NEC-MITSUBISHI ELECTRIC
VISUAL SYSTEMS CORPORATION

Service Bulletin

ISSUE DATE:2003/05/30 (YY/MM/DD)
SECTION:
AUTHOR :KAZUYOSHI MIYAZAWA/NMV
APPROVED BY:KIYOSHI MORITA/NMV

ISSUE NO.:CRT03-006

1. MODEL(S) AFFECTED：FE750(A), FE750(B), FE750(R), FE750(A)(C), FE750VE(B), FE950(A), FE950(B), FE950(R), FE1250(A), FE1250(B), FE1250(R)

2. SUBJECT:Countermeasure of R556 broken (Revise of CRT02-002)

3. AFFECTED SERIAL NO.:Please refer item 6.
ECN NO.:

4. REFURBISHMENT
LOCATION:HVT, ETC, Other
LOT:

5. COST CHARGE
PARTS:DIVISION
LABOR:DIVISION

6. DESCRIPTION:

The total amount will be charged back to NMV with oder #18-160-A029-M079.
Liaison is Mr. Misao Kihara, Shonan CSQA, NMV Japan.

- Note -
This bulletin is revised version of the service bulletin #CRT02-002.
Please discard the previous service bulletin #CRT02-002.

We revised the following service method from CRT02-002.
(1)Exchange of IC is IC541 only. IC491,IC851 are not exchanged.
(2)Add operation to IC541.
We add the thermal conductive sheet(3A107002:FLS300BH 20*20*3T) on IC541 after exchange of IC541.
(3)We changed order number to #18-160-A029-M079 for charge back.


ServiceProcedure.pdf

ProcedureD501_R556.pdf

ProcedureIC541.pdf

ProcedureIC541_additional operation.pdf

7. TABLE OF CHANGE

REASON FOR CHANGE
A. Improvement of performance
B. Improvement of reliability
C. To meet approved spec.
D. Standardization
E. Correction of previous info.
F. Change of materials
G. Others

INTERCHANGEABILITY

TYPE	PARTS	EARLY SET	LATE SET
A	ORIGINAL	OK	OK
	NEW	OK	OK
B	ORIGINAL	OK	NG
	NEW	OK	OK
C	ORIGINAL	NG	NG
	NEW	OK	OK
D	ORIGINAL	OK	NG
	NEW	NG	OK

REF.NUMBER (SYMBOL #)	CHANGE	PART NO.	DESCRIPTION	Q'TY	REASON	INTERC.	MODEL NAME
R556	FROM	404J9510	R.METAL 2.2H 5% 1/4W	1	B		FE750/950/1250
	TO	404K3609	R.METAL 2.2H 1% 1/2W	1			
IC541	FROM				B		FE750/950/1250
	TO	370KE048	QP20WZU	1			
	FROM						FE750/950/1250
	TO	3A107002	FLS300BH 20*20*3T	1	B		
	FROM						
	TO						
	FROM						
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	FROM						
	TO						
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ISSUE NO.:CRT03-006

- Note -

This bulletin is revised version of the service bulletin #CRT02-002.
Please discard the previous service bulletin #CRT02-002.

The result of cause investigation to which R556 becomes open, it turns out that IC541 which is power regulator for IC501 is operating incorrectly. It is thought that IC541 has received damage, point of bonding wire inside of IC has stress with over heat or abnormal welding conditions.

1. MODEL(S) AFFECTED： FE750(A), FE750(B), FE750(R), FE750(A)(C), FE750VE(B), FE950(A), FE950(B), FE950(R), FE1250(A), FE1250(B), FE1250(R),

2. SUBJECT: Countermeasure of R556 broken (Revise of CRT02-002)

3. AFFECTED SERIAL NO.: Please refer item 6.
ECN NO.:

4. REFURBISHMENT

LOCATION: HVT, ETC, Others

5. COST CHARGE

PARTS: DIVISION
LABOR: DIVISION

6. DESCRIPTION:

The total amount will be charged back to NMV with oder #18-160-A029-M079.

Liaison is Mr. Misao Kihara, Shonan CSQA, NMV Japan.

6-1. The scope of this countermeasure.

Model	Serial number
FE750(A)	Should apply to all units returned from customers.
FE750(B)	
FE750(R)	
FE950(A)	
FE950(B)	
FE950(R)	
FE1250(A)	
FE1250(B)	
FE1250(R)	
FE750(A)(C)	
FE750VE(B)	

6-2. Phenomenon :

R556 on Main PWB is damaged by the following reason.

a) Partial soldering of D501 on OSC PWB.

b) Parts problem of IC541 on OSC PWB.

~~c) Parts problem of IC491, IC851 on MAIN PWB. Since IC491 and IC851 is the same IC as IC541, It is for preventive action.~~

6-3. Tools:

(1) Soldering iron (Temperature control type, resistance more than 10 M-ohm)

(2) Solder remover (Temperature control type, resistance more than 10 M-ohm)

(3) The instrument measuring of temperature for solder iron.

(4) Solder (Diameter 0.5 mm)

(5) Flux (Ex. TAMURA　CF-150V)

(6) Tweezers for holding IC

6-4. Cautions of work:

(1) Measures for static electricity

Use resistance of solder iron more than 10 M-ohm.

To use list strap connected to the ground.

(2) The distribution method of IC.

Cut each reel and distribute IC.

Take out IC from the reel immediately before use, because the leads of IC might be damaged.

(3) Method of preserving IC.

Prevent IC from humidity.

(4) Measure the temperature of solder iron twice a day, and record in the management list.

The temperature of solder iron shall be set up with the temperature-measuring instrument for solder iron.

(Because we want to prove to SHARP that work is done appropriately)

(5) Use soldering iron adjusted to 320 deg C when remove solder.

(6) Use soldering iron adjusted to 320 deg C when soldering new IC.

Supply the flux to leads area and solder each leads.

Soldering condition) Temp. : 320 deg C, Time : Maximum 5 sec for each lead

(7) Don't change the temperature of soldering iron.

(8) Take off solder with the soldering remover, because the solder remains on PWB after taking IC. At that time, should be care to move soldering remover just horizontally along the soldering pad, to solve to peel soldering pad.

