



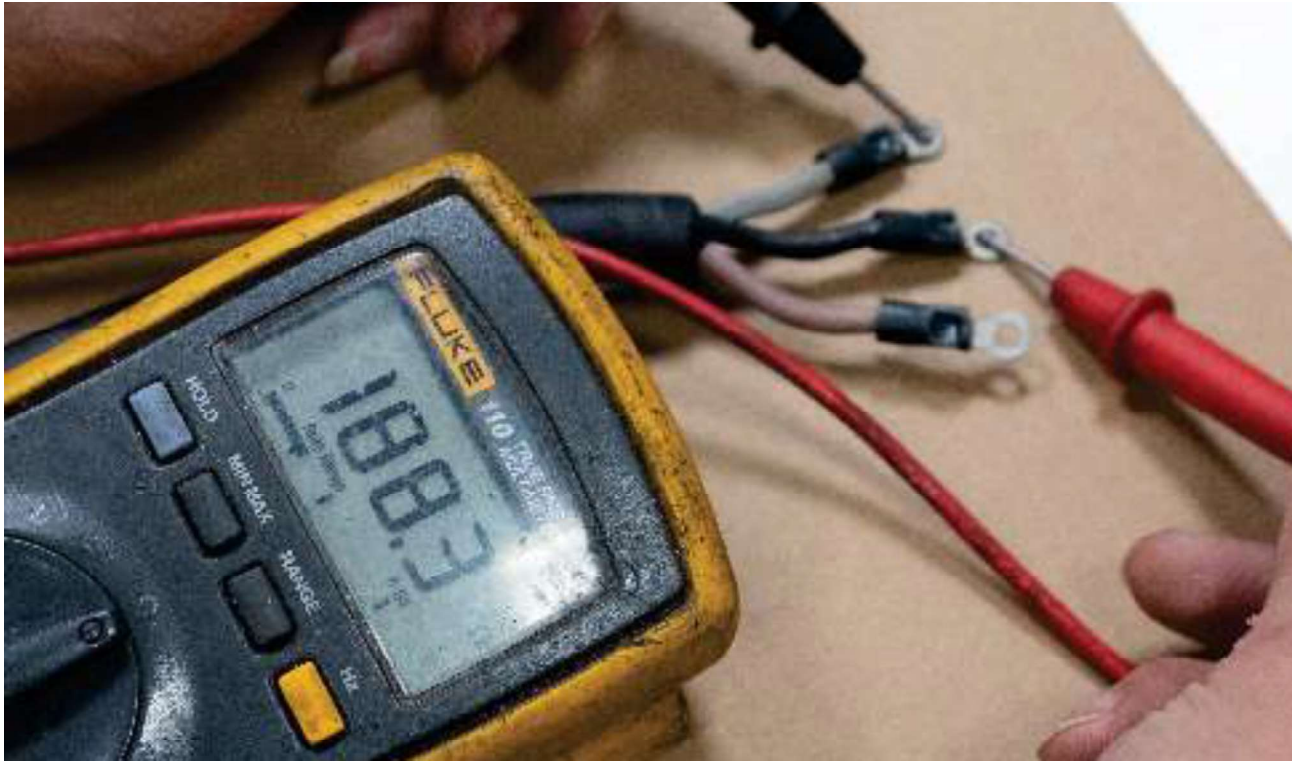
# CE-35 inspection instruction for Edenox

Transformer/Mainboard/IGBT module Inspection

Only for authorized personnel or group

•This instruction is for SEF's 3.5KW models, such as:

- 19001562 IE-35 / CB-35A
- 19001564 ISM-35 / CT-35A
- 19001565 IW-35 / CW-35A
- 19001566 IWE-35 / CBW-35A
- 19048693 IE-35-D / CB-70A (3.5KW module x 2)



## Starts from the power cord (1)

- Starts from power cords to examine if the front or rear zone failed.
- (19048693 IE-35-D / CB-70A)  
There will be a label sticker on the back of the unit indicating the attribute of each cord. Take left photo for example, Grey=N ; Brown =L1 ; Black=L2.

When it was shipped from SEF, L1 always comes from the front zone, while L2 the rear zone.

- (other models) There will be only L and N.
- Measuring L1&N, you will get resistance of  $200\Omega + / - 10\%$  if it is under normal condition.



- Measuring N&L2, you will get resistance of  $200\Omega + / - 10\%$  if it is under normal condition.

