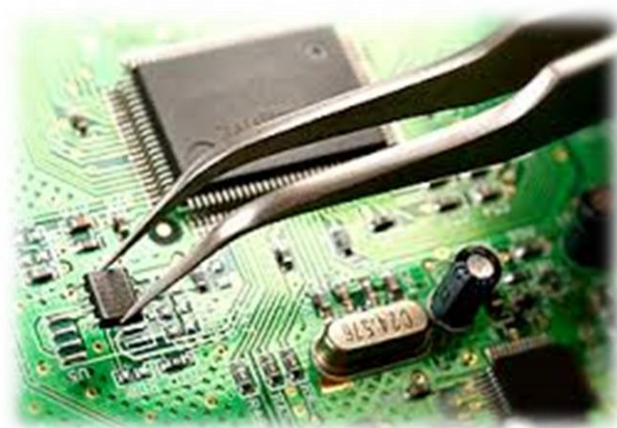


FY16 Models LCDTV Main 4K MCB (GN2TR) Easy Repair Guide (ERG)

Easy Repair Tips

(Model: FY16 4K GN2TR – BFM BOARD)

By SOEM-BRC



Board Model: BFM Board

No.	Title	Page
1	No Power / No Response / TV Reboot	4 ~ 10
2	HDMI No Picture / HDMI Not Working	11 ~ 17