(9) Don't touch the fin of IC directly when fix the fin of IC by soldering iron.

(10) When to take touch up several times the re-soldering for an IC should be scrape, because of the IC is too delicate to take damage by high capacity of temperature.

(11) Use the tool for holding PWB horizontally when replacing IC.

6-5. Countermeasure :

(1) Add solder part of D501.

Refer to the documents of "Procedure D501_R556".

(2) Exchange R556 from 1/4 watt resister to 1/2 watt resister.

Refer to the documents of "Procedure D501_R556".

(3) Replace IC541

Refer to the documents of "Procedure IC541".

~~(4) Replace IC491, IC851~~

~~Refer to the documents of "Procedure IC491_IC851".~~

(4) Add thermal conductive sheet to IC541 for radiate heat of IC

Refer to the documents of "Procedure IC541 additional operation".

6-6. Disposal of exchanged IC541~~, IC491 and IC851~~ :

(1) The exchanged IC's lot shall be reported to the following periodically.

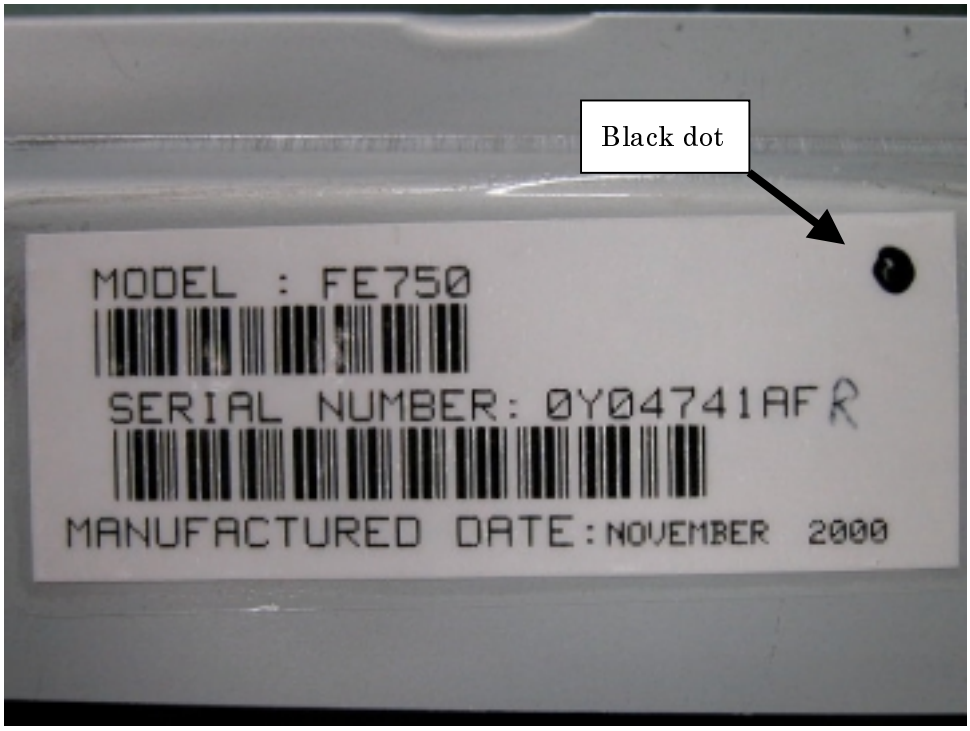
E-mail address : **tetsuya_shinohara@nmv.co.jp**

(2) The exchanged IC shall be sent to the following, in order to analyze the cause.

Tetsuya Shinohara
Engineering Department, 2nd CRT Engineering Section
NEC-MITSUBISHI Electric Visual Systems Corporation
686-1, Nishioi, Oi-machi, Ashigarakami-gun, Kanagawa, 258-8533
Japan

6-7. The marking for discrimination :

Add black dot to Serial Number label.



7. TABLE OF CHANGE

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A. Improvement of performance
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REF.NUMBER (SYMBOL #)	CHANGE	PART NO.	DESCRIPTION	Q'TY	REASON	INTERC.	MODEL NAME
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IC541	FROM				B		FE750/950/1250
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	FROM						FE750/950/1250
	TO	3A107002	FLS300BH 20*20*3T	1	B		
	FROM						
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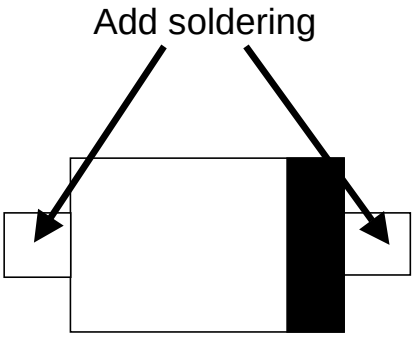
[Procedure D501_R556]

6-5. Countermeasure :

(1) Add soldering on lead of D501.



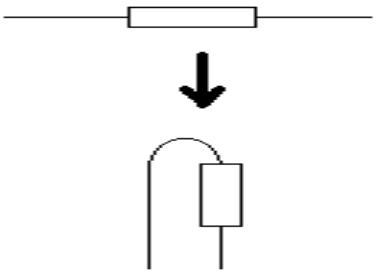
6-5. Countermeasure :

(2) Exchange R556 from 1/4 watt resister to 1/2 watt resister.

