

Technical Service Bulletin no. 29

THIS BULLETIN REPLACES BULLETIN No 8, 9, 10 and 14

Created by: Lab.gruppen AB Service Department

Date: 20121124

Reference no: C-X

Affected models

Following models are affected by this technical service bulletin:

C5:4X

C10:4X

C10:8X

C20:8X

Affected boards/modules

AICO4B06a-F01	SP20F05a-F01=P34401-EAA
AICO4B06a-F02	SP20F05b-F01=P34401-EAB
AICO4B06b-F01	SP20F06b-F01=P34401-FAB
AICO4B06b-F02	SP20F06c-F01=P34401-FAC
AICO4B07a-F01	SP20F06d-F01=P34401-FAD
AICO4B07a-F02	
AICO4B07b-F01	
AICO4B07b-F02	
AICO4BEXT06a-F01	
AICO4BEXT06a-F02	
AICO4BEXT07a-F01	
AICO4BEXT07a-F02	
AICO4BEXT07b-F01	
AICO4BEXT07b-F02	
A104D-F01=P34001	
A104D03a-F01=P34001-CAA	
A104D04a-F01=P34001-DAA	
A104D04b-F01=P34001-DAB	
A104D04c-F01=P34001-DAC	
A104D05a-F01=P34001-EAA	
A104D05b-F01=P34001-EAB	
A104D05c-F01=P34001-EAC	
SP20F-F01=P34401	

Symptom

Fault on one or more channels. MUTE and VHF (indicating fault).

Solution

Components shall be exchanged on some positions and some additional components shall be added. See below for instruction how to perform the modifications on the different boards.

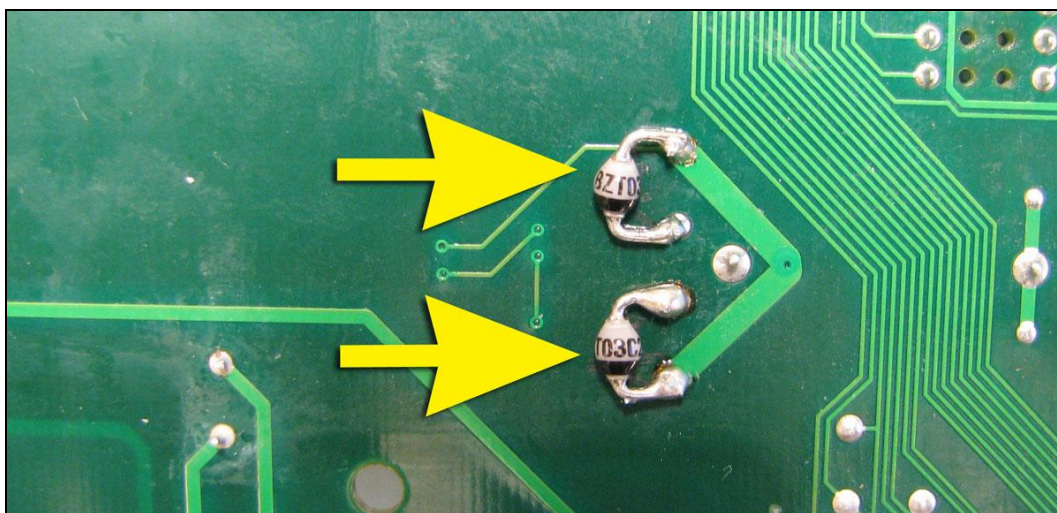
Note

SMD components can be purchased by the service centre. Just make sure it is the exact same brand, model and type as described in the instruction below.
When doing service on a C:X Series the modifications according to this service bulletin shall be made if not already done.

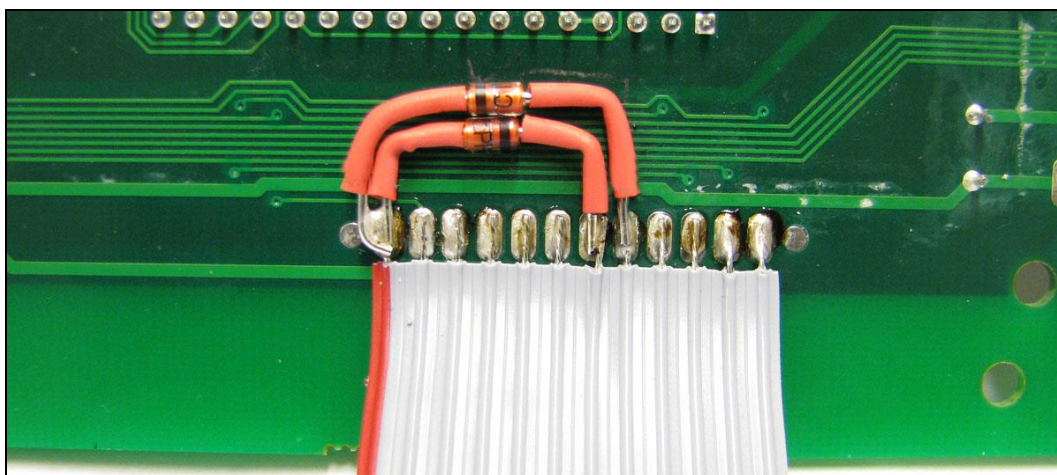
Modification instruction for AICO4B07b-FXX and below

Part No.	Description	Amount	Info	Pos
20V3.25W5%	Diode Zener 20V 3.25W 5%. SOT57, Manufacture BZT03C20	2		D422, D423
15V1.3W5%	Diode Zener 15V 1.3W 5% Manufacture BZT03-C15	2		D424, D425
R0.8	Resistor Jumper 0r D.8	8		
HOPTFE.86	Hose Ptfе 0.86mm Vw1	4		

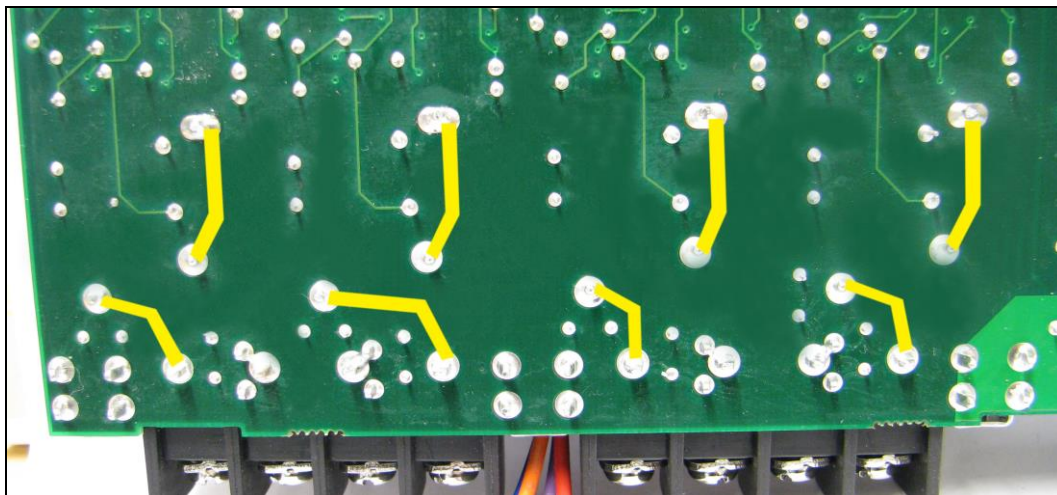
Added components: D422, D423, Diode Zener 20V 3.25W 5%.