***Contents are as per findings SOEM-BRC Team*

Title #1

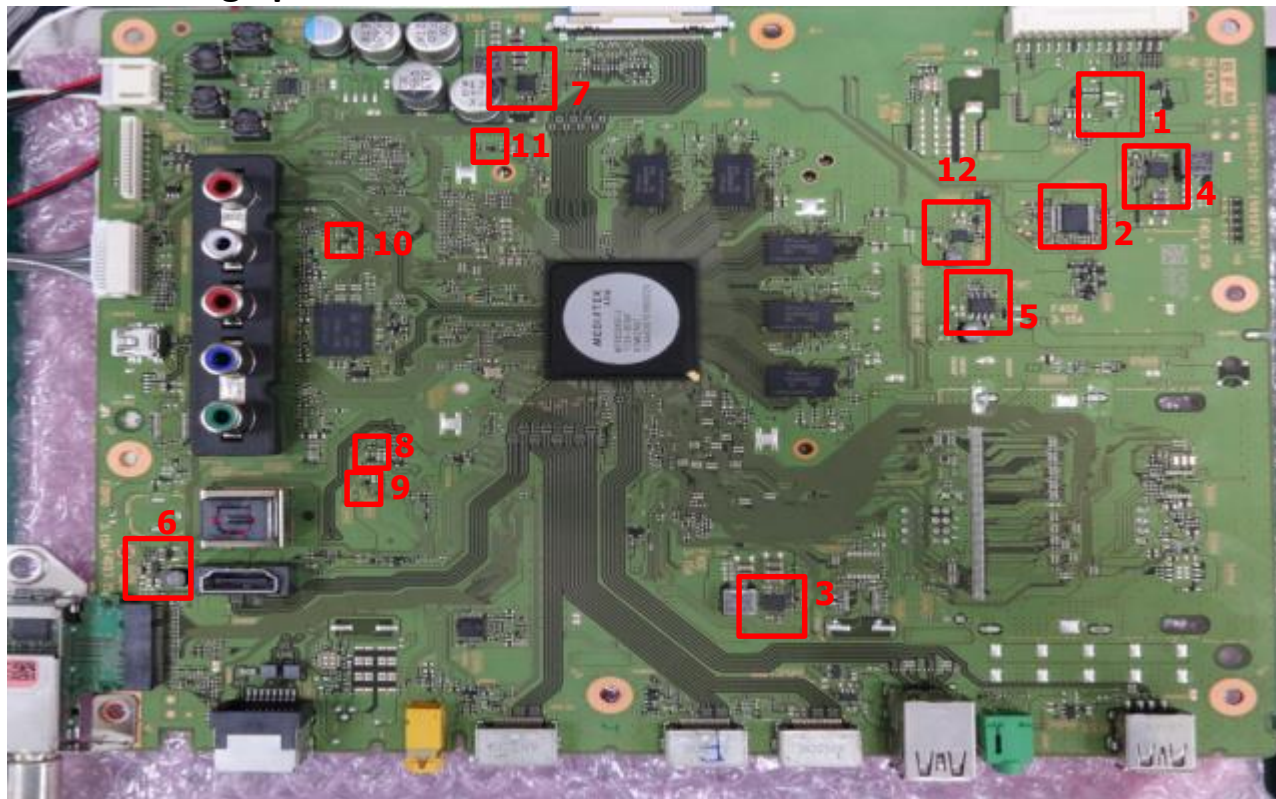
No Power / No Response / TV Reboot

#	Parts Ref	Symptom	Part Number	Remarks
1	IC401 IC402 IC403 IC404 IC405 IC604 IC602 IC605 IC606 IC603 IC601	No Power / No Response / TV Reboot	6-721-987-11 (IC PIC16F527T-I/SS) 6-721-997-01 6-721-997-01 (IC AOZ1236QI-01) 6-721-356-01 (IC BD9D320EFJ-E2) 6-722-698-01 (IC TPS562209DDCR) 6-721-990-01 (IC AOZ1267QI) 6-722-761-01 6-722-761-01 (IC MM3411Z10RRE) 6-722-761-01 6-722-899-01 (IC MM3571Z10RRE) 6-722-077-01 (IC BD9B300MUV)	*Please replace mainboard for IC1000 failure.

Symptom: No Power , Reboot & No Response

Checking Steps:

Check main voltage point :- *(refer to all Red Box below)*



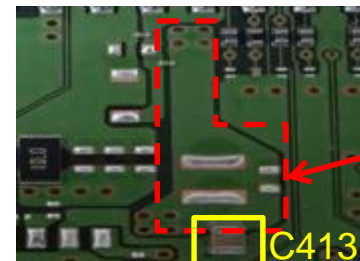
*Note: 1. Follow the number sequence/step during confirmation.
2. If each point found NG, please replace the component/parts*

Symptom: No Power / No Response / Reboot

1. -C413 (STBY 3.3V)

-Voltage point measure : 3.3V

No voltage or point short to GND → **IC1000 NG ***



1. - (STBY 3.3V)
Tapping area

*U-Com Failure

2. -IC401 (6-721-987-11)

a) Pin 15 (P_ON_LNB) -Voltage point measure : >3.0V

-No voltage → Change **IC401**

b) Pin 11 (P_ON_VBUS) -Voltage point measure : >3.0V

-No voltage → Change **IC401**

c) Pin 13 (P_ON_#1) -Voltage point measure : >3.0V

-No voltage → Change **IC401**

d) Pin 14 (P_ON_#2) -Voltage point measure : >3.0V

-No voltage → Change **IC401**

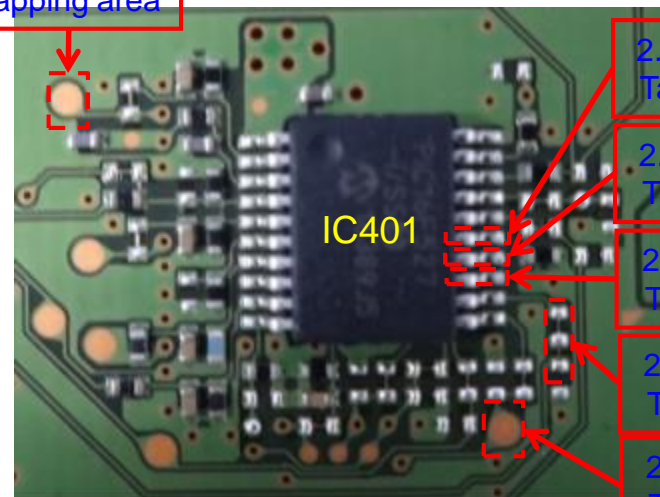
e) Pin 12 (ORESETB) -Voltage point measure : >3.0V

