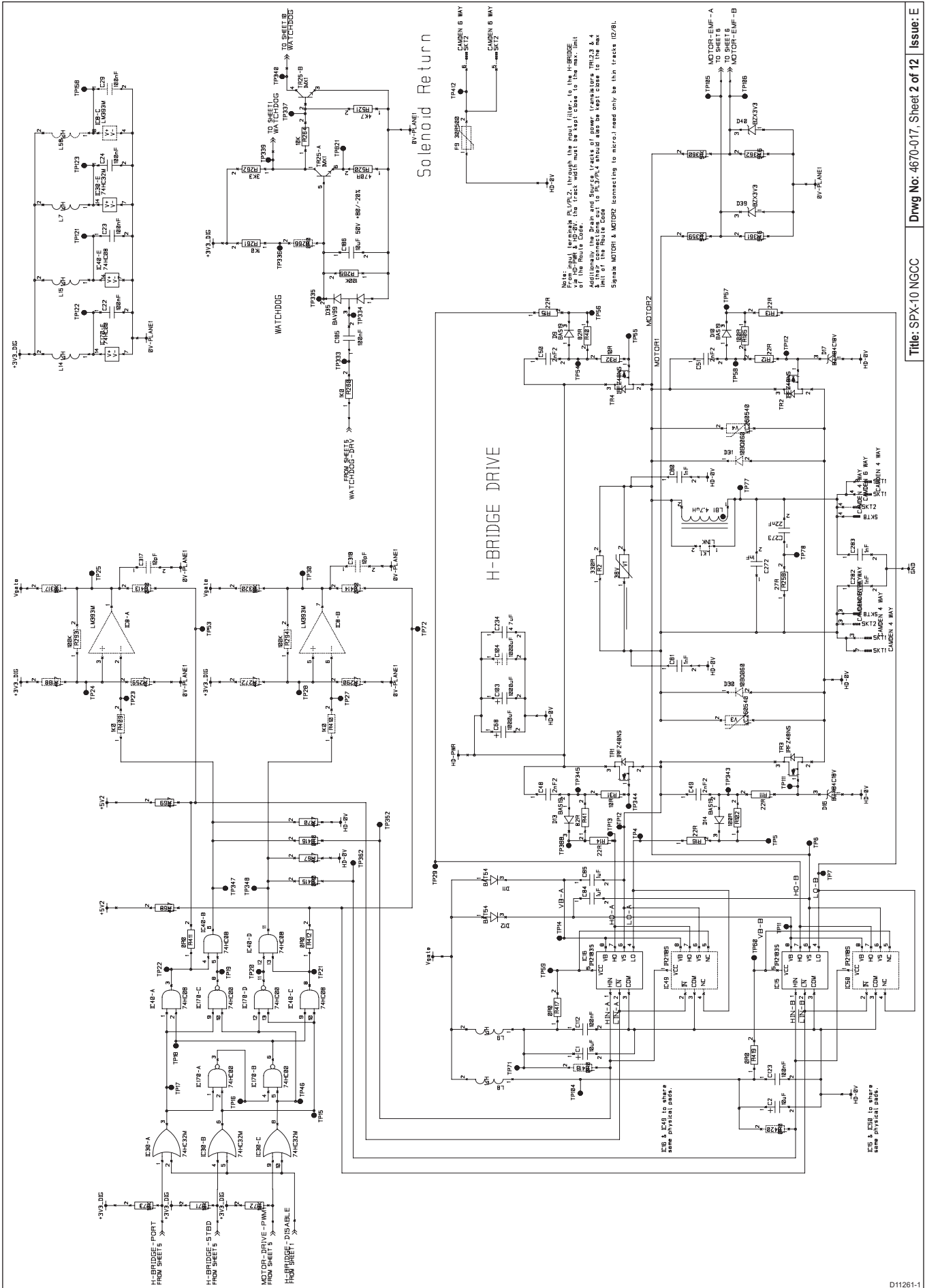
Item	Spare description	Part No.
-	Compass base kit:	M096
3	Pivot retaining screw (x2)	
4	Bracket	
-	Fluxgate sub-assembly:	M022
5	Pivot sub-assembly (x2)	
6	Fluxgate sub-assembly	

Chapter 4: SmartPilot X-10 PCB

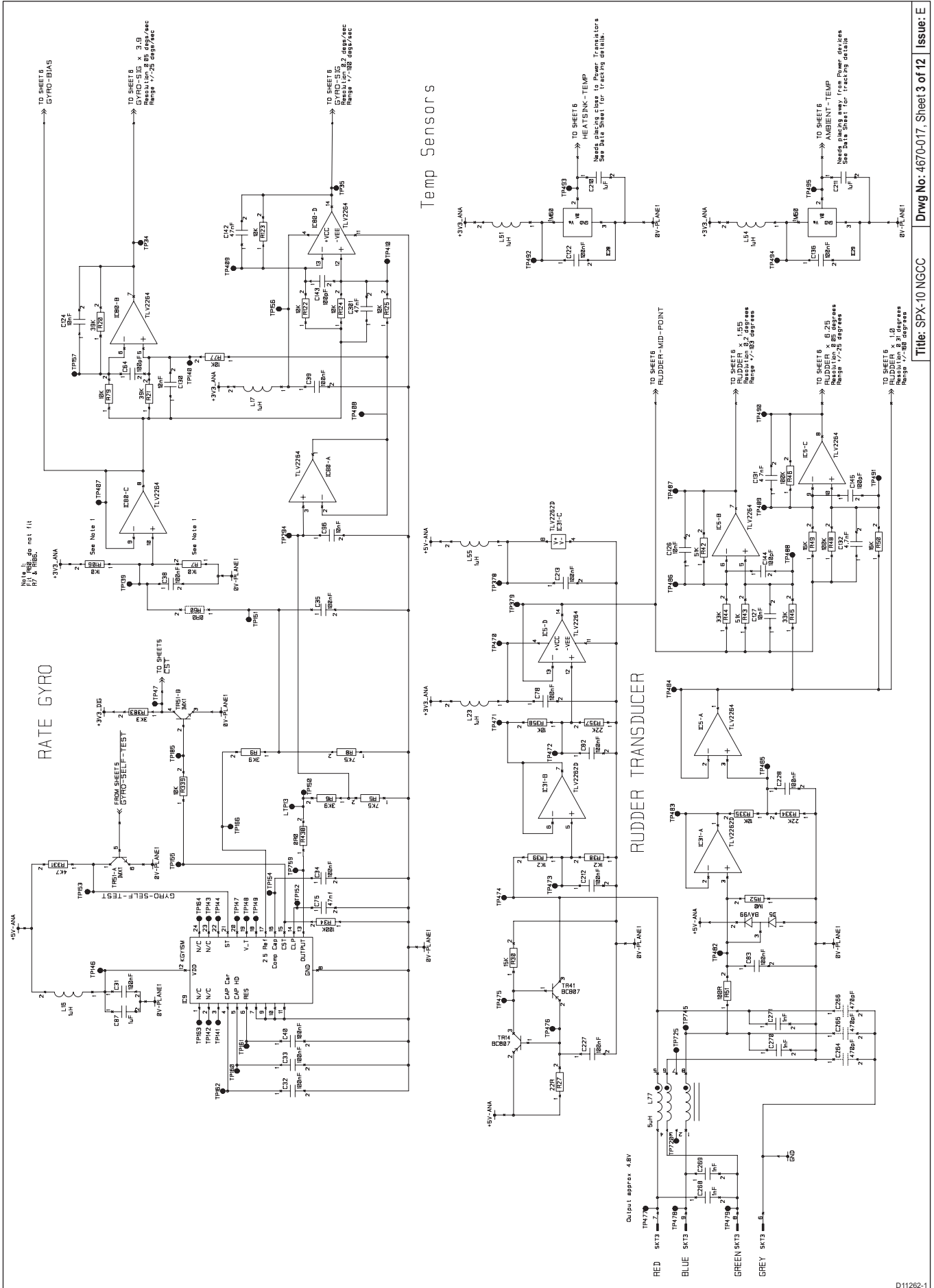
SmartPilot X-10 PCB - Sheet 1 of 12



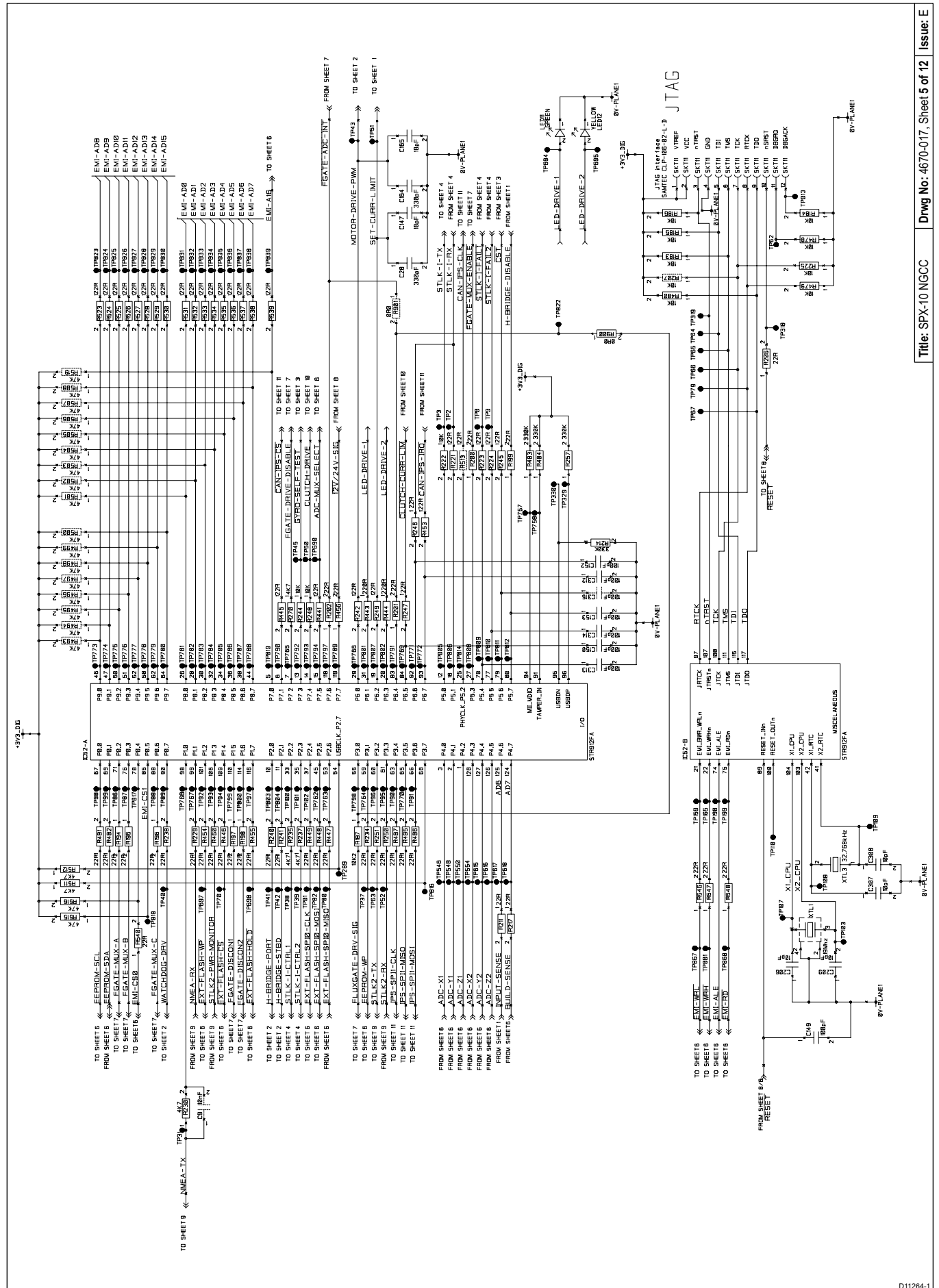
SmartPilot X-10 PCB - Sheet 2 of 12



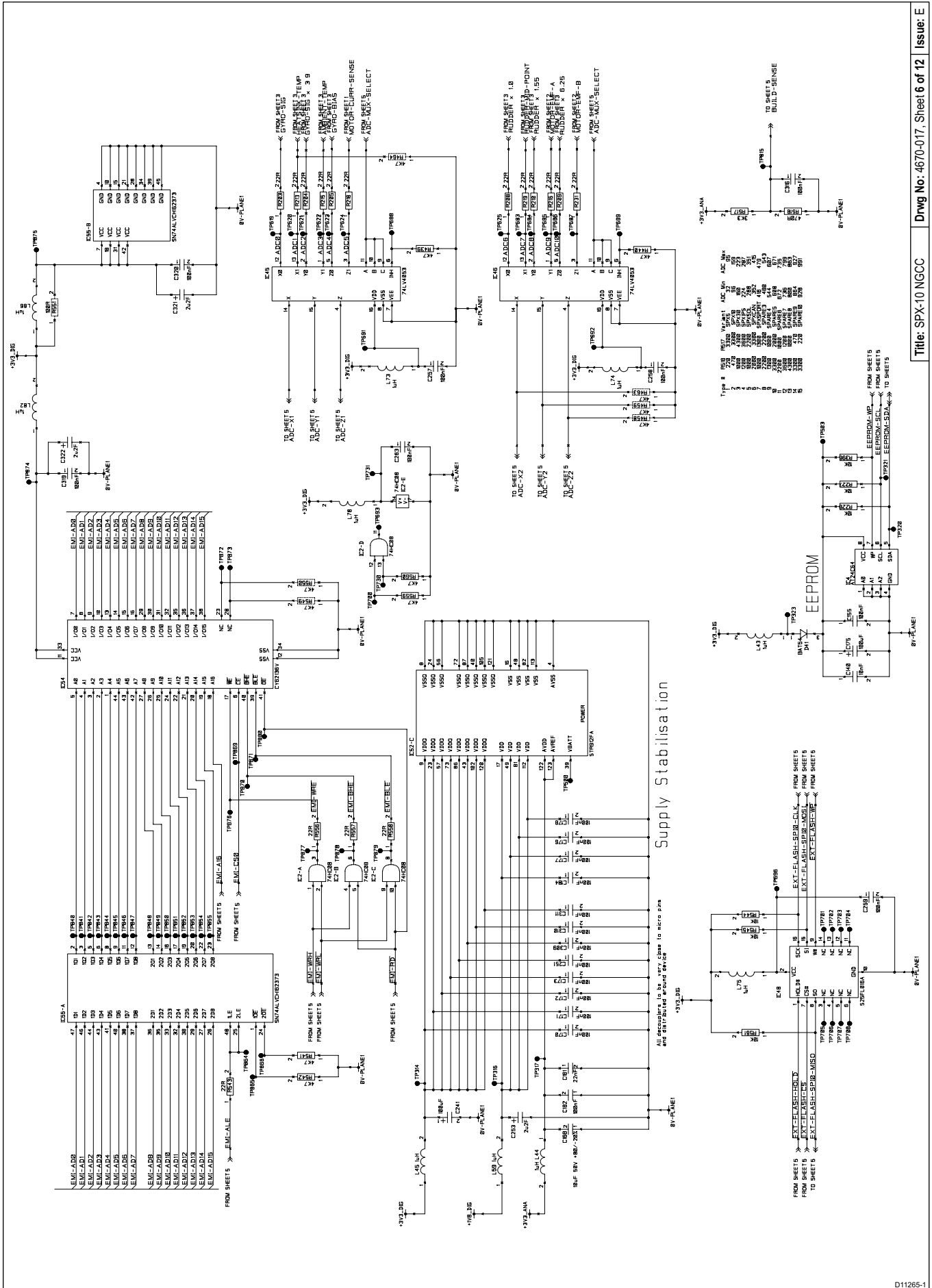
SmartPilot X-10 PCB - Sheet 3 of 12



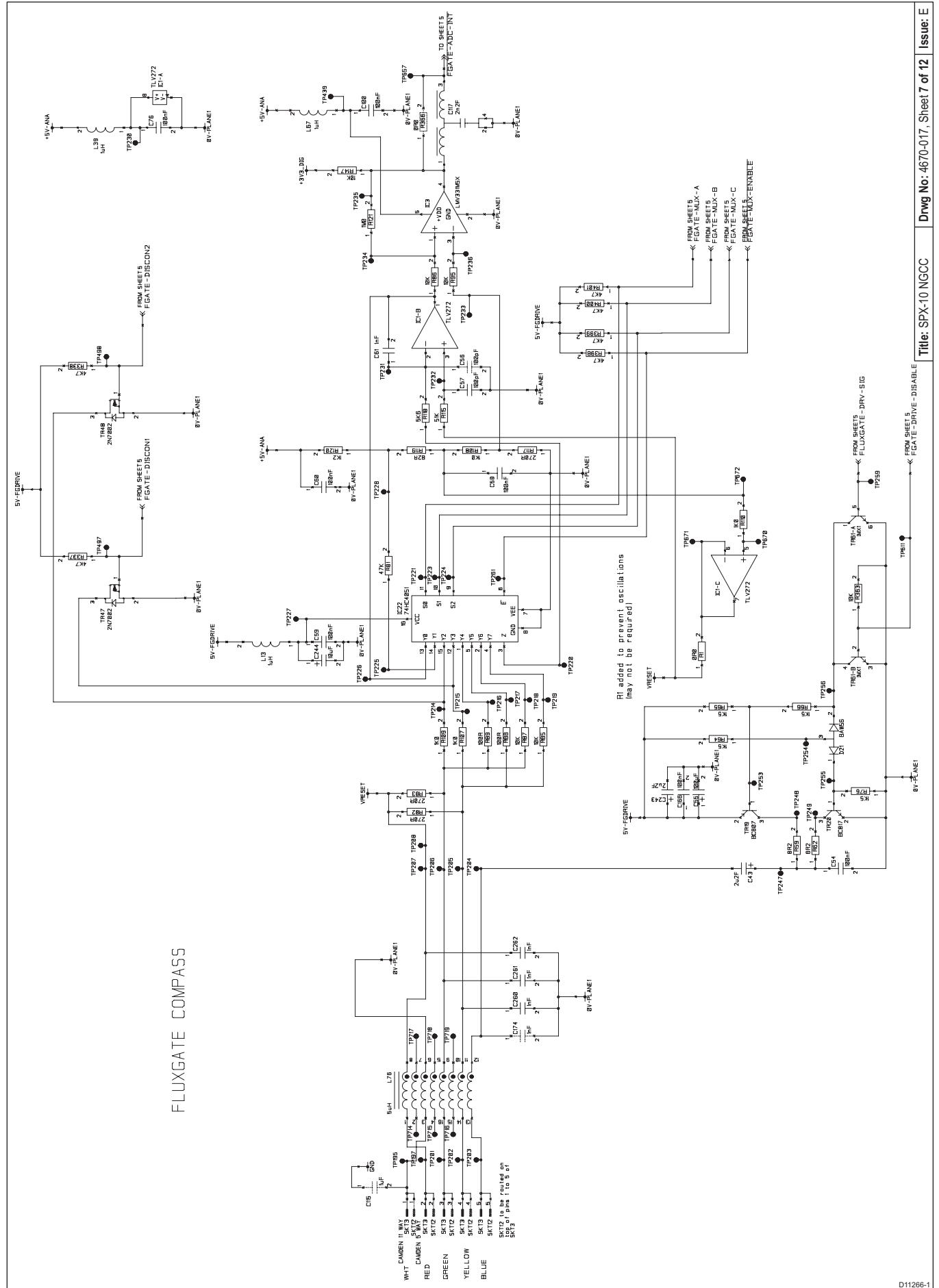
SmartPilot X-10 PCB - Sheet 5 of 12



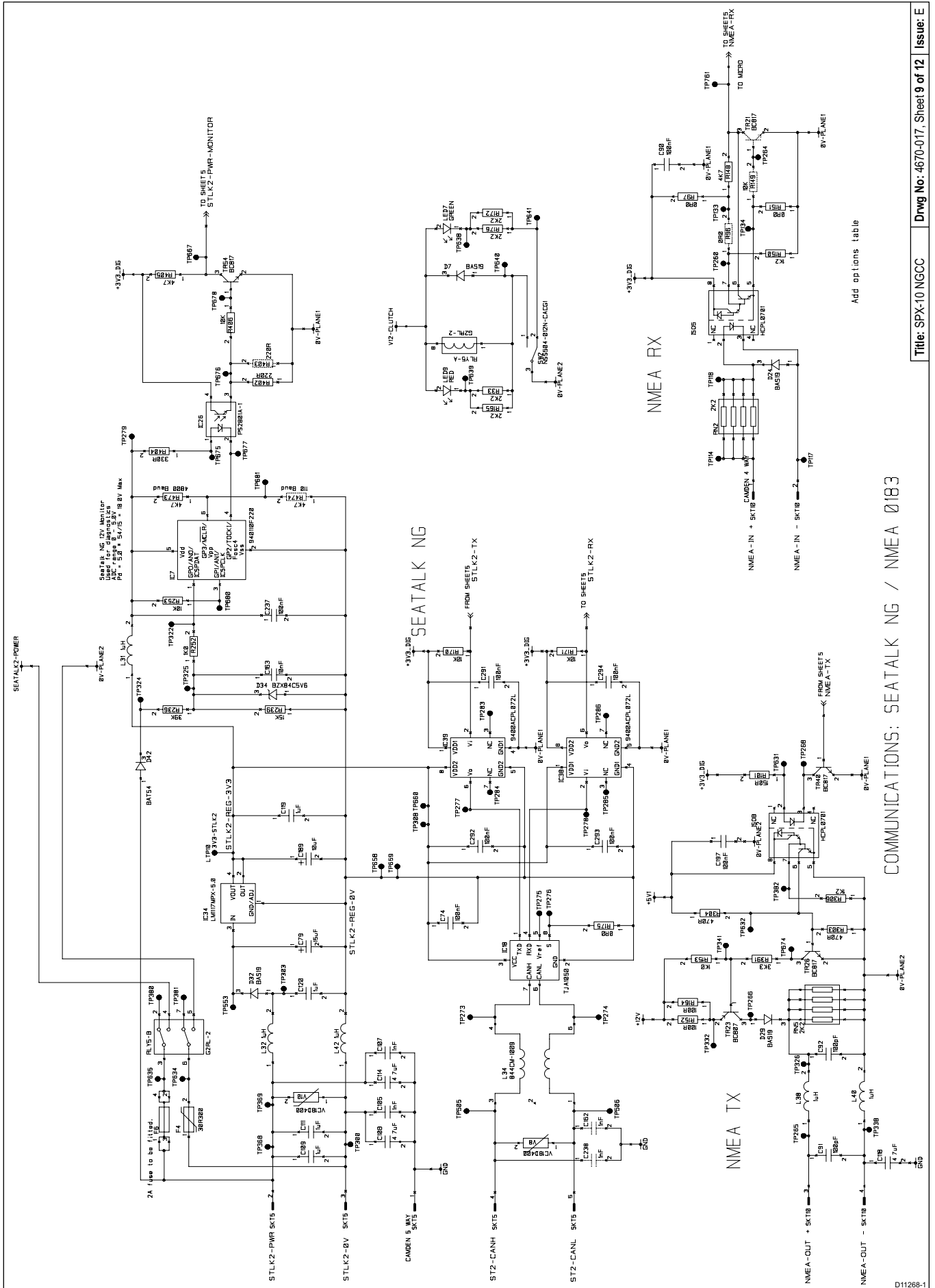
SmartPilot X-10 PCB - Sheet 6 of 12



SmartPilot X-10 PCB - Sheet 7 of 12



SmartPilot X-10 PCB - Sheet 9 of 12



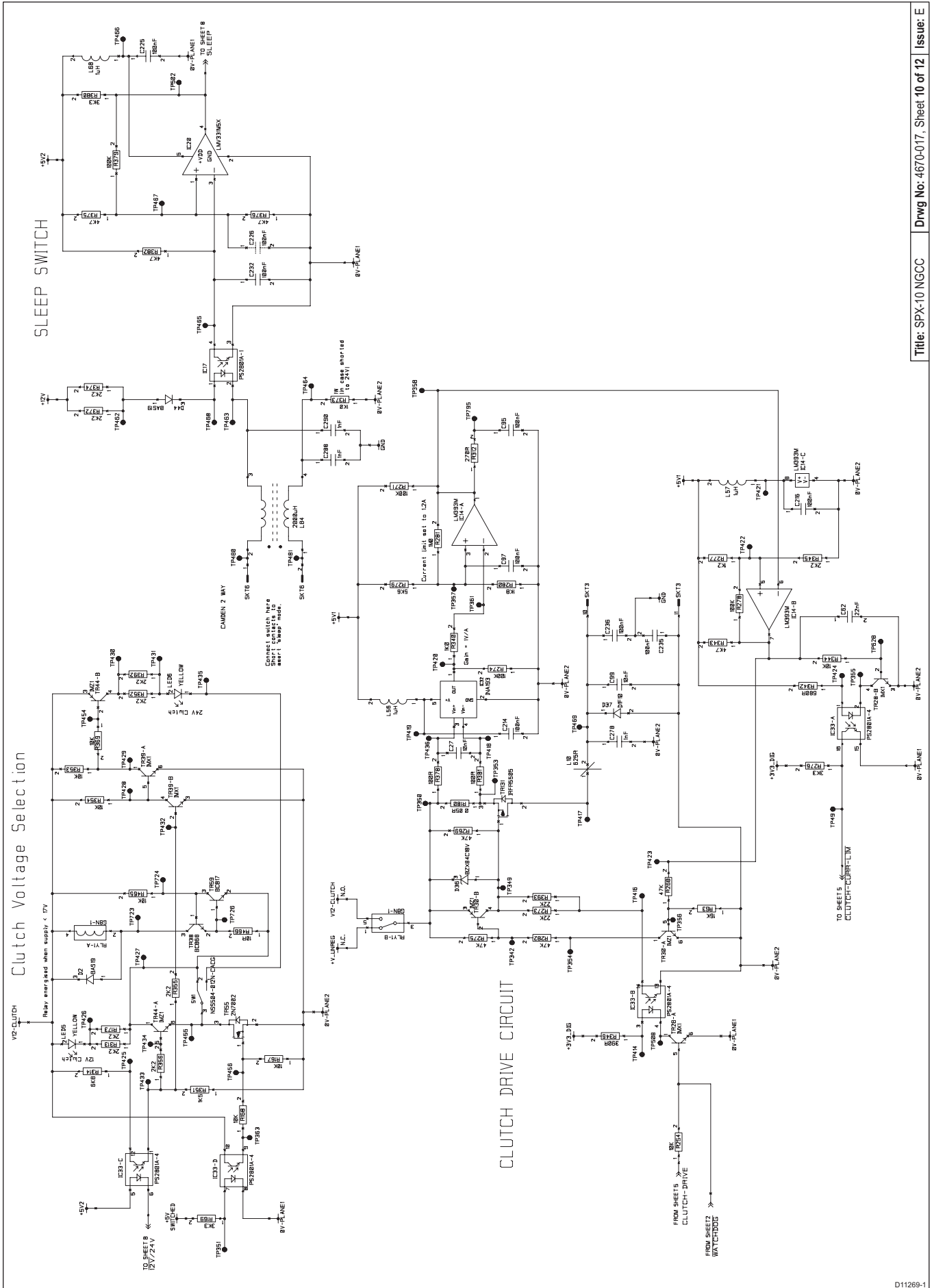
Title: SPX-10 NGCC Dwg No: 4670-017, Sheet 9 of 12 Issue: E

COMMUNICATIONS: SEATALK NG / NMEA 0183

Add options table

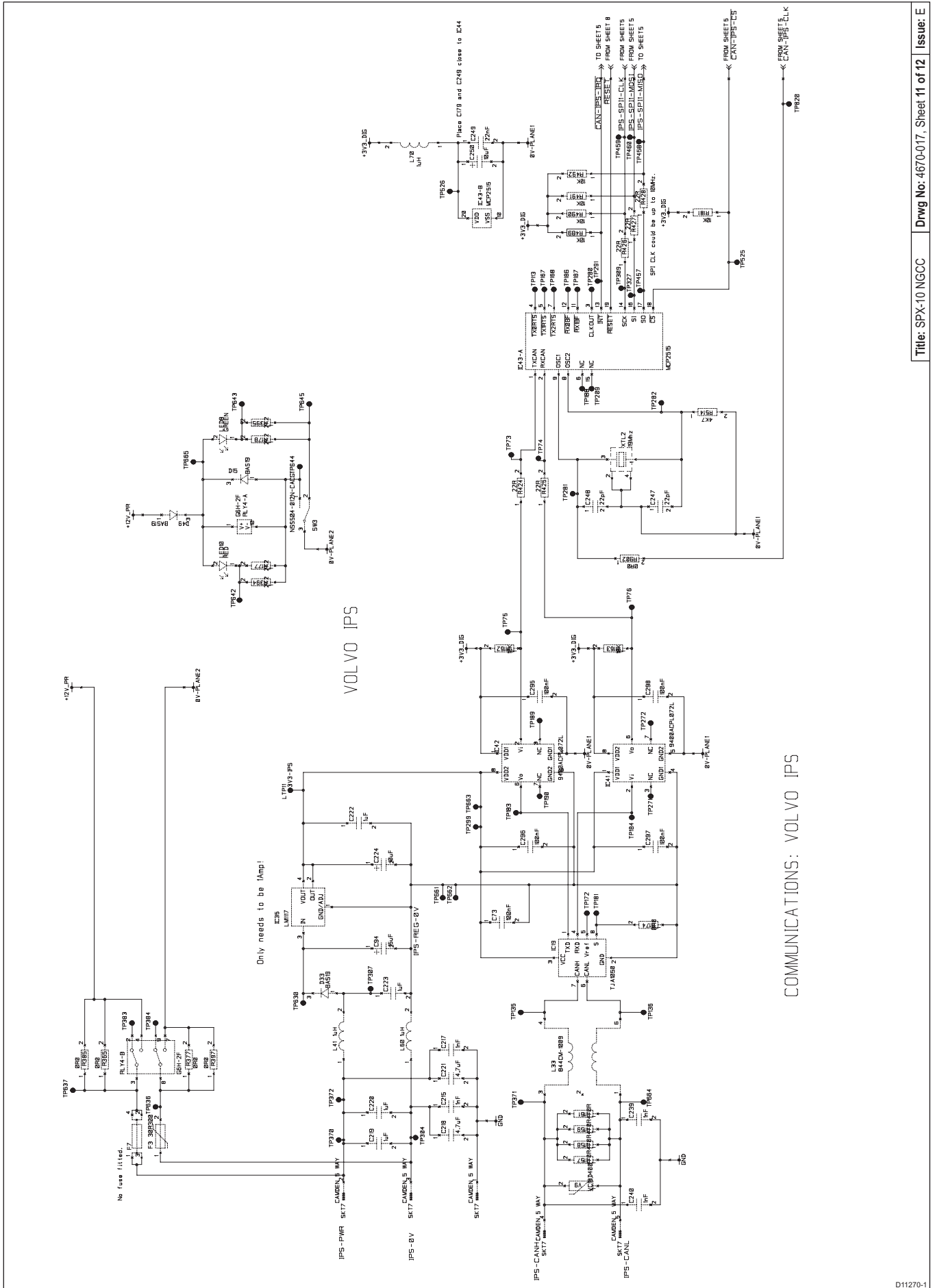
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SmartPilot X-10 PCB - Sheet 10 of 12

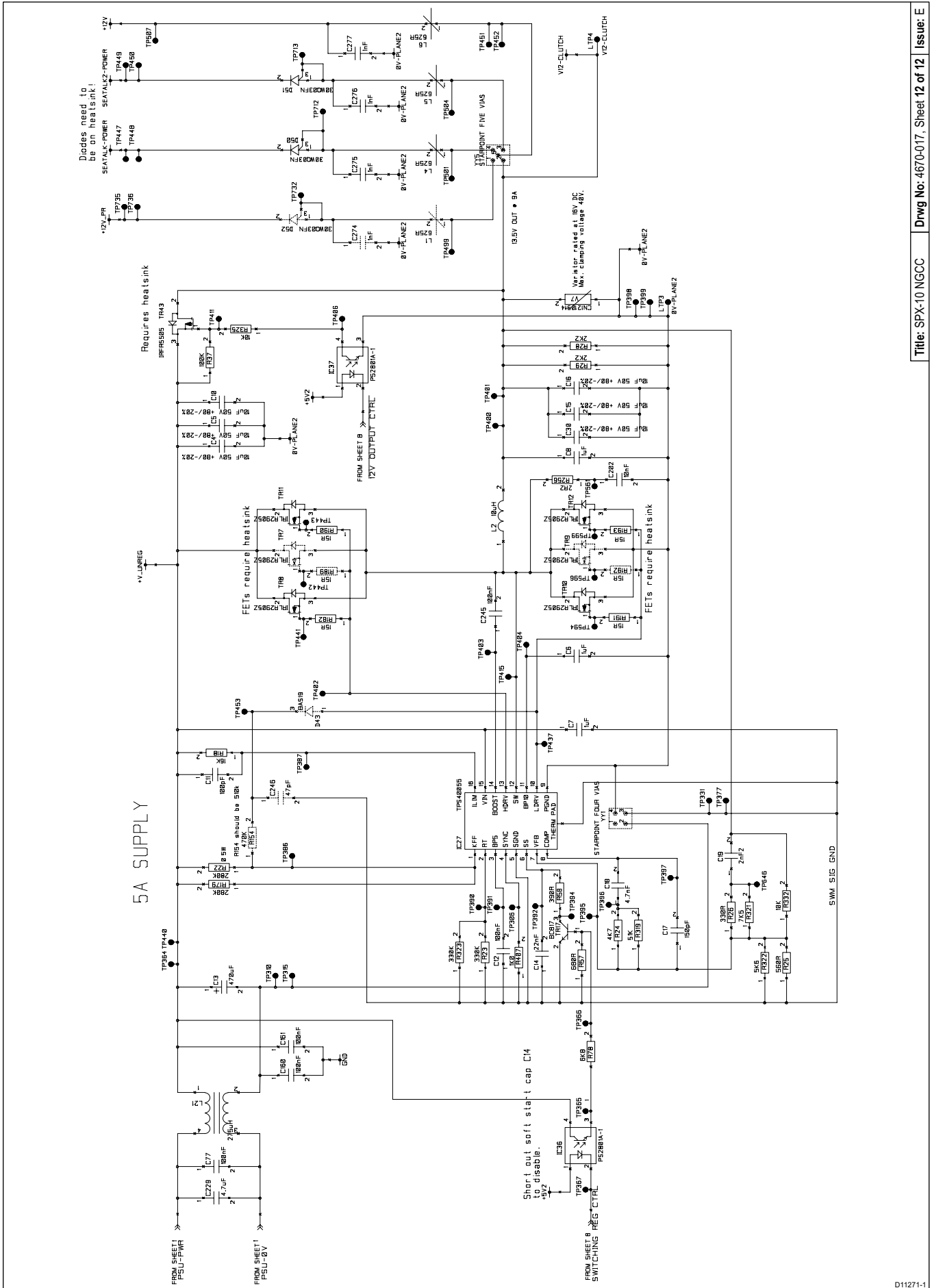


Drwg No: 4670-017, Sheet 10 of 12 Issue: E

SmartPilot X-10 PCB - Sheet 11 of 12

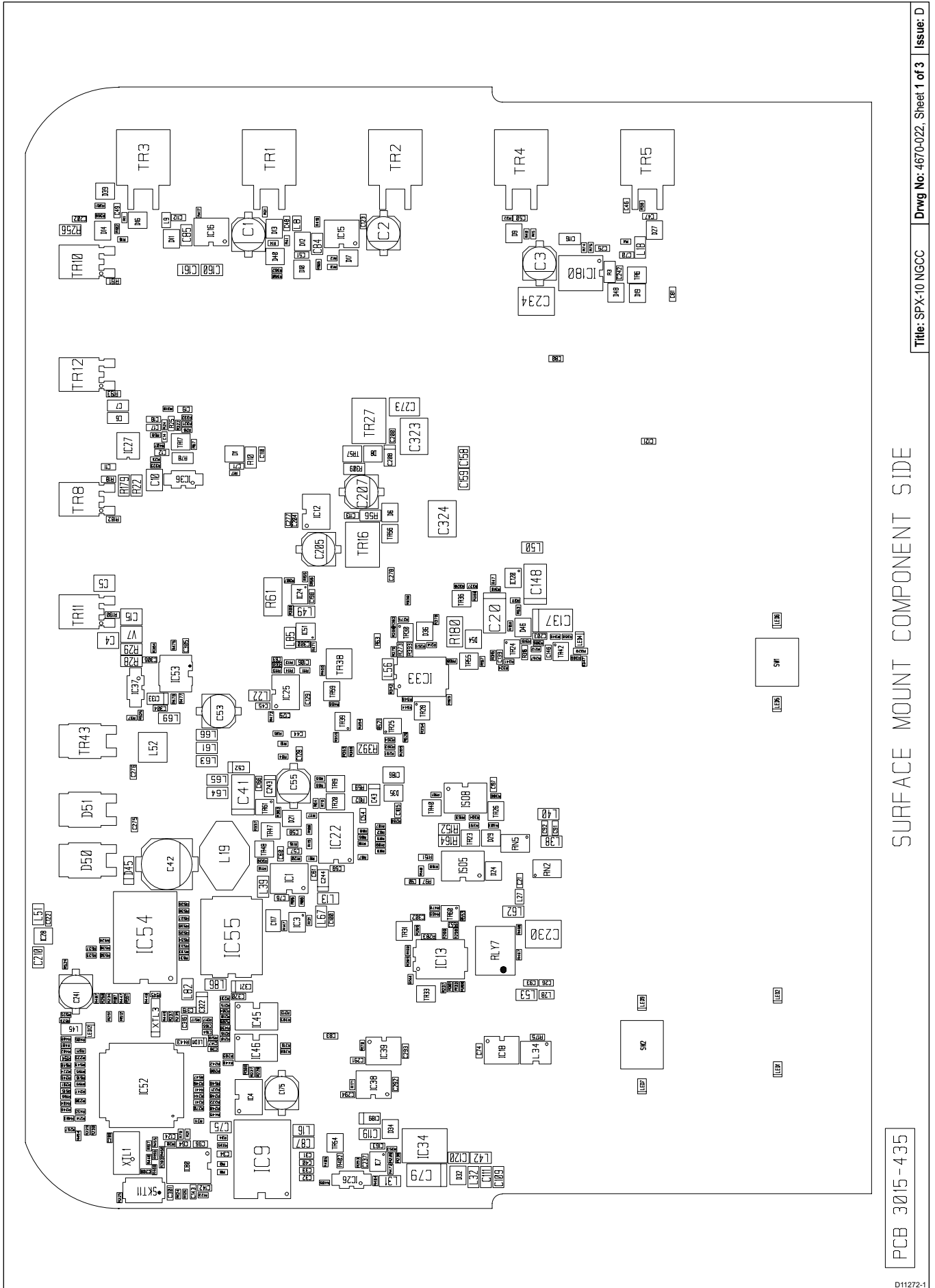


SmartPilot X-10 PCB - Sheet 12 of 12



Title: SPX-10 NGCC Drwg No: 4670-017, Sheet 12 of 12 Issue: E

SmartPilot X-10 PCB - Components - Sheet 1 of 3

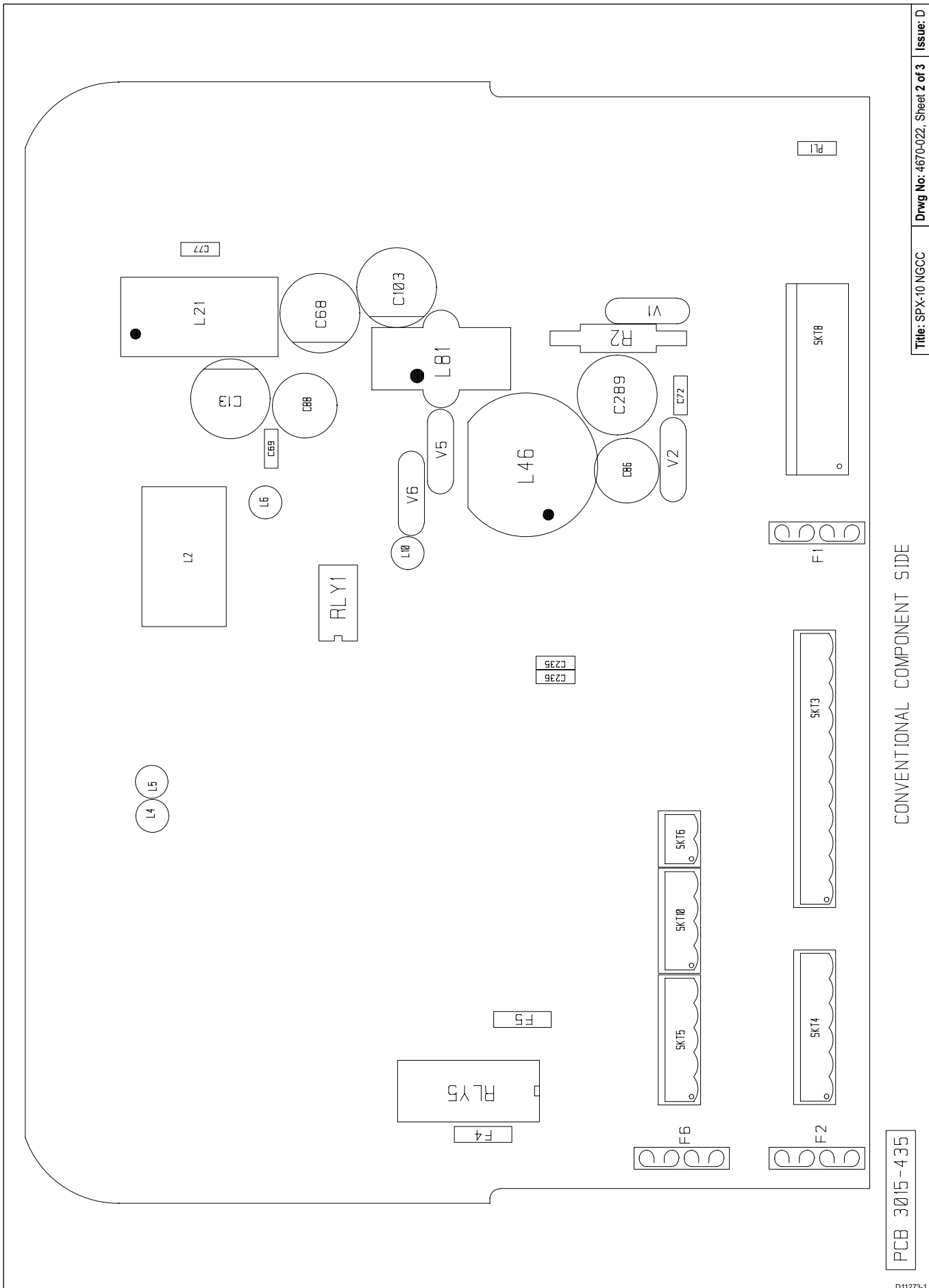


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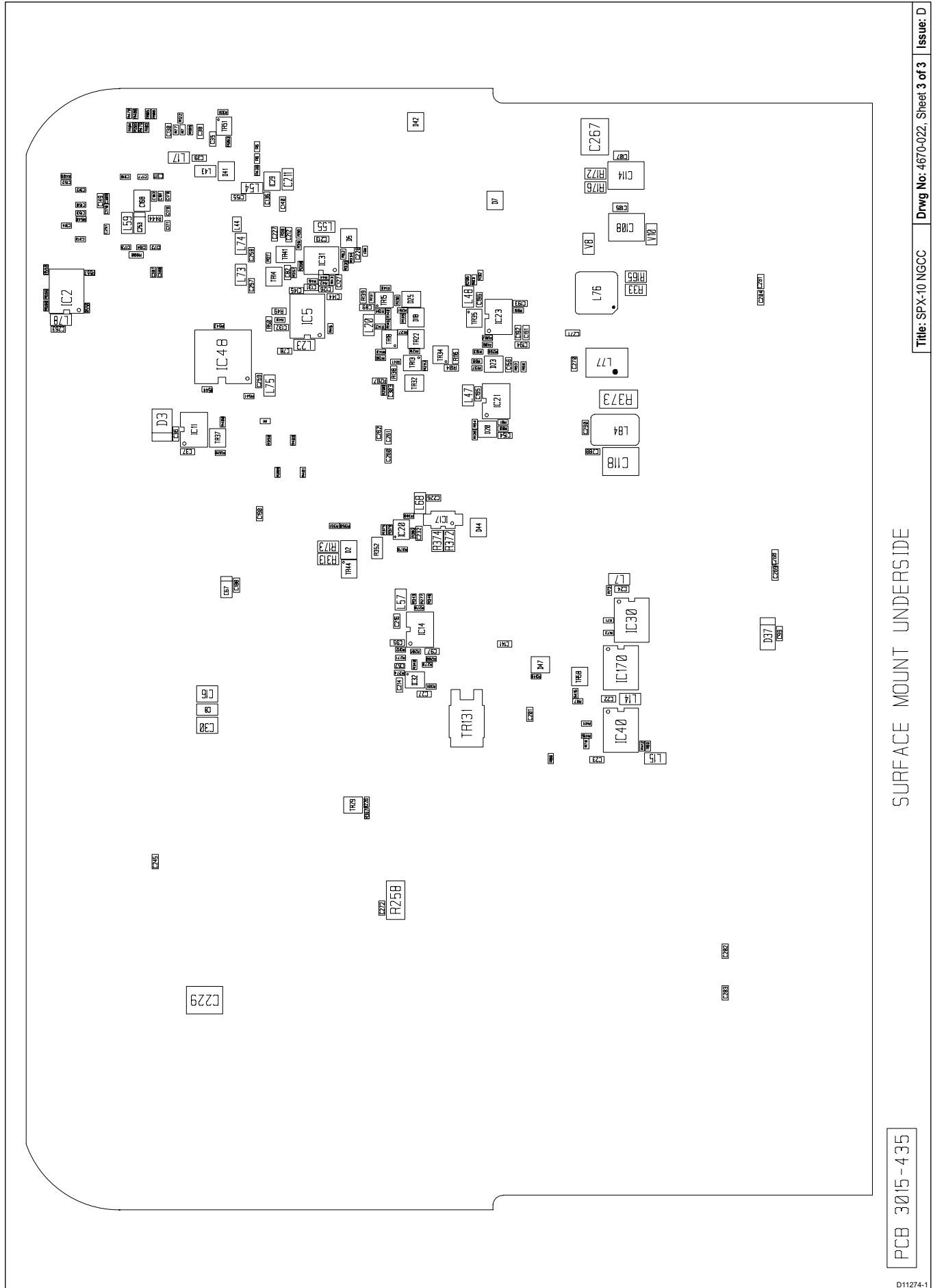
SURFACE MOUNT COMPONENT SIDE

Title: SPX-10 NGCC Drwg No. 4670-022, Sheet 1 of 3 Issue: D

SmartPilot X-10 PCB - Components - Sheet 2 of 3



SmartPilot X-10 PCB - Components - Sheet 3 of 3



PCB 3015-435

SURFACE MOUNT UNDERSIDE

Title: SPX-10 NGCC | Dwg No: 467-0-022, Sheet 3 of 3 | Issue: D

SmartPilot X-10 PCB - Components, Parts List

Ref.	Description	Part No.
C1	CAP ALELEC 10uF 50v 20% ELECD	93ZEHEXXX10U
C2	CAP ALELEC 10uF 50v 20% ELECD	93ZEHEXXX10U
C3	CAP ALELEC 10uF 50v 20% ELECD	93ZEHEXXX10U
C4	CAP CERAMIC 10uF 50V 1210	93DFHD10U
C5	CAP CERAMIC 10uF 50V 1210	93DFHD10U
C6	CAP Y5V 1uF 50v 20% 1206	93261U
C7	CAP Y5V 1uF 50v 20% 1206	93261U
C8	CAP Y5V 1uF 50v 20% 1206	93261U
C10	CAP CERAMIC 10uF 50V 1210	93DFHD10U
C11	CAP COG 100pF 50v 5% 0603	93ACHAXX100P
C12	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C13	CAP ELEC LOW ESR 470uF 63V 20% RAD	3206
C14	CAP CERAMIC 22nF SM 16V 10% 0402	93QDEB22N
C15	CAP CERAMIC 10uF 50V 1210	93DFHD10U
C16	CAP CERAMIC 10uF 50V 1210	93DFHD10U
C17	CAP COG 150pF 50V 2% 0603	93ABHA150P
C18	CAP X7R 4.7nF 50V 10% 0603	93ADHAXX4N7
C19	CAP X7R 2.2nF 50v 10% 0603	93ADHBXX2N2
C20	CAP TANT 15uF 35V 20% TANTD	93JEGCXX15U
C21	CAP COG 470pF 50v 5% 0603	93ACHAXX470P
C22	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C23	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C24	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C25	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C26	CAP COG 470pF 50v 5% 0603	93ACHAXX470P
C27	CAP X7R 10nF 50v 10% 0603	93ADHBXX10N
C28	CAP 330pF +/-5% 50V COG 0402	93QCHA330P
C30	CAP CERAMIC 10uF 50V 1210	93DFHD10U
C31	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C32	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C33	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C34	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C35	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C36	CAP X7R 10nF 50v 10% 0603	93ADHBXX10N
C37	CAP COG 470pF 50v 5% 0603	93ACHAXX470P
C38	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C39	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C40	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C41	CAP TANT 100uF 10v 20% TANTD	9326100U
C42	CAP 100uF 50v 20% AL-ELEC	93ZEHEXX100U
C43	CAP TANT 2u2F 10v 10% TANTA	93GDDC2U2
C44	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C45	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C46	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C47	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C48	CAP X7R 2.2nF 50v 10% 0603	93ADHBXX2N2
C49	CAP X7R 2.2nF 50v 10% 0603	93ADHBXX2N2
C50	CAP X7R 2.2nF 50v 10% 0603	93ADHBXX2N2

Ref.	Description	Part No.
C51	CAP X7R 2.2nF 50v 10% 0603	93ADHBXX2N2
C52	CAP TANT 10uF 10v 10% TANTA	93GDDCXXX10U
C53	CAP ALELEC 100uF 6.3v 20%ELECD	9324100U
C54	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C55	CAP ALELEC 100uF 35V 20% CASE G	93KEGEXX100U
C57	CAP COG 100pF 50v 5% 0603	93ACHAXX100P
C58	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C59	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C60	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C61	CAP X7R 1nF 50v 10% 0603	93ADHBXX1N
C62	CAP CERAMIC 22nF SM 16V 10% 0402	93QDEB22N
C63	CAP CERAMIC 22nF SM 16V 10% 0402	93QDEB22N
C64	CAP COG 100pF 50v 5% 0603	93ACHAXX100P
C67	CAP TANT 10uF 10v 10% TANTA	93GDDCXXX10U
C68	CAP ELECTROLYTIC 1000uF 50V RADIAL	3177
C69	CAP POLY 100nF 100V 10% RADIAL	3082
C70	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C71	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C72	CAP POLY 100nF 100V 10% RADIAL	3082
C74	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C75	CAP X7R 47nF 50V 10% 1206	93060U047
C76	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C77	CAP POLY 100nF 100V 10% RADIAL	3082
C78	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C79	CAP TANT 15uF 35V 20% TANTD	93JEGCXX15U
C80	CAP X7R 1nF 50v 10% 0603	93ADHBXX1N
C81	CAP X7R 1nF 50v 10% 0603	93ADHBXX1N
C82	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C83	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C84	CAP Y5V 1uF 50v 20% 1206	93261U
C85	CAP Y5V 1uF 50v 20% 1206	93261U
C86	CAP ALEL NONPOL 220uF 50v 20% RAD	3153
C87	CAP Y5V 1uF 50v 20% 1206	93261U
C88	CAP ALEL NONPOL 220uF 50v 20% RAD	3153
C89	CAP X7R 1nF 50v 10% 0603	93ADHBXX1N
C90	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C91	CAP COG 100pF 50v 5% 0603	93ACHAXX100P
C92	CAP COG 100pF 50v 5% 0603	93ACHAXX100P
C93	CAP X7R 1nF 50v 10% 0603	93ADHBXX1N
C95	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C96	CAP X7R 10nF 50v 10% 0603	93ADHBXX10N
C97	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C99	CAP X7R 10nF 50v 10% 0603	93ADHBXX10N
C100	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C103	CAP ELECTROLYTIC 1000uF 50V RADIAL	3177
C105	CAP COG 1nF 100V +/- 5% 0805	93ACJAXXXX1N
C106	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C107	CAP COG 1nF 100V +/- 5% 0805	93ACJAXXXX1N
C108	CAP X7R 4.7uF 100v 10% 2220	93FDJBXXX4U7

Ref.	Description	Part No.	Ref.	Description	Part No.
C109	CAP Y5V 1uF 50v 20% 1206	93261U	C166	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C110	CAP COG 470pF 50v 5% 0603	93ACHAXX470P	C168	CAP CERAMIC 10uF 50V 1210	93DFHD10U
C111	CAP Y5V 1uF 50v 20% 1206	93261U	C170	CAP 100nF +/-10% 10V X5R 0402	93QDDI100N
C112	CAP X7R 100nF 25V 10% 0603	93ADFB100N	C171	CAP 100nF +/-10% 10V X5R 0402	93QDDI100N
C113	CAP X7R 100nF 25V 10% 0603	93ADFB100N	C172	CAP 100nF +/-10% 10V X5R 0402	93QDDI100N
C114	CAP X7R 4.7uF 100v 10% 2220	93FDJBXXX4U7	C173	CAP 100nF +/-10% 10V X5R 0402	93QDDI100N
C116	CAP X7R 47nF 50V 10% 1206	93060U047	C175	CAP ALELEC 100uF 6.3v 20%ELECD	9324100U
C117	CAP FILT 2n2F 25v -/+50% 6A	93ZHFGXXX2N2	C176	CAP 100nF +/-10% 10V X5R 0402	93QDDI100N
C118	CAP X7R 4.7uF 100v 10% 2220	93FDJBXXX4U7	C177	CAP 100nF +/-10% 10V X5R 0402	93QDDI100N
C119	CAP Y5V 1uF 50v 20% 1206	93261U	C178	CAP 100nF +/-10% 10V X5R 0402	93QDDI100N
C120	CAP Y5V 1uF 50v 20% 1206	93261U	C181	CAP CERAMIC 22nF SM 16V 10% 0402	93QDEB22N
C121	CAP COG 470pF 50v 5% 0603	93ACHAXX470P	C182	CAP 100nF +/-10% 10V X5R 0402	93QDDI100N
C122	CAP X7R 100nF 25V 10% 0603	93ADFB100N	C184	CAP 100nF +/-10% 10V X5R 0402	93QDDI100N
C123	CAP X7R 100nF 25V 10% 0603	93ADFB100N	C185	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C124	CAP X7R 10nF 50v 10% 0603	93ADHBXX10N	C186	CAP CERAMIC 10uF 50V 1210	93DFHD10U
C125	CAP CERAMIC 22nF SM 16V 10% 0402	93QDEB22N	C188	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C126	CAP X7R 10nF 50v 10% 0603	93ADHBXX10N	C189	CAP TANT 10uF 10v 10% TANTA	93GDCCXXX10U
C127	CAP X7R 10nF 50v 10% 0603	93ADHBXX10N	C190	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C128	CAP X7R 100nF 25V 10% 0603	93ADFB100N	C191	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C129	CAP X7R 100nF 25V 10% 0603	93ADFB100N	C192	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C130	CAP X7R 10nF 50v 10% 0603	93ADHBXX10N	C193	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C131	CAP X7R 4.7nF 50V 10% 0603	93ADHAXXX4N7	C194	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C132	CAP X7R 4.7nF 50V 10% 0603	93ADHAXXX4N7	C195	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C133	CAP TANT 10uF 10v 10% TANTA	93GDCCXXX10U	C196	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C136	CAP X7R 100nF 25V 10% 0603	93ADFB100N	C197	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C137	CAP TANT 100uF 10v 20% TANTD	9326100U	C198	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C139	CAP COG 100pF 50v 5% 0603	93ACHAXX100P	C200	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C140	CAP X7R 10nF 50v 10% 0603	93ADHBXX10N	C201	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C141	CAP COG 100pF 50v 5% 0603	93ACHAXX100P	C202	CAP X7R 10nF 50v 10% 0603	93ADHBXX10N
C142	CAP X7R 47nF 16v 10% 0603	93ADEBXX47N	C203	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C143	CAP COG 100pF 50v 5% 0603	93ACHAXX100P	C204	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C144	CAP COG 100pF 50v 5% 0603	93ACHAXX100P	C205	CAP ALELEC 100uF 35V 20% CASE G	93KEGEXX100U
C145	CAP COG 100pF 50v 5% 0603	93ACHAXX100P	C206	CAP 10pF SM 0402	93QCHA10P
C146	CAP COG 100pF 50v 5% 0603	93ACHAXX100P	C207	CAP ALELEC 100uF 35V 20% CASE G	93KEGEXX100U
C147	CAP 18pF +/-5% 50V COG 0402	93QCHA18P	C208	CAP TANT 10uF 10v 10% TANTA	93GDCCXXX10U
C148	CAP TANT 100uF 10v 20% TANTD	9326100U	C209	CAP 10pF SM 0402	93QCHA10P
C149	CAP COG 100pF 50v 5% 0603	93ACHAXX100P	C210	CAP Y5V 1uF 50v 20% 1206	93261U
C150	CAP 100pF 1% 50V COG 0402	93QAHA100P	C211	CAP Y5V 1uF 50v 20% 1206	93261U
C152	CAP 100pF 1% 50V COG 0402	93QAHA100P	C212	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C153	CAP 100pF 1% 50V COG 0402	93QAHA100P	C213	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C154	CAP COG 100pF 50v 5% 0603	93ACHAXX100P	C214	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C155	CAP X7R 100nF 25V 10% 0603	93ADFB100N	C216	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C156	CAP COG 100pF 50v 5% 0603	93ACHAXX100P	C225	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C158	CAP X7R 0.1uF 50v 20% 1206	93070U1	C227	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C159	CAP X7R 0.1uF 50v 20% 1206	93070U1	C228	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C160	CAP X7R 0.1uF 50v 20% 1206	93070U1	C229	CAP X7R 4.7uF 50v 10% 2220	93FDHBXXX4U7
C161	CAP X7R 0.1uF 50v 20% 1206	93070U1	C230	CAP X7R 4.7uF 100v 10% 2220	93FDJBXXX4U7
C163	CAP X7R 10nF 50v 10% 0603	93ADHBXX10N	C232	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C164	CAP 330pF +/-5% 50V COG 0402	93QCHA330P	C234	CAP X7R 4.7uF 100v 10% 2220	93FDJBXXX4U7
C165	CAP 18pF +/-5% 50V COG 0402	93QCHA18P	C235	CAP POLY 100nF 100V 10% RADIAL	3082