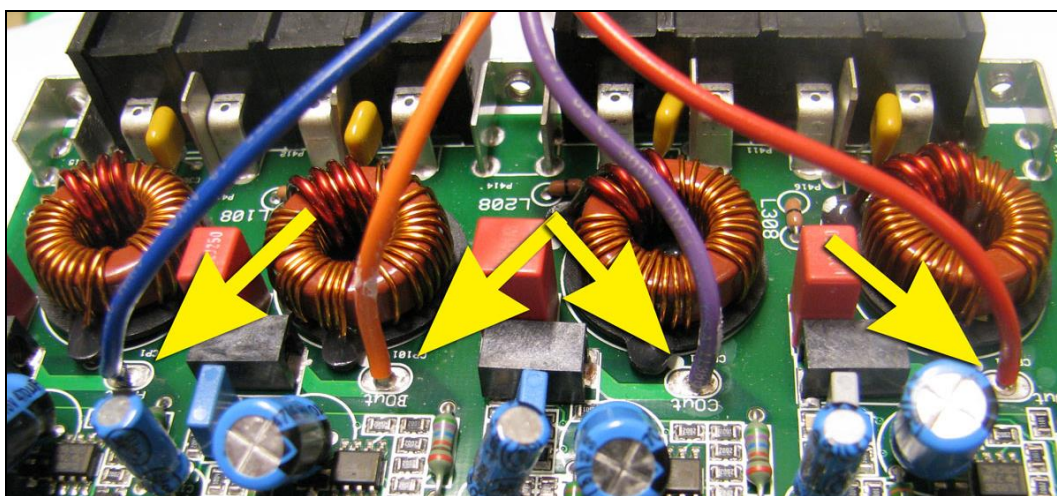
Added components, D424, D425: Diode Zener 15V 1.3W 5%.	Hose!
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Solder jumper 0,8mm outside diameter. See yellow lines. Make sure short circuit to other solder pads is avoided!



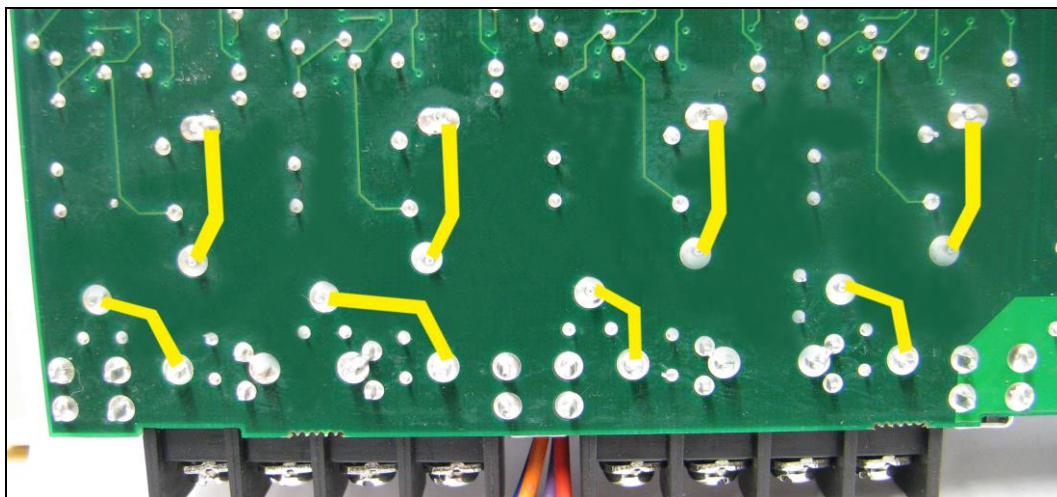
Check that cables are still soldered correctly. (It may from heat from soldering on opposite side come out of its position.)



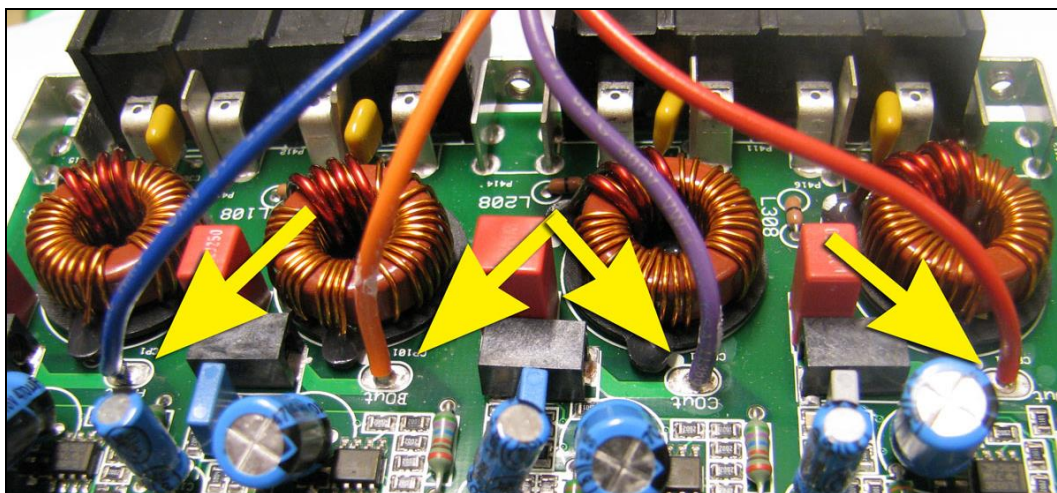
Instruction modification for AICO4BEXT07b-Fxx and below

Part No.	Description	Amount	Info	Pos
R0.8	Resistor Jumper 0r D.8	8		

	Solder jumper 0,8mm outside diameter. See yellow lines.
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	Check that cables are still soldered correctly. (It may from heat from soldering on opposite side come out of its position.)
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Modification instruction for (SP20F06d-F01) P34401-F and below