-No voltage → Change **IC401**

f) Pin 2 (OPWRSB) -Voltage point measure : 0V

-If have voltage > 0V → **IC1000 NG ***

2.f - (PIN 2)
Tapping area



2.a - (PIN 15)
Tapping area

2.d - (PIN 14)
Tapping area

2.c - (PIN 13)
Tapping area

2.e - (PIN 12)
Tapping area

2.b - (PIN 11)
Tapping area

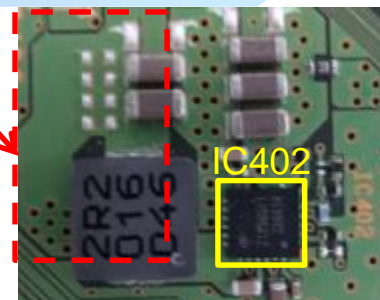
Symptom: No Power / No Response / Reboot

*DDCon / LDO Check

3. -IC402 (+5.0V_VBus)

- Voltage point measure : 5.0V
- No voltage → Change IC402 (6-721-997-01)

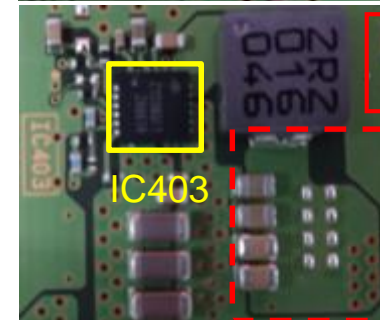
3. - (5.0V)
Tapping area



4. -IC403 (+3.3V_DDC_OUT)

- Voltage point measure : 3.3V
- No voltage → Change IC403 (6-721-997-01)

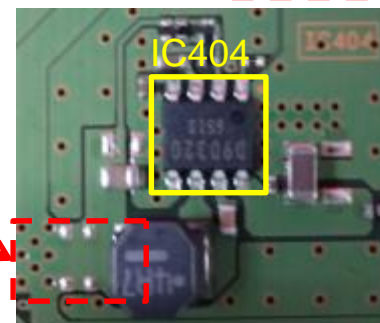
4. - (3.3V)
Tapping area



5. -IC404 (+5V_MAIN)

- Voltage point measure : 5.0V
- No voltage → Change IC404 (6-721-356-01)

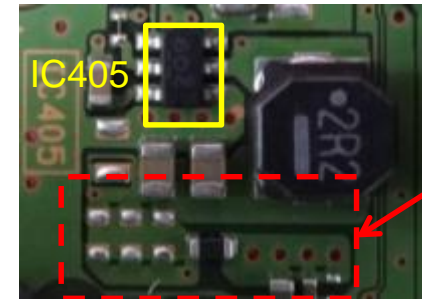
5. - (5V)
Tapping area



Symptom: No Power / No Response / Reboot

6. -IC405 (+1.8V_TU)

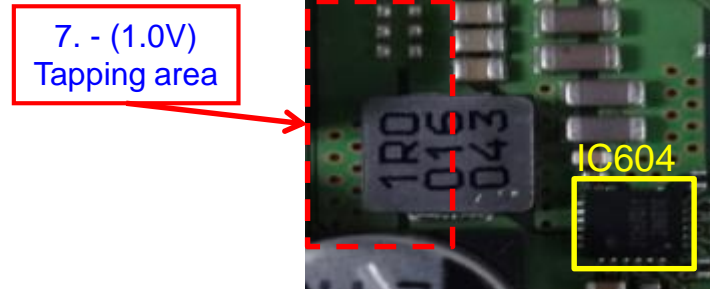
- Voltage point measure : 1.8V
- No voltage → Change **IC405 (6-722-698-01)**



6. - (1.8V)
Tapping area

7. -IC604 (+1.0V)

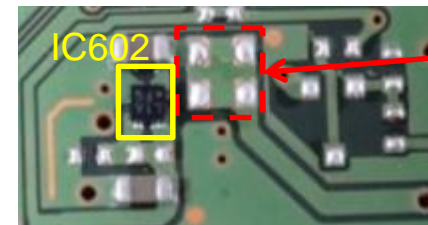
- Voltage point measure : 1.0V
- No voltage → Change **IC604 (6-721-990-01)**



7. - (1.0V)
Tapping area

8. -IC602 (+1.05V_M2_STBY)