Ref.	Description	Part No.
C236	CAP POLY 100nF 100V 10% RADIAL	3082
C237	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C241	CAP ALELEC 100uF 6.3v 20%ELECD	9324100U
C242	CAP X7R 1nF 50v 10% 0603	93ADHBXX1N
C243	CAP TANT 2u2F 10v 10% TANTA	93GDDC2U2
C244	CAP TANT 10uF 10v 10% TANTA	93GDDCXXX10U
C245	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C251	CAP 100nF +/-10% 10V X5R 0402	93QDDI100N
C253	CAP TANT 2u2F 10v 10% TANTA	93GDDC2U2
C257	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C258	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C259	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C260	CAP X7R 1nF 50v 10% 0603	93ADHBXX1N
C261	CAP X7R 1nF 50v 10% 0603	93ADHBXX1N
C262	CAP X7R 1nF 50v 10% 0603	93ADHBXX1N
C263	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C267	CAP X7R 4.7uF 100v 10% 2220	93FDJBXX4U7
C268	CAP X7R 1nF 50v 10% 0603	93ADHBXX1N
C269	CAP X7R 1nF 50v 10% 0603	93ADHBXX1N
C270	CAP X7R 1nF 50v 10% 0603	93ADHBXX1N
C271	CAP X7R 1nF 50v 10% 0603	93ADHBXX1N
C272	CAP X7R 1nF 50v 10% 0603	93ADHBXX1N
C273	CAP PFILM 22nF 100V 20% 1812	93EEJL22N
C275	CAP X7R 1nF 50v 10% 0603	93ADHBXX1N
C276	CAP X7R 1nF 50v 10% 0603	93ADHBXX1N
C277	CAP X7R 1nF 50v 10% 0603	93ADHBXX1N
C278	CAP X7R 1nF 50v 10% 0603	93ADHBXX1N
C281	CAP X7R 1nF 50v 10% 0603	93ADHBXX1N
C282	CAP X7R 1nF 50v 10% 0603	93ADHBXX1N
C283	CAP X7R 1nF 50v 10% 0603	93ADHBXX1N
C284	CAP X7R 1nF 50v 10% 0603	93ADHBXX1N
C288	CAP X7R 1nF 50v 10% 0603	93ADHBXX1N
C289	CAP AL ELEC NP 470uF 50V 20% RADIAL	3209
C290	CAP X7R 1nF 50v 10% 0603	93ADHBXX1N
C291	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C292	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C293	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C294	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C300	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C301	CAP X7R 47nF 16v 10% 0603	93ADEBXX47N
C302	CAP COG 470pF 50v 5% 0603	93ACHAXX470P
C303	CAP COG 470pF 50v 5% 0603	93ACHAXX470P
C304	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C305	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C306	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C307	CAP 10pF SM 0402	93QCHA10P
C308	CAP 10pF SM 0402	93QCHA10P
C309	CAP 100nF +/-10% 10V X5R 0402	93QDDI100N
C310	CAP 100nF +/-10% 10V X5R 0402	93QDDI100N
C311	CAP 100nF +/-10% 10V X5R 0402	93QDDI100N

Ref.	Description	Part No.
C312	CAP 100pF 1% 50V COG 0402	93QAHA100P
C313	CAP 100pF 1% 50V COG 0402	93QAHA100P
C314	CAP 100pF 1% 50V COG 0402	93QAHA100P
C316	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C319	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C320	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C321	CAP TANT 2u2F 10v 10% TANTA	93GDDC2U2
C322	CAP TANT 2u2F 10v 10% TANTA	93GDDC2U2
C323	CAP X7R 4.7uF 100v 10% 2220	93FDJBXX4U7
C324	CAP X7R 4.7uF 100v 10% 2220	93FDJBXX4U7
D1	DIODE ZENER 3V3 SOT23	9203BZX3V3
D2	DIODE BAS19 SOT23	9200BAS19
D3	DIODE SCHOTTKY 10BQ100 1A SMB	920010BQ100
D5	DIODE DUAL BAV99 SOT23	9200BAV99
D6	DIODE ZENER 18V 330mW SOT23	9203BZX18V
D7	DIODE BAS19 SOT23	9200BAS19
D8	DIODE ZENER 6V2 250mW SOT23	9203BZX6V2
D9	DIODE BAS19 SOT23	9200BAS19
D10	DIODE BAS19 SOT23	9200BAS19
D11	DIODE SCHOTTKY BAT54 SOT23	9200BAT54
D12	DIODE SCHOTTKY BAT54 SOT23	9200BAT54
D13	DIODE BAS19 SOT23	9200BAS19
D14	DIODE BAS19 SOT23	9200BAS19
D16	DIODE ZENER 18V 330mW SOT23	9203BZX18V
D17	DIODE ZENER 18V 330mW SOT23	9203BZX18V
D18	DIODE SCHOTTKY BAT54S SOT23	9200BAT54S
D19	DIODE ZENER 15V	9203BZX15V
D20	DIODE SCHOTTKY BAT54S SOT23	9200BAT54S
D21	DIODE BAW56 DUAL SOT23	9200BAW56
D23	DIODE SCHOTTKY BAT54S SOT23	9200BAT54S
D24	DIODE BAS19 SOT23	9200BAS19
D25	DIODE SCHOTTKY BAT54 SOT23	9200BAT54
D27	DIODE SCHOTTKY BAT54S SOT23	9200BAT54S
D29	DIODE BAS19 SOT23	9200BAS19
D32	DIODE BAS19 SOT23	9200BAS19
D34	DIODE ZENER 5V6 350mW SOT23	9203BZX5V6
D35	DIODE DUAL BAV99 SOT23	9200BAV99
D36	DIODE ZENER 18V 330mW SOT23	9203BZX18V
D37	DIODE RECT 1A D1F10	9204D1F10
D39	DIODE ZENER 3V3 SOT23	9203BZX3V3
D40	DIODE ZENER 3V3 SOT23	9203BZX3V3
D41	DIODE SCHOTTKY BAT54 SOT23	9200BAT54
D42	DIODE SCHOTTKY BAT54 SOT23	9200BAT54
D44	DIODE BAS19 SOT23	9200BAS19
D45	IC SCHOTTKY DIODE RECTIFIER MBR0530 SOD-123	9200MBR0530
D46	DIODE SCHOTTKY BAT54 SOT23	9200BAT54
D47	DIODE SCHOTTKY BAT54 SOT23	9200BAT54
D48	DIODE BAS19 SOT23	9200BAS19

Ref.	Description	Part No.
D50	IC SCHOTTKY DIODE RECTIFIER 30WQ03FN TO-252	920030WQ03
D51	IC SCHOTTKY DIODE RECTIFIER 30WQ03FN TO-252	920030WQ03
D54	DIODE SCHOTTKY BAT54 SOT23	9200BAT54
F1	FUSE CLIP AUTOMOTIVE 15A	15525
F2	FUSE CLIP AUTOMOTIVE 15A	15525
F4	FUSE RESET 3A	15524
F5	FUSE RESET 3A	15524
F6	FUSE CLIP AUTOMOTIVE 15A	15525
IC1	IC OPAMP DUAL RAIL-TO-RAIL SO8	9400TLV272
IC2	IC QUAD AND 74HC08 2V SO14	940074HC08
IC3	IC COMPARATOR 2.7V TO 5V SOT23	9400LMV331
IC4	IC SERIAL EEPROM SOIC8 SM	9401AT24C64
IC5	IC QUAD OPAMP TLV2264 SO14	9400TLV2264
IC7	IC FLASH 8 BIT FLASH MICROCONTROLLER 6 PIN SEATKNG	940110F220
IC9	IC GYRO KGF01-080 SO24	9400KGF01
IC11	IC POWER REGULATOR 5V 500MA 260KHZ SO8	9400LM2671
IC12	IC REG LOW DROPOUT POS 5V SO8	9400LM2931AM
IC13	IC OPTO COUPLER QUAD SSO16	9400PS2801A4
IC14	IC COMPARATOR 2-36V SO8	9400LM393M
IC15	TRANSISTOR MOSFET H-BRIDGE DRIVER SO8	9400IR2183
IC16	TRANSISTOR MOSFET H-BRIDGE DRIVER SO8	9400IR2183
IC17	IC OPTO COUPLER SINGLE SSOP4	9400PS2801A1
IC18	IC TRANSCEIVER HS CAN 5v SO8	9400TJA1050
IC20	IC COMPARATOR 2.7V TO 5V SOT23	9400LMV331
IC21	IC OPAMP DUAL TLV2262CD SO8	9400TLV2262
IC22	IC LOGIC SWITCH 74HC4051 SO16	940074HC4051
IC23	IC COMPARATOR 2-36V SO8	9400LM393M
IC24	IC AMPLIFIER ANALOGUE 20V/V 500kHz SOT23	9400INA193
IC25	IC COMPARATOR 2-36V SO8	9400LM393M
IC26	IC OPTO COUPLER SINGLE SSOP4	9400PS2801A1
IC27	12V SUPPLY CONTROLLER	9400TPS40055
IC28	IC TEMPERATURE SENSOR SOT23	9400LM60
IC29	IC TEMPERATURE SENSOR SOT23	9400LM60
IC30	IC QUAD 2 INPUT POSITIVE OR GATES 74HC32M SO14 SM	940074HC32M
IC31	IC OPAMP DUAL TLV2262CD SO8	9400TLV2262
IC32	IC AMPLIFIER ANALOGUE 20V/V 500kHz SOT23	9400INA193
IC33	IC OPTO COUPLER QUAD SSO16	9400PS2801A4
IC34	IC REGULATOR LINEAR 5V 800mA SOT223	9401LM1117
IC36	IC OPTO COUPLER SINGLE SSOP4	9400PS2801A1
IC37	IC OPTO COUPLER SINGLE SSOP4	9400PS2801A1
IC38	IC HIGH SPEED CMOS OPTOCOUPLER 3.3/5V SSO8	9400ACPL072L
IC39	IC HIGH SPEED CMOS OPTOCOUPLER 3.3/5V SSO8	9400ACPL072L

Ref.	Description	Part No.
IC40	IC QUAD AND 74HC08 2V SO14	940074HC08
IC45	IC TRIPLE 2-CHANNEL ANALOG MULTIPLEXER/DEMULTIPLEXER	940074LV4053
IC46	IC TRIPLE 2-CHANNEL ANALOG MULTIPLEXER/DEMULTIPLEXER	940074LV4053
IC48	IC FLASH MEMORY 16MBIT SERIAL	9400S25FL016A
IC51	IC OPAMP LINEAR 2.7-6V SOT23-5	9400TLV2461
IC52	IC MICROCONTROLLER ARM9 512k FLASH 96k SRAM	9401STR912FA
IC53	IC DUAL OUTPUT VOLTAGE REGULATOR 3.3V/1.8V	9400TPS70151
IC54	IC SRAM 2-MBIT 128Kx16 HIGH SPEED 2.7-3.6V	9400CY62136
IC55	IC LATCH D-TYPE 16 BIT TRANSPARENT	9.40074E+11
IC80	IC QUAD OPAMP TLV2264 SO14	9400TLV2264
IC120	IC COMPARATOR PUSH PULL SOT23-6	9400LMV761
IC170	IC QUAD 2I/P NAND GATE 74HC00 SO14	940074HC00
IC180	IC QUAD NAND HEF4011UB SO14 SM	94004011U
ISO5	IC OPTO COUPLER 18v SO8	9400HP0701
ISO8	IC OPTO COUPLER 18v SO8	9400HP0701
L2	INDUCTOR 10uH 18A	15554
L4	INDUCTOR FERRITE BEAD 650R@100MHz	15390
L5	INDUCTOR FERRITE BEAD 650R@100MHz	15390
L6	INDUCTOR FERRITE BEAD 650R@100MHz	15390
L7	INDUCTOR 1uH 200mA 1206	9600L1
L8	INDUCTOR 1uH 0.92A 5% 0805	9600MAG1U
L9	INDUCTOR 1uH 0.92A 5% 0805	9600MAG1U
L10	INDUCTOR FERRITE BEAD 650R@100MHz	15390
L13	INDUCTOR 1uH 200mA 1206	9600L1
L14	INDUCTOR 1uH 200mA 1206	9600L1
L15	INDUCTOR 1uH 200mA 1206	9600L1
L16	INDUCTOR 1uH 200mA 1206	9600L1
L17	INDUCTOR 1uH 200mA 1206	9600L1
L18	INDUCTOR 1uH 200mA 1206	9600L1
L19	INDUCTOR 100uH 730mA	9600COILC2
L20	INDUCTOR 1uH 200mA 1206	9600L1
L21	IND COMMON MODE CHOKE VERT 13A 275uH	15539
L22	INDUCTOR 1uH 200mA 1206	9600L1
L23	INDUCTOR 1uH 200mA 1206	9600L1
L27	FERRITE 200mA BLM21A102S	9600FER2012
L28	FERRITE 200mA BLM21A102S	9600FER2012
L31	INDUCTOR 1uH 200mA 1206	9600L1
L32	INDUCTOR 1uH 200mA 1206	9600L1
L34	TRANSF C-MODE 0.7A TOKO B4FL	9600TOKOCM1
L38	INDUCTOR 1uH 200mA 1206	9600L1
L39	INDUCTOR 1uH 200mA 1206	9600L1
L40	INDUCTOR 1uH 200mA 1206	9600L1
L42	INDUCTOR 1uH 200mA 1206	9600L1
L43	INDUCTOR 1uH 200mA 1206	9600L1
L44	INDUCTOR 1uH 0.92A 5% 0805	9600MAG1U
L45	INDUCTOR 1uH 200mA 1206	9600L1

Ref.	Description	Part No.
L46	IND COMMON MODE CHOKE 30A 270uH	3030-602
L47	INDUCTOR 1uH 200mA 1206	9600L1
L48	INDUCTOR 1uH 200mA 1206	9600L1
L49	INDUCTOR 1uH 200mA 1206	9600L1
L50	INDUCTOR 1uH 200mA 1206	9600L1
L51	INDUCTOR 1uH 200mA 1206	9600L1
L52	INDUCTOR 10uH SMD	9600L29
L53	INDUCTOR 1uH 200mA 1206	9600L1
L54	INDUCTOR 1uH 200mA 1206	9600L1
L55	INDUCTOR 1uH 200mA 1206	9600L1
L56	INDUCTOR 1uH 200mA 1206	9600L1
L57	INDUCTOR 1uH 200mA 1206	9600L1
L59	INDUCTOR 1uH 200mA 1206	9600L1
L61	INDUCTOR 1uH 200mA 1206	9600L1
L62	INDUCTOR 1uH 200mA 1206	9600L1
L63	INDUCTOR 1uH 200mA 1206	9600L1
L64	INDUCTOR 1uH 200mA 1206	9600L1
L65	INDUCTOR 1uH 200mA 1206	9600L1
L66	INDUCTOR 1uH 200mA 1206	9600L1
L67	INDUCTOR 1uH 200mA 1206	9600L1
L68	INDUCTOR 1uH 200mA 1206	9600L1
L69	INDUCTOR 1uH 200mA 1206	9600L1
L73	INDUCTOR 1uH 200mA 1206	9600L1
L74	INDUCTOR 1uH 200mA 1206	9600L1
L75	INDUCTOR 1uH 200mA 1206	9600L1
L76	IND COMMON MODE CHOKE 8 LINE 100mA 5uH	9600CCDLF80
L77	IND COMMON MODE CHOKE 3 LINE 100mA 5uH	9600PDLF30
L78	INDUCTOR 1uH 200mA 1206	9600L1
L81	IND COMMON MODE CHOKE 30A 4.7uH	3030-603
L82	INDUCTOR 1uH 200mA 1206	9600L1
L84	COMMON MODE CHOKE WE 744221 SM	9600WURTH2M
L85	INDUCTOR 1uH 200mA 1206	9600L1
L86	INDUCTOR 1uH 200mA 1206	9600L1
LED1	LED RED 0805 SM	9207SML210LT
LED2	LED RED 0805 SM	9207SML210LT
LED4	LED YELLOW 0805 SM	9207SML210Y
LED5	LED YELLOW 0805 SM	9207SML210Y
LED6	LED YELLOW 0805 SM	9207SML210Y
LED7	LED SML-210 GREEN	9207SML210
LED9	LED RED 0805 SM	9207SML210LT
LED11	LED SML-210 GREEN	9207SML210
LED12	LED YELLOW 0805 SM	9207SML210Y
PL1	CONNECTOR SPADE (EARTH TAG)	7503
R1	RES 0R0 1% 0.063W 0402	91QAA0R0
R2	RES MFILM 330R 5% 3W CONV	1245
R3	RES MFILM 2K2 5% 0.125W 1206	91062K2
R4	RES 100R 1% 0.063W 0402	91QAA100R
R5	RES MFILM 7K5 1% 0.063W 0402	91QAA7K5

Ref.	Description	Part No.
R6	RES MFILM 3K9 1% 0.063W 0402	91QAA3K9
R7	RES MFILM 1K0 1% 0.063W 0402	91QAA1K
R8	RES MFILM 7K5 1% 0.063W 0402	91QAA7K5
R9	RES MFILM 3K9 1% 0.063W 0402	91QAA3K9
R10	RES MFILM 12K 5% 0.125W 1206	910612K
R11	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R12	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R13	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R14	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R15	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R16	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R17	RES MFILM 1K2 1% 0.063W 0402	91QAA1K2
R18	RES MFILM 16K 1% 0.063W 0603	91AAAXX16K
R19	RES MFILM 1M0 1% 0.063W 0402	91QAA1M
R20	RES MFILM 39K 1% 0.063W 0402	91QAA39K
R21	RES MFILM 39K 1% 0.063W 0402	91QAA39K
R22	RES MFILM 280K 1% 0.25W 1206	91CADXX280K
R23	RES MFILM 330K 1% 0.063W 0402	91QAA330K
R24	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7
R25	RES MFILM 560R 1% 0.063W 0603	91AAAXX560R
R26	RES MFILM 330R 1% 0.063W 0402	91QAA330R
R27	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R28	RES MFILM 2K2 5% 0.125W 1206	91062K2
R29	RES MFILM 2K2 5% 0.125W 1206	91062K2
R30	RES MFILM 15K 1% 0.063W 0402	91QAAXX15K
R31	RES MFILM 10R 1% 0.063W 0402	91QAA10R
R32	RES MFILM 10R 1% 0.063W 0402	91QAA10R
R33	RES MFILM 2K2 5% 0.125W 1206	91062K2
R34	RES 100K 1% 0.063W 0402	91QAA100K
R35	RES MFILM 150K 1% 0.063W 0402	91QAA150K
R36	RES 100K 1% 0.063W 0402	91QAA100K
R37	RES 100K 1% 0.063W 0402	91QAA100K
R38	RES MFILM 1K2 1% 0.063W 0402	91QAA1K2
R39	RES MFILM 1K2 1% 0.063W 0402	91QAA1K2
R40	RES MFILM 82R 1% 0.063W 0402	91QAA82R
R41	RES MFILM 82R 1% 0.063W 0402	91QAA82R
R42	RES MFILM 51K 1% 0.063W 0402	91QAA51K
R43	RES MFILM 51K 1% 0.063W 0402	91QAA51K
R44	RES MFILM 33K 1% 0.063W 0402	91QAA33K
R45	RES MFILM 33K 1% 0.063W 0402	91QAA33K
R46	RES 100K 1% 0.063W 0402	91QAA100K
R47	RES 180K 1% 0.063W 0402	91QAA180K
R48	RES 100K 1% 0.063W 0402	91QAA100K
R49	RES MFILM 16K 1% 0.063W 0603	91AAAXX16K
R50	RES MFILM 16K 1% 0.063W 0603	91AAAXX16K
R51	RES 100R 1% 0.063W 0402	91QAA100R
R52	RES MFILM 1M0 1% 0.063W 0402	91QAA1M
R53	RES MFILM 2K2 1% 0.063W 0402	91QAA2K2
R56	RES MFILM 2K2 5% 0.125W 1206	91062K2
R57	RES MFILM 680R 1% 0.063W 0402	91QAA680R

Ref.	Description	Part No.	Ref.	Description	Part No.
R58	RES MFILM 390R 1% 0.063W 0402	91QAA390R	R110	RES MFILM 1K0 1% 0.063W 0402	91QAA1K
R59	RES MFILM 8R2 1% 0.063W 0603	91AAAXX8R2	R111	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7
R61	RES LOW VALUE 0R005 5% 2W 2512	91FCHXXR005	R112	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7
R62	RES MFILM 8R2 1% 0.063W 0603	91AAAXX8R2	R113	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7
R63	RES MFILM 16K 1% 0.063W 0603	91AAAXX16K	R114	RES 100K 1% 0.063W 0402	91QAA100K
R64	RES MFILM 1K5 1% 0.063W 0402	91QAA1K5	R115	RES MFILM 51K 1% 0.063W 0402	91QAA51K
R65	RES MFILM 1K5 1% 0.063W 0402	91QAA1K5	R116	RES MFILM 220R 1% 0.063W 0603	91AAAXX220R
R66	RES MFILM 1K5 1% 0.063W 0402	91QAA1K5	R117	RES MFILM 270R 1% 0.063W 0402	91QAA270R
R67	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7	R118	RES MFILM 5K6 1% 0.063W 0402	91QAA5K6
R68	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7	R119	RES MFILM 82R 1% 0.063W 0402	91QAA82R
R69	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7	R120	RES MFILM 1K2 1% 0.063W 0402	91QAA1K2
R70	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7	R121	RES MFILM 1M0 1% 0.063W 0402	91QAA1M
R71	RES 10K 1% 0.063W 0402	91QAA10K	R122	RES 10K 1% 0.063W 0402	91QAA10K
R72	RES 10K 1% 0.063W 0402	91QAA10K	R123	RES 10K 1% 0.063W 0402	91QAA10K
R73	RES 10K 1% 0.063W 0402	91QAA10K	R124	RES 10K 1% 0.063W 0402	91QAA10K
R74	RES 10K 1% 0.063W 0402	91QAA10K	R125	RES 10K 1% 0.063W 0402	91QAA10K
R75	RES 10K 1% 0.063W 0402	91QAA10K	R126	RES MFILM 3K3 1% 0.063W 0402	91QAA3K3
R76	RES MFILM 1K5 1% 0.063W 0402	91QAA1K5	R127	RES MFILM 1K0 1% 0.063W 0402	91QAA1K
R77	RES 10K 1% 0.063W 0402	91QAA10K	R128	RES MFILM 39K 1% 0.063W 0402	91QAA39K
R78	RES MFILM 6K8 1% 0.25W 1206	91036K8	R130	RES MFILM 2K2 1% 0.063W 0402	91QAA2K2
R79	RES 10K 1% 0.063W 0402	91QAA10K	R131	RES MFILM 2K2 1% 0.063W 0402	91QAA2K2
R80	RES MFILM 2M7 1% 0.063W 0402	91QAA2M7	R132	RES MFILM 33K 1% 0.063W 0402	91QAA33K
R81	RES MFILM 47K 1% 0.063W 0402	91QAA47K	R133	RES MFILM 680R 1% 0.063W 0402	91QAA680R
R82	RES MFILM 270R 1% 0.063W 0402	91QAA270R	R134	RES 10K 1% 0.063W 0402	91QAA10K
R83	RES MFILM 270R 1% 0.063W 0402	91QAA270R	R135	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7
R84	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7	R136	RES MFILM 390R 1% 0.063W 0402	91QAA390R
R85	RES 10K 1% 0.063W 0402	91QAA10K	R137	RES MFILM 3K3 1% 0.063W 0402	91QAA3K3
R86	RES 10K 1% 0.063W 0402	91QAA10K	R138	RES MFILM 8R2 1% 0.063W 0603	91AAAXX8R2
R87	RES 10K 1% 0.063W 0402	91QAA10K	R139	RES MFILM 22K 1% 0.063W 0603	91AAAXX22K
R88	RES 100R 1% 0.063W 0402	91QAA100R	R140	RES MFILM 15K 1% 0.063W 0402	91QAAXX15K
R89	RES 100R 1% 0.063W 0402	91QAA100R	R141	RES MFILM 2K2 1% 0.063W 0402	91QAA2K2
R90	RES MFILM 2M7 1% 0.063W 0402	91QAA2M7	R142	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7
R91	RES MFILM 820K 1% 0.063W 0402	91QAA820K	R143	RES MFILM 39K 1% 0.063W 0402	91QAA39K
R92	RES MFILM 820K 1% 0.063W 0402	91QAA820K	R144	RES MFILM 330R 1% 0.063W 0402	91QAA330R
R93	RES 10K 1% 0.063W 0402	91QAA10K	R145	RES MFILM 39K 1% 0.063W 0402	91QAA39K
R94	RES MFILM 330K 1% 0.063W 0402	91QAA330K	R146	RES MFILM 39K 1% 0.063W 0402	91QAA39K
R95	RES 10K 1% 0.063W 0402	91QAA10K	R147	RES 10K 1% 0.063W 0402	91QAA10K
R97	RES MFILM 0R0 5% 0.063W 0603	91010R0	R148	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7
R98	RES MFILM 330K 1% 0.063W 0402	91QAA330K	R150	RES MFILM 1K2 1% 0.063W 0402	91QAA1K2
R99	RES MFILM 2K2 1% 0.063W 0402	91QAA2K2	R151	RES MFILM 0R0 5% 0.063W 0603	91010R0
R100	RES MFILM 2K2 1% 0.063W 0402	91QAA2K2	R152	RES MFILM 100R 5% 0.125W 1206	9106100R
R101	RES MFILM 150R 1% 0.063W 0402	91QAA150R	R153	RES MFILM 1K0 1% 0.063W 0402	91QAA1K
R102	RES 100R 1% 0.063W 0402	91QAA100R	R155	RES MFILM 22K 1% 0.063W 0402	91QAA22K
R103	RES 10K 1% 0.063W 0402	91QAA10K	R156	RES MFILM 5K6 1% 0.063W 0402	91QAA5K6
R104	RES MFILM 220R 1% 0.063W 0603	91AAAXX220R	R160	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7
R105	RES 100R 1% 0.063W 0402	91QAA100R	R164	RES MFILM 100R 5% 0.125W 1206	9106100R
R106	RES MFILM 1K0 1% 0.063W 0402	91QAA1K	R165	RES MFILM 2K2 5% 0.125W 1206	91062K2
R107	RES MFILM 1K0 1% 0.063W 0402	91QAA1K	R166	RES MFILM 1K0 1% 0.063W 0402	91QAA1K
R108	RES MFILM 1K0 1% 0.063W 0402	91QAA1K	R167	RES 10K 1% 0.063W 0402	91QAA10K
R109	RES MFILM 1K0 1% 0.063W 0402	91QAA1K	R168	RES 10K 1% 0.063W 0402	91QAA10K

Ref.	Description	Part No.
R169	RES MFILM 3K3 1% 0.063W 0402	91QAA3K3
R170	RES 10K 1% 0.063W 0402	91QAA10K
R171	RES 10K 1% 0.063W 0402	91QAA10K
R172	RES MFILM 2K2 5% 0.125W 1206	91062K2
R173	RES MFILM 2K2 5% 0.125W 1206	91062K2
R175	RES MFILM 0R0 5% 0.063W 0603	91010R0
R176	RES MFILM 2K2 5% 0.125W 1206	91062K2
R179	RES MFILM 280K 1% 0.25W 1206	91CADXX280K
R180	RES MFILM 0.05R 5% 0.5W 2010	91HCGXXXR05
R182	RES MFILM 15R 1% 0.063W 0603	91AAAXX15R
R183	RES 10K 1% 0.063W 0402	91QAA10K
R184	RES 10K 1% 0.063W 0402	91QAA10K
R185	RES 10K 1% 0.063W 0402	91QAA10K
R186	RES 10K 1% 0.063W 0402	91QAA10K
R187	RES 10K 1% 0.063W 0402	91QAA10K
R190	RES MFILM 15R 1% 0.063W 0603	91AAAXX15R
R191	RES MFILM 15R 1% 0.063W 0603	91AAAXX15R
R193	RES MFILM 15R 1% 0.063W 0603	91AAAXX15R
R194	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R195	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R196	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R197	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R198	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R199	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R200	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R201	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R202	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R203	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R204	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R205	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R206	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R208	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R209	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R210	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R211	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R212	RES MFILM 1K0 1% 0.063W 0402	91QAA1K
R213	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R214	RES MFILM 330K 1% 0.063W 0402	91QAA330K
R215	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R216	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R217	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R218	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R219	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R221	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R222	RES 10K 1% 0.063W 0402	91QAA10K
R223	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R224	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R225	RES 10K 1% 0.063W 0402	91QAA10K
R226	RES 100K 1% 0.063W 0402	91QAA100K
R227	RES 10K 1% 0.063W 0402	91QAA10K

Ref.	Description	Part No.
R228	RES 10K 1% 0.063W 0402	91QAA10K
R229	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R230	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7
R231	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R234	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R235	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7
R236	RES MFILM 39K 1% 0.063W 0402	91QAA39K
R237	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7
R238	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R239	RES MFILM 15K 1% 0.063W 0402	91QAAXX15K
R240	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R241	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R242	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R244	RES 10K 1% 0.063W 0402	91QAA10K
R245	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R246	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R247	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R248	RES 10K 1% 0.063W 0402	91QAA10K
R249	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R250	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R251	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R252	RES MFILM 1K0 1% 0.063W 0402	91QAA1K
R253	RES 10K 1% 0.063W 0402	91QAA10K
R254	RES 10K 1% 0.063W 0402	91QAA10K
R256	RES MFILM 2R2 5% 0.125W 1206	91CCC2R2
R257	RES MFILM 330K 1% 0.063W 0402	91QAA330K
R258	RES MFILM 27R 5% 1W 2512	91FCG27R
R260	RES MFILM 1K0 1% 0.063W 0402	91QAA1K
R261	RES MFILM 1K0 1% 0.063W 0402	91QAA1K
R262	RES MFILM 3K3 1% 0.063W 0402	91QAA3K3
R264	RES 10K 1% 0.063W 0402	91QAA10K
R265	RES 100K 1% 0.063W 0402	91QAA100K
R267	RES MFILM 680R 1% 0.063W 0402	91QAA680R
R268	RES MFILM 47K 1% 0.063W 0402	91QAA47K
R269	RES MFILM 47K 1% 0.063W 0402	91QAA47K
R270	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7
R271	RES 100K 1% 0.063W 0402	91QAA100K
R273	RES MFILM 22K 1% 0.063W 0603	91AAAXX22K
R274	RES 100K 1% 0.063W 0402	91QAA100K
R275	RES MFILM 47K 1% 0.063W 0402	91QAA47K
R276	RES MFILM 3K3 1% 0.063W 0402	91QAA3K3
R277	RES MFILM 1K2 1% 0.063W 0402	91QAA1K2
R278	RES 100K 1% 0.063W 0402	91QAA100K
R279	RES MFILM 5K6 1% 0.063W 0402	91QAA5K6
R280	RES MFILM 1K8 1% 0.063W 0402	91QAA1K8
R281	RES MFILM 1M0 1% 0.063W 0402	91QAA1M
R282	RES MFILM 47K 1% 0.063W 0402	91QAA47K
R283	RES MFILM 220R 1% 0.063W 0603	91AAAXX220R
R285	RES 10K 1% 0.063W 0402	91QAA10K
R286	RES 10K 1% 0.063W 0402	91QAA10K

Ref.	Description	Part No.	Ref.	Description	Part No.
R287	RES MFILM 220R 1% 0.063W 0603	91AAAXX220R	R344	RES 10K 1% 0.063W 0402	91QAA10K
R289	RES MFILM 120R 1% 0.063W 0402	91QAA120R	R345	RES MFILM 2K2 1% 0.063W 0402	91QAA2K2
R291	RES MFILM 470R 1% 0.063W 0402	91QAA470R	R346	RES MFILM 390R 1% 0.063W 0402	91QAA390R
R292	RES MFILM 470R 1% 0.063W 0402	91QAA470R	R347	RES MFILM 2K2 1% 0.063W 0402	91QAA2K2
R295	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7	R348	RES MFILM 330K 1% 0.063W 0402	91QAA330K
R296	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7	R349	RES MFILM 47K 1% 0.063W 0402	91QAA47K
R297	RES MFILM 680R 1% 0.063W 0402	91QAA680R	R350	RES MFILM 47K 1% 0.063W 0402	91QAA47K
R298	RES MFILM 1K2 1% 0.063W 0402	91QAA1K2	R351	RES MFILM 1K5 1% 0.063W 0402	91QAA1K5
R299	RES MFILM 1K2 1% 0.063W 0402	91QAA1K2	R352	RES MFILM 2K2 5% 0.125W 1206	91062K2
R300	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7	R353	RES 10K 1% 0.063W 0402	91QAA10K
R301	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7	R354	RES 10K 1% 0.063W 0402	91QAA10K
R302	RES MFILM 33K 1% 0.063W 0402	91QAA33K	R355	RES MFILM 2K2 1% 0.063W 0402	91QAA2K2
R303	RES MFILM 470R 1% 0.063W 0402	91QAA470R	R356	RES MFILM 2K2 1% 0.063W 0402	91QAA2K2
R304	RES MFILM 470R 1% 0.063W 0402	91QAA470R	R357	RES MFILM 22K 1% 0.063W 0402	91QAA22K
R305	RES MFILM 2K7 1% 0.063W 0402	91QAA2K7	R358	RES 10K 1% 0.063W 0402	91QAA10K
R306	RES MFILM 1K2 1% 0.063W 0402	91QAA1K2	R359	RES MFILM 51K 1% 0.063W 0402	91QAA51K
R307	RES 0R0 1% 0.063W 0402	91QAA0R0	R360	RES MFILM 51K 1% 0.063W 0402	91QAA51K
R308	RES 0R0 1% 0.063W 0402	91QAA0R0	R361	RES MFILM 5K6 1% 0.063W 0402	91QAA5K6
R309	RES MFILM 2K2 5% 0.125W 1206	91062K2	R362	RES MFILM 5K6 1% 0.063W 0402	91QAA5K6
R310	RES MFILM 33K 1% 0.063W 0402	91QAA33K	R363	RES 10K 1% 0.063W 0402	91QAA10K
R311	RES MFILM 220K 1% 0.063W 0402	91QAA220K	R364	RES 100R 1% 0.063W 0402	91QAA100R
R312	RES MFILM 270R 1% 0.063W 0402	91QAA270R	R367	RES 10K 1% 0.063W 0402	91QAA10K
R313	RES MFILM 2K2 5% 0.125W 1206	91062K2	R369	RES 10K 1% 0.063W 0402	91QAA10K
R314	RES MFILM 6K8 1% 0.063W 0402	91QAA6K8	R372	RES MFILM 2K2 5% 0.125W 1206	91062K2
R315	RES MFILM 680R 1% 0.063W 0402	91QAA680R	R373	RES MFILM 1K0 5% 1.0W 2512	91FCGXXXX1K
R316	RES MFILM 220R 1% 0.063W 0603	91AAAXX220R	R374	RES MFILM 2K2 5% 0.125W 1206	91062K2
R318	RES 100R 1% 0.063W 0402	91QAA100R	R375	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7
R319	RES MFILM 51K 1% 0.063W 0402	91QAA51K	R376	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7
R321	RES MFILM 7K5 1% 0.063W 0402	91QAA7K5	R378	RES 100R 1% 0.063W 0402	91QAA100R
R322	RES MFILM 5K6 1% 0.063W 0402	91QAA5K6	R379	RES 100K 1% 0.063W 0402	91QAA100K
R323	RES MFILM 330K 1% 0.063W 0402	91QAA330K	R380	RES MFILM 3K3 1% 0.063W 0402	91QAA3K3
R324	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7	R381	RES 100R 1% 0.063W 0402	91QAA100R
R325	RES 10K 1% 0.063W 0402	91QAA10K	R382	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7
R326	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7	R383	RES MFILM 3K3 1% 0.063W 0402	91QAA3K3
R327	RES 10K 1% 0.063W 0402	91QAA10K	R389	RES 10K 1% 0.063W 0402	91QAA10K
R328	RES 100K 1% 0.063W 0402	91QAA100K	R390	RES MFILM 1K0 1% 0.063W 0402	91QAA1K
R329	RES MFILM 220R 1% 0.063W 0603	91AAAXX220R	R391	RES MFILM 3K3 1% 0.063W 0402	91QAA3K3
R330	RES MFILM 33K 1% 0.063W 0402	91QAA33K	R392	RES MFILM 2K2 5% 0.125W 1206	91062K2
R331	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7	R393	RES MFILM 22K 1% 0.063W 0603	91AAAXX22K
R332	RES 10K 1% 0.063W 0402	91QAA10K	R396	RES 10K 1% 0.063W 0402	91QAA10K
R334	RES MFILM 22K 1% 0.063W 0402	91QAA22K	R398	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7
R335	RES 10K 1% 0.063W 0402	91QAA10K	R399	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7
R336	RES MFILM 270R 1% 0.063W 0402	91QAA270R	R400	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7
R337	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7	R401	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7
R338	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7	R402	RES MFILM 220R 1% 0.063W 0603	91AAAXX220R
R339	RES 10K 1% 0.063W 0402	91QAA10K	R404	RES MFILM 330R 1% 0.063W 0402	91QAA330R
R340	RES MFILM 1K0 1% 0.063W 0402	91QAA1K	R405	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7
R341	RES MFILM 330K 1% 0.063W 0402	91QAA330K	R406	RES 10K 1% 0.063W 0402	91QAA10K
R342	RES MFILM 680R 1% 0.063W 0402	91QAA680R	R407	RES MFILM 1K0 1% 0.063W 0402	91QAA1K
R343	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7	R408	RES MFILM 2K2 1% 0.063W 0402	91QAA2K2

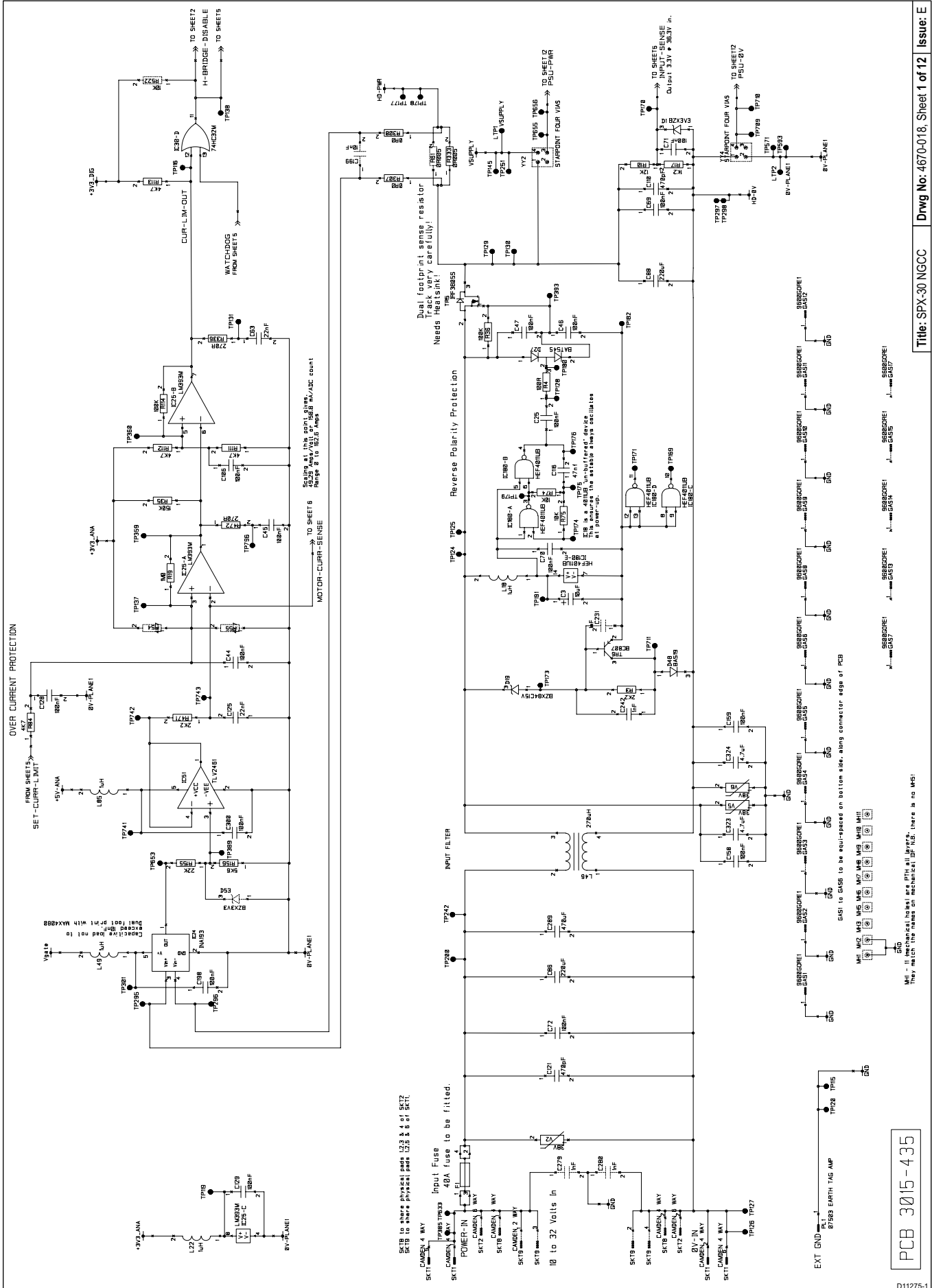
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R416	RES 0R0 1% 0.063W 0402	91QAA0R0
R417	RES 0R0 1% 0.063W 0402	91QAA0R0
R419	RES 0R0 1% 0.063W 0402	91QAA0R0
R438	RES 0R0 1% 0.063W 0402	91QAA0R0
R439	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7
R440	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7
R441	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R443	RES MFILM 220R 1% 0.063W 0603	91AAAXX220R
R444	RES MFILM 220R 1% 0.063W 0603	91AAAXX220R
R445	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R446	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R447	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R448	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R449	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R453	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R454	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R455	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R456	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R460	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R465	RES 10K 1% 0.063W 0402	91QAA10K
R466	RES MFILM 10R 1% 0.063W 0402	91QAA10R
R467	RES MFILM 330R 1% 0.063W 0402	91QAA330R
R468	RES MFILM 330R 1% 0.063W 0402	91QAA330R
R469	RES 10K 1% 0.063W 0402	91QAA10K
R470	RES 10K 1% 0.063W 0402	91QAA10K
R471	RES MFILM 2K2 1% 0.063W 0402	91QAA2K2
R472	RES MFILM 270R 1% 0.063W 0402	91QAA270R
R473	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7
R475	RES 100R 1% 0.063W 0402	91QAA100R
R476	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7
R477	RES 0R0 1% 0.063W 0402	91QAA0R0
R478	RES 10K 1% 0.063W 0402	91QAA10K
R479	RES 10K 1% 0.063W 0402	91QAA10K
R480	RES 10K 1% 0.063W 0402	91QAA10K
R481	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R482	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R483	RES MFILM 330K 1% 0.063W 0402	91QAA330K
R484	RES MFILM 330K 1% 0.063W 0402	91QAA330K
R485	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R486	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R487	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R489	RES 10K 1% 0.063W 0402	91QAA10K
R511	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7
R512	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7
R515	RES MFILM 47K 1% 0.063W 0402	91QAA47K
R516	RES MFILM 47K 1% 0.063W 0402	91QAA47K
R517	RES MFILM 3K3 1% 0.063W 0402	91QAA3K3

Ref.	Description	Part No.
R518	RES MFILM 470R 1% 0.063W 0402	91QAA470R
R520	RES MFILM 470R 1% 0.063W 0402	91QAA470R
R521	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7
R523	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R524	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R525	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R526	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R527	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R528	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R529	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R530	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R531	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R532	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R533	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R534	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R535	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R536	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R537	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R538	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R539	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R540	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R541	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7
R542	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7
R543	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R544	RES 10K 1% 0.063W 0402	91QAA10K
R545	RES 10K 1% 0.063W 0402	91QAA10K
R546	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R547	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R548	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R552	RES MFILM 2K2 1% 0.063W 0402	91QAA2K2
R553	RES MFILM 2K2 1% 0.063W 0402	91QAA2K2
R556	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R557	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R558	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R559	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7
R560	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7
R561	RES 10K 1% 0.063W 0402	91QAA10K
R900	RES MFILM 0R0 5% 0.063W 0603	91010R0
RLY1	RELAY SPDT 12VDC 25A OMRON	15541
RLY5	RELAY DPDT-NO 12V OMRON	15522
RLY7	RELAY DPST-NO DUAL FET 60VAC 400mA OMRON	9600RELAY3
RN2	RES NET 2K2 5% 0.125W MNR34	91122K2
RN5	RES NET 2K2 5% 0.125W MNR34	91122K2
SKT3	11 way 5.0 mm header	7488
SKT4	6 way 5.0 mm header	7490
SKT5	5 way 5.0 mm header	7491
SKT6	2 way 5.0 mm header	7499
SKT8	CON HEADER CLAMP TERMINAL 9.52mm PITCH 4W	7486

Ref.	Description	Part No.	Ref.	Description	Part No.
SKT10	4 way 5.0 mm header	7511	TR54	TRANSISTOR BC817 NPN SOT23	9500BC817
SKT11	CON SAMTEC 12 WAY CLP LOW PROFILE	9602SAMTEC12	TR55	TRANSISTOR MOSFET N CHAN SOT23	95002N7002
SW1	SLIDE SWITCH	9600SWAPEM	TR56	TRANSISTOR BC817 NPN SOT23	9500BC817
SW2	SLIDE SWITCH	9600SWAPEM	TR57	TRANSISTOR BC817 NPN SOT23	9500BC817
TR1	TRANSISTOR MOSFET NCHAN	9500IRFZ48	TR58	TRANSISTOR BC817 NPN SOT23	9500BC817
TR2	TRANSISTOR MOSFET NCHAN	9500IRFZ48	TR59	TRANSISTOR BC817 NPN SOT23	9500BC817
TR3	TRANSISTOR MOSFET NCHAN	9500IRFZ48	TR60	TRANSISTOR DUAL IMX1 NPN SOT36	9500IMX1
TR4	TRANSISTOR MOSFET NCHAN	9500IRFZ48	TR61	TRANSISTOR DUAL IMX1 NPN SOT36	9500IMX1
TR5	TRANSISTOR MOSFET NCHAN	9500IRFZ48	TR131	TRANSISTOR MOSFET PCHAN IRFR5505 TO252	9500IR5505
TR6	TRANSISTOR BC807 PNP SOT23	9500BC807	V1	VARISTOR 2K2 V33ZA5	1244
TR8	TRANSISTOR MOSFET N CHAN DPAK	9500IRLR2905	V2	VARISTOR 2K2 V33ZA5	1244
TR10	TRANSISTOR MOSFET N CHAN DPAK	9500IRLR2905	V5	VARISTOR 2K2 V33ZA5	1244
TR11	TRANSISTOR MOSFET N CHAN DPAK	9500IRLR2905	V6	VARISTOR 2K2 V33ZA5	1244
TR12	TRANSISTOR MOSFET N CHAN DPAK	9500IRLR2905	V7	TRANS SUPPRESSOR CERAMIC 1210	9108EPCOSV1
TR13	TRANSISTOR DUAL IMX1 NPN SOT36	9500IMX1	V8	TRANS SUPPRESSOR VC180400 1206	9108VC180400
TR14	TRANSISTOR BC807 PNP SOT23	9500BC807	V10	TRANS SUPPRESSOR VC180400 1206	9108VC180400
TR15	TRANSISTOR DUAL IMZ1 PNP	9500IMZ1	XTL1	XTAL 19Mhz CERAMIC BASE & LID SM7A	9601CR19
TR16	TRANSISTOR BCP56 NPN SOT223	9500BCP56	XTL3	CRYSTAL 32.768kHz SM	9602CR32P768
TR17	TRANSISTOR BC817 NPN SOT23	9500BC817			
TR18	TRANSISTOR DUAL IMX1 NPN SOT36	9500IMX1			
TR19	TRANSISTOR BC807 PNP SOT23	9500BC807			
TR20	TRANSISTOR BC817 NPN SOT23	9500BC817			
TR22	TRANSISTOR MOSFET N CHAN SOT23	95002N7002			
TR23	TRANSISTOR BC807 PNP SOT23	9500BC807			
TR24	TRANSISTOR DUAL IMX1 NPN SOT36	9500IMX1			
TR25	TRANSISTOR DUAL IMX1 NPN SOT36	9500IMX1			
TR26	TRANSISTOR BC817 NPN SOT23	9500BC817			
TR27	TRANSISTOR BCP56 NPN SOT223	9500BCP56			
TR28	TRANSISTOR DUAL IMX1 NPN SOT36	9500IMX1			
TR29	TRANSISTOR P CHANNEL MOSFET 30V 1.6A SOT23	9500ZXP3A13			
TR30	TRANSISTOR DUAL IMZ1 PNP	9500IMZ1			
TR31	TRANSISTOR BC817 NPN SOT23	9500BC817			
TR32	TRANSISTOR BC817 NPN SOT23	9500BC817			
TR33	TRANSISTOR BC807 PNP SOT23	9500BC807			
TR34	TRANSISTOR DUAL IMX1 NPN SOT36	9500IMX1			
TR35	TRANSISTOR DUAL IMX1 NPN SOT36	9500IMX1			
TR36	TRANSISTOR BC807 PNP SOT23	9500BC807			
TR37	TRANSISTOR BC817 NPN SOT23	9500BC817			
TR38	TRANSISTOR BC868 NPN SOT89	9501BC868			
TR39	TRANSISTOR DUAL IMX1 NPN SOT36	9500IMX1			
TR40	TRANSISTOR BC817 NPN SOT23	9500BC817			
TR41	TRANSISTOR BC807 PNP SOT23	9500BC807			
TR42	TRANSISTOR DUAL IMX1 NPN SOT36	9500IMX1			
TR43	TRANSISTOR MOSFET PCHAN IRFR5505 TO252	9500IR5505			
TR44	TRANSISTOR DUAL IMZ1 PNP	9500IMZ1			
TR47	TRANSISTOR MOSFET N CHAN SOT23	95002N7002			
TR48	TRANSISTOR MOSFET N CHAN SOT23	95002N7002			
TR51	TRANSISTOR DUAL IMX1 NPN SOT36	9500IMX1			

Chapter 5: SmartPilot X-30 PCB

SmartPilot X-30 PCB - Sheet 1 of 12



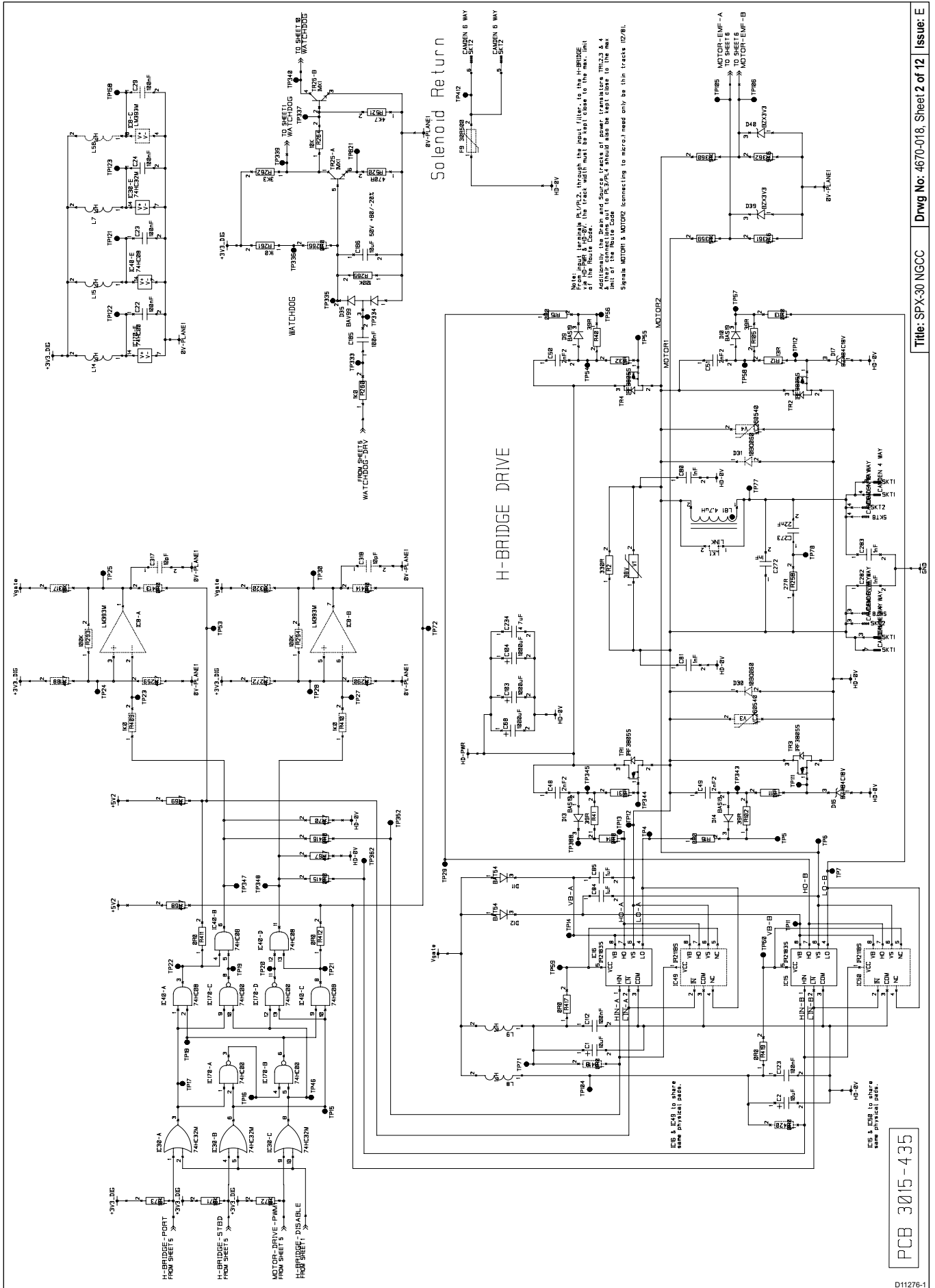
PCB 3015-435

Title: SPX-30 NGCC Drwg No: 4670-018, Sheet 1 of 12 Issue: E

M1 - M12 Mechanical holes per PTH. All holes. They are not the same as mechanical holes. There is no M12!