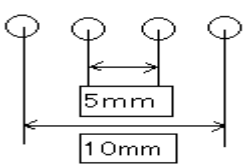
<Procedure>

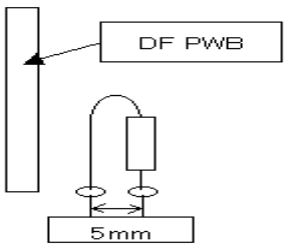
Application:

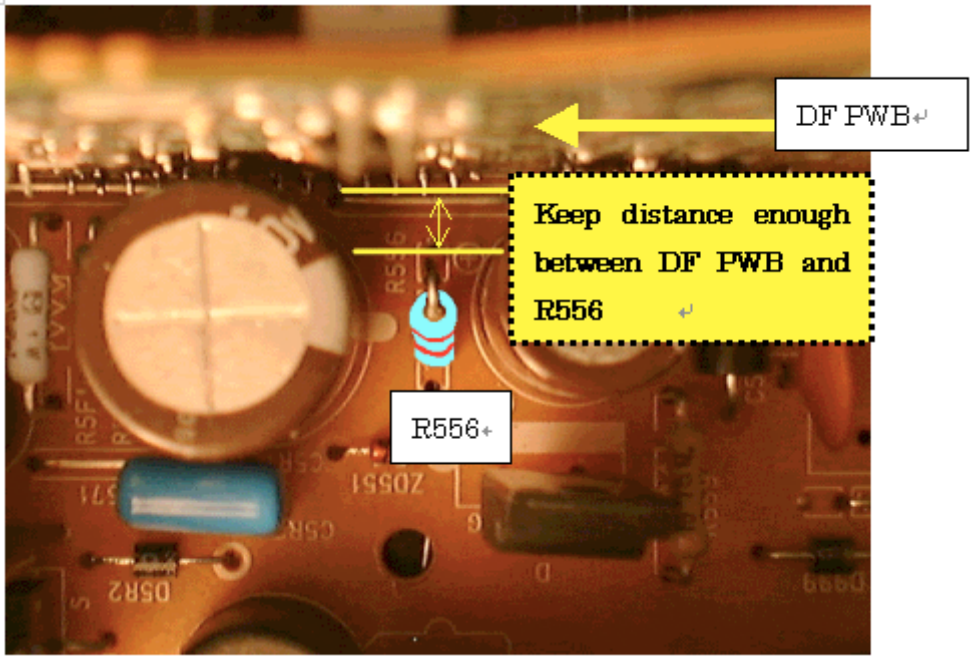
a) To apply the read forming as follow.

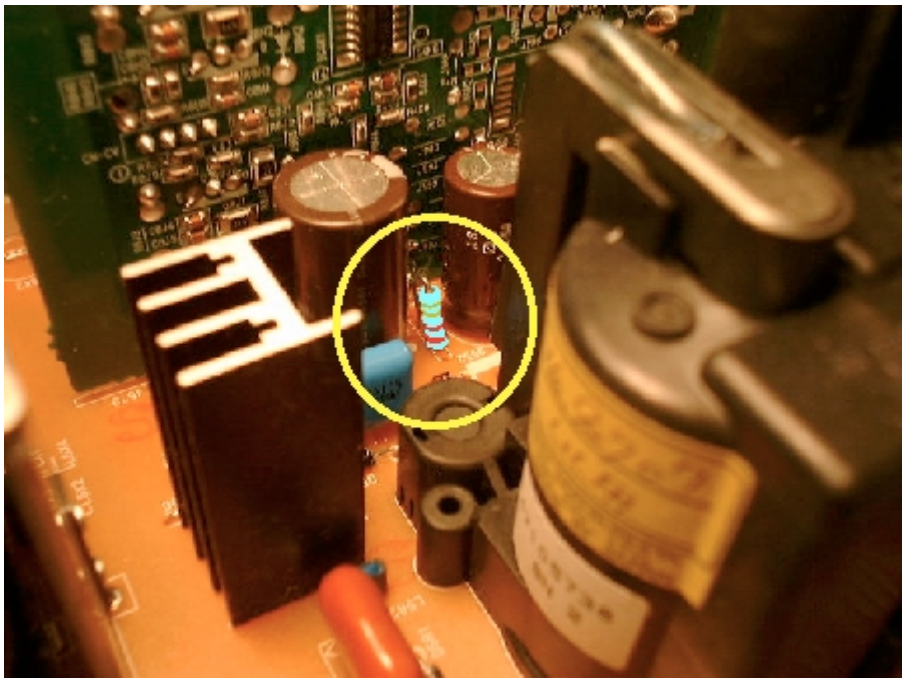


b) To insert the formed resistor using pitch 5 mm holes as attached.






