



Artesyn Embedded Technologies

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PRODUCT CHANGE NOTICE FORM

PCN NO. 0013
DATE: 09 March 2017

CUSTOMER: Standard Product

CUSTOMER P/N: DS1600SPE-3 & -001

FAX NO:

VENDOR P/N: DS1600SPE-3 & -001

TEL. NO:

POWER SUPPLY WATTAGE: 1600W

ORIGINATOR ENGINEER: Jon Karlo Lee

APPROVED BY: Louie Cuevas

CHECKED BY: Emerson Cua

FORWARD TO NAME: Richard Daniel Caubang

DEPARTMENT: Team 1

RESPONSIBLE ENGINEER: Jon Karlo Lee

PRIORITY: EMERGENCY URGENT ROUTINE
IMPACT NO COST COST AMOUNT SCHEDULE

TYPE OF REQUEST:

PROCESS CHANGE DESIGN CHANGE QUALITY RELIABILITY COMPONENT APPLICATION SAFETY
 SECOND SOURCE OTHERS:

ACCOMPANYING MATERIAL:

CUSTOMER SPEC ARTWORK SOURCE LIST TEST PLAN COMPONENTS/UNITS
 DRAWING TEST DATA B.O.M. COMPONENT SPECS SCHEMATIC
 FRU Specs PSMI Compliance Specs Other OTHERS: PCB Change discussion and Factory Email Approval

REQUESTED DATE OF COMPLETION: AS SOON AS POSSIBLE

CUSTOMER BUYER AFFECTED:

DESCRIPTION OF REQUEST	JUSTIFICATION
<ul style="list-style-type: none"> Added PCB placement for preload resistors R176 and R177 (IPN: 301-011709-1501) Move D2 and D1002 from solder side to component side. Replace D119 and D10 parts to more suitable for solder side wave soldering process (IPN: 101-006678-0000) Move D1010 from solder side to component side because of shadow effect wave soldering 	<p>Update the DS1600SPE-3 Main Board PCB from 509-010756-0007 to 509-010756-0008 for manufacturing improvements</p>

Model Revision References:

1. **DS1600SPE-3** Rev CZ to EA
EEPROM register 9Bh was CZ is EA

2. **DS1600SPE-3-001** Rev BY to BZ
EEPROM register 9Bh was BY is BZ

ASTEC SAFETY CERTIFICATE: _____

APPROVALS:

CUSTOMER ENGINEER RESPONSE: _____

SIGNATURE: Richard Daniel Caubang DATE: _____

CUT IN DATE: Immediate Implementation

SERIAL NUMBER:

ASTEC-PHIL-PCN-2004-001

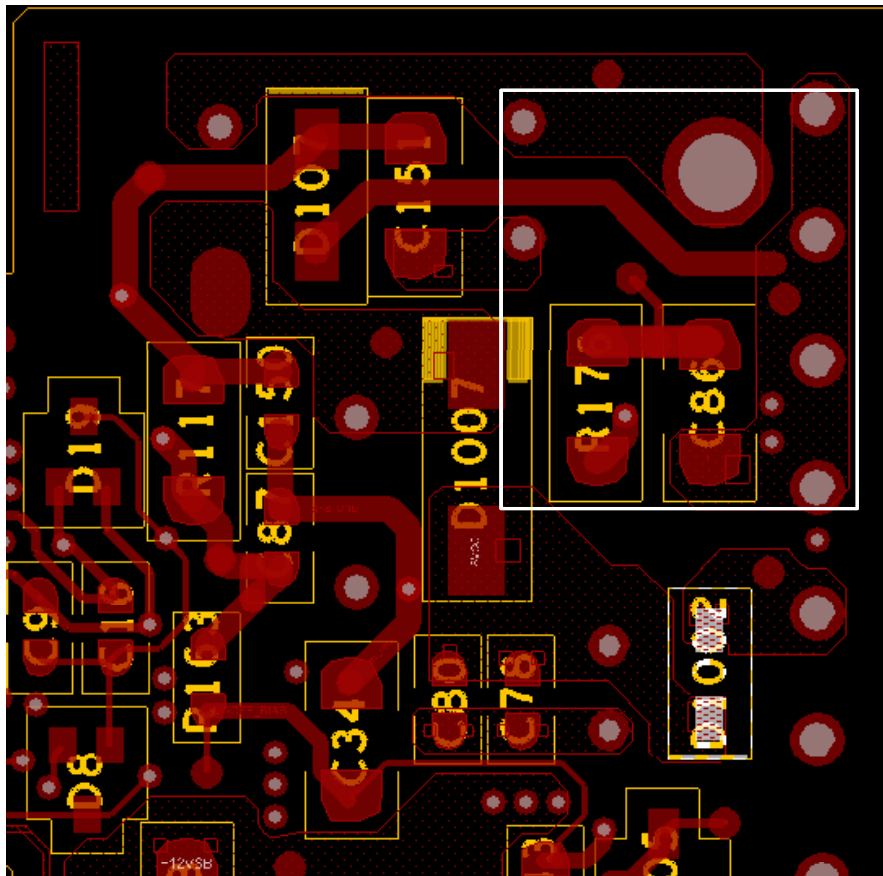
ARTESYN EMBEDDED TECHNOLOGIES CONFIDENTIAL