D11275-1

SmartPilot X-30 PCB - Sheet 2 of 12



Title: SP-X30 NGCC

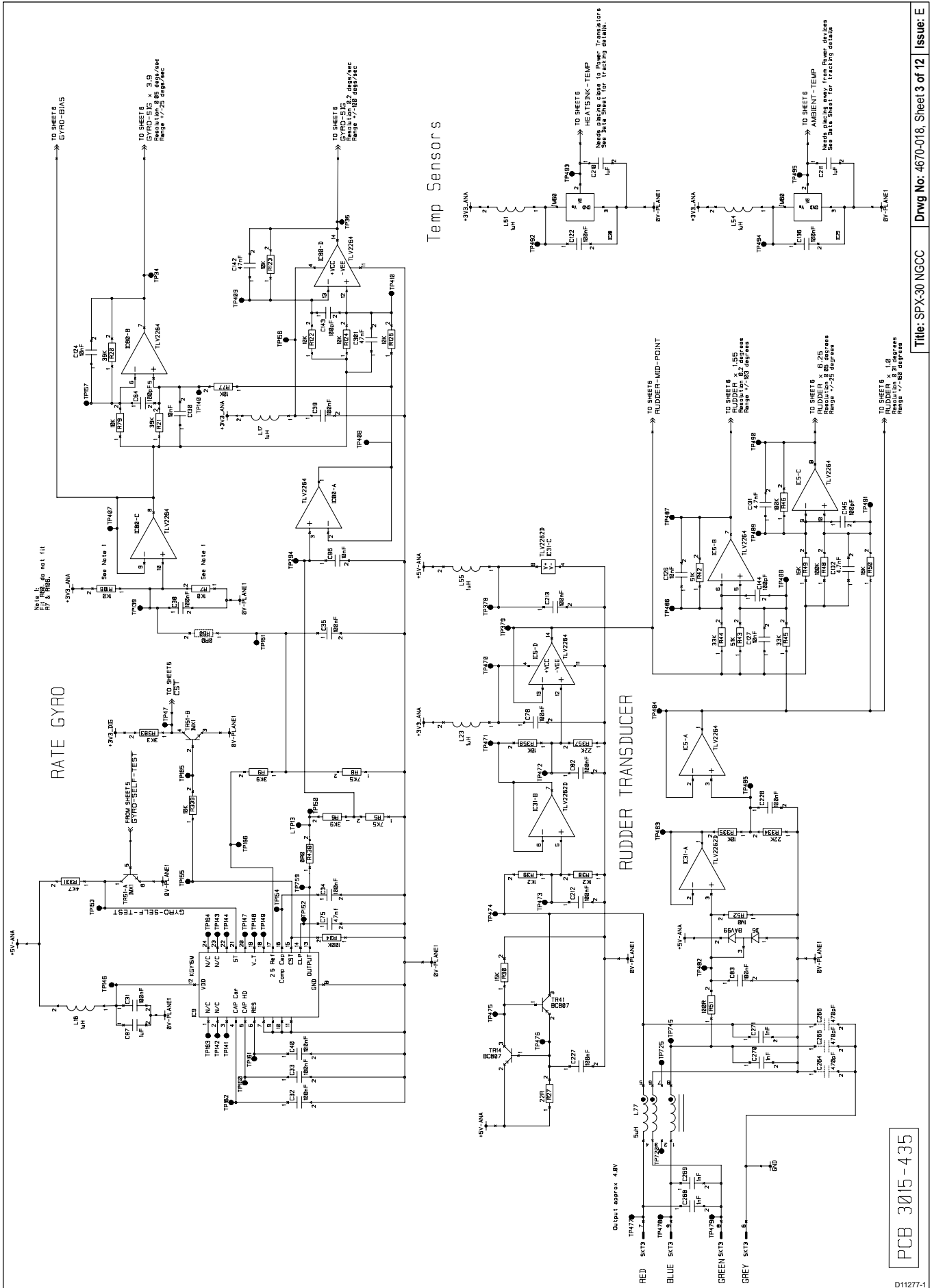
Dwg No. 4670-018, Sheet 2 of 12

Issue: E

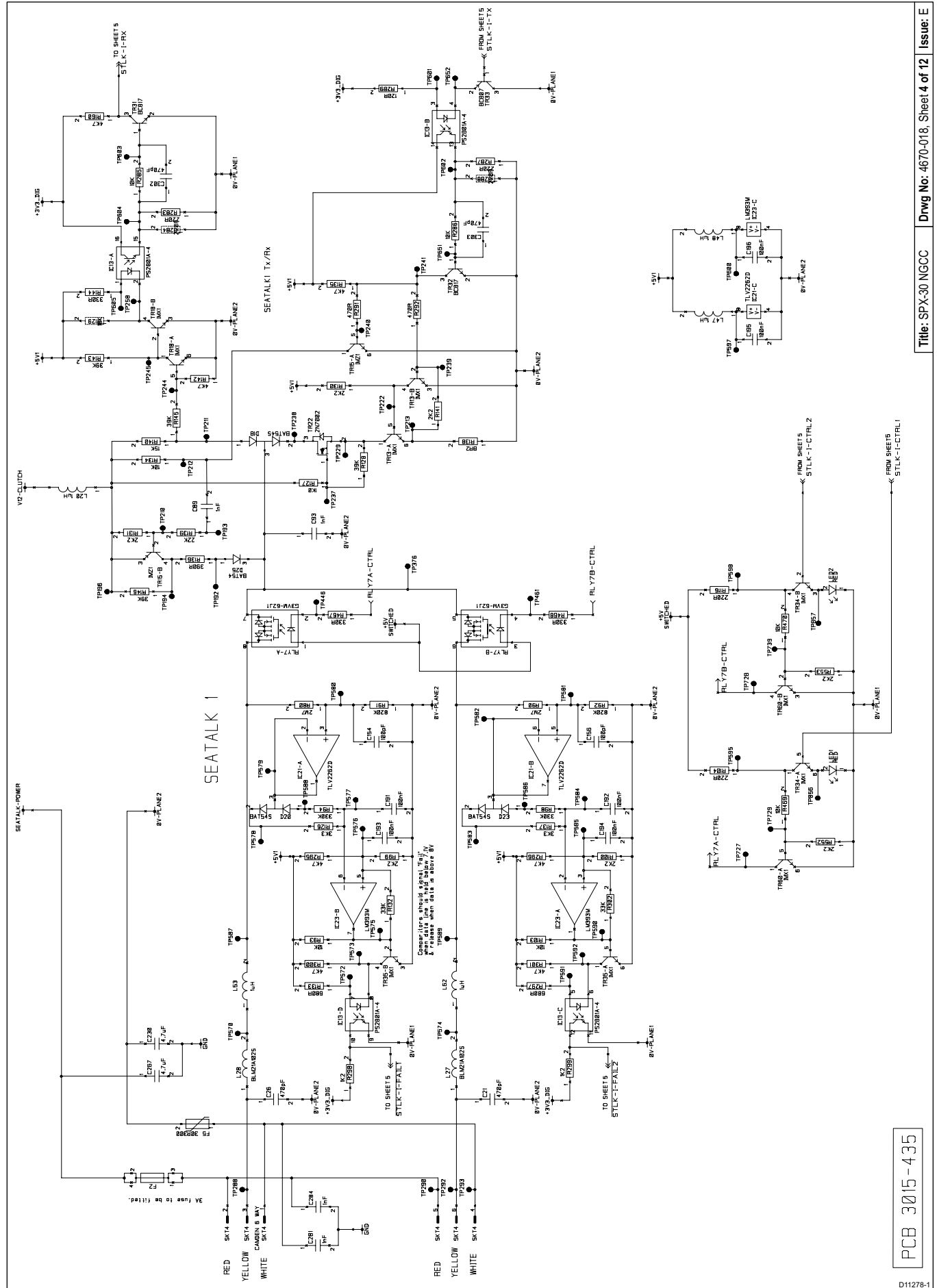
PCB 3015-435

011276-1

SmartPilot X-30 PCB - Sheet 3 of 12



SmartPilot X-30 PCB - Sheet 4 of 12

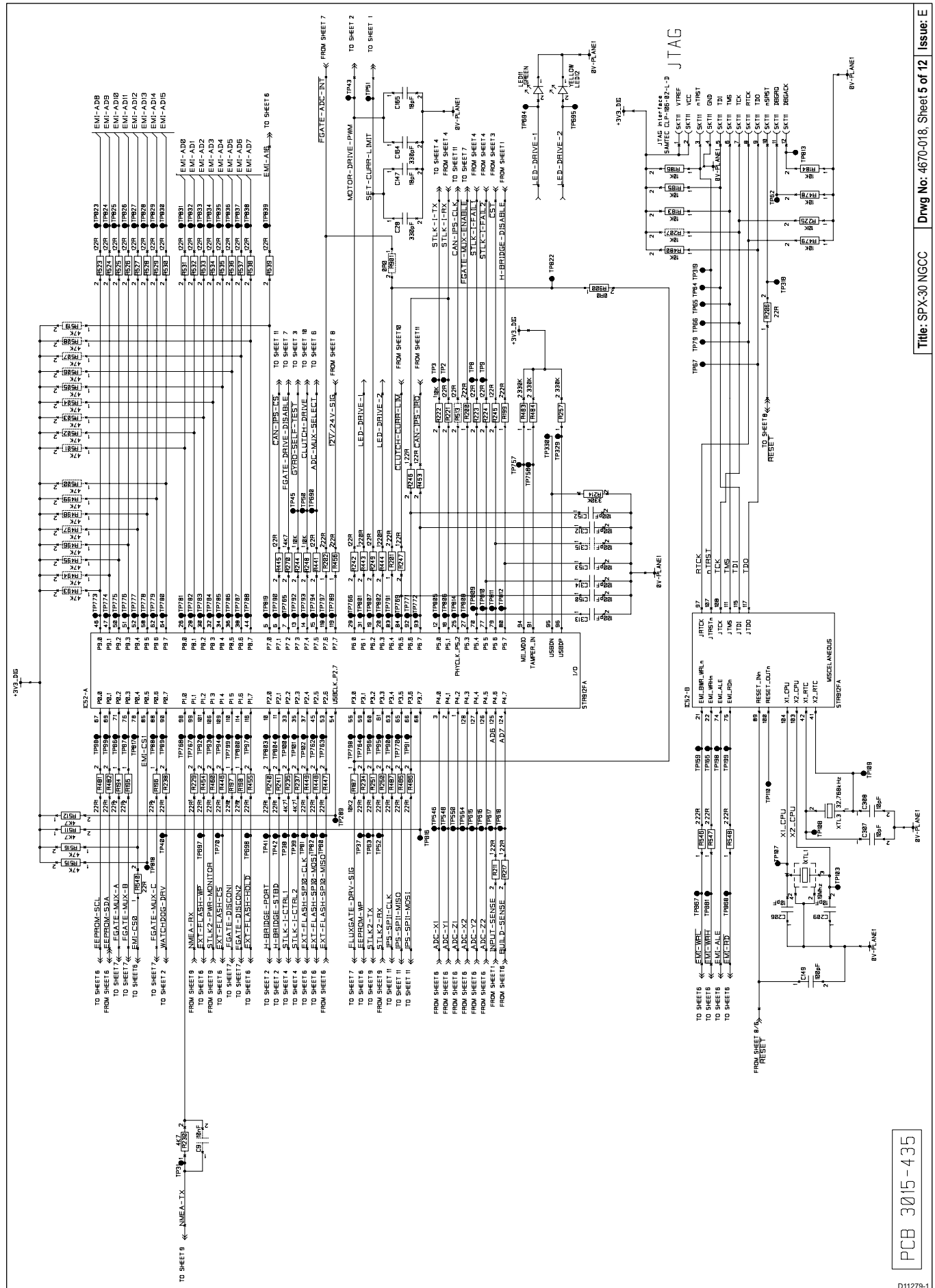


PCB 3015-435

Title: SPX-30 NGCC Dwg No. 4670-018, Sheet 4 of 12 Issue: E

011278-1

SmartPilot X-30 PCB - Sheet 5 of 12

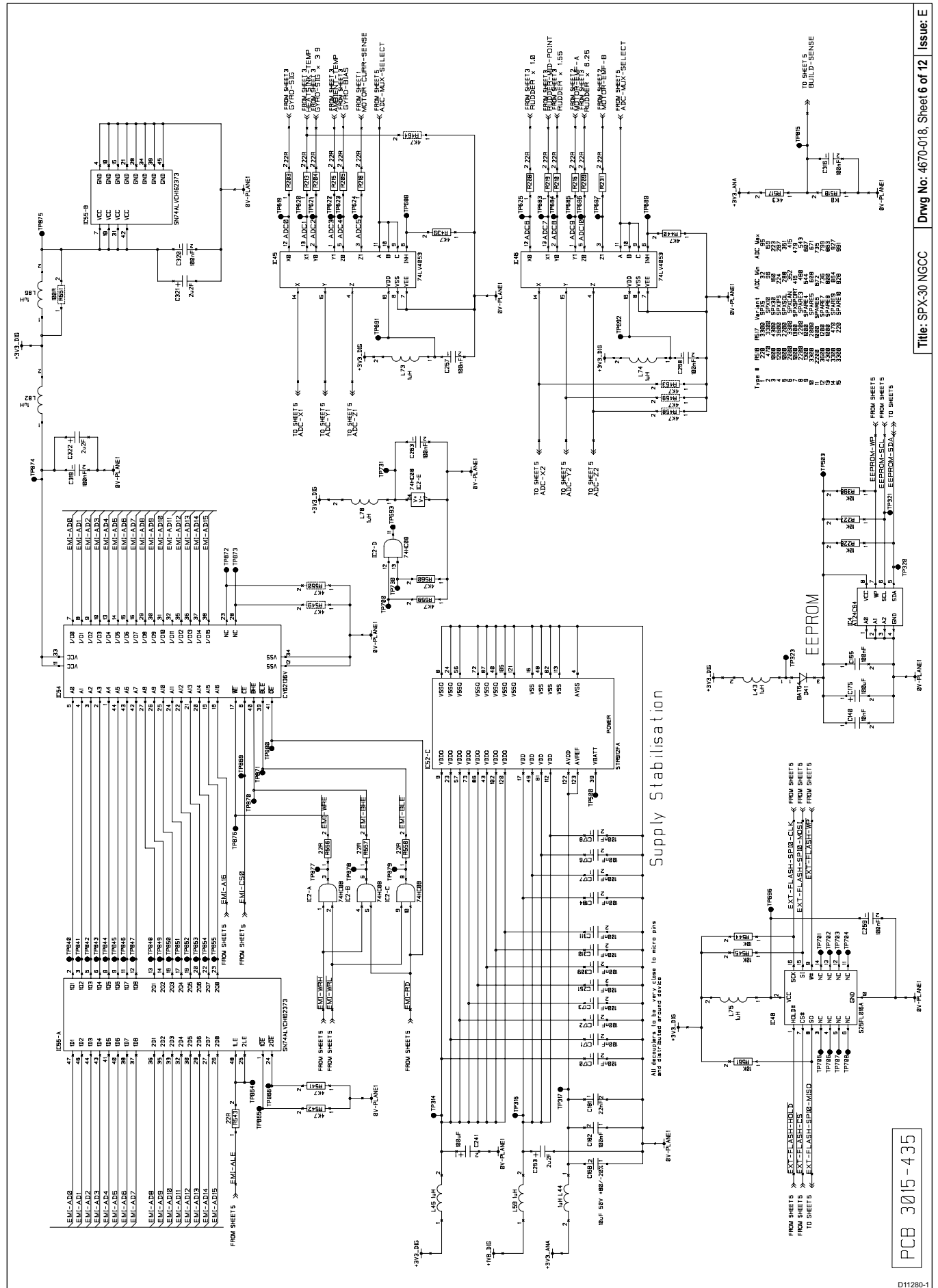


PCB 3015-435

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D11279-1

SmartPilot X-30 PCB - Sheet 6 of 12

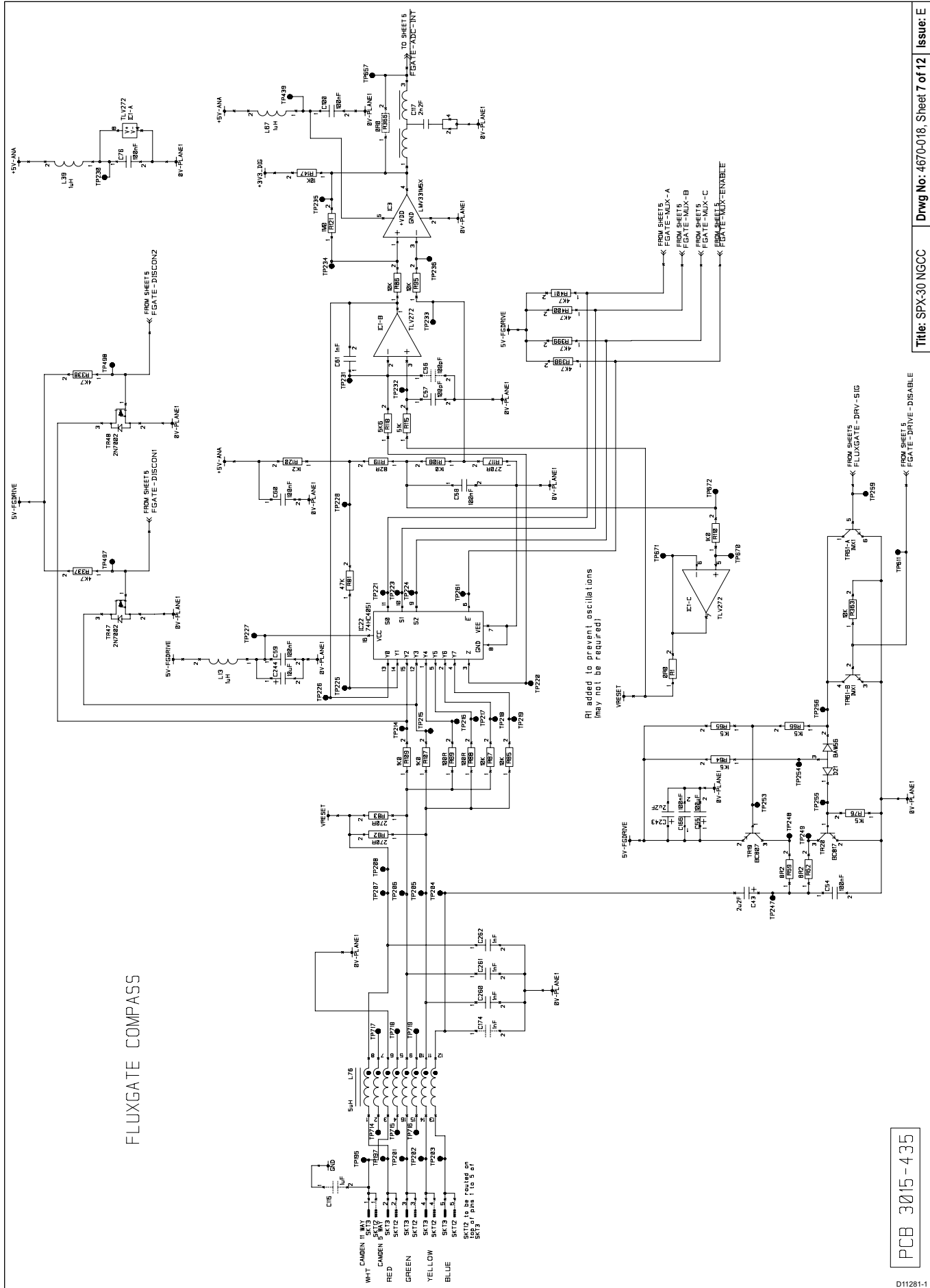


PCB 3015-435

Title: SPX-30 NGCC Dwg No. 4670-018, Sheet 6 of 12 Issue: E

D11280-1

SmartPilot X-30 PCB - Sheet 7 of 12



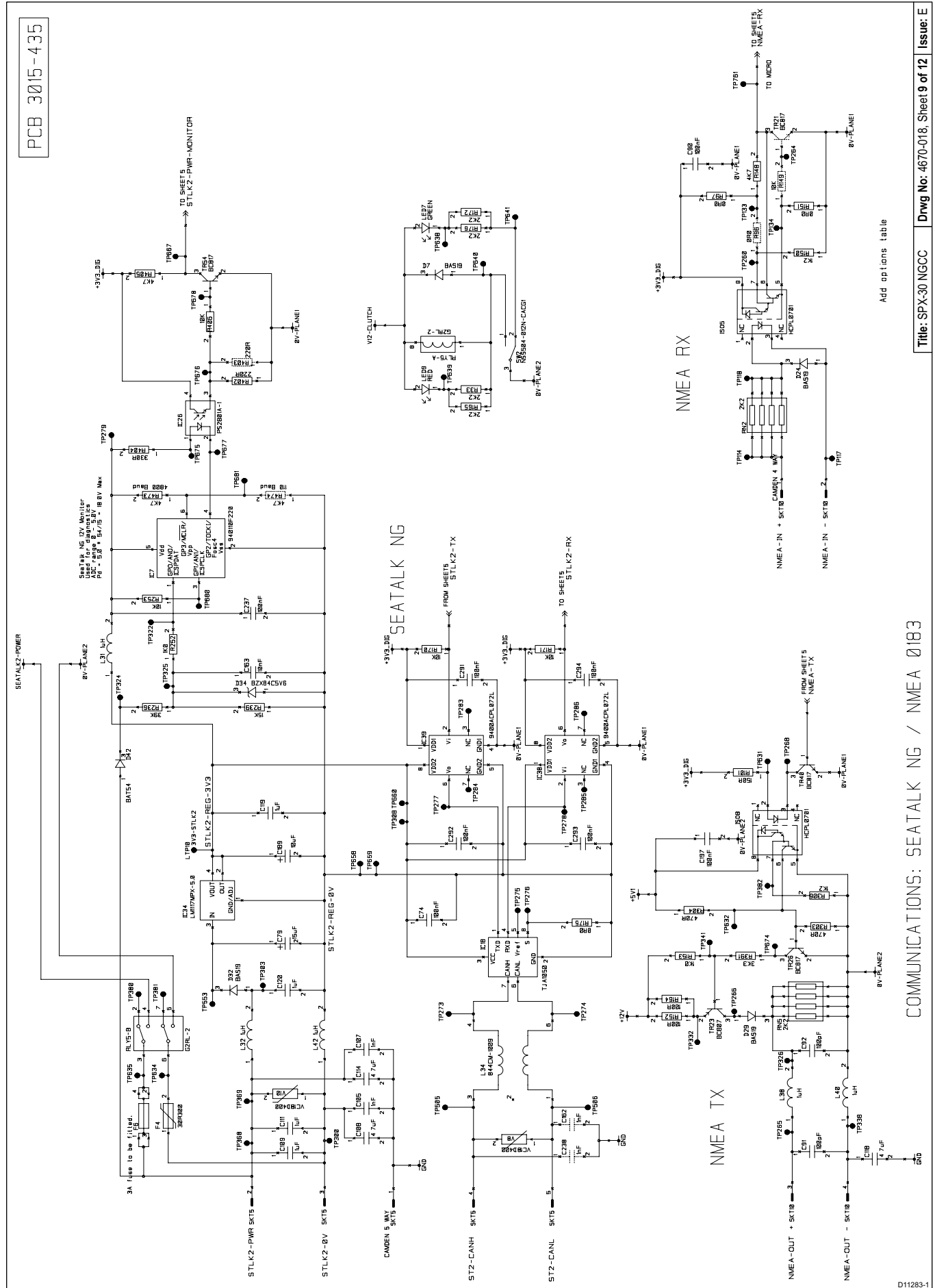
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PCB 3015-435

D11281-1

SmartPilot X-30 PCB - Sheet 9 of 12

PCB 3015-435



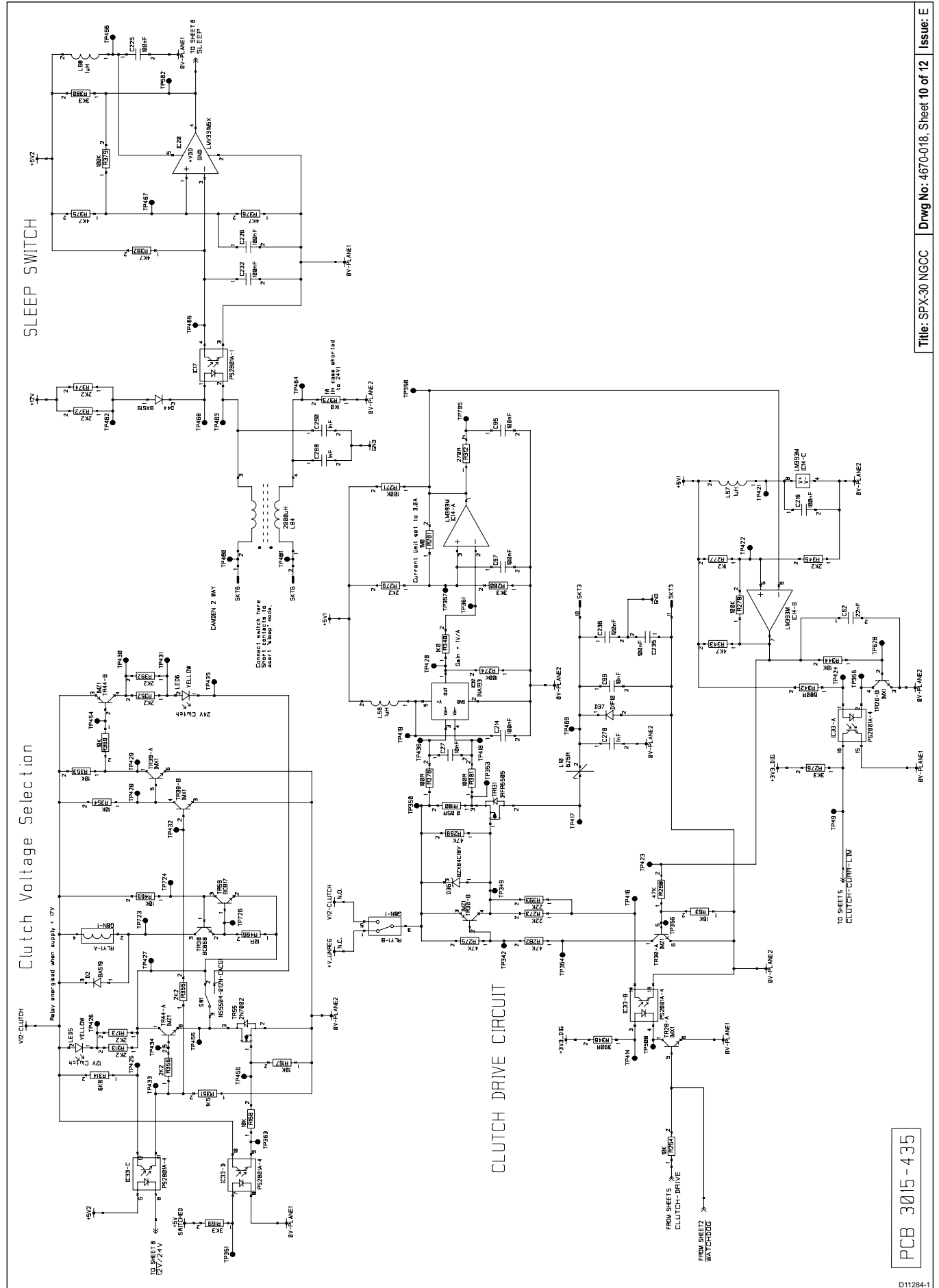
Add options table

COMMUNICATIONS: SEATALK NG / NMEA 0183

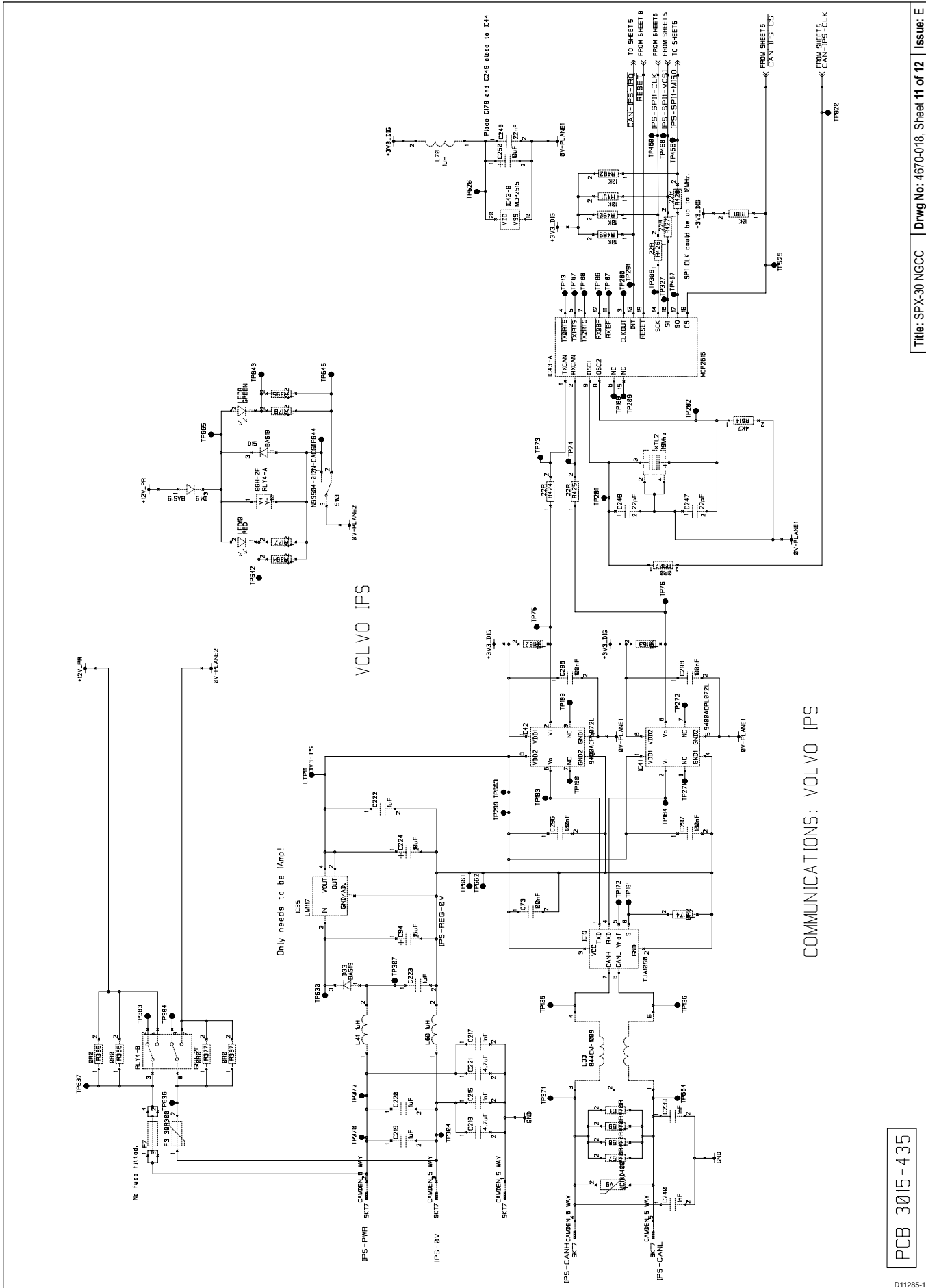
Title: SPX-30 NGCC Drwg No. 4670-018, Sheet 9 of 12 Issue: E

D11283-1

SmartPilot X-30 PCB - Sheet 10 of 12



SmartPilot X-30 PCB - Sheet 11 of 12

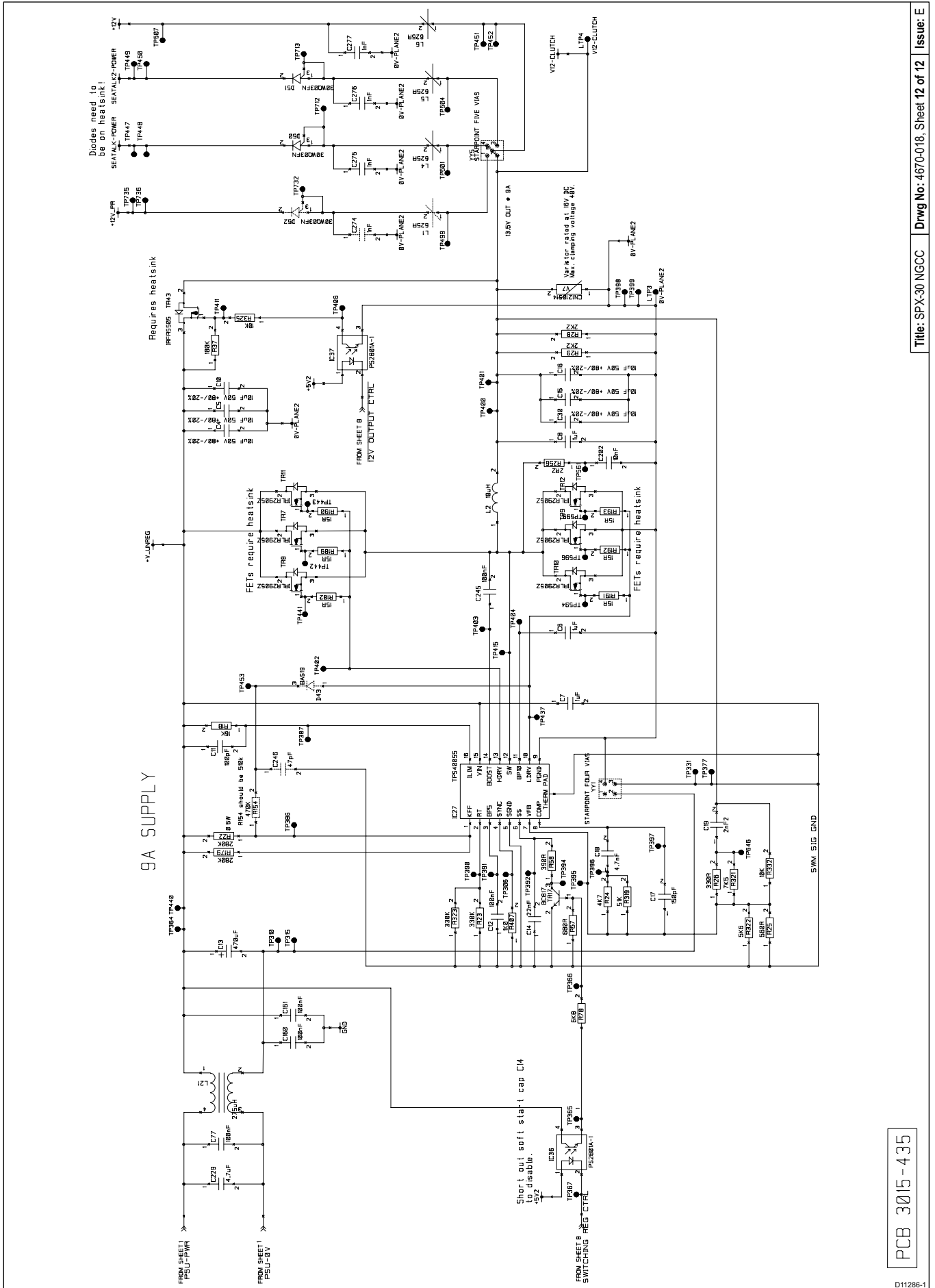


Title: SPX-30 NGCC Drwg No: 4670-018, Sheet 11 of 12 Issue: E

PCB 3015-435

011285-1

SmartPilot X-30 PCB - Sheet 12 of 12

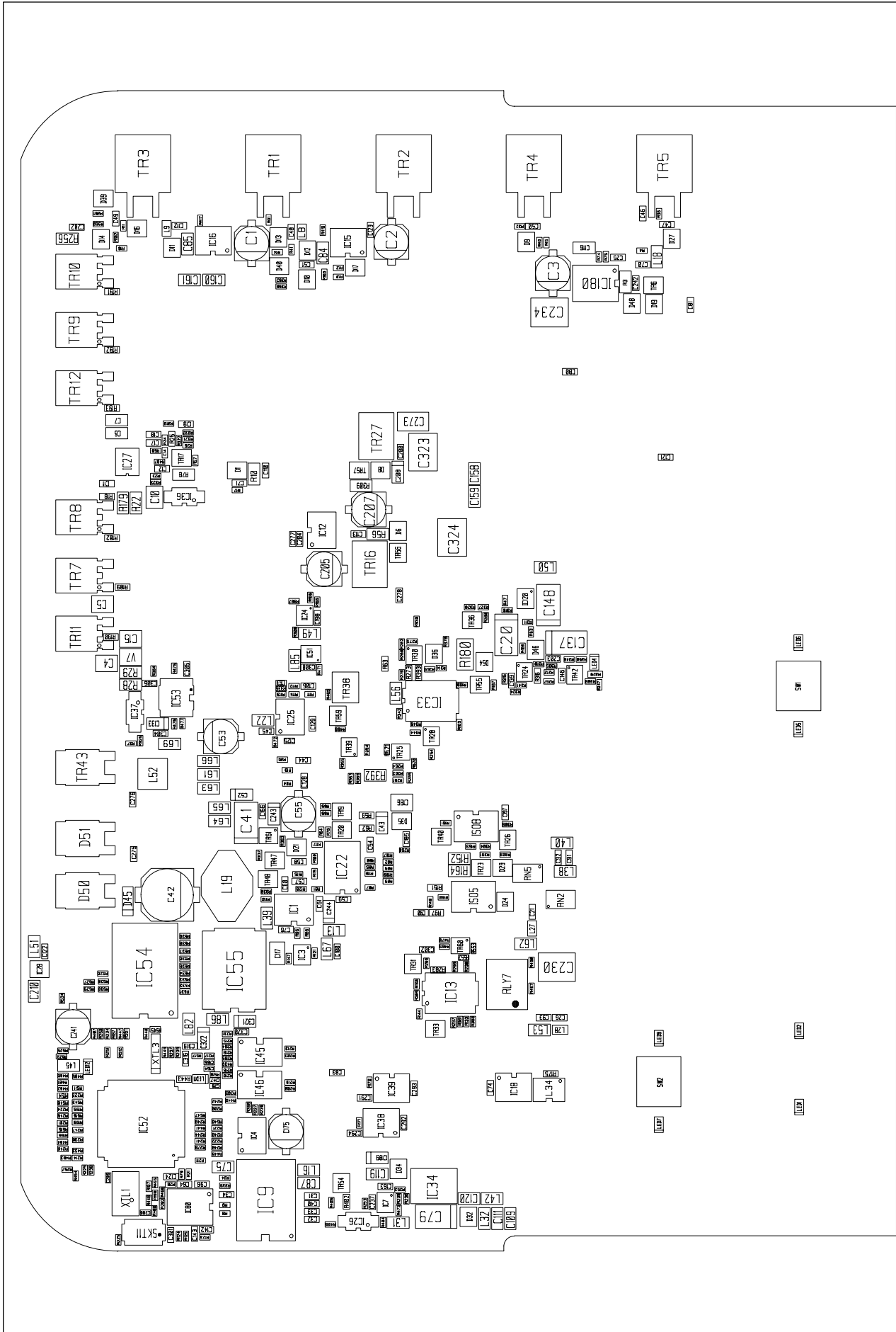


PCB 3015-435

Title: SPX-30 NGCC Drwg No: 4670-018, Sheet 12 of 12 Issue: E

011286-1

SmartPilot X-30 PCB - Components - Sheet 1 of 3

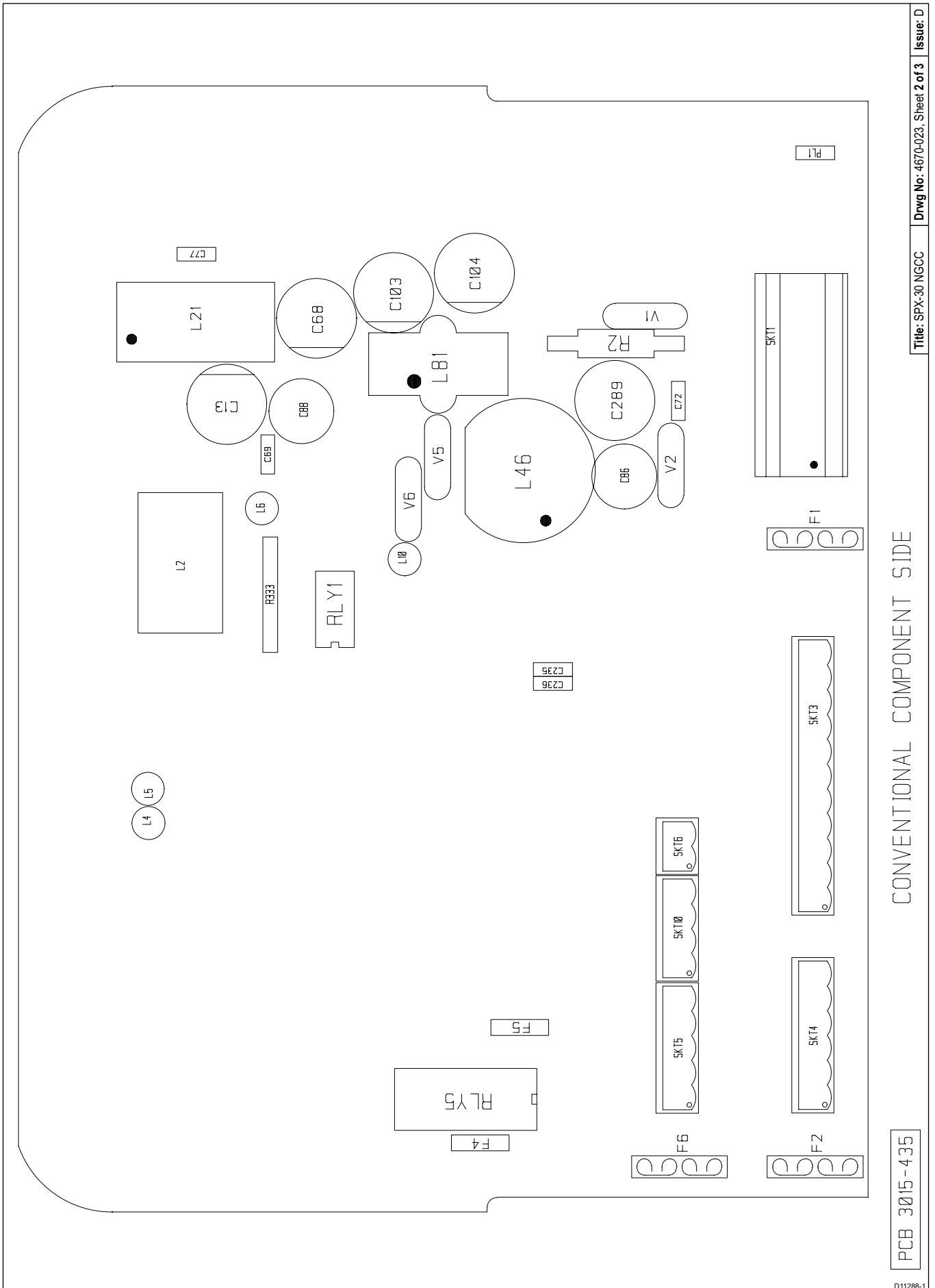


PCB 3015-435

SURFACE MOUNT COMPONENT SIDE

Title: SPX-30 NGCC Drwg No: 4670-023, Sheet 1 of 3 Issue: D

SmartPilot X-30 PCB - Components - Sheet 2 of 3



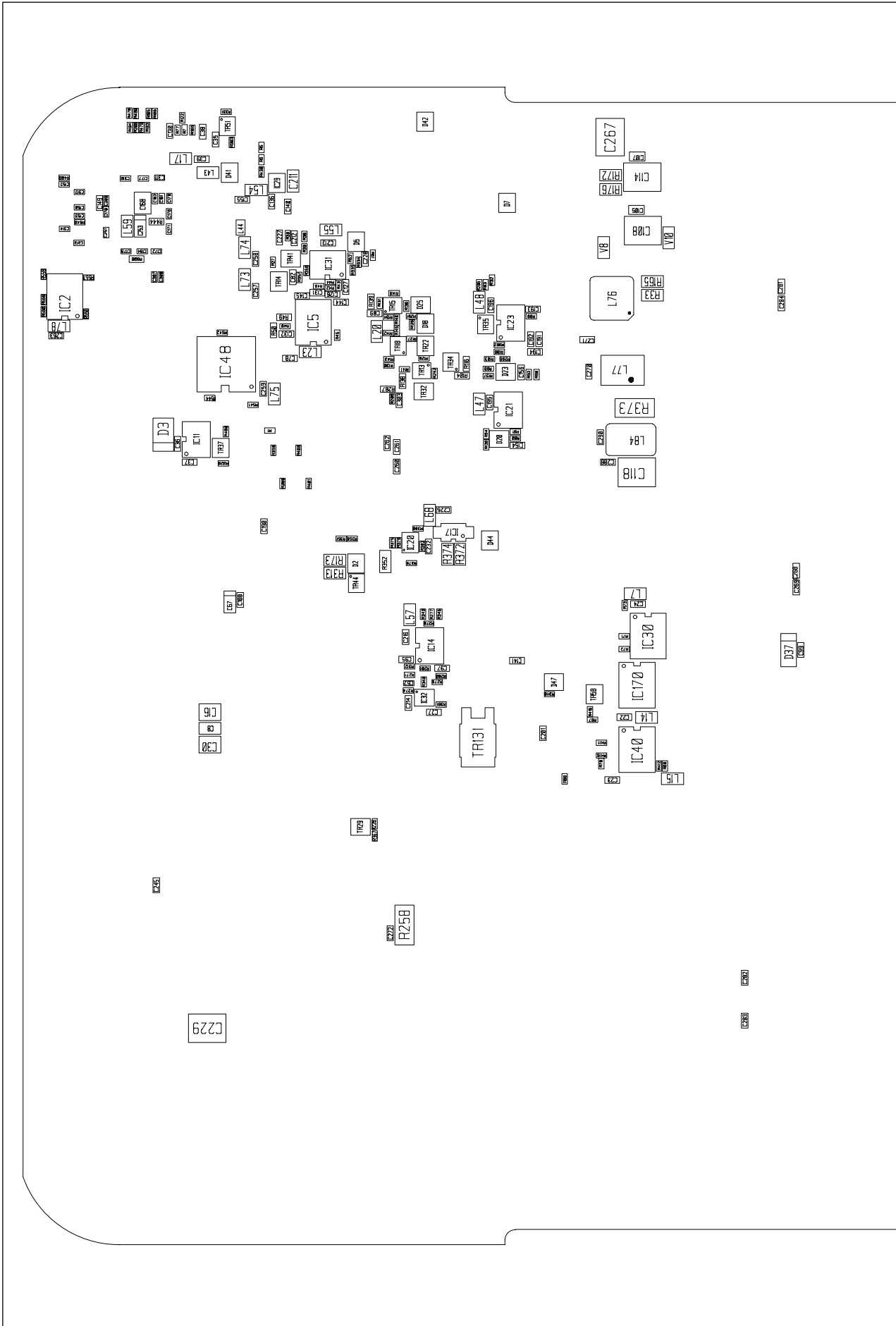
CONVENTIONAL COMPONENT SIDE

PCB 3015 - 435

D11288-1

Title: SPX-30 NGCC Drwg No: 4670-023, Sheet 2 of 3 Issue: D

SmartPilot X-30 PCB - Components - Sheet 3 of 3



SURFACE MOUNT UNDERSIDE

PCB 3015-435

Title: SPX-30 NGCC Drwg No: 4670-023 Sheet 3 of 3 Issue: D

D11289-1

SmartPilot X-30 PCB - Components, Parts List

Ref.	Description	Part No.
C1	CAP ALELEC 10uF 50v 20% ELECD	93ZEHEXXX10U
C2	CAP ALELEC 10uF 50v 20% ELECD	93ZEHEXXX10U
C3	CAP ALELEC 10uF 50v 20% ELECD	93ZEHEXXX10U
C4	CAP CERAMIC 10uF 50V 1210	93DFHD10U
C5	CAP CERAMIC 10uF 50V 1210	93DFHD10U
C6	CAP Y5V 1uF 50v 20% 1206	93261U
C7	CAP Y5V 1uF 50v 20% 1206	93261U
C8	CAP Y5V 1uF 50v 20% 1206	93261U
C10	CAP CERAMIC 10uF 50V 1210	93DFHD10U
C11	CAP COG 100pF 50v 5% 0603	93ACHAXX100P
C12	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C13	CAP ELEC LOW ESR 470uF 63V 20% RAD	3206
C14	CAP CERAMIC 22nF SM 16V 10% 0402	93QDEB22N
C15	CAP CERAMIC 10uF 50V 1210	93DFHD10U
C16	CAP CERAMIC 10uF 50V 1210	93DFHD10U
C17	CAP COG 150pF 50V 2% 0603	93ABHA150P
C18	CAP X7R 4.7nF 50V 10% 0603	93ADHAXX4N7
C19	CAP X7R 2.2nF 50v 10% 0603	93ADHBXX2N2
C20	CAP TANT 15uF 35V 20% TANTD	93JEGCXX15U
C21	CAP COG 470pF 50v 5% 0603	93ACHAXX470P
C22	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C23	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C24	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C25	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C26	CAP COG 470pF 50v 5% 0603	93ACHAXX470P
C27	CAP X7R 10nF 50v 10% 0603	93ADHBXX10N
C28	CAP 330pF +/-5% 50V COG 0402	93QCHA330P
C30	CAP CERAMIC 10uF 50V 1210	93DFHD10U
C31	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C32	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C33	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C34	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C35	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C36	CAP X7R 10nF 50v 10% 0603	93ADHBXX10N
C37	CAP COG 470pF 50v 5% 0603	93ACHAXX470P
C38	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C39	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C40	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C41	CAP TANT 100uF 10v 20% TANTD	9326100U
C42	CAP 100uF 50v 20% AL-ELEC	93ZEHEXX100U
C43	CAP TANT 2u2F 10v 10% TANTA	93GDDC2U2
C44	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C45	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C46	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C47	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C48	CAP X7R 2.2nF 50v 10% 0603	93ADHBXX2N2
C49	CAP X7R 2.2nF 50v 10% 0603	93ADHBXX2N2
C50	CAP X7R 2.2nF 50v 10% 0603	93ADHBXX2N2

Ref.	Description	Part No.
C51	CAP X7R 2.2nF 50v 10% 0603	93ADHBXX2N2
C52	CAP TANT 10uF 10v 10% TANTA	93GDDCXXX10U
C53	CAP ALELEC 100uF 6.3v 20%ELECD	9324100U
C54	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C55	CAP ALELEC 100uF 35V 20% CASE G	93KEGEXX100U
C57	CAP COG 100pF 50v 5% 0603	93ACHAXX100P
C58	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C59	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C60	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C61	CAP X7R 1nF 50v 10% 0603	93ADHBXX1N
C62	CAP CERAMIC 22nF SM 16V 10% 0402	93QDEB22N
C63	CAP CERAMIC 22nF SM 16V 10% 0402	93QDEB22N
C64	CAP COG 100pF 50v 5% 0603	93ACHAXX100P
C67	CAP TANT 10uF 10v 10% TANTA	93GDDCXXX10U
C68	CAP ELECTROLYTIC 1000uF 50V RADIAL	3177
C69	CAP POLY 100nF 100V 10% RADIAL	3082
C70	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C71	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C72	CAP POLY 100nF 100V 10% RADIAL	3082
C74	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C75	CAP X7R 47nF 50V 10% 1206	93060U047
C76	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C77	CAP POLY 100nF 100V 10% RADIAL	3082
C78	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C79	CAP TANT 15uF 35V 20% TANTD	93JEGCXX15U
C80	CAP X7R 1nF 50v 10% 0603	93ADHBXX1N
C81	CAP X7R 1nF 50v 10% 0603	93ADHBXX1N
C82	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C83	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C84	CAP Y5V 1uF 50v 20% 1206	93261U
C85	CAP Y5V 1uF 50v 20% 1206	93261U
C86	CAP ALEL NONPOL 220uF 50v 20% RAD	3153
C87	CAP Y5V 1uF 50v 20% 1206	93261U
C88	CAP ALEL NONPOL 220uF 50v 20% RAD	3153
C89	CAP X7R 1nF 50v 10% 0603	93ADHBXX1N
C90	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C91	CAP COG 100pF 50v 5% 0603	93ACHAXX100P
C92	CAP COG 100pF 50v 5% 0603	93ACHAXX100P
C93	CAP X7R 1nF 50v 10% 0603	93ADHBXX1N
C95	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C96	CAP X7R 10nF 50v 10% 0603	93ADHBXX10N
C97	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C99	CAP X7R 10nF 50v 10% 0603	93ADHBXX10N
C100	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C103	CAP ELECTROLYTIC 1000uF 50V RADIAL	3177
C104	CAP ELECTROLYTIC 1000uF 50V RADIAL	3177
C105	CAP COG 1nF 100V +/- 5% 0805	93ACJAXXXX1N
C106	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C107	CAP COG 1nF 100V +/- 5% 0805	93ACJAXXXX1N

Ref.	Description	Part No.
C108	CAP X7R 4.7uF 100v 10% 2220	93FDJBXXX4U7
C109	CAP Y5V 1uF 50v 20% 1206	93261U
C110	CAP COG 470pF 50v 5% 0603	93ACHAXX470P
C111	CAP Y5V 1uF 50v 20% 1206	93261U
C112	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C113	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C114	CAP X7R 4.7uF 100v 10% 2220	93FDJBXXX4U7
C116	CAP X7R 47nF 50V 10% 1206	93060U047
C117	CAP FILT 2n2F 25v +/-50% 6A	93ZHFGXXX2N2
C118	CAP X7R 4.7uF 100v 10% 2220	93FDJBXXX4U7
C119	CAP Y5V 1uF 50v 20% 1206	93261U
C120	CAP Y5V 1uF 50v 20% 1206	93261U
C121	CAP COG 470pF 50v 5% 0603	93ACHAXX470P
C122	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C123	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C124	CAP X7R 10nF 50v 10% 0603	93ADHBXX10N
C125	CAP CERAMIC 22nF SM 16V 10% 0402	93QDEB22N
C126	CAP X7R 10nF 50v 10% 0603	93ADHBXX10N
C127	CAP X7R 10nF 50v 10% 0603	93ADHBXX10N
C128	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C129	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C130	CAP X7R 10nF 50v 10% 0603	93ADHBXX10N
C131	CAP X7R 4.7nF 50V 10% 0603	93ADHAXX4N7
C132	CAP X7R 4.7nF 50V 10% 0603	93ADHAXX4N7
C133	CAP TANT 10uF 10v 10% TANTA	93GDCCXXX10U
C136	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C137	CAP TANT 100uF 10v 20% TANTD	9326100U
C139	CAP COG 100pF 50v 5% 0603	93ACHAXX100P
C140	CAP X7R 10nF 50v 10% 0603	93ADHBXX10N
C141	CAP COG 100pF 50v 5% 0603	93ACHAXX100P
C142	CAP X7R 47nF 16v 10% 0603	93ADEBXX47N
C143	CAP COG 100pF 50v 5% 0603	93ACHAXX100P
C144	CAP COG 100pF 50v 5% 0603	93ACHAXX100P
C145	CAP COG 100pF 50v 5% 0603	93ACHAXX100P
C146	CAP COG 100pF 50v 5% 0603	93ACHAXX100P
C147	CAP 18pF +/-5% 50V COG 0402	93QCHA18P
C148	CAP TANT 100uF 10v 20% TANTD	9326100U
C149	CAP COG 100pF 50v 5% 0603	93ACHAXX100P
C150	CAP 100pF 1% 50V COG 0402	93QAHA100P
C152	CAP 100pF 1% 50V COG 0402	93QAHA100P
C153	CAP 100pF 1% 50V COG 0402	93QAHA100P
C154	CAP COG 100pF 50v 5% 0603	93ACHAXX100P
C155	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C156	CAP COG 100pF 50v 5% 0603	93ACHAXX100P
C158	CAP X7R 0.1uF 50v 20% 1206	93070U1
C159	CAP X7R 0.1uF 50v 20% 1206	93070U1
C160	CAP X7R 0.1uF 50v 20% 1206	93070U1
C161	CAP X7R 0.1uF 50v 20% 1206	93070U1
C163	CAP X7R 10nF 50v 10% 0603	93ADHBXX10N
C164	CAP 330pF +/-5% 50V COG 0402	93QCHA330P