Starts from the power cord  
(2)



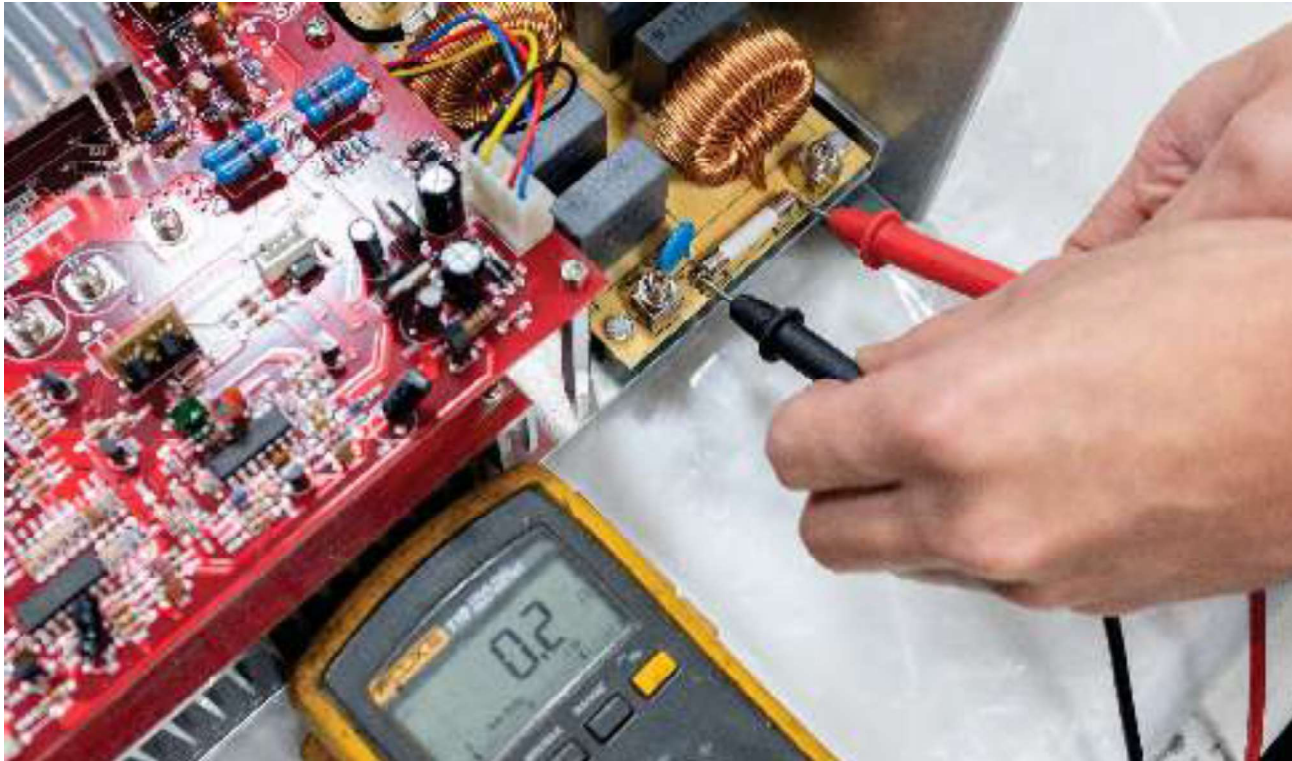
- (19048693 IE-35-D / CB-70A)  
Measuring L1&L2, you will get resistance of  $400\Omega + / - 10\%$  if it is under normal condition.

Starts from the power cord  
(3)