- Voltage point measure : 1.05V
- No voltage → Change **IC602 (6-722-761-01)**



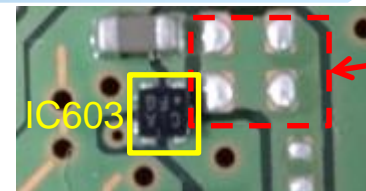
8. - (1.05V)
Tapping area

Symptom: No Power / No Response / Reboot

9. -IC603 (+1.05V_M2_A_1)

-Voltage point measure : 1.05V

-No voltage → Change IC603 (6-722-899-01)

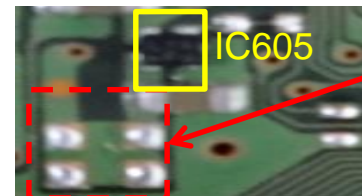


9. - (1.05V)
Tapping area

10. -IC605 (+1.05V_M2_ST_ET)

-Voltage point measure : 1.05V

-No voltage → Change IC605 (6-722-761-01)

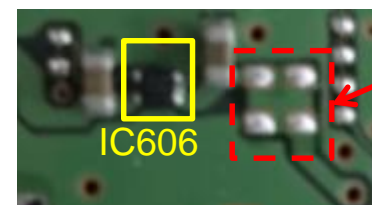


10. - (1.05V)
Tapping area

11. -IC606 (+1.05V_M2_A_2)

-Voltage point measure : 1.05V

-No voltage → Change IC606 (6-722-761-01)

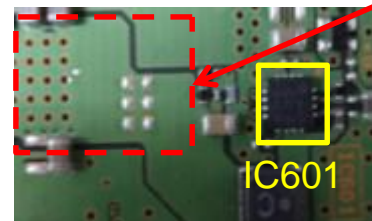


11. - (1.05V)
Tapping area

12. -IC601 (+1.5V_DDR)

-Voltage point measure : 1.5V

-No voltage → Change IC601 (6-722-077-01)