Ref.	Description	Part No.
C165	CAP 18pF +/-5% 50V COG 0402	93QCHA18P
C166	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C168	CAP CERAMIC 10uF 50V 1210	93DFHD10U
C170	CAP 100nF +/-10% 10V X5R 0402	93QDDI100N
C171	CAP 100nF +/-10% 10V X5R 0402	93QDDI100N
C172	CAP 100nF +/-10% 10V X5R 0402	93QDDI100N
C173	CAP 100nF +/-10% 10V X5R 0402	93QDDI100N
C175	CAP ALELEC 100uF 6.3v 20%ELECD	9324100U
C176	CAP 100nF +/-10% 10V X5R 0402	93QDDI100N
C177	CAP 100nF +/-10% 10V X5R 0402	93QDDI100N
C178	CAP 100nF +/-10% 10V X5R 0402	93QDDI100N
C181	CAP CERAMIC 22nF SM 16V 10% 0402	93QDEB22N
C182	CAP 100nF +/-10% 10V X5R 0402	93QDDI100N
C184	CAP 100nF +/-10% 10V X5R 0402	93QDDI100N
C185	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C186	CAP CERAMIC 10uF 50V 1210	93DFHD10U
C188	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C189	CAP TANT 10uF 10v 10% TANTA	93GDCCXXX10U
C190	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C191	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C192	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C193	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C194	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C195	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C196	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C197	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C198	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C200	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C201	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C202	CAP X7R 10nF 50v 10% 0603	93ADHBXX10N
C203	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C204	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C205	CAP ALELEC 100uF 35V 20% CASE G	93KEGEXX100U
C206	CAP 10pF SM 0402	93QCHA10P
C207	CAP ALELEC 100uF 35V 20% CASE G	93KEGEXX100U
C208	CAP TANT 10uF 10v 10% TANTA	93GDCCXXX10U
C209	CAP 10pF SM 0402	93QCHA10P
C210	CAP Y5V 1uF 50v 20% 1206	93261U
C211	CAP Y5V 1uF 50v 20% 1206	93261U
C212	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C213	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C214	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C216	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C225	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C227	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C228	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C229	CAP X7R 4.7uF 50v 10% 2220	93FDHBXXX4U7
C230	CAP X7R 4.7uF 100v 10% 2220	93FDJBXXX4U7
C232	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C234	CAP X7R 4.7uF 100v 10% 2220	93FDJBXXX4U7

Ref.	Description	Part No.	Ref.	Description	Part No.
C235	CAP POLY 100nF 100V 10% RADIAL	3082	C311	CAP 100nF +/-10% 10V X5R 0402	93QDDI100N
C236	CAP POLY 100nF 100V 10% RADIAL	3082	C312	CAP 100pF 1% 50V COG 0402	93QAHA100P
C237	CAP X7R 100nF 25V 10% 0603	93ADFB100N	C313	CAP 100pF 1% 50V COG 0402	93QAHA100P
C241	CAP ALELEC 100uF 6.3v 20%ELECD	9324100U	C314	CAP 100pF 1% 50V COG 0402	93QAHA100P
C242	CAP X7R 1nF 50v 10% 0603	93ADHBXX1N	C316	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C243	CAP TANT 2u2F 10v 10% TANTA	93GDDC2U2	C319	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C244	CAP TANT 10uF 10v 10% TANTA	93GDDCXXX10U	C320	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C245	CAP X7R 100nF 25V 10% 0603	93ADFB100N	C321	CAP TANT 2u2F 10v 10% TANTA	93GDDC2U2
C251	CAP 100nF +/-10% 10V X5R 0402	93QDDI100N	C322	CAP TANT 2u2F 10v 10% TANTA	93GDDC2U2
C253	CAP TANT 2u2F 10v 10% TANTA	93GDDC2U2	C323	CAP X7R 4.7uF 100v 10% 2220	93FDJBXXX4U7
C257	CAP X7R 100nF 25V 10% 0603	93ADFB100N	C324	CAP X7R 4.7uF 100v 10% 2220	93FDJBXXX4U7
C258	CAP X7R 100nF 25V 10% 0603	93ADFB100N	D1	DIODE ZENER 3V3 SOT23	9203BZX3V3
C259	CAP X7R 100nF 25V 10% 0603	93ADFB100N	D2	DIODE BAS19 SOT23	9200BAS19
C260	CAP X7R 1nF 50v 10% 0603	93ADHBXX1N	D3	DIODE SCHOTTKY 10BQ100 1A SMB	920010BQ100
C261	CAP X7R 1nF 50v 10% 0603	93ADHBXX1N	D5	DIODE DUAL BAV99 SOT23	9200BAV99
C262	CAP X7R 1nF 50v 10% 0603	93ADHBXX1N	D6	DIODE ZENER 18V 330mW SOT23	9203BZX18V
C263	CAP X7R 100nF 25V 10% 0603	93ADFB100N	D7	DIODE BAS19 SOT23	9200BAS19
C267	CAP X7R 4.7uF 100v 10% 2220	93FDJBXXX4U7	D8	DIODE ZENER 6V2 250mW SOT23	9203BZX6V2
C268	CAP X7R 1nF 50v 10% 0603	93ADHBXX1N	D9	DIODE BAS19 SOT23	9200BAS19
C269	CAP X7R 1nF 50v 10% 0603	93ADHBXX1N	D10	DIODE BAS19 SOT23	9200BAS19
C270	CAP X7R 1nF 50v 10% 0603	93ADHBXX1N	D11	DIODE SCHOTTKY BAT54 SOT23	9200BAT54
C271	CAP X7R 1nF 50v 10% 0603	93ADHBXX1N	D12	DIODE SCHOTTKY BAT54 SOT23	9200BAT54
C272	CAP X7R 1nF 50v 10% 0603	93ADHBXX1N	D13	DIODE BAS19 SOT23	9200BAS19
C273	CAP PFILM 22nF 100V 20% 1812	93EEJL22N	D14	DIODE BAS19 SOT23	9200BAS19
C275	CAP X7R 1nF 50v 10% 0603	93ADHBXX1N	D16	DIODE ZENER 18V 330mW SOT23	9203BZX18V
C276	CAP X7R 1nF 50v 10% 0603	93ADHBXX1N	D17	DIODE ZENER 18V 330mW SOT23	9203BZX18V
C277	CAP X7R 1nF 50v 10% 0603	93ADHBXX1N	D18	DIODE SCHOTTKY BAT54S SOT23	9200BAT54S
C278	CAP X7R 1nF 50v 10% 0603	93ADHBXX1N	D19	DIODE ZENER 15V	9203BZX15V
C281	CAP X7R 1nF 50v 10% 0603	93ADHBXX1N	D20	DIODE SCHOTTKY BAT54S SOT23	9200BAT54S
C282	CAP X7R 1nF 50v 10% 0603	93ADHBXX1N	D21	DIODE BAW56 DUAL SOT23	9200BAW56
C283	CAP X7R 1nF 50v 10% 0603	93ADHBXX1N	D23	DIODE SCHOTTKY BAT54S SOT23	9200BAT54S
C284	CAP X7R 1nF 50v 10% 0603	93ADHBXX1N	D24	DIODE BAS19 SOT23	9200BAS19
C288	CAP X7R 1nF 50v 10% 0603	93ADHBXX1N	D25	DIODE SCHOTTKY BAT54 SOT23	9200BAT54
C289	CAP AL ELEC NP 470uF 50V 20% RADIAL	3209	D27	DIODE SCHOTTKY BAT54S SOT23	9200BAT54S
C290	CAP X7R 1nF 50v 10% 0603	93ADHBXX1N	D29	DIODE BAS19 SOT23	9200BAS19
C291	CAP X7R 100nF 25V 10% 0603	93ADFB100N	D32	DIODE BAS19 SOT23	9200BAS19
C292	CAP X7R 100nF 25V 10% 0603	93ADFB100N	D34	DIODE ZENER 5V6 350mW SOT23	9203BZX5V6
C293	CAP X7R 100nF 25V 10% 0603	93ADFB100N	D35	DIODE DUAL BAV99 SOT23	9200BAV99
C294	CAP X7R 100nF 25V 10% 0603	93ADFB100N	D36	DIODE ZENER 18V 330mW SOT23	9203BZX18V
C300	CAP X7R 100nF 25V 10% 0603	93ADFB100N	D37	DIODE RECT 1A D1F10	9204D1F10
C301	CAP X7R 47nF 16v 10% 0603	93ADEBXX47N	D39	DIODE ZENER 3V3 SOT23	9203BZX3V3
C302	CAP COG 470pF 50v 5% 0603	93ACHAXX470P	D40	DIODE ZENER 3V3 SOT23	9203BZX3V3
C303	CAP COG 470pF 50v 5% 0603	93ACHAXX470P	D41	DIODE SCHOTTKY BAT54 SOT23	9200BAT54
C304	CAP X7R 100nF 25V 10% 0603	93ADFB100N	D42	DIODE SCHOTTKY BAT54 SOT23	9200BAT54
C305	CAP X7R 100nF 25V 10% 0603	93ADFB100N	D44	DIODE BAS19 SOT23	9200BAS19
C306	CAP X7R 100nF 25V 10% 0603	93ADFB100N	D45	IC SCHOTTKY DIODE RECTIFIER MBR0530 SOD-123	9200MBR0530
C307	CAP 10pF SM 0402	93QCHA10P	D46	DIODE SCHOTTKY BAT54 SOT23	9200BAT54
C308	CAP 10pF SM 0402	93QCHA10P	D47	DIODE SCHOTTKY BAT54 SOT23	9200BAT54
C309	CAP 100nF +/-10% 10V X5R 0402	93QDDI100N	D48	DIODE BAS19 SOT23	9200BAS19
C310	CAP 100nF +/-10% 10V X5R 0402	93QDDI100N			

Ref.	Description	Part No.
D50	IC SCHOTTKY DIODE RECTIFIER 30WQ03FN TO-252	920030WQ03
D51	IC SCHOTTKY DIODE RECTIFIER 30WQ03FN TO-252	920030WQ03
D54	DIODE SCHOTTKY BAT54 SOT23	9200BAT54
F1	FUSE CLIP AUTOMOTIVE 15A	15525
F2	FUSE CLIP AUTOMOTIVE 15A	15525
F4	FUSE RESET 3A	15524
F5	FUSE RESET 3A	15524
F6	FUSE CLIP AUTOMOTIVE 15A	15525
IC1	IC OPAMP DUAL RAIL-TO-RAIL SO8	9400TLV272
IC2	IC QUAD AND 74HC08 2V SO14	940074HC08
IC3	IC COMPARATOR 2.7V TO 5V SOT23	9400LMV331
IC4	IC SERIAL EEPROM SOIC8 SM	9401AT24C64
IC5	IC QUAD OPAMP TLV2264 SO14	9400TLV2264
IC7	IC FLASH 8 BIT FLASH MICROCONTROLLER 6 PIN SEATALKNG	940110F220
IC9	IC GYRO KGF01-080 SO24	9400KGF01
IC11	IC POWER REGULATOR 5V 500MA 260KHZ SO8	9400LM2671
IC12	IC REG LOW DROPOUT POS 5V SO8	9400LM2931AM
IC13	IC OPTO COUPLER QUAD SSO16	9400PS2801A4
IC14	IC COMPARATOR 2-36V SO8	9400LM393M
IC15	TRANSISTOR MOSFET H-BRIDGE DRIVER SO8	9400IR2183
IC16	TRANSISTOR MOSFET H-BRIDGE DRIVER SO8	9400IR2183
IC17	IC OPTO COUPLER SINGLE SSO4	9400PS2801A1
IC18	IC TRANSCEIVER HS CAN 5v SO8	9400TJA1050
IC20	IC COMPARATOR 2.7V TO 5V SOT23	9400LMV331
IC21	IC OPAMP DUAL TLV2262CD SO8	9400TLV2262
IC22	IC LOGIC SWITCH 74HC4051 SO16	940074HC4051
IC23	IC COMPARATOR 2-36V SO8	9400LM393M
IC24	IC AMPLIFIER ANALOGUE 20V/V 500kHz SOT23	9400INA193
IC25	IC COMPARATOR 2-36V SO8	9400LM393M
IC26	IC OPTO COUPLER SINGLE SSO4	9400PS2801A1
IC27	12V SUPPLY CONTROLLER	9400TPS40055
IC28	IC TEMPERATURE SENSOR SOT23	9400LM60
IC29	IC TEMPERATURE SENSOR SOT23	9400LM60
IC30	IC QUAD 2 INPUT POSITIVE OR GATES 74HC32M SO14 SM	940074HC32M
IC31	IC OPAMP DUAL TLV2262CD SO8	9400TLV2262
IC32	IC AMPLIFIER ANALOGUE 20V/V 500kHz SOT23	9400INA193
IC33	IC OPTO COUPLER QUAD SSO16	9400PS2801A4
IC34	IC REGULATOR LINEAR 5V 800mA SOT223	9401LM1117
IC36	IC OPTO COUPLER SINGLE SSO4	9400PS2801A1
IC37	IC OPTO COUPLER SINGLE SSO4	9400PS2801A1
IC38	IC HIGH SPEED CMOS OPTOCOUPLER 3.3/5V SSO8	9400ACPL072L
IC39	IC HIGH SPEED CMOS OPTOCOUPLER 3.3/5V SSO8	9400ACPL072L

Ref.	Description	Part No.
IC40	IC QUAD AND 74HC08 2V SO14	940074HC08
IC45	IC TRIPLE 2-CHANNEL ANALOG MULTIPLEXER/DEMULTIPLEXER	940074LV4053
IC46	IC TRIPLE 2-CHANNEL ANALOG MULTIPLEXER/DEMULTIPLEXER	940074LV4053
IC48	IC FLASH MEMORY 16MBIT SERIAL	9400S25FL016A
IC51	IC OPAMP LINEAR 2.7-6V SOT23-5	9400TLV2461
IC52	IC MICROCONTROLLER ARM9 512k FLASH 96k SRAM	9401STR912FA
IC53	IC DUAL OUTPUT VOLTAGE REGULATOR 3.3V/1.8V	9400TPS70151
IC54	IC SRAM 2-MBIT 128Kx16 HIGH SPEED 2.7-3.6V	9400CY62136
IC55	IC LATCH D-TYPE 16 BIT TRANSPARENT	9.40074E+11
IC80	IC QUAD OPAMP TLV2264 SO14	9400TLV2264
IC120	IC COMPARATOR PUSH PULL SOT23-6	9400LMV761
IC170	IC QUAD 2I/P NAND GATE 74HC00 SO14	940074HC00
IC180	IC QUAD NAND HEF4011UB SO14 SM	94004011U
ISO5	IC OPTO COUPLER 18v SO8	9400HP0701
ISO8	IC OPTO COUPLER 18v SO8	9400HP0701
L2	INDUCTOR 10uH 18A	15554
L4	INDUCTOR FERRITE BEAD 650R@100MHz	15390
L5	INDUCTOR FERRITE BEAD 650R@100MHz	15390
L6	INDUCTOR FERRITE BEAD 650R@100MHz	15390
L7	INDUCTOR 1uH 200mA 1206	9600L1
L8	INDUCTOR 1uH 0.92A 5% 0805	9600MAG1U
L9	INDUCTOR 1uH 0.92A 5% 0805	9600MAG1U
L10	INDUCTOR FERRITE BEAD 650R@100MHz	15390
L13	INDUCTOR 1uH 200mA 1206	9600L1
L14	INDUCTOR 1uH 200mA 1206	9600L1
L15	INDUCTOR 1uH 200mA 1206	9600L1
L16	INDUCTOR 1uH 200mA 1206	9600L1
L17	INDUCTOR 1uH 200mA 1206	9600L1
L18	INDUCTOR 1uH 200mA 1206	9600L1
L19	INDUCTOR 100uH 730mA	9600COILC2
L20	INDUCTOR 1uH 200mA 1206	9600L1
L21	IND COMMON MODE CHOKE VERT 13A 275uH	15539
L22	INDUCTOR 1uH 200mA 1206	9600L1
L23	INDUCTOR 1uH 200mA 1206	9600L1
L27	FERRITE 200mA BLM21A102S	9600FER2012
L28	FERRITE 200mA BLM21A102S	9600FER2012
L31	INDUCTOR 1uH 200mA 1206	9600L1
L32	INDUCTOR 1uH 200mA 1206	9600L1
L34	TRANSF C-MODE 0.7A TOKO B4FL	9600TOKOCM1
L38	INDUCTOR 1uH 200mA 1206	9600L1
L39	INDUCTOR 1uH 200mA 1206	9600L1
L40	INDUCTOR 1uH 200mA 1206	9600L1
L42	INDUCTOR 1uH 200mA 1206	9600L1
L43	INDUCTOR 1uH 200mA 1206	9600L1
L44	INDUCTOR 1uH 0.92A 5% 0805	9600MAG1U
L45	INDUCTOR 1uH 200mA 1206	9600L1

Ref.	Description	Part No.	Ref.	Description	Part No.
L46	IND COMMON MODE CHOKE 30A 270uH	3030-602	R6	RES MFILM 3K9 1% 0.063W 0402	91QAA3K9
L47	INDUCTOR 1uH 200mA 1206	9600L1	R7	RES MFILM 1K0 1% 0.063W 0402	91QAA1K
L48	INDUCTOR 1uH 200mA 1206	9600L1	R8	RES MFILM 7K5 1% 0.063W 0402	91QAA7K5
L49	INDUCTOR 1uH 200mA 1206	9600L1	R9	RES MFILM 3K9 1% 0.063W 0402	91QAA3K9
L50	INDUCTOR 1uH 200mA 1206	9600L1	R10	RES MFILM 12K 5% 0.125W 1206	910612K
L51	INDUCTOR 1uH 200mA 1206	9600L1	R11	RES MFILM 13R 1% 0.063W 0402	91QAA13R
L52	INDUCTOR 10uH SMD	9600L29	R12	RES MFILM 13R 1% 0.063W 0402	91QAA13R
L53	INDUCTOR 1uH 200mA 1206	9600L1	R13	RES 0R0 1% 0.063W 0402	91QAA0R0
L54	INDUCTOR 1uH 200mA 1206	9600L1	R14	RES 0R0 1% 0.063W 0402	91QAA0R0
L55	INDUCTOR 1uH 200mA 1206	9600L1	R15	RES 0R0 1% 0.063W 0402	91QAA0R0
L56	INDUCTOR 1uH 200mA 1206	9600L1	R16	RES 0R0 1% 0.063W 0402	91QAA0R0
L57	INDUCTOR 1uH 200mA 1206	9600L1	R17	RES MFILM 1K2 1% 0.063W 0402	91QAA1K2
L59	INDUCTOR 1uH 200mA 1206	9600L1	R18	RES MFILM 16K 1% 0.063W 0603	91AAAXX16K
L61	INDUCTOR 1uH 200mA 1206	9600L1	R19	RES MFILM 1M0 1% 0.063W 0402	91QAA1M
L62	INDUCTOR 1uH 200mA 1206	9600L1	R20	RES MFILM 39K 1% 0.063W 0402	91QAA39K
L63	INDUCTOR 1uH 200mA 1206	9600L1	R21	RES MFILM 39K 1% 0.063W 0402	91QAA39K
L64	INDUCTOR 1uH 200mA 1206	9600L1	R22	RES MFILM 280K 1% 0.25W 1206	91CADXX280K
L65	INDUCTOR 1uH 200mA 1206	9600L1	R23	RES MFILM 330K 1% 0.063W 0402	91QAA330K
L66	INDUCTOR 1uH 200mA 1206	9600L1	R24	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7
L67	INDUCTOR 1uH 200mA 1206	9600L1	R25	RES MFILM 560R 1% 0.063W 0603	91AAAXX560R
L68	INDUCTOR 1uH 200mA 1206	9600L1	R26	RES MFILM 330R 1% 0.063W 0402	91QAA330R
L69	INDUCTOR 1uH 200mA 1206	9600L1	R27	RES MFILM 22R 1% 0.063W 0402	91QAA22R
L73	INDUCTOR 1uH 200mA 1206	9600L1	R28	RES MFILM 2K2 5% 0.125W 1206	91062K2
L74	INDUCTOR 1uH 200mA 1206	9600L1	R29	RES MFILM 2K2 5% 0.125W 1206	91062K2
L75	INDUCTOR 1uH 200mA 1206	9600L1	R30	RES MFILM 15K 1% 0.063W 0402	91QAAAXX15K
L76	IND COMMON MODE CHOKE 8 LINE 100mA 5uH	9600CCDLF80	R31	RES MFILM 13R 1% 0.063W 0402	91QAA13R
L77	IND COMMON MODE CHOKE 3 LINE 100mA 5uH	9600PDLF30	R32	RES MFILM 13R 1% 0.063W 0402	91QAA13R
L78	INDUCTOR 1uH 200mA 1206	9600L1	R33	RES MFILM 2K2 5% 0.125W 1206	91062K2
L81	IND COMMON MODE CHOKE 30A 4.7uH	3030-603	R34	RES 100K 1% 0.063W 0402	91QAA100K
L82	INDUCTOR 1uH 200mA 1206	9600L1	R35	RES MFILM 150K 1% 0.063W 0402	91QAA150K
L84	COMMON MODE CHOKE WE 744221 SM	9600WURTH2M	R36	RES 100K 1% 0.063W 0402	91QAA100K
L85	INDUCTOR 1uH 200mA 1206	9600L1	R37	RES 100K 1% 0.063W 0402	91QAA100K
L86	INDUCTOR 1uH 200mA 1206	9600L1	R38	RES MFILM 1K2 1% 0.063W 0402	91QAA1K2
LED1	LED RED 0805 SM	9207SML210LT	R39	RES MFILM 1K2 1% 0.063W 0402	91QAA1K2
LED2	LED RED 0805 SM	9207SML210LT	R40	RES MFILM 39R 1% 0.063W 0402	91QAA39R
LED4	LED YELLOW 0805 SM	9207SML210Y	R41	RES MFILM 39R 1% 0.063W 0402	91QAA39R
LED5	LED YELLOW 0805 SM	9207SML210Y	R42	RES MFILM 51K 1% 0.063W 0402	91QAA51K
LED6	LED YELLOW 0805 SM	9207SML210Y	R43	RES MFILM 51K 1% 0.063W 0402	91QAA51K
LED7	LED SML-210 GREEN	9207SML210	R44	RES MFILM 33K 1% 0.063W 0402	91QAA33K
LED9	LED RED 0805 SM	9207SML210LT	R45	RES MFILM 33K 1% 0.063W 0402	91QAA33K
LED11	LED SML-210 GREEN	9207SML210	R46	RES 100K 1% 0.063W 0402	91QAA100K
LED12	LED YELLOW 0805 SM	9207SML210Y	R47	RES 180K 1% 0.063W 0402	91QAA180K
PL1	CONNECTOR SPADE (EARTH TAG)	7503	R48	RES 100K 1% 0.063W 0402	91QAA100K
R1	RES 0R0 1% 0.063W 0402	91QAA0R0	R49	RES MFILM 16K 1% 0.063W 0603	91AAAXX16K
R2	RES MFILM 330R 5% 3W CONV	1245	R50	RES MFILM 16K 1% 0.063W 0603	91AAAXX16K
R3	RES MFILM 2K2 5% 0.125W 1206	91062K2	R51	RES 100R 1% 0.063W 0402	91QAA100R
R4	RES 100R 1% 0.063W 0402	91QAA100R	R52	RES MFILM 1M0 1% 0.063W 0402	91QAA1M
R5	RES MFILM 7K5 1% 0.063W 0402	91QAA7K5	R53	RES MFILM 2K2 1% 0.063W 0402	91QAA2K2
			R56	RES MFILM 2K2 5% 0.125W 1206	91062K2
			R57	RES MFILM 680R 1% 0.063W 0402	91QAA680R

Ref.	Description	Part No.
R58	RES MFILM 390R 1% 0.063W 0402	91QAA390R
R59	RES MFILM 8R2 1% 0.063W 0603	91AAAXX8R2
R62	RES MFILM 8R2 1% 0.063W 0603	91AAAXX8R2
R63	RES MFILM 16K 1% 0.063W 0603	91AAAXX16K
R64	RES MFILM 1K5 1% 0.063W 0402	91QAA1K5
R65	RES MFILM 1K5 1% 0.063W 0402	91QAA1K5
R66	RES MFILM 1K5 1% 0.063W 0402	91QAA1K5
R67	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7
R68	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7
R69	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7
R70	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7
R71	RES 10K 1% 0.063W 0402	91QAA10K
R72	RES 10K 1% 0.063W 0402	91QAA10K
R73	RES 10K 1% 0.063W 0402	91QAA10K
R74	RES 10K 1% 0.063W 0402	91QAA10K
R75	RES 10K 1% 0.063W 0402	91QAA10K
R76	RES MFILM 1K5 1% 0.063W 0402	91QAA1K5
R77	RES 10K 1% 0.063W 0402	91QAA10K
R78	RES MFILM 6K8 1% 0.25W 1206	91036K8
R79	RES 10K 1% 0.063W 0402	91QAA10K
R80	RES MFILM 2M7 1% 0.063W 0402	91QAA2M7
R81	RES MFILM 47K 1% 0.063W 0402	91QAA47K
R82	RES MFILM 270R 1% 0.063W 0402	91QAA270R
R83	RES MFILM 270R 1% 0.063W 0402	91QAA270R
R84	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7
R85	RES 10K 1% 0.063W 0402	91QAA10K
R86	RES 10K 1% 0.063W 0402	91QAA10K
R87	RES 10K 1% 0.063W 0402	91QAA10K
R88	RES 100R 1% 0.063W 0402	91QAA100R
R89	RES 100R 1% 0.063W 0402	91QAA100R
R90	RES MFILM 2M7 1% 0.063W 0402	91QAA2M7
R91	RES MFILM 820K 1% 0.063W 0402	91QAA820K
R92	RES MFILM 820K 1% 0.063W 0402	91QAA820K
R93	RES 10K 1% 0.063W 0402	91QAA10K
R94	RES MFILM 330K 1% 0.063W 0402	91QAA330K
R95	RES 10K 1% 0.063W 0402	91QAA10K
R97	RES MFILM 0R0 5% 0.063W 0603	91010R0
R98	RES MFILM 330K 1% 0.063W 0402	91QAA330K
R99	RES MFILM 2K2 1% 0.063W 0402	91QAA2K2
R100	RES MFILM 2K2 1% 0.063W 0402	91QAA2K2
R101	RES MFILM 150R 1% 0.063W 0402	91QAA150R
R102	RES MFILM 39R 1% 0.063W 0402	91QAA39R
R103	RES 10K 1% 0.063W 0402	91QAA10K
R104	RES MFILM 220R 1% 0.063W 0603	91AAAXX220R
R105	RES MFILM 39R 1% 0.063W 0402	91QAA39R
R106	RES MFILM 1K0 1% 0.063W 0402	91QAA1K
R107	RES MFILM 1K0 1% 0.063W 0402	91QAA1K
R108	RES MFILM 1K0 1% 0.063W 0402	91QAA1K
R109	RES MFILM 1K0 1% 0.063W 0402	91QAA1K
R110	RES MFILM 1K0 1% 0.063W 0402	91QAA1K

Ref.	Description	Part No.
R111	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7
R112	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7
R113	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7
R114	RES 100K 1% 0.063W 0402	91QAA100K
R115	RES MFILM 51K 1% 0.063W 0402	91QAA51K
R116	RES MFILM 220R 1% 0.063W 0603	91AAAXX220R
R117	RES MFILM 270R 1% 0.063W 0402	91QAA270R
R118	RES MFILM 5K6 1% 0.063W 0402	91QAA5K6
R119	RES MFILM 82R 1% 0.063W 0402	91QAA82R
R120	RES MFILM 1K2 1% 0.063W 0402	91QAA1K2
R121	RES MFILM 1M0 1% 0.063W 0402	91QAA1M
R122	RES 10K 1% 0.063W 0402	91QAA10K
R123	RES 10K 1% 0.063W 0402	91QAA10K
R124	RES 10K 1% 0.063W 0402	91QAA10K
R125	RES 10K 1% 0.063W 0402	91QAA10K
R126	RES MFILM 3K3 1% 0.063W 0402	91QAA3K3
R127	RES MFILM 1K0 1% 0.063W 0402	91QAA1K
R128	RES MFILM 39K 1% 0.063W 0402	91QAA39K
R130	RES MFILM 2K2 1% 0.063W 0402	91QAA2K2
R131	RES MFILM 2K2 1% 0.063W 0402	91QAA2K2
R132	RES MFILM 33K 1% 0.063W 0402	91QAA33K
R133	RES MFILM 680R 1% 0.063W 0402	91QAA680R
R134	RES 10K 1% 0.063W 0402	91QAA10K
R135	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7
R136	RES MFILM 390R 1% 0.063W 0402	91QAA390R
R137	RES MFILM 3K3 1% 0.063W 0402	91QAA3K3
R138	RES MFILM 8R2 1% 0.063W 0603	91AAAXX8R2
R139	RES MFILM 22K 1% 0.063W 0603	91AAAXX22K
R140	RES MFILM 15K 1% 0.063W 0402	91QAAXX15K
R141	RES MFILM 2K2 1% 0.063W 0402	91QAA2K2
R142	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7
R143	RES MFILM 39K 1% 0.063W 0402	91QAA39K
R144	RES MFILM 330R 1% 0.063W 0402	91QAA330R
R145	RES MFILM 39K 1% 0.063W 0402	91QAA39K
R146	RES MFILM 39K 1% 0.063W 0402	91QAA39K
R147	RES 10K 1% 0.063W 0402	91QAA10K
R148	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7
R150	RES MFILM 1K2 1% 0.063W 0402	91QAA1K2
R151	RES MFILM 0R0 5% 0.063W 0603	91010R0
R152	RES MFILM 100R 5% 0.125W 1206	9106100R
R153	RES MFILM 1K0 1% 0.063W 0402	91QAA1K
R155	RES MFILM 22K 1% 0.063W 0402	91QAA22K
R156	RES MFILM 5K6 1% 0.063W 0402	91QAA5K6
R160	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7
R164	RES MFILM 100R 5% 0.125W 1206	9106100R
R165	RES MFILM 2K2 5% 0.125W 1206	91062K2
R166	RES MFILM 1K0 1% 0.063W 0402	91QAA1K
R167	RES 10K 1% 0.063W 0402	91QAA10K
R168	RES 10K 1% 0.063W 0402	91QAA10K
R169	RES MFILM 3K3 1% 0.063W 0402	91QAA3K3

Ref.	Description	Part No.
R170	RES 10K 1% 0.063W 0402	91QAA10K
R171	RES 10K 1% 0.063W 0402	91QAA10K
R172	RES MFILM 2K2 5% 0.125W 1206	91062K2
R173	RES MFILM 2K2 5% 0.125W 1206	91062K2
R175	RES MFILM 0R0 5% 0.063W 0603	91010R0
R176	RES MFILM 2K2 5% 0.125W 1206	91062K2
R179	RES MFILM 280K 1% 0.25W 1206	91CADXX280K
R180	RES MFILM 0.05R 5% 0.5W 2010	91HCGXXXR05
R182	RES MFILM 15R 1% 0.063W 0603	91AAAXX15R
R183	RES 10K 1% 0.063W 0402	91QAA10K
R184	RES 10K 1% 0.063W 0402	91QAA10K
R185	RES 10K 1% 0.063W 0402	91QAA10K
R186	RES 10K 1% 0.063W 0402	91QAA10K
R187	RES 10K 1% 0.063W 0402	91QAA10K
R189	RES MFILM 15R 1% 0.063W 0603	91AAAXX15R
R190	RES MFILM 15R 1% 0.063W 0603	91AAAXX15R
R191	RES MFILM 15R 1% 0.063W 0603	91AAAXX15R
R192	RES MFILM 15R 1% 0.063W 0603	91AAAXX15R
R193	RES MFILM 15R 1% 0.063W 0603	91AAAXX15R
R194	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R195	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R196	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R197	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R198	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R199	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R200	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R201	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R202	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R203	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R204	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R205	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R206	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R208	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R209	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R210	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R211	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R212	RES MFILM 1K0 1% 0.063W 0402	91QAA1K
R213	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R214	RES MFILM 330K 1% 0.063W 0402	91QAA330K
R215	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R216	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R217	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R218	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R219	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R221	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R222	RES 10K 1% 0.063W 0402	91QAA10K
R223	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R224	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R225	RES 10K 1% 0.063W 0402	91QAA10K
R226	RES 100K 1% 0.063W 0402	91QAA100K

Ref.	Description	Part No.
R227	RES 10K 1% 0.063W 0402	91QAA10K
R228	RES 10K 1% 0.063W 0402	91QAA10K
R229	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R230	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7
R231	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R234	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R235	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7
R236	RES MFILM 39K 1% 0.063W 0402	91QAA39K
R237	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7
R238	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R239	RES MFILM 15K 1% 0.063W 0402	91QAAXX15K
R240	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R241	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R242	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R244	RES 10K 1% 0.063W 0402	91QAA10K
R245	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R246	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R247	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R248	RES 10K 1% 0.063W 0402	91QAA10K
R249	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R250	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R251	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R252	RES MFILM 1K0 1% 0.063W 0402	91QAA1K
R253	RES 10K 1% 0.063W 0402	91QAA10K
R254	RES 10K 1% 0.063W 0402	91QAA10K
R256	RES MFILM 2R2 5% 0.125W 1206	91CCC2R2
R257	RES MFILM 330K 1% 0.063W 0402	91QAA330K
R258	RES MFILM 27R 5% 1W 2512	91FCG27R
R260	RES MFILM 1K0 1% 0.063W 0402	91QAA1K
R261	RES MFILM 1K0 1% 0.063W 0402	91QAA1K
R262	RES MFILM 3K3 1% 0.063W 0402	91QAA3K3
R264	RES 10K 1% 0.063W 0402	91QAA10K
R265	RES 100K 1% 0.063W 0402	91QAA100K
R267	RES MFILM 680R 1% 0.063W 0402	91QAA680R
R268	RES MFILM 47K 1% 0.063W 0402	91QAA47K
R269	RES MFILM 47K 1% 0.063W 0402	91QAA47K
R270	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7
R271	RES 100K 1% 0.063W 0402	91QAA100K
R273	RES MFILM 22K 1% 0.063W 0603	91AAAXX22K
R274	RES 100K 1% 0.063W 0402	91QAA100K
R275	RES MFILM 47K 1% 0.063W 0402	91QAA47K
R276	RES MFILM 3K3 1% 0.063W 0402	91QAA3K3
R277	RES MFILM 1K2 1% 0.063W 0402	91QAA1K2
R278	RES 100K 1% 0.063W 0402	91QAA100K
R279	RES MFILM 2K2 1% 0.063W 0402	91QAA2K2
R280	RES MFILM 3K3 1% 0.063W 0402	91QAA3K3
R281	RES MFILM 1M0 1% 0.063W 0402	91QAA1M
R282	RES MFILM 47K 1% 0.063W 0402	91QAA47K
R283	RES MFILM 220R 1% 0.063W 0603	91AAAXX220R
R285	RES 10K 1% 0.063W 0402	91QAA10K

Ref.	Description	Part No.
R286	RES 10K 1% 0.063W 0402	91QAA10K
R287	RES MFILM 220R 1% 0.063W 0603	91AAAXX220R
R289	RES MFILM 120R 1% 0.063W 0402	91QAA120R
R291	RES MFILM 470R 1% 0.063W 0402	91QAA470R
R292	RES MFILM 470R 1% 0.063W 0402	91QAA470R
R295	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7
R296	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7
R297	RES MFILM 680R 1% 0.063W 0402	91QAA680R
R298	RES MFILM 1K2 1% 0.063W 0402	91QAA1K2
R299	RES MFILM 1K2 1% 0.063W 0402	91QAA1K2
R300	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7
R301	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7
R302	RES MFILM 33K 1% 0.063W 0402	91QAA33K
R303	RES MFILM 470R 1% 0.063W 0402	91QAA470R
R304	RES MFILM 470R 1% 0.063W 0402	91QAA470R
R305	RES MFILM 2K7 1% 0.063W 0402	91QAA2K7
R306	RES MFILM 1K2 1% 0.063W 0402	91QAA1K2
R307	RES 0R0 1% 0.063W 0402	91QAA0R0
R308	RES 0R0 1% 0.063W 0402	91QAA0R0
R309	RES MFILM 2K2 5% 0.125W 1206	91062K2
R310	RES MFILM 33K 1% 0.063W 0402	91QAA33K
R311	RES MFILM 220K 1% 0.063W 0402	91QAA220K
R312	RES MFILM 270R 1% 0.063W 0402	91QAA270R
R313	RES MFILM 2K2 5% 0.125W 1206	91062K2
R314	RES MFILM 6K8 1% 0.063W 0402	91QAA6K8
R315	RES MFILM 680R 1% 0.063W 0402	91QAA680R
R316	RES MFILM 220R 1% 0.063W 0603	91AAAXX220R
R318	RES 100R 1% 0.063W 0402	91QAA100R
R319	RES MFILM 51K 1% 0.063W 0402	91QAA51K
R321	RES MFILM 7K5 1% 0.063W 0402	91QAA7K5
R322	RES MFILM 5K6 1% 0.063W 0402	91QAA5K6
R323	RES MFILM 330K 1% 0.063W 0402	91QAA330K
R324	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7
R325	RES 10K 1% 0.063W 0402	91QAA10K
R326	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7
R327	RES 10K 1% 0.063W 0402	91QAA10K
R328	RES 100K 1% 0.063W 0402	91QAA100K
R329	RES MFILM 220R 1% 0.063W 0603	91AAAXX220R
R330	RES MFILM 33K 1% 0.063W 0402	91QAA33K
R331	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7
R332	RES 10K 1% 0.063W 0402	91QAA10K
R333	RES OAR 0R005 5% 5W CONV	1259
R334	RES MFILM 22K 1% 0.063W 0402	91QAA22K
R335	RES 10K 1% 0.063W 0402	91QAA10K
R336	RES MFILM 270R 1% 0.063W 0402	91QAA270R
R337	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7
R338	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7
R339	RES 10K 1% 0.063W 0402	91QAA10K
R340	RES MFILM 1K0 1% 0.063W 0402	91QAA1K
R341	RES MFILM 330K 1% 0.063W 0402	91QAA330K

Ref.	Description	Part No.
R342	RES MFILM 680R 1% 0.063W 0402	91QAA680R
R343	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7
R344	RES 10K 1% 0.063W 0402	91QAA10K
R345	RES MFILM 2K2 1% 0.063W 0402	91QAA2K2
R346	RES MFILM 390R 1% 0.063W 0402	91QAA390R
R347	RES MFILM 2K2 1% 0.063W 0402	91QAA2K2
R348	RES MFILM 330K 1% 0.063W 0402	91QAA330K
R349	RES MFILM 47K 1% 0.063W 0402	91QAA47K
R350	RES MFILM 47K 1% 0.063W 0402	91QAA47K
R351	RES MFILM 1K5 1% 0.063W 0402	91QAA1K5
R352	RES MFILM 2K2 5% 0.125W 1206	91062K2
R353	RES 10K 1% 0.063W 0402	91QAA10K
R354	RES 10K 1% 0.063W 0402	91QAA10K
R355	RES MFILM 2K2 1% 0.063W 0402	91QAA2K2
R356	RES MFILM 2K2 1% 0.063W 0402	91QAA2K2
R357	RES MFILM 22K 1% 0.063W 0402	91QAA22K
R358	RES 10K 1% 0.063W 0402	91QAA10K
R359	RES MFILM 51K 1% 0.063W 0402	91QAA51K
R360	RES MFILM 51K 1% 0.063W 0402	91QAA51K
R361	RES MFILM 5K6 1% 0.063W 0402	91QAA5K6
R362	RES MFILM 5K6 1% 0.063W 0402	91QAA5K6
R363	RES 10K 1% 0.063W 0402	91QAA10K
R364	RES 100R 1% 0.063W 0402	91QAA100R
R367	RES 10K 1% 0.063W 0402	91QAA10K
R369	RES 10K 1% 0.063W 0402	91QAA10K
R372	RES MFILM 2K2 5% 0.125W 1206	91062K2
R373	RES MFILM 1K0 5% 1.0W 2512	91FCGXXX1K
R374	RES MFILM 2K2 5% 0.125W 1206	91062K2
R375	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7
R376	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7
R378	RES 100R 1% 0.063W 0402	91QAA100R
R379	RES 100K 1% 0.063W 0402	91QAA100K
R380	RES MFILM 3K3 1% 0.063W 0402	91QAA3K3
R381	RES 100R 1% 0.063W 0402	91QAA100R
R382	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7
R383	RES MFILM 3K3 1% 0.063W 0402	91QAA3K3
R389	RES 10K 1% 0.063W 0402	91QAA10K
R390	RES MFILM 1K0 1% 0.063W 0402	91QAA1K
R391	RES MFILM 3K3 1% 0.063W 0402	91QAA3K3
R392	RES MFILM 2K2 5% 0.125W 1206	91062K2
R393	RES MFILM 22K 1% 0.063W 0603	91AAAXX22K
R396	RES 10K 1% 0.063W 0402	91QAA10K
R398	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7
R399	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7
R400	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7
R401	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7
R402	RES MFILM 220R 1% 0.063W 0603	91AAAXX220R
R404	RES MFILM 330R 1% 0.063W 0402	91QAA330R
R405	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7
R406	RES 10K 1% 0.063W 0402	91QAA10K

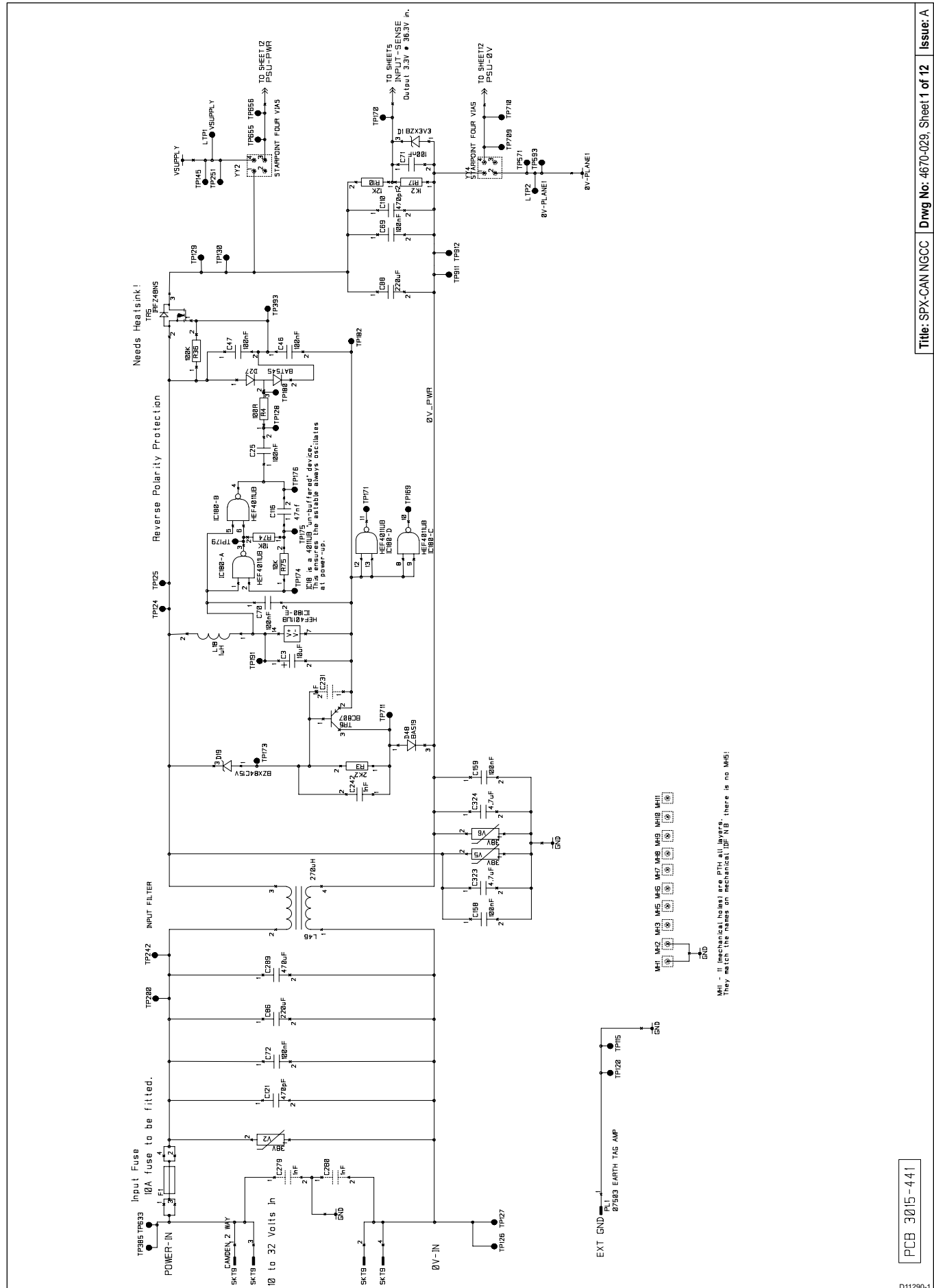
Ref.	Description	Part No.	Ref.	Description	Part No.
R407	RES MFILM 1K0 1% 0.063W 0402	91QAA1K	R516	RES MFILM 47K 1% 0.063W 0402	91QAA47K
R408	RES MFILM 2K2 1% 0.063W 0402	91QAA2K2	R517	RES MFILM 4K3 1% 0.063W 0402	91QAA4K3
R411	RES 0R0 1% 0.063W 0402	91QAA0R0	R518	RES MFILM 1K0 1% 0.063W 0402	91QAA1K
R412	RES 0R0 1% 0.063W 0402	91QAA0R0	R520	RES MFILM 470R 1% 0.063W 0402	91QAA470R
R415	RES 0R0 1% 0.063W 0402	91QAA0R0	R521	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7
R416	RES 0R0 1% 0.063W 0402	91QAA0R0	R523	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R417	RES 0R0 1% 0.063W 0402	91QAA0R0	R524	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R419	RES 0R0 1% 0.063W 0402	91QAA0R0	R525	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R438	RES 0R0 1% 0.063W 0402	91QAA0R0	R526	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R439	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7	R527	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R440	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7	R528	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R441	RES MFILM 22R 1% 0.063W 0402	91QAA22R	R529	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R443	RES MFILM 220R 1% 0.063W 0603	91AAAXX220R	R530	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R444	RES MFILM 220R 1% 0.063W 0603	91AAAXX220R	R531	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R445	RES MFILM 22R 1% 0.063W 0402	91QAA22R	R532	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R446	RES MFILM 22R 1% 0.063W 0402	91QAA22R	R533	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R447	RES MFILM 22R 1% 0.063W 0402	91QAA22R	R534	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R448	RES MFILM 22R 1% 0.063W 0402	91QAA22R	R535	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R449	RES MFILM 22R 1% 0.063W 0402	91QAA22R	R536	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R453	RES MFILM 22R 1% 0.063W 0402	91QAA22R	R537	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R454	RES MFILM 22R 1% 0.063W 0402	91QAA22R	R538	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R455	RES MFILM 22R 1% 0.063W 0402	91QAA22R	R539	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R456	RES MFILM 22R 1% 0.063W 0402	91QAA22R	R540	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R460	RES MFILM 22R 1% 0.063W 0402	91QAA22R	R541	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7
R465	RES 10K 1% 0.063W 0402	91QAA10K	R542	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7
R466	RES MFILM 10R 1% 0.063W 0402	91QAA10R	R543	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R467	RES MFILM 330R 1% 0.063W 0402	91QAA330R	R544	RES 10K 1% 0.063W 0402	91QAA10K
R468	RES MFILM 330R 1% 0.063W 0402	91QAA330R	R545	RES 10K 1% 0.063W 0402	91QAA10K
R469	RES 10K 1% 0.063W 0402	91QAA10K	R546	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R470	RES 10K 1% 0.063W 0402	91QAA10K	R547	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R471	RES MFILM 2K2 1% 0.063W 0402	91QAA2K2	R548	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R472	RES MFILM 270R 1% 0.063W 0402	91QAA270R	R552	RES MFILM 2K2 1% 0.063W 0402	91QAA2K2
R473	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7	R553	RES MFILM 2K2 1% 0.063W 0402	91QAA2K2
R475	RES 100R 1% 0.063W 0402	91QAA100R	R556	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R476	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7	R557	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R477	RES 0R0 1% 0.063W 0402	91QAA0R0	R558	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R478	RES 10K 1% 0.063W 0402	91QAA10K	R559	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7
R479	RES 10K 1% 0.063W 0402	91QAA10K	R560	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7
R480	RES 10K 1% 0.063W 0402	91QAA10K	R561	RES 10K 1% 0.063W 0402	91QAA10K
R481	RES MFILM 22R 1% 0.063W 0402	91QAA22R	R900	RES MFILM 0R0 5% 0.063W 0603	91010R0
R482	RES MFILM 22R 1% 0.063W 0402	91QAA22R	RLY1	RELAY SPDT 12VDC 25A OMRON	15541
R483	RES MFILM 330K 1% 0.063W 0402	91QAA330K	RLY5	RELAY DPDT-NO 12V OMRON	15522
R484	RES MFILM 330K 1% 0.063W 0402	91QAA330K	RLY7	RELAY DPST-NO DUAL FET 60VAC 400mA OMRON	9600RELAY3
R485	RES MFILM 22R 1% 0.063W 0402	91QAA22R	RN2	RES NET 2K2 5% 0.125W MNR34	91122K2
R486	RES MFILM 22R 1% 0.063W 0402	91QAA22R	RN5	RES NET 2K2 5% 0.125W MNR34	91122K2
R487	RES MFILM 22R 1% 0.063W 0402	91QAA22R	SKT1	4 way 10.16 mm header	7487
R489	RES 10K 1% 0.063W 0402	91QAA10K	SKT3	11 way 5.0 mm header	7488
R511	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7	SKT4	6 way 5.0 mm header	7490
R512	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7	SKT5	5 way 5.0 mm header	7491
R515	RES MFILM 47K 1% 0.063W 0402	91QAA47K			

Ref.	Description	Part No.
SKT6	2 way 5.0 mm header	7499
SKT10	4 way 5.0 mm header	7511
SKT11	CON SAMTEC 12 WAY CLP LOW PROFILE	9602SAMTEC12
SW1	SLIDE SWITCH	9600SWAPEM
SW2	SLIDE SWITCH	9600SWAPEM
TR1	TRANSISTOR MOSFET N CHAN D2PAK	9500IRF3805
TR2	TRANSISTOR MOSFET N CHAN D2PAK	9500IRF3805
TR3	TRANSISTOR MOSFET N CHAN D2PAK	9500IRF3805
TR4	TRANSISTOR MOSFET N CHAN D2PAK	9500IRF3805
TR5	TRANSISTOR MOSFET N CHAN D2PAK	9500IRF3805
TR6	TRANSISTOR BC807 PNP SOT23	9500BC807
TR7	TRANSISTOR MOSFET N CHAN DPAK	9500IRLR2905
TR8	TRANSISTOR MOSFET N CHAN DPAK	9500IRLR2905
TR9	TRANSISTOR MOSFET N CHAN DPAK	9500IRLR2905
TR10	TRANSISTOR MOSFET N CHAN DPAK	9500IRLR2905
TR11	TRANSISTOR MOSFET N CHAN DPAK	9500IRLR2905
TR12	TRANSISTOR MOSFET N CHAN DPAK	9500IRLR2905
TR13	TRANSISTOR DUAL IMX1 NPN SOT36	9500IMX1
TR14	TRANSISTOR BC807 PNP SOT23	9500BC807
TR15	TRANSISTOR DUAL IMZ1 PNP	9500IMZ1
TR16	TRANSISTOR BCP56 NPN SOT223	9500BCP56
TR17	TRANSISTOR BC817 NPN SOT23	9500BC817
TR18	TRANSISTOR DUAL IMX1 NPN SOT36	9500IMX1
TR19	TRANSISTOR BC807 PNP SOT23	9500BC807
TR20	TRANSISTOR BC817 NPN SOT23	9500BC817
TR22	TRANSISTOR MOSFET N CHAN SOT23	95002N7002
TR23	TRANSISTOR BC807 PNP SOT23	9500BC807
TR24	TRANSISTOR DUAL IMX1 NPN SOT36	9500IMX1
TR25	TRANSISTOR DUAL IMX1 NPN SOT36	9500IMX1
TR26	TRANSISTOR BC817 NPN SOT23	9500BC817
TR27	TRANSISTOR BCP56 NPN SOT223	9500BCP56
TR28	TRANSISTOR DUAL IMX1 NPN SOT36	9500IMX1
TR29	TRANSISTOR P CHANNEL MOSFET 30V 1.6A SOT23	9500ZXMP3A13
TR30	TRANSISTOR DUAL IMZ1 PNP	9500IMZ1
TR31	TRANSISTOR BC817 NPN SOT23	9500BC817
TR32	TRANSISTOR BC817 NPN SOT23	9500BC817
TR33	TRANSISTOR BC807 PNP SOT23	9500BC807
TR34	TRANSISTOR DUAL IMX1 NPN SOT36	9500IMX1
TR35	TRANSISTOR DUAL IMX1 NPN SOT36	9500IMX1
TR36	TRANSISTOR BC807 PNP SOT23	9500BC807
TR37	TRANSISTOR BC817 NPN SOT23	9500BC817
TR38	TRANSISTOR BC868 NPN SOT89	9501BC868
TR39	TRANSISTOR DUAL IMX1 NPN SOT36	9500IMX1
TR40	TRANSISTOR BC817 NPN SOT23	9500BC817
TR41	TRANSISTOR BC807 PNP SOT23	9500BC807
TR42	TRANSISTOR DUAL IMX1 NPN SOT36	9500IMX1
TR43	TRANSISTOR MOSFET PCHAN IRFR5505 TO252	9500IR5505
TR44	TRANSISTOR DUAL IMZ1 PNP	9500IMZ1

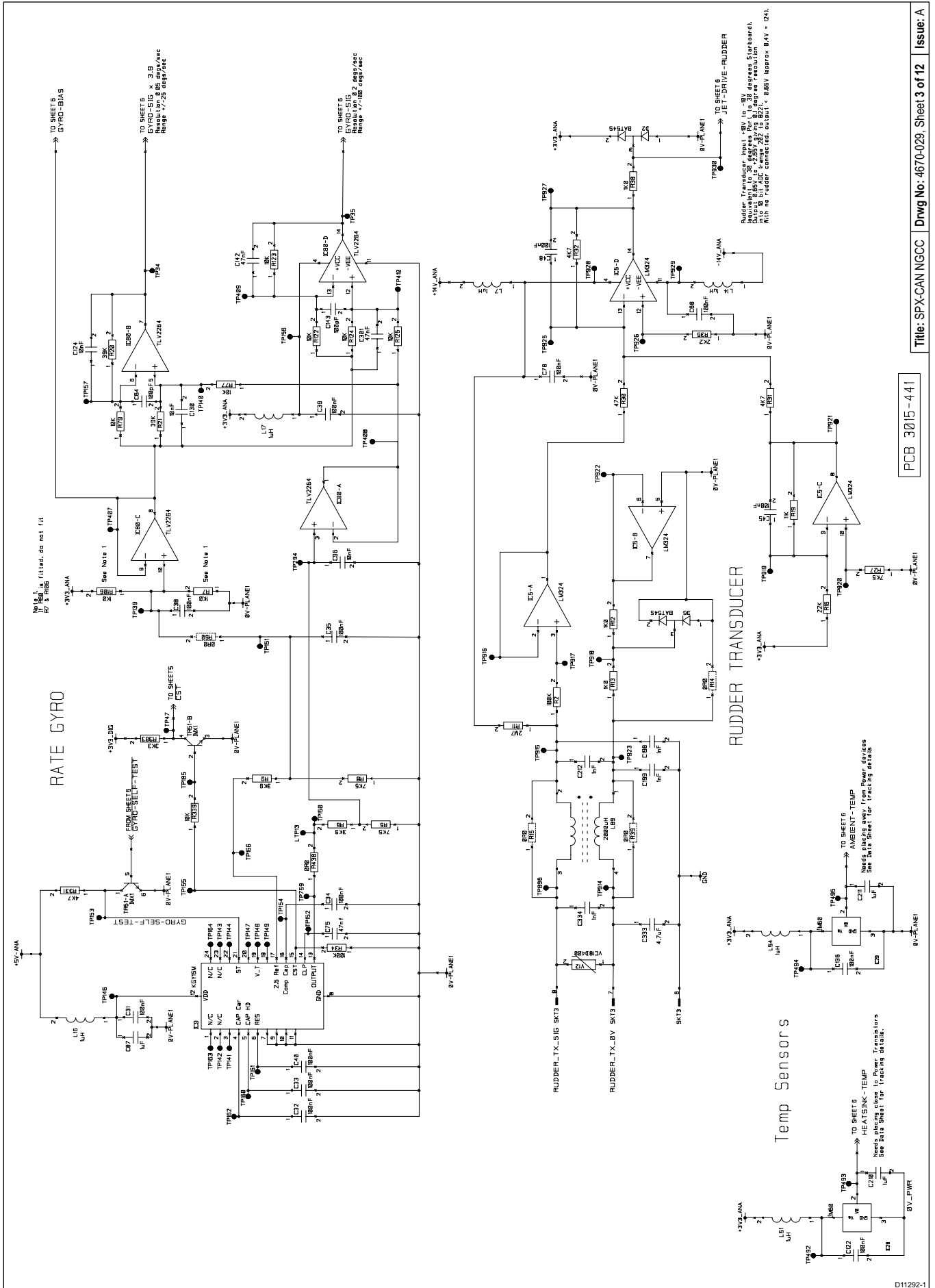
Ref.	Description	Part No.
TR47	TRANSISTOR MOSFET N CHAN SOT23	95002N7002
TR48	TRANSISTOR MOSFET N CHAN SOT23	95002N7002
TR51	TRANSISTOR DUAL IMX1 NPN SOT36	9500IMX1
TR54	TRANSISTOR BC817 NPN SOT23	9500BC817
TR55	TRANSISTOR MOSFET N CHAN SOT23	95002N7002
TR56	TRANSISTOR BC817 NPN SOT23	9500BC817
TR57	TRANSISTOR BC817 NPN SOT23	9500BC817
TR58	TRANSISTOR BC817 NPN SOT23	9500BC817
TR59	TRANSISTOR BC817 NPN SOT23	9500BC817
TR60	TRANSISTOR DUAL IMX1 NPN SOT36	9500IMX1
TR61	TRANSISTOR DUAL IMX1 NPN SOT36	9500IMX1
TR131	TRANSISTOR MOSFET PCHAN IRFR5505 TO252	9500IR5505
V1	VARISTOR 2K2 V33ZA5	1244
V2	VARISTOR 2K2 V33ZA5	1244
V5	VARISTOR 2K2 V33ZA5	1244
V6	VARISTOR 2K2 V33ZA5	1244
V7	TRANS SUPPRESSOR CERAMIC 1210	9108EPCOSV1
V8	TRANS SUPPRESSOR VC180400 1206	9108VC180400
V10	TRANS SUPPRESSOR VC180400 1206	9108VC180400
XTL1	XTAL 19Mhz CERAMIC BASE & LID SM7A	9601CR19
XTL3	CRYSTAL 32.768kHz SM	9602CR32P768