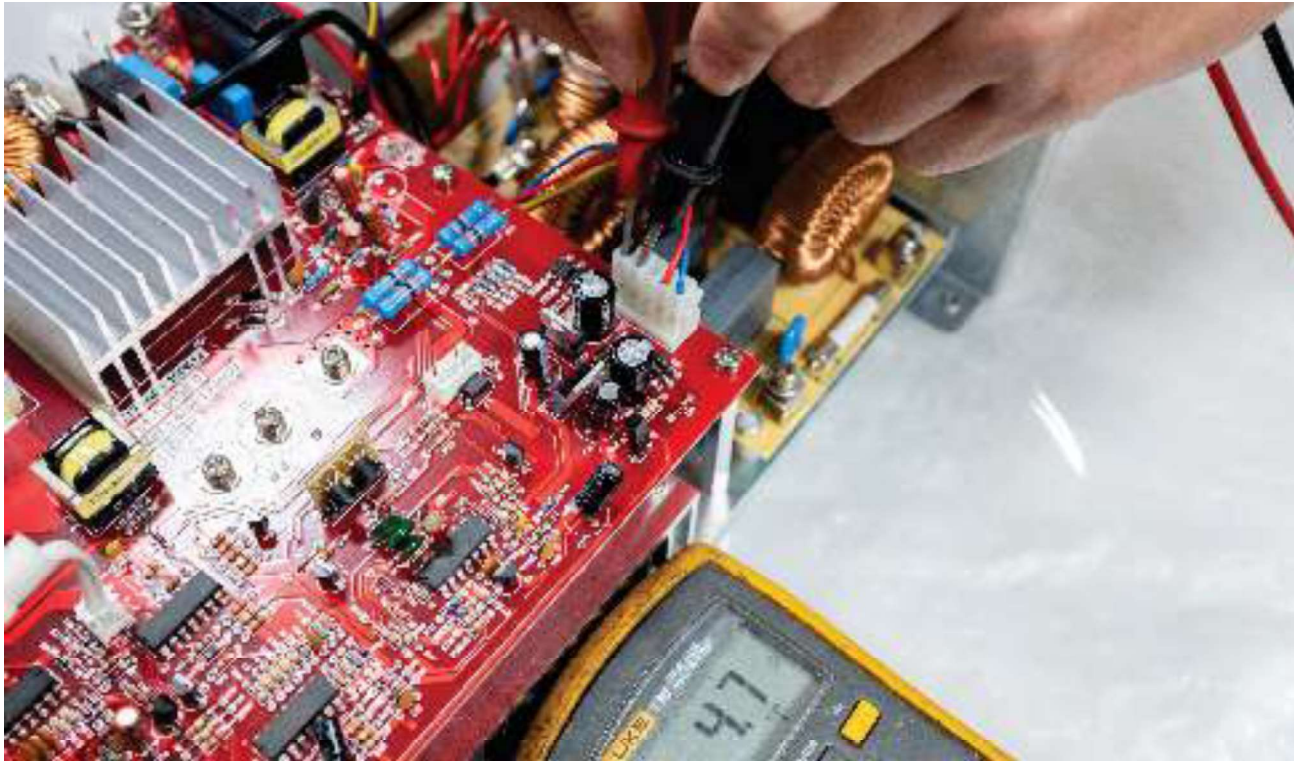
- Use multimeter to measure both **L and N**, you will get **resistance of  $200\Omega + / - 10\%$** . This means the fuse and transformer are within normal range. If you cannot get this value range, please do the follow inspections.

