**CO$EL**

ABNORMAL TEST RESULT

OF MODEL PBA300F

1. Did Cheese Cloth or Paper Glow?

      No.

2. Did Ground Fuse Open?

      No.

3. Dielectric breakdown?

      No.

4. Other Results?

      See the following pages .
      ( FMEA             :   2/36 ～ 35/36)
      ( Abnormal Test Result: 36/36 ～ 36/36)

There was no emission of flame, molten metal, ignition of cheesecloth, dielectric

breakdown, opening of the ground fuse, other indication of a shock or fire hazard.

Ver 1.7

**CO$EL**

F M E A

| Component | Mode | Comment | Output Voltage (V) |
|---|---|---|---|
| C101 | Open | Normal operation. | |
| | Short | F101 opened, No hazard. | AVR1:0 |
| C102 | Open | Normal operation. | |
| | Short | F101 opened, No hazard. | AVR1:0 |
| C106 | Open | Normal operation. | |
| | Short | R114 opened, No hazard. | AVR1:0 |
| C109 | Open | Normal operation. | |
| | Short | F101 opened, No hazard. R114 opened, No hazard. | AVR1:0 |
| C110 | Open | Normal operation. | |
| | Short | Normal operation. | |
| C111 | Open | Normal operation. | |
| | Short | Normal operation. | |
| C119 | Open | See 36 Page. | |
| | Short | R114 opened, No hazard. | AVR1:0 |
| C120 | Open | See 36 Page. | |
| | Short | R114 opened, No hazard. | AVR1:0 |
| C126 | Open | No Hazard. | AVR1:0 |
| | Short | Normal operation. | |
| C128 | Open | Normal operation. | |
| | Short | R114 opened, No hazard. | AVR1:0 |
| C201 | Open | Normal operation. | |
| | Short | Normal operation. | |
| C203 | Open | Normal operation. | |
| | Short | Normal operation. | |

Ver 1.7

**COSEL**

F M E A

| Component | Mode | Comment | Output Voltage (V) |
|-----------|------|---------|---------------------|
| C204 | Open | Normal operation. | |
| | Short | Normal operation. | |
| C205 | Open | Normal operation. | |
| | Short | No Hazard. | AVR1:0 |
| C206 | Open | Normal operation. | |
| | Short | Normal operation. | |
| C207 | Open | Normal operation. | |
| | Short | No Hazard. | AVR1:0 |
| C208 | Open | Normal operation. | |
| | Short | No Hazard. | AVR1:0 |
| C209 | Open | F101 opened, No hazard. | AVR1:0 |
| | Short | F101 opened, No hazard. | AVR1:0 |
| C210 | Open | Normal operation. | |
| | Short | No Hazard. | AVR1:0 |
| C211 | Open | Normal operation. | |
| | Short | No Hazard. | AVR1:0 |
| C212 | Open | F101 opened, No hazard. | AVR1:0 |
| | Short | No Hazard. | AVR1:0 |
| C213 | Open | Normal operation. | |
| | Short | No Hazard. | AVR1:0 |
| C214 | Open | Normal operation. | |
| | Short | Normal operation. | |
| C220 | Open | F101 opened, No hazard. | AVR1:0 |
| | Short | No Hazard. | AVR1:0 |

Ver 1.7

**CO$EL**

## F M E A

| Component | Mode | Comment | Output Voltage (V) |
|---|---|---|---|
| C301 | Open | Normal operation. | |
| | Short | No Hazard. | AVR1:0 |
| C302 | Open | Normal operation. | |
| | Short | No Hazard. | AVR1:0 |
| C303 | Open | Normal operation. | |
| | Short | Normal operation. | |
| C304 | Open | Normal operation. | |
| | Short | No Hazard. | AVR1:0 |
| C305 | Open | No Hazard. | AVR1:0 |
| | Short | No Hazard. | AVR1:0 |
| C306 | Open | No Hazard. | AVR1:0 |
| | Short | Normal operation. | |
| C307 | Open | Normal operation. | |
| | Short | Normal operation. | |
| C308 | Open | Normal operation. | |
| | Short | Normal operation. | |
| C310 | Open | Normal operation. | |
| | Short | No Hazard. | AVR1:0 |
| C318 | Open | Normal operation. | |
| | Short | Normal operation. | |
| C320 | Open | Normal operation. | |
| | Short | Normal operation. | |
| C323 | Open | Output voltage decreased. No hazard. | AVR1:decreased |
| | Short | No Hazard. | AVR1:0 |

Ver 1.7

**CO$EL**

F M E A

| Component | Mode | Comment | Output Voltage (V) |
|-----------|------|---------|--------------------|
| C324 | Open | Normal operation. | |
| | Short | No Hazard. | AVR1:0 |
| C325 | Open | Normal operation. | |
| | Short | No Hazard. | AVR1:0 |
| C330 | Open | Normal operation. | |
| | Short | No Hazard. | AVR1:0 |
| C398 | Open | Normal operation. | |
| | Short | Normal operation. | |
| C399 | Open | Normal operation. | |
| | Short | No Hazard. | AVR1:0 |
| C401 | Open | Normal operation. | |
| | Short | R410 opened, No hazard. | AVR1:0 |
| C402 | Open | No Hazard. | AVR1:0 |
| | Short | No Hazard. | AVR1:0 |
| C403 | Open | Normal operation. | |
| | Short | Normal operation. | |
| C404 | Open | Normal operation. | |
| | Short | No Hazard. | AVR1:0 |
| C405 | Open | Normal operation. | |
| | Short | No Hazard. | AVR1:0 |
| C406 | Open | Normal operation. | |
| | Short | Normal operation. . | |
| C407 | Open | Normal operation. | |
| | Short | Normal operation. | |