DS1600SPE-3 PCB Changes from 509-010756-0007 to 0008

Preload resistor, R176 & R177

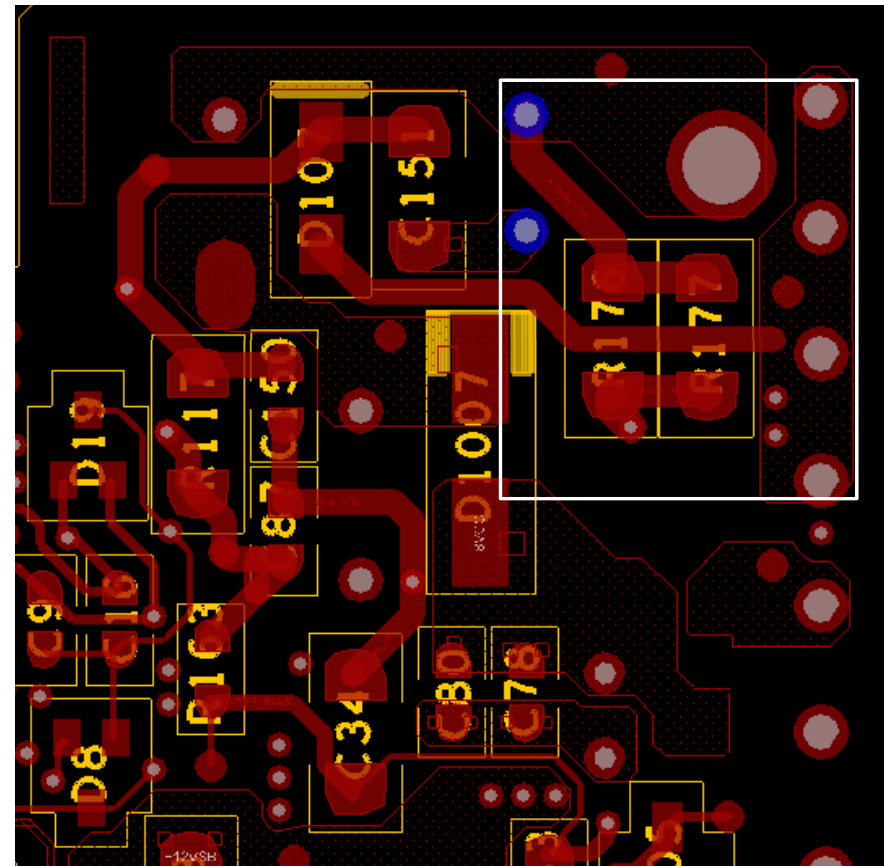
509-010756-0007

From



509-010756-0008

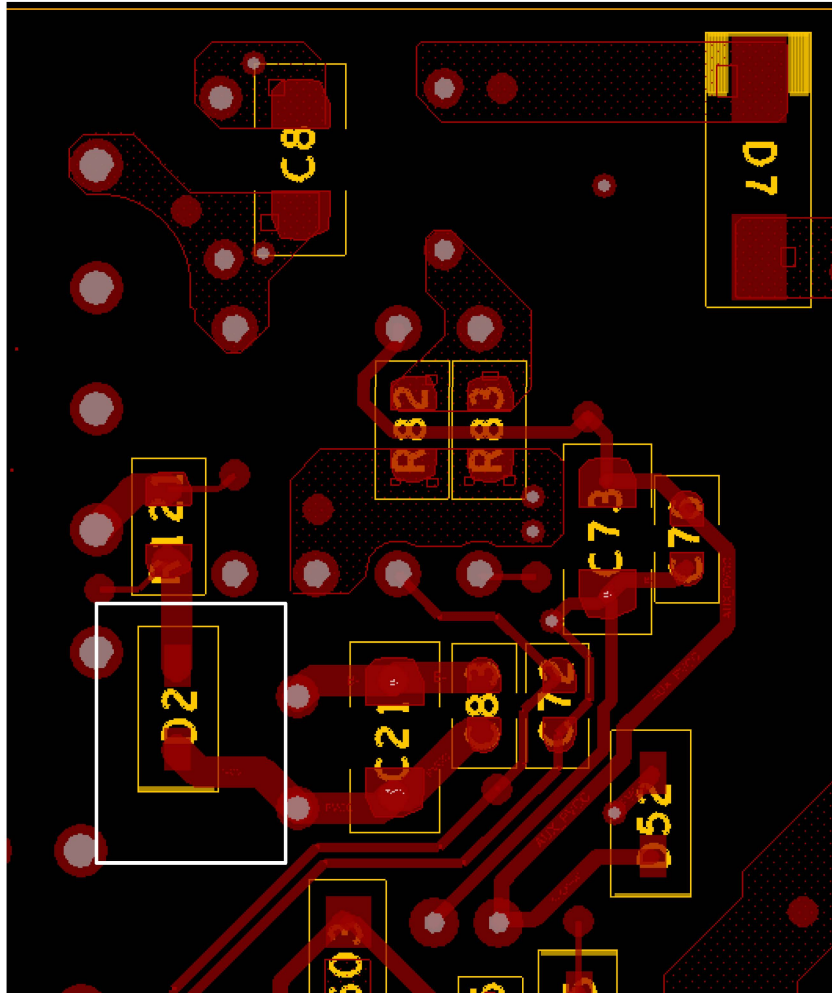
To



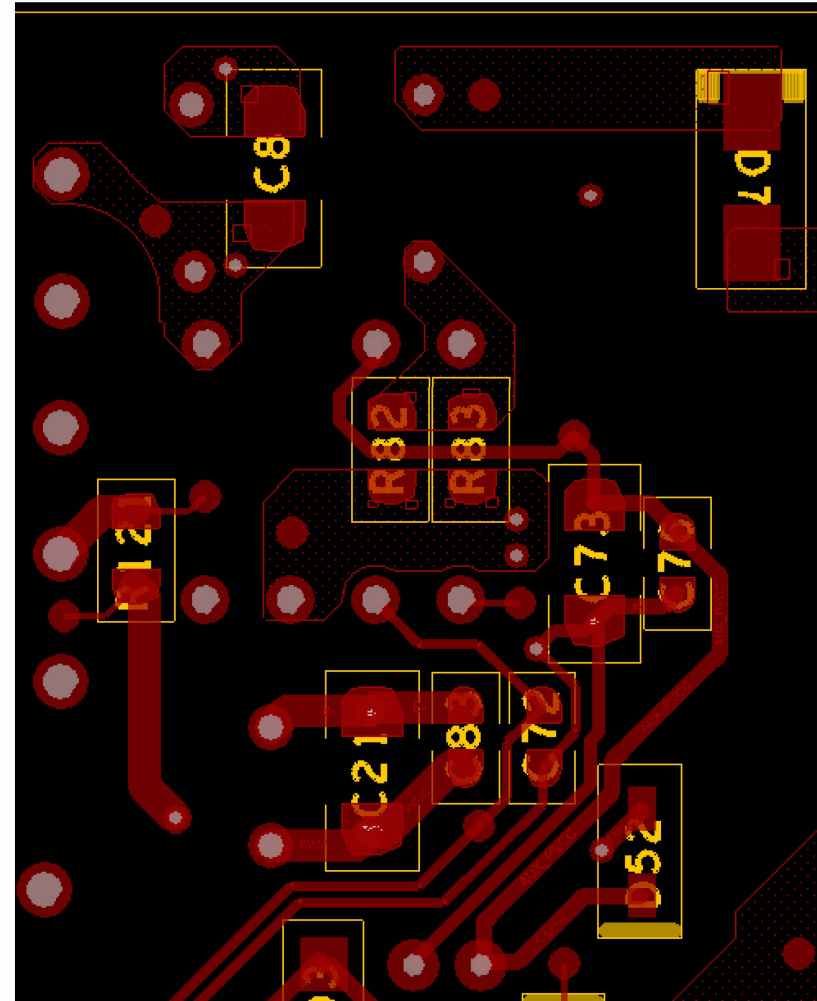
R176 and R177 placement and layout

g

509-010756-0007

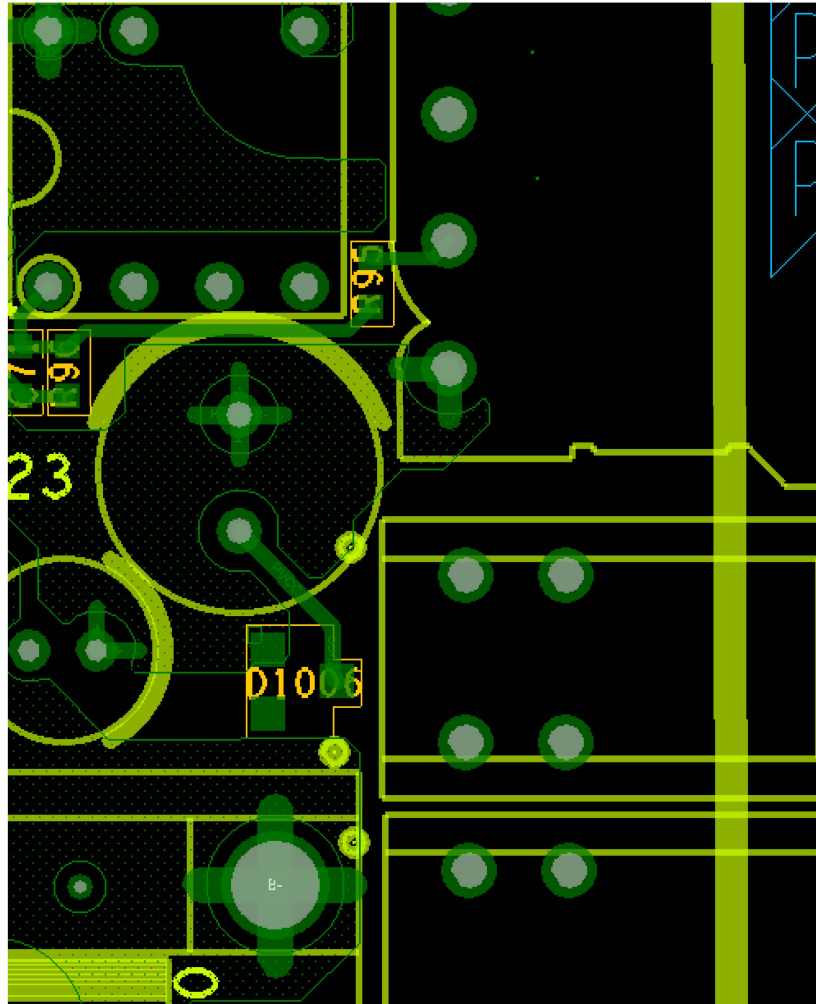


509-010756-0008