Inspect the fuse and power supply parts



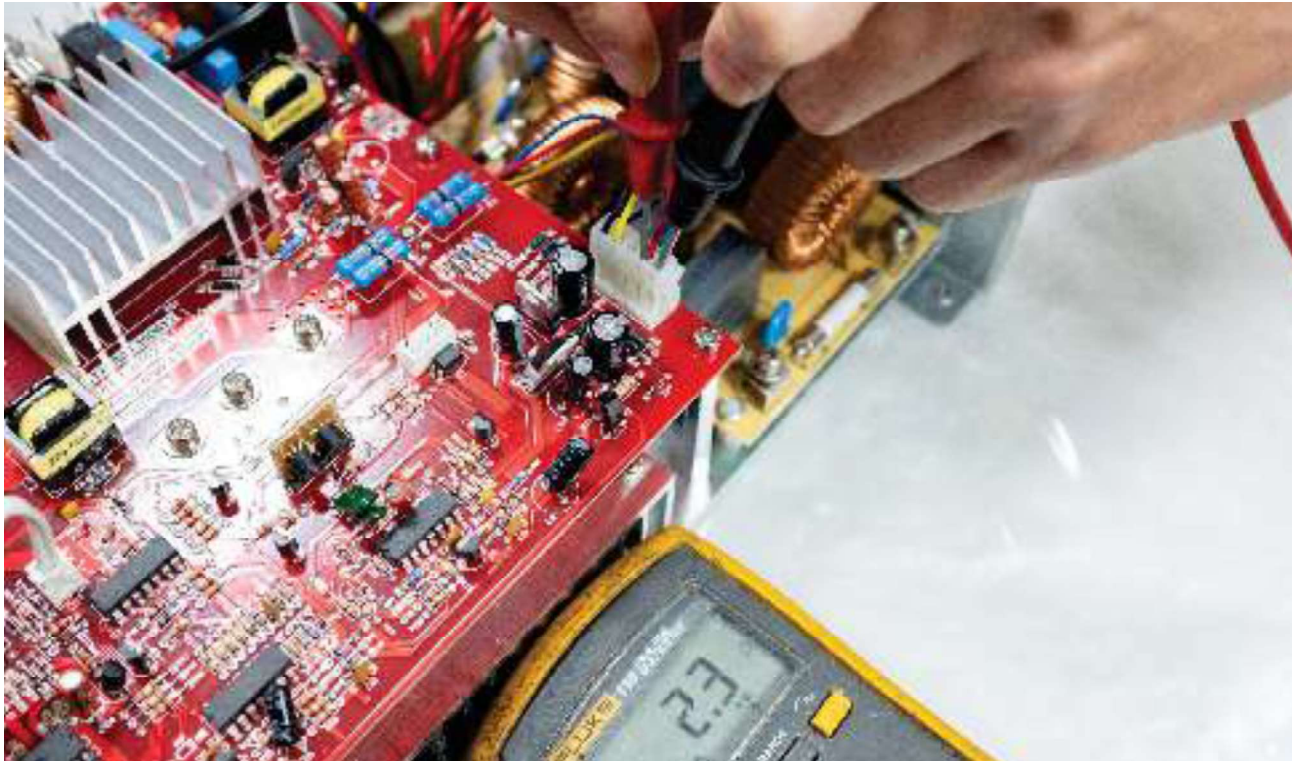
Check the fuse directly

- You will get **very low resistance** for example  $0.2\Omega$  if the fuse is under normal condition. If not, it means the fuse has already blown. In this case, other electronic parts might have also been damaged. Please continue checking other electronic parts.



## Check the transformer(1)

- Measuring the location in the left photo and you should get **very low resistance** if the transformer is under normal condition.



## Check the transformer (2)

- Measuring the location in the left photo and you should get **very low resistance** if the transformer is under normal condition.



## Check mainboard with IGBT (1)

- Measuring **G&E** and you should get something around **23K $\Omega$**  if it is under normal condition. If not, it means either the mainboard or the IGBT module has failed.



## Check mainboard with IGBT (2)

- Measuring **E&C** and you should get something around **130KΩ** if it is under normal condition. If not, it means either the mainboard or the IGBT module has failed.



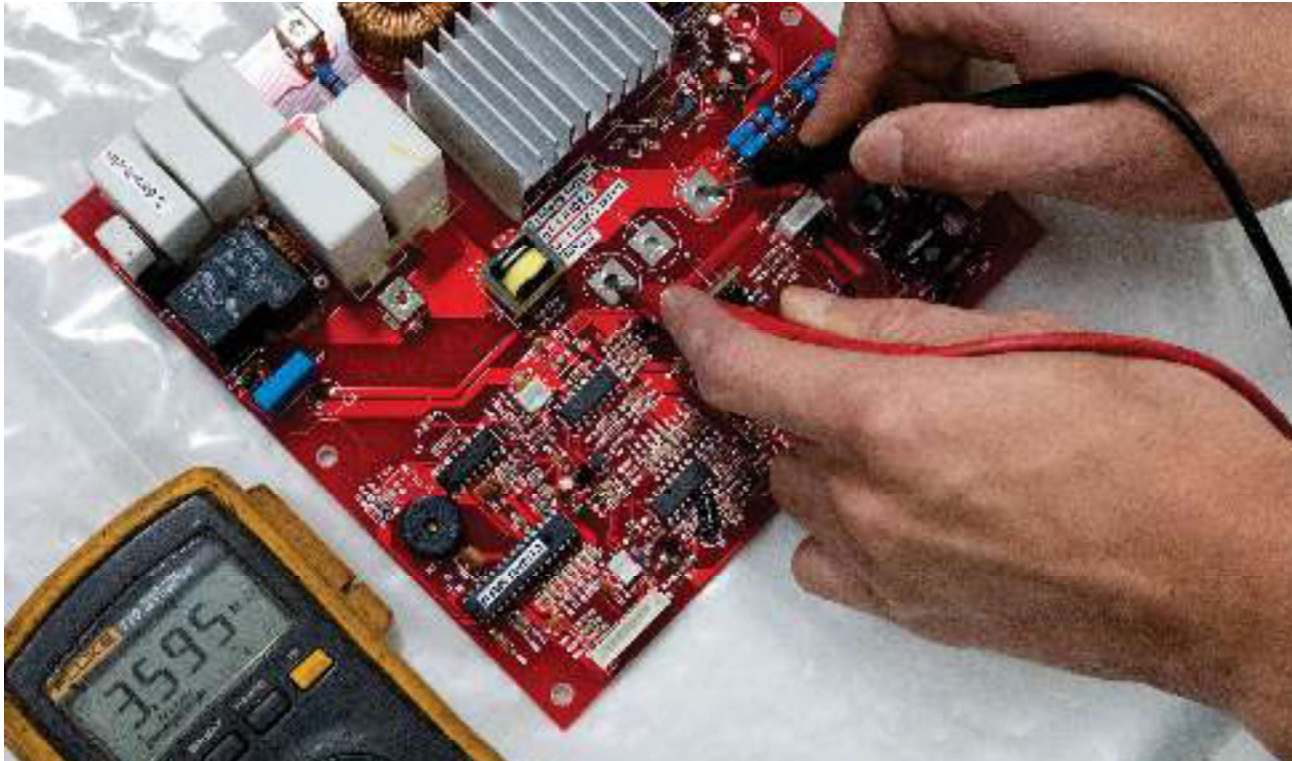
## Check mainboard with IGBT (3)

- Measuring **C&G** and you should get something around **153K $\Omega$**  if it is under normal condition. If not, it means either the mainboard or the IGBT module has failed.