DF PWB
Keep distance enough between DF PWB and R556
R556

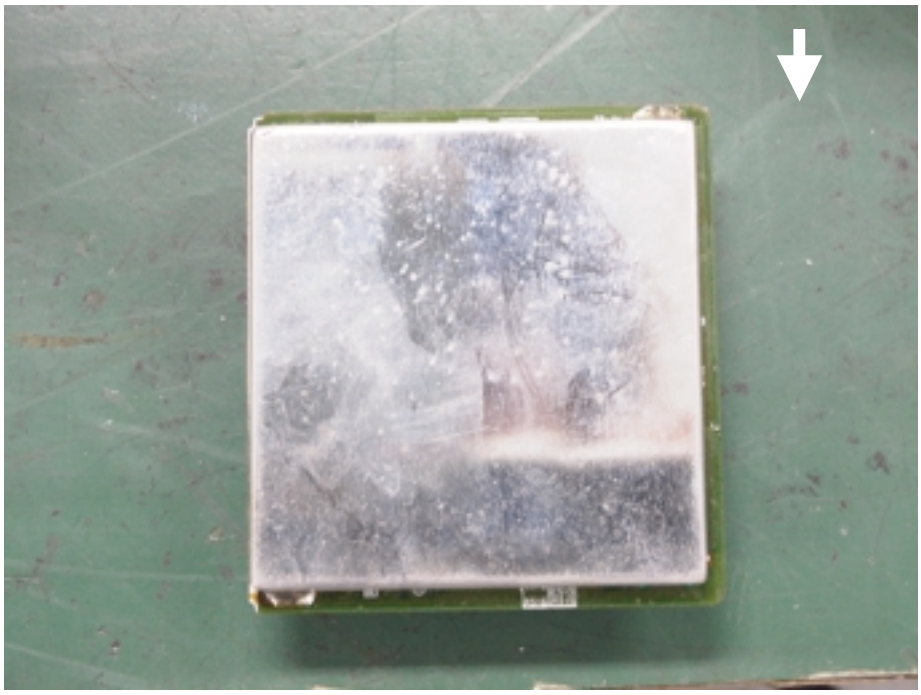


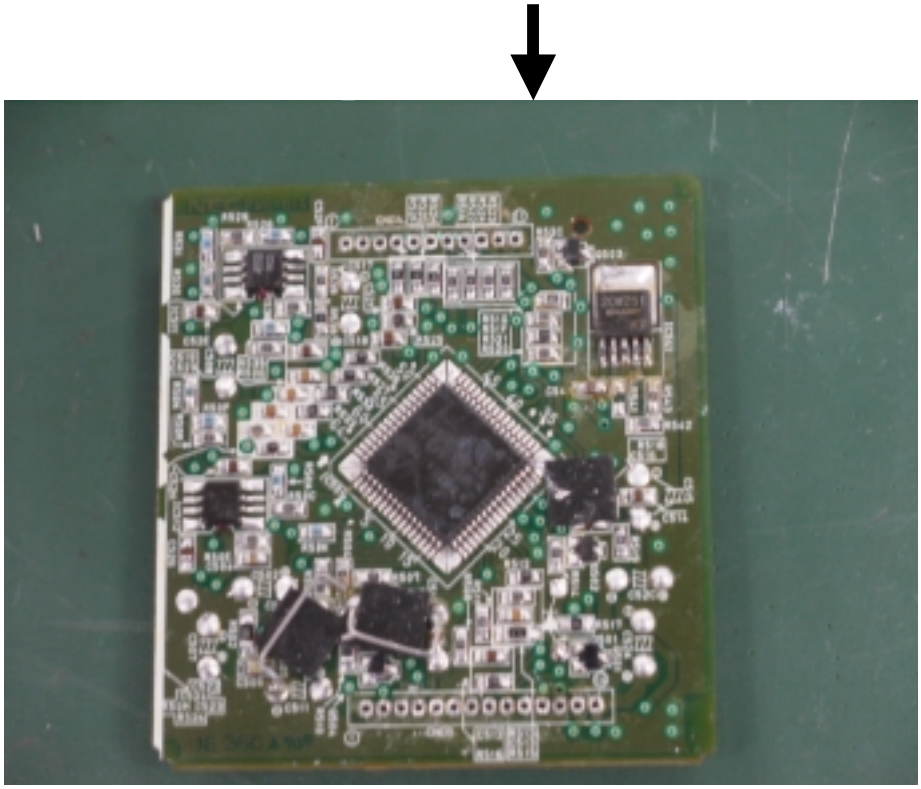
[Procedure IC541]

6-5. Countermeasure :

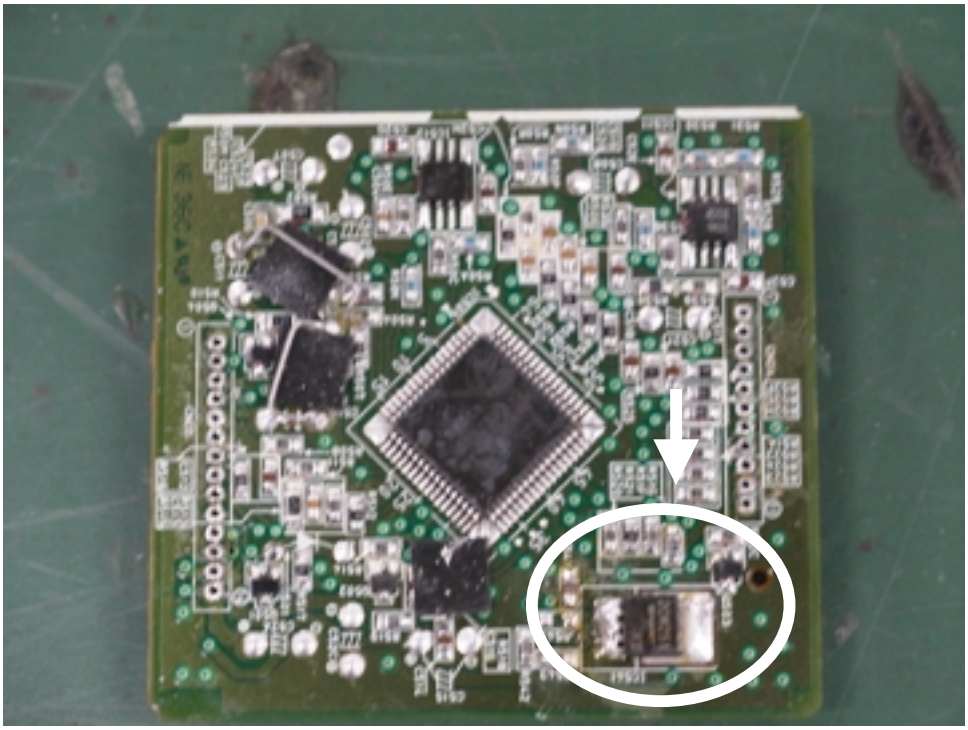
(3) Replace IC541

a) De-solder SHIELDING-CASE(2 ponits) to take it off OSC-PWB.