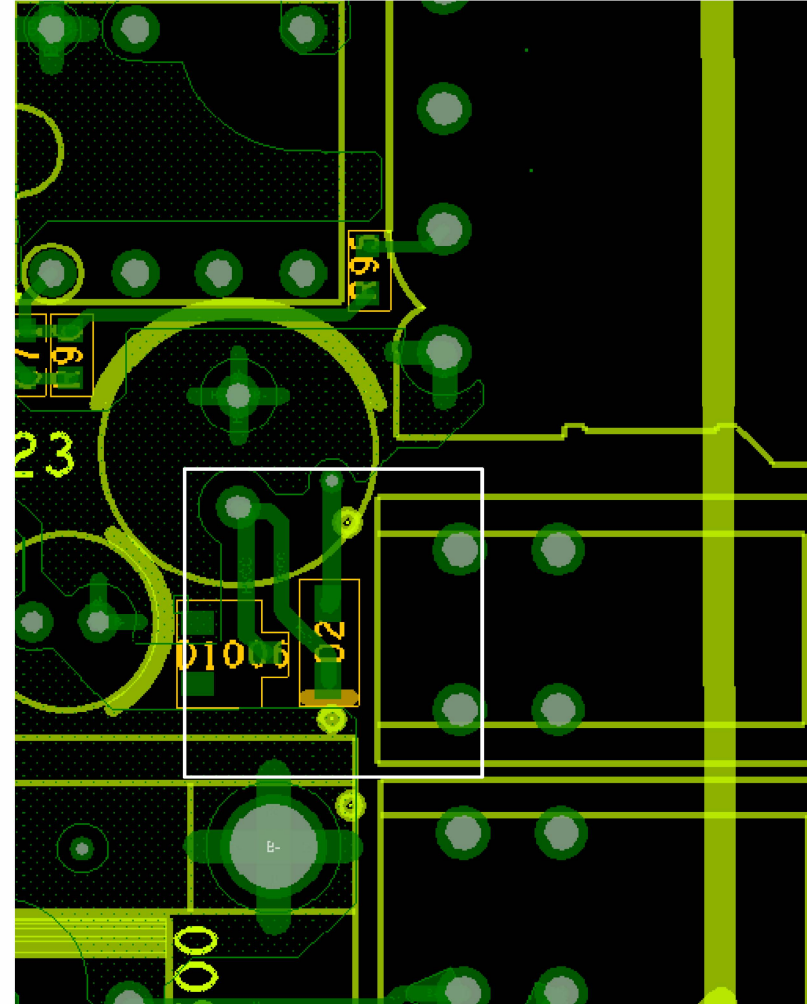


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509-010756-0007



509-010756-0008



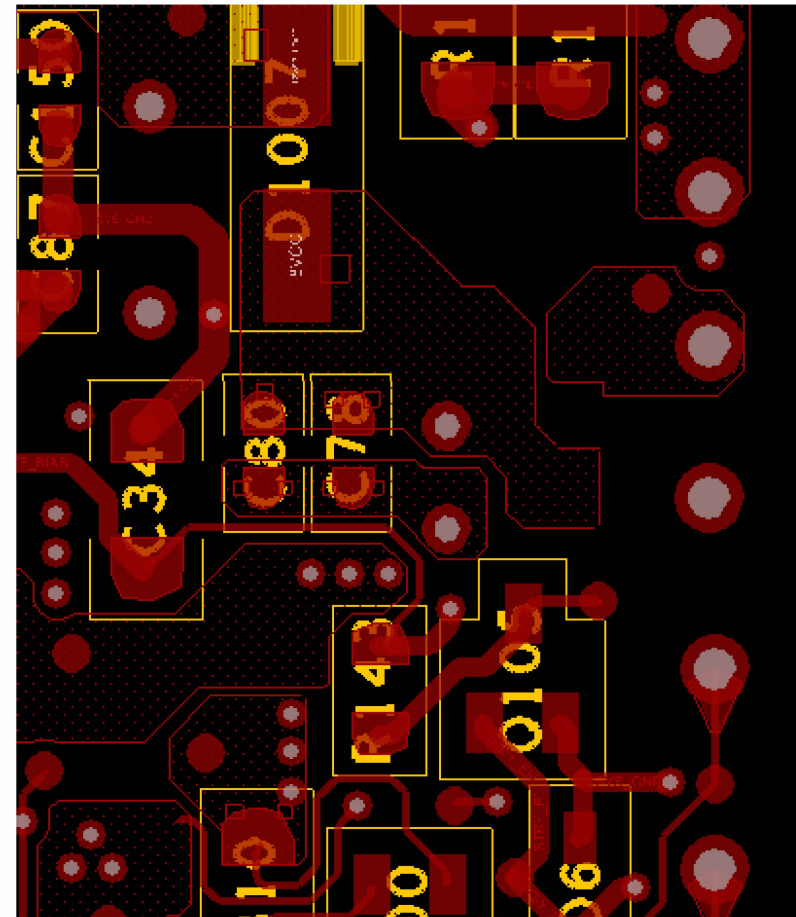
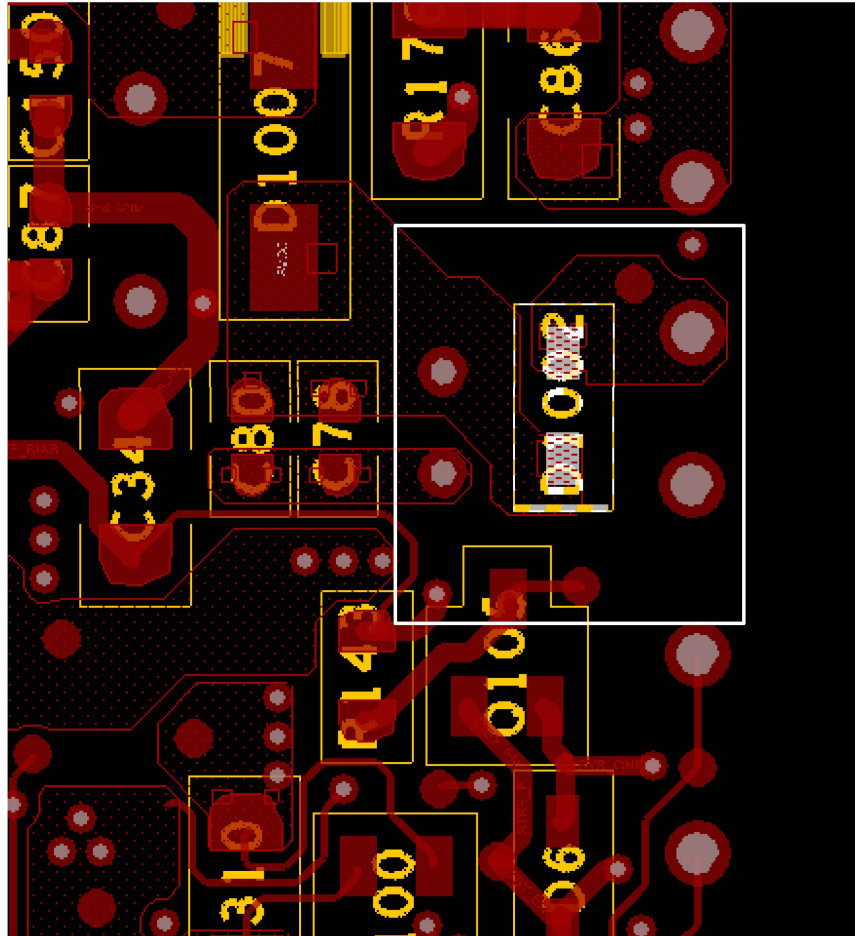
Solder to Component side, D1002

D1002

d_ a

509-010756-0007

509-010756-0008



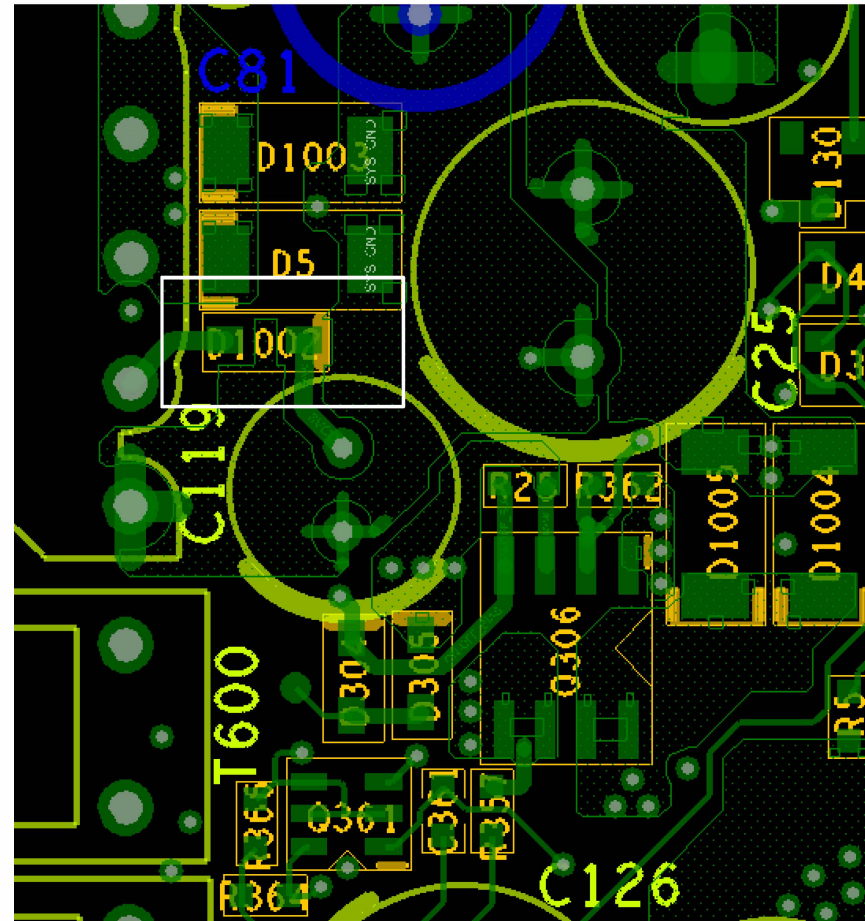
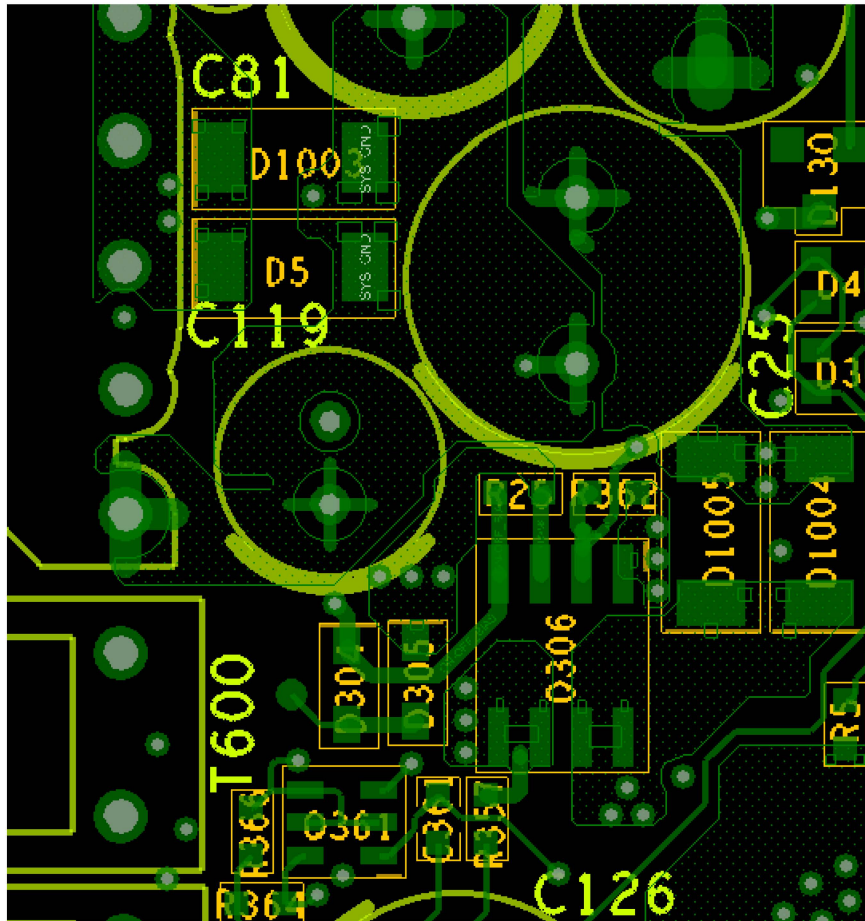
Solder to Component side, D1002