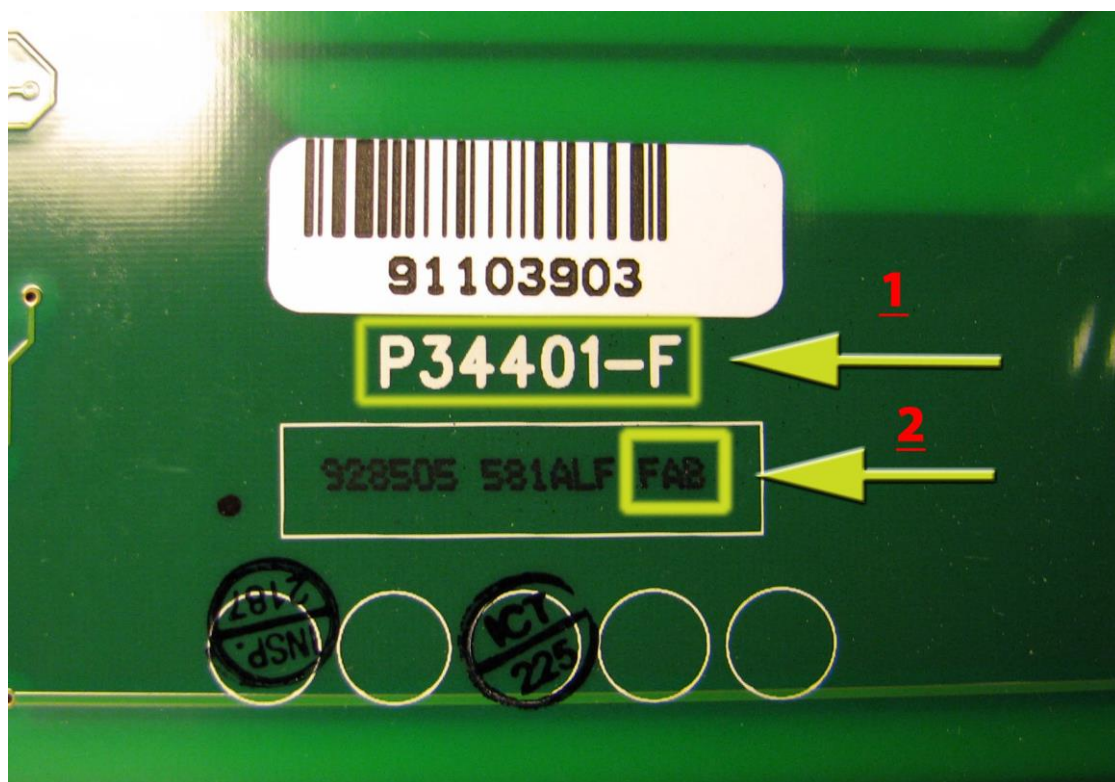
Part No.	Description	Amount	Info	Pos
0R0681W1% 2512	Resistor Metal Strip 0.068R 1W 1% Surface mounted 2512 Manufacture WSL2512R0680FEA or WSL2512R0680FEB	2		R36, R43
402K.250W1 %1206	Resistor thick film 402K .250W 1% Surface Mounted 1206	1		R103
CT71x1.8	Cable Tie 71x1.8	2		
R0.8	Resistor Jumper 0r D.8	2	a´ 5 mm	R74, R75
3n3250VMK P5%7.5	Capacitor Polypropylene 3n3 250V Mkp 5% 7.5mm Manufacture: MKP10 3300PF 5% 250VDC	2		D29, D27
2N2250VMK P5%7.5	Capacitor Polypropylene 2n2 250V Mkp 5% 7.5mm Manufacture: MKP10 2200PF 5% 250VDC	2		D28, D30
AWG24WHI 300VW1	Cable Awg24 White Ul Style 1061 / 1429 Vw1	1	a´ 18 cm	
P34OVPA- ST01	P34 Over Voltage Protection A, Surfacemounted Top type 01	1		
BEAD1.6x4x 3.3	Ferrite Bead 1.6x4x3.3	1		D3

Instruction concerning SP20F-34401-F

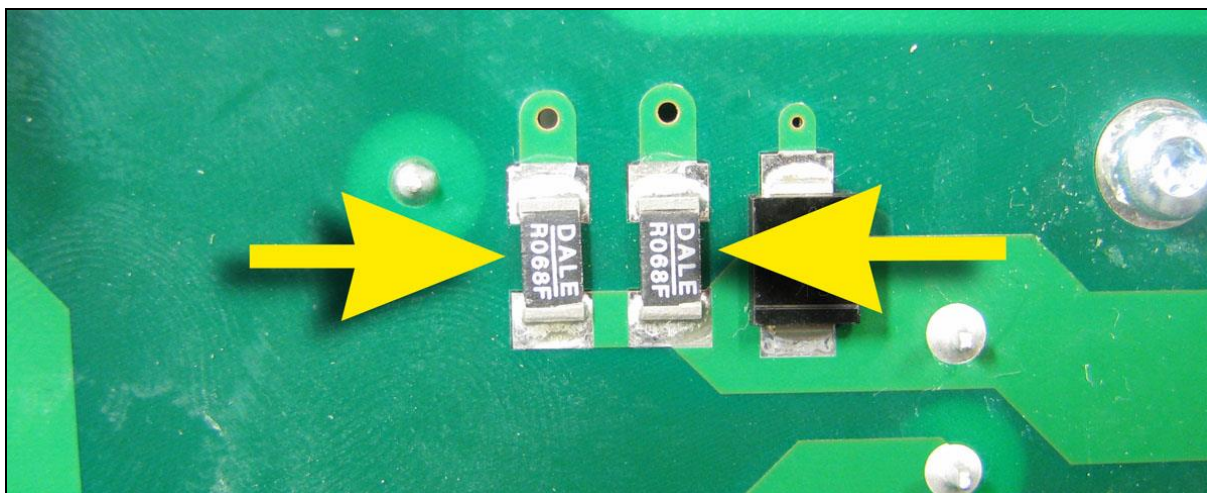
In the example in picture (1) the F indicates the PCB revision number. Whenever you encounter a PCB revision number "F" or below you will need to do the modification

In the example in picture (2) F indicates the PCB revision number F and the third letter B is the boom version

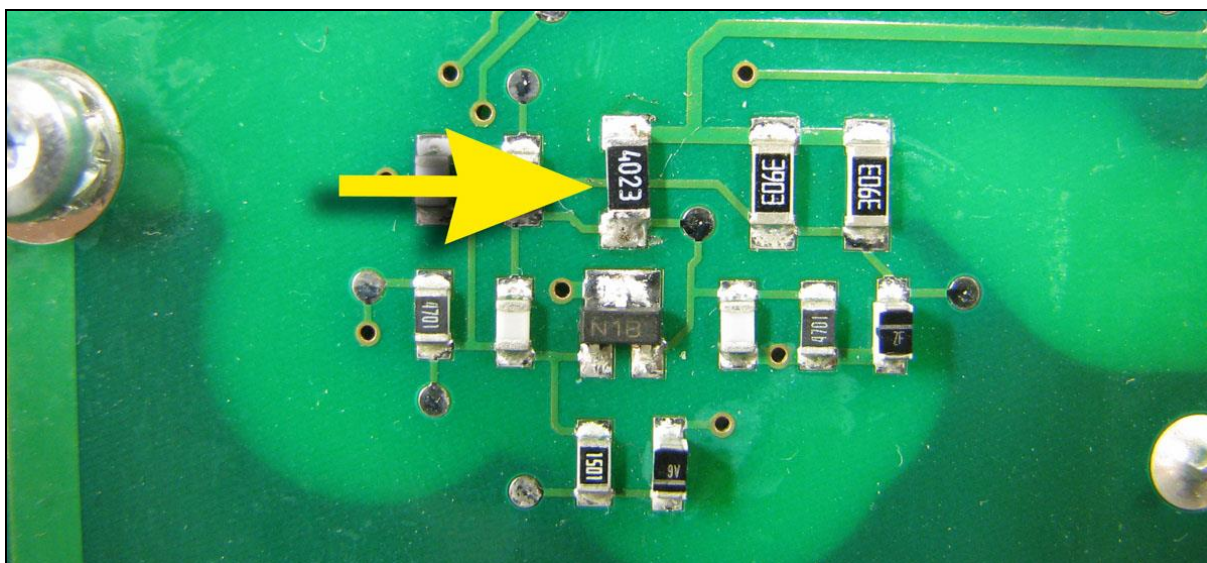
This board is P34401 revision F and boom b