Ver 1.7

参考資料

**COSEL**

F  M  E  A

| Component | Mode | | Comment | Output Voltage (V) |
|---|---|---|---|---|
| C409 | Open | | Normal operation. | |
| | Short | | Normal operation. | |
| C504 | Open | | No Hazard. | AVR1:0 |
| | Short | | Normal operation. | |
| C505 | Open | | Normal operation. | |
| | Short | | No Hazard. | AVR1:0 |
| C506 | Open | | Normal operation. | |
| | Short | | No Hazard. | AVR1:0 |
| C507 | Open | | Normal operation. | |
| | Short | | No Hazard. | AVR1:0 |
| C519 | Open | Only 3, 5, 7 | Normal operation. | |
| | Short | Only 3, 5, 7 | No Hazard. | AVR1:0 |
| C522 | Open | Only 3, 5, 7 | Normal operation. | |
| | Short | Only 3, 5, 7 | No Hazard. | AVR1:0 |
| C523 | Open | Only 3, 5, 7 | Normal operation. | |
| | Short | Only 3, 5, 7 | No Hazard. | AVR1:0 |
| C524 | Open | Only 3, 5, 7 | Normal operation. | |
| | Short | Only 3, 5, 7 | No Hazard. | AVR1:0 |
| C525 | Open | | Normal operation. | |
| | Short | | No Hazard. | AVR1:0 |
| C530 | Open | | Normal operation. | |
| | Short | | Normal operation. | |
| C531 | Open | | Normal operation. | |
| | Short | | Normal operation. | |

Ver 1.7

参考資料

# CO$EL

F M E A

| Component | Mode | | Comment | Output Voltage (V) |
|---|---|---|---|---|
| C533 | Open | | Normal operation. | |
| | Short | | Normal operation. | |
| C534 | Open | | Normal operation. | |
| | Short | | Normal operation. | |
| C556 | Open | Only 5 | Normal operation. | |
| | Short | Only 5 | No Hazard. | AVR1:0 |
| C601 | Open | | Normal operation. | |
| | Short | | No Hazard. | AVR1:0 |
| C602 | Open | | Normal operation. | |
| | Short | | No Hazard. | AVR1:0 |
| C604 | Open | | Normal operation. | |
| | Short | | Normal operation. | |
| C605 | Open | | Output voltage decreased. No hazard. | AVR1:decreased |
| | Short | | Output voltage decreased. No hazard. | AVR1:decreased |
| C606 | Open | | Normal operation. | |
| | Short | | Output voltage decreased. No hazard. | AVR1:decreased |
| C607 | Open | | Normal operation. | |
| | Short | | No Hazard. | AVR1:0 |
| C608 | Open | | Normal operation. | |
| | Short | | Output voltage decreased. No hazard. | AVR1:decreased |
| C609 | Open | | Normal operation. | |
| | Short | | Normal operation. | |
| C615 | Open | | Normal operation. | |
| | Short | | Normal operation. | |

Ver 1.7

**CO$EL**

<u>F M E A</u>

| Component | Mode | | Comment | Output Voltage (V) |
|---|---|---|---|---|
| C620 | Open | | Normal operation. | |
| | Short | | No Hazard. | AVR1:0 |
| C621 | Open | | Normal operation. | |
| | Short | | Output voltage decreased.<br>No hazard. | AVR1:decreased |
| C624 | Open | | Normal operation. | |
| | Short | | Normal operation. | |
| C625 | Open | | Normal operation. | |
| | Short | | Output voltage decreased.<br>No hazard. | AVR1:decreased |
| C626 | Open | | Normal operation. | |
| | Short | | Output voltage decreased.<br>No hazard. | AVR1:decreased |
| C627 | Open | | Normal operation. | |
| | Short | | No Hazard. | AVR1:0 |
| C628 | Open | | Normal operation. | |
| | Short | | No Hazard. | AVR1:0 |
| C630 | Open | Only 5, 48 | Output voltage decreased.<br>No hazard. | AVR1:decreased |
| | Short | Only 5, 48 | Output voltage decreased.<br>No hazard. | AVR1:decreased |
| C634 | Open | Only 48 | Normal operation. | |
| | Short | Only 48 | Normal operation. | |
| C640 | Open | | Normal operation. | |
| | Short | | Normal operation. | |
| C701 | Open | | Normal operation. | |
| | Short | | No Hazard. | AVR1:0 |
| C703 | Open | | Normal operation. | |
| | Short | | Normal operation. | AUX:0V |

Ver 1.7

**CO$EL**

<u>F  M  E  A</u>

| Component | Mode | Comment | Output Voltage (V) |
|---|---|---|---|
| C704 | Open | Normal operation. | |
| | Short | No Hazard. | AVR1:0 |
| C705 | Open | Normal operation. | |
| | Short | No Hazard. | AVR1:0 |
| C709 | Open | Normal operation. | |
| | Short | Normal operation. | |
| C710 | Open | Normal operation. | |
| | Short | Normal operation. | |
| C711 | Open | Normal operation. | |
| | Short | Normal operation. | |
| C712 | Open | Normal operation. | |
| | Short | Normal operation. | |
| C713 | Open | Normal operation. | |
| | Short | Normal operation. | |
| C714 | Open | Normal operation. | |
| | Short | Normal operation. | |
| C715 | Open | Normal operation. | |
| | Short | No Hazard. | AVR1:0 |
| C716 | Open | Normal operation. | |
| | Short | No Hazard. | AVR1:0 |
| D101 | Open | R114 opened, No hazard. | AVR1:0 |
| | Short | R114 opened, No hazard. | AVR1:0 |
| D102 | Open | Normal operation. | |
| | Short | F101 opened, No hazard. | AVR1:0 |