D1002

d_ a

509-010756-0007

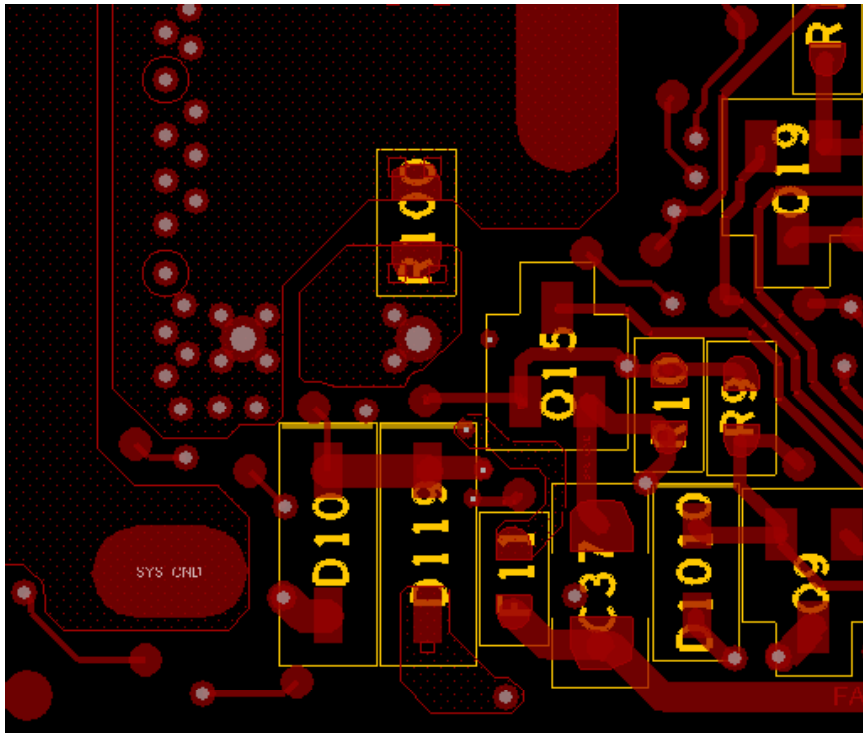
509-010756-0008



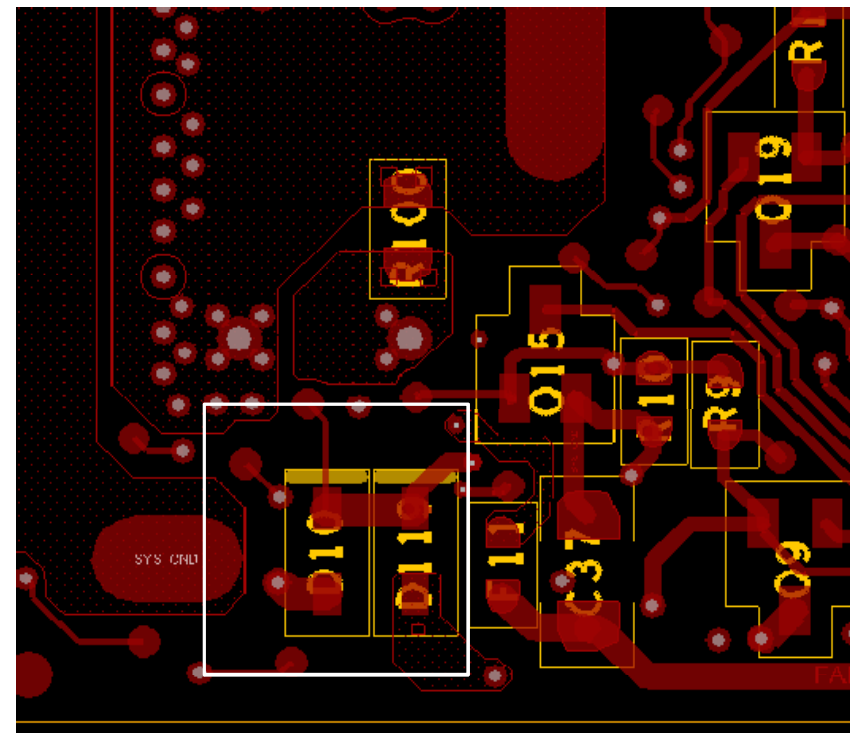
Change ipn for D119 and D10

From 101-002814-0000 to 101-006678-0000

509-010756-0007



509-010756-0008

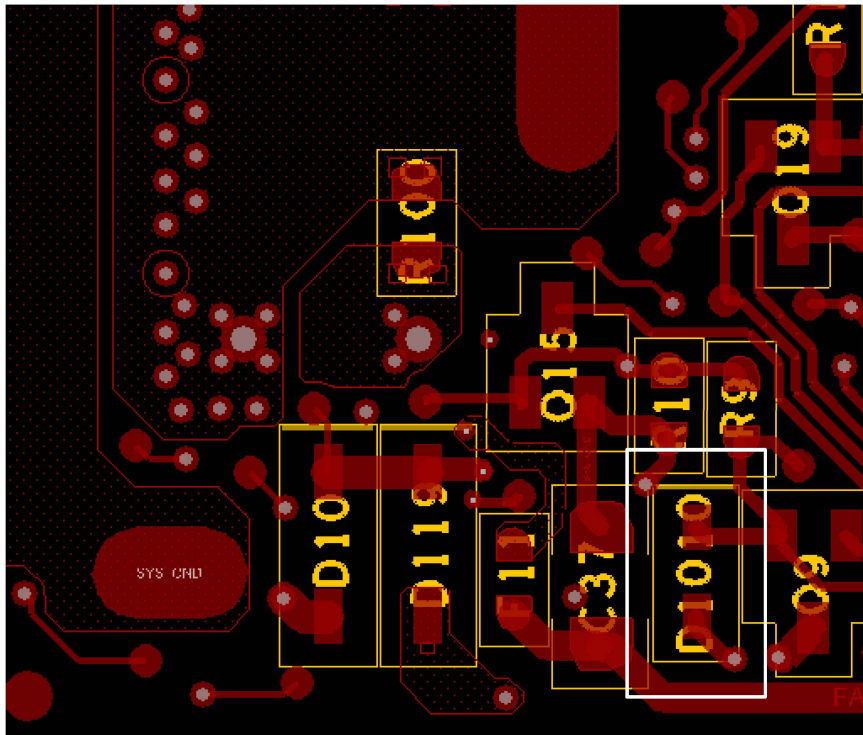


Change:

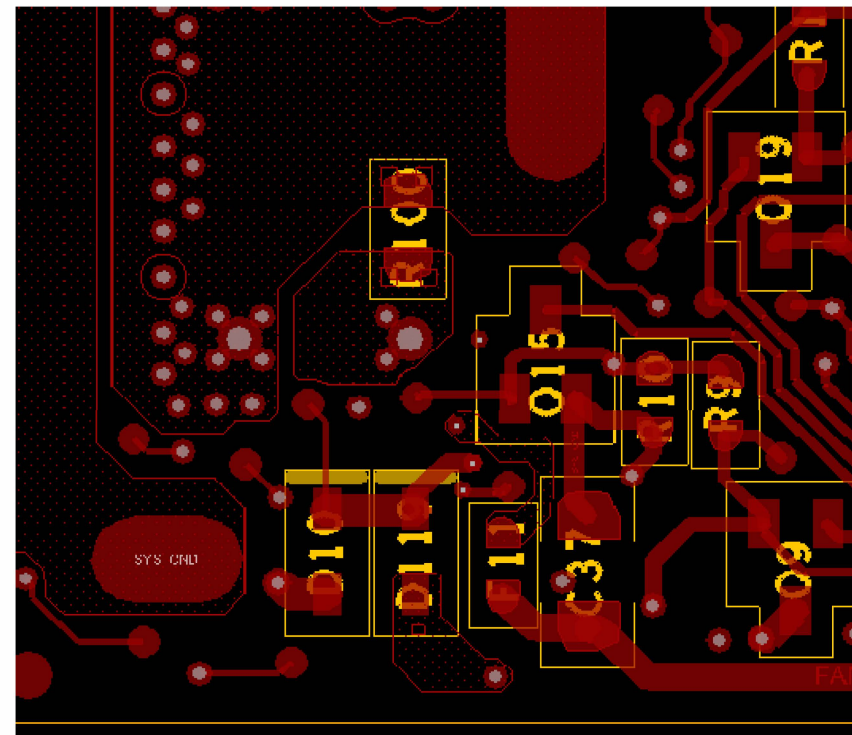
Replace current D119 and D10 parts
that is suitable for wave soldering

D1010 shadow effect during wave soldering
D1010 is move from solder side to component side