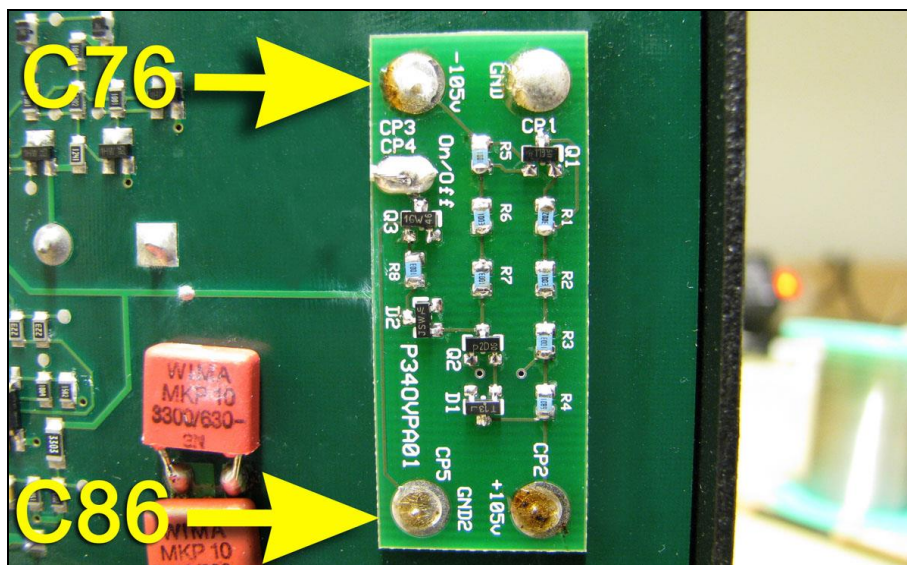
	Replace resistor to 0R0681W1%2512. Vishay P/D number WSL2512R068FEA or WSL2512R068FEB		R36, R43
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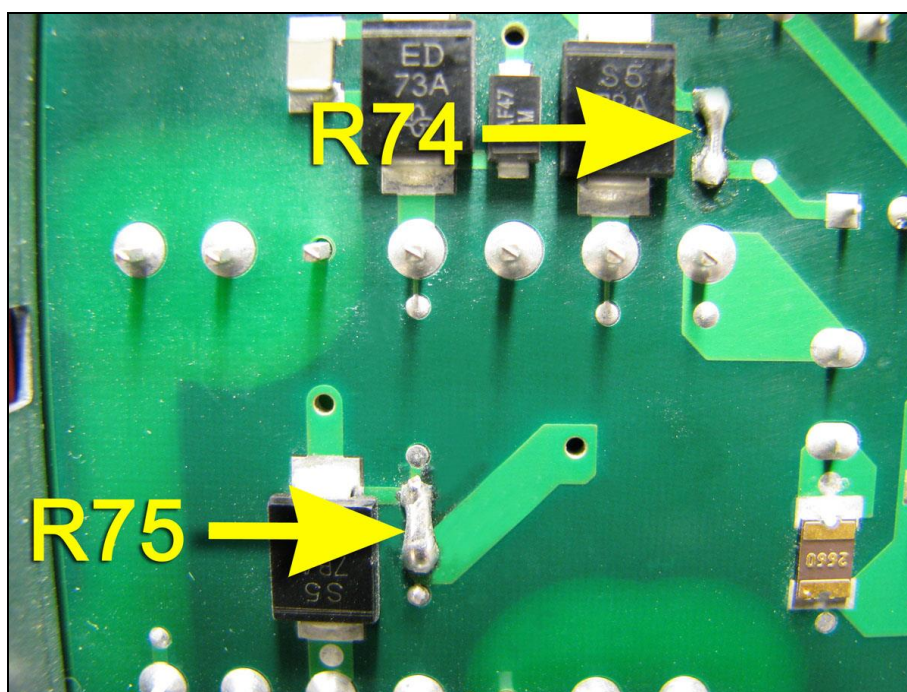
	Replace resistor to 402K.250W1%1206		R103
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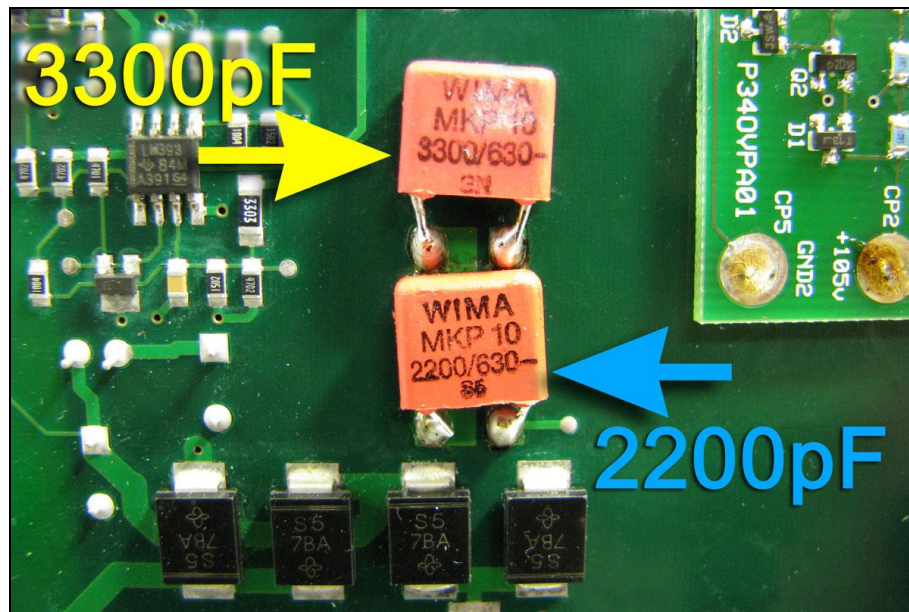
	Mount pcb P34OVPA-ST01 at leg of capacitors C76 & C86. Solder pcb. Caution! Control soldering.		
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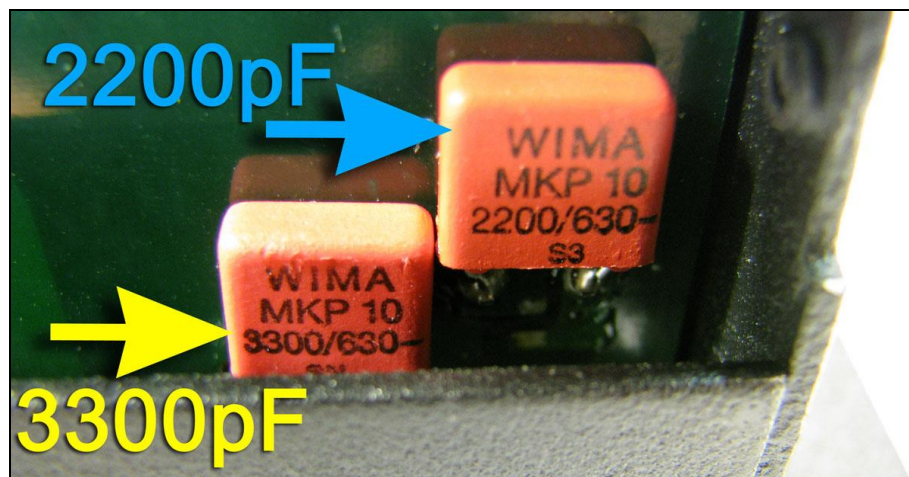
	Remove R74-75. Solder Resistor Jumper Or D.8 according to picture		R74-75
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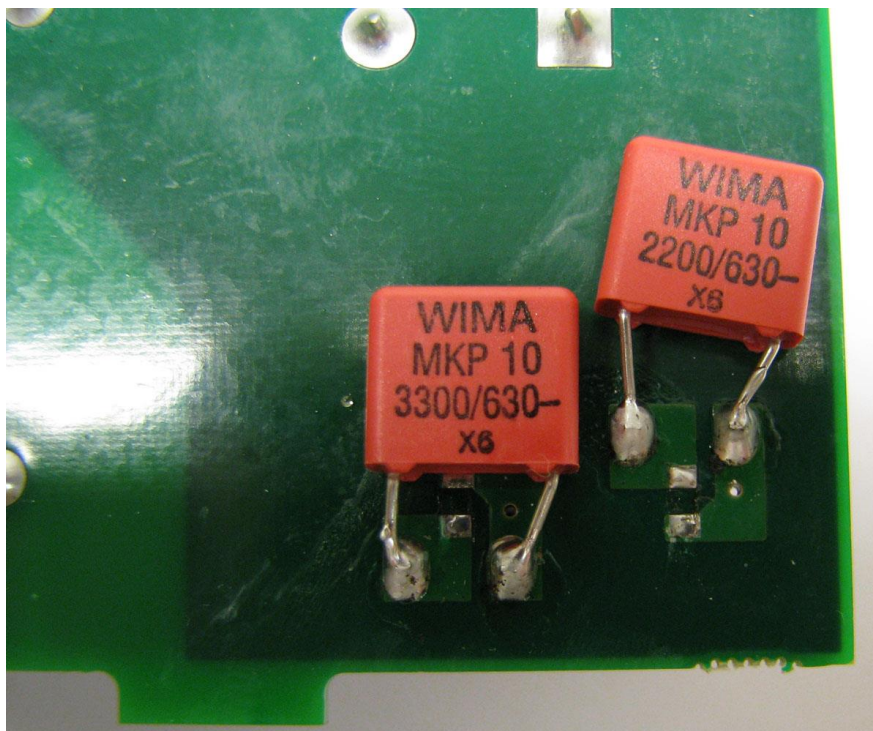