Ver 1.7

# F M E A

| Component | Mode | | Comment | Output Voltage (V) |
|-----------|------|------|---------|--------------------|
| D109 | Open | | R114 opened, No hazard. | AVR1：0 |
| | Short | | R114 opened, No hazard. | AVR1：0 |
| D202 | Open | | Normal operation. | |
| | Short | | Normal operation. | |
| D203 | Open | | Normal operation. | |
| | Short | | No Hazard. | AVR1：0 |
| D204 | Open | | Normal operation. | |
| | Short | | Normal operation. | |
| D205 | Open | | Normal operation. | |
| | Short | | No Hazard. | AVR1：0 |
| D209 | Open | | No Hazard. | AVR1：0 |
| | Short | | Normal operation. | |
| D210 | Open | | Normal operation. | |
| | Short | | Normal operation. | |
| D301 | Open | | Normal operation. | |
| | Short | | Normal operation. | |
| D302 | Open | | Normal operation. | |
| | Short | | Normal operation. | |
| D303 | Open | Except 5 | Normal operation. | |
| | Short | Except 5 | Normal operation. | |
| D304 | Open | | Normal operation. | |
| | Short | | Normal operation. | |
| D401 | Open | | No Hazard. | AVR1：0 |
| | Short | | R401 opened, No hazard. | AVR1：0 |

Ver 1.7

**COSEL**

F M E A

| Component | Mode | | Comment | Output Voltage (V) |
|---|---|---|---|---|
| D402 | Open | | No Hazard. | AVR1:0 |
| | Short | | No Hazard. | AVR1:0 |
| D403 | Open | | Normal operation. | |
| | Short | | See 36 Page. | |
| D404 | Open | | Normal operation. | |
| | Short | | Normal operation. | |
| D405 | Open | | No Hazard. | AVR1:0 |
| | Short | | Normal operation. | |
| D406 | Open | | Normal operation. | |
| | Short | | See 36 Page. | |
| D501 | Open | | No Hazard. | AVR1:0 |
| | Short | | No Hazard. | AVR1:0 |
| D502 | Open | | Normal operation. | |
| | Short | | No Hazard. | AVR1:0 |
| D503 | Open | Only 36 | Normal operation. | |
| | Short | Only 36 | Normal operation. | |
| D601 | Open | | No Hazard. | AVR1:0 |
| | Short | | No Hazard. | AVR1:0 |
| D603 | Open | | No Hazard. | AVR1:0 |
| | Short | | Normal operation. | |
| D605 | Open | | No Hazard. | AVR1:0 |
| | Short | | Normal operation. | |
| D608 | Open | | Normal operation. | |
| | Short | | Normal operation. | |

Ver 1.7

参考資料

**COSEL**

<u>F M E A</u>

| Component | Mode | Comment | Output Voltage (V) |
|---|---|---|---|
| D610 | Open | Normal operation. | |
| | Short | Normal operation. | |
| D611 | Open | Normal operation. | |
| | Short | Normal operation. | |
| D615 | Open | Normal operation. | |
| | Short | No Hazard. | AVR1:0 |
| D616 | Open | Normal operation. | |
| | Short | Output voltage decreased.<br>No hazard. | AVR1:decreased |
| D623 | Open | Normal operation. | |
| | Short | Output voltage decreased.<br>No hazard. | AVR1:decreased |
| D701 | Open | Normal operation. | |
| | Short | No Hazard. | AVR1:0 |
| D702 | Open | Normal operation. | |
| | Short | No Hazard. | AVR1:0 |
| D704 | Open | Normal operation. | |
| | Short | Normal operation. | |
| D705 | Open | Normal operation. | |
| | Short | Normal operation. | |
| D706 | Open | Normal operation. | |
| | Short | No Hazard. | AVR1:0 |
| D707 | Open | Normal operation. | |
| | Short | Normal operation. | |
| D708 | Open | Normal operation. | |
| | Short | Normal operation. | |

Ver 1.7

**COSEL**

<div align="center">

F M E A

</div>

| Component | Mode | | Comment | Output Voltage (V) |
|-----------|------|------|---------|--------------------|
| IC201 | Open | 1 | F101 opened, No hazard. | AVR1:0 |
| | | 2 | Normal operation. | |
| | | 3 | Normal operation. | |
| | | 4 | No Hazard. | AVR1:0 |
| | | 5 | Normal operation. | |
| | | 6 | Normal operation. | |
| | | 7 | Normal operation. | |
| | | 8 | Normal operation. | |
| | | 9 | No Hazard. | AVR1:0 |
| | | 10 | No Hazard. | AVR1:0 |
| | | 11 | Normal operation. | |
| | | 12 | F101 opened, No hazard. | AVR1:0 |
| | | 13 | No Hazard. | AVR1:0 |
| | | 14 | F101 opened, No hazard. | AVR1:0 |
| | | 15 | No Hazard. | AVR1:0 |
| | | 16 | No Hazard. | AVR1:0 |
| | Short | 1-2 | Normal operation. | |
| | | 2-3 | Normal operation. | |
| | | 3-4 | No Hazard. | AVR1:0 |
| | | 4-5 | No Hazard. | AVR1:0 |
| | | 5-6 | Normal operation. | |
| | | 6-7 | Normal operation. | |
| | | 7-8 | Normal operation. | |
| | | 9-10 | Normal operation. | |