12. - (1.5V)
Tapping area

***If all above voltage is OK, you can try UART communication. If still remain, IC1000 NG ***

Title #2

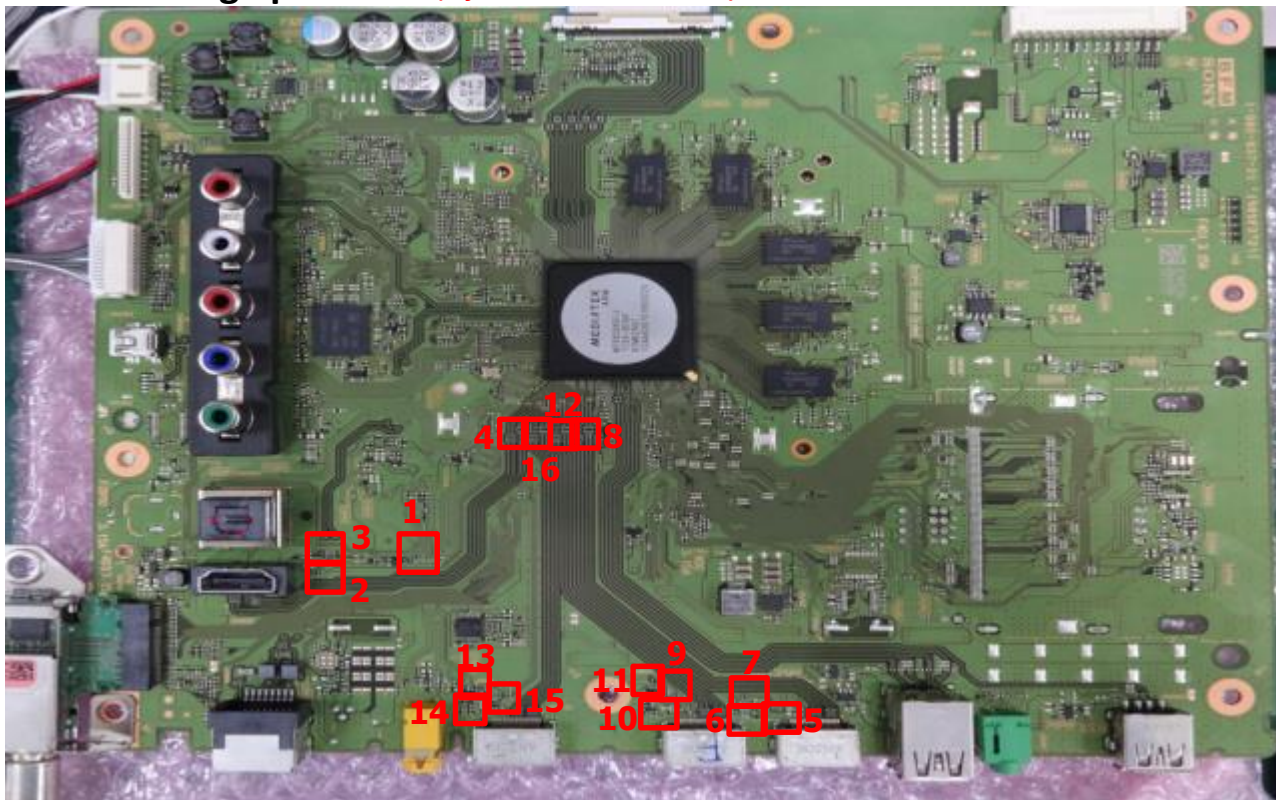
HDMI No Picture / HDMI Not Working

#	Parts Ref	Symptom	Part Number	Remarks
1	R3646 R3644 R3645 R3647	HDMI No Picture / HDMI Not Working	1-218-953-11 1-218-933-11 (RESISTOR, CHIP 1K 1/16W) 1-218-953-11 1-218-933-81 (RESISTOR, CHIP 22 1/16W)	*Please replace mainboard for IC1000 failure.

Symptom: HDMI No Picture / HDMI Not Working

Checking Steps:

Check main voltage point :- (refer to all Red Box below)



- Note: 1. Follow the number sequence/step during confirmation.
2. If each point found NG, please replace the component/parts

Symptom: HDMI No Picture / HDMI Not Working

*HDMI 1

1. + 5V Line

- Voltage point measure : 4.7~5.3V
- No voltage → Change **R3646 (1-218-953-11)**

2. HPD Line

- Voltage point measure : 2.4~5.3V
- No voltage → Change **IC1000 NG ***

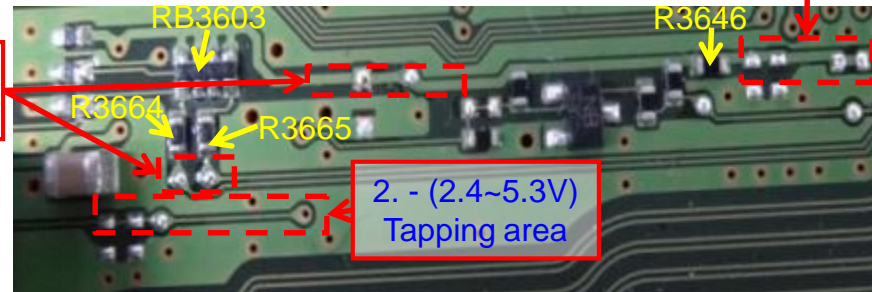
3. DDC Line

- Voltage point measure : 5V
- Check parts RB3603, R3664, R3665
- No Voltage → Change Parts NG
- Have voltage → Change **IC1000 NG***

4. TMDS Line

- Voltage point measure : 3.0V~3.3V
- Check parts RB3619, RB3620, RB3611, RB3612
- No Voltage → Change Parts NG
- Have voltage → Change **IC1000 NG***

3. - (5V)
Tapping area



1. - (4.7~5.3V)
Tapping area

2. - (2.4~5.3V)
Tapping area



4. - (3.0V~3.3V)
Tapping area

Symptom: HDMI No Picture / HDMI Not Working

*HDMI 2

5. + 5V Line

- Voltage point measure : 4.7~5.3V
- No voltage → Change **R3647 (1-218-933-81)**