Chapter 6: SmartPilot X-CAN PCB

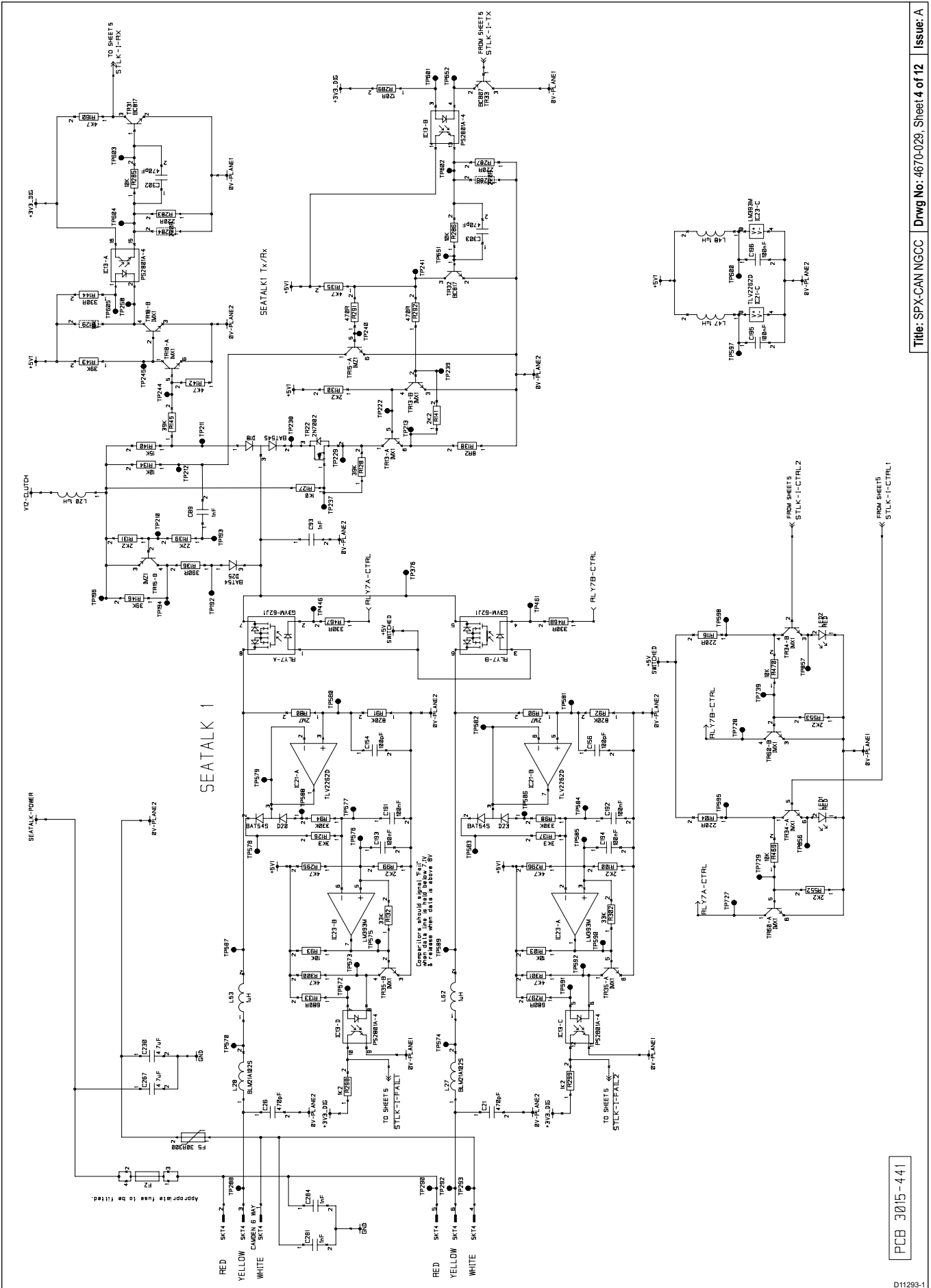
SmartPilot X-CAN PCB - Sheet 1 of 12



SmartPilot X-CAN PCB - Sheet 3 of 12



SmartPilot X-CAN PCB - Sheet 4 of 12

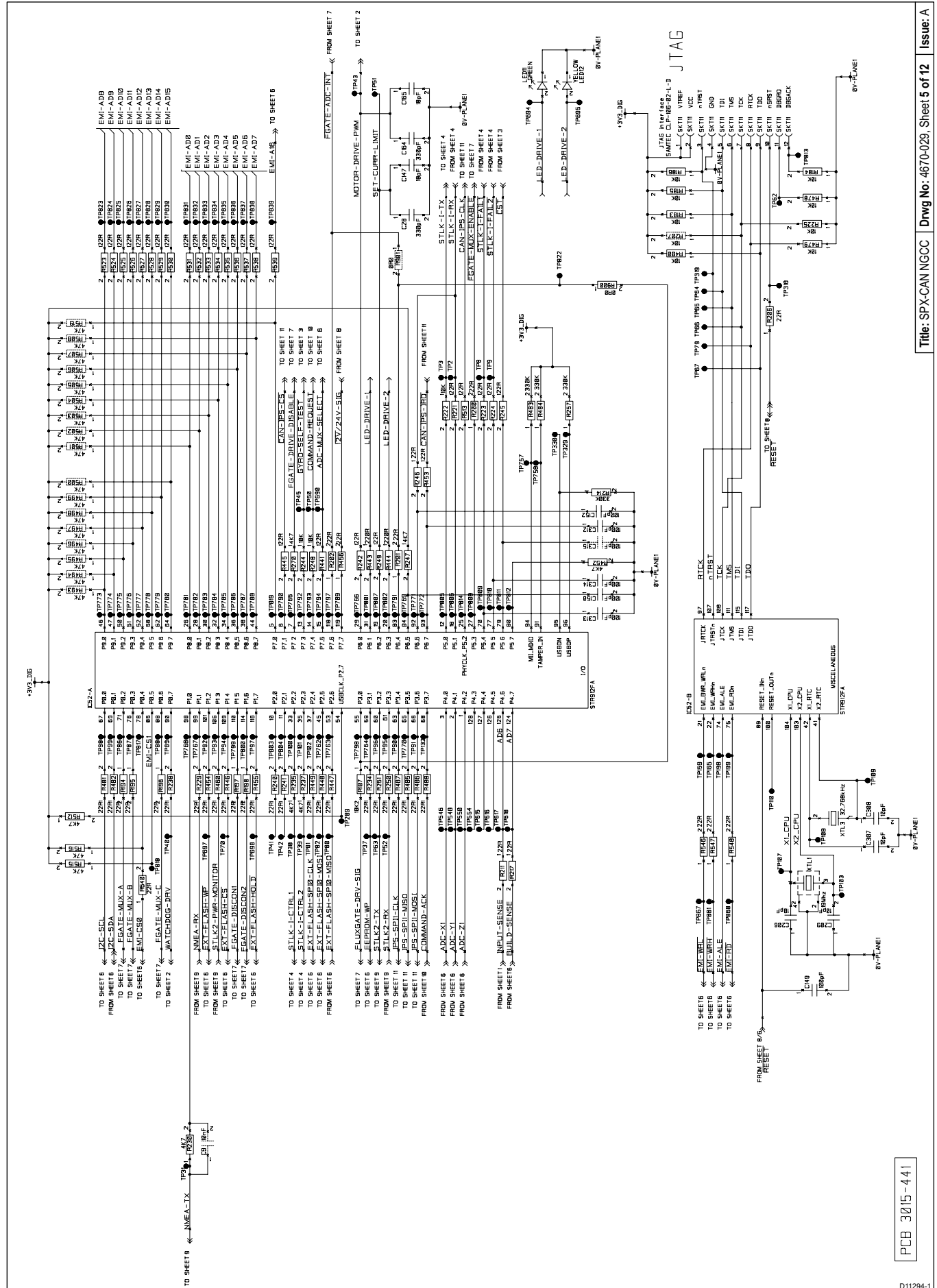


PCB 3015-441

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D11293-1

SmartPilot X-CAN PCB - Sheet 5 of 12

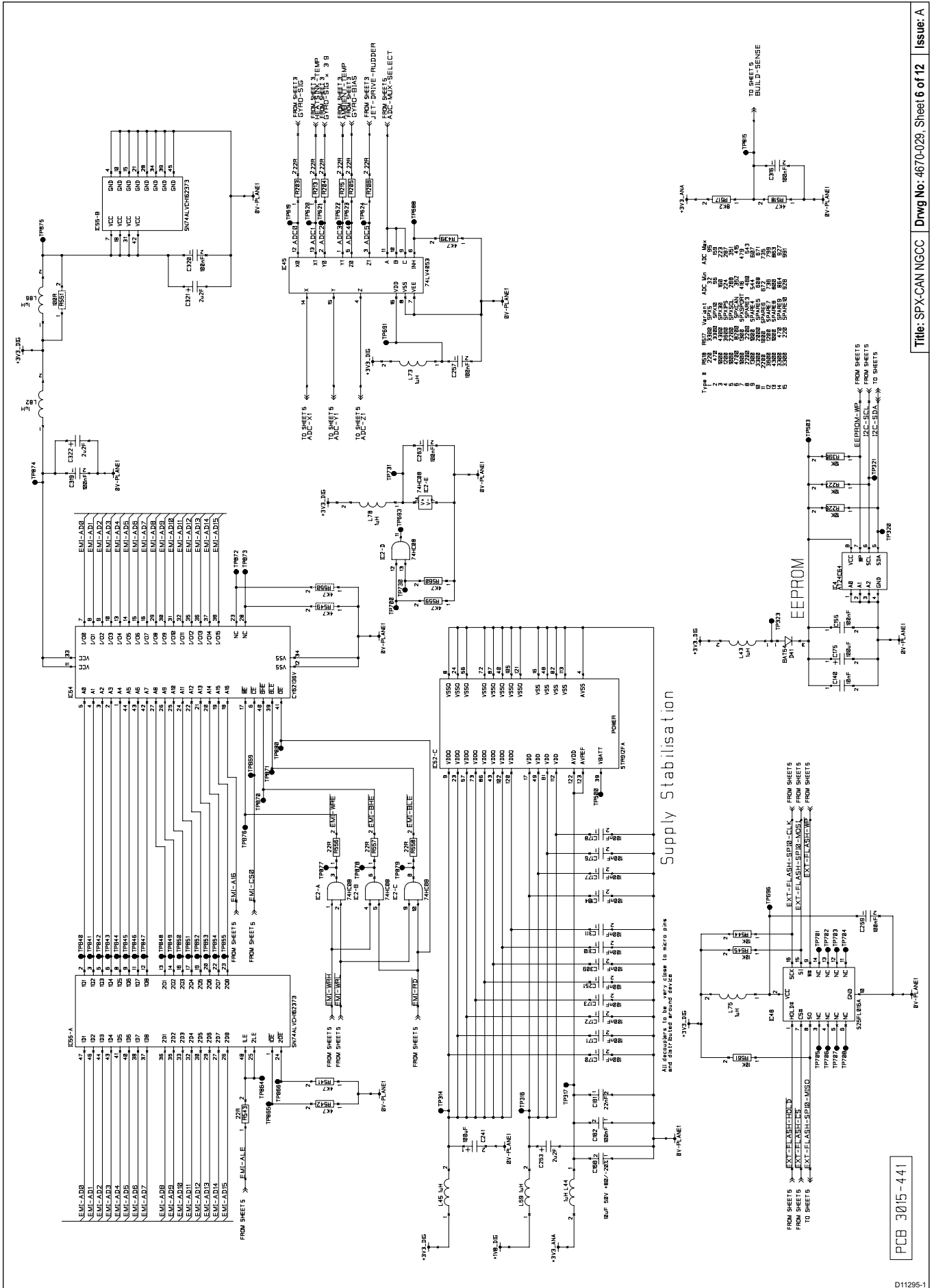


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PCB 3015-441

D11294-1

SmartPilot X-CAN PCB - Sheet 6 of 12

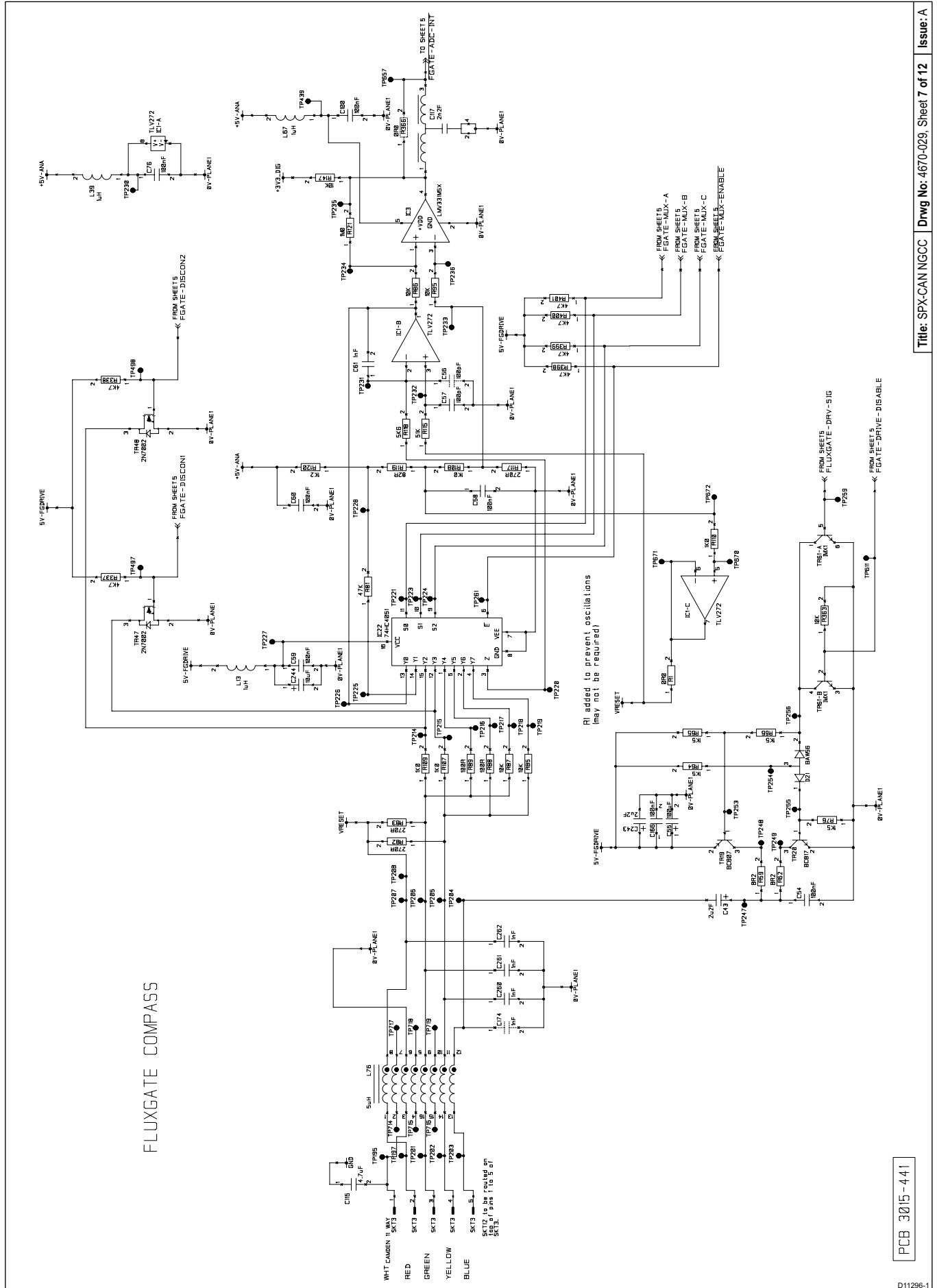


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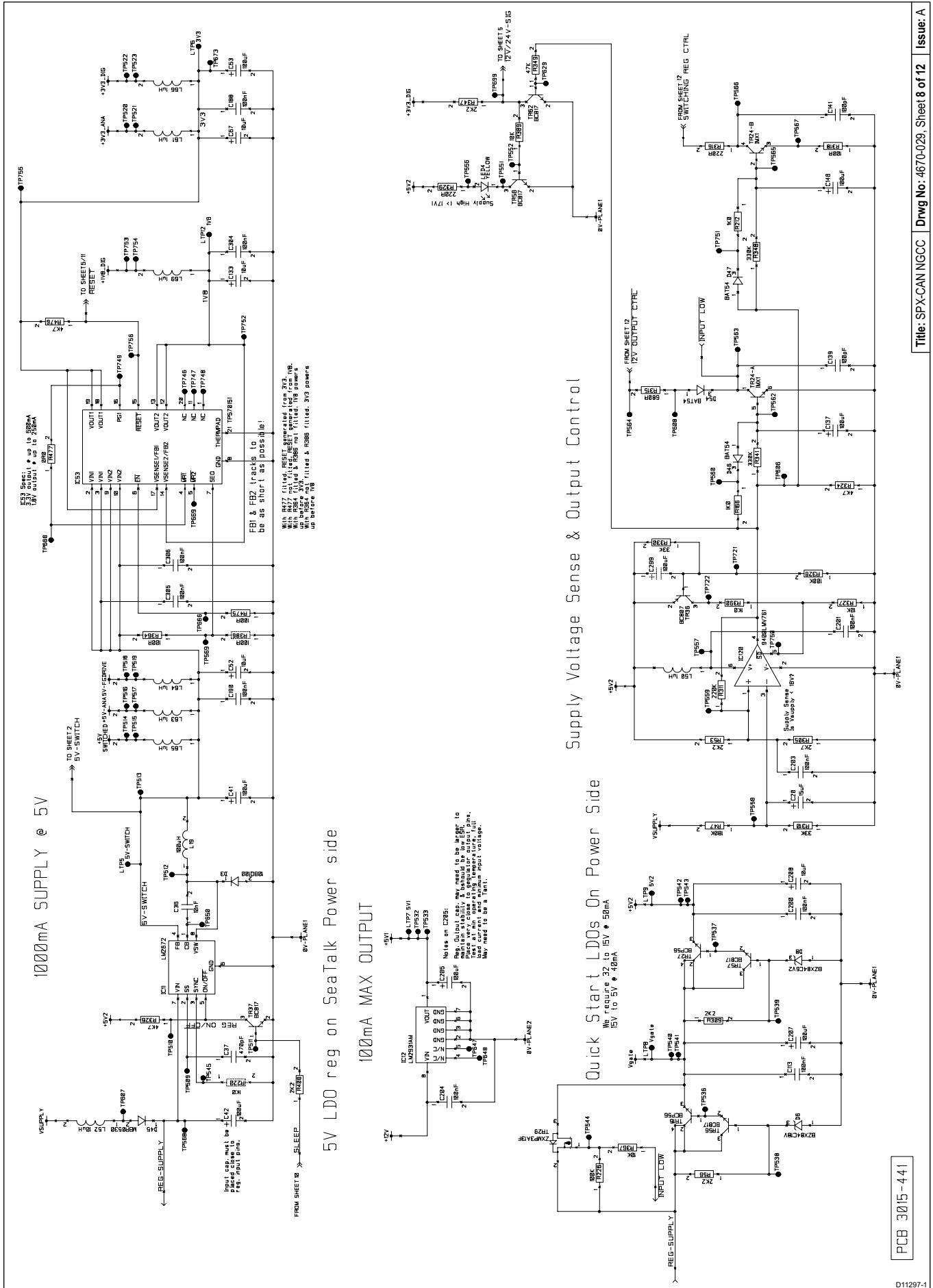
PCB 3015-441

D11295-1

SmartPilot X-CAN PCB - Sheet 7 of 12



SmartPilot X-CAN PCB - Sheet 8 of 12

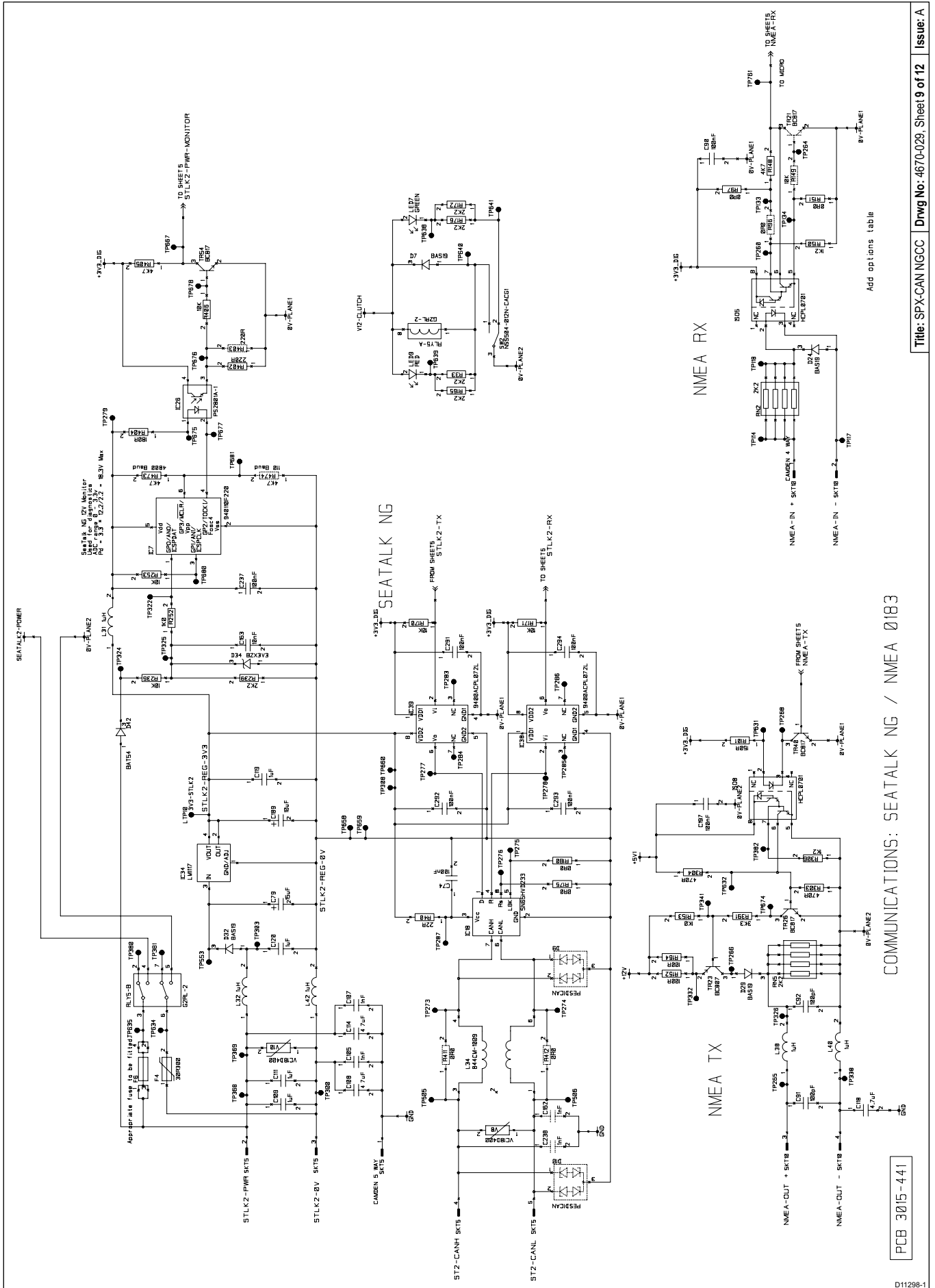


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PCB 3015-441

D11297-1

SmartPilot X-CAN PCB - Sheet 9 of 12

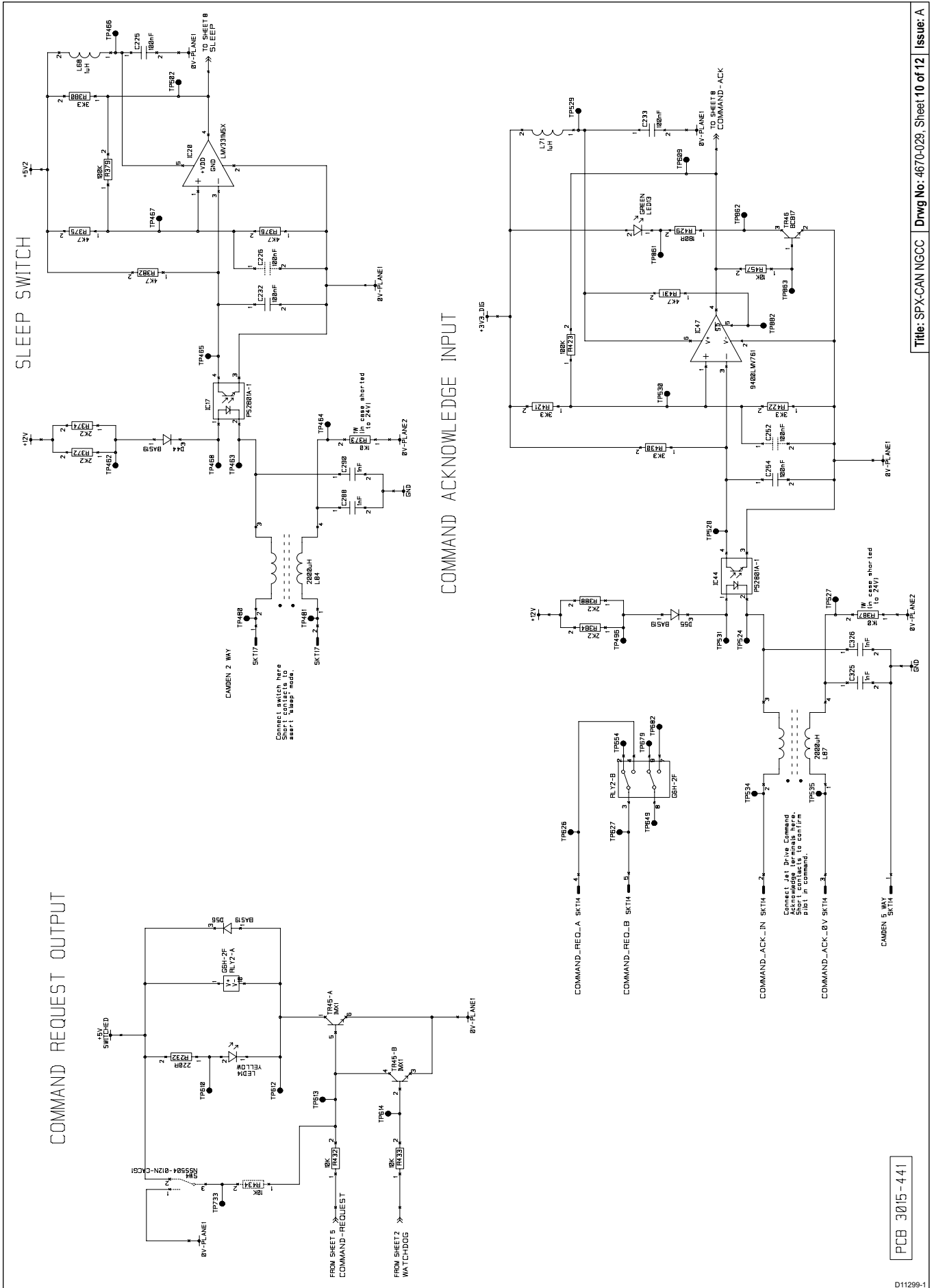


PCB 3015-441

COMMUNICATIONS: SEATALK NG / NMEA 0183

Add options table

SmartPilot X-CAN PCB - Sheet 10 of 12

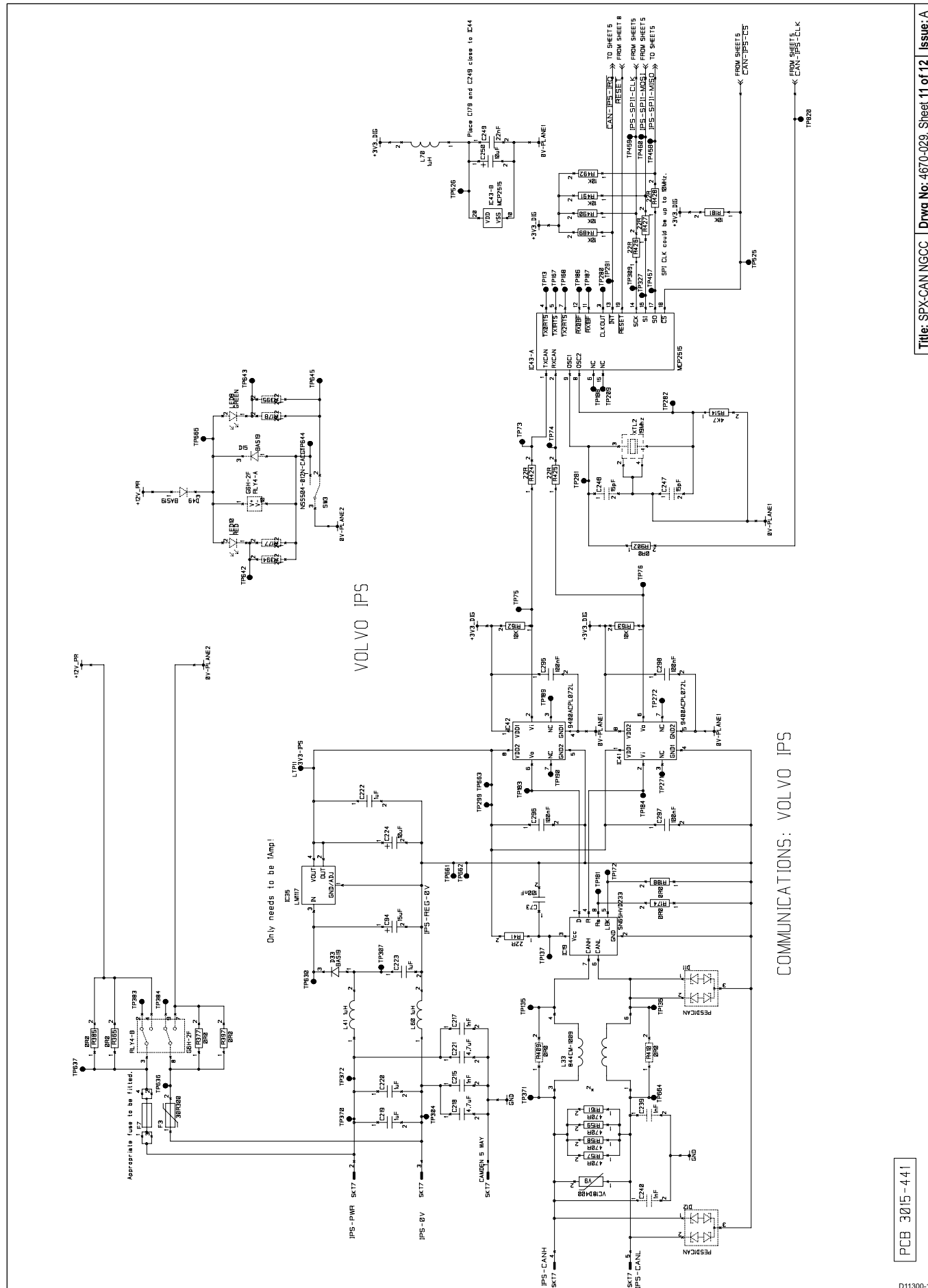


PCB 3015-441

Title: SPX-CAN NGCC Drwg No: 4670-029, Sheet 10 of 12 Issue: A

D11299-1

SmartPilot X-CAN PCB - Sheet 11 of 12

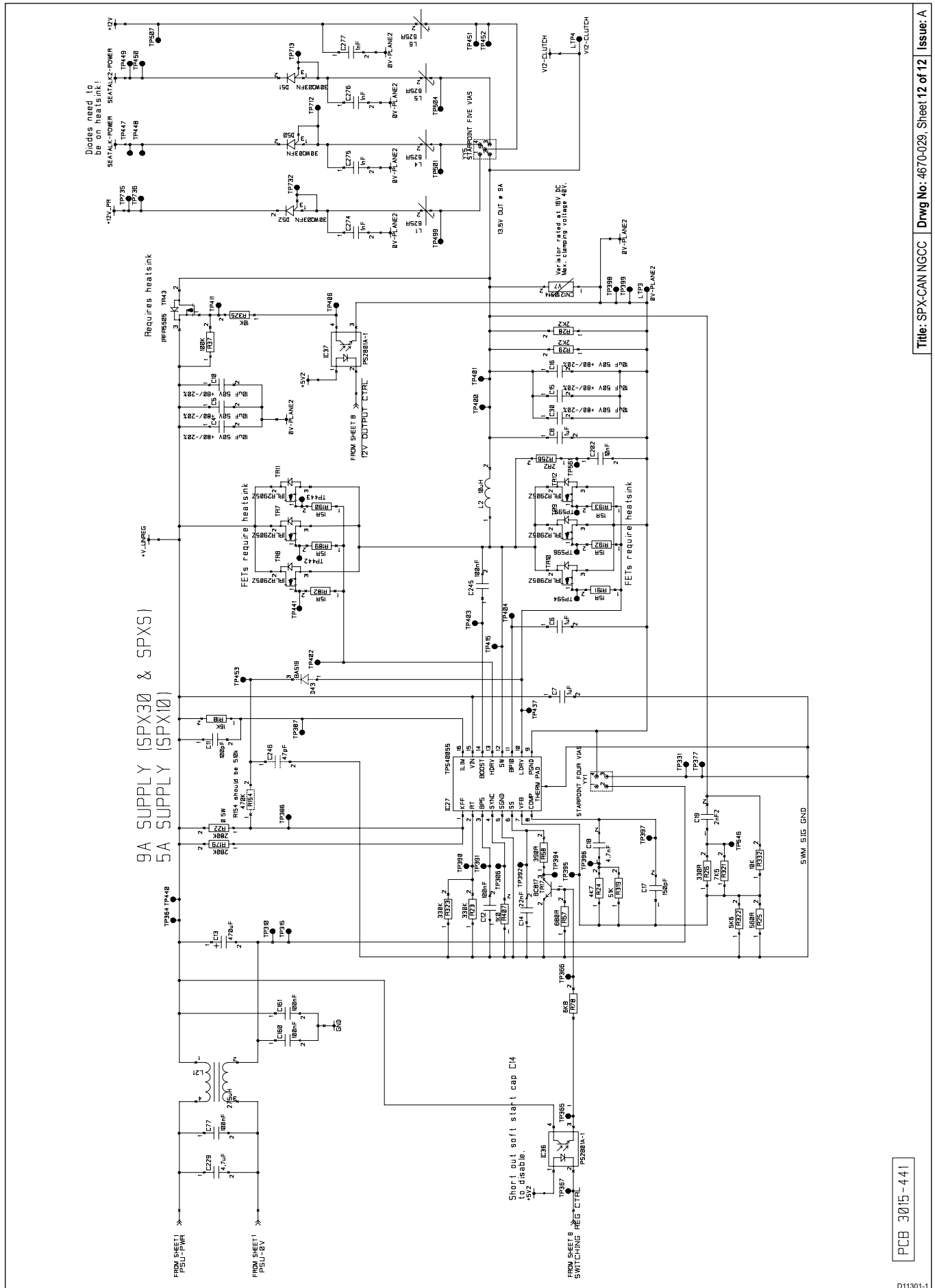


Title: SPX-CAN NGCC | Dwg No: 4670-029, Sheet 11 of 12 | Issue: A

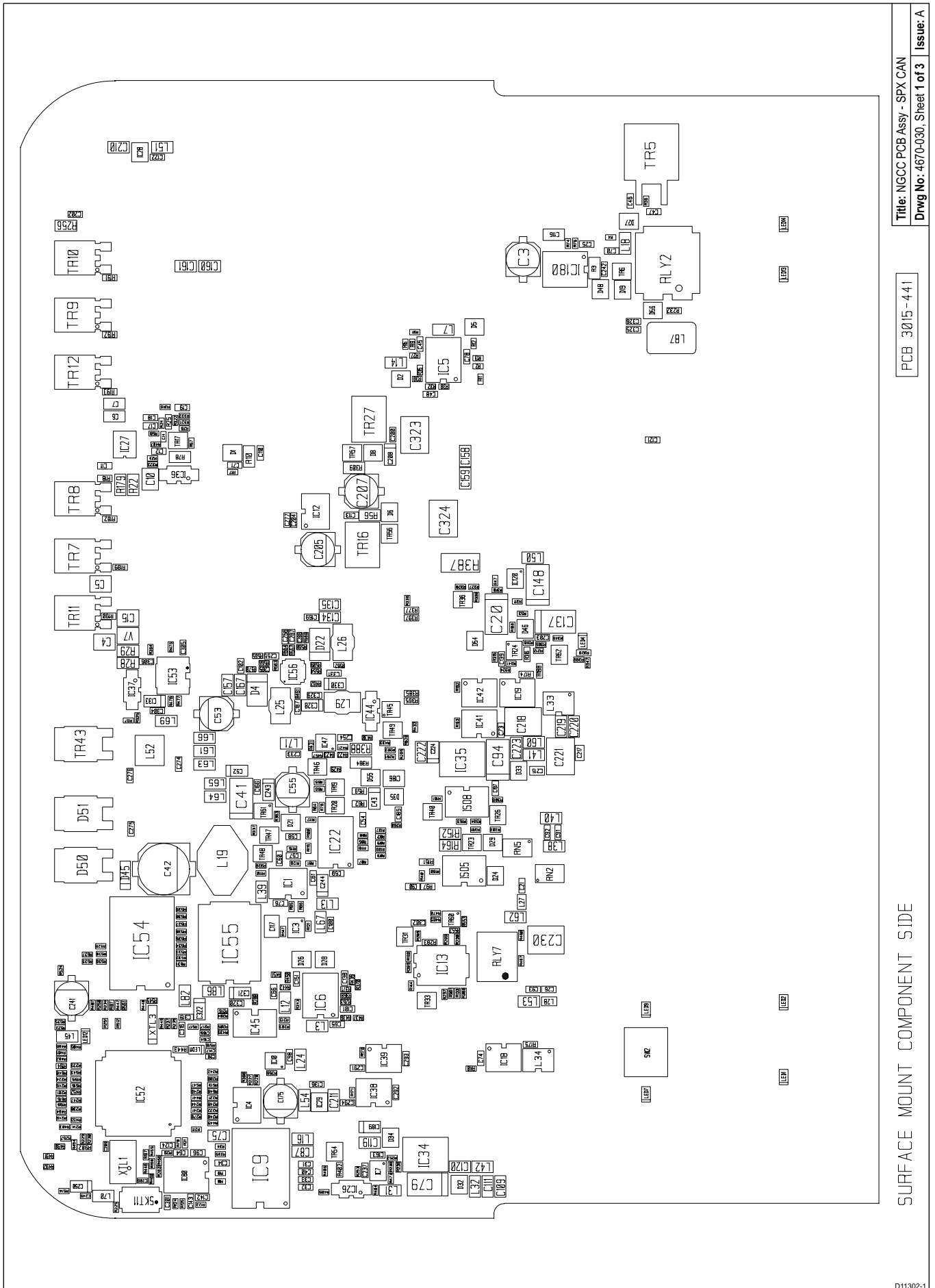
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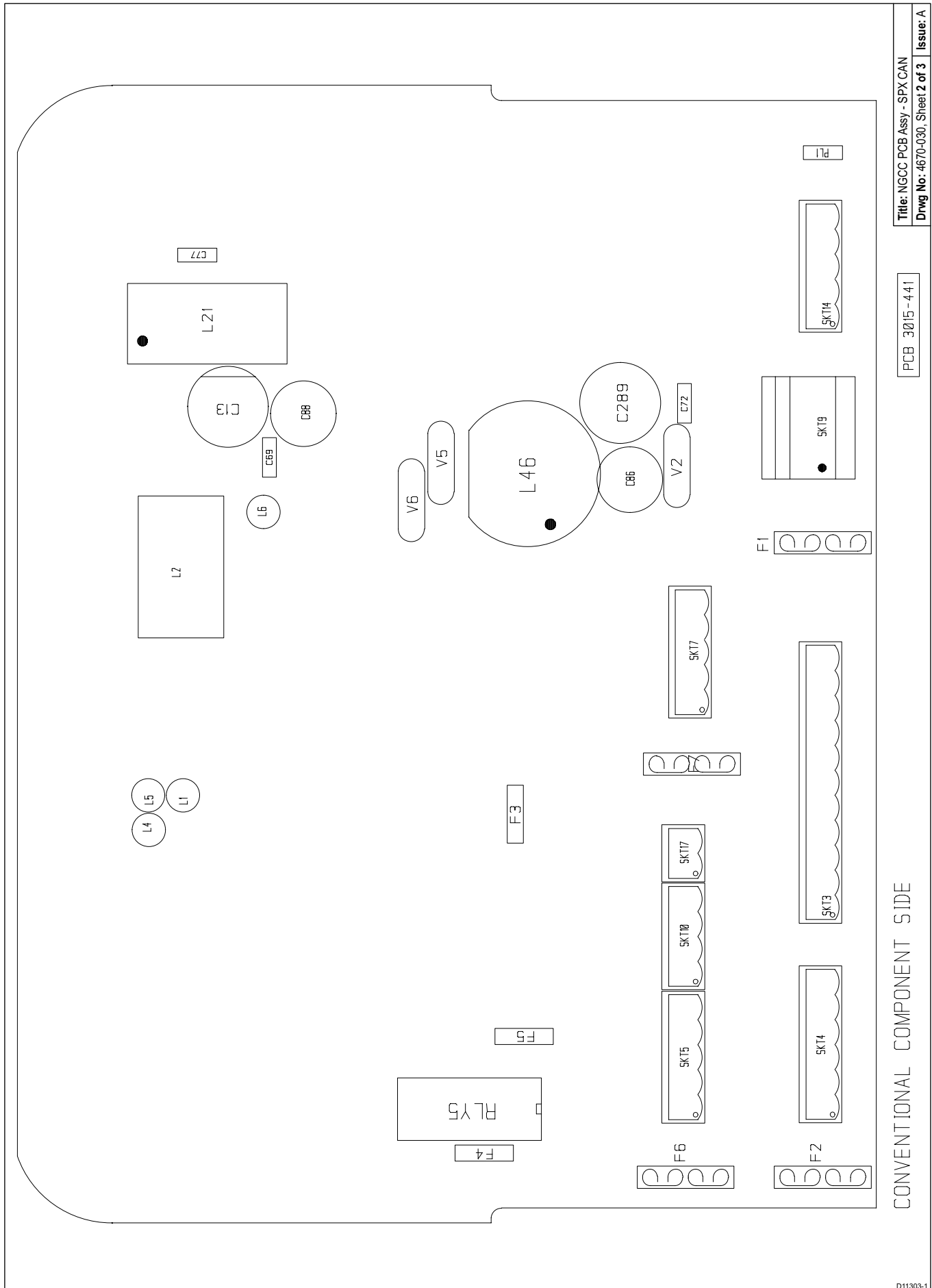
SmartPilot X-CAN PCB - Sheet 12 of 12



SmartPilot X-CAN PCB - Components - Sheet 1 of 3

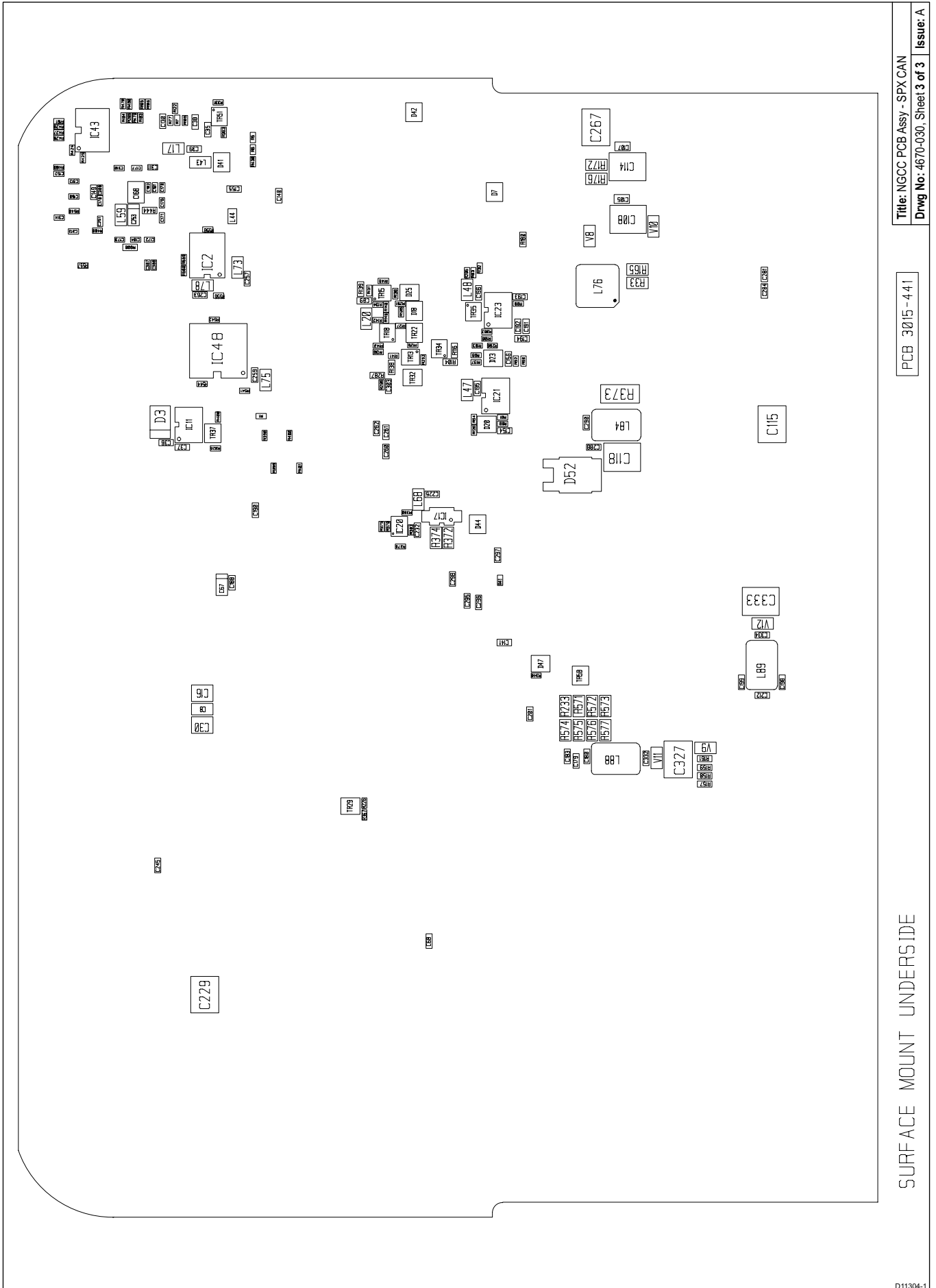


SmartPilot X-CAN PCB - Components - Sheet 2 of 3



D11303-1

SmartPilot X-CAN PCB - Components - Sheet 3 of 3



SmartPilot X-CAN PCB - Components, Parts List

Ref.	Description	Part No.
C3	CAP ALELEC 10uF 50v 20% ELECD	93ZEHEXXX10U
C4	CAP CERAMIC 10uF 50V 1210	93DFHD10U
C5	CAP CERAMIC 10uF 50V 1210	93DFHD10U
C6	CAP Y5V 1uF 50v 20% 1206	93261U
C7	CAP Y5V 1uF 50v 20% 1206	93261U
C8	CAP Y5V 1uF 50v 20% 1206	93261U
C10	CAP CERAMIC 10uF 50V 1210	93DFHD10U
C11	CAP COG 100pF 50v 5% 0603	93ACHAXX100P
C12	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C13	CAP ELEC LOW ESR 470uF 63V 20% RAD	3206
C14	CAP CERAMIC 22nF SM 16V 10% 0402	93QDEB22N
C15	CAP CERAMIC 10uF 50V 1210	93DFHD10U
C16	CAP CERAMIC 10uF 50V 1210	93DFHD10U
C17	CAP COG 150pF 50V 2% 0603	93ABHA150P
C18	CAP X7R 4.7nF 50V 10% 0603	93ADHAXX4N7
C19	CAP X7R 2.2nF 50v 10% 0603	93ADHBXX2N2
C20	CAP TANT 15uF 35V 20% TANTD	93JEGCXX15U
C21	CAP COG 470pF 50v 5% 0603	93ACHAXX470P
C25	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C26	CAP COG 470pF 50v 5% 0603	93ACHAXX470P
C28	CAP 330pF +/-5% 50V COG 0402	93QCHA330P
C30	CAP CERAMIC 10uF 50V 1210	93DFHD10U
C31	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C32	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C33	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C34	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C35	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C36	CAP X7R 10nF 50v 10% 0603	93ADHBXX10N
C37	CAP COG 470pF 50v 5% 0603	93ACHAXX470P
C38	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C39	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C40	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C41	CAP TANT 100uF 10v 20% TANTD	9326100U
C42	CAP 100uF 50v 20% AL-ELEC	93ZEHEXX100U
C43	CAP TANT 2u2F 10v 10% TANTA	93GDCC2U2
C45	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C46	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C47	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C48	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C52	CAP TANT 10uF 10v 10% TANTA	93GDCCXXX10U
C53	CAP ALELEC 100uF 6.3v 20%ELECD	9324100U
C54	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C55	CAP ALELEC 100uF 35V 20% CASE G	93KEGEXX100U
C57	CAP COG 100pF 50v 5% 0603	93ACHAXX100P
C58	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C59	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C60	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C61	CAP X7R 1nF 50v 10% 0603	93ADHBXX1N

Ref.	Description	Part No.
C64	CAP COG 100pF 50v 5% 0603	93ACHAXX100P
C65	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C66	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C67	CAP TANT 10uF 10v 10% TANTA	93GDCCXXX10U
C68	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C69	CAP POLY 100nF 100V 10% RADIAL	3082
C70	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C71	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C72	CAP POLY 100nF 100V 10% RADIAL	3082
C73	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C74	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C75	CAP X7R 47nF 50V 10% 1206	93060U047
C76	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C77	CAP POLY 100nF 100V 10% RADIAL	3082
C78	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C79	CAP TANT 15uF 35V 20% TANTD	93JEGCXX15U
C86	CAP ALEL NONPOL 220uF 50v 20% RAD	3153
C87	CAP Y5V 1uF 50v 20% 1206	93261U
C88	CAP ALEL NONPOL 220uF 50v 20% RAD	3153
C89	CAP X7R 1nF 50v 10% 0603	93ADHBXX1N
C90	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C91	CAP COG 100pF 50v 5% 0603	93ACHAXX100P
C92	CAP COG 100pF 50v 5% 0603	93ACHAXX100P
C93	CAP X7R 1nF 50v 10% 0603	93ADHBXX1N
C94	CAP TANT 15uF 35V 20% TANTD	93JEGCXX15U
C96	CAP X7R 10nF 50v 10% 0603	93ADHBXX10N
C98	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C100	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C101	CAP X7R 1nF 50v 10% 0603	93ADHBXX1N
C102	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C105	CAP COG 1nF 100V +/- 5% 0805	93ACJAXXXX1N
C107	CAP COG 1nF 100V +/- 5% 0805	93ACJAXXXX1N
C108	CAP X7R 4.7uF 100v 10% 2220	93FDJBXXX4U7
C109	CAP Y5V 1uF 50v 20% 1206	93261U
C110	CAP COG 470pF 50v 5% 0603	93ACHAXX470P
C111	CAP Y5V 1uF 50v 20% 1206	93261U
C113	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C114	CAP X7R 4.7uF 100v 10% 2220	93FDJBXXX4U7
C115	CAP X7R 4.7uF 100v 10% 2220	93FDJBXXX4U7
C116	CAP X7R 47nF 50V 10% 1206	93060U047
C117	CAP FILT 2n2F 25v +/-50% 6A	93ZHFGXXX2N2
C118	CAP X7R 4.7uF 100v 10% 2220	93FDJBXXX4U7
C119	CAP Y5V 1uF 50v 20% 1206	93261U
C120	CAP Y5V 1uF 50v 20% 1206	93261U
C121	CAP COG 470pF 50v 5% 0603	93ACHAXX470P
C122	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C124	CAP X7R 10nF 50v 10% 0603	93ADHBXX10N
C130	CAP X7R 10nF 50v 10% 0603	93ADHBXX10N
C133	CAP TANT 10uF 10v 10% TANTA	93GDCCXXX10U