Ver 1.7

**CO$EL**

<u>F M E A</u>

| Component | Mode | | Comment | Output Voltage (V) |
|---|---|---|---|---|
| IC201 | Short | 10-11 | Normal operation. | |
| | | 11-12 | F101 opened, No hazard. | AVR1:0 |
| | | 12-13 | F101 opened, No hazard. | AVR1:0 |
| | | 13-14 | F101 opened, No hazard. | AVR1:0 |
| | | 14-15 | F101 opened, No hazard. | AVR1:0 |
| | | 15-16 | F101 opened, No hazard. | AVR1:0 |
| IC301 | Open | 1 | No Hazard. | AVR1:0 |
| | | 2 | No Hazard. | AVR1:0 |
| | | 3 | F101 opened, No hazard. | AVR1:0 |
| | | 4 | Normal operation. | |
| | | 5 | Normal operation. | |
| | | 6 | Normal operation. | |
| | | 7 | Normal operation. | |
| | | 8 | Normal operation. | |
| | | 9 | Normal operation. | |
| | | 10 | No Hazard. | AVR1:0 |
| | | 11 | No Hazard. | AVR1:0 |
| | | 12 | No Hazard. | AVR1:0 |
| | | 13 | Output voltage decreased. No hazard. | AVR1:decreased |
| | | 14 | Normal operation. | |
| | | 15 | Normal operation. | |
| | | 16 | Normal operation. | |
| | | 17 | No Hazard. | AVR1:0 |
| | | 18 | Output voltage decreased. No hazard. | AVR1:decreased |

Ver 1.7

**CO$EL**

<u>F M E A</u>

| Component | Mode | | Comment | Output Voltage (V) |
|---|---|---|---|---|
| IC301 | Open | 19 | Output voltage decreased.<br>No hazard. | AVR1:decreased |
| | | 20 | No Hazard. | AVR1:0 |
| | Short | 1-2 | See 36 Page. | |
| | | 2-3 | No Hazard. | AVR1:0 |
| | | 3-4 | Normal operation. | |
| | | 4-5 | Normal operation. | |
| | | 5-6 | Normal operation. | |
| | | 6-7 | Normal operation. | |
| | | 7-8 | Normal operation. | |
| | | 8-9 | Normal operation. | |
| | | 9-10 | No Hazard. | AVR1:0 |
| | | 11-12 | No Hazard. | AVR1:0 |
| | | 12-13 | No Hazard. | AVR1:0 |
| | | 13-14 | Normal operation. | |
| | | 14-15 | Normal operation. | |
| | | 15-16 | Normal operation. | |
| | | 16-17 | Normal operation. | |
| | | 17-18 | Normal operation. | |
| | | 18-19 | Normal operation. | |
| | | 19-20 | No Hazard. | AVR1:0 |
| IC302 | Open | 1 | Normal operation. | |
| | | 2 | Normal operation. | |
| | | 3 | Normal operation. | |
| | | 4 | Normal operation. | |

Ver 1.7

# COSEL

## F M E A

| Component | Mode | | Comment | Output Voltage (V) |
|---|---|---|---|---|
| IC302 | Open | 5 | Normal operation. | |
| | | 6 | Normal operation. | |
| | | 7 | Normal operation. | |
| | | 8 | Normal operation. | |
| | Short | 1-2 | Normal operation. | |
| | | 2-3 | Normal operation. | |
| | | 3-4 | Normal operation. | |
| | | 5-6 | Normal operation. | |
| | | 6-7 | Normal operation. | |
| | | 7-8 | Normal operation. | |
| IC401 | Open | 1 | No Hazard. | AVR1:0 |
| | | 2 | No Hazard. | AVR1:0 |
| | | 3 | No Hazard. | AVR1:0 |
| | Short | 1-2 | No Hazard. | AVR1:0 |
| | | 2-3 | R410 opened, No hazard. IC401 short | AVR1:0 |
| IC601 | Open | 1 | No Hazard. | AVR1:0 |
| | | 2 | No Hazard. | AVR1:0 |
| | | 3 | No Hazard. | AVR1:0 |
| | Short | 1-2 | No Hazard. | AVR1:0 |
| | | 2-3 | No Hazard. | AVR1:0 |
| IC602 | Open | 1 | Normal operation. | |
| | | 2 | Normal operation. | |
| | | 3 | Normal operation. | |
| | | 4 | No Hazard. | AVR1:0 |

Ver 1.7

**COSEL**

<div align="center">

F  M  E  A

</div>

| Component | Mode | | Comment | Output Voltage (V) |
|---|---|---|---|---|
| IC602 | Open | 5 | Normal operation. | |
| | | 6 | No Hazard. | AVR1:0 |
| | | 7 | No Hazard. | AVR1:0 |
| | | 8 | No Hazard. | AVR1:0 |
| | Short | 1-2 | Normal operation. | |
| | | 2-3 | Normal operation. | |
| | | 3-4 | Normal operation. | |
| | | 5-6 | No Hazard. | AVR1:0 |
| | | 6-7 | No Hazard. | AVR1:0 |
| | | 7-8 | No Hazard. | AVR1:0 |
| IC603 | Open | K | No Hazard. | AVR1:0 |
| | | A | No Hazard. | AVR1:0 |
| | | R | No Hazard. | AVR1:0 |
| | Short | A-K | No Hazard. | AVR1:0 |
| | | K-R | Output voltage decreased. No hazard. | AVR1:decreased |
| | | R-A | Output voltage decreased. No hazard. | AVR1:decreased |
| IC604 | Open | 1 | Normal operation. | |
| | | 2 | Normal operation. | |
| | | 3 | Normal operation. | |
| | | 4 | Normal operation. | |
| | | 5 | Normal operation. | |
| | | 6 | No Hazard. | AVR1:0 |
| | | 7 | Normal operation. | |
| | | 8 | Normal operation. | |