509-010756-0007

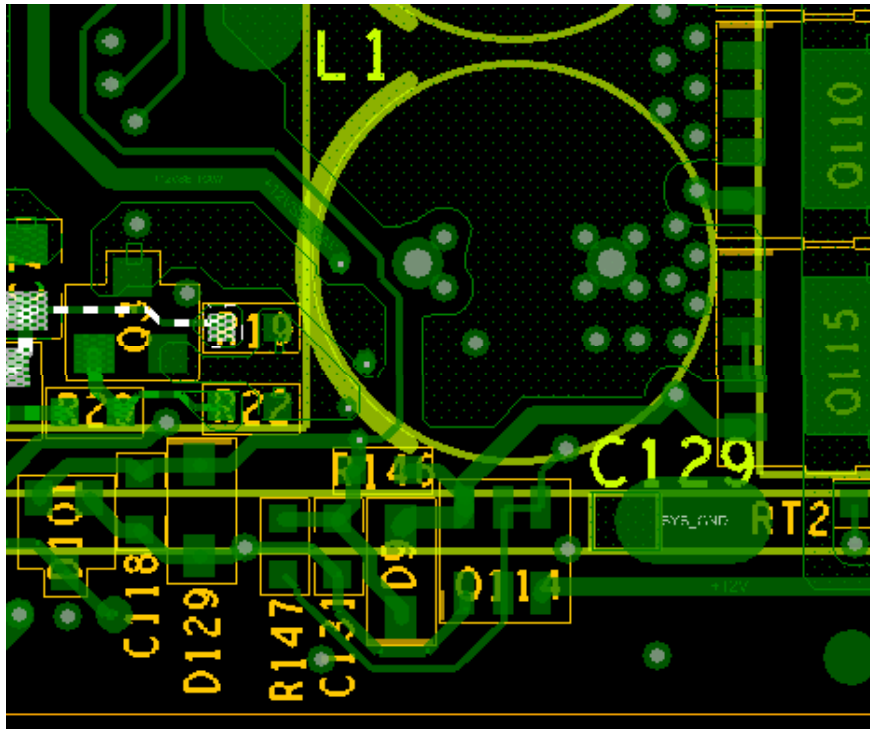


509-010756-0008

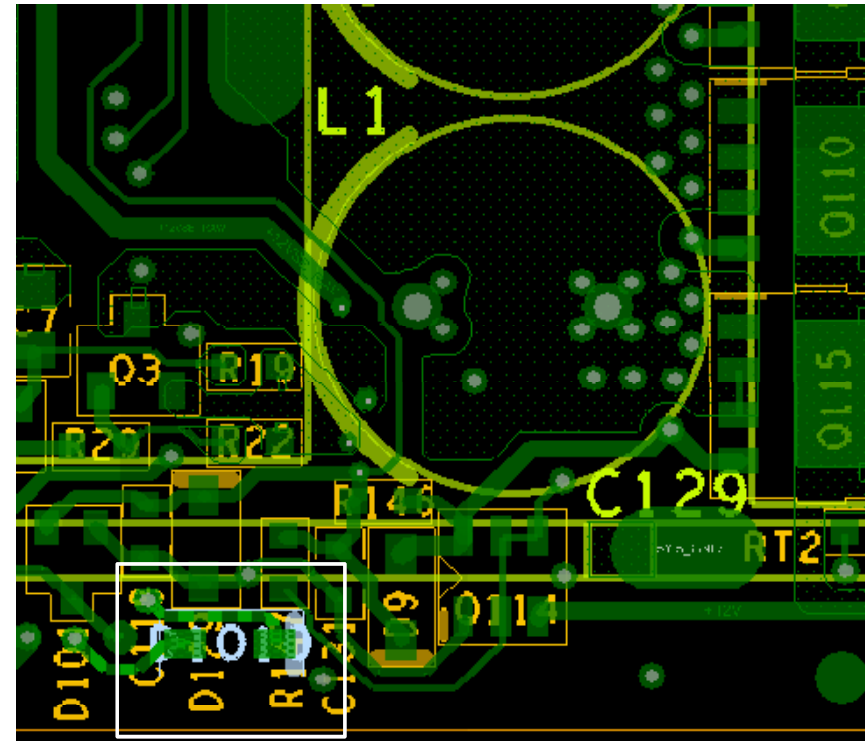


D1010 shadow effect during wave soldering
D1010 is move from solder side to component side