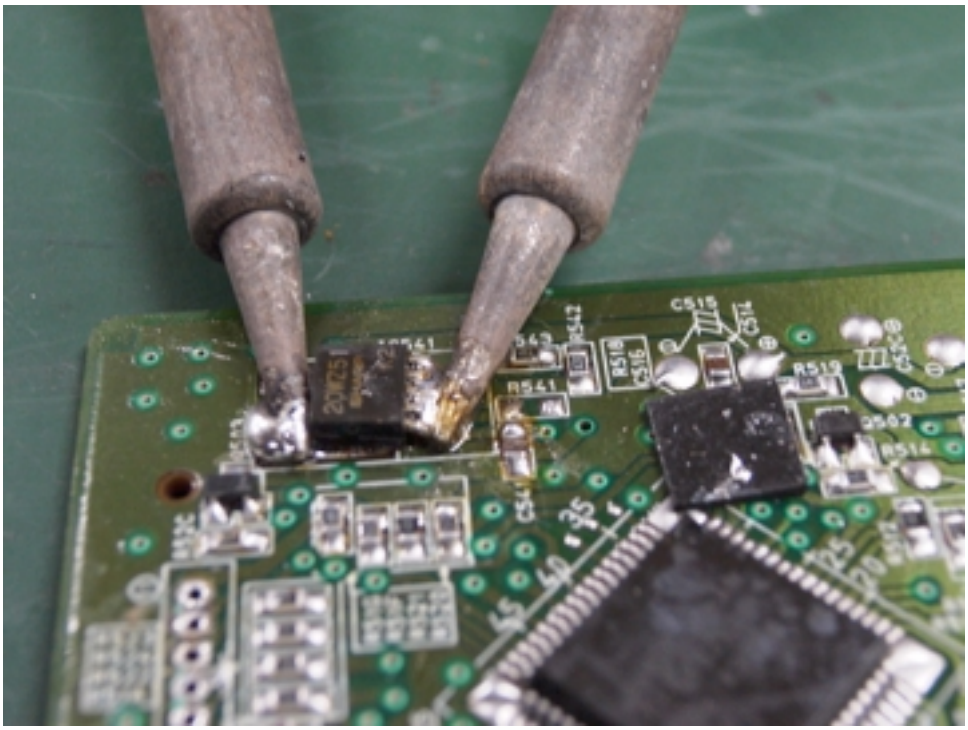




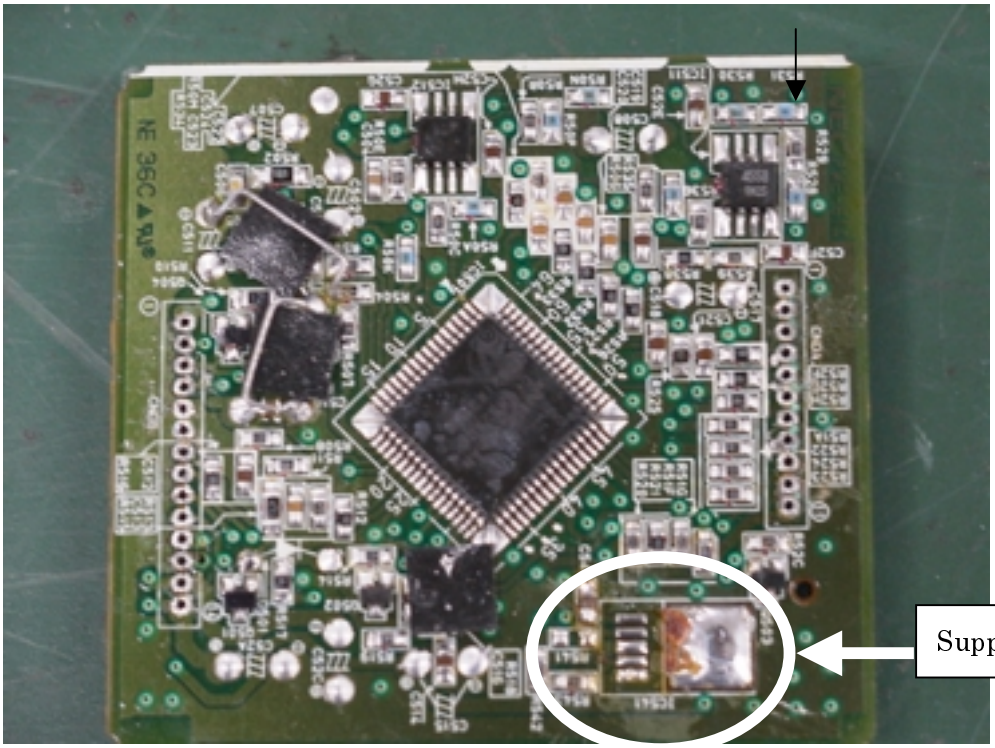
b) Supply additional solder to IC541's 5 leads to make solder bridge.



c) Heat IC541's 5 leads and head of body(fin) at the same time with 2 soldering irons.
When the solder is melted, take IC541 with pliers.
Please do not heat it to excess. If it's too much to heat, soldering pad will be lifted.

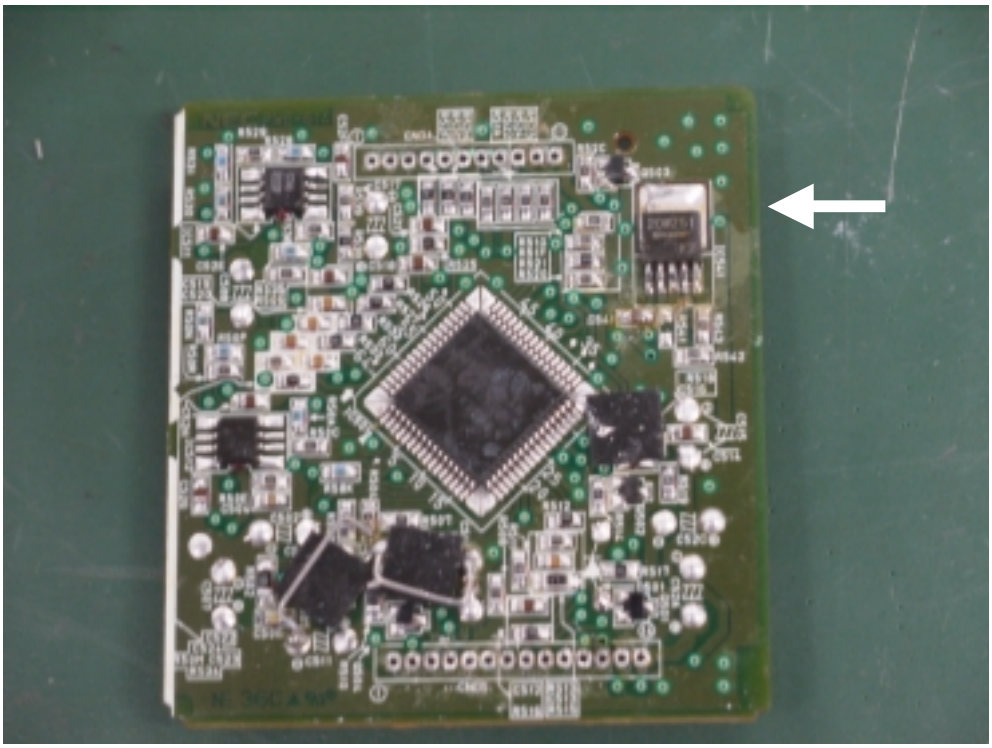


d) Clean soldering pad on OSC-PWB with de-soldering tool, and To connect head of body(fin) temporarily, Supply a little solder to soldering pad.