Ver 1.7

COSEL

<u>F M E A</u>

| Component | Mode | | Comment | Output Voltage (V) |
|---|---|---|---|---|
| IC604 | Short | 1-2 | Normal operation. | |
| | | 2-3 | Normal operation. | |
| | | 3-4 | Normal operation. | |
| | | 5-6 | No Hazard. | AVR1:0 |
| | | 6-7 | Normal operation. | |
| | | 7-8 | No Hazard. | AVR1:0 |
| IC701 | Open | 1 | Normal operation. | |
| | | 2 | Normal operation. | |
| | | 3 | Normal operation. | |
| | Short | 1-2 | No Hazard. | AVR1:0 |
| | | 2-3 | Normal operation. | |
| L101 | Open | | No Hazard. | AVR1:0 |
| | Short | | F101 opened, No hazard. | AVR1:0 |
| L102 | Open | | No Hazard. | AVR1:0 |
| | Short | | F101 opened, No hazard. | AVR1:0 |
| L103 | Open | 1 | No Hazard. | AVR1:0 |
| | | 2 | No Hazard. | AVR1:0 |
| | | 3 | R114 opened, No hazard. | AVR1:0 |
| | | 4 | R114 opened, No hazard. | AVR1:0 |
| | Short | 1-2 | F101 opened, No hazard. | AVR1:0 |
| | | 1-3 | R114 opened, No hazard. | AVR1:0 |
| L501 | Open | 1, 3 | No Hazard. | AVR1:0 |
| | | 2, 4 | No Hazard. | AVR1:0 |
| | Short | 1-3 | No Hazard. | AVR1:0 |

Ver 1.7

**COSEL**

F M E A

| Component | Mode | | Comment | Output Voltage (V) |
|---|---|---|---|---|
| L501 | Short | 2-4 | No Hazard. | AVR1:0 |
| L508 | Open | | No Hazard. | AVR1:0 |
| | Short | | Normal operation. | |
| LED601 | Open | | Normal operation. | |
| | Short | | Normal operation. | |
| PC301 | Open | A, K | Normal operation. | |
| | | C, E | Normal operation. | |
| | Short | A-K | Normal operation. | |
| | | C-E | No Hazard. | AVR1:0 |
| PC302 | Open | A, K | No Hazard. | AVR1:0 |
| | | C, E | No Hazard. | AVR1:0 |
| | | D | No Hazard. | AVR1:0 |
| | Short | A-K | No Hazard. | AVR1:0 |
| | | C-E | Output voltage decreased. No hazard. | AVR1:decreased |
| | | D-E | No Hazard. | AVR1:0 |
| | | C-D | No Hazard. | AVR1:0 |
| PC602 | Open | A, K | Normal operation. | |
| | | C, E | Normal operation. | |
| | Short | A-K | Normal operation. | |
| | | C-E | No Hazard. | AVR1:0 |
| PC603 | Open | A, K | Normal operation. | |
| | | C, E | Normal operation. | |
| | Short | A-K | Normal operation. | |
| | | C-E | Normal operation. | |

Ver 1.7

**CO$EL**

## F  M  E  A

| Component | Mode | | Comment | Output Voltage (V) |
|---|---|---|---|---|
| PC702 | Open | A, K | Normal operation. | |
| | | C, E | Normal operation. | |
| | Short | A-K | Normal operation. | |
| | | C-E | Normal operation. | |
| SCR101 | Open | K | R114 opened, No hazard. | AVR1:0 |
| | | A | R114 opened, No hazard. | AVR1:0 |
| | | G | R114 opened, No hazard. | AVR1:0 |
| | Short | K-A | Normal operation. | |
| | | K-G | R114 opened, No hazard. | AVR1:0 |
| | | A-G | R114 opened, No hazard. | AVR1:0 |
| SS101 | Open | + | No Hazard. | AVR1:0 |
| | | − | No Hazard. | AVR1:0 |
| | | AC | No Hazard. | AVR1:0 |
| | Short | +−AC | F101 opened, No hazard. | AVR1:0 |
| | | −−AC | F101 opened, No hazard. | AVR1:0 |
| SS103 | Open | | No Hazard. | AVR1:0 |
| | Short | | R114 opened, No hazard. | AVR1:0 |
| SS104 | Open | | No Hazard. | AVR1:0 |
| | Short | | R114 opened, No hazard. | AVR1:0 |
| SS501 | Open | 1 | No Hazard. | AVR1:0 |
| | | 2 | No Hazard. | AVR1:0 |
| | | 3 | Normal operation. | |
| | Short | 1-2 | No Hazard. | AVR1:0 |
| | | 2-3 | No Hazard. | AVR1:0 |