509-010756-0007



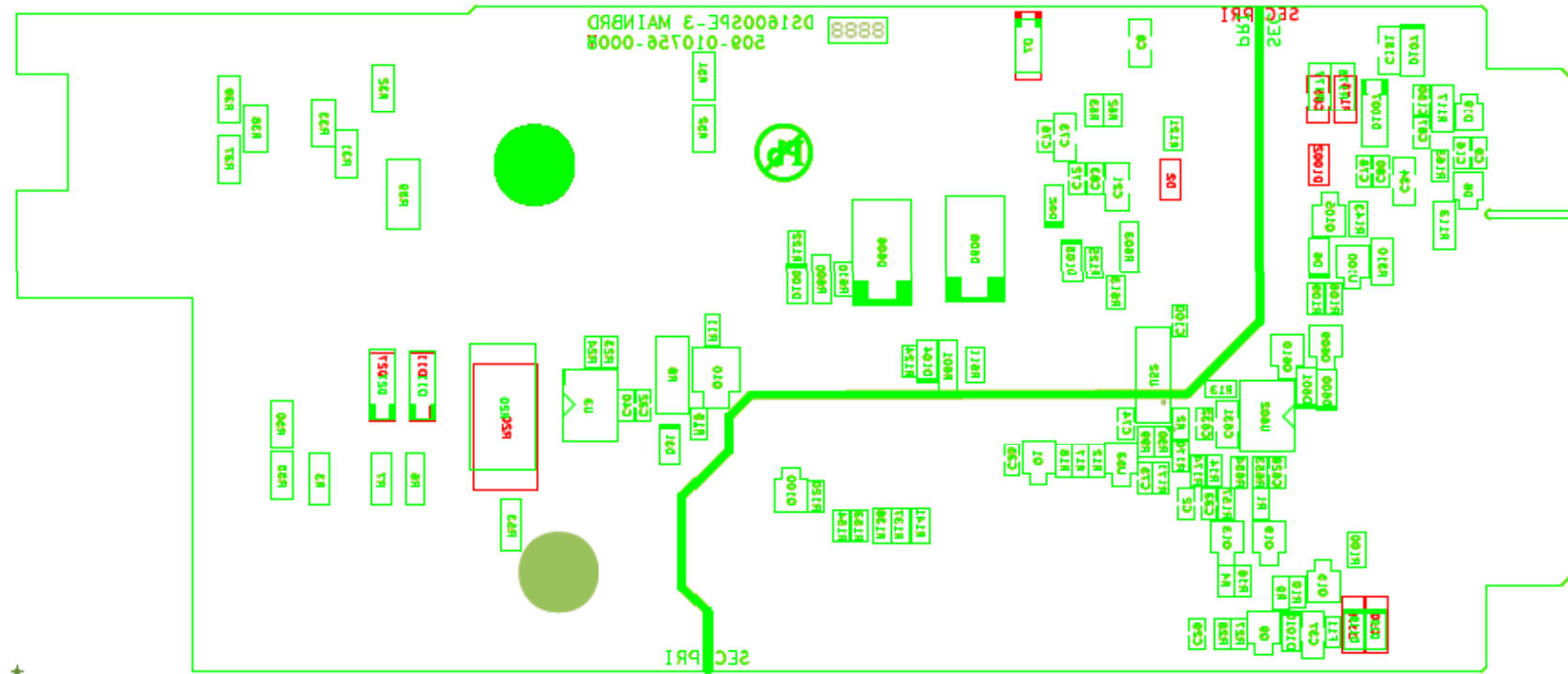
509-010756-0008



Solder Side- Silk Screen

Overlaying 509-010756-0007 with 509-010756-0008

Component Assembly Bottom - 509-010756-0008

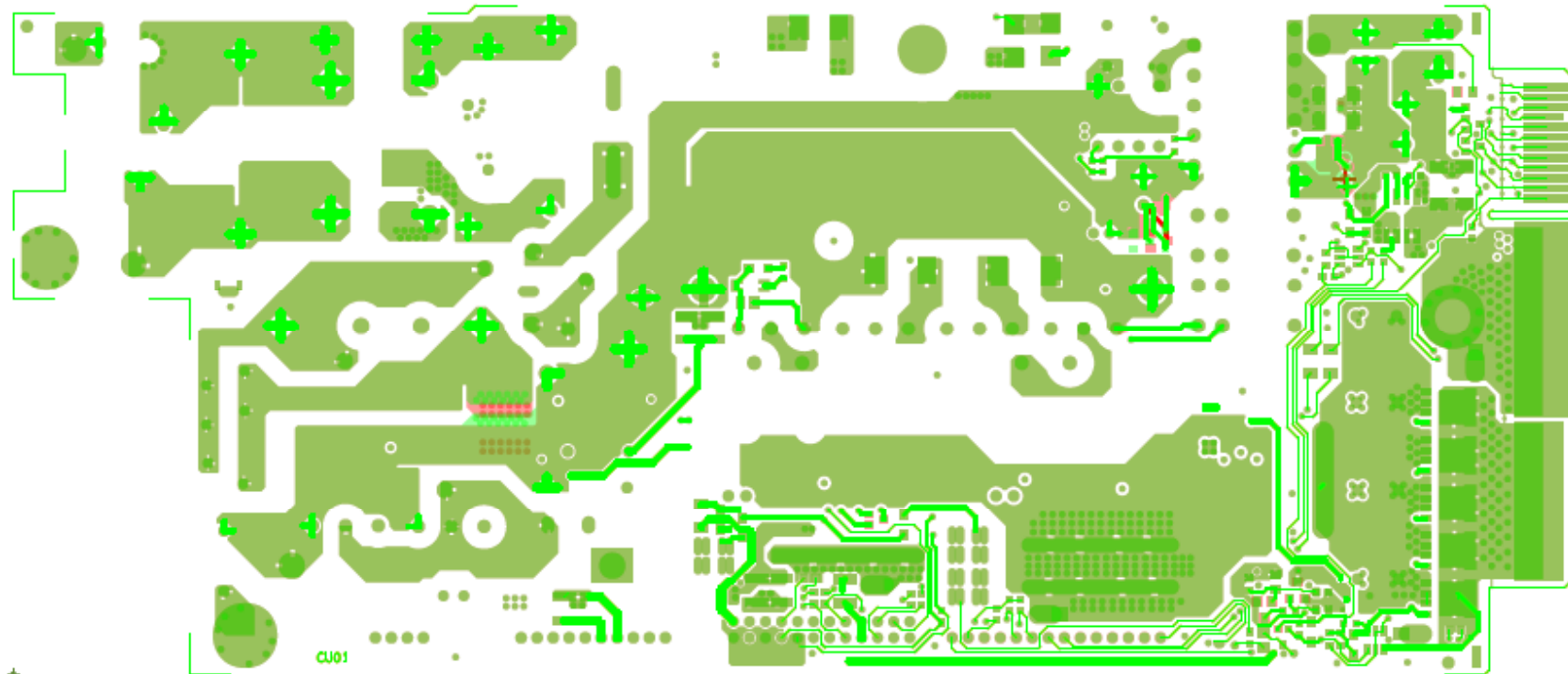


Component Assembly Bottom - 509-010756-0007

Copper Top layer

Overlaying 509-010756-0007 with 509-010756-0008

Copper TOP - 509-010756-0008

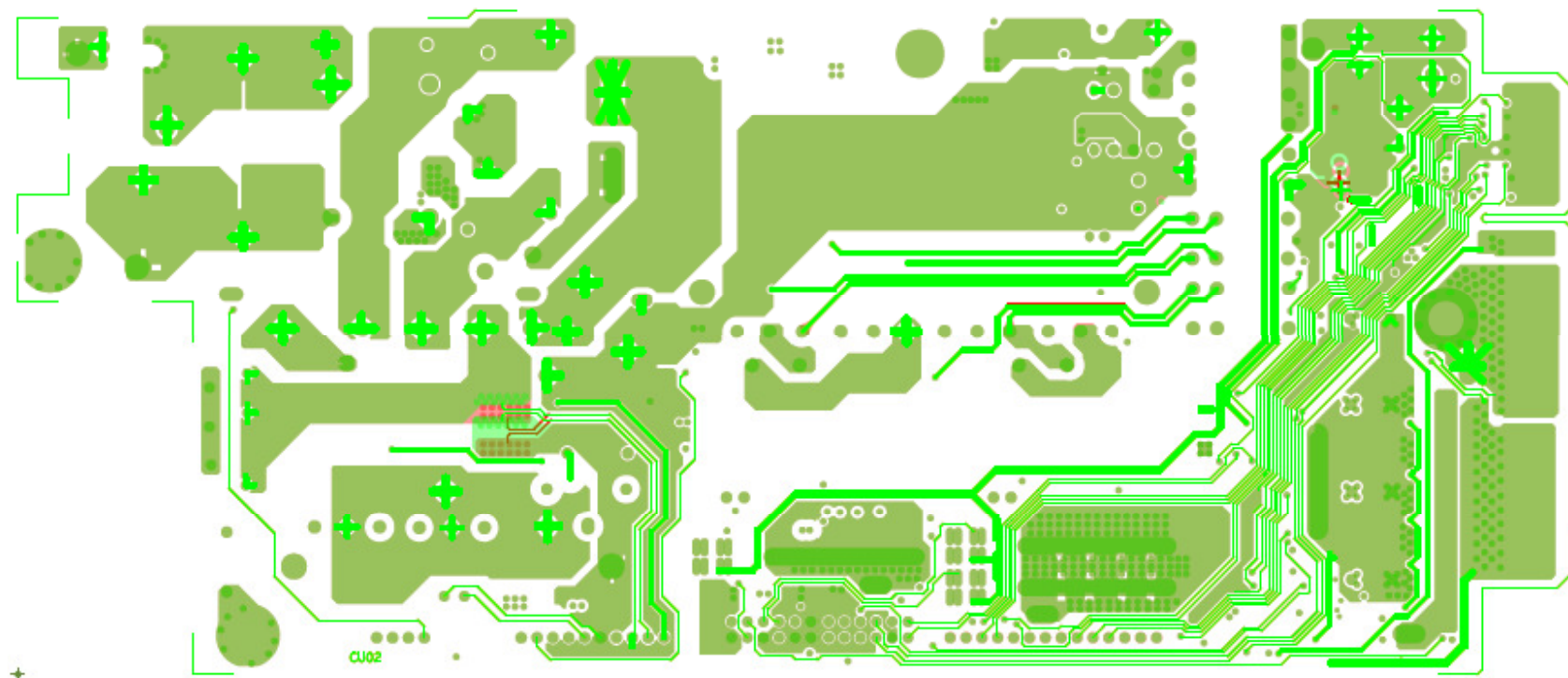


Copper TOP - 509-010756-0007

Copper 02 layer

Overlaying 509-010756-0007 with 509-010756-0008

Copper 02 - 509-010756-0008