6. HPD Line

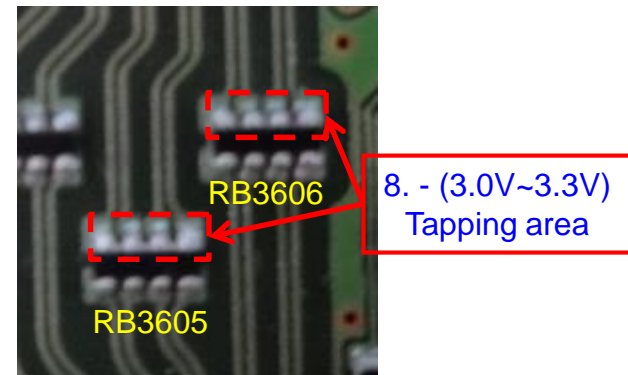
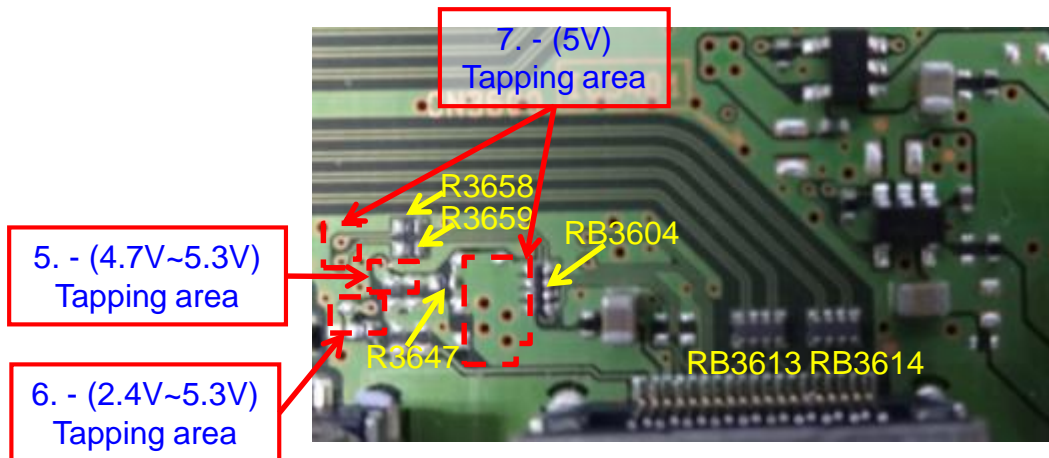
- Voltage point measure : 2.4~5.3V
- No voltage → Change **IC1000 NG ***

7. DDC Line

- Voltage point measure : 5V
- Check parts RB3604,R3658,R3659
- No Voltage → Change Parts NG
- Have voltage → Change **IC1000 NG***

8. TMDS Line

- Voltage point measure : 3.0V~3.3V
- Check parts RB3613,RB3614,RB3605,RB3606
- No Voltage → Change Parts NG
- Have voltage → Change **IC1000 NG***



Symptom: HDMI No Picture / HDMI Not Working

*HDMI 3

9. + 5V Line

- Voltage point measure : 4.7~5.3V
- No voltage → Change **R3644 (1-218-953-11)**

10. HPD Line

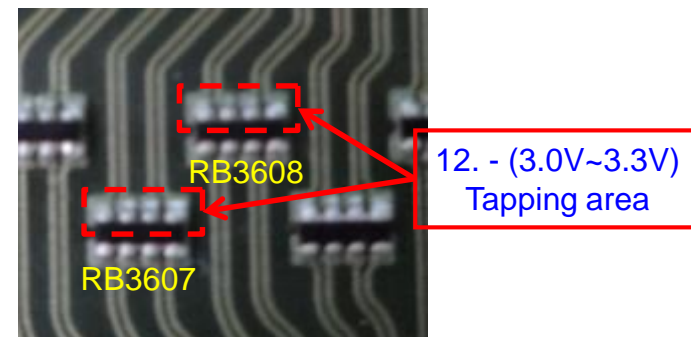
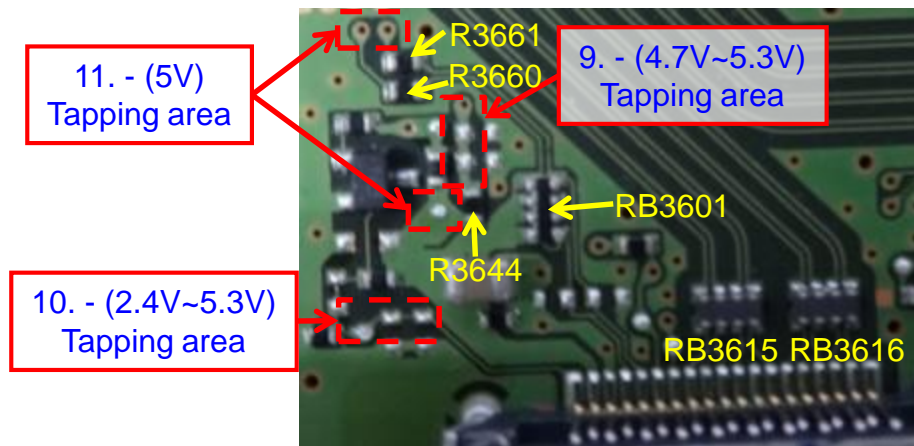
- Voltage point measure : 2.4~5.3V
- No voltage → Change **IC1000 NG ***