Ver 1.7

**CO$EL**

F  M  E  A

| Component | Mode | | Comment | Output Voltage (V) |
|---|---|---|---|---|
| SS505 | Open | Except 48 | Normal operation. | |
| | Short | Except 48 | No Hazard. | AVR1:0 |
| T104 | Open | 1 | No Hazard. | AVR1:0 |
| | | 3 | No Hazard. | AVR1:0 |
| | | 4 | Output voltage increased. No hazard. | AVR1:increased |
| | | 7 | Output voltage increased. No hazard. | AVR1:increased |
| | Short | 1-3 | Normal operation. | |
| | | 4-7 | Normal operation. | |
| T301 | Open | A | Normal operation. | |
| | | B | Normal operation. | |
| | | C | Normal operation. | |
| | | D | Normal operation. | |
| | | E | No Hazard. | AVR1:0 |
| | | G | No Hazard. | AVR1:0 |
| | Short | E-G | R114 opened, No hazard. | AVR1:0 |
| | | AC-BD | R114 opened, No hazard. | AVR1:0 |
| T401 | Open | 1 | No Hazard. | AVR1:0 |
| | | 2 | No Hazard. | AVR1:0 |
| | | 3 | No Hazard. | AVR1:0 |
| | | 4 | No Hazard. | AVR1:0 |
| | | 5 | R401 opened, No hazard.  IC401 short | AVR1:0 |
| | | 6 | R401 opened, No hazard.  IC401 short | AVR1:0 |
| | | 7 | No Hazard. | AVR1:0 |
| | | 9 | No Hazard. | AVR1:0 |

Ver 1.7

**CO$EL**

<u>F  M  E  A</u>

| Component | Mode | | Comment | Output Voltage (V) |
|---|---|---|---|---|
| T401 | Short | 1-2 | No Hazard. | AVR1:0 |
| | | 3-4 | No Hazard. | AVR1:0 |
| | | 5-6 | No Hazard. | AVR1:0 |
| | | 7-9 | R401 opened, No hazard. | AVR1:0 |
| THSW301 | Open | | Normal operation. | |
| | Short | | No Hazard. | AVR1:0 |
| TR101 | Open | D | See  36 Page. | |
| | | S | See  36 Page. | |
| | | G | See  36 Page. | |
| | Short | D-S | See  36 Page. | |
| | | S-G | See  36 Page. | |
| | | G-D | See  36 Page. | |
| TR109 | Open | C | R114 opened, No hazard. | AVR1:0 |
| | | E | Normal operation. | |
| | | B | R114 opened, No hazard. | AVR1:0 |
| | Short | C-E | No Hazard. | AVR1:0 |
| | | E-B | Normal operation. | |
| | | B-C | R114 opened, No hazard. | AVR1:0 |
| TR201 | Open | C | No Hazard. | AVR1:0 |
| | | E | No Hazard. | AVR1:0 |
| | | B | No Hazard. | AVR1:0 |
| | Short | C-E | Normal operation. | |
| | | E-B | No Hazard. | AVR1:0 |
| | | B-C | Normal operation. | |

Ver 1.7

**CO$EL**

<u>F M E A</u>

| Component | Mode | | Comment | Output Voltage (V) |
|---|---|---|---|---|
| TR202 | Open | C | Normal operation. | |
| | | E | Normal operation. | |
| | | B | Normal operation. | |
| | Short | C-E | No Hazard. | AVR1:0 |
| | | E-B | Normal operation. | |
| | | B-C | No Hazard. | AVR1:0 |
| TR301 | Open | C | Normal operation. | |
| | | E | Normal operation. | |
| | | B | Normal operation. | |
| | Short | C-E | No Hazard. | AVR1:0 |
| | | E-B | Normal operation. | |
| | | B-C | No Hazard. | AVR1:0 |
| TR302 | Open | C | No Hazard. | AVR1:0 |
| | | E | No Hazard. | AVR1:0 |
| | | B | No Hazard. | AVR1:0 |
| | Short | C-E | Normal operation. | |
| | | E-B | No Hazard. | AVR1:0 |
| | | B-C | No Hazard. | AVR1:0 |
| TR308 | Open | D | See  36 Page. | |
| | | S | See  36 Page. | |
| | | G | See  36 Page. | |
| | Short | D-S | See  36 Page. | |
| | | S-G | See  36 Page. | |
| | | G-D | See  36 Page. | |

Ver 1.7

**CO$EL**

<u>F  M  E  A</u>

| Component | Mode | | Comment | Output Voltage (V) |
|---|---|---|---|---|
| TR401 | Open | C | Normal operation. | |
| | | E | Normal operation. | |
| | | B | Normal operation. | |
| | Short | C-E | Normal operation. | |
| | | E-B | Normal operation. | |
| | | B-C | Normal operation. | |
| TR610 | Open | C | Output voltage increased.<br>No hazard. | AVR1:increased |
| | | E | Output voltage increased.<br>No hazard. | AVR1:increased |
| | | B | Output voltage increased.<br>No hazard. | AVR1:increased |
| | Short | C-E | Normal operation. | |
| | | E-B | Normal operation. | |
| | | B-C | Normal operation. | |
| TR611 | Open | C | Normal operation. | |
| | | E | Normal operation. | |
| | | B | Normal operation. | |
| | Short | C-E | Normal operation. | |
| | | E-B | Normal operation. | |
| | | B-C | Normal operation. | |
| TR620 | Open | C | Normal operation. | |
| | | E | Normal operation. | |
| | | B | Normal operation. | |
| | Short | C-E | Output voltage decreased.<br>No hazard. | AVR1:decreased |
| | | E-B | Normal operation. | |
| | | B-C | No Hazard. | AVR1:0 |