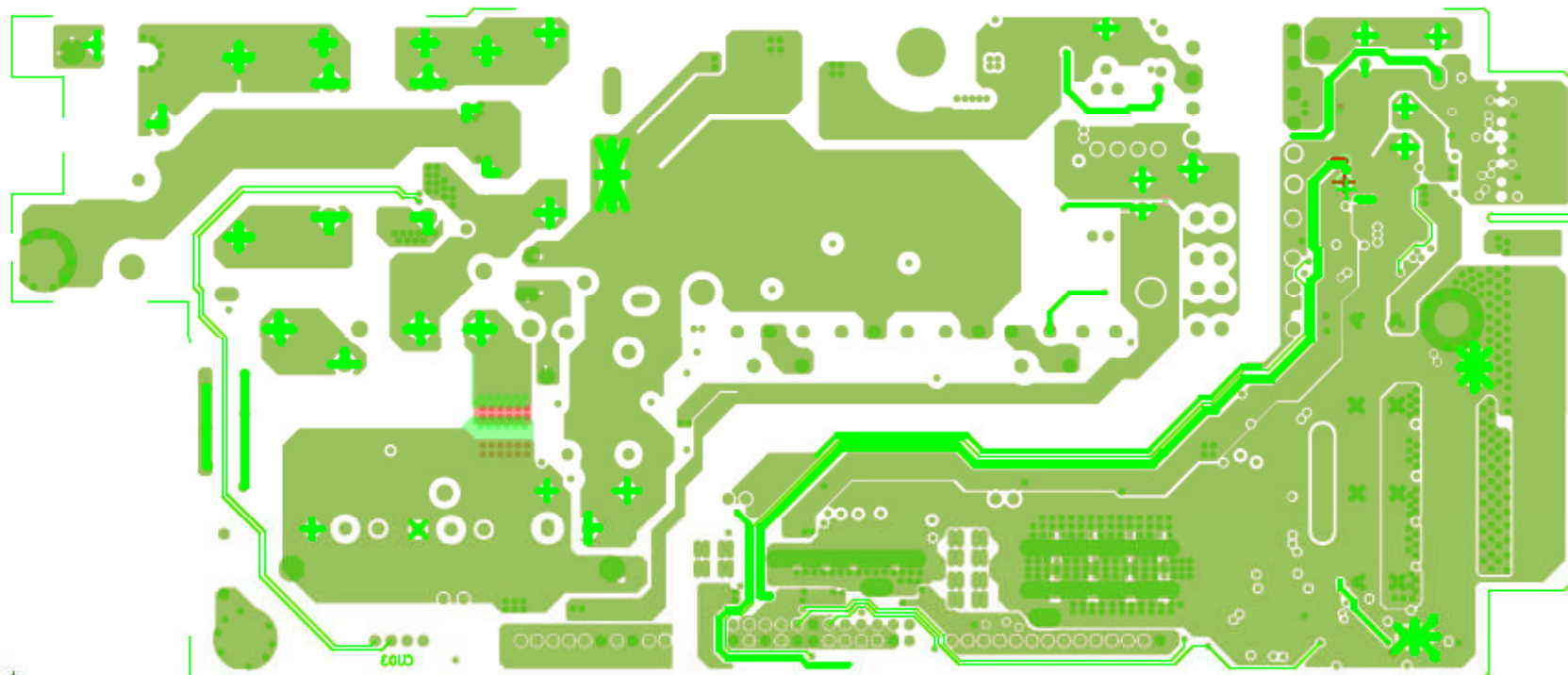


Copper 02 - 509-010756-0007

Copper 03 layer

Overlaying 509-010756-0007 with 509-010756-0008

Copper 03 - 509-010756-0008

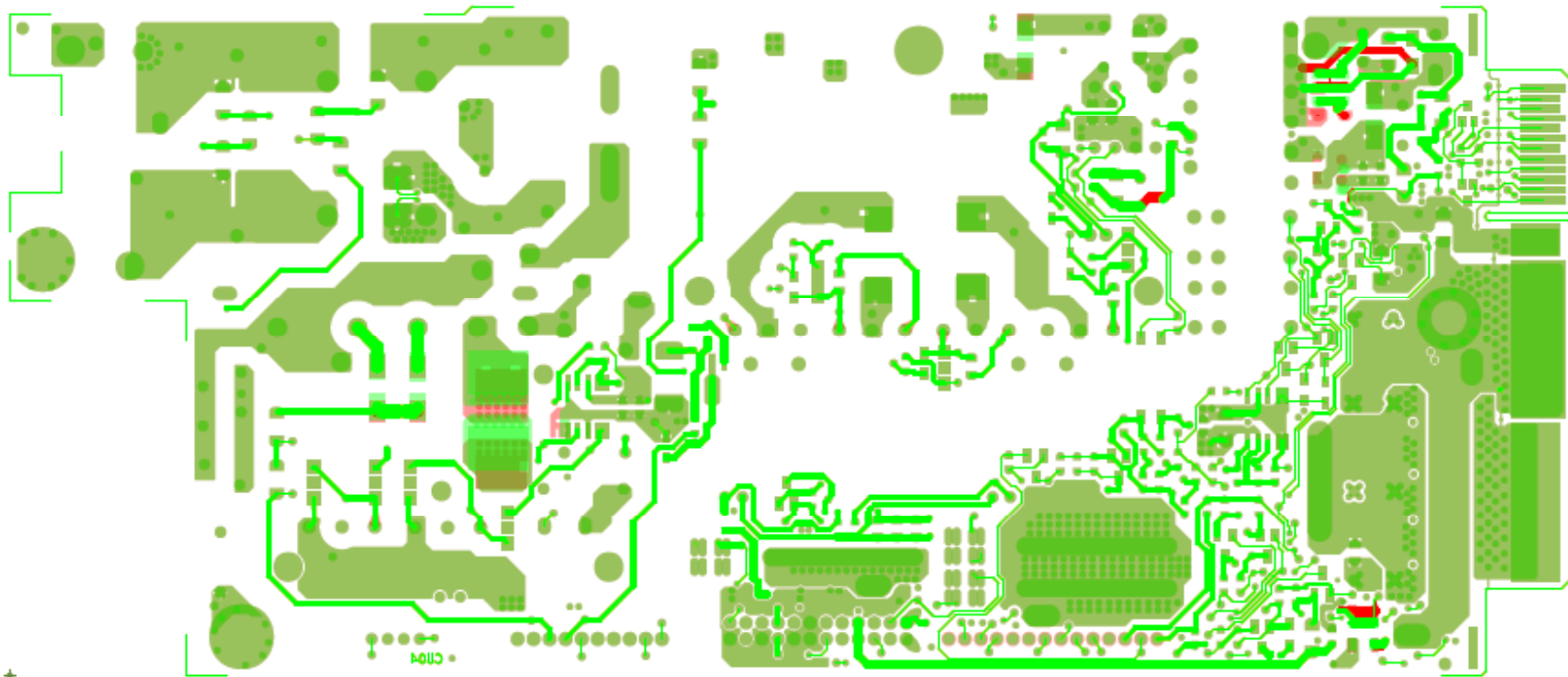


Copper 03 - 509-010756-0007

Copper Bottom layer

Overlaying 509-010756-0007 with 509-010756-0008

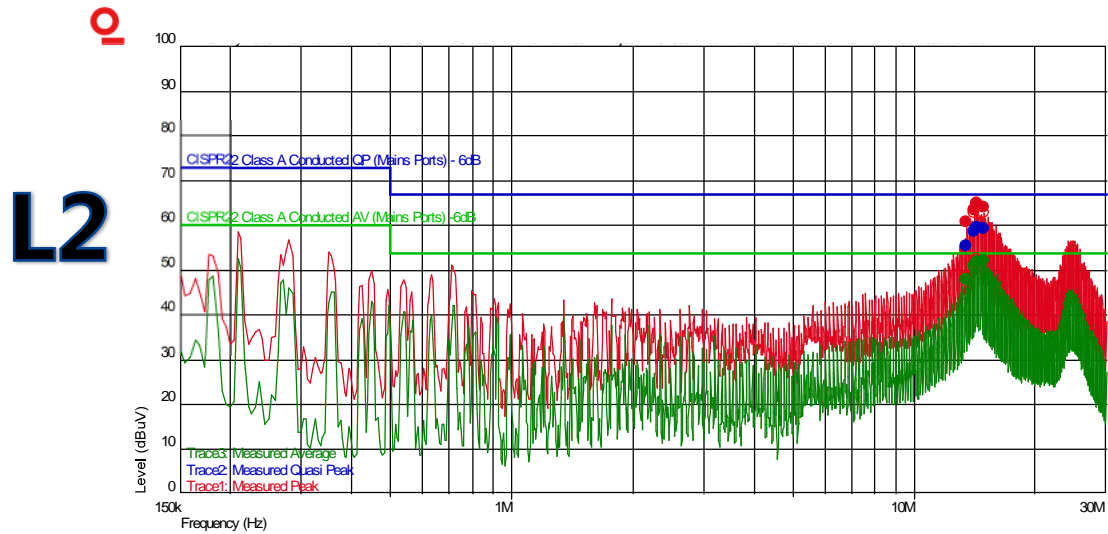
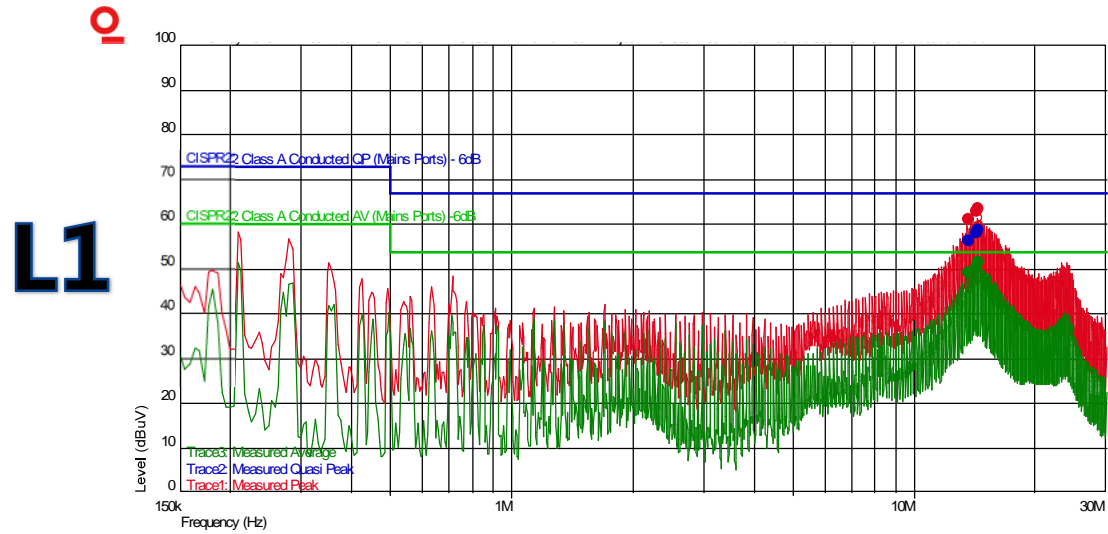
Copper BOTTOM - 509-010756-0008



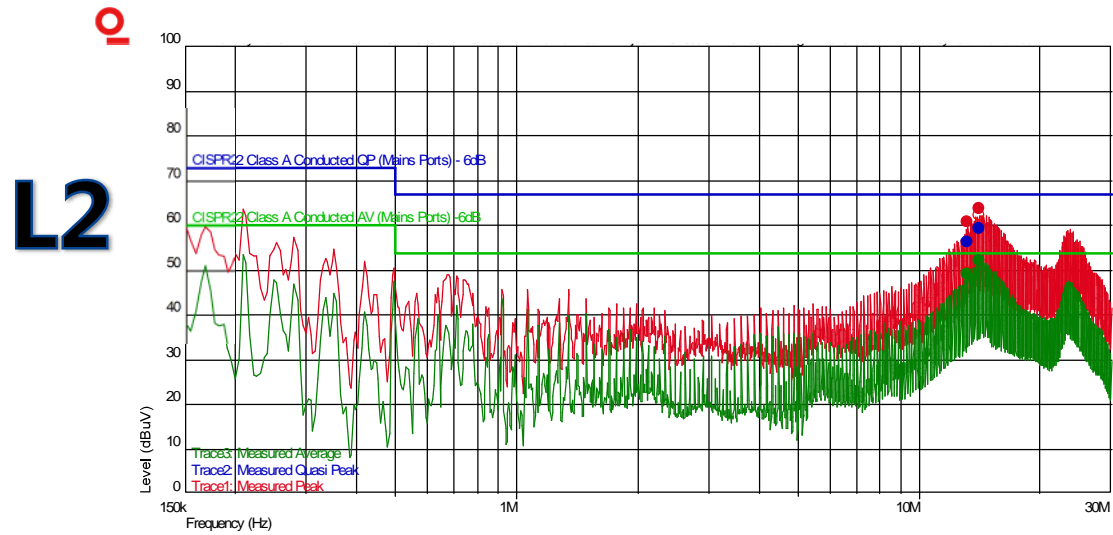
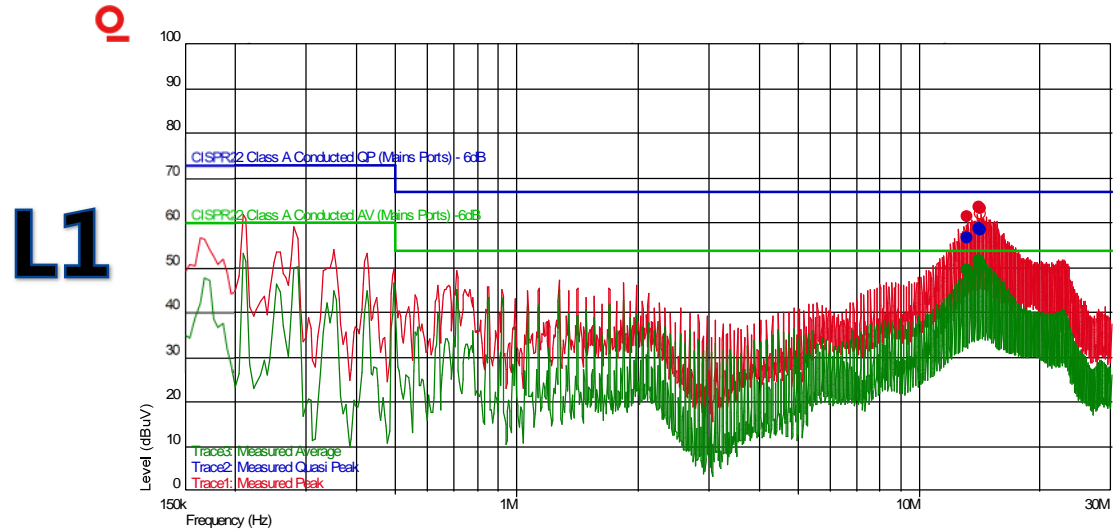
Copper BOTTOM - 509-010756-0007