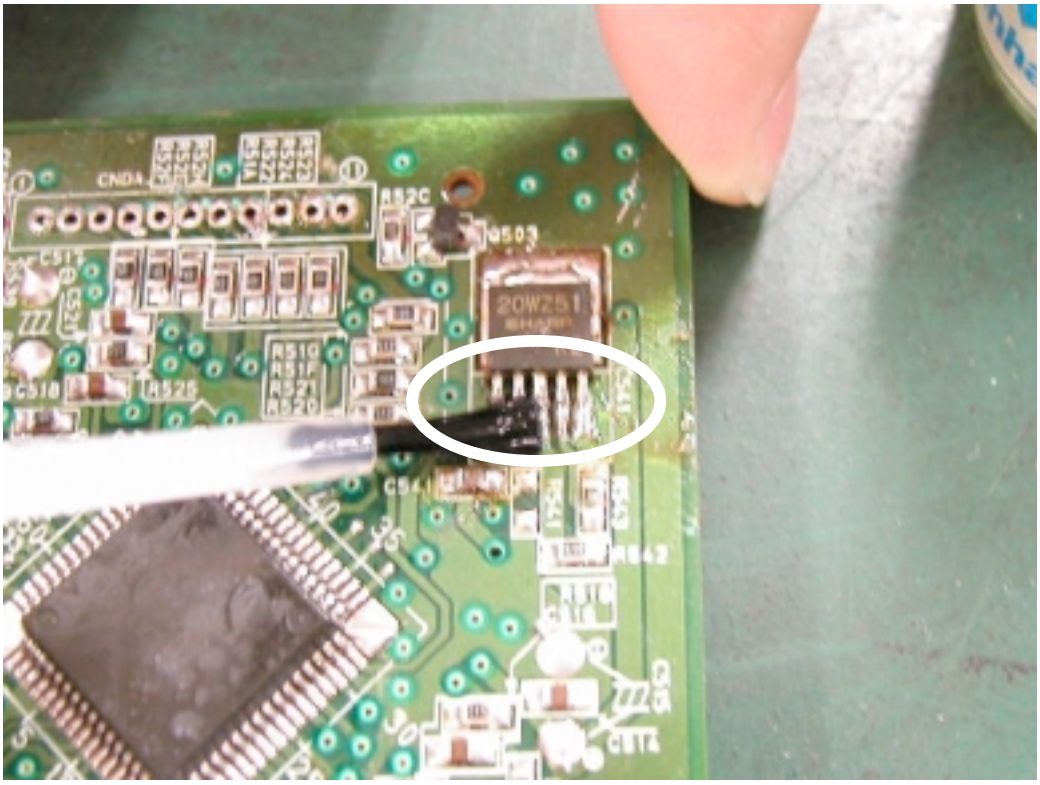
e) Place new IC541 on soldering pad and solder head of body(fin).

Soldering condition) Temp : 320℃, Time : Maximum 5 sec

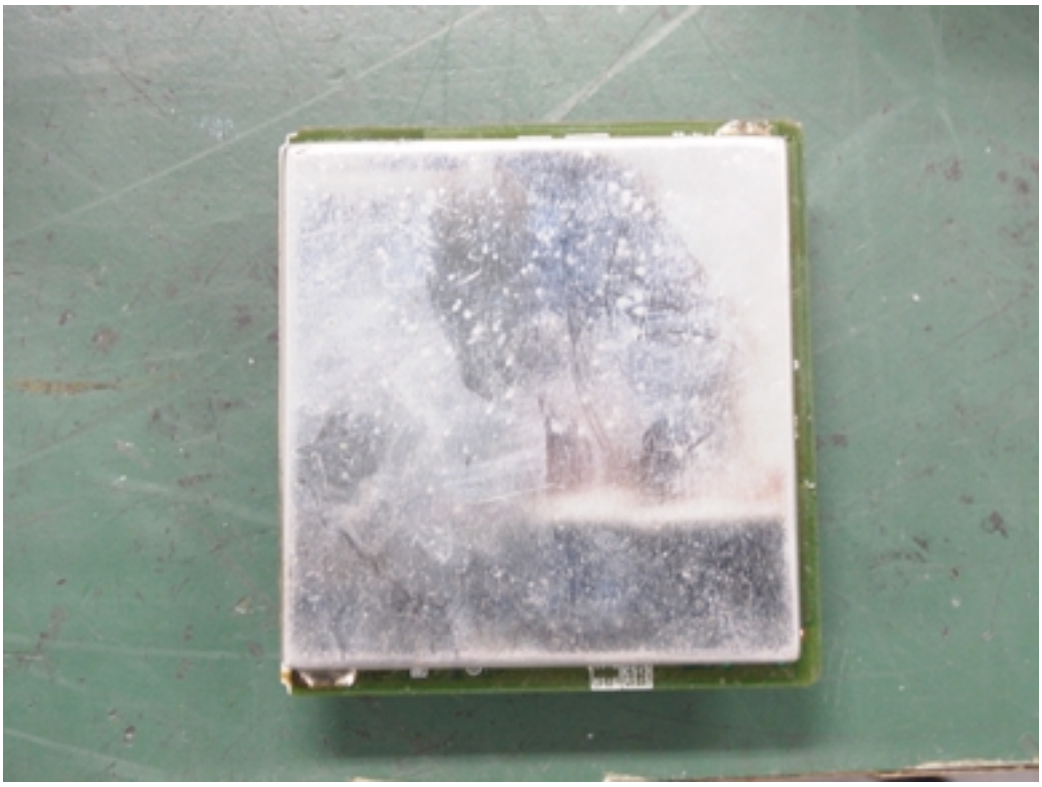


f) Supply the flux to leads area and solder each leads and head of body.