Check the mainboard  
without IGBT(1)

- Measuring E&C and you should get 130K $\Omega$  if it is under normal condition.



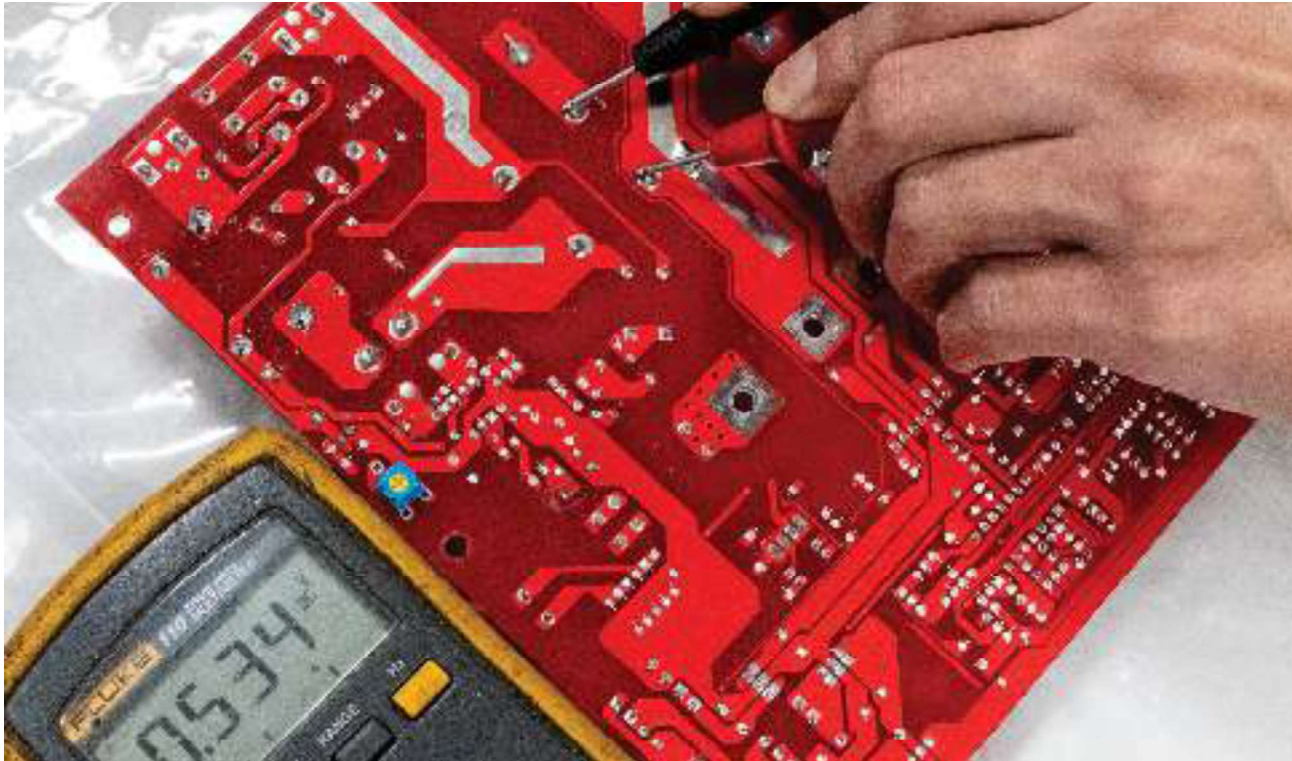
## Check the mainboard without IGBT (2)

- Measuring G&C and you should get a very high resistance such as 3.59MΩ if it is under normal condition.