Ref.	Description	Part No.	Ref.	Description	Part No.
C134	CAP X5R 4u7F 25V 10% 1206	93CDFI4U7	C190	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C135	CAP X5R 4u7F 25V 10% 1206	93CDFI4U7	C191	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C136	CAP X7R 100nF 25V 10% 0603	93ADFB100N	C192	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C137	CAP TANT 100uF 10v 20% TANTD	9326100U	C193	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C138	CAP X7R 10nF 50v 10% 0603	93ADHBXX10N	C194	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C139	CAP COG 100pF 50v 5% 0603	93ACHAXX100P	C195	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C140	CAP X7R 10nF 50v 10% 0603	93ADHBXX10N	C196	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C141	CAP COG 100pF 50v 5% 0603	93ACHAXX100P	C197	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C142	CAP X7R 47nF 16v 10% 0603	93ADEBXX47N	C198	CAP X7R 1nF 50v 10% 0603	93ADHBXX1N
C143	CAP COG 100pF 50v 5% 0603	93ACHAXX100P	C199	CAP X7R 1nF 50v 10% 0603	93ADHBXX1N
C147	CAP 18pF +/-5% 50V COG 0402	93QCHA18P	C200	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C148	CAP TANT 100uF 10v 20% TANTD	9326100U	C201	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C149	CAP COG 100pF 50v 5% 0603	93ACHAXX100P	C202	CAP X7R 10nF 50v 10% 0603	93ADHBXX10N
C150	CAP 100pF 1% 50V COG 0402	93QAHA100P	C203	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C151	CAP X7R 10nF 50v 10% 0603	93ADHBXX10N	C204	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C152	CAP 100pF 1% 50V COG 0402	93QAHA100P	C205	CAP ALELEC 100uF 35V 20% CASE G	93KEGEXX100U
C154	CAP COG 100pF 50v 5% 0603	93ACHAXX100P	C206	CAP 10pF SM 0402	93QCHA10P
C155	CAP X7R 100nF 25V 10% 0603	93ADFB100N	C207	CAP ALELEC 100uF 35V 20% CASE G	93KEGEXX100U
C156	CAP COG 100pF 50v 5% 0603	93ACHAXX100P	C208	CAP TANT 10uF 10v 10% TANTA	93GDCCXXX10U
C157	CAP X5R 4u7F 25V 10% 1206	93CDFI4U7	C209	CAP 10pF SM 0402	93QCHA10P
C158	CAP X7R 0.1uF 50v 20% 1206	93070U1	C210	CAP Y5V 1uF 50v 20% 1206	93261U
C159	CAP X7R 0.1uF 50v 20% 1206	93070U1	C211	CAP Y5V 1uF 50v 20% 1206	93261U
C160	CAP X7R 0.1uF 50v 20% 1206	93070U1	C212	CAP X7R 1nF 50v 10% 0603	93ADHBXX1N
C161	CAP X7R 0.1uF 50v 20% 1206	93070U1	C215	CAP COG 1nF 100V +/- 5% 0805	93ACJAXXXX1N
C163	CAP X7R 10nF 50v 10% 0603	93ADHBXX10N	C217	CAP COG 1nF 100V +/- 5% 0805	93ACJAXXXX1N
C164	CAP 330pF +/-5% 50V COG 0402	93QCHA330P	C218	CAP X7R 4.7uF 100v 10% 2220	93FDJBXXX4U7
C165	CAP 18pF +/-5% 50V COG 0402	93QCHA18P	C219	CAP Y5V 1uF 50v 20% 1206	93261U
C166	CAP X7R 100nF 25V 10% 0603	93ADFB100N	C220	CAP Y5V 1uF 50v 20% 1206	93261U
C167	CAP X5R 4u7F 25V 10% 1206	93CDFI4U7	C221	CAP X7R 4.7uF 100v 10% 2220	93FDJBXXX4U7
C168	CAP CERAMIC 10uF 50V 1210	93DFHD10U	C222	CAP Y5V 1uF 50v 20% 1206	93261U
C169	CAP X7R 100nF 25V 10% 0603	93ADFB100N	C223	CAP Y5V 1uF 50v 20% 1206	93261U
C170	CAP 100nF +/-10% 10V X5R 0402	93QDDI100N	C224	CAP TANT 10uF 10v 10% TANTA	93GDCCXXX10U
C171	CAP 100nF +/-10% 10V X5R 0402	93QDDI100N	C225	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C172	CAP 100nF +/-10% 10V X5R 0402	93QDDI100N	C229	CAP X7R 4.7uF 50v 10% 2220	93FDHBXXX4U7
C173	CAP 100nF +/-10% 10V X5R 0402	93QDDI100N	C230	CAP X7R 4.7uF 100v 10% 2220	93FDJBXXX4U7
C175	CAP ALELEC 100uF 6.3v 20%ELECD	9324100U	C232	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C176	CAP 100nF +/-10% 10V X5R 0402	93QDDI100N	C233	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C177	CAP 100nF +/-10% 10V X5R 0402	93QDDI100N	C237	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C178	CAP 100nF +/-10% 10V X5R 0402	93QDDI100N	C241	CAP ALELEC 100uF 6.3v 20%ELECD	9324100U
C179	CAP X7R 1nF 50v 10% 0603	93ADHBXX1N	C242	CAP X7R 1nF 50v 10% 0603	93ADHBXX1N
C180	CAP X7R 1nF 50v 10% 0603	93ADHBXX1N	C243	CAP TANT 2u2F 10v 10% TANTA	93GDCC2U2
C181	CAP CERAMIC 22nF SM 16V 10% 0402	93QDEB22N	C244	CAP TANT 10uF 10v 10% TANTA	93GDCCXXX10U
C182	CAP 100nF +/-10% 10V X5R 0402	93QDDI100N	C245	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C183	CAP X7R 1nF 50v 10% 0603	93ADHBXX1N	C249	CAP CERAMIC 22nF SM 16V 10% 0402	93QDEB22N
C184	CAP 100nF +/-10% 10V X5R 0402	93QDDI100N	C250	CAP TANT 10uF 10v 10% TANTA	93GDCCXXX10U
C185	CAP X7R 100nF 25V 10% 0603	93ADFB100N	C251	CAP 100nF +/-10% 10V X5R 0402	93QDDI100N
C186	CAP CERAMIC 10uF 50V 1210	93DFHD10U	C253	CAP TANT 2u2F 10v 10% TANTA	93GDCC2U2
C187	CAP X7R 100nF 25V 10% 0603	93ADFB100N	C254	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C188	CAP X7R 100nF 25V 10% 0603	93ADFB100N	C255	CAP X7R 10nF 50v 10% 0603	93ADHBXX10N
C189	CAP TANT 10uF 10v 10% TANTA	93GDCCXXX10U	C256	CAP X7R 10nF 50v 10% 0603	93ADHBXX10N

Ref.	Description	Part No.
C257	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C259	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C260	CAP X7R 1nF 50v 10% 0603	93ADHBXX1N
C261	CAP X7R 1nF 50v 10% 0603	93ADHBXX1N
C262	CAP X7R 1nF 50v 10% 0603	93ADHBXX1N
C263	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C267	CAP X7R 4.7uF 100v 10% 2220	93FDJBXX4U7
C274	CAP X7R 1nF 50v 10% 0603	93ADHBXX1N
C275	CAP X7R 1nF 50v 10% 0603	93ADHBXX1N
C276	CAP X7R 1nF 50v 10% 0603	93ADHBXX1N
C277	CAP X7R 1nF 50v 10% 0603	93ADHBXX1N
C281	CAP X7R 1nF 50v 10% 0603	93ADHBXX1N
C284	CAP X7R 1nF 50v 10% 0603	93ADHBXX1N
C285	CAP 47pF +/-5% 50V COG 0402	93QCHA47P
C286	CAP 47pF +/-5% 50V COG 0402	93QCHA47P
C287	CAP Y5V 220nF 16V +80%/-20% 0603	93AFEDXX220N
C288	CAP X7R 1nF 50v 10% 0603	93ADHBXX1N
C289	CAP AL ELEC NP 470uF 50V 20% RADIAL	3209
C290	CAP X7R 1nF 50v 10% 0603	93ADHBXX1N
C291	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C292	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C293	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C294	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C295	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C296	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C297	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C298	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C301	CAP X7R 47nF 16v 10% 0603	93ADEBXX47N
C302	CAP COG 470pF 50v 5% 0603	93ACHAXX470P
C303	CAP COG 470pF 50v 5% 0603	93ACHAXX470P
C304	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C305	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C306	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C307	CAP 10pF SM 0402	93QCHA10P
C308	CAP 10pF SM 0402	93QCHA10P
C309	CAP 100nF +/-10% 10V X5R 0402	93QDDI100N
C310	CAP 100nF +/-10% 10V X5R 0402	93QDDI100N
C311	CAP 100nF +/-10% 10V X5R 0402	93QDDI100N
C312	CAP 100pF 1% 50V COG 0402	93QAHA100P
C313	CAP 100pF 1% 50V COG 0402	93QAHA100P
C314	CAP 100pF 1% 50V COG 0402	93QAHA100P
C316	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C319	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C320	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C321	CAP TANT 2u2F 10v 10% TANTA	93GDCC2U2
C322	CAP TANT 2u2F 10v 10% TANTA	93GDCC2U2
C323	CAP X7R 4.7uF 100v 10% 2220	93FDJBXX4U7
C324	CAP X7R 4.7uF 100v 10% 2220	93FDJBXX4U7
C325	CAP X7R 1nF 50v 10% 0603	93ADHBXX1N
C326	CAP X7R 1nF 50v 10% 0603	93ADHBXX1N

Ref.	Description	Part No.
C327	CAP X7R 4.7uF 100v 10% 2220	93FDJBXX4U7
C328	CAP TANT 10uF 10v 10% TANTA	93GDCCXX10U
C329	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C330	CAP TANT 10uF 10v 10% TANTA	93GDCCXX10U
C331	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C332	CAP X7R 1nF 50v 10% 0603	93ADHBXX1N
C333	CAP X7R 4.7uF 100v 10% 2220	93FDJBXX4U7
C334	CAP X7R 1nF 50v 10% 0603	93ADHBXX1N
D1	DIODE ZENER 3V3 SOT23	9203BZX3V3
D2	DIODE SCHOTTKY BAT54S SOT23	9200BAT54S
D3	DIODE SCHOTTKY 10BQ100 1A SMB	920010BQ100
D4	DIODE SCHOTTKY 10BQ100 1A SMB	920010BQ100
D5	DIODE SCHOTTKY BAT54S SOT23	9200BAT54S
D6	DIODE ZENER 18V 330mW SOT23	9203BZX18V
D7	DIODE BAS19 SOT23	9200BAS19
D8	DIODE ZENER 6V2 250mW SOT23	9203BZX6V2
D18	DIODE SCHOTTKY BAT54S SOT23	9200BAT54S
D19	DIODE ZENER 15V	9203BZX15V
D20	DIODE SCHOTTKY BAT54S SOT23	9200BAT54S
D21	DIODE BAW56 DUAL SOT23	9200BAW56
D22	DIODE SCHOTTKY 10BQ100 1A SMB	920010BQ100
D23	DIODE SCHOTTKY BAT54S SOT23	9200BAT54S
D24	DIODE BAS19 SOT23	9200BAS19
D25	DIODE SCHOTTKY BAT54 SOT23	9200BAT54
D26	DIODE DUAL BAV99 SOT23	9200BAV99
D27	DIODE SCHOTTKY BAT54S SOT23	9200BAT54S
D28	DIODE DUAL BAV99 SOT23	9200BAV99
D29	DIODE BAS19 SOT23	9200BAS19
D32	DIODE BAS19 SOT23	9200BAS19
D33	DIODE BAS19 SOT23	9200BAS19
D34	DIODE ZENER 3V3 SOT23	9203BZX3V3
D35	DIODE DUAL BAV99 SOT23	9200BAV99
D41	DIODE SCHOTTKY BAT54 SOT23	9200BAT54
D42	DIODE SCHOTTKY BAT54 SOT23	9200BAT54
D44	DIODE BAS19 SOT23	9200BAS19
D45	IC SCHOTTKY DIODE RECTIFIER MBR0530 SOD-123	9200MBR0530
D46	DIODE SCHOTTKY BAT54 SOT23	9200BAT54
D47	DIODE SCHOTTKY BAT54 SOT23	9200BAT54
D48	DIODE BAS19 SOT23	9200BAS19
D50	IC SCHOTTKY DIODE RECTIFIER 30WQ03FN TO-252	920030WQ03
D51	IC SCHOTTKY DIODE RECTIFIER 30WQ03FN TO-252	920030WQ03
D52	IC SCHOTTKY DIODE RECTIFIER 30WQ03FN TO-252	920030WQ03
D54	DIODE SCHOTTKY BAT54 SOT23	9200BAT54
D55	DIODE BAS19 SOT23	9200BAS19
D56	DIODE BAS19 SOT23	9200BAS19
F1	FUSE CLIP AUTOMOTIVE 15A	15525
F2	FUSE CLIP AUTOMOTIVE 15A	15525

Ref.	Description	Part No.
F3	FUSE RESET 3A	15524
F4	FUSE RESET 3A	15524
F5	FUSE RESET 3A	15524
F6	FUSE CLIP AUTOMOTIVE 15A	15525
F7	FUSE CLIP AUTOMOTIVE 15A	15525
IC1	IC OPAMP DUAL RAIL-TO-RAIL SO8	9400TLV272
IC2	IC QUAD AND 74HC08 2V SO14	940074HC08
IC3	IC COMPARATOR 2.7V TO 5V SOT23	9400LMV331
IC4	IC SERIAL EEPROM SOIC8 SM	9401AT24C64
IC5	IC QUAD OPAMP LM324 SO14	9400LM324
IC6	IC QUAD OPAMP LM324 SO14	9400LM324
IC7	IC FLASH 8 BIT FLASH MICROCONTROLLER 6 PIN SEATALKNG	940110F220
IC9	IC GYRO KGF01-080 SO24	9400KGF01
IC10	IC DAC SINGLE CHANNEL 10 BIT I2C SOT23-6	9400DAC6571
IC11	SIMPLE SWITCHER POWER CONVERTER	9400LM2672
IC12	IC REG LOW DROPOUT POS 5V SO8	9400LM2931AM
IC13	IC OPTO COUPLER QUAD SSO16	9400PS2801A4
IC17	IC OPTO COUPLER SINGLE SSOP4	9400PS2801A1
IC18	IC TRANSCEIVER CAN LOWER POWER STANDBY 3V3 SO8	940065HVD233
IC19	IC TRANSCEIVER CAN LOWER POWER STANDBY 3V3 SO8	940065HVD233
IC20	IC COMPARATOR 2.7V TO 5V SOT23	9400LMV331
IC21	IC OPAMP DUAL TLV2262CD SO8	9400TLV2262
IC22	IC LOGIC SWITCH 74HC4051 SO16	940074HC4051
IC23	IC COMPARATOR 2-36V SO8	9400LM393M
IC26	IC OPTO COUPLER SINGLE SSOP4	9400PS2801A1
IC27	12V SUPPLY CONTROLLER	9400TPS40055
IC28	IC TEMPERATURE SENSOR SOT23	9400LM60
IC29	IC TEMPERATURE SENSOR SOT23	9400LM60
IC34	IC REG LIN 3.3V 800mA SOT223	9400LM1117
IC35	IC REG LIN 3.3V 800mA SOT223	9400LM1117
IC36	IC OPTO COUPLER SINGLE SSOP4	9400PS2801A1
IC37	IC OPTO COUPLER SINGLE SSOP4	9400PS2801A1
IC38	IC HIGH SPEED CMOS OPTOCOUPLER 3.3/5V SSO8	9400ACPL072L
IC39	IC HIGH SPEED CMOS OPTOCOUPLER 3.3/5V SSO8	9400ACPL072L
IC41	IC HIGH SPEED CMOS OPTOCOUPLER 3.3/5V SSO8	9400ACPL072L
IC42	IC HIGH SPEED CMOS OPTOCOUPLER 3.3/5V SSO8	9400ACPL072L
IC43	IC CAN CONTROLLER TSSOP20	9400MCP2515
IC44	IC OPTO COUPLER SINGLE SSOP4	9400PS2801A1
IC45	IC TRIPLE 2-CHANNEL ANALOG MULTIPLEXER/DEMULTIPLEXER	940074LV4053
IC47	IC COMPARATOR PUSH PULL SOT23-6	9400LMV761
IC48	IC FLASH MEMORY 16MBIT SERIAL	9400S25FL016A
IC52	IC MICROCONTROLLER ARM9 512k FLASH 96k SRAM	9401STR912FA
IC53	IC DUAL OUTPUT VOLTAGE REGULATOR 3.3V/1.8V	9400TPS70151

Ref.	Description	Part No.
IC54	IC SRAM 2-MBIT 128Kx16 HIGH SPEED2.7-3.6V	9400CY62136
IC55	IC LATCH D-TYPE 16 BIT TRANSPARENT	9.40074E+11
IC56	IC SWITCHING REGULATOR POS & NEG 200mA OUTPUT	9400TPS65130
IC80	IC QUAD OPAMP TLV2264 SO14	9400TLV2264
IC120	IC COMPARATOR PUSH PULL SOT23-6	9400LMV761
IC180	IC QUAD NAND HEF4011UB SO14 SM	94004011U
ISO5	IC OPTO COUPLER 18v SO8	9400HP0701
ISO8	IC OPTO COUPLER 18v SO8	9400HP0701
L1	INDUCTOR FERRITE BEAD 650R@100MHz	15390
L2	INDUCTOR 10uH 18A	15554
L3	INDUCTOR 1uH 200mA 1206	9600L1
L4	INDUCTOR FERRITE BEAD 650R@100MHz	15390
L5	INDUCTOR FERRITE BEAD 650R@100MHz	15390
L6	INDUCTOR FERRITE BEAD 650R@100MHz	15390
L7	INDUCTOR 1uH 200mA 1206	9600L1
L12	INDUCTOR 1uH 200mA 1206	9600L1
L13	INDUCTOR 1uH 200mA 1206	9600L1
L14	INDUCTOR 1uH 200mA 1206	9600L1
L16	INDUCTOR 1uH 200mA 1206	9600L1
L17	INDUCTOR 1uH 200mA 1206	9600L1
L18	INDUCTOR 1uH 200mA 1206	9600L1
L19	INDUCTOR 100uH 730mA	9600COILC2
L20	INDUCTOR 1uH 200mA 1206	9600L1
L21	IND COMMON MODE CHOKE VERT 13A 275uH	15539
L24	INDUCTOR 1uH 200mA 1206	9600L1
L25	INDUCTOR 4.7uH 1.5A	9600COILC4U7
L26	INDUCTOR 4.7uH 1.5A	9600COILC4U7
L27	FERRITE 200mA BLM21A102S	9600FER2012
L28	FERRITE 200mA BLM21A102S	9600FER2012
L29	INDUCTOR 4.7uH 1.5A	9600COILC4U7
L31	INDUCTOR 1uH 200mA 1206	9600L1
L32	INDUCTOR 1uH 200mA 1206	9600L1
L33	TRANSF C-MODE 0.7A TOKO B4FL	9600TOKOCM1
L34	TRANSF C-MODE 0.7A TOKO B4FL	9600TOKOCM1
L38	INDUCTOR 1uH 200mA 1206	9600L1
L39	INDUCTOR 1uH 200mA 1206	9600L1
L40	INDUCTOR 1uH 200mA 1206	9600L1
L41	INDUCTOR 1uH 200mA 1206	9600L1
L42	INDUCTOR 1uH 200mA 1206	9600L1
L43	INDUCTOR 1uH 200mA 1206	9600L1
L44	INDUCTOR 1uH 0.92A 5% 0805	9600MAG1U
L45	INDUCTOR 1uH 200mA 1206	9600L1
L46	IND COMMON MODE CHOKE 30A 270uH	3030-602
L47	INDUCTOR 1uH 200mA 1206	9600L1
L48	INDUCTOR 1uH 200mA 1206	9600L1
L50	INDUCTOR 1uH 200mA 1206	9600L1
L51	INDUCTOR 1uH 200mA 1206	9600L1
L52	INDUCTOR 10uH SMD	9600L29

Ref.	Description	Part No.
L53	INDUCTOR 1uH 200mA 1206	9600L1
L54	INDUCTOR 1uH 200mA 1206	9600L1
L59	INDUCTOR 1uH 200mA 1206	9600L1
L60	INDUCTOR 1uH 200mA 1206	9600L1
L61	INDUCTOR 1uH 200mA 1206	9600L1
L62	INDUCTOR 1uH 200mA 1206	9600L1
L63	INDUCTOR 1uH 200mA 1206	9600L1
L64	INDUCTOR 1uH 200mA 1206	9600L1
L65	INDUCTOR 1uH 200mA 1206	9600L1
L66	INDUCTOR 1uH 200mA 1206	9600L1
L67	INDUCTOR 1uH 200mA 1206	9600L1
L68	INDUCTOR 1uH 200mA 1206	9600L1
L69	INDUCTOR 1uH 200mA 1206	9600L1
L70	INDUCTOR 1uH 200mA 1206	9600L1
L71	INDUCTOR 1uH 200mA 1206	9600L1
L73	INDUCTOR 1uH 200mA 1206	9600L1
L75	INDUCTOR 1uH 200mA 1206	9600L1
L76	IND COMMON MODE CHOKE 8 LINE 100mA 5uH	9600CCDLF80
L78	INDUCTOR 1uH 200mA 1206	9600L1
L82	INDUCTOR 1uH 200mA 1206	9600L1
L84	COMMON MODE CHOKE WE 744221 SM	9600WURTH2M
L86	INDUCTOR 1uH 200mA 1206	9600L1
L87	COMMON MODE CHOKE WE 744221 SM	9600WURTH2M
L88	COMMON MODE CHOKE WE 744221 SM	9600WURTH2M
L89	COMMON MODE CHOKE WE 744221 SM	9600WURTH2M
LED1	LED RED 0805 SM	9207SML210LT
LED2	LED RED 0805 SM	9207SML210LT
LED4	LED YELLOW 0805 SM	9207SML210Y
LED7	LED SML-210 GREEN	9207SML210
LED9	LED RED 0805 SM	9207SML210LT
LED11	LED SML-210 GREEN	9207SML210
LED12	LED YELLOW 0805 SM	9207SML210Y
LED13	LED SML-210 GREEN	9207SML210
LED14	LED YELLOW 0805 SM	9207SML210Y
PL1	CONNECTOR SPADE (EARTH TAG)	7503
R1	RES 0R0 1% 0.063W 0402	91QAA0R0
R2	RES 100K 1% 0.063W 0402	91QAA100K
R3	RES MFILM 2K2 5% 0.125W 1206	91062K2
R4	RES 100R 1% 0.063W 0402	91QAA100R
R5	RES MFILM 7K5 1% 0.063W 0402	91QAA7K5
R6	RES MFILM 3K9 1% 0.063W 0402	91QAA3K9
R7	RES MFILM 1K0 1% 0.063W 0402	91QAA1K
R8	RES MFILM 7K5 1% 0.063W 0402	91QAA7K5
R9	RES MFILM 3K9 1% 0.063W 0402	91QAA3K9
R10	RES MFILM 12K 5% 0.125W 1206	910612K
R11	RES MFILM 2M7 1% 0.063W 0402	91QAA2M7
R12	RES MFILM 1K0 1% 0.063W 0402	91QAA1K
R13	RES MFILM 1K0 1% 0.063W 0402	91QAA1K
R16	RES MFILM 22K 1% 0.063W 0402	91QAA22K

Ref.	Description	Part No.
R17	RES MFILM 1K2 1% 0.063W 0402	91QAA1K2
R18	RES MFILM 16K 1% 0.063W 0603	91AAAXX16K
R19	RES 11K 1% 0.063W 0402	91QAA11K
R20	RES MFILM 39K 1% 0.063W 0402	91QAA39K
R21	RES MFILM 39K 1% 0.063W 0402	91QAA39K
R22	RES MFILM 280K 1% 0.25W 1206	91CADXX280K
R23	RES MFILM 330K 1% 0.063W 0402	91QAA330K
R24	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7
R25	RES MFILM 560R 1% 0.063W 0603	91AAAXX560R
R26	RES MFILM 330R 1% 0.063W 0402	91QAA330R
R27	RES MFILM 7K5 1% 0.063W 0402	91QAA7K5
R28	RES MFILM 2K2 5% 0.125W 1206	91062K2
R29	RES MFILM 2K2 5% 0.125W 1206	91062K2
R30	RES MFILM 47K 1% 0.063W 0402	91QAA47K
R31	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7
R32	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7
R33	RES MFILM 2K2 5% 0.125W 1206	91062K2
R34	RES 100K 1% 0.063W 0402	91QAA100K
R35	RES MFILM 2K2 1% 0.063W 0402	91QAA2K2
R36	RES 100K 1% 0.063W 0402	91QAA100K
R37	RES 100K 1% 0.063W 0402	91QAA100K
R38	RES MFILM 1K0 1% 0.063W 0402	91QAA1K
R40	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R41	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R47	RES 180K 1% 0.063W 0402	91QAA180K
R53	RES MFILM 2K2 1% 0.063W 0402	91QAA2K2
R56	RES MFILM 2K2 5% 0.125W 1206	91062K2
R57	RES MFILM 680R 1% 0.063W 0402	91QAA680R
R58	RES MFILM 390R 1% 0.063W 0402	91QAA390R
R59	RES MFILM 8R2 1% 0.063W 0603	91AAAXX8R2
R62	RES MFILM 8R2 1% 0.063W 0603	91AAAXX8R2
R64	RES MFILM 1K5 1% 0.063W 0402	91QAA1K5
R65	RES MFILM 1K5 1% 0.063W 0402	91QAA1K5
R66	RES MFILM 1K5 1% 0.063W 0402	91QAA1K5
R74	RES 10K 1% 0.063W 0402	91QAA10K
R75	RES 10K 1% 0.063W 0402	91QAA10K
R76	RES MFILM 1K5 1% 0.063W 0402	91QAA1K5
R77	RES 10K 1% 0.063W 0402	91QAA10K
R78	RES MFILM 6K8 1% 0.25W 1206	91036K8
R79	RES 10K 1% 0.063W 0402	91QAA10K
R80	RES MFILM 2M7 1% 0.063W 0402	91QAA2M7
R81	RES MFILM 47K 1% 0.063W 0402	91QAA47K
R82	RES MFILM 270R 1% 0.063W 0402	91QAA270R
R83	RES MFILM 270R 1% 0.063W 0402	91QAA270R
R85	RES 10K 1% 0.063W 0402	91QAA10K
R86	RES 10K 1% 0.063W 0402	91QAA10K
R87	RES 10K 1% 0.063W 0402	91QAA10K
R88	RES 100R 1% 0.063W 0402	91QAA100R
R89	RES 100R 1% 0.063W 0402	91QAA100R
R90	RES MFILM 2M7 1% 0.063W 0402	91QAA2M7

Ref.	Description	Part No.	Ref.	Description	Part No.
R91	RES MFILM 820K 1% 0.063W 0402	91QAA820K	R150	RES MFILM 1K2 1% 0.063W 0402	91QAA1K2
R92	RES MFILM 820K 1% 0.063W 0402	91QAA820K	R151	RES MFILM 0R0 5% 0.063W 0603	91010R0
R93	RES 10K 1% 0.063W 0402	91QAA10K	R152	RES MFILM 100R 5% 0.125W 1206	9106100R
R94	RES MFILM 330K 1% 0.063W 0402	91QAA330K	R153	RES MFILM 1K0 1% 0.063W 0402	91QAA1K
R95	RES 10K 1% 0.063W 0402	91QAA10K	R157	RES MFILM 470R 1% 0.063W 0603	91AAAXX470R
R97	RES MFILM 0R0 5% 0.063W 0603	91010R0	R158	RES MFILM 470R 1% 0.063W 0603	91AAAXX470R
R98	RES MFILM 330K 1% 0.063W 0402	91QAA330K	R159	RES MFILM 470R 1% 0.063W 0603	91AAAXX470R
R99	RES MFILM 2K2 1% 0.063W 0402	91QAA2K2	R160	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7
R100	RES MFILM 2K2 1% 0.063W 0402	91QAA2K2	R161	RES MFILM 470R 1% 0.063W 0603	91AAAXX470R
R101	RES MFILM 150R 1% 0.063W 0402	91QAA150R	R162	RES 10K 1% 0.063W 0402	91QAA10K
R103	RES 10K 1% 0.063W 0402	91QAA10K	R163	RES 10K 1% 0.063W 0402	91QAA10K
R104	RES MFILM 220R 1% 0.063W 0603	91AAAXX220R	R164	RES MFILM 100R 5% 0.125W 1206	9106100R
R106	RES MFILM 1K0 1% 0.063W 0402	91QAA1K	R165	RES MFILM 2K2 5% 0.125W 1206	91062K2
R107	RES MFILM 1K0 1% 0.063W 0402	91QAA1K	R166	RES MFILM 1K0 1% 0.063W 0402	91QAA1K
R108	RES MFILM 1K0 1% 0.063W 0402	91QAA1K	R170	RES 10K 1% 0.063W 0402	91QAA10K
R109	RES MFILM 1K0 1% 0.063W 0402	91QAA1K	R171	RES 10K 1% 0.063W 0402	91QAA10K
R110	RES MFILM 1K0 1% 0.063W 0402	91QAA1K	R172	RES MFILM 2K2 5% 0.125W 1206	91062K2
R115	RES MFILM 51K 1% 0.063W 0402	91QAA51K	R174	RES MFILM 0R0 5% 0.063W 0603	91010R0
R116	RES MFILM 220R 1% 0.063W 0603	91AAAXX220R	R175	RES MFILM 0R0 5% 0.063W 0603	91010R0
R117	RES MFILM 270R 1% 0.063W 0402	91QAA270R	R176	RES MFILM 2K2 5% 0.125W 1206	91062K2
R118	RES MFILM 5K6 1% 0.063W 0402	91QAA5K6	R179	RES MFILM 280K 1% 0.25W 1206	91CADXX280K
R119	RES MFILM 82R 1% 0.063W 0402	91QAA82R	R180	RES MFILM 0R0 5% 0.063W 0603	91010R0
R120	RES MFILM 1K2 1% 0.063W 0402	91QAA1K2	R181	RES 10K 1% 0.063W 0402	91QAA10K
R121	RES MFILM 1M0 1% 0.063W 0402	91QAA1M	R182	RES MFILM 15R 1% 0.063W 0603	91AAAXX15R
R122	RES 10K 1% 0.063W 0402	91QAA10K	R183	RES 10K 1% 0.063W 0402	91QAA10K
R123	RES 10K 1% 0.063W 0402	91QAA10K	R184	RES 10K 1% 0.063W 0402	91QAA10K
R124	RES 10K 1% 0.063W 0402	91QAA10K	R185	RES 10K 1% 0.063W 0402	91QAA10K
R125	RES 10K 1% 0.063W 0402	91QAA10K	R186	RES 10K 1% 0.063W 0402	91QAA10K
R126	RES MFILM 3K3 1% 0.063W 0402	91QAA3K3	R187	RES 10K 1% 0.063W 0402	91QAA10K
R127	RES MFILM 1K0 1% 0.063W 0402	91QAA1K	R188	RES MFILM 0R0 5% 0.063W 0603	91010R0
R128	RES MFILM 39K 1% 0.063W 0402	91QAA39K	R189	RES MFILM 15R 1% 0.063W 0603	91AAAXX15R
R130	RES MFILM 2K2 1% 0.063W 0402	91QAA2K2	R190	RES MFILM 15R 1% 0.063W 0603	91AAAXX15R
R131	RES MFILM 2K2 1% 0.063W 0402	91QAA2K2	R191	RES MFILM 15R 1% 0.063W 0603	91AAAXX15R
R132	RES MFILM 33K 1% 0.063W 0402	91QAA33K	R192	RES MFILM 15R 1% 0.063W 0603	91AAAXX15R
R133	RES MFILM 680R 1% 0.063W 0402	91QAA680R	R193	RES MFILM 15R 1% 0.063W 0603	91AAAXX15R
R134	RES 10K 1% 0.063W 0402	91QAA10K	R194	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R135	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7	R195	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R136	RES MFILM 390R 1% 0.063W 0402	91QAA390R	R196	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R137	RES MFILM 3K3 1% 0.063W 0402	91QAA3K3	R197	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R138	RES MFILM 8R2 1% 0.063W 0603	91AAAXX8R2	R198	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R139	RES MFILM 22K 1% 0.063W 0603	91AAAXX22K	R200	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R140	RES MFILM 15K 1% 0.063W 0402	91QAAXX15K	R201	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R141	RES MFILM 2K2 1% 0.063W 0402	91QAA2K2	R202	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R142	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7	R203	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R143	RES MFILM 39K 1% 0.063W 0402	91QAA39K	R204	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R144	RES MFILM 330R 1% 0.063W 0402	91QAA330R	R205	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R145	RES MFILM 39K 1% 0.063W 0402	91QAA39K	R206	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R146	RES MFILM 39K 1% 0.063W 0402	91QAA39K	R208	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R147	RES 10K 1% 0.063W 0402	91QAA10K	R211	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R148	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7	R212	RES MFILM 1K0 1% 0.063W 0402	91QAA1K

Ref.	Description	Part No.
R213	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R214	RES MFILM 330K 1% 0.063W 0402	91QAA330K
R215	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R217	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R221	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R222	RES 10K 1% 0.063W 0402	91QAA10K
R223	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R224	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R225	RES 10K 1% 0.063W 0402	91QAA10K
R226	RES 100K 1% 0.063W 0402	91QAA100K
R227	RES 10K 1% 0.063W 0402	91QAA10K
R228	RES 10K 1% 0.063W 0402	91QAA10K
R229	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R230	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7
R232	RES MFILM 220R 1% 0.063W 0603	91AAAXX220R
R233	RES MFILM 1K8 5% 0.25W 1206	91061K8
R234	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R235	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7
R236	RES 10K 1% 0.063W 0402	91QAA10K
R237	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7
R238	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R239	RES MFILM 2K2 1% 0.063W 0402	91QAA2K2
R240	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R241	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R242	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R243	RES MFILM 1K0 1% 0.063W 0402	91QAA1K
R244	RES 10K 1% 0.063W 0402	91QAA10K
R245	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R246	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R247	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7
R248	RES 10K 1% 0.063W 0402	91QAA10K
R249	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R250	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R251	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R252	RES MFILM 1K0 1% 0.063W 0402	91QAA1K
R253	RES 10K 1% 0.063W 0402	91QAA10K
R255	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7
R256	RES MFILM 2R2 5% 0.125W 1206	91CCC2R2
R257	RES MFILM 330K 1% 0.063W 0402	91QAA330K
R260	RES MFILM 1K0 1% 0.063W 0402	91QAA1K
R261	RES MFILM 1K0 1% 0.063W 0402	91QAA1K
R262	RES MFILM 3K3 1% 0.063W 0402	91QAA3K3
R263	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7
R265	RES 100K 1% 0.063W 0402	91QAA100K
R270	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7
R283	RES MFILM 220R 1% 0.063W 0603	91AAAXX220R
R285	RES 10K 1% 0.063W 0402	91QAA10K
R286	RES 10K 1% 0.063W 0402	91QAA10K
R287	RES MFILM 220R 1% 0.063W 0603	91AAAXX220R
R289	RES MFILM 120R 1% 0.063W 0402	91QAA120R

Ref.	Description	Part No.
R291	RES MFILM 470R 1% 0.063W 0402	91QAA470R
R292	RES MFILM 470R 1% 0.063W 0402	91QAA470R
R295	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7
R296	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7
R297	RES MFILM 680R 1% 0.063W 0402	91QAA680R
R298	RES MFILM 1K2 1% 0.063W 0402	91QAA1K2
R299	RES MFILM 1K2 1% 0.063W 0402	91QAA1K2
R300	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7
R301	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7
R302	RES MFILM 33K 1% 0.063W 0402	91QAA33K
R303	RES MFILM 470R 1% 0.063W 0402	91QAA470R
R304	RES MFILM 470R 1% 0.063W 0402	91QAA470R
R305	RES MFILM 2K7 1% 0.063W 0402	91QAA2K7
R306	RES MFILM 1K2 1% 0.063W 0402	91QAA1K2
R309	RES MFILM 2K2 5% 0.125W 1206	91062K2
R310	RES MFILM 33K 1% 0.063W 0402	91QAA33K
R311	RES MFILM 220K 1% 0.063W 0402	91QAA220K
R315	RES MFILM 680R 1% 0.063W 0402	91QAA680R
R316	RES MFILM 220R 1% 0.063W 0603	91AAAXX220R
R318	RES 100R 1% 0.063W 0402	91QAA100R
R319	RES MFILM 51K 1% 0.063W 0402	91QAA51K
R321	RES MFILM 7K5 1% 0.063W 0402	91QAA7K5
R322	RES MFILM 5K6 1% 0.063W 0402	91QAA5K6
R323	RES MFILM 330K 1% 0.063W 0402	91QAA330K
R324	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7
R325	RES 10K 1% 0.063W 0402	91QAA10K
R326	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7
R327	RES 10K 1% 0.063W 0402	91QAA10K
R328	RES 100K 1% 0.063W 0402	91QAA100K
R329	RES MFILM 220R 1% 0.063W 0603	91AAAXX220R
R330	RES MFILM 33K 1% 0.063W 0402	91QAA33K
R331	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7
R332	RES 10K 1% 0.063W 0402	91QAA10K
R337	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7
R338	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7
R339	RES 10K 1% 0.063W 0402	91QAA10K
R341	RES MFILM 330K 1% 0.063W 0402	91QAA330K
R347	RES MFILM 2K2 1% 0.063W 0402	91QAA2K2
R348	RES MFILM 330K 1% 0.063W 0402	91QAA330K
R349	RES MFILM 47K 1% 0.063W 0402	91QAA47K
R363	RES 10K 1% 0.063W 0402	91QAA10K
R364	RES 100R 1% 0.063W 0402	91QAA100R
R365	RES MFILM 0R0 5% 0.063W 0603	91010R0
R367	RES 10K 1% 0.063W 0402	91QAA10K
R368	RES MFILM 470K 1% 0.063W 0402	91QAA470K
R370	RES MFILM 22K 1% 0.063W 0402	91QAA22K
R371	RES MFILM 7K5 1% 0.063W 0402	91QAA7K5
R372	RES MFILM 2K2 5% 0.125W 1206	91062K2
R373	RES MFILM 1K0 5% 1.0W 2512	91FCGXXX1K
R374	RES MFILM 2K2 5% 0.125W 1206	91062K2

Ref.	Description	Part No.	Ref.	Description	Part No.
R375	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7	R447	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R376	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7	R448	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R377	RES MFILM 0R0 5% 0.063W 0603	91010R0	R449	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R379	RES 100K 1% 0.063W 0402	91QAA100K	R450	RES MFILM 22K 1% 0.063W 0402	91QAA22K
R380	RES MFILM 3K3 1% 0.063W 0402	91QAA3K3	R451	RES 10K 1% 0.063W 0402	91QAA10K
R382	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7	R452	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7
R383	RES MFILM 3K3 1% 0.063W 0402	91QAA3K3	R453	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R384	RES MFILM 2K2 5% 0.125W 1206	91062K2	R454	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R385	RES MFILM 0R0 5% 0.063W 0603	91010R0	R455	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R387	RES MFILM 1K0 5% 1.0W 2512	91FCGX1K	R456	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R388	RES MFILM 2K2 5% 0.125W 1206	91062K2	R457	RES 10K 1% 0.063W 0402	91QAA10K
R389	RES 10K 1% 0.063W 0402	91QAA10K	R460	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R390	RES MFILM 1K0 1% 0.063W 0402	91QAA1K	R461	RES 100R 1% 0.063W 0402	91QAA100R
R391	RES MFILM 3K3 1% 0.063W 0402	91QAA3K3	R462	RES 100R 1% 0.063W 0402	91QAA100R
R396	RES 10K 1% 0.063W 0402	91QAA10K	R467	RES MFILM 330R 1% 0.063W 0402	91QAA330R
R397	RES MFILM 0R0 5% 0.063W 0603	91010R0	R468	RES MFILM 330R 1% 0.063W 0402	91QAA330R
R398	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7	R469	RES 10K 1% 0.063W 0402	91QAA10K
R399	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7	R470	RES 10K 1% 0.063W 0402	91QAA10K
R400	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7	R473	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7
R401	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7	R475	RES 100R 1% 0.063W 0402	91QAA100R
R402	RES MFILM 220R 1% 0.063W 0603	91AAAX220R	R476	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7
R404	RES MFILM 180R 1% 0.063W 0402	91QAA180R	R477	RES 0R0 1% 0.063W 0402	91QAA0R0
R405	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7	R478	RES 10K 1% 0.063W 0402	91QAA10K
R406	RES 10K 1% 0.063W 0402	91QAA10K	R479	RES 10K 1% 0.063W 0402	91QAA10K
R407	RES MFILM 1K0 1% 0.063W 0402	91QAA1K	R480	RES 10K 1% 0.063W 0402	91QAA10K
R408	RES MFILM 2K2 1% 0.063W 0402	91QAA2K2	R481	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R421	RES MFILM 3K3 1% 0.063W 0402	91QAA3K3	R482	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R422	RES MFILM 3K3 1% 0.063W 0402	91QAA3K3	R483	RES MFILM 330K 1% 0.063W 0402	91QAA330K
R423	RES 100K 1% 0.063W 0402	91QAA100K	R484	RES MFILM 330K 1% 0.063W 0402	91QAA330K
R424	RES MFILM 22R 1% 0.063W 0402	91QAA22R	R485	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R425	RES MFILM 22R 1% 0.063W 0402	91QAA22R	R486	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R426	RES MFILM 22R 1% 0.063W 0402	91QAA22R	R487	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R427	RES MFILM 22R 1% 0.063W 0402	91QAA22R	R488	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R428	RES MFILM 22R 1% 0.063W 0402	91QAA22R	R489	RES 10K 1% 0.063W 0402	91QAA10K
R429	RES MFILM 180R 1% 0.063W 0402	91QAA180R	R490	RES 10K 1% 0.063W 0402	91QAA10K
R430	RES MFILM 3K3 1% 0.063W 0402	91QAA3K3	R491	RES 10K 1% 0.063W 0402	91QAA10K
R431	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7	R492	RES 10K 1% 0.063W 0402	91QAA10K
R432	RES 10K 1% 0.063W 0402	91QAA10K	R509	RES 100R 1% 0.063W 0402	91QAA100R
R433	RES 10K 1% 0.063W 0402	91QAA10K	R512	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7
R435	RES 11K 1% 0.063W 0402	91QAA11K	R513	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R436	RES MFILM 3K6 1% 0.063W 0402	91QAA3K6	R514	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7
R437	RES MFILM 3K6 1% 0.063W 0402	91QAA3K6	R515	RES MFILM 47K 1% 0.063W 0402	91QAA47K
R438	RES 0R0 1% 0.063W 0402	91QAA0R0	R516	RES MFILM 47K 1% 0.063W 0402	91QAA47K
R439	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7	R517	RES MFILM 8K2 1% 0.063W 0402	91QAA8K2
R441	RES MFILM 22R 1% 0.063W 0402	91QAA22R	R518	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7
R442	RES MFILM 1K8 1% 0.063W 0402	91QAA1K8	R520	RES MFILM 470R 1% 0.063W 0402	91QAA470R
R443	RES MFILM 220R 1% 0.063W 0603	91AAAX220R	R523	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R444	RES MFILM 220R 1% 0.063W 0603	91AAAX220R	R524	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R445	RES MFILM 22R 1% 0.063W 0402	91QAA22R	R525	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R446	RES MFILM 22R 1% 0.063W 0402	91QAA22R	R526	RES MFILM 22R 1% 0.063W 0402	91QAA22R

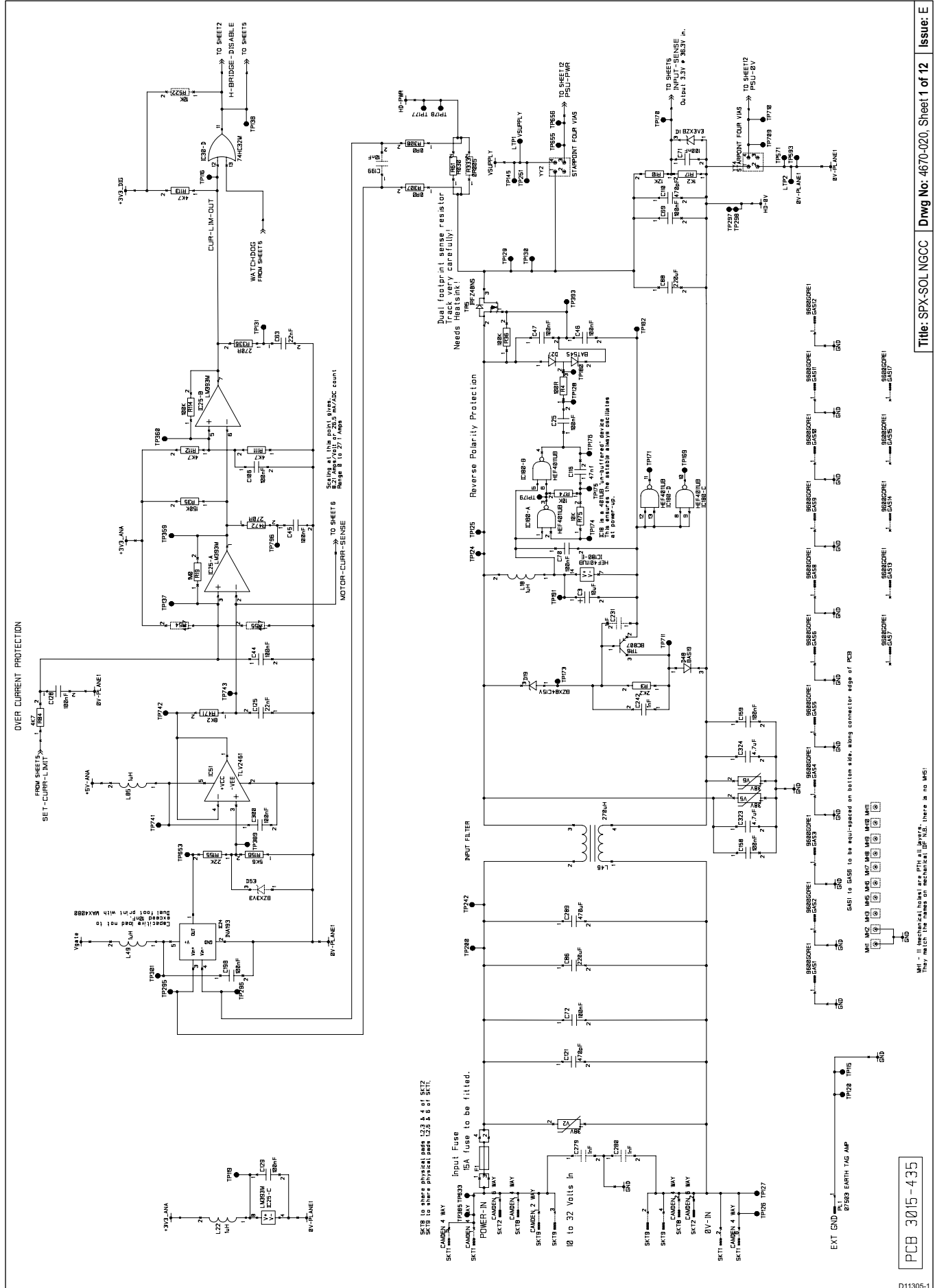
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R527	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R528	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R529	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R530	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R531	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R532	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R533	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R534	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R535	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R536	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R537	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R538	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R539	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R540	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R541	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7
R542	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7
R543	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R544	RES 10K 1% 0.063W 0402	91QAA10K
R545	RES 10K 1% 0.063W 0402	91QAA10K
R546	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R547	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R548	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R552	RES MFILM 2K2 1% 0.063W 0402	91QAA2K2
R553	RES MFILM 2K2 1% 0.063W 0402	91QAA2K2
R554	RES 100R 1% 0.063W 0402	91QAA100R
R556	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R557	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R558	RES MFILM 22R 1% 0.063W 0402	91QAA22R
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R561	RES 10K 1% 0.063W 0402	91QAA10K
R562	RES 100R 1% 0.063W 0402	91QAA100R
R563	RES MFILM 1K0 1% 0.063W 0402	91QAA1K
R564	RES 0R0 1% 0.063W 0402	91QAA0R0
R565	RES MFILM 12K 1% 0.063W 0402	91QAA12K
R566	RES 130K 1% 0.063W 0402	91QAA130K
R567	RES 11K 1% 0.063W 0402	91QAA11K
R568	RES 130K 1% 0.063W 0402	91QAA130K
R569	RES 10K 1% 0.063W 0402	91QAA10K
R570	RES 0R0 1% 0.063W 0402	91QAA0R0
R571	RES MFILM 1K8 5% 0.25W 1206	91061K8
R572	RES MFILM 1K8 5% 0.25W 1206	91061K8
R573	RES MFILM 1K8 5% 0.25W 1206	91061K8
R574	RES MFILM 1K8 5% 0.25W 1206	91061K8
R575	RES MFILM 1K8 5% 0.25W 1206	91061K8
R576	RES MFILM 1K8 5% 0.25W 1206	91061K8
R577	RES MFILM 1K8 5% 0.25W 1206	91061K8
R900	RES MFILM 0R0 5% 0.063W 0603	91010R0
R902	RES MFILM 0R0 5% 0.063W 0603	91010R0
RLY2	RELAY DPDT 5V OMRON	9600RELAY1

Ref.	Description	Part No.
RLY5	RELAY DPDT-NO 12V OMRON	15522
RLY7	RELAY DPST-NO DUAL FET 60VAC 400mA OMRON	9600RELAY3
RN2	RES NET 2K2 5% 0.125W MNR34	91122K2
RN5	RES NET 2K2 5% 0.125W MNR34	91122K2
SKT3	11 way 5.0 mm header	7488
SKT4	6 way 5.0 mm header	7490
SKT5	5 way 5.0 mm header	7491
SKT7	5 way 5.0 mm header	7491
SKT9	2 way 10.16 mm header	7525
SKT10	4 way 5.0 mm header	7511
SKT11	CON SAMTEC 12 WAY CLP LOW PROFILE	9602SAMTEC12
SKT14	5 way 5.0 mm header	7491
SKT17	2 way 5.0 mm header	7499
SW2	SLIDE SWITCH	9600SWAPEM
TR5	TRANSISTOR MOSFET NCHAN	9500IRFZ48
TR6	TRANSISTOR BC807 PNP SOT23	9500BC807
TR7	TRANSISTOR MOSFET N CHAN DPAK	9500IRLR2905
TR8	TRANSISTOR MOSFET N CHAN DPAK	9500IRLR2905
TR9	TRANSISTOR MOSFET N CHAN DPAK	9500IRLR2905
TR10	TRANSISTOR MOSFET N CHAN DPAK	9500IRLR2905
TR11	TRANSISTOR MOSFET N CHAN DPAK	9500IRLR2905
TR12	TRANSISTOR MOSFET N CHAN DPAK	9500IRLR2905
TR13	TRANSISTOR DUAL IMX1 NPN SOT36	9500IMX1
TR15	TRANSISTOR DUAL IMZ1 PNP	9500IMZ1
TR16	TRANSISTOR BCP56 NPN SOT223	9500BCP56
TR17	TRANSISTOR BC817 NPN SOT23	9500BC817
TR18	TRANSISTOR DUAL IMX1 NPN SOT36	9500IMX1
TR19	TRANSISTOR BC807 PNP SOT23	9500BC807
TR20	TRANSISTOR BC817 NPN SOT23	9500BC817
TR22	TRANSISTOR MOSFET N CHAN SOT23	95002N7002
TR23	TRANSISTOR BC807 PNP SOT23	9500BC807
TR24	TRANSISTOR DUAL IMX1 NPN SOT36	9500IMX1
TR26	TRANSISTOR BC817 NPN SOT23	9500BC817
TR27	TRANSISTOR BCP56 NPN SOT223	9500BCP56
TR29	TRANSISTOR P CHANNEL MOSFET 30V 1.6A SOT23	9500ZXMP3A13
TR31	TRANSISTOR BC817 NPN SOT23	9500BC817
TR32	TRANSISTOR BC817 NPN SOT23	9500BC817
TR33	TRANSISTOR BC807 PNP SOT23	9500BC807
TR34	TRANSISTOR DUAL IMX1 NPN SOT36	9500IMX1
TR35	TRANSISTOR DUAL IMX1 NPN SOT36	9500IMX1
TR36	TRANSISTOR BC807 PNP SOT23	9500BC807
TR37	TRANSISTOR BC817 NPN SOT23	9500BC817
TR40	TRANSISTOR BC817 NPN SOT23	9500BC817
TR43	TRANSISTOR MOSFET PCHAN IRFR5505 TO252	9500IR5505
TR45	TRANSISTOR DUAL IMX1 NPN SOT36	9500IMX1
TR46	TRANSISTOR BC817 NPN SOT23	9500BC817
TR47	TRANSISTOR MOSFET N CHAN SOT23	95002N7002
TR48	TRANSISTOR MOSFET N CHAN SOT23	95002N7002

Ref.	Description	Part No.
TR49	TRANSISTOR BC817 NPN SOT23	9500BC817
TR51	TRANSISTOR DUAL IMX1 NPN SOT36	9500IMX1
TR54	TRANSISTOR BC817 NPN SOT23	9500BC817
TR56	TRANSISTOR BC817 NPN SOT23	9500BC817
TR57	TRANSISTOR BC817 NPN SOT23	9500BC817
TR58	TRANSISTOR BC817 NPN SOT23	9500BC817
TR60	TRANSISTOR DUAL IMX1 NPN SOT36	9500IMX1
TR61	TRANSISTOR DUAL IMX1 NPN SOT36	9500IMX1
TR62	TRANSISTOR BC817 NPN SOT23	9500BC817
V2	VARISTOR 38V 12J 0.1W	1262
V5	VARISTOR 38V 12J 0.1W	1262
V6	VARISTOR 38V 12J 0.1W	1262
V7	TRANS SUPPRESSOR CERAMIC 1210	9108EPCOSV1
V8	TRANS SUPPRESSOR VC180400 1206	9108VC180400
V9	TRANS SUPPRESSOR VC180400 1206	9108VC180400
V10	TRANS SUPPRESSOR VC180400 1206	9108VC180400
V11	TRANS SUPPRESSOR VC180400 1206	9108VC180400
V12	TRANS SUPPRESSOR VC180400 1206	9108VC180400
XTL1	XTAL 19Mhz CERAMIC BASE & LID SM7A	9601CR19
XTL3	CRYSTAL 32.768kHz SM	9602CR32P768