Soldering condition) Temp : 320℃, Time : Maximum 5 sec for each lead

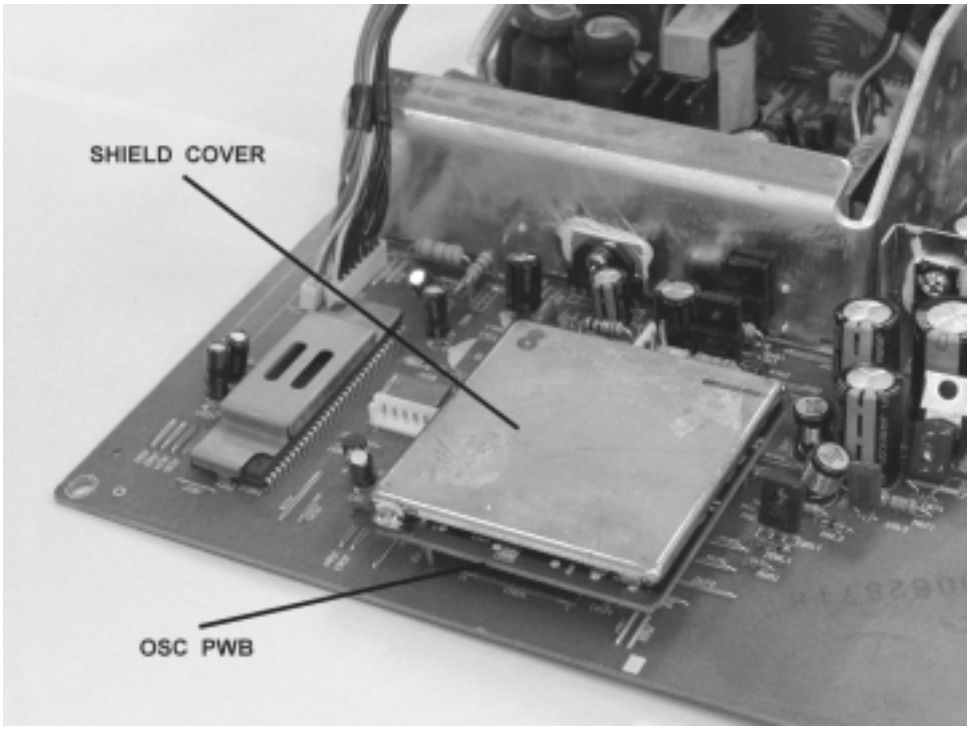


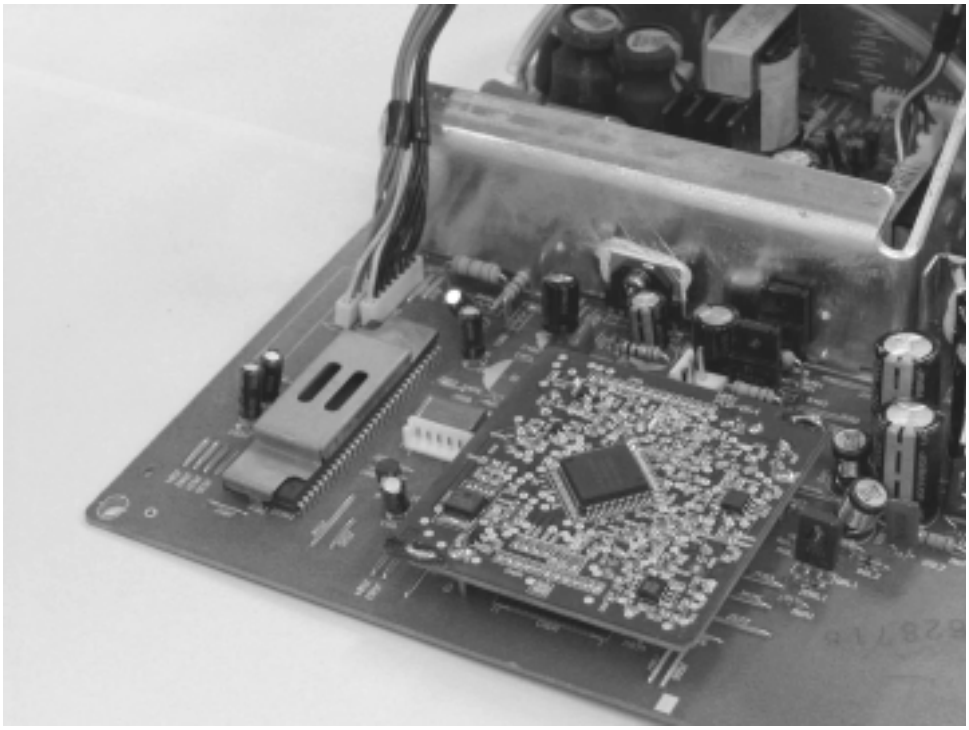
g) Put SHIELDING-CASE on OSC-PWB and solder it(2 ponints).