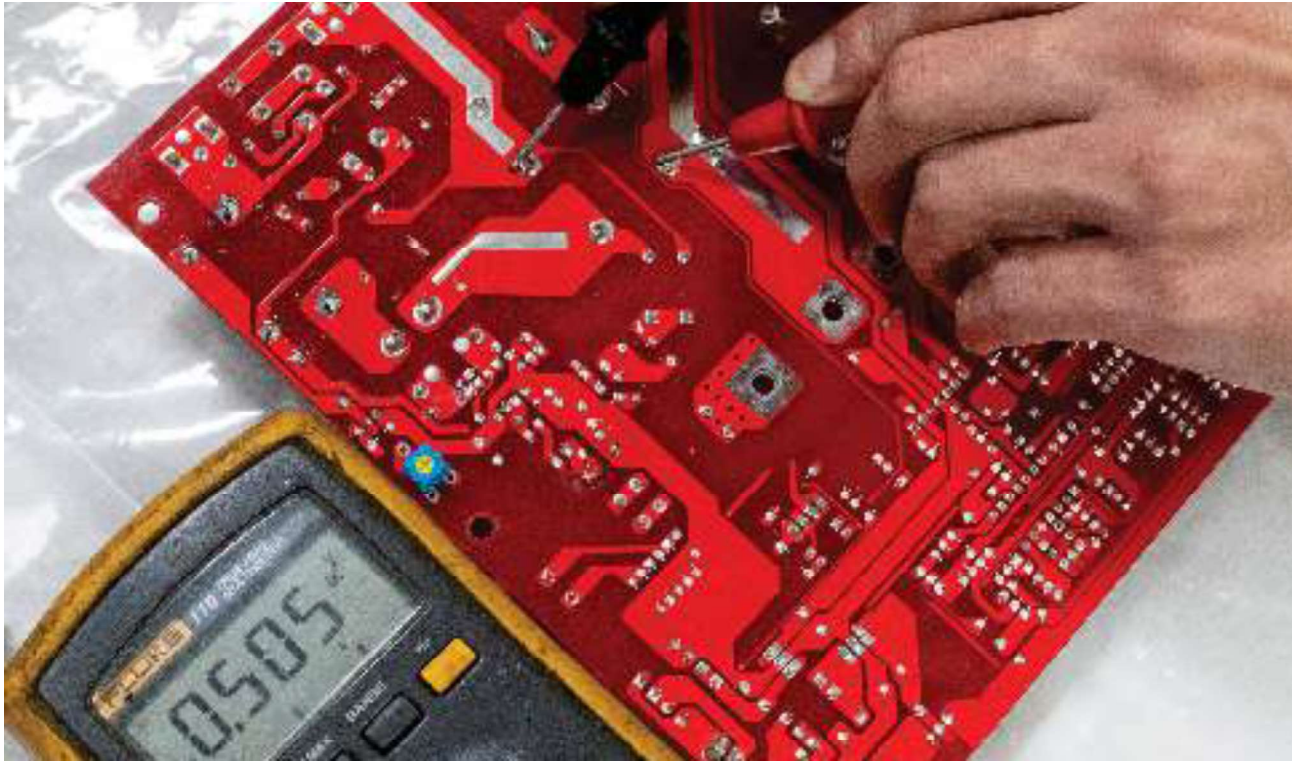
## Check the mainboard without IGBT (3)

- Measuring G&E and you should get a very high resistance such as  $3.46\text{M}\Omega$  if it is under normal condition.



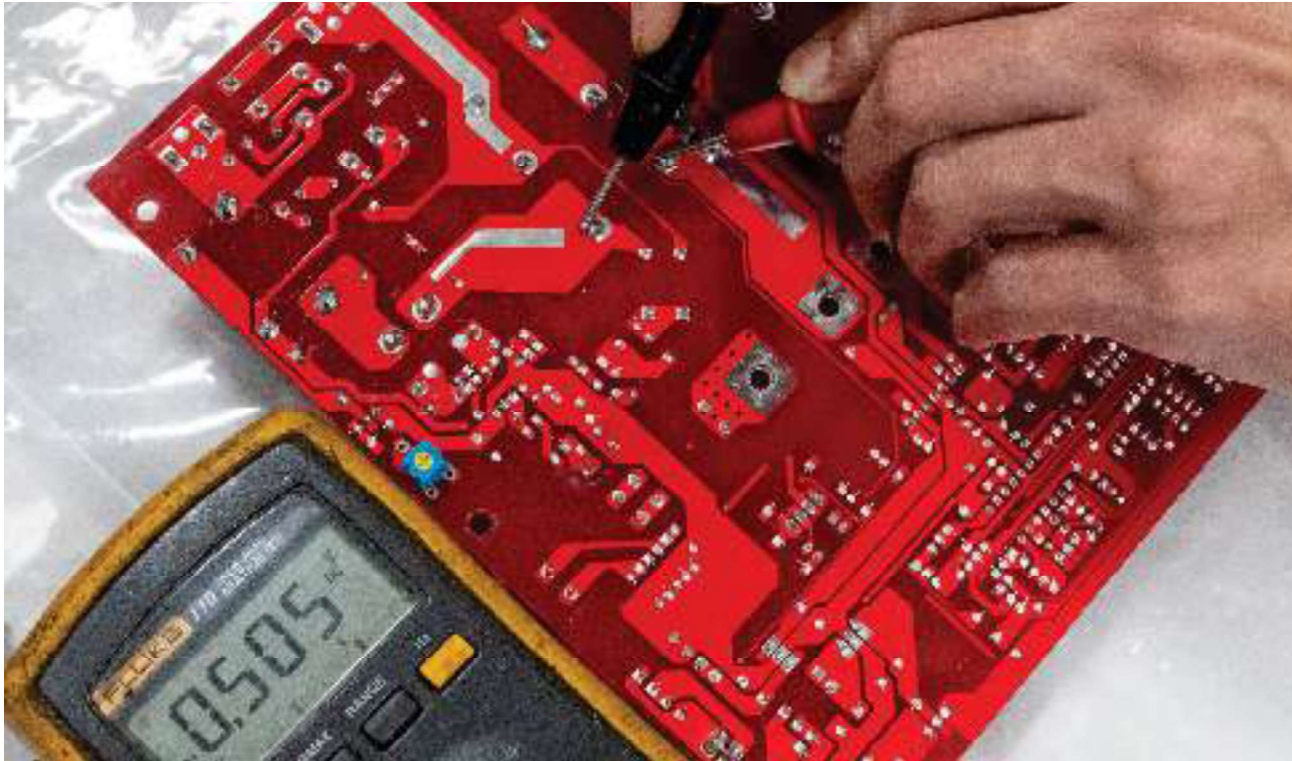
## Check the mainboard (4)