	Remove Surface Mounted capacitor. Solder new capacitor according to picture.		D29, D28
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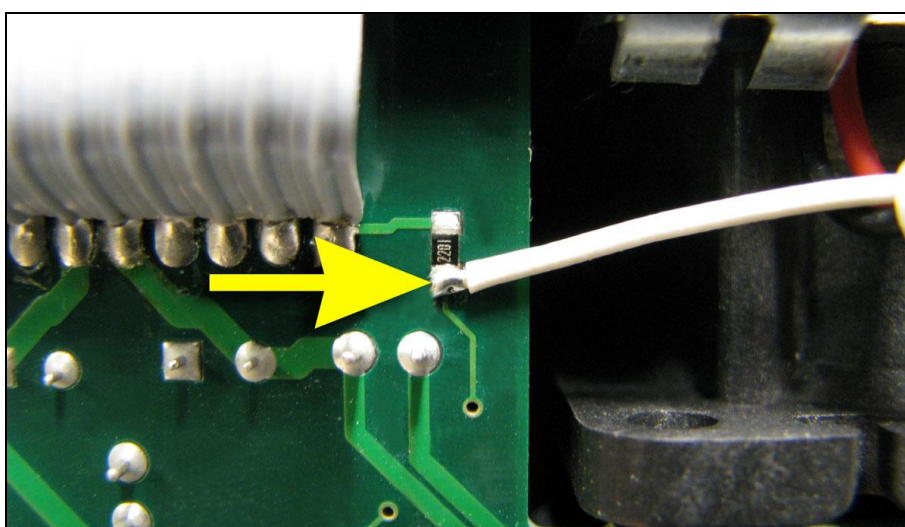


	Remove Surface Mounted capacitor. Solder new capacitor according to picture		D27, D30
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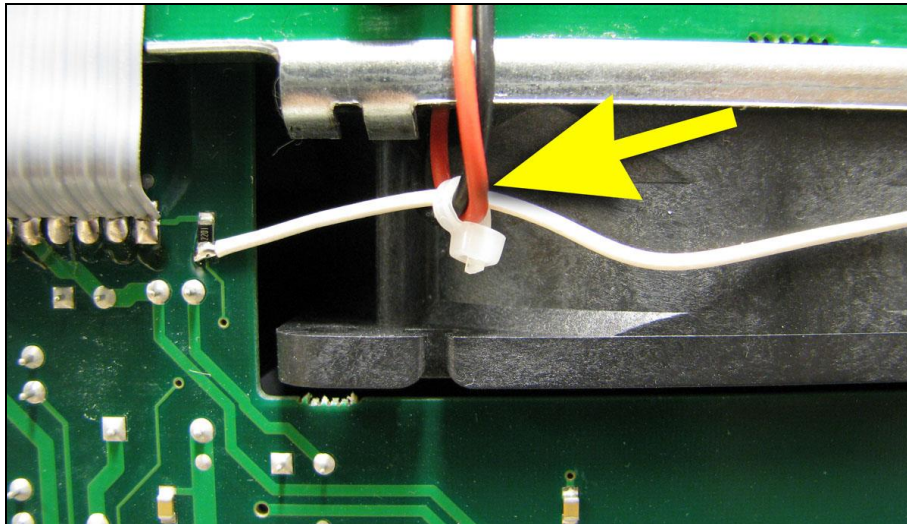




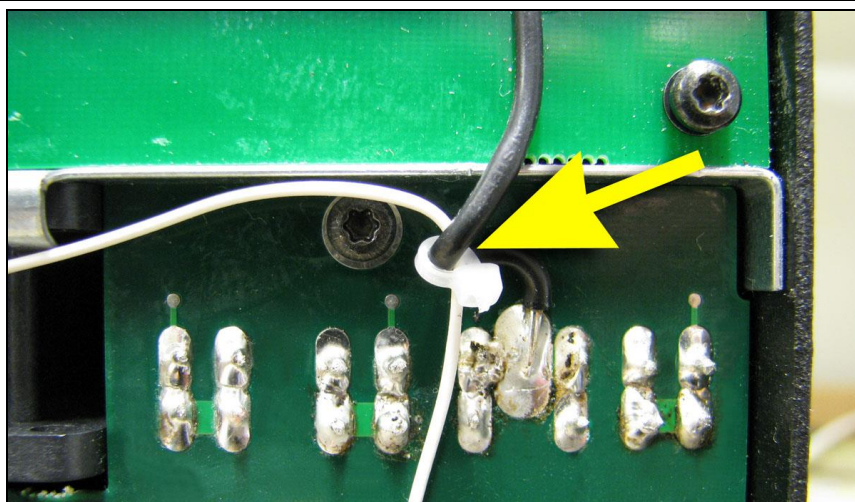
	Solder Awg 24 cable at R51 according to picture. NOTE! (The cable has to be mounted on the marked side of the component)		
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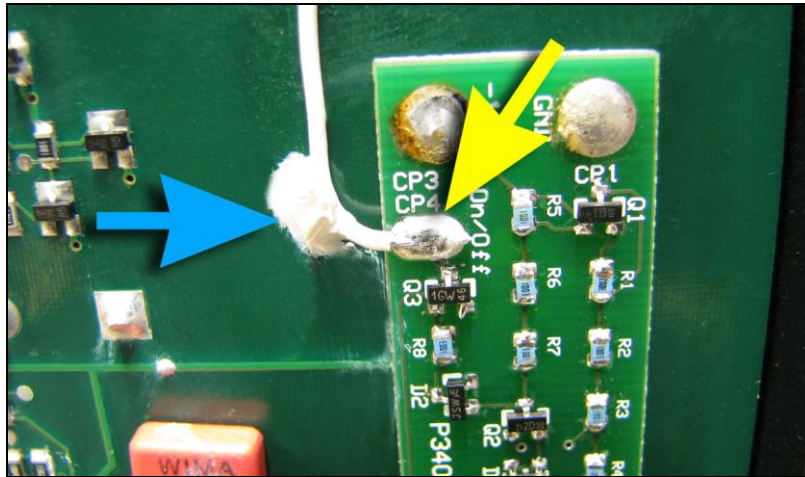
	Place AWG 24 cable under Red & Black fan cables. Tie cables according to picture.		
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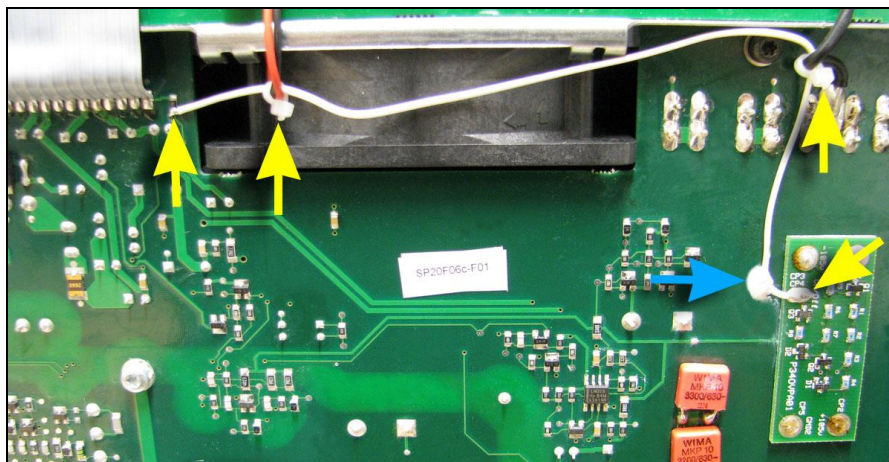
	Place AWG 24 cable under Black ground cable. Tie cables according to picture		
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Solder AWG 24 cable at CP4. Apply Sikaflex at AWG 24 cable (se blue arrow)		
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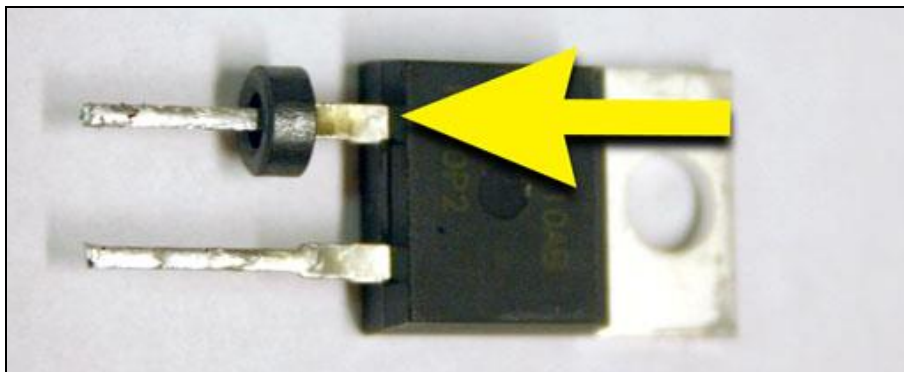