Ver 1.7

**COSEL**

<u>F M E A</u>

| Component | Mode | | Comment | Output Voltage (V) |
|---|---|---|---|---|
| TR704 | Open | C | No Hazard. | AVR1:0 |
| | | E | No Hazard. | AVR1:0 |
| | | B | No Hazard. | AVR1:0 |
| | Short | C-E | Normal operation. | |
| | | E-B | No Hazard. | AVR1:0 |
| | | B-C | No Hazard. | AVR1:0 |
| TR705 | Open | C | No Hazard. | AVR1:0 |
| | | E | No Hazard. | AVR1:0 |
| | | B | No Hazard. | AVR1:0 |
| | Short | C-E | Normal operation. | |
| | | E-B | No Hazard. | AVR1:0 |
| | | B-C | Normal operation. | |
| TR706 | Open | C | Normal operation. | |
| | | E | Normal operation. | |
| | | B | Normal operation. | |
| | Short | C-E | Normal operation. | |
| | | E-B | Normal operation. | |
| | | B-C | Normal operation. | |
| VR601 | Open | brush | Output voltage increased. No hazard. | AVR1:increased |
| | | | No Hazard. | AVR1:0 |
| | Short | | Output voltage decreased. No hazard. | AVR1:decreased |
| VR602 | Open | brush Only 48 | Output voltage decreased. No hazard. | AVR1:decreased |
| | | Only 48 | Output voltage decreased. No hazard. | AVR1:decreased |
| | Short | Only 48 | Output voltage increased. No hazard. | AVR1:increased |

Ver 1.7

**CO$EL**

<center>F M E A</center>

| Component | Mode | Comment | Output Voltage (V) |
|---|---|---|---|
| ZD201 | Open | No Hazard. | AVR1:0 |
|  | Short | Normal operation. |  |
| ZD202 | Open | Normal operation. |  |
|  | Short | No Hazard. | AVR1:0 |
| ZD203 | Open | Normal operation. |  |
|  | Short | No Hazard. | AVR1:0 |
| ZD204 | Open | Normal operation. |  |
|  | Short | No Hazard. | AVR1:0 |
| ZD205 | Open | Normal operation. |  |
|  | Short | Normal operation. |  |
| ZD206 | Open | Normal operation. |  |
|  | Short | No Hazard. | AVR1:0 |
| ZD301 | Open | No Hazard. | AVR1:0 |
|  | Short | Normal operation. |  |
| ZD302 | Open | Normal operation. |  |
|  | Short | No Hazard. | AVR1:0 |
| ZD303 | Open | Normal operation. |  |
|  | Short | No Hazard. | AVR1:0 |
| ZD397 | Open | Normal operation. |  |
|  | Short | No Hazard. | AVR1:0 |
| ZD401 | Open | No Hazard. | AVR1:0 |
|  | Short | Normal operation. |  |
| ZD402 | Open | Normal operation. |  |
|  | Short | No Hazard. | AVR1:0 |

Ver 1.7

**CO$EL**

F M E A

| Component | Mode | | Comment | Output Voltage (V) |
|---|---|---|---|---|
| ZD403 | Open | | No Hazard. | AVR1:0 |
| | Short | | Normal operation. | |
| ZD501 | Open | | Normal operation. | |
| | Short | | No Hazard. | AVR1:0 |
| ZD502 | Open | Only 24, 36, 48 | Normal operation. | |
| | Short | Only 24, 36, 48 | No Hazard. | AVR1:0 |
| ZD701 | Open | | Normal operation. | |
| | Short | | Normal operation. | |
| R101 | Open | | Normal operation. | |
| R102 | Open | | Normal operation. | |
| R103 | Open | | Normal operation. | |
| R104 | Open | | Normal operation. | |
| R105 | Open | | Normal operation. | |
| R106 | Open | | Normal operation. | |
| R107 | Open | | Normal operation. | |
| R108 | Open | | Normal operation. | |
| R110 | Open | | R114 opened, No hazard. | AVR1:0 |
| R111 | Open | | R114 opened, No hazard. | AVR1:0 |
| R113 | Open | | F101 opened, No hazard. | AVR1:0 |
| R114 | Open | | Normal operation. | |
| R115 | Open | | See 36 Page. | |
| R116 | Open | | Normal operation. | |
| R118 | Open | | F101 opened, No hazard. | AVR1:0 |
| R121 | Open | | Normal operation. | |

Ver 1.7

**COSEL**

F  M  E  A

| Component | Mode | Comment | Output Voltage (V) |
|---|---|---|---|
| R122 | Open | F101 opened, No hazard. | AVR1:0 |
| R123 | Open | Normal operation. | |
| R124 | Open | Normal operation. | |
| R125 | Open | R114 opened, No hazard. | AVR1:0 |
| R126 | Open | Normal operation. | |
| R201 | Open | Normal operation. | |
| R202 | Open | Normal operation. | |
| R203 | Open | Normal operation. | |
| R204 | Open | Normal operation. | |
| R205 | Open | No Hazard. | AVR1:0 |
| R206 | Open | Normal operation. | |
| R207 | Open | Normal operation. | |
| R208 | Open | F101 opened, No hazard. | AVR1:0 |
| R209 | Open | No Hazard. | AVR1:0 |
| R210 | Open | No Hazard. | AVR1:0 |
| R211 | Open | Normal operation. | |
| R212 | Open | No Hazard. | AVR1:0 |
| R213 | Open | Normal operation. | |
| R215 | Open | No Hazard. | AVR1:0 |
| R216 | Open | Normal operation. | |
| R217 | Open | Normal operation. | |
| R218 | Open | Normal operation. | |
| R219 | Open | No Hazard. | AVR1:0 |
| R220 | Open | No Hazard. | AVR1:0 |