- We can check the BD from the back of the mainboard to see if it is under normal condition.
- Please refer to the photo on the left, and use **Diode mode** of multimeter to test these two points.
- If the BD failed, you will get **very low voltage** and the multimeter will have warning sounds indicating it has short-circuit.
- The value in the photo shows it is under normal condition.



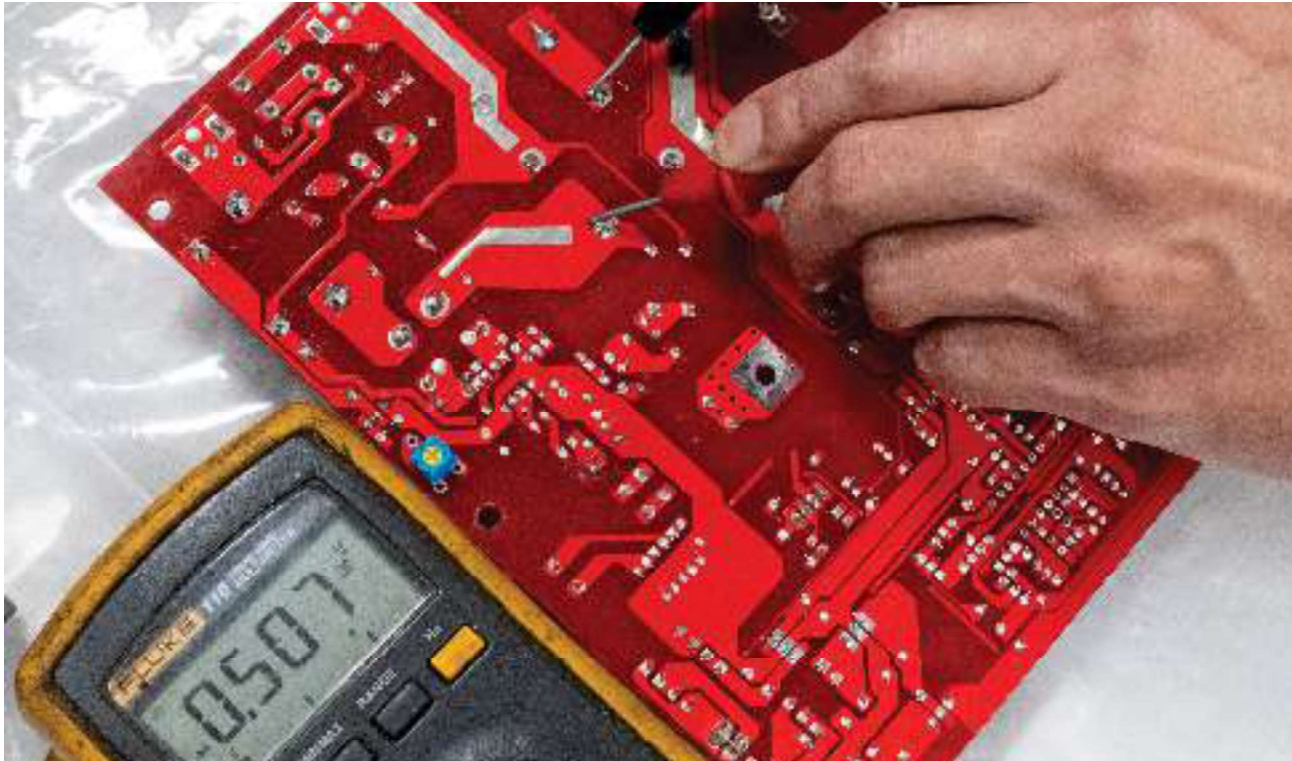
## Check the mainboard (5)

- Please refer to the photo on the left, and use Diode mode of multimeter to test these two points.
- If the BD failed, you will get very low voltage and the multimeter will have warning sounds indicating it has short-circuit.
- The value in the photo shows it is under normal condition.