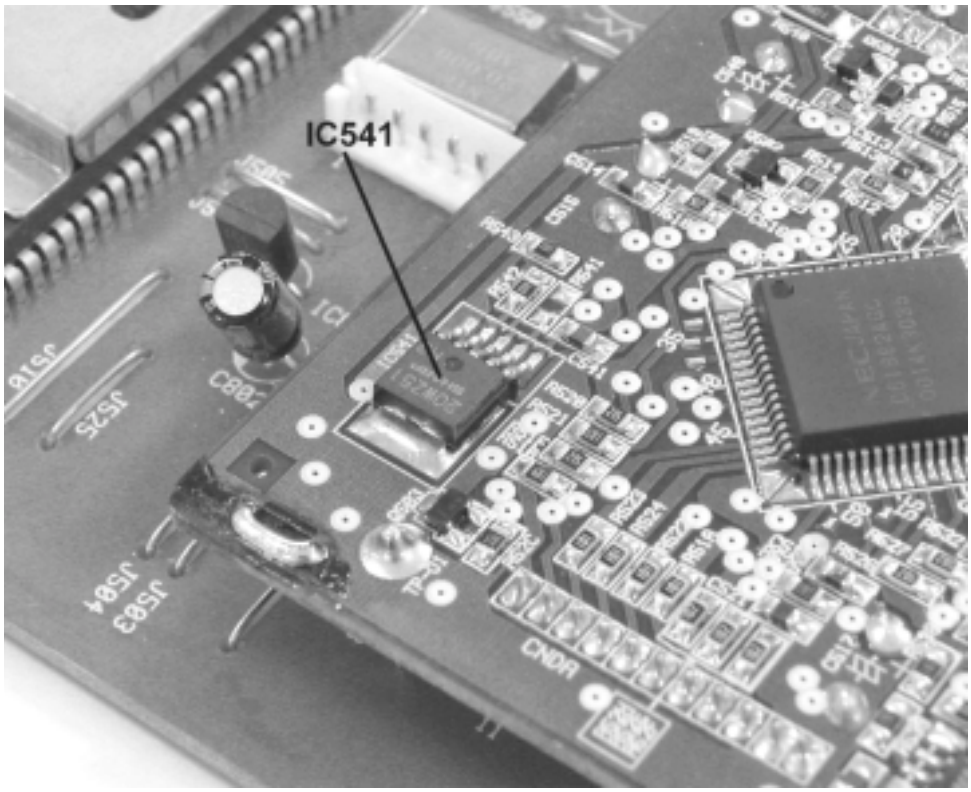
The way of putting a sheet

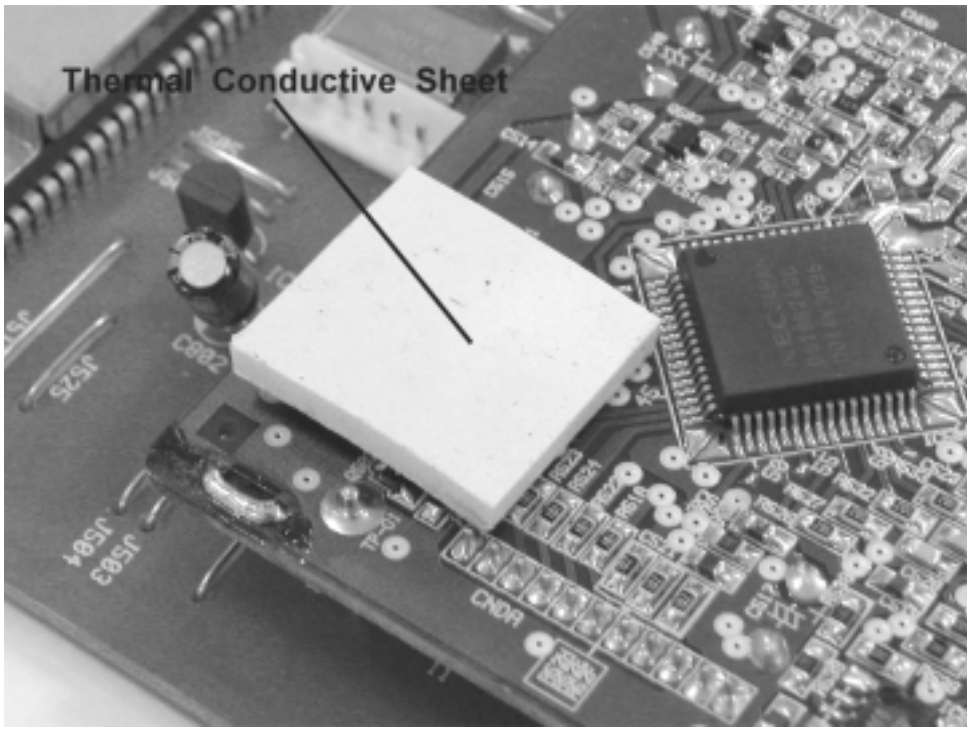
1. **A shield cover is removed from OSC PWB.**



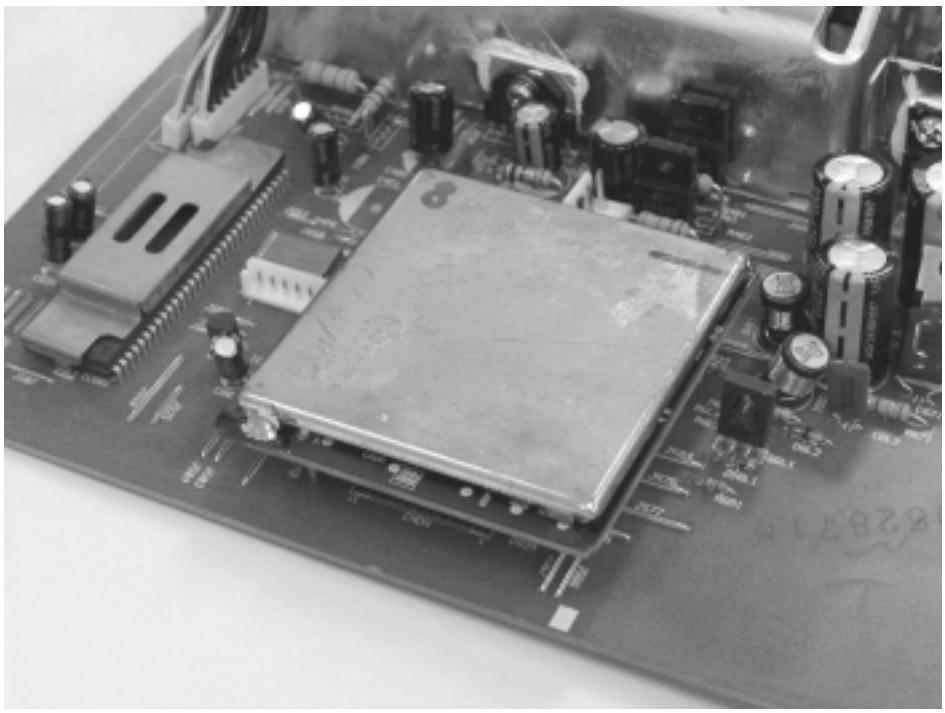


2. A thermal conductive sheet is placed on IC541





3. A shield cover is soldered to the OSC PWB.



notes

The purpose to put a sheet is for IC541 to radiate.
So, Please put this sheet to touch IC541 and a shield cover well.