Overview.		
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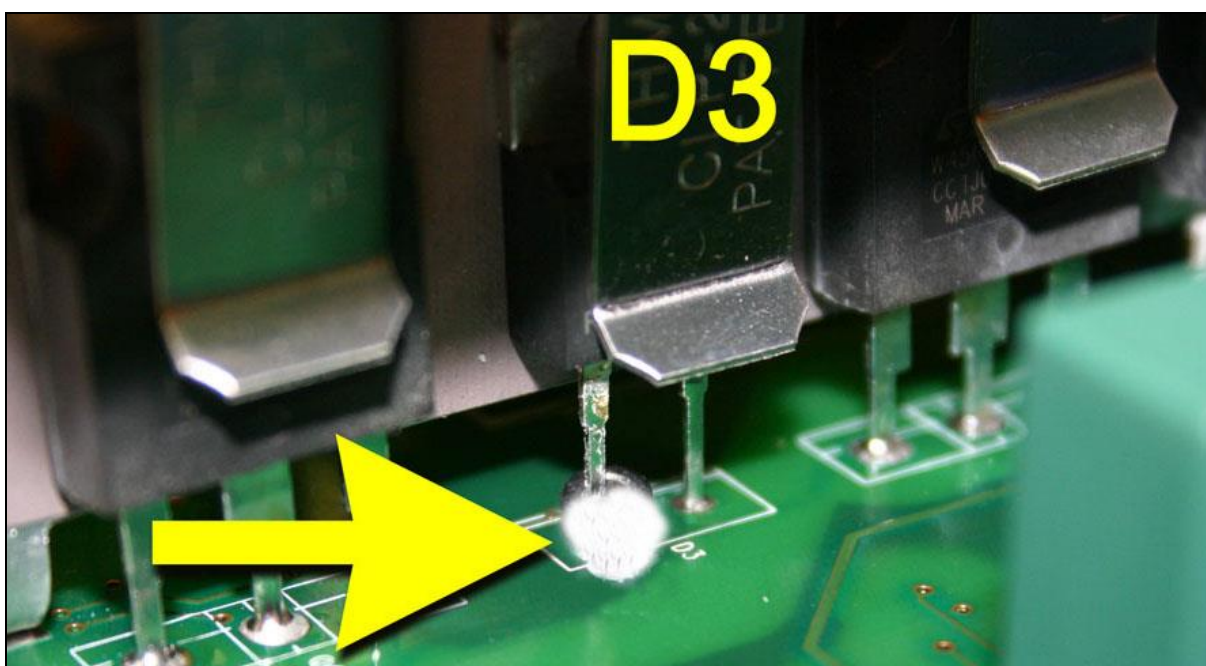


SP20F-F01 Mount Ferrite and apply glue if it's not mounted on D3.

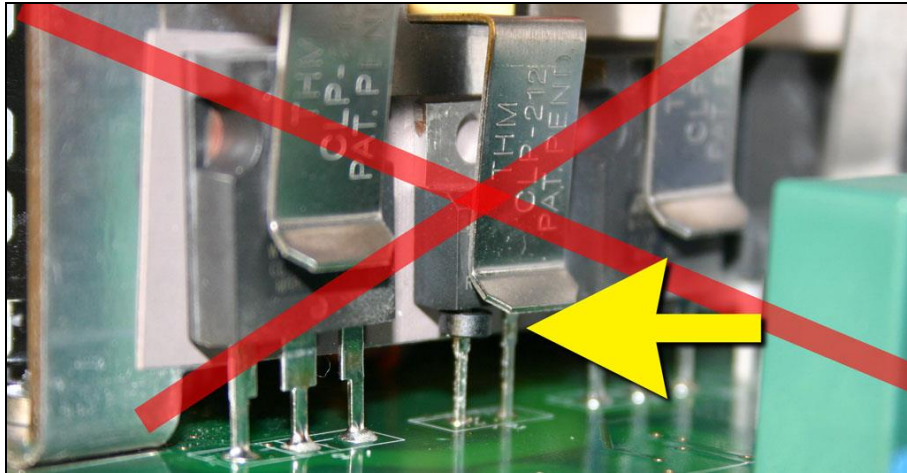
	Mount Ferrite on D3 according to picture.		
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	Fasten the bead component using a non conductive glue that withstand temperatures of at least 120°C according to picture.		
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The ferrite must be fasten against the PCB.		
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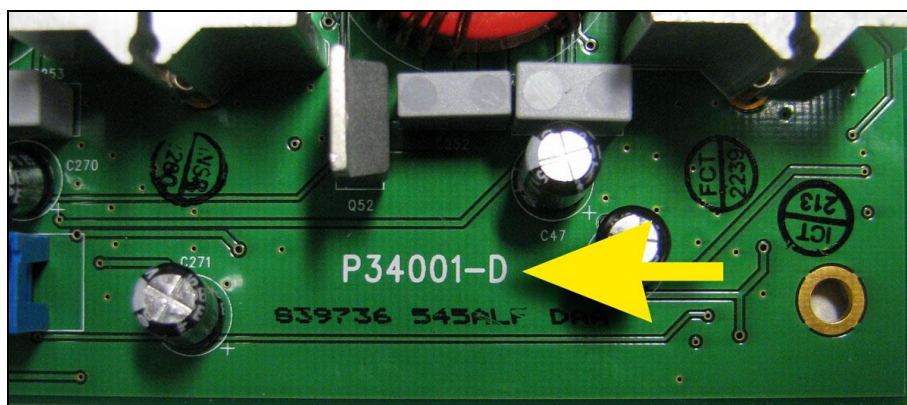
Instruction for A104D- P34001-D and below

Instruction concerning A104D-P34001.