11. DDC Line

- Voltage point measure : 5V
- Check parts RB3601,R3660,R3661
- No Voltage → Change Parts NG
- Have voltage → Change **IC1000 NG ***

12. TMDS Line

- Voltage point measure : 3.0V~3.3V
- Check parts RB3615,RB3616,RB3607,RB3608
- No Voltage → Change Parts NG
- Have voltage → Change **IC1000 NG ***



Symptom: HDMI No Picture / HDMI Not Working

*HDMI 4

13. + 5V Line

- Voltage point measure : 4.7~5.3V
- No voltage → Change **R3645 (1-218-953-11)**

14. HPD Line

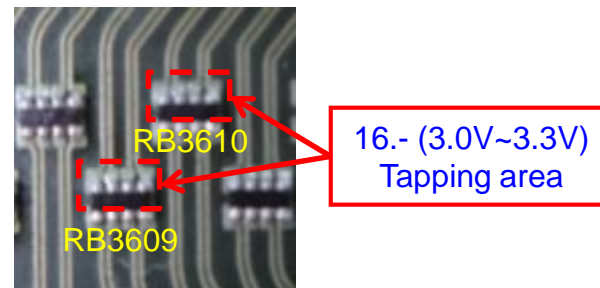
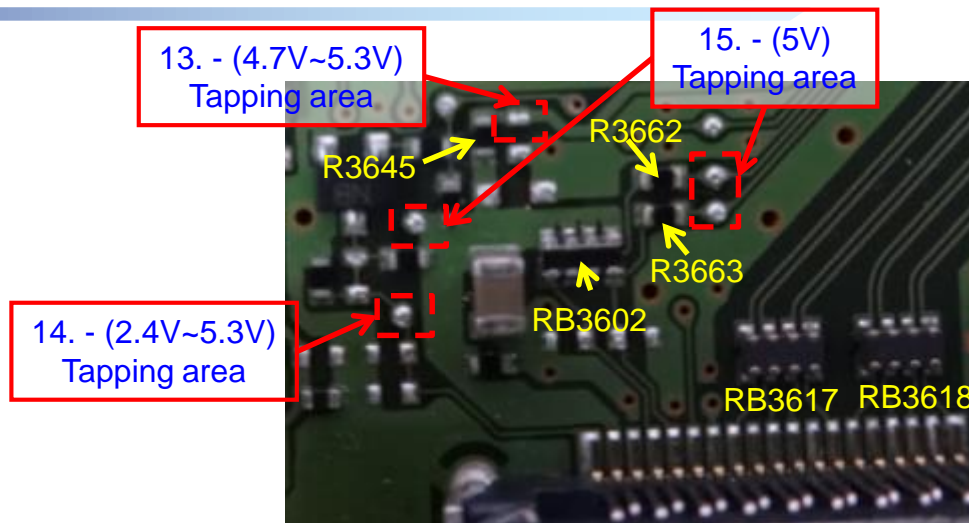
- Voltage point measure : 2.4~5.3V
- No voltage → Change **IC1000 NG ***

15. DDC Line

- Voltage point measure : 5V
- Check parts **RB3602,R3662,R3663**
- No Voltage → Change Parts NG
- Have voltage→ Change **IC1000 NG***

16. TMDS Line

- Voltage point measure : 3.0V~3.3V
- Check parts **RB3617,RB3618,RB3609,RB3610**
- No Voltage → Change Parts NG
- Have voltage→ Change **IC1000 NG***



End Of File