Chapter 7: SmartPilot X-SOL PCB

SmartPilot X-SOL PCB - Sheet 1 of 12

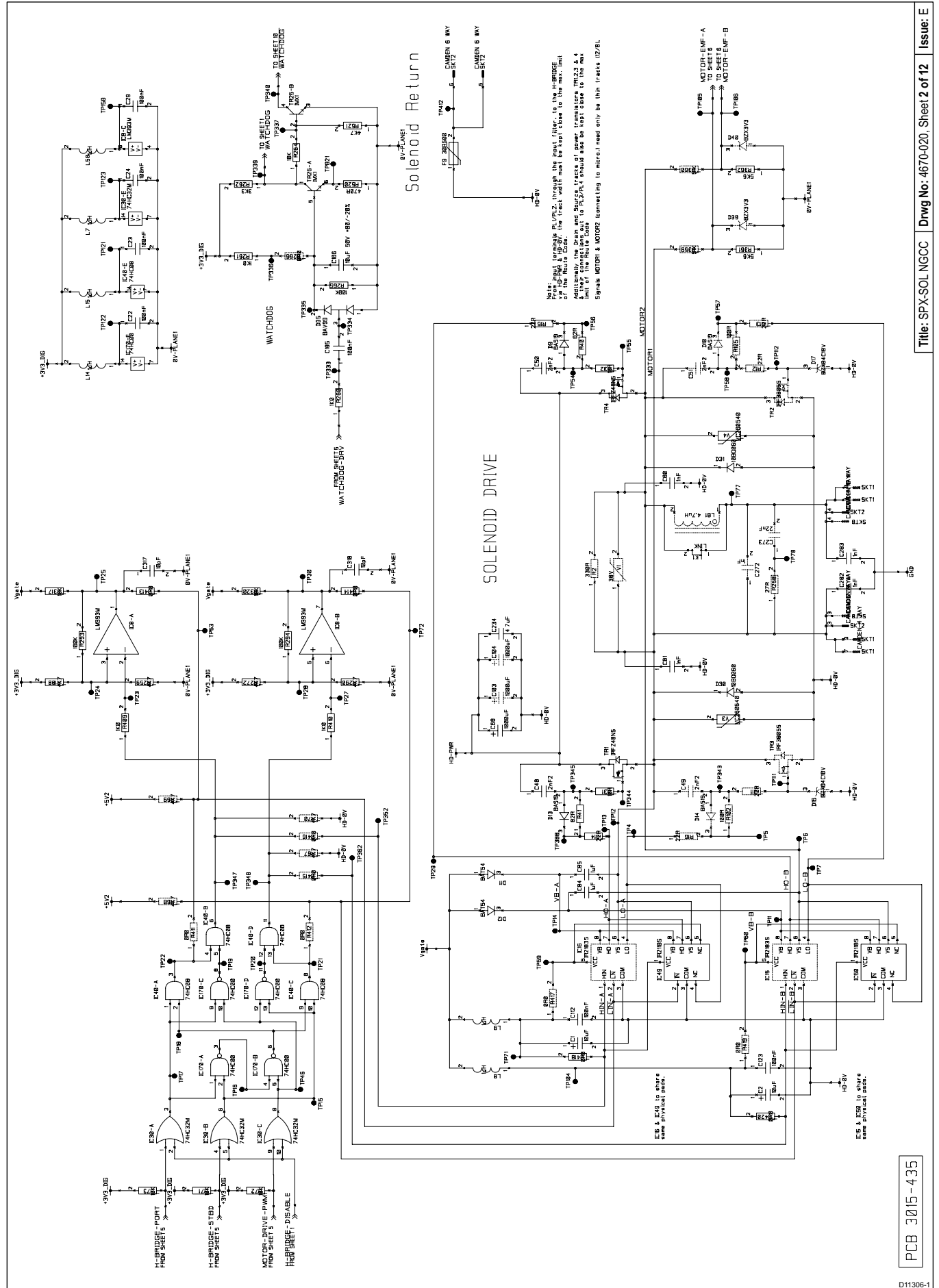


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PCB 3015-435

D11305-1

SmartPilot X-SOL PCB - Sheet 2 of 12

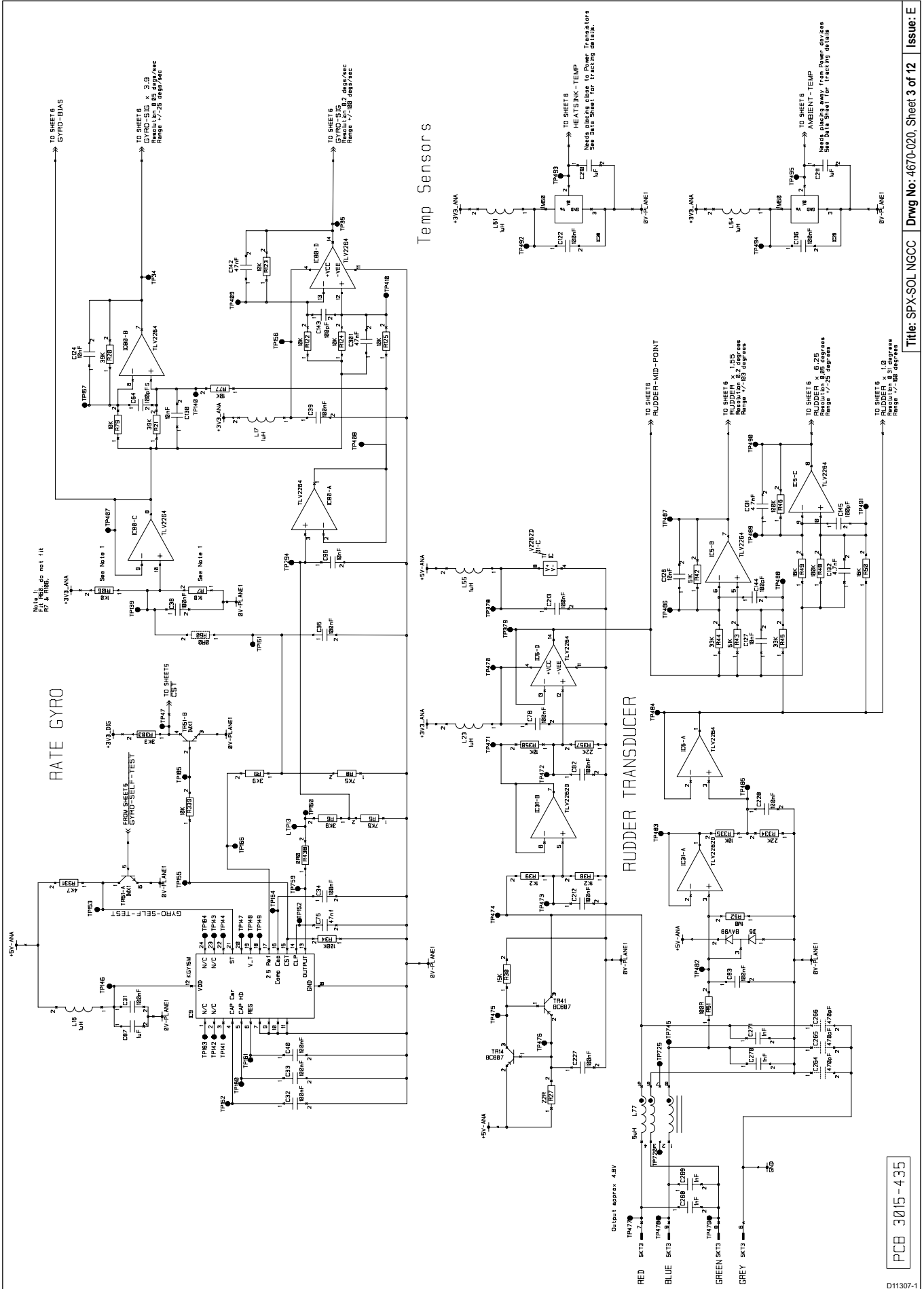


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PCB 3015-435

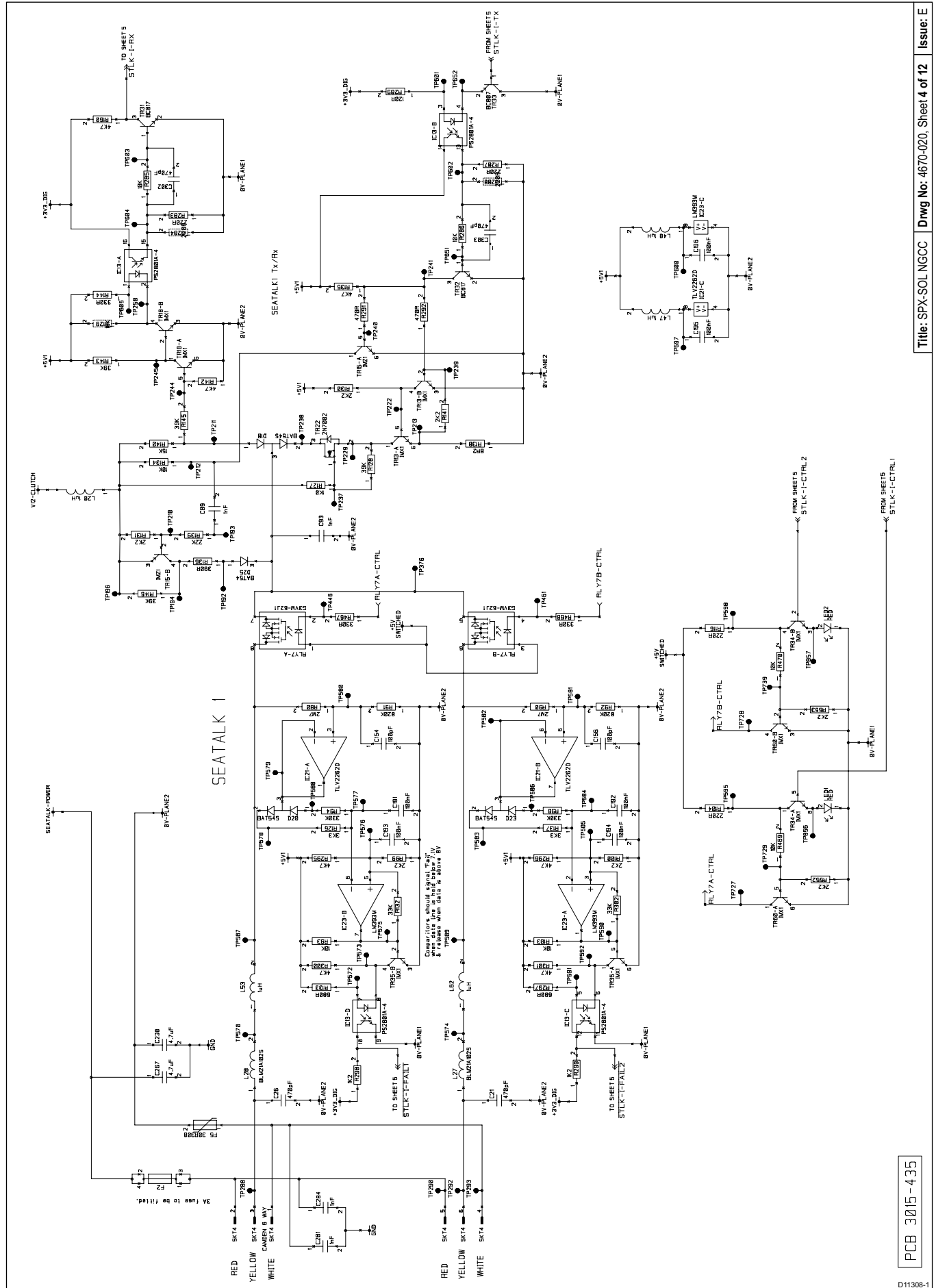
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SmartPilot X-SOL PCB - Sheet 3 of 12

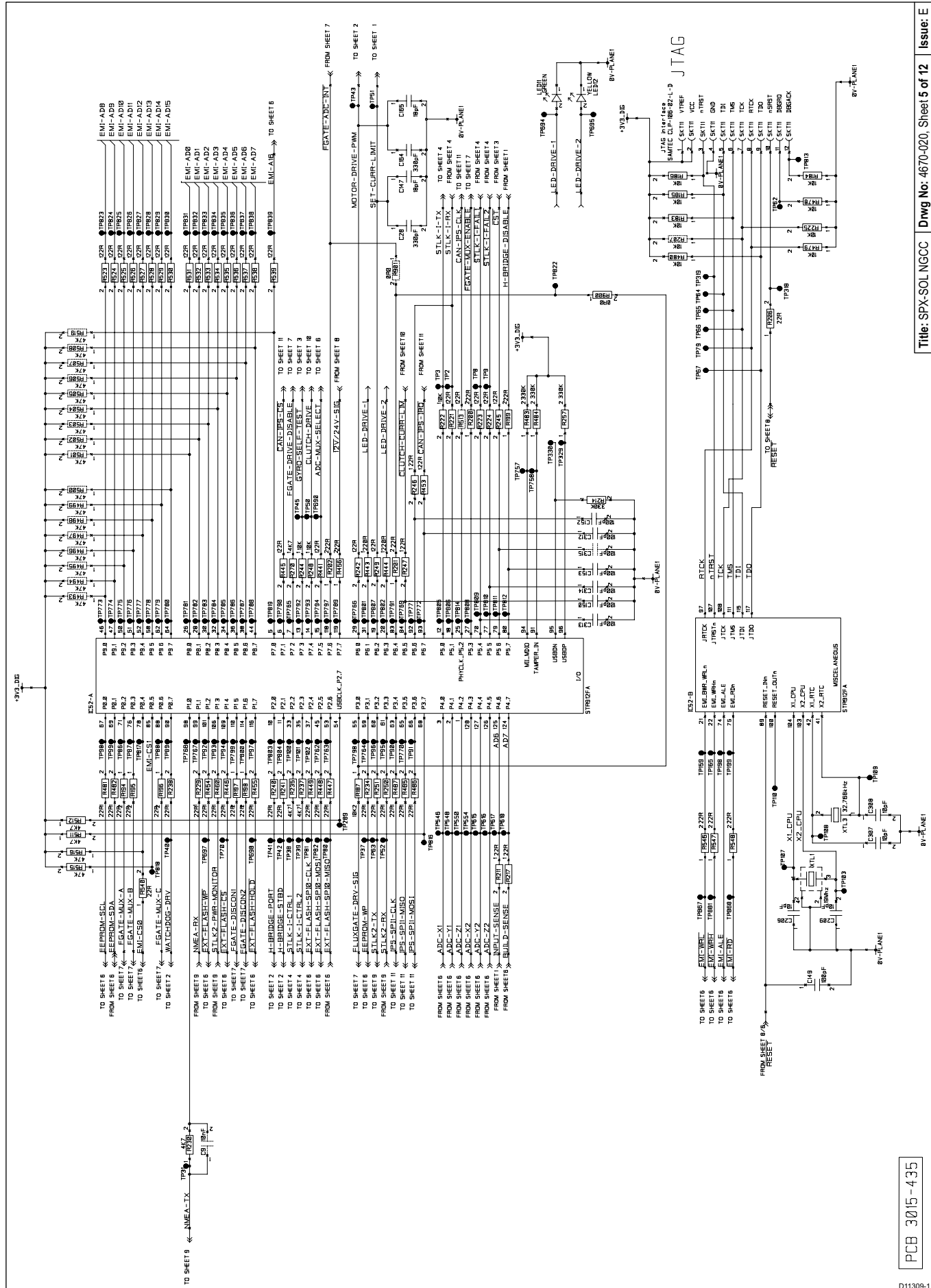


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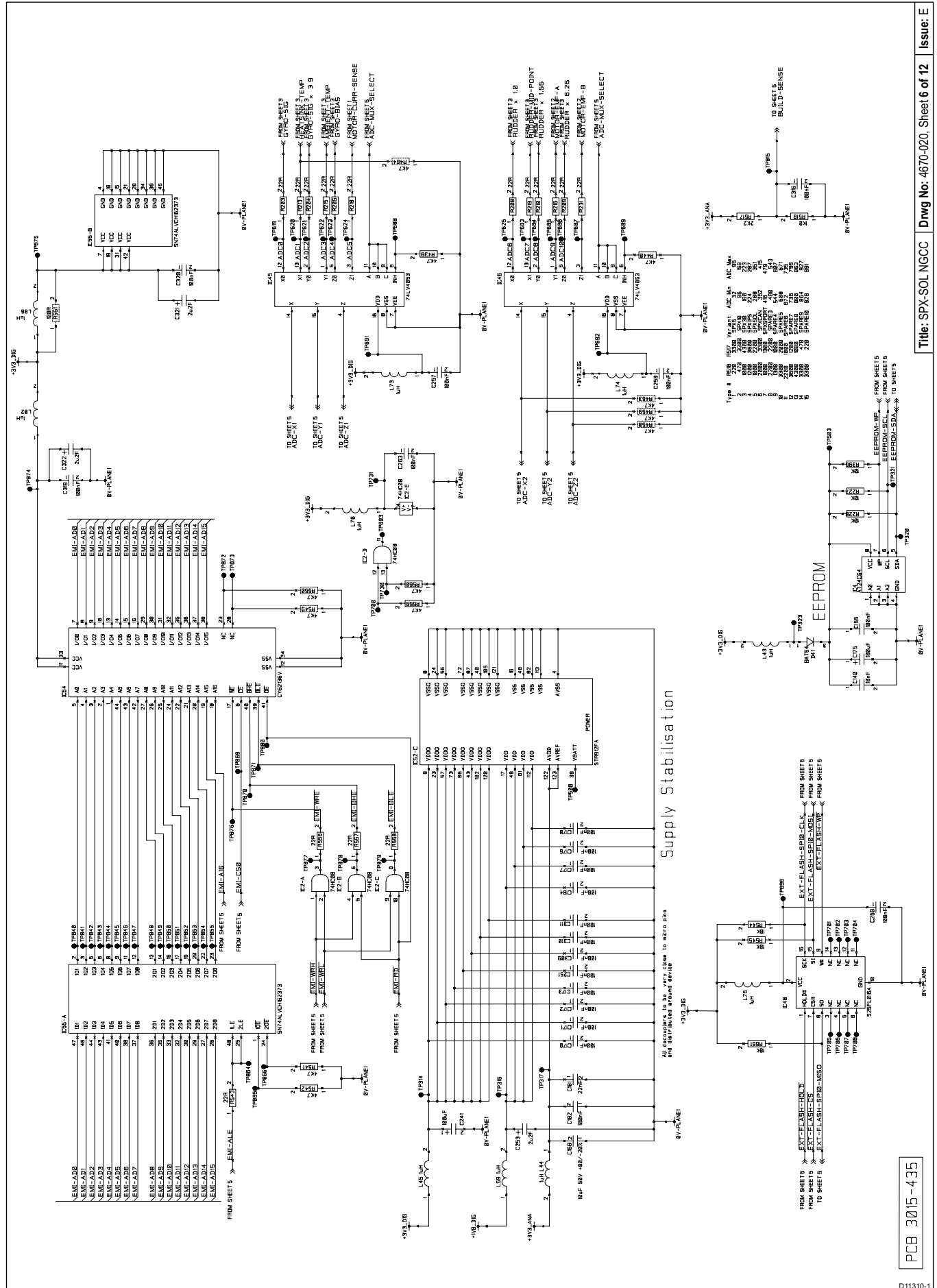
SmartPilot X-SOL PCB - Sheet 4 of 12



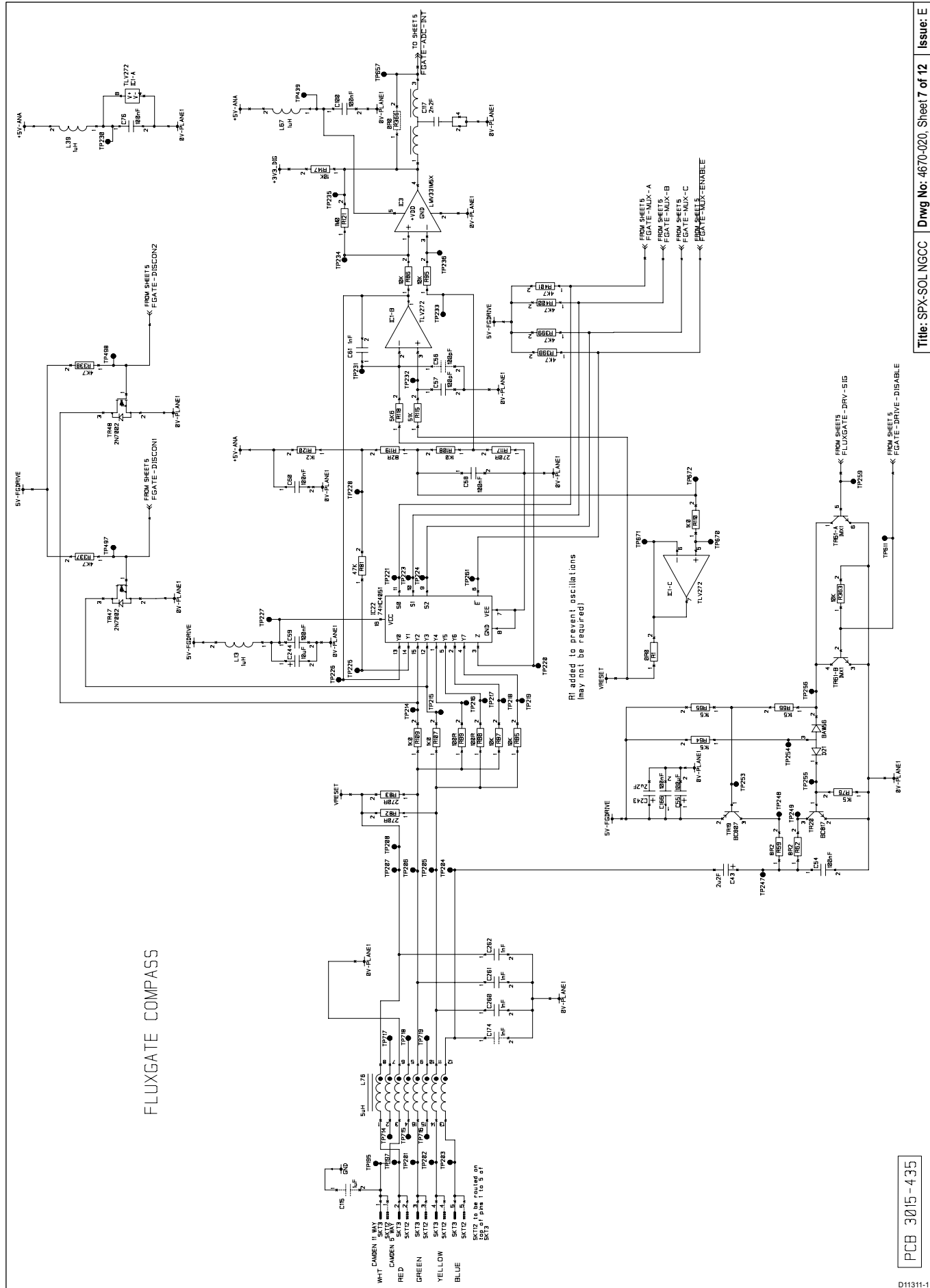
SmartPilot X-SOL PCB - Sheet 5 of 12



SmartPilot X-SOL PCB - Sheet 6 of 12

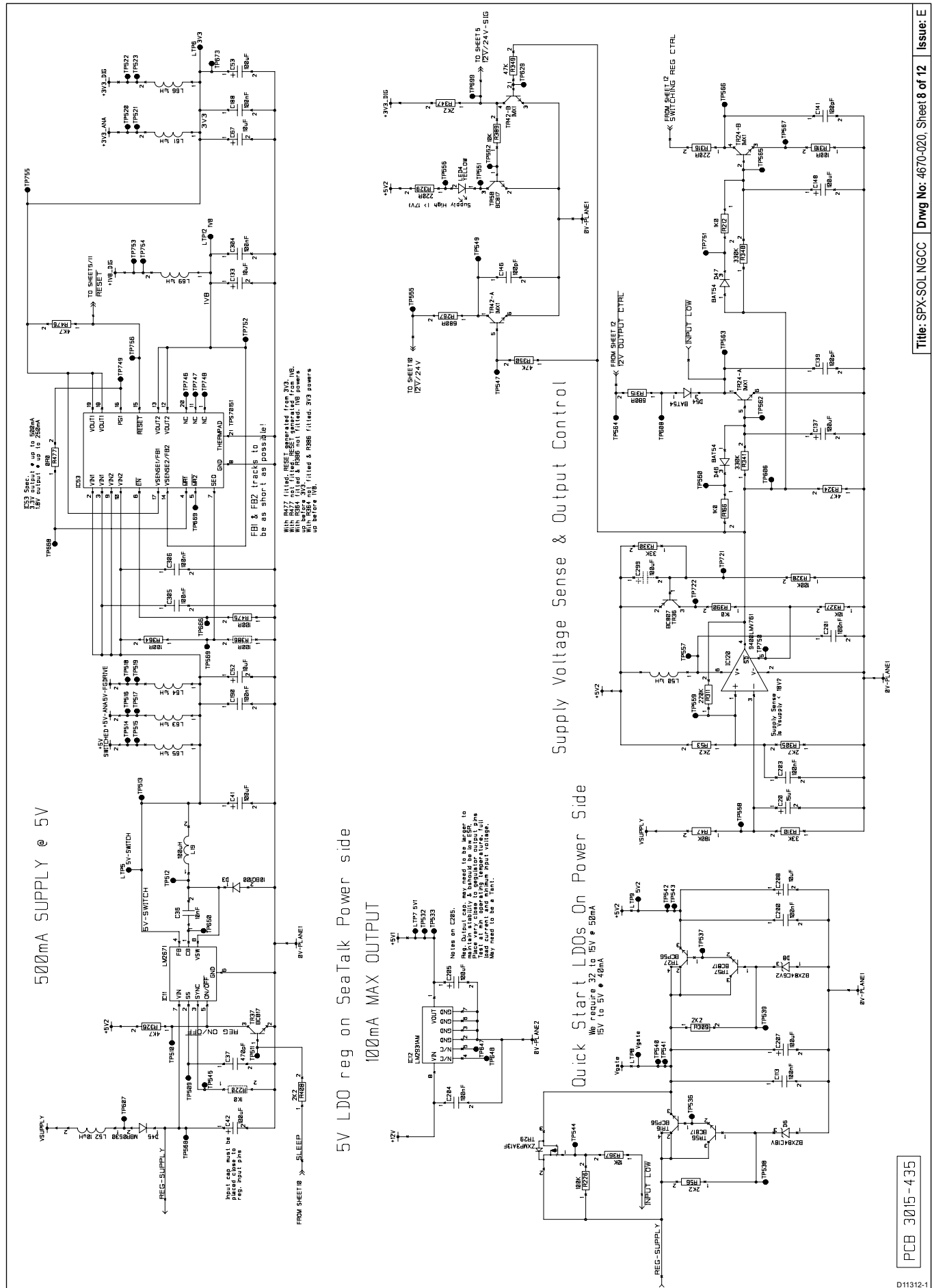


SmartPilot X-SOL PCB - Sheet 7 of 12

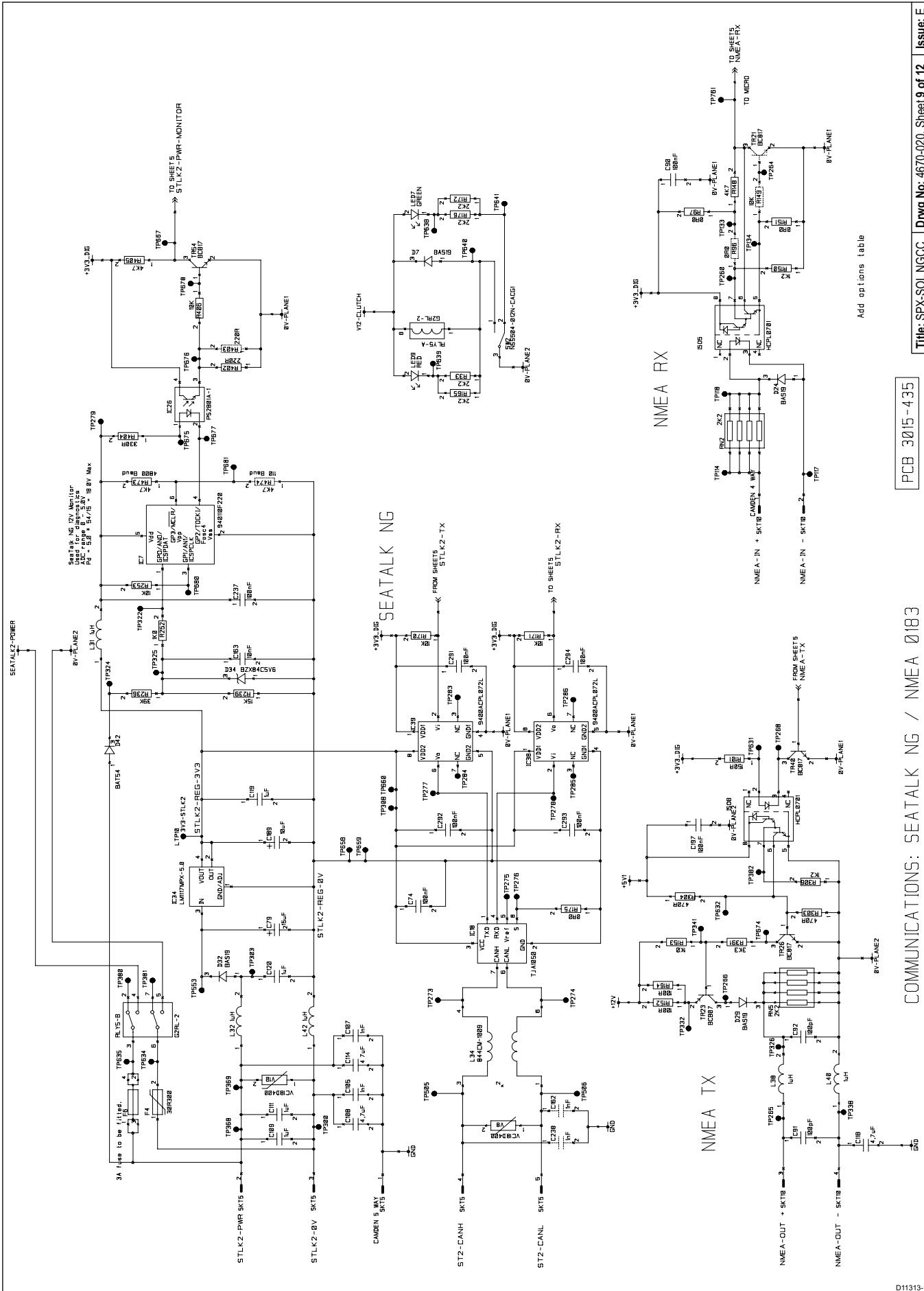


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SmartPilot X-SOL PCB - Sheet 8 of 12



SmartPilot X-SOL PCB - Sheet 9 of 12



Add options table

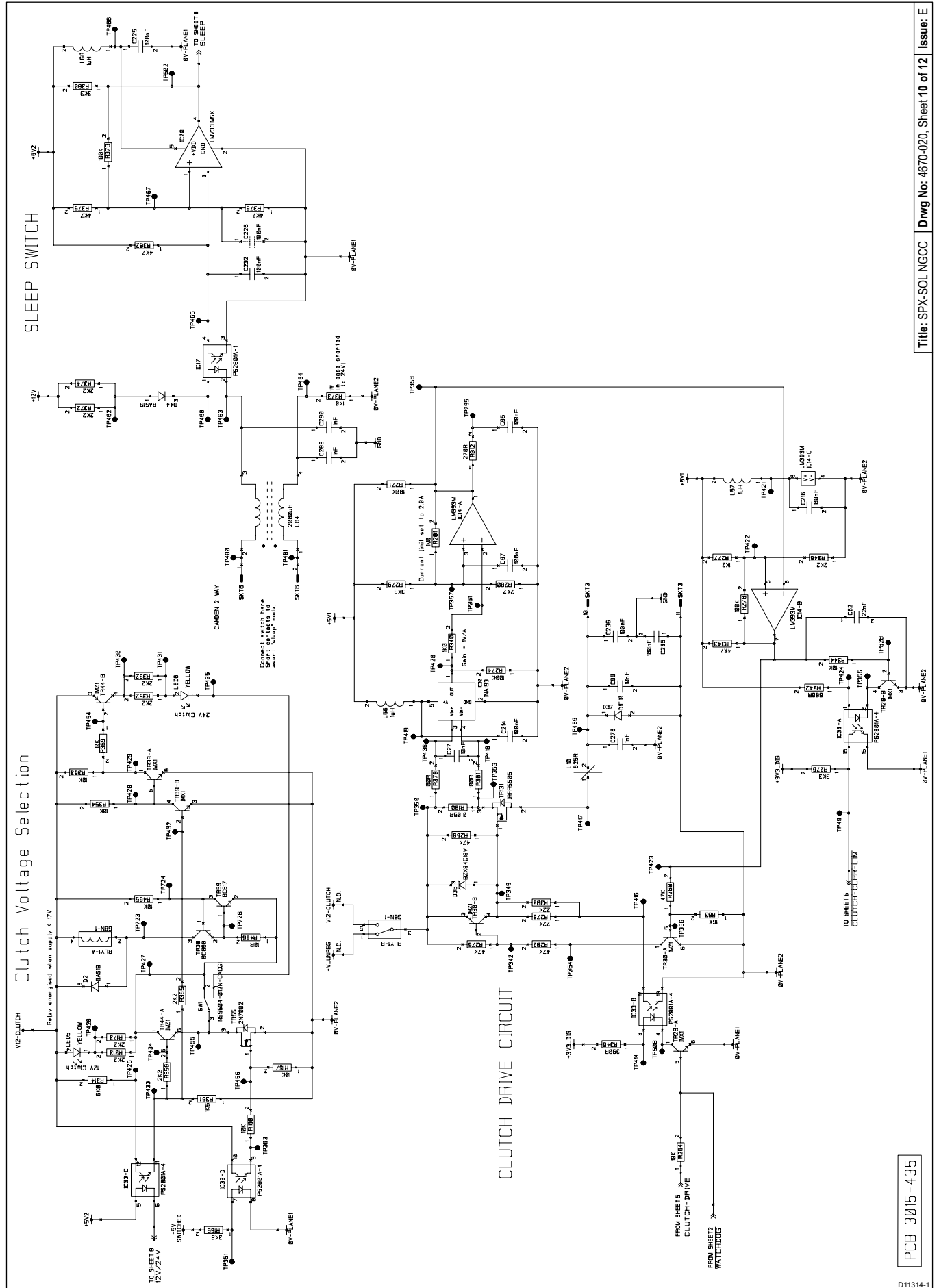
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COMMUNICATIONS: SEATALK NG / NMEA 0183

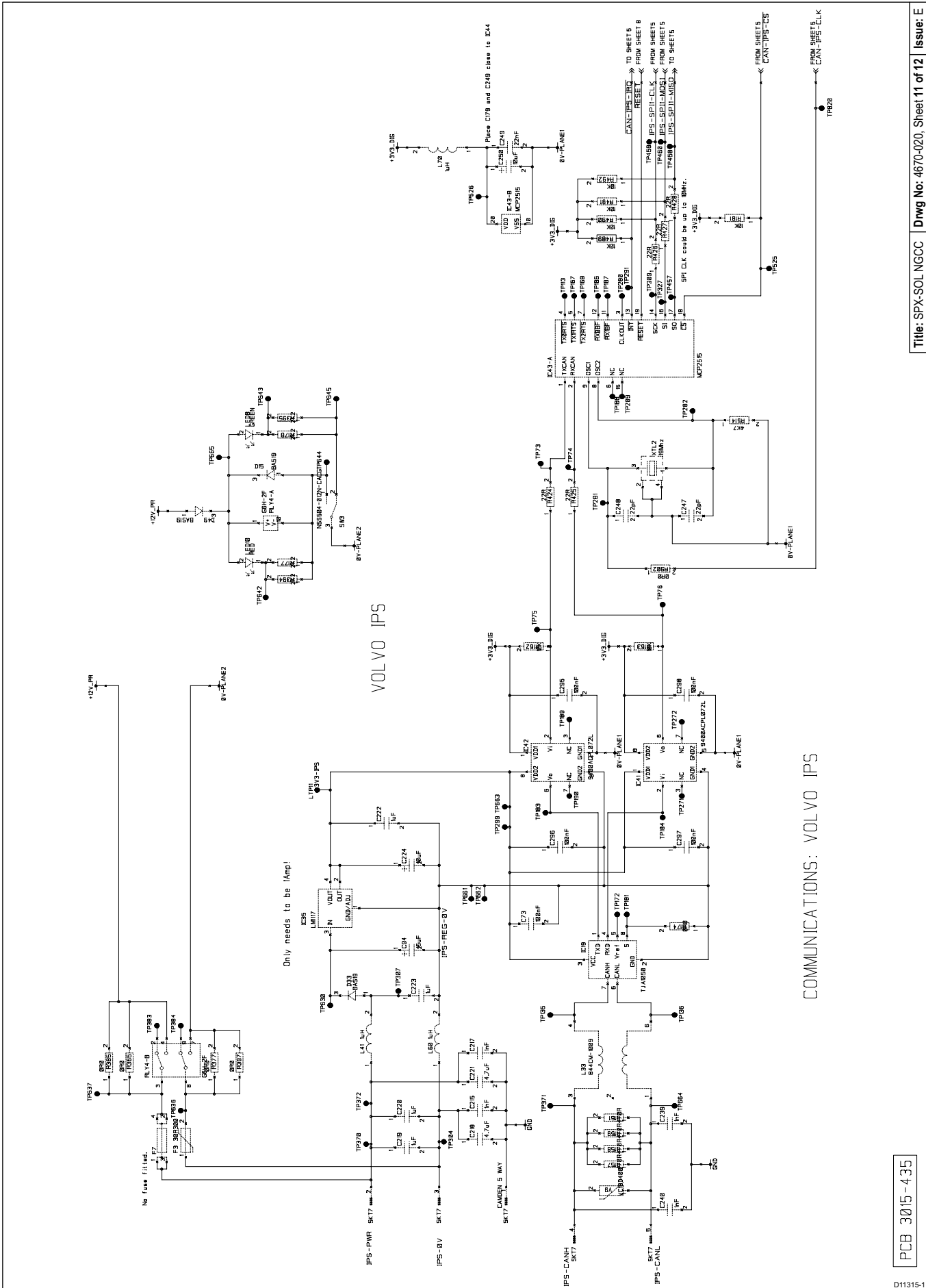
Title: SPX-SOL.NGCC Drwg No: 4670-020, Sheet 9 of 12 Issue: E

D11313-1

SmartPilot X-SOL PCB - Sheet 10 of 12



SmartPilot X-SOL PCB - Sheet 11 of 12

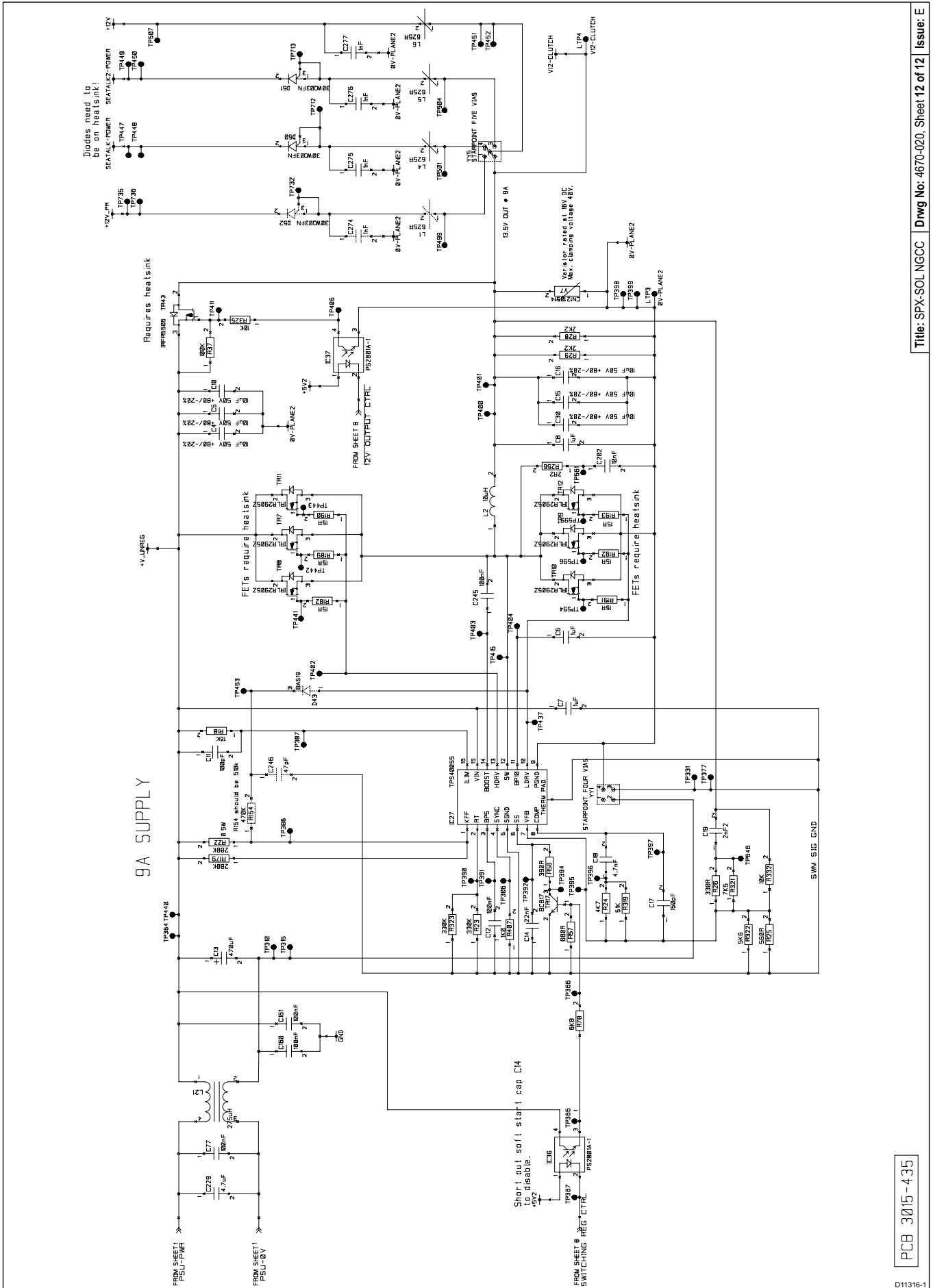


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PCB 3015-435

D11315-1

SmartPilot X-SOL PCB - Sheet 12 of 12

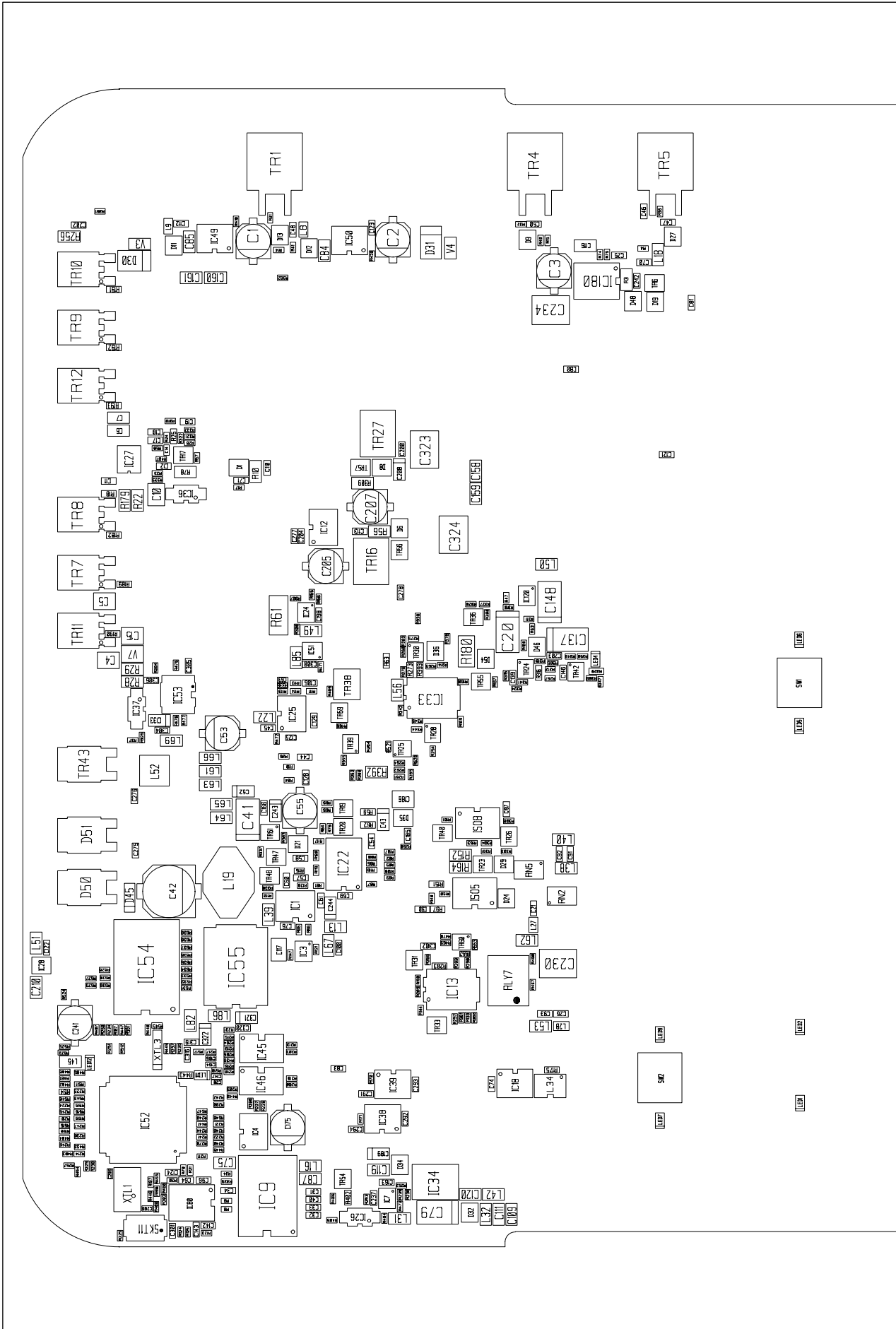


Title: SPX-SOL.NGCC Dwg No: 4670-020, Sheet 12 of 12 Issue: E

PCB 3015-435

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SmartPilot X-SOL PCB - Components - Sheet 1 of 3

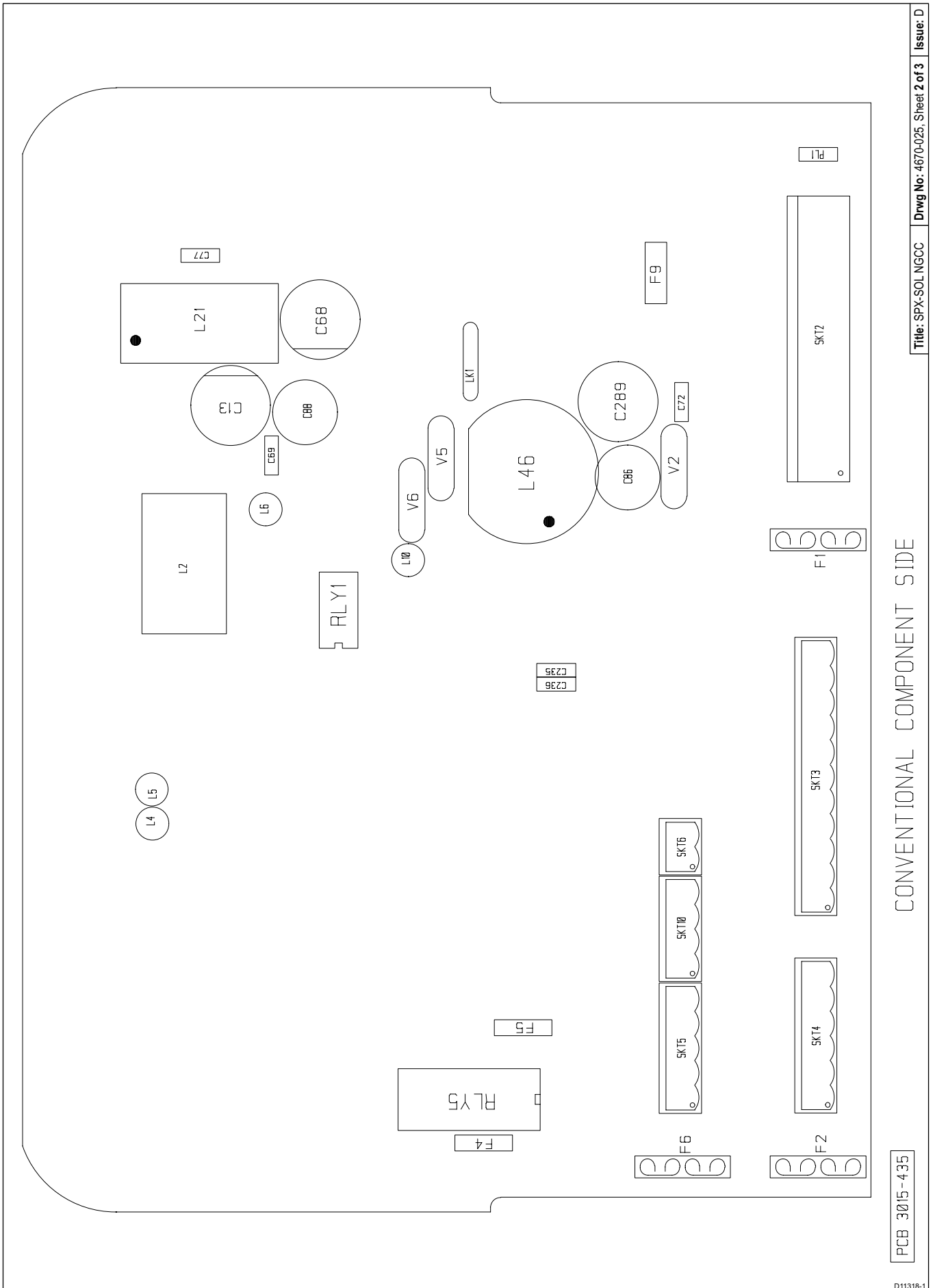


PCB 3015-435

SURFACE MOUNT COMPONENT SIDE

Title: SPX-SOL.NGCC Drwg No: 4670-025-Sheet 1 of 3 Issue: D

SmartPilot X-SOL PCB - Components - Sheet 2 of 3



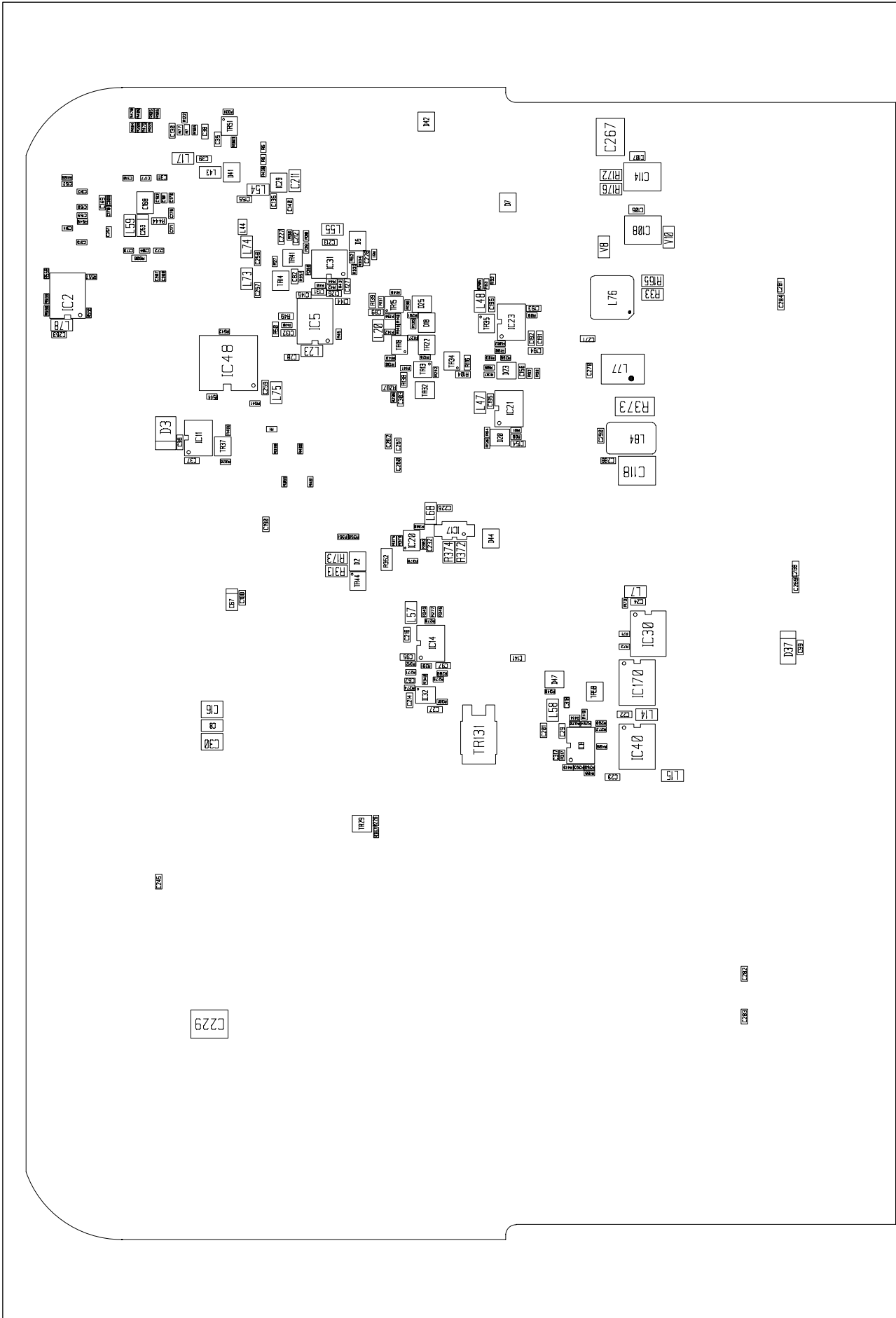
PCB_3015-435

CONVENTIONAL COMPONENT SIDE

Title: SPX-SOL.NGCC Drwg No: 4670-025, Sheet 2 of 3 Issue: D

D11318-1

SmartPilot X-SOL PCB - Components - Sheet 3 of 3



SURFACE MOUNT UNDERSIDE

PCB 3015-435

Title: SPX-SOL.NGCC Drwg No: 4670-025 Sheet 3 of 3 Issue: D

D11319-1

SmartPilot X-SOL PCB - Components, Parts List

Ref.	Description	Part No.	Ref.	Description	Part No.
C1	CAP ALELEC 10uF 50v 20% ELECD	93ZEHEXXX10U	C52	CAP TANT 10uF 10v 10% TANTA	93GDDCXXX10U
C2	CAP ALELEC 10uF 50v 20% ELECD	93ZEHEXXX10U	C53	CAP ALELEC 100uF 6.3v 20%ELECD	9324100U
C3	CAP ALELEC 10uF 50v 20% ELECD	93ZEHEXXX10U	C54	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C4	CAP CERAMIC 10uF 50V 1210	93DFHD10U	C55	CAP ALELEC 100uF 35V 20% CASE G	93KEGEXX100U
C5	CAP CERAMIC 10uF 50V 1210	93DFHD10U	C57	CAP COG 100pF 50v 5% 0603	93ACHAXX100P
C6	CAP Y5V 1uF 50v 20% 1206	93261U	C58	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C7	CAP Y5V 1uF 50v 20% 1206	93261U	C59	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C8	CAP Y5V 1uF 50v 20% 1206	93261U	C60	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C10	CAP CERAMIC 10uF 50V 1210	93DFHD10U	C61	CAP X7R 1nF 50v 10% 0603	93ADHBXX1N
C11	CAP COG 100pF 50v 5% 0603	93ACHAXX100P	C62	CAP CERAMIC 22nF SM 16V 10% 0402	93QDEB22N
C12	CAP X7R 100nF 25V 10% 0603	93ADFB100N	C63	CAP CERAMIC 22nF SM 16V 10% 0402	93QDEB22N
C13	CAP ELEC LOW ESR 470uF 63V 20% RAD	3206	C64	CAP COG 100pF 50v 5% 0603	93ACHAXX100P
C14	CAP CERAMIC 22nF SM 16V 10% 0402	93QDEB22N	C67	CAP TANT 10uF 10v 10% TANTA	93GDDCXXX10U
C15	CAP CERAMIC 10uF 50V 1210	93DFHD10U	C68	CAP ELECTROLYTIC 1000uF 50V RADIAL	3177
C16	CAP CERAMIC 10uF 50V 1210	93DFHD10U	C69	CAP POLY 100nF 100V 10% RADIAL	3082
C17	CAP COG 150pF 50V 2% 0603	93ABHA150P	C70	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C18	CAP X7R 4.7nF 50V 10% 0603	93ADHAXXX4N7	C71	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C19	CAP X7R 2.2nF 50v 10% 0603	93ADHBXX2N2	C72	CAP POLY 100nF 100V 10% RADIAL	3082
C20	CAP TANT 15uF 35V 20% TANTD	93JEGCXX15U	C74	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C21	CAP COG 470pF 50v 5% 0603	93ACHAXX470P	C75	CAP X7R 47nF 50V 10% 1206	93060U047
C22	CAP X7R 100nF 25V 10% 0603	93ADFB100N	C76	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C23	CAP X7R 100nF 25V 10% 0603	93ADFB100N	C77	CAP POLY 100nF 100V 10% RADIAL	3082
C24	CAP X7R 100nF 25V 10% 0603	93ADFB100N	C78	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C25	CAP X7R 100nF 25V 10% 0603	93ADFB100N	C79	CAP TANT 15uF 35V 20% TANTD	93JEGCXX15U
C26	CAP COG 470pF 50v 5% 0603	93ACHAXX470P	C80	CAP X7R 1nF 50v 10% 0603	93ADHBXX1N
C27	CAP X7R 10nF 50v 10% 0603	93ADHBXX10N	C81	CAP X7R 1nF 50v 10% 0603	93ADHBXX1N
C28	CAP 330pF +/-5% 50V COG 0402	93QCHA330P	C82	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C29	CAP X7R 100nF 25V 10% 0603	93ADFB100N	C83	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C30	CAP CERAMIC 10uF 50V 1210	93DFHD10U	C84	CAP Y5V 1uF 50v 20% 1206	93261U
C31	CAP X7R 100nF 25V 10% 0603	93ADFB100N	C85	CAP Y5V 1uF 50v 20% 1206	93261U
C32	CAP X7R 100nF 25V 10% 0603	93ADFB100N	C86	CAP ALEL NONPOL 220uF 50v 20% RAD	3153
C33	CAP X7R 100nF 25V 10% 0603	93ADFB100N	C87	CAP Y5V 1uF 50v 20% 1206	93261U
C34	CAP X7R 100nF 25V 10% 0603	93ADFB100N	C88	CAP ALEL NONPOL 220uF 50v 20% RAD	3153
C35	CAP X7R 100nF 25V 10% 0603	93ADFB100N	C89	CAP X7R 1nF 50v 10% 0603	93ADHBXX1N
C36	CAP X7R 10nF 50v 10% 0603	93ADHBXX10N	C90	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C37	CAP COG 470pF 50v 5% 0603	93ACHAXX470P	C91	CAP COG 100pF 50v 5% 0603	93ACHAXX100P
C38	CAP X7R 100nF 25V 10% 0603	93ADFB100N	C92	CAP COG 100pF 50v 5% 0603	93ACHAXX100P
C39	CAP X7R 100nF 25V 10% 0603	93ADFB100N	C93	CAP X7R 1nF 50v 10% 0603	93ADHBXX1N
C40	CAP X7R 100nF 25V 10% 0603	93ADFB100N	C95	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C41	CAP TANT 100uF 10v 20% TANTD	9326100U	C96	CAP X7R 10nF 50v 10% 0603	93ADHBXX10N
C42	CAP 100uF 50v 20% AL-ELEC	93ZEHEXX100U	C97	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C43	CAP TANT 2u2F 10v 10% TANTA	93GDDC2U2	C99	CAP X7R 10nF 50v 10% 0603	93ADHBXX10N
C44	CAP X7R 100nF 25V 10% 0603	93ADFB100N	C100	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C45	CAP X7R 100nF 25V 10% 0603	93ADFB100N	C105	CAP COG 1nF 100V +/- 5% 0805	93ACJAXXXX1N
C46	CAP X7R 100nF 25V 10% 0603	93ADFB100N	C106	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C47	CAP X7R 100nF 25V 10% 0603	93ADFB100N	C107	CAP COG 1nF 100V +/- 5% 0805	93ACJAXXXX1N
C48	CAP X7R 2.2nF 50v 10% 0603	93ADHBXX2N2	C108	CAP X7R 4.7uF 100v 10% 2220	93FDJBXXX4U7
C50	CAP X7R 2.2nF 50v 10% 0603	93ADHBXX2N2	C109	CAP Y5V 1uF 50v 20% 1206	93261U
			C110	CAP COG 470pF 50v 5% 0603	93ACHAXX470P