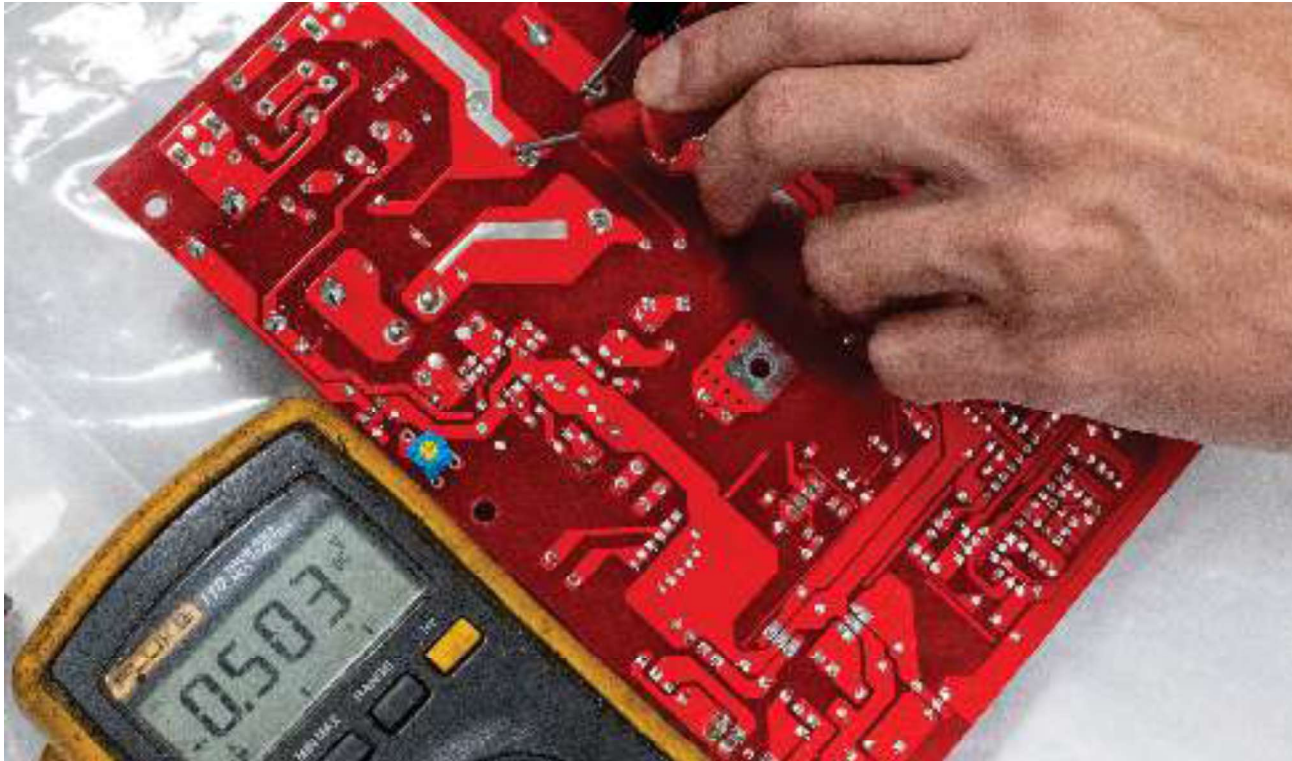
## Check the mainboard (6)

- Please refer to the photo on the left, and use Diode mode of multimeter to test these two points.
- If the BD failed, you will get very low voltage and the multimeter will have warning sounds indicating it has short-circuit.
- The value in the photo shows it is under normal condition.



## Check the mainboard (7)

- Please refer to the photo on the left, and use Diode mode of multimeter to test these two points.
- If the BD failed, you will get very low voltage and the multimeter will have warning sounds indicating it has short-circuit.
- The value in the photo shows it is under normal condition.



## Check the mainboard (8)

- Please refer to the photo on the left, and use Diode mode of multimeter to test these two points.
- If the BD failed, you will get very low voltage and the multimeter will have warning sounds indicating it has short-circuit.
- The value in the photo shows it is under normal condition.

# Check IGBT module (1)

- Please refer to the photo on the right and measure the same points as it shows. You should get the **resistance of 23K $\Omega$**  if this IGBT module is under normal condition.



## Check IGBT module (2)

- Please refer to the photo on the right and measure the same points as it shows. You should get **very high resistance** if this IGBT module is under normal condition.



## Check IGBT module (3)

- Please refer to the photo on the right and measure the same points as it shows. You should **get very high resistance** if this IGBT module is under normal condition.