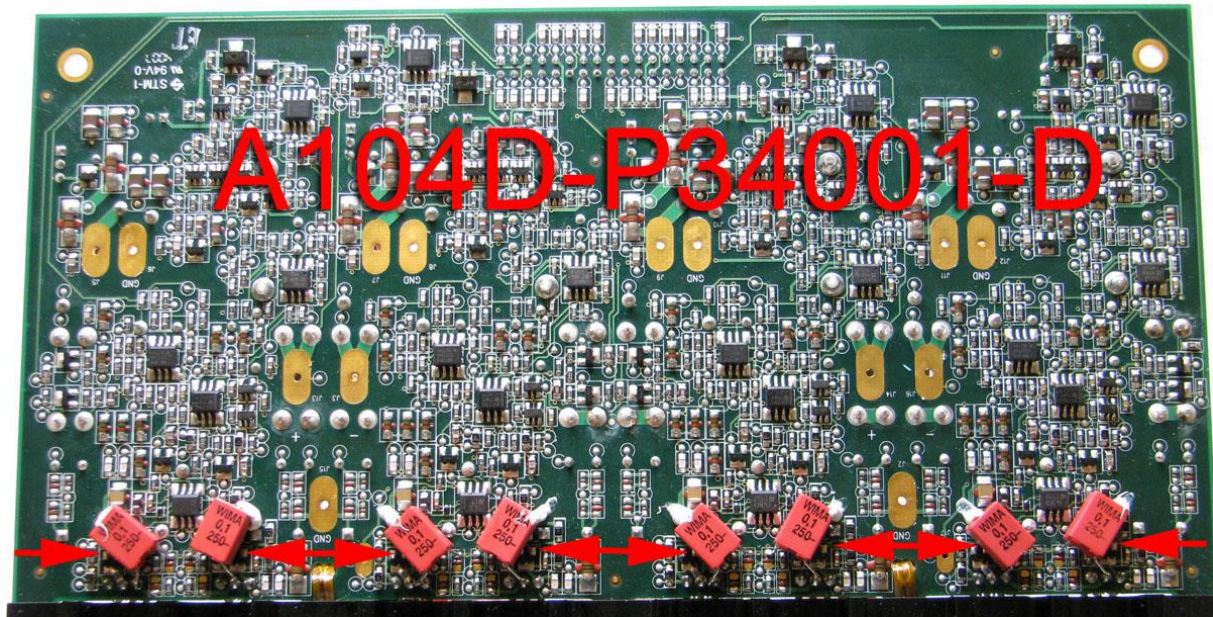
In the example in pic1, the “D” indicates the PCB revision number. Whenever you encounter a PCB revision number “D” or below, see if the capacitors are mounted like in Pic2 (see red arrows) then the board has been updated to the latest revision so you can continue repairing.

If they are not mounted you need to replace the A104D-P34001. See the spare parts list for the correct spare part.

PIC1



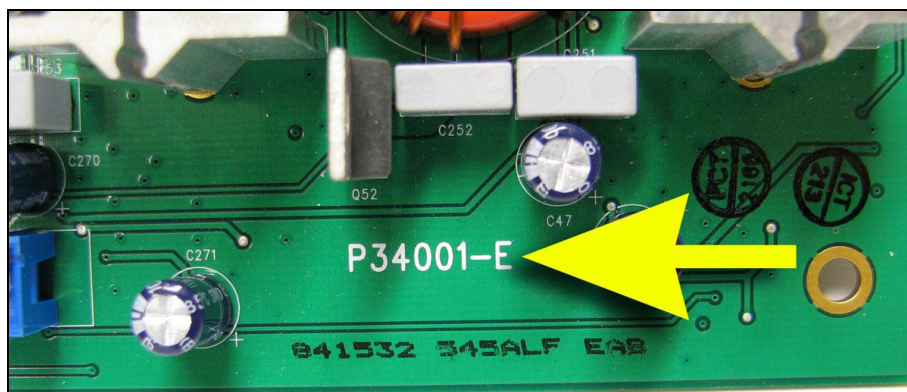
Pic2



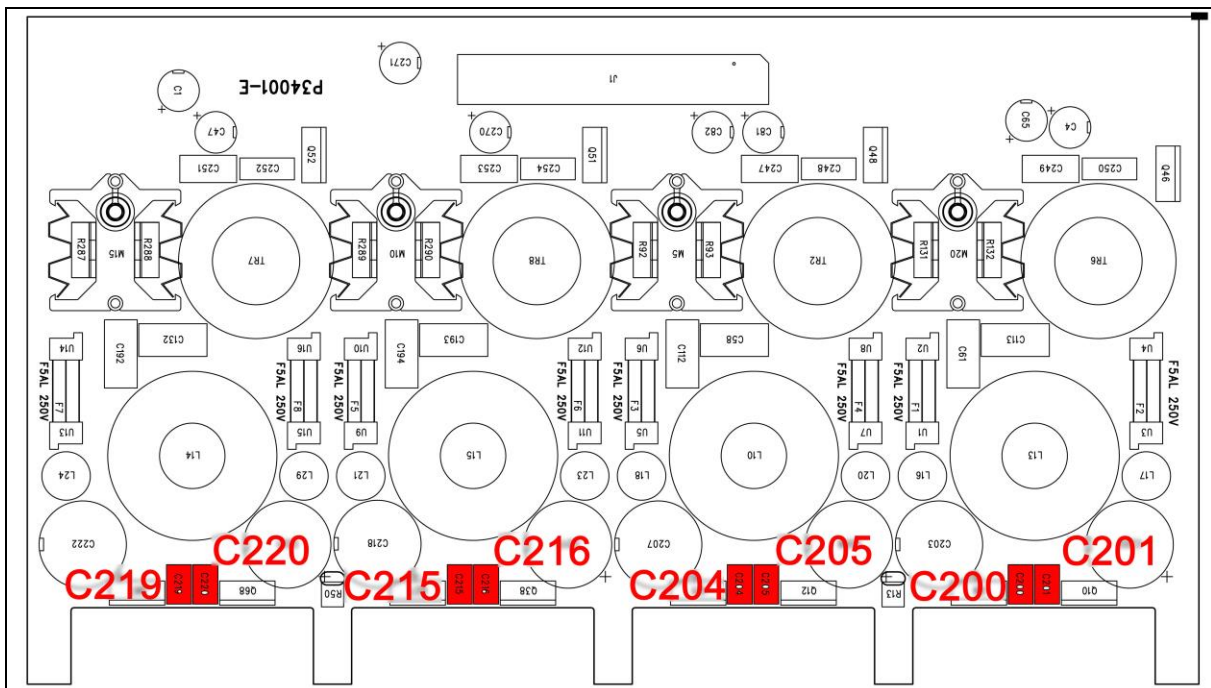
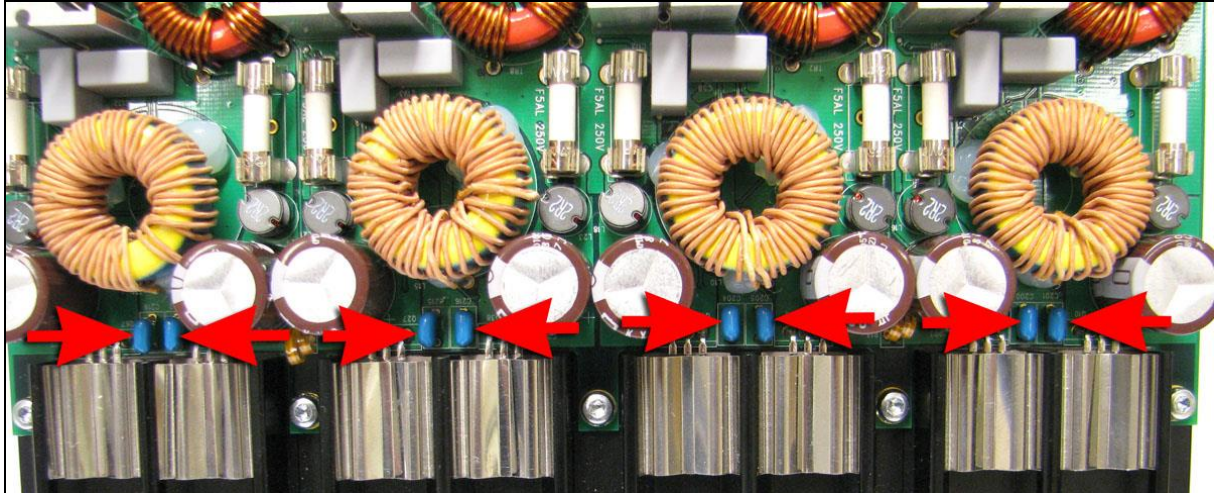
Modification Instruction for (A104D05c-F01) P34001-E and below