EFFICIENCY AND EMI SCAN TEST REPORTS

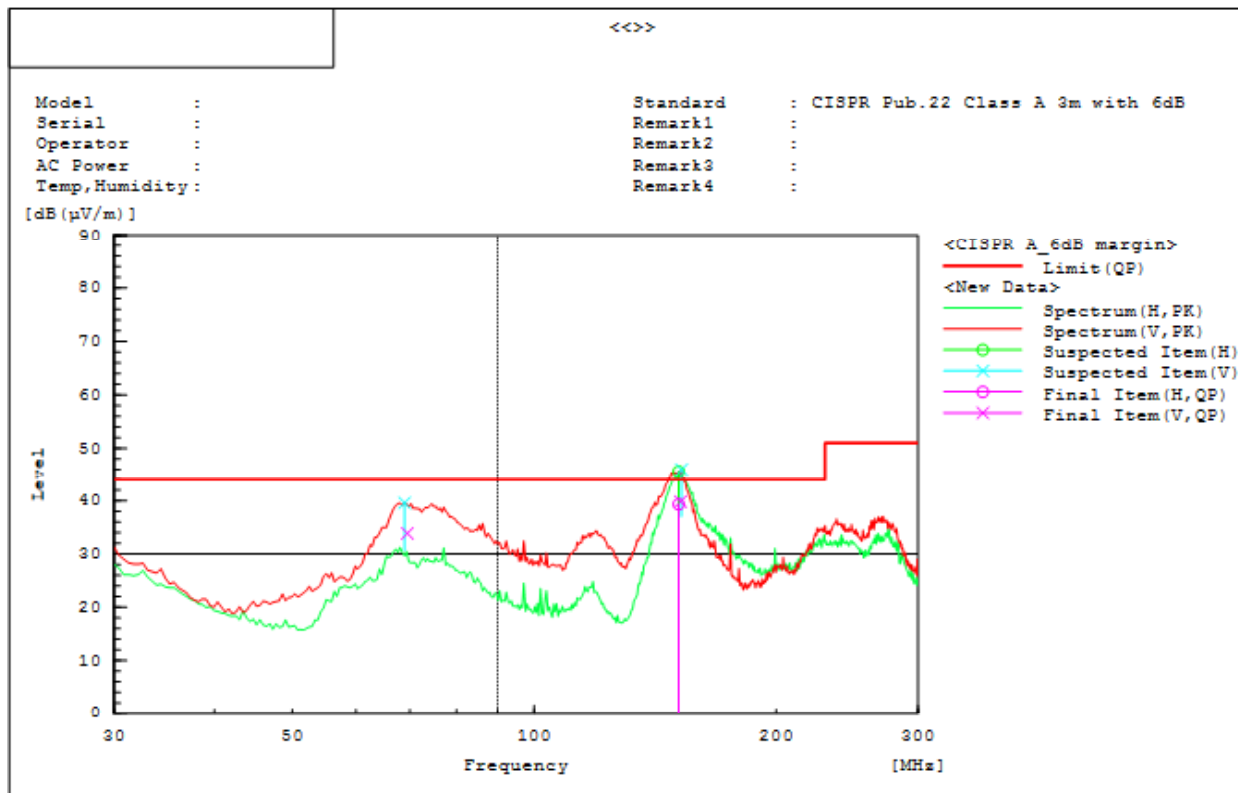
Conducted EMI Scan at Low Line (115Vac) - pass



Conducted EMI Scan at High Line (230Vac) - pass



Radiated EMI Scan at Low Line (115Vac) - pass

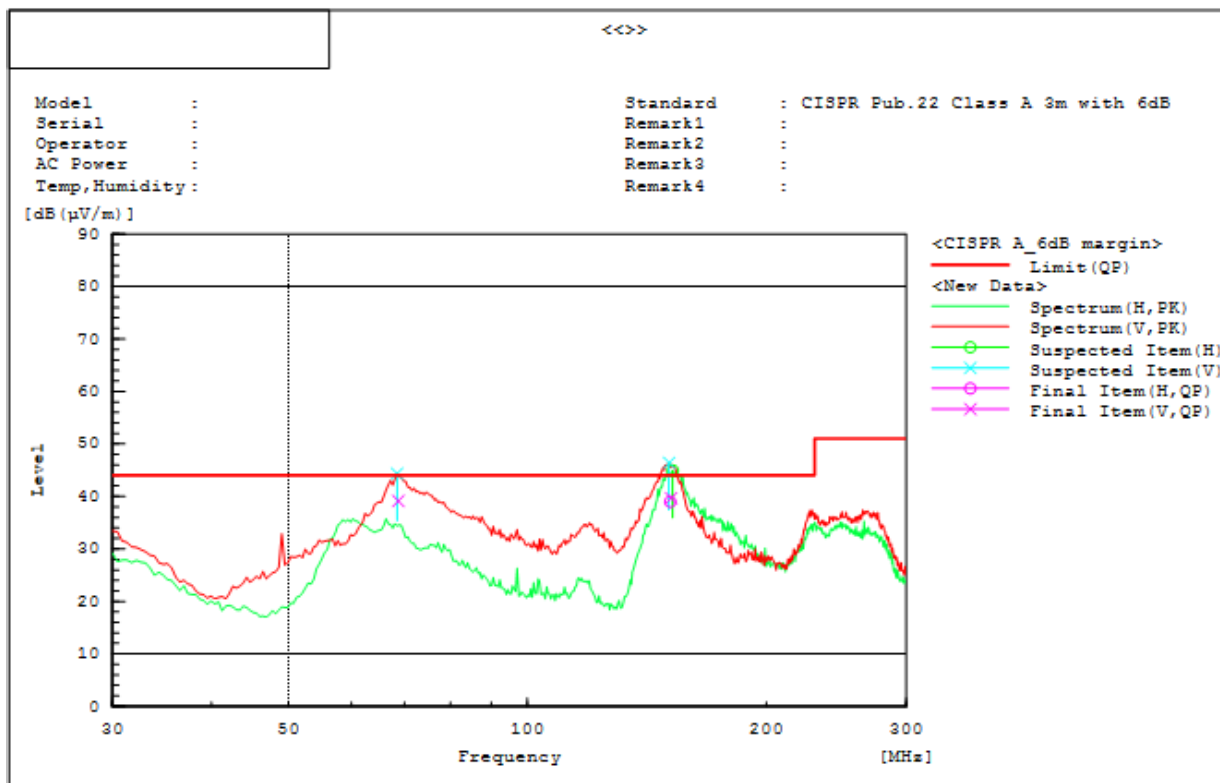


Final Result

--- QP Measurement ---

No.	Frequency [MHz]	Reading [dB (µV)] [H/V]		c.f. [dB (1/m)] [H/V]		Result [dB (µV/m)] [H/V]		Limit [dB (µV/m)]	Margin [dB] [H/V]
1	69.531	---	51.1	---	-17.2	---	33.9	44.0	10.1
2	151.232	---	53.6	---	-14.3	---	39.3	44.0	4.7
3	151.946	---	54.2	---	-14.3	---	39.9	44.0	4.1

Radiated EMI Scan at High Line (230Vac) - pass



Final Result

--- QP Measurement ---

No.	Frequency [MHz]	Reading [dB (µV)] [H/V]	c.f [dB (1/m)] [H/V]	Result [dB (µV/m)] [H/V]	Limit [dB (µV/m)]	Margin [dB] [H/V]
1	68.756	56.4	-17.2	39.2	44.0	4.8
2	151.336	53.3	-14.3	39.0	44.0	5.0
3	151.591	54.0	-14.3	39.7	44.0	4.3