Ref.	Description	Part No.
C111	CAP Y5V 1uF 50v 20% 1206	93261U
C112	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C113	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C114	CAP X7R 4.7uF 100v 10% 2220	93FDJBXXX4U7
C116	CAP X7R 47nF 50V 10% 1206	93060U047
C117	CAP FILT 2n2F 25v +/-50% 6A	93ZHFGXXX2N2
C118	CAP X7R 4.7uF 100v 10% 2220	93FDJBXXX4U7
C119	CAP Y5V 1uF 50v 20% 1206	93261U
C120	CAP Y5V 1uF 50v 20% 1206	93261U
C121	CAP COG 470pF 50v 5% 0603	93ACHAXX470P
C122	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C123	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C124	CAP X7R 10nF 50v 10% 0603	93ADHBXX10N
C125	CAP CERAMIC 22nF SM 16V 10% 0402	93QDEB22N
C126	CAP X7R 10nF 50v 10% 0603	93ADHBXX10N
C127	CAP X7R 10nF 50v 10% 0603	93ADHBXX10N
C128	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C129	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C130	CAP X7R 10nF 50v 10% 0603	93ADHBXX10N
C131	CAP X7R 4.7nF 50V 10% 0603	93ADHAXXX4N7
C132	CAP X7R 4.7nF 50V 10% 0603	93ADHAXXX4N7
C133	CAP TANT 10uF 10v 10% TANTA	93GDCCXXX10U
C136	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C137	CAP TANT 100uF 10v 20% TANTD	9326100U
C139	CAP COG 100pF 50v 5% 0603	93ACHAXX100P
C140	CAP X7R 10nF 50v 10% 0603	93ADHBXX10N
C141	CAP COG 100pF 50v 5% 0603	93ACHAXX100P
C142	CAP X7R 47nF 16v 10% 0603	93ADEBXX47N
C143	CAP COG 100pF 50v 5% 0603	93ACHAXX100P
C144	CAP COG 100pF 50v 5% 0603	93ACHAXX100P
C145	CAP COG 100pF 50v 5% 0603	93ACHAXX100P
C146	CAP COG 100pF 50v 5% 0603	93ACHAXX100P
C147	CAP 18pF +/-5% 50V COG 0402	93QCHA18P
C148	CAP TANT 100uF 10v 20% TANTD	9326100U
C149	CAP COG 100pF 50v 5% 0603	93ACHAXX100P
C150	CAP 100pF 1% 50V COG 0402	93QAHA100P
C152	CAP 100pF 1% 50V COG 0402	93QAHA100P
C153	CAP 100pF 1% 50V COG 0402	93QAHA100P
C154	CAP COG 100pF 50v 5% 0603	93ACHAXX100P
C155	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C156	CAP COG 100pF 50v 5% 0603	93ACHAXX100P
C158	CAP X7R 0.1uF 50v 20% 1206	93070U1
C159	CAP X7R 0.1uF 50v 20% 1206	93070U1
C160	CAP X7R 0.1uF 50v 20% 1206	93070U1
C161	CAP X7R 0.1uF 50v 20% 1206	93070U1
C163	CAP X7R 10nF 50v 10% 0603	93ADHBXX10N
C164	CAP 330pF +/-5% 50V COG 0402	93QCHA330P
C165	CAP 18pF +/-5% 50V COG 0402	93QCHA18P
C166	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C168	CAP CERAMIC 10uF 50V 1210	93DFHD10U

Ref.	Description	Part No.
C170	CAP 100nF +/-10% 10V X5R 0402	93QDDI100N
C171	CAP 100nF +/-10% 10V X5R 0402	93QDDI100N
C172	CAP 100nF +/-10% 10V X5R 0402	93QDDI100N
C173	CAP 100nF +/-10% 10V X5R 0402	93QDDI100N
C175	CAP ALELEC 100uF 6.3v 20%ELECD	9324100U
C176	CAP 100nF +/-10% 10V X5R 0402	93QDDI100N
C177	CAP 100nF +/-10% 10V X5R 0402	93QDDI100N
C178	CAP 100nF +/-10% 10V X5R 0402	93QDDI100N
C181	CAP CERAMIC 22nF SM 16V 10% 0402	93QDEB22N
C182	CAP 100nF +/-10% 10V X5R 0402	93QDDI100N
C184	CAP 100nF +/-10% 10V X5R 0402	93QDDI100N
C185	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C186	CAP CERAMIC 10uF 50V 1210	93DFHD10U
C188	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C189	CAP TANT 10uF 10v 10% TANTA	93GDCCXXX10U
C190	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C191	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C192	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C193	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C194	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C195	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C196	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C197	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C198	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C200	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C201	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C202	CAP X7R 10nF 50v 10% 0603	93ADHBXX10N
C203	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C204	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C205	CAP ALELEC 100uF 35V 20% CASE G	93KEGEXX100U
C206	CAP 10pF SM 0402	93QCHA10P
C207	CAP ALELEC 100uF 35V 20% CASE G	93KEGEXX100U
C208	CAP TANT 10uF 10v 10% TANTA	93GDCCXXX10U
C209	CAP 10pF SM 0402	93QCHA10P
C210	CAP Y5V 1uF 50v 20% 1206	93261U
C211	CAP Y5V 1uF 50v 20% 1206	93261U
C212	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C213	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C214	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C216	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C225	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C227	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C228	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C229	CAP X7R 4.7uF 50v 10% 2220	93FDHBXXX4U7
C230	CAP X7R 4.7uF 100v 10% 2220	93FDJBXXX4U7
C232	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C234	CAP X7R 4.7uF 100v 10% 2220	93FDJBXXX4U7
C235	CAP POLY 100nF 100V 10% RADIAL	3082
C236	CAP POLY 100nF 100V 10% RADIAL	3082
C237	CAP X7R 100nF 25V 10% 0603	93ADFB100N

Ref.	Description	Part No.	Ref.	Description	Part No.
C241	CAP ALELEC 100uF 6.3v 20%ELECD	9324100U	C317	CAP 10pF SM 0402	93QCHA10P
C242	CAP X7R 1nF 50v 10% 0603	93ADHBXX1N	C318	CAP 10pF SM 0402	93QCHA10P
C243	CAP TANT 2u2F 10v 10% TANTA	93GDDC2U2	C319	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C244	CAP TANT 10uF 10v 10% TANTA	93GDDCXXX10U	C320	CAP X7R 100nF 25V 10% 0603	93ADFB100N
C245	CAP X7R 100nF 25V 10% 0603	93ADFB100N	C321	CAP TANT 2u2F 10v 10% TANTA	93GDDC2U2
C251	CAP 100nF +/-10% 10V X5R 0402	93QDDI100N	C322	CAP TANT 2u2F 10v 10% TANTA	93GDDC2U2
C253	CAP TANT 2u2F 10v 10% TANTA	93GDDC2U2	C323	CAP X7R 4.7uF 100v 10% 2220	93FDJBXXX4U7
C257	CAP X7R 100nF 25V 10% 0603	93ADFB100N	C324	CAP X7R 4.7uF 100v 10% 2220	93FDJBXXX4U7
C258	CAP X7R 100nF 25V 10% 0603	93ADFB100N	D1	DIODE ZENER 3V3 SOT23	9203BZX3V3
C259	CAP X7R 100nF 25V 10% 0603	93ADFB100N	D2	DIODE BAS19 SOT23	9200BAS19
C260	CAP X7R 1nF 50v 10% 0603	93ADHBXX1N	D3	DIODE SCHOTTKY 10BQ100 1A SMB	920010BQ100
C261	CAP X7R 1nF 50v 10% 0603	93ADHBXX1N	D5	DIODE DUAL BAV99 SOT23	9200BAV99
C262	CAP X7R 1nF 50v 10% 0603	93ADHBXX1N	D6	DIODE ZENER 18V 330mW SOT23	9203BZX18V
C263	CAP X7R 100nF 25V 10% 0603	93ADFB100N	D7	DIODE BAS19 SOT23	9200BAS19
C267	CAP X7R 4.7uF 100v 10% 2220	93FDJBXXX4U7	D8	DIODE ZENER 6V2 250mW SOT23	9203BZX6V2
C268	CAP X7R 1nF 50v 10% 0603	93ADHBXX1N	D9	DIODE BAS19 SOT23	9200BAS19
C269	CAP X7R 1nF 50v 10% 0603	93ADHBXX1N	D11	DIODE SCHOTTKY BAT54 SOT23	9200BAT54
C270	CAP X7R 1nF 50v 10% 0603	93ADHBXX1N	D12	DIODE SCHOTTKY BAT54 SOT23	9200BAT54
C271	CAP X7R 1nF 50v 10% 0603	93ADHBXX1N	D13	DIODE BAS19 SOT23	9200BAS19
C275	CAP X7R 1nF 50v 10% 0603	93ADHBXX1N	D18	DIODE SCHOTTKY BAT54S SOT23	9200BAT54S
C276	CAP X7R 1nF 50v 10% 0603	93ADHBXX1N	D19	DIODE ZENER 15V	9203BZX15V
C277	CAP X7R 1nF 50v 10% 0603	93ADHBXX1N	D20	DIODE SCHOTTKY BAT54S SOT23	9200BAT54S
C278	CAP X7R 1nF 50v 10% 0603	93ADHBXX1N	D21	DIODE BAW56 DUAL SOT23	9200BAW56
C281	CAP X7R 1nF 50v 10% 0603	93ADHBXX1N	D23	DIODE SCHOTTKY BAT54S SOT23	9200BAT54S
C282	CAP X7R 1nF 50v 10% 0603	93ADHBXX1N	D24	DIODE BAS19 SOT23	9200BAS19
C283	CAP X7R 1nF 50v 10% 0603	93ADHBXX1N	D25	DIODE SCHOTTKY BAT54 SOT23	9200BAT54
C284	CAP X7R 1nF 50v 10% 0603	93ADHBXX1N	D27	DIODE SCHOTTKY BAT54S SOT23	9200BAT54S
C288	CAP X7R 1nF 50v 10% 0603	93ADHBXX1N	D29	DIODE BAS19 SOT23	9200BAS19
C289	CAP AL ELEC NP 470uF 50V 20% RADIAL	3209	D30	DIODE SCHOTTKY 1A 60V SMB	920010BQ060
C290	CAP X7R 1nF 50v 10% 0603	93ADHBXX1N	D31	DIODE SCHOTTKY 1A 60V SMB	920010BQ060
C291	CAP X7R 100nF 25V 10% 0603	93ADFB100N	D32	DIODE BAS19 SOT23	9200BAS19
C292	CAP X7R 100nF 25V 10% 0603	93ADFB100N	D34	DIODE ZENER 5V6 350mW SOT23	9203BZX5V6
C293	CAP X7R 100nF 25V 10% 0603	93ADFB100N	D35	DIODE DUAL BAV99 SOT23	9200BAV99
C294	CAP X7R 100nF 25V 10% 0603	93ADFB100N	D36	DIODE ZENER 18V 330mW SOT23	9203BZX18V
C300	CAP X7R 100nF 25V 10% 0603	93ADFB100N	D37	DIODE RECT 1A D1F10	9204D1F10
C301	CAP X7R 47nF 16v 10% 0603	93ADEBXX47N	D41	DIODE SCHOTTKY BAT54 SOT23	9200BAT54
C302	CAP COG 470pF 50v 5% 0603	93ACHAXX470P	D42	DIODE SCHOTTKY BAT54 SOT23	9200BAT54
C303	CAP COG 470pF 50v 5% 0603	93ACHAXX470P	D44	DIODE BAS19 SOT23	9200BAS19
C304	CAP X7R 100nF 25V 10% 0603	93ADFB100N	D45	IC SCHOTTKY DIODE RECTIFIER MBR0530 SOD-123	9200MBR0530
C305	CAP X7R 100nF 25V 10% 0603	93ADFB100N	D46	DIODE SCHOTTKY BAT54 SOT23	9200BAT54
C306	CAP X7R 100nF 25V 10% 0603	93ADFB100N	D47	DIODE SCHOTTKY BAT54 SOT23	9200BAT54
C307	CAP 10pF SM 0402	93QCHA10P	D48	DIODE BAS19 SOT23	9200BAS19
C308	CAP 10pF SM 0402	93QCHA10P	D50	IC SCHOTTKY DIODE RECTIFIER 30WQ03FN TO-252	920030WQ03
C309	CAP 100nF +/-10% 10V X5R 0402	93QDDI100N	D51	IC SCHOTTKY DIODE RECTIFIER 30WQ03FN TO-252	920030WQ03
C310	CAP 100nF +/-10% 10V X5R 0402	93QDDI100N	D54	DIODE SCHOTTKY BAT54 SOT23	9200BAT54
C311	CAP 100nF +/-10% 10V X5R 0402	93QDDI100N	F1	FUSE CLIP AUTOMOTIVE 15A	15525
C312	CAP 100pF 1% 50V COG 0402	93QAHA100P	F2	FUSE CLIP AUTOMOTIVE 15A	15525
C313	CAP 100pF 1% 50V COG 0402	93QAHA100P	F4	FUSE RESET 3A	15524
C314	CAP 100pF 1% 50V COG 0402	93QAHA100P			
C316	CAP X7R 100nF 25V 10% 0603	93ADFB100N			

Ref.	Description	Part No.
F5	FUSE RESET 3A	15524
F6	FUSE CLIP AUTOMOTIVE 15A	15525
F9	FUSE RESET 5A	15523
IC1	IC OPAMP DUAL RAIL-TO-RAIL SO8	9400TLV272
IC2	IC QUAD AND 74HC08 2V SO14	940074HC08
IC3	IC COMPARATOR 2.7V TO 5V SOT23	9400LMV331
IC4	IC SERIAL EEPROM SOIC8 SM	9401AT24C64
IC5	IC QUAD OPAMP TLV2264 SO14	9400TLV2264
IC7	IC FLASH 8 BIT FLASH MICROCONTROLLER 6 PIN SEATALKNG	940110F220
IC8	IC COMPARATOR 2-36V SO8	9400LM393M
IC9	IC GYRO KGF01-080 SO24	9400KGF01
IC11	IC POWER REGULATOR 5V 500MA 260kHz SO8	9400LM2671
IC12	IC REG LOW DROPOUT POS 5V SO8	9400LM2931AM
IC13	IC OPTO COUPLER QUAD SSO16	9400PS2801A4
IC14	IC COMPARATOR 2-36V SO8	9400LM393M
IC17	IC OPTO COUPLER SINGLE SSOP4	9400PS2801A1
IC18	IC TRANSCEIVER HS CAN 5v SO8	9400TJA1050
IC20	IC COMPARATOR 2.7V TO 5V SOT23	9400LMV331
IC21	IC OPAMP DUAL TLV2262CD SO8	9400TLV2262
IC22	IC LOGIC SWITCH 74HC4051 SO16	940074HC4051
IC23	IC COMPARATOR 2-36V SO8	9400LM393M
IC24	IC AMPLIFIER ANALOGUE 20V/V 500kHz SOT23	9400INA193
IC25	IC COMPARATOR 2-36V SO8	9400LM393M
IC26	IC OPTO COUPLER SINGLE SSOP4	9400PS2801A1
IC27	12V SUPPLY CONTROLLER	9400TPS40055
IC28	IC TEMPERATURE SENSOR SOT23	9400LM60
IC29	IC TEMPERATURE SENSOR SOT23	9400LM60
IC30	IC QUAD 2 INPUT POSITIVE OR GATES 74HC32M SO14 SM	940074HC32M
IC31	IC OPAMP DUAL TLV2262CD SO8	9400TLV2262
IC32	IC AMPLIFIER ANALOGUE 20V/V 500kHz SOT23	9400INA193
IC33	IC OPTO COUPLER QUAD SSO16	9400PS2801A4
IC34	IC REGULATOR LINEAR 5V 800mA SOT223	9401LM1117
IC36	IC OPTO COUPLER SINGLE SSOP4	9400PS2801A1
IC37	IC OPTO COUPLER SINGLE SSOP4	9400PS2801A1
IC38	IC HIGH SPEED CMOS OPTOCOUPLER 3.3/5V SSO8	9400ACPL072L
IC39	IC HIGH SPEED CMOS OPTOCOUPLER 3.3/5V SSO8	9400ACPL072L
IC40	IC QUAD AND 74HC08 2V SO14	940074HC08
IC45	IC TRIPLE 2-CHANNEL ANALOG MULTIPLEXER/DEMULTIPLEXER	940074LV4053
IC46	IC TRIPLE 2-CHANNEL ANALOG MULTIPLEXER/DEMULTIPLEXER	940074LV4053
IC48	IC FLASH MEMORY 16MBIT SERIAL	9400S25FL016A
IC49	IC MOSFET HIGH SIDE DRIVER SO8	9400IRS2118
IC50	IC MOSFET HIGH SIDE DRIVER SO8	9400IRS2118
IC51	IC OPAMP LINEAR 2.7-6V SOT23-5	9400TLV2461

Ref.	Description	Part No.
IC52	IC MICROCONTROLLER ARM9 512k FLASH 96k SRAM	9401STR912FA
IC53	IC DUAL OUTPUT VOLTAGE REGULATOR 3.3V/1.8V	9400TPS70151
IC54	IC SRAM 2-MBIT 128Kx16 HIGH SPEED2.7-3.6V	9400CY62136
IC55	IC LATCH D-TYPE 16 BIT TRANSPARENT	9.40074E+11
IC80	IC QUAD OPAMP TLV2264 SO14	9400TLV2264
IC120	IC COMPARATOR PUSH PULL SOT23-6	9400LMV761
IC170	IC QUAD 2/I/P NAND GATE 74HC00 SO14	940074HC00
IC180	IC QUAD NAND HEF4011UB SO14 SM	94004011U
ISO5	IC OPTO COUPLER 18v SO8	9400HP0701
ISO8	IC OPTO COUPLER 18v SO8	9400HP0701
L2	INDUCTOR 10uH 18A	15554
L4	INDUCTOR FERRITE BEAD 650R@100MHz	15390
L5	INDUCTOR FERRITE BEAD 650R@100MHz	15390
L6	INDUCTOR FERRITE BEAD 650R@100MHz	15390
L7	INDUCTOR 1uH 200mA 1206	9600L1
L8	INDUCTOR 1uH 0.92A 5% 0805	9600MAG1U
L9	INDUCTOR 1uH 0.92A 5% 0805	9600MAG1U
L10	INDUCTOR FERRITE BEAD 650R@100MHz	15390
L13	INDUCTOR 1uH 200mA 1206	9600L1
L14	INDUCTOR 1uH 200mA 1206	9600L1
L15	INDUCTOR 1uH 200mA 1206	9600L1
L16	INDUCTOR 1uH 200mA 1206	9600L1
L17	INDUCTOR 1uH 200mA 1206	9600L1
L18	INDUCTOR 1uH 200mA 1206	9600L1
L19	INDUCTOR 100uH 730mA	9600COILC2
L20	INDUCTOR 1uH 200mA 1206	9600L1
L21	IND COMMON MODE CHOKE VERT 13A 275uH	15539
L22	INDUCTOR 1uH 200mA 1206	9600L1
L23	INDUCTOR 1uH 200mA 1206	9600L1
L27	FERRITE 200mA BLM21A102S	9600FER2012
L28	FERRITE 200mA BLM21A102S	9600FER2012
L31	INDUCTOR 1uH 200mA 1206	9600L1
L32	INDUCTOR 1uH 200mA 1206	9600L1
L34	TRANSF C-MODE 0.7A TOKO B4FL	9600TOKOCM1
L38	INDUCTOR 1uH 200mA 1206	9600L1
L39	INDUCTOR 1uH 200mA 1206	9600L1
L40	INDUCTOR 1uH 200mA 1206	9600L1
L42	INDUCTOR 1uH 200mA 1206	9600L1
L43	INDUCTOR 1uH 200mA 1206	9600L1
L44	INDUCTOR 1uH 0.92A 5% 0805	9600MAG1U
L45	INDUCTOR 1uH 200mA 1206	9600L1
L46	IND COMMON MODE CHOKE 30A 270uH	3030-602
L47	INDUCTOR 1uH 200mA 1206	9600L1
L48	INDUCTOR 1uH 200mA 1206	9600L1
L49	INDUCTOR 1uH 200mA 1206	9600L1
L50	INDUCTOR 1uH 200mA 1206	9600L1
L51	INDUCTOR 1uH 200mA 1206	9600L1

Ref.	Description	Part No.	Ref.	Description	Part No.
L52	INDUCTOR 10uH SMD	9600L29	R15	RES MFILM 22R 1% 0.063W 0402	91QAA22R
L53	INDUCTOR 1uH 200mA 1206	9600L1	R17	RES MFILM 1K2 1% 0.063W 0402	91QAA1K2
L54	INDUCTOR 1uH 200mA 1206	9600L1	R18	RES MFILM 16K 1% 0.063W 0603	91AAAXX16K
L55	INDUCTOR 1uH 200mA 1206	9600L1	R19	RES MFILM 1M0 1% 0.063W 0402	91QAA1M
L56	INDUCTOR 1uH 200mA 1206	9600L1	R20	RES MFILM 39K 1% 0.063W 0402	91QAA39K
L57	INDUCTOR 1uH 200mA 1206	9600L1	R21	RES MFILM 39K 1% 0.063W 0402	91QAA39K
L58	INDUCTOR 1uH 200mA 1206	9600L1	R22	RES MFILM 280K 1% 0.25W 1206	91CADXX280K
L59	INDUCTOR 1uH 200mA 1206	9600L1	R23	RES MFILM 330K 1% 0.063W 0402	91QAA330K
L61	INDUCTOR 1uH 200mA 1206	9600L1	R24	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7
L62	INDUCTOR 1uH 200mA 1206	9600L1	R25	RES MFILM 560R 1% 0.063W 0603	91AAAXX560R
L63	INDUCTOR 1uH 200mA 1206	9600L1	R26	RES MFILM 330R 1% 0.063W 0402	91QAA330R
L64	INDUCTOR 1uH 200mA 1206	9600L1	R27	RES MFILM 22R 1% 0.063W 0402	91QAA22R
L65	INDUCTOR 1uH 200mA 1206	9600L1	R28	RES MFILM 2K2 5% 0.125W 1206	91062K2
L66	INDUCTOR 1uH 200mA 1206	9600L1	R29	RES MFILM 2K2 5% 0.125W 1206	91062K2
L67	INDUCTOR 1uH 200mA 1206	9600L1	R30	RES MFILM 15K 1% 0.063W 0402	91QAAXX15K
L68	INDUCTOR 1uH 200mA 1206	9600L1	R31	RES MFILM 10R 1% 0.063W 0402	91QAA10R
L69	INDUCTOR 1uH 200mA 1206	9600L1	R32	RES MFILM 10R 1% 0.063W 0402	91QAA10R
L73	INDUCTOR 1uH 200mA 1206	9600L1	R33	RES MFILM 2K2 5% 0.125W 1206	91062K2
L74	INDUCTOR 1uH 200mA 1206	9600L1	R34	RES 100K 1% 0.063W 0402	91QAA100K
L75	INDUCTOR 1uH 200mA 1206	9600L1	R35	RES MFILM 150K 1% 0.063W 0402	91QAA150K
L76	IND COMMON MODE CHOKE 8 LINE 100mA 5uH	9600CCDLF80	R36	RES 100K 1% 0.063W 0402	91QAA100K
L77	IND COMMON MODE CHOKE 3 LINE 100mA 5uH	9600PDLF30	R37	RES 100K 1% 0.063W 0402	91QAA100K
L78	INDUCTOR 1uH 200mA 1206	9600L1	R38	RES MFILM 1K2 1% 0.063W 0402	91QAA1K2
L82	INDUCTOR 1uH 200mA 1206	9600L1	R39	RES MFILM 1K2 1% 0.063W 0402	91QAA1K2
L84	COMMON MODE CHOKE WE 744221 SM	9600WURTH2M	R40	RES MFILM 82R 1% 0.063W 0402	91QAA82R
L85	INDUCTOR 1uH 200mA 1206	9600L1	R41	RES MFILM 82R 1% 0.063W 0402	91QAA82R
L86	INDUCTOR 1uH 200mA 1206	9600L1	R42	RES MFILM 51K 1% 0.063W 0402	91QAA51K
LED1	LED RED 0805 SM	9207SML210LT	R43	RES MFILM 51K 1% 0.063W 0402	91QAA51K
LED2	LED RED 0805 SM	9207SML210LT	R44	RES MFILM 33K 1% 0.063W 0402	91QAA33K
LED4	LED YELLOW 0805 SM	9207SML210Y	R45	RES MFILM 33K 1% 0.063W 0402	91QAA33K
LED5	LED YELLOW 0805 SM	9207SML210Y	R46	RES 100K 1% 0.063W 0402	91QAA100K
LED6	LED YELLOW 0805 SM	9207SML210Y	R47	RES 180K 1% 0.063W 0402	91QAA180K
LED7	LED SML-210 GREEN	9207SML210	R48	RES 100K 1% 0.063W 0402	91QAA100K
LED9	LED RED 0805 SM	9207SML210LT	R49	RES MFILM 16K 1% 0.063W 0603	91AAAXX16K
LED11	LED SML-210 GREEN	9207SML210	R50	RES MFILM 16K 1% 0.063W 0603	91AAAXX16K
LED12	LED YELLOW 0805 SM	9207SML210Y	R51	RES 100R 1% 0.063W 0402	91QAA100R
LK1	LINK WIRE 20 SWG (0.91mm DIA) 13mm PITCH	3017-078	R52	RES MFILM 1M0 1% 0.063W 0402	91QAA1M
PL1	CONNECTOR SPADE (EARTH TAG)	7503	R53	RES MFILM 2K2 1% 0.063W 0402	91QAA2K2
R1	RES 0R0 1% 0.063W 0402	91QAA0R0	R56	RES MFILM 2K2 5% 0.125W 1206	91062K2
R3	RES MFILM 2K2 5% 0.125W 1206	91062K2	R57	RES MFILM 680R 1% 0.063W 0402	91QAA680R
R4	RES 100R 1% 0.063W 0402	91QAA100R	R58	RES MFILM 390R 1% 0.063W 0402	91QAA390R
R5	RES MFILM 7K5 1% 0.063W 0402	91QAA7K5	R59	RES MFILM 8R2 1% 0.063W 0603	91AAAXX8R2
R6	RES MFILM 3K9 1% 0.063W 0402	91QAA3K9	R61	CURRENT SENSE RESISTOR ORO30ohms 5%	91FCHXXR030
R7	RES MFILM 1K0 1% 0.063W 0402	91QAA1K	R62	RES MFILM 8R2 1% 0.063W 0603	91AAAXX8R2
R8	RES MFILM 7K5 1% 0.063W 0402	91QAA7K5	R63	RES MFILM 16K 1% 0.063W 0603	91AAAXX16K
R9	RES MFILM 3K9 1% 0.063W 0402	91QAA3K9	R64	RES MFILM 1K5 1% 0.063W 0402	91QAA1K5
R10	RES MFILM 12K 5% 0.125W 1206	910612K	R65	RES MFILM 1K5 1% 0.063W 0402	91QAA1K5
R14	RES MFILM 22R 1% 0.063W 0402	91QAA22R	R66	RES MFILM 1K5 1% 0.063W 0402	91QAA1K5
			R71	RES 10K 1% 0.063W 0402	91QAA10K

Ref.	Description	Part No.
R72	RES 10K 1% 0.063W 0402	91QAA10K
R73	RES 10K 1% 0.063W 0402	91QAA10K
R74	RES 10K 1% 0.063W 0402	91QAA10K
R75	RES 10K 1% 0.063W 0402	91QAA10K
R76	RES MFILM 1K5 1% 0.063W 0402	91QAA1K5
R77	RES 10K 1% 0.063W 0402	91QAA10K
R78	RES MFILM 6K8 1% 0.25W 1206	91036K8
R79	RES 10K 1% 0.063W 0402	91QAA10K
R80	RES MFILM 2M7 1% 0.063W 0402	91QAA2M7
R81	RES MFILM 47K 1% 0.063W 0402	91QAA47K
R82	RES MFILM 270R 1% 0.063W 0402	91QAA270R
R83	RES MFILM 270R 1% 0.063W 0402	91QAA270R
R84	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7
R85	RES 10K 1% 0.063W 0402	91QAA10K
R86	RES 10K 1% 0.063W 0402	91QAA10K
R87	RES 10K 1% 0.063W 0402	91QAA10K
R88	RES 100R 1% 0.063W 0402	91QAA100R
R89	RES 100R 1% 0.063W 0402	91QAA100R
R90	RES MFILM 2M7 1% 0.063W 0402	91QAA2M7
R91	RES MFILM 820K 1% 0.063W 0402	91QAA820K
R92	RES MFILM 820K 1% 0.063W 0402	91QAA820K
R93	RES 10K 1% 0.063W 0402	91QAA10K
R94	RES MFILM 330K 1% 0.063W 0402	91QAA330K
R95	RES 10K 1% 0.063W 0402	91QAA10K
R97	RES MFILM 0R0 5% 0.063W 0603	91010R0
R98	RES MFILM 330K 1% 0.063W 0402	91QAA330K
R99	RES MFILM 2K2 1% 0.063W 0402	91QAA2K2
R100	RES MFILM 2K2 1% 0.063W 0402	91QAA2K2
R101	RES MFILM 150R 1% 0.063W 0402	91QAA150R
R103	RES 10K 1% 0.063W 0402	91QAA10K
R104	RES MFILM 220R 1% 0.063W 0603	91AAAXX220R
R106	RES MFILM 1K0 1% 0.063W 0402	91QAA1K
R107	RES MFILM 1K0 1% 0.063W 0402	91QAA1K
R108	RES MFILM 1K0 1% 0.063W 0402	91QAA1K
R109	RES MFILM 1K0 1% 0.063W 0402	91QAA1K
R110	RES MFILM 1K0 1% 0.063W 0402	91QAA1K
R111	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7
R112	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7
R113	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7
R114	RES 100K 1% 0.063W 0402	91QAA100K
R115	RES MFILM 51K 1% 0.063W 0402	91QAA51K
R116	RES MFILM 220R 1% 0.063W 0603	91AAAXX220R
R117	RES MFILM 270R 1% 0.063W 0402	91QAA270R
R118	RES MFILM 5K6 1% 0.063W 0402	91QAA5K6
R119	RES MFILM 82R 1% 0.063W 0402	91QAA82R
R120	RES MFILM 1K2 1% 0.063W 0402	91QAA1K2
R121	RES MFILM 1M0 1% 0.063W 0402	91QAA1M
R122	RES 10K 1% 0.063W 0402	91QAA10K
R123	RES 10K 1% 0.063W 0402	91QAA10K
R124	RES 10K 1% 0.063W 0402	91QAA10K

Ref.	Description	Part No.
R125	RES 10K 1% 0.063W 0402	91QAA10K
R126	RES MFILM 3K3 1% 0.063W 0402	91QAA3K3
R127	RES MFILM 1K0 1% 0.063W 0402	91QAA1K
R128	RES MFILM 39K 1% 0.063W 0402	91QAA39K
R130	RES MFILM 2K2 1% 0.063W 0402	91QAA2K2
R131	RES MFILM 2K2 1% 0.063W 0402	91QAA2K2
R132	RES MFILM 33K 1% 0.063W 0402	91QAA33K
R133	RES MFILM 680R 1% 0.063W 0402	91QAA680R
R134	RES 10K 1% 0.063W 0402	91QAA10K
R135	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7
R136	RES MFILM 390R 1% 0.063W 0402	91QAA390R
R137	RES MFILM 3K3 1% 0.063W 0402	91QAA3K3
R138	RES MFILM 8R2 1% 0.063W 0603	91AAAXX8R2
R139	RES MFILM 22K 1% 0.063W 0603	91AAAXX22K
R140	RES MFILM 15K 1% 0.063W 0402	91QAAXX15K
R141	RES MFILM 2K2 1% 0.063W 0402	91QAA2K2
R142	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7
R143	RES MFILM 39K 1% 0.063W 0402	91QAA39K
R144	RES MFILM 330R 1% 0.063W 0402	91QAA330R
R145	RES MFILM 39K 1% 0.063W 0402	91QAA39K
R146	RES MFILM 39K 1% 0.063W 0402	91QAA39K
R147	RES 10K 1% 0.063W 0402	91QAA10K
R148	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7
R150	RES MFILM 1K2 1% 0.063W 0402	91QAA1K2
R151	RES MFILM 0R0 5% 0.063W 0603	91010R0
R152	RES MFILM 100R 5% 0.125W 1206	9106100R
R153	RES MFILM 1K0 1% 0.063W 0402	91QAA1K
R155	RES MFILM 22K 1% 0.063W 0402	91QAA22K
R156	RES MFILM 5K6 1% 0.063W 0402	91QAA5K6
R160	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7
R164	RES MFILM 100R 5% 0.125W 1206	9106100R
R165	RES MFILM 2K2 5% 0.125W 1206	91062K2
R166	RES MFILM 1K0 1% 0.063W 0402	91QAA1K
R167	RES 10K 1% 0.063W 0402	91QAA10K
R168	RES 10K 1% 0.063W 0402	91QAA10K
R169	RES MFILM 3K3 1% 0.063W 0402	91QAA3K3
R170	RES 10K 1% 0.063W 0402	91QAA10K
R171	RES 10K 1% 0.063W 0402	91QAA10K
R172	RES MFILM 2K2 5% 0.125W 1206	91062K2
R173	RES MFILM 2K2 5% 0.125W 1206	91062K2
R175	RES MFILM 0R0 5% 0.063W 0603	91010R0
R176	RES MFILM 2K2 5% 0.125W 1206	91062K2
R179	RES MFILM 280K 1% 0.25W 1206	91CADXX280K
R180	RES MFILM 0.05R 5% 0.5W 2010	91HCGXXR05
R182	RES MFILM 15R 1% 0.063W 0603	91AAAXX15R
R183	RES 10K 1% 0.063W 0402	91QAA10K
R184	RES 10K 1% 0.063W 0402	91QAA10K
R185	RES 10K 1% 0.063W 0402	91QAA10K
R186	RES 10K 1% 0.063W 0402	91QAA10K
R187	RES 10K 1% 0.063W 0402	91QAA10K

Ref.	Description	Part No.	Ref.	Description	Part No.
R188	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7	R242	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R189	RES MFILM 15R 1% 0.063W 0603	91AAAXX15R	R244	RES 10K 1% 0.063W 0402	91QAA10K
R190	RES MFILM 15R 1% 0.063W 0603	91AAAXX15R	R245	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R191	RES MFILM 15R 1% 0.063W 0603	91AAAXX15R	R246	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R192	RES MFILM 15R 1% 0.063W 0603	91AAAXX15R	R247	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R193	RES MFILM 15R 1% 0.063W 0603	91AAAXX15R	R248	RES 10K 1% 0.063W 0402	91QAA10K
R194	RES MFILM 22R 1% 0.063W 0402	91QAA22R	R249	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R195	RES MFILM 22R 1% 0.063W 0402	91QAA22R	R250	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R196	RES MFILM 22R 1% 0.063W 0402	91QAA22R	R251	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R197	RES MFILM 22R 1% 0.063W 0402	91QAA22R	R252	RES MFILM 1K0 1% 0.063W 0402	91QAA1K
R198	RES MFILM 22R 1% 0.063W 0402	91QAA22R	R253	RES 10K 1% 0.063W 0402	91QAA10K
R199	RES MFILM 22R 1% 0.063W 0402	91QAA22R	R254	RES 10K 1% 0.063W 0402	91QAA10K
R200	RES MFILM 22R 1% 0.063W 0402	91QAA22R	R256	RES MFILM 2R2 5% 0.125W 1206	91CCC2R2
R201	RES MFILM 22R 1% 0.063W 0402	91QAA22R	R257	RES MFILM 330K 1% 0.063W 0402	91QAA330K
R202	RES MFILM 22R 1% 0.063W 0402	91QAA22R	R259	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7
R203	RES MFILM 22R 1% 0.063W 0402	91QAA22R	R260	RES MFILM 1K0 1% 0.063W 0402	91QAA1K
R204	RES MFILM 22R 1% 0.063W 0402	91QAA22R	R261	RES MFILM 1K0 1% 0.063W 0402	91QAA1K
R205	RES MFILM 22R 1% 0.063W 0402	91QAA22R	R262	RES MFILM 3K3 1% 0.063W 0402	91QAA3K3
R206	RES MFILM 22R 1% 0.063W 0402	91QAA22R	R264	RES 10K 1% 0.063W 0402	91QAA10K
R208	RES MFILM 22R 1% 0.063W 0402	91QAA22R	R265	RES 100K 1% 0.063W 0402	91QAA100K
R209	RES MFILM 22R 1% 0.063W 0402	91QAA22R	R267	RES MFILM 680R 1% 0.063W 0402	91QAA680R
R210	RES MFILM 22R 1% 0.063W 0402	91QAA22R	R268	RES MFILM 47K 1% 0.063W 0402	91QAA47K
R211	RES MFILM 22R 1% 0.063W 0402	91QAA22R	R269	RES MFILM 47K 1% 0.063W 0402	91QAA47K
R212	RES MFILM 1K0 1% 0.063W 0402	91QAA1K	R270	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7
R213	RES MFILM 22R 1% 0.063W 0402	91QAA22R	R271	RES 100K 1% 0.063W 0402	91QAA100K
R214	RES MFILM 330K 1% 0.063W 0402	91QAA330K	R272	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7
R215	RES MFILM 22R 1% 0.063W 0402	91QAA22R	R273	RES MFILM 22K 1% 0.063W 0603	91AAAXX22K
R216	RES MFILM 22R 1% 0.063W 0402	91QAA22R	R274	RES 100K 1% 0.063W 0402	91QAA100K
R217	RES MFILM 22R 1% 0.063W 0402	91QAA22R	R275	RES MFILM 47K 1% 0.063W 0402	91QAA47K
R218	RES MFILM 22R 1% 0.063W 0402	91QAA22R	R276	RES MFILM 3K3 1% 0.063W 0402	91QAA3K3
R219	RES MFILM 22R 1% 0.063W 0402	91QAA22R	R277	RES MFILM 1K2 1% 0.063W 0402	91QAA1K2
R221	RES MFILM 22R 1% 0.063W 0402	91QAA22R	R278	RES 100K 1% 0.063W 0402	91QAA100K
R222	RES 10K 1% 0.063W 0402	91QAA10K	R279	RES MFILM 3K3 1% 0.063W 0402	91QAA3K3
R223	RES MFILM 22R 1% 0.063W 0402	91QAA22R	R280	RES MFILM 2K2 1% 0.063W 0402	91QAA2K2
R224	RES MFILM 22R 1% 0.063W 0402	91QAA22R	R281	RES MFILM 1M0 1% 0.063W 0402	91QAA1M
R225	RES 10K 1% 0.063W 0402	91QAA10K	R282	RES MFILM 47K 1% 0.063W 0402	91QAA47K
R226	RES 100K 1% 0.063W 0402	91QAA100K	R283	RES MFILM 220R 1% 0.063W 0603	91AAAXX220R
R227	RES 10K 1% 0.063W 0402	91QAA10K	R285	RES 10K 1% 0.063W 0402	91QAA10K
R228	RES 10K 1% 0.063W 0402	91QAA10K	R286	RES 10K 1% 0.063W 0402	91QAA10K
R229	RES MFILM 22R 1% 0.063W 0402	91QAA22R	R287	RES MFILM 220R 1% 0.063W 0603	91AAAXX220R
R230	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7	R289	RES MFILM 120R 1% 0.063W 0402	91QAA120R
R231	RES MFILM 22R 1% 0.063W 0402	91QAA22R	R290	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7
R234	RES MFILM 22R 1% 0.063W 0402	91QAA22R	R291	RES MFILM 470R 1% 0.063W 0402	91QAA470R
R235	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7	R292	RES MFILM 470R 1% 0.063W 0402	91QAA470R
R236	RES MFILM 39K 1% 0.063W 0402	91QAA39K	R293	RES 100K 1% 0.063W 0402	91QAA100K
R237	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7	R294	RES 100K 1% 0.063W 0402	91QAA100K
R238	RES MFILM 22R 1% 0.063W 0402	91QAA22R	R295	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7
R239	RES MFILM 15K 1% 0.063W 0402	91QAAAXX15K	R296	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7
R240	RES MFILM 22R 1% 0.063W 0402	91QAA22R	R297	RES MFILM 680R 1% 0.063W 0402	91QAA680R
R241	RES MFILM 22R 1% 0.063W 0402	91QAA22R	R298	RES MFILM 1K2 1% 0.063W 0402	91QAA1K2

Ref.	Description	Part No.
R299	RES MFILM 1K2 1% 0.063W 0402	91QAA1K2
R300	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7
R301	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7
R302	RES MFILM 33K 1% 0.063W 0402	91QAA33K
R303	RES MFILM 470R 1% 0.063W 0402	91QAA470R
R304	RES MFILM 470R 1% 0.063W 0402	91QAA470R
R305	RES MFILM 2K7 1% 0.063W 0402	91QAA2K7
R306	RES MFILM 1K2 1% 0.063W 0402	91QAA1K2
R307	RES 0R0 1% 0.063W 0402	91QAA0R0
R308	RES 0R0 1% 0.063W 0402	91QAA0R0
R309	RES MFILM 2K2 5% 0.125W 1206	91062K2
R310	RES MFILM 33K 1% 0.063W 0402	91QAA33K
R311	RES MFILM 220K 1% 0.063W 0402	91QAA220K
R312	RES MFILM 270R 1% 0.063W 0402	91QAA270R
R313	RES MFILM 2K2 5% 0.125W 1206	91062K2
R314	RES MFILM 6K8 1% 0.063W 0402	91QAA6K8
R315	RES MFILM 680R 1% 0.063W 0402	91QAA680R
R316	RES MFILM 220R 1% 0.063W 0603	91AAAXX220R
R317	RES 10K 1% 0.063W 0402	91QAA10K
R318	RES 100R 1% 0.063W 0402	91QAA100R
R319	RES MFILM 51K 1% 0.063W 0402	91QAA51K
R320	RES 10K 1% 0.063W 0402	91QAA10K
R321	RES MFILM 7K5 1% 0.063W 0402	91QAA7K5
R322	RES MFILM 5K6 1% 0.063W 0402	91QAA5K6
R323	RES MFILM 330K 1% 0.063W 0402	91QAA330K
R324	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7
R325	RES 10K 1% 0.063W 0402	91QAA10K
R326	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7
R327	RES 10K 1% 0.063W 0402	91QAA10K
R328	RES 100K 1% 0.063W 0402	91QAA100K
R329	RES MFILM 220R 1% 0.063W 0603	91AAAXX220R
R330	RES MFILM 33K 1% 0.063W 0402	91QAA33K
R331	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7
R332	RES 10K 1% 0.063W 0402	91QAA10K
R334	RES MFILM 22K 1% 0.063W 0402	91QAA22K
R335	RES 10K 1% 0.063W 0402	91QAA10K
R336	RES MFILM 270R 1% 0.063W 0402	91QAA270R
R337	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7
R338	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7
R339	RES 10K 1% 0.063W 0402	91QAA10K
R340	RES MFILM 1K0 1% 0.063W 0402	91QAA1K
R341	RES MFILM 330K 1% 0.063W 0402	91QAA330K
R342	RES MFILM 680R 1% 0.063W 0402	91QAA680R
R343	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7
R344	RES 10K 1% 0.063W 0402	91QAA10K
R345	RES MFILM 2K2 1% 0.063W 0402	91QAA2K2
R346	RES MFILM 390R 1% 0.063W 0402	91QAA390R
R347	RES MFILM 2K2 1% 0.063W 0402	91QAA2K2
R348	RES MFILM 330K 1% 0.063W 0402	91QAA330K
R349	RES MFILM 47K 1% 0.063W 0402	91QAA47K

Ref.	Description	Part No.
R350	RES MFILM 47K 1% 0.063W 0402	91QAA47K
R351	RES MFILM 1K5 1% 0.063W 0402	91QAA1K5
R352	RES MFILM 2K2 5% 0.125W 1206	91062K2
R353	RES 10K 1% 0.063W 0402	91QAA10K
R354	RES 10K 1% 0.063W 0402	91QAA10K
R355	RES MFILM 2K2 1% 0.063W 0402	91QAA2K2
R356	RES MFILM 2K2 1% 0.063W 0402	91QAA2K2
R357	RES MFILM 22K 1% 0.063W 0402	91QAA22K
R358	RES 10K 1% 0.063W 0402	91QAA10K
R361	RES MFILM 5K6 1% 0.063W 0402	91QAA5K6
R362	RES MFILM 5K6 1% 0.063W 0402	91QAA5K6
R363	RES 10K 1% 0.063W 0402	91QAA10K
R364	RES 100R 1% 0.063W 0402	91QAA100R
R367	RES 10K 1% 0.063W 0402	91QAA10K
R369	RES 10K 1% 0.063W 0402	91QAA10K
R372	RES MFILM 2K2 5% 0.125W 1206	91062K2
R373	RES MFILM 1K0 5% 1.0W 2512	91FCGXXX1K
R374	RES MFILM 2K2 5% 0.125W 1206	91062K2
R375	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7
R376	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7
R378	RES 100R 1% 0.063W 0402	91QAA100R
R379	RES 100K 1% 0.063W 0402	91QAA100K
R380	RES MFILM 3K3 1% 0.063W 0402	91QAA3K3
R381	RES 100R 1% 0.063W 0402	91QAA100R
R382	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7
R383	RES MFILM 3K3 1% 0.063W 0402	91QAA3K3
R389	RES 10K 1% 0.063W 0402	91QAA10K
R390	RES MFILM 1K0 1% 0.063W 0402	91QAA1K
R391	RES MFILM 3K3 1% 0.063W 0402	91QAA3K3
R392	RES MFILM 2K2 5% 0.125W 1206	91062K2
R393	RES MFILM 22K 1% 0.063W 0603	91AAAXX22K
R396	RES 10K 1% 0.063W 0402	91QAA10K
R398	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7
R399	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7
R400	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7
R401	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7
R402	RES MFILM 220R 1% 0.063W 0603	91AAAXX220R
R404	RES MFILM 330R 1% 0.063W 0402	91QAA330R
R405	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7
R406	RES 10K 1% 0.063W 0402	91QAA10K
R407	RES MFILM 1K0 1% 0.063W 0402	91QAA1K
R408	RES MFILM 2K2 1% 0.063W 0402	91QAA2K2
R409	RES MFILM 1K0 1% 0.063W 0402	91QAA1K
R410	RES MFILM 1K0 1% 0.063W 0402	91QAA1K
R413	RES 0R0 1% 0.063W 0402	91QAA0R0
R414	RES 0R0 1% 0.063W 0402	91QAA0R0
R418	RES 0R0 1% 0.063W 0402	91QAA0R0
R420	RES 0R0 1% 0.063W 0402	91QAA0R0
R438	RES 0R0 1% 0.063W 0402	91QAA0R0
R439	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7

Ref.	Description	Part No.	Ref.	Description	Part No.
R440	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7	R528	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R441	RES MFILM 22R 1% 0.063W 0402	91QAA22R	R529	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R443	RES MFILM 220R 1% 0.063W 0603	91AAAXX220R	R530	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R444	RES MFILM 220R 1% 0.063W 0603	91AAAXX220R	R531	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R445	RES MFILM 22R 1% 0.063W 0402	91QAA22R	R532	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R446	RES MFILM 22R 1% 0.063W 0402	91QAA22R	R533	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R447	RES MFILM 22R 1% 0.063W 0402	91QAA22R	R534	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R448	RES MFILM 22R 1% 0.063W 0402	91QAA22R	R535	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R449	RES MFILM 22R 1% 0.063W 0402	91QAA22R	R536	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R453	RES MFILM 22R 1% 0.063W 0402	91QAA22R	R537	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R454	RES MFILM 22R 1% 0.063W 0402	91QAA22R	R538	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R455	RES MFILM 22R 1% 0.063W 0402	91QAA22R	R539	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R456	RES MFILM 22R 1% 0.063W 0402	91QAA22R	R540	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R460	RES MFILM 22R 1% 0.063W 0402	91QAA22R	R541	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7
R465	RES 10K 1% 0.063W 0402	91QAA10K	R542	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7
R466	RES MFILM 10R 1% 0.063W 0402	91QAA10R	R543	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R467	RES MFILM 330R 1% 0.063W 0402	91QAA330R	R544	RES 10K 1% 0.063W 0402	91QAA10K
R468	RES MFILM 330R 1% 0.063W 0402	91QAA330R	R545	RES 10K 1% 0.063W 0402	91QAA10K
R469	RES 10K 1% 0.063W 0402	91QAA10K	R546	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R470	RES 10K 1% 0.063W 0402	91QAA10K	R547	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R471	RES MFILM 8K2 1% 0.063W 0402	91QAA8K2	R548	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R472	RES MFILM 270R 1% 0.063W 0402	91QAA270R	R552	RES MFILM 2K2 1% 0.063W 0402	91QAA2K2
R473	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7	R553	RES MFILM 2K2 1% 0.063W 0402	91QAA2K2
R475	RES 100R 1% 0.063W 0402	91QAA100R	R556	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R476	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7	R557	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R477	RES 0R0 1% 0.063W 0402	91QAA0R0	R558	RES MFILM 22R 1% 0.063W 0402	91QAA22R
R478	RES 10K 1% 0.063W 0402	91QAA10K	R559	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7
R479	RES 10K 1% 0.063W 0402	91QAA10K	R560	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7
R480	RES 10K 1% 0.063W 0402	91QAA10K	R561	RES 10K 1% 0.063W 0402	91QAA10K
R481	RES MFILM 22R 1% 0.063W 0402	91QAA22R	R900	RES MFILM 0R0 5% 0.063W 0603	91010R0
R482	RES MFILM 22R 1% 0.063W 0402	91QAA22R	RLY1	RELAY SPDT 12VDC 25A OMRON	15541
R483	RES MFILM 330K 1% 0.063W 0402	91QAA330K	RLY5	RELAY DPDT-NO 12V OMRON	15522
R484	RES MFILM 330K 1% 0.063W 0402	91QAA330K	RLY7	RELAY DPST-NO DUAL FET 60VAC 400mA OMRON	9600RELAY3
R485	RES MFILM 22R 1% 0.063W 0402	91QAA22R	RN2	RES NET 2K2 5% 0.125W MNR34	91122K2
R486	RES MFILM 22R 1% 0.063W 0402	91QAA22R	RN5	RES NET 2K2 5% 0.125W MNR34	91122K2
R487	RES MFILM 22R 1% 0.063W 0402	91QAA22R	SKT2	CON HEADER CLAMP TERMINAL 9.52mm PITCH 6W	7501
R489	RES 10K 1% 0.063W 0402	91QAA10K	SKT3	11 way 5.0 mm header	7488
R511	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7	SKT4	6 way 5.0 mm header	7490
R512	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7	SKT5	5 way 5.0 mm header	7491
R515	RES MFILM 47K 1% 0.063W 0402	91QAA47K	SKT6	2 way 5.0 mm header	7499
R516	RES MFILM 47K 1% 0.063W 0402	91QAA47K	SKT10	4 way 5.0 mm header	7511
R517	RES MFILM 2K2 1% 0.063W 0402	91QAA2K2	SKT11	CON SAMTEC 12 WAY CLP LOW PROFILE	9602SAMTEC12
R518	RES MFILM 1K0 1% 0.063W 0402	91QAA1K	SW1	SLIDE SWITCH	9600SWAPEM
R520	RES MFILM 470R 1% 0.063W 0402	91QAA470R	SW2	SLIDE SWITCH	9600SWAPEM
R521	RES MFILM 4K7 1% 0.063W 0402	91QAA4K7	TR1	TRANSISTOR MOSFET NCHAN	9500IRFZ48
R523	RES MFILM 22R 1% 0.063W 0402	91QAA22R	TR4	TRANSISTOR MOSFET NCHAN	9500IRFZ48
R524	RES MFILM 22R 1% 0.063W 0402	91QAA22R	TR5	TRANSISTOR MOSFET NCHAN	9500IRFZ48
R525	RES MFILM 22R 1% 0.063W 0402	91QAA22R	TR6	TRANSISTOR BC807 PNP SOT23	9500BC807
R526	RES MFILM 22R 1% 0.063W 0402	91QAA22R			
R527	RES MFILM 22R 1% 0.063W 0402	91QAA22R			

Ref.	Description	Part No.
TR7	TRANSISTOR MOSFET N CHAN DPAK	9500IRLR2905
TR8	TRANSISTOR MOSFET N CHAN DPAK	9500IRLR2905
TR9	TRANSISTOR MOSFET N CHAN DPAK	9500IRLR2905
TR10	TRANSISTOR MOSFET N CHAN DPAK	9500IRLR2905
TR11	TRANSISTOR MOSFET N CHAN DPAK	9500IRLR2905
TR12	TRANSISTOR MOSFET N CHAN DPAK	9500IRLR2905
TR13	TRANSISTOR DUAL IMX1 NPN SOT36	9500IMX1
TR14	TRANSISTOR BC807 PNP SOT23	9500BC807
TR15	TRANSISTOR DUAL IMZ1 PNP	9500IMZ1
TR16	TRANSISTOR BCP56 NPN SOT223	9500BCP56
TR17	TRANSISTOR BC817 NPN SOT23	9500BC817
TR18	TRANSISTOR DUAL IMX1 NPN SOT36	9500IMX1
TR19	TRANSISTOR BC807 PNP SOT23	9500BC807
TR20	TRANSISTOR BC817 NPN SOT23	9500BC817
TR22	TRANSISTOR MOSFET N CHAN SOT23	95002N7002
TR23	TRANSISTOR BC807 PNP SOT23	9500BC807
TR24	TRANSISTOR DUAL IMX1 NPN SOT36	9500IMX1
TR25	TRANSISTOR DUAL IMX1 NPN SOT36	9500IMX1
TR26	TRANSISTOR BC817 NPN SOT23	9500BC817
TR27	TRANSISTOR BCP56 NPN SOT223	9500BCP56
TR28	TRANSISTOR DUAL IMX1 NPN SOT36	9500IMX1
TR29	TRANSISTOR P CHANNEL MOSFET 30V 1.6A SOT23	9500ZXMP3A13
TR30	TRANSISTOR DUAL IMZ1 PNP	9500IMZ1
TR31	TRANSISTOR BC817 NPN SOT23	9500BC817
TR32	TRANSISTOR BC817 NPN SOT23	9500BC817
TR33	TRANSISTOR BC807 PNP SOT23	9500BC807
TR34	TRANSISTOR DUAL IMX1 NPN SOT36	9500IMX1
TR35	TRANSISTOR DUAL IMX1 NPN SOT36	9500IMX1
TR36	TRANSISTOR BC807 PNP SOT23	9500BC807
TR37	TRANSISTOR BC817 NPN SOT23	9500BC817
TR38	TRANSISTOR BC868 NPN SOT89	9501BC868
TR39	TRANSISTOR DUAL IMX1 NPN SOT36	9500IMX1
TR40	TRANSISTOR BC817 NPN SOT23	9500BC817
TR41	TRANSISTOR BC807 PNP SOT23	9500BC807
TR42	TRANSISTOR DUAL IMX1 NPN SOT36	9500IMX1
TR43	TRANSISTOR MOSFET PCHAN IRFR5505 TO252	9500IR5505
TR44	TRANSISTOR DUAL IMZ1 PNP	9500IMZ1
TR47	TRANSISTOR MOSFET N CHAN SOT23	95002N7002
TR48	TRANSISTOR MOSFET N CHAN SOT23	95002N7002
TR51	TRANSISTOR DUAL IMX1 NPN SOT36	9500IMX1
TR54	TRANSISTOR BC817 NPN SOT23	9500BC817
TR55	TRANSISTOR MOSFET N CHAN SOT23	95002N7002
TR56	TRANSISTOR BC817 NPN SOT23	9500BC817
TR57	TRANSISTOR BC817 NPN SOT23	9500BC817
TR58	TRANSISTOR BC817 NPN SOT23	9500BC817
TR59	TRANSISTOR BC817 NPN SOT23	9500BC817
TR60	TRANSISTOR DUAL IMX1 NPN SOT36	9500IMX1
TR61	TRANSISTOR DUAL IMX1 NPN SOT36	9500IMX1

Ref.	Description	Part No.
TR131	TRANSISTOR MOSFET PCHAN IRFR5505 TO252	9500IR5505
V2	VARISTOR 2K2 V33ZA5	1244
V3	TRANS SUPPRESSOR VC260540 1206	9108VC260540
V4	TRANS SUPPRESSOR VC260540 1206	9108VC260540
V5	VARISTOR 2K2 V33ZA5	1244
V6	VARISTOR 2K2 V33ZA5	1244
V7	TRANS SUPPRESSOR CERAMIC 1210	9108EPCOSV1
V8	TRANS SUPPRESSOR VC180400 1206	9108VC180400
V10	TRANS SUPPRESSOR VC180400 1206	9108VC180400
XTL1	XTAL 19Mhz CERAMIC BASE & LID SM7A	9601CR19
XTL3	CRYSTAL 32.768kHz SM	9602CR32P768

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