Instruction last updated		2009-01-27		LP
Part No.	Description	Amount	Info	Pos
510K.125W1 %0805	Resistor 510K .125W 1% Surface Mounted 0805	4		
100N250VMK P5%5	Capacitor Polypropylene 100n 250V Mkp 5% 5mm	8		C200-201, C204-205, C215-216, C219-220

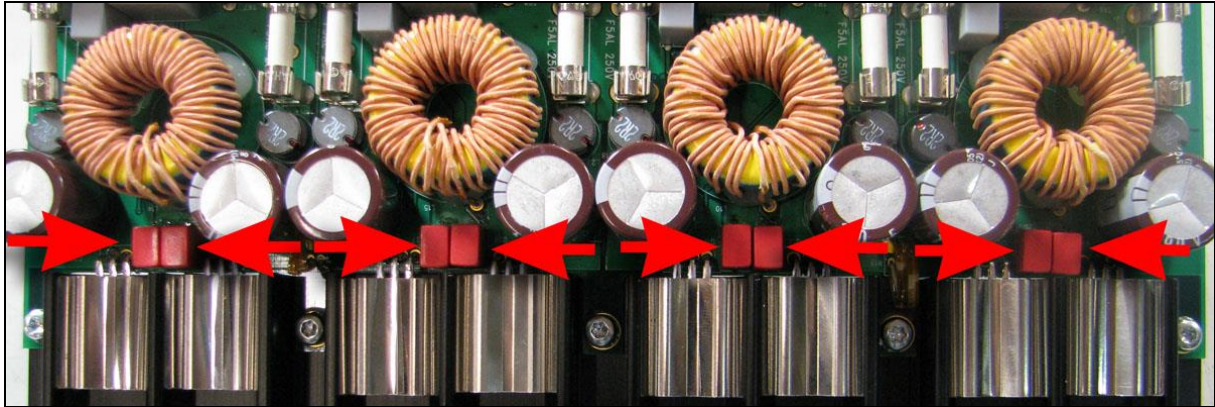
Instruction concerning A104d- P34001Revision "E"



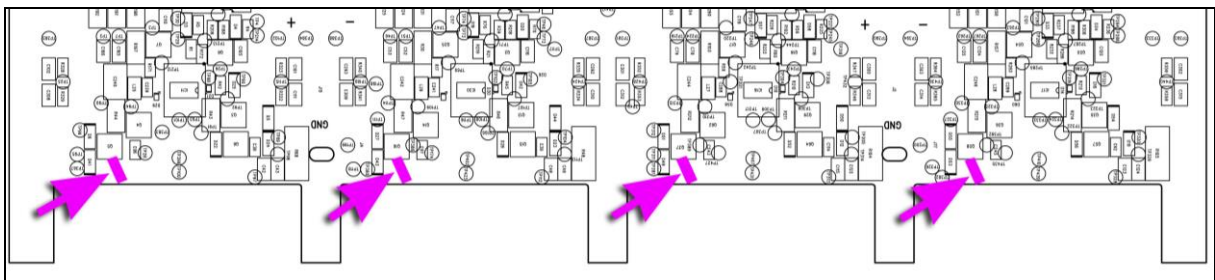
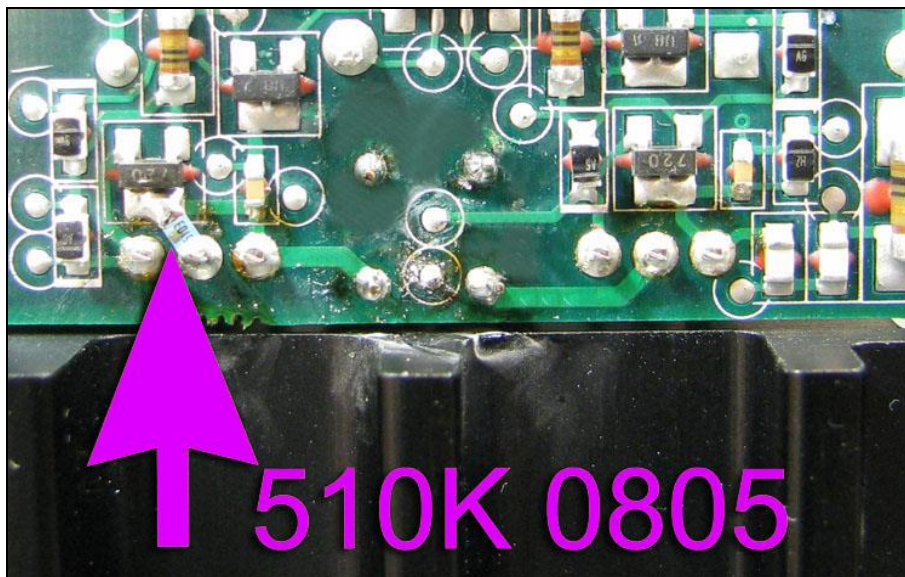
Remove capacitors C200-201, C204-205, C215-216 & C219-220.



Replace it with 0,1u 250V



Mount & solder 510K 0805 resistors at all channels according to picture.



Part numbers

Model	115V part number	230V part number
All C:X Series	See instructions above	See instructions above

Service repair report forms

Write “Technical Service Bulletin no.29” in the service repair report form, column “Repair Remedy” besides other normal repair information.

History

Date	Created By	Status	Bulletin no.	Comment
090123	JF	Old	10	Supersedes bulletin no 8 and 9.
090512	JF	Old	10	Update of following pages: 2 (22K removed), 5 and 11 (IRFB4233 information added). Correction of typing error.
101219	CL	Old	14	Supersedes bulletin no 8, 9 and 10.
111220	CL	Old	14	Updates on following pages 1 (AICO4B07c-F01, AICO4B07c-F02, AICO4BEXT07c-F01, AICO4BEXT07c-F02 Removed from Affected boards list) 3 (R0.8 added in parts list) 6,13,14,19 (Sticker BomName removed)
121128	AR	OLD	29	Updated A104D and SP20F information.
20140408	ALRIQ	SHARP	29	Service repair report form information added