Ver 1.7

**COSEL**

<u>F M E A</u>

| Component | Mode | Comment | Output Voltage (V) |
|---|---|---|---|
| R221 | Open | Normal operation. | |
| R222 | Open | No Hazard. | AVR1:0 |
| R223 | Open | No Hazard. | AVR1:0 |
| R224 | Open | Normal operation. | |
| R225 | Open | Normal operation. | |
| R228 | Open | Normal operation. | |
| R229 | Open | Normal operation. | |
| R232 | Open | Normal operation. | |
| R233 | Open | No Hazard. | AVR1:0 |
| R234 | Open | No Hazard. | AVR1:0 |
| R236 | Open | No Hazard. | AVR1:0 |
| R237 | Open | No Hazard. | AVR1:0 |
| R291 | Open | Normal operation. | |
| R294 | Open | Normal operation. | |
| R296 | Open | Normal operation. | |
| R297 | Open | No Hazard. | AVR1:0 |
| R298 | Open | No Hazard. | AVR1:0 |
| R301 | Open | Normal operation. | |
| R302 | Open | Normal operation. | |
| R303 | Open | No Hazard. | AVR1:0 |
| R304 | Open | No Hazard. | AVR1:0 |
| R305 | Open | Normal operation. | |
| R306 | Open | No Hazard. | AVR1:0 |
| R307 | Open | No Hazard. | AVR1:0 |

Ver 1.7

参考資料

**COSEL**

## F M E A

| Component | Mode | | Comment | Output Voltage (V) |
|---|---|---|---|---|
| R308 | Open | | No Hazard. | AVR1:0 |
| R309 | Open | | Output voltage decreased.<br>No hazard. | AVR1:decreased |
| R310 | Open | | Normal operation. | |
| R313 | Open | | Normal operation. | |
| R314 | Open | | Normal operation. | |
| R315 | Open | | Normal operation. | |
| R316 | Open | | Output voltage decreased.<br>No hazard. | AVR1:decreased |
| R317 | Open | | Output voltage decreased.<br>No hazard. | AVR1:decreased |
| R318 | Open | | No Hazard. | AVR1:0 |
| R319 | Open | | No Hazard. | AVR1:0 |
| R320 | Open | | R114 opened, No hazard. | AVR1:0 |
| R321 | Open | Except 5 | Normal operation. | |
| R322 | Open | | No Hazard. | AVR1:0 |
| R325 | Open | | No Hazard. | AVR1:0 |
| R329 | Open | | Normal operation. | |
| R330 | Open | | Normal operation. | |
| R331 | Open | | Normal operation. | |
| R346 | Open | | Normal operation. | |
| R350 | Open | | Normal operation. | |
| R351 | Open | | Normal operation. | |
| R352 | Open | | Normal operation. | |
| R353 | Open | | Normal operation. | |
| R354 | Open | | Normal operation. | |
| R355 | Open | | No Hazard. | AVR1:0 |

Ver 1.7

**CO$EL**

F M E A

| Component | Mode | Comment | Output Voltage (V) |
|---|---|---|---|
| R356 | Open | Normal operation. | |
| R357 | Open | Normal operation. | |
| R396 | Open | Normal operation. | |
| R397 | Open | Normal operation. | |
| R398 | Open | Normal operation. | |
| R399 | Open | Normal operation. | |
| R401 | Open | No Hazard. | AVR1:0 |
| R402 | Open | No Hazard. | AVR1:0 |
| R403 | Open | No Hazard. | AVR1:0 |
| R404 | Open | Normal operation. | |
| R405 | Open | Normal operation. | |
| R406 | Open | Normal operation. | |
| R407 | Open | Normal operation. | |
| R408 | Open | Normal operation. | |
| R409 | Open | Normal operation. | |
| R410 | Open | No Hazard. | AVR1:0 |
| R411 | Open | No Hazard. | AVR1:0 |
| R413 | Open | Normal operation. | |
| R414 | Open | Normal operation. | |
| R415 | Open | Normal operation. | |
| R416 | Open | Normal operation. | |
| R506 | Open | No Hazard. | AVR1:0 |
| R507 | Open | Normal operation. | |
| R508 | Open | Normal operation. | |

Ver 1.7

**COSEL**

F M E A

| Component | Mode | | Comment | Output Voltage (V) |
|-----------|------|------|---------|--------------------|
| R509 | Open | | Normal operation. | |
| R510 | Open | | Normal operation. | |
| R515 | Open | | Normal operation. | |
| R516 | Open | | Normal operation. | |
| R517 | Open | Except 24, 36, 48 | Normal operation. | |
| R518 | Open | | No Hazard. | AVR1:0 |
| R519 | Open | | No Hazard. | AVR1:0 |
| R550 | Open | | Normal operation. | |
| R551 | Open | Except 3, 5 | Normal operation. | |
| R552 | Open | Except 3, 5 | Normal operation. | |
| R553 | Open | Except 3, 5 | Normal operation. | |
| R554 | Open | Except 3, 5, 7 | Normal operation. | |
| R555 | Open | Except 3, 5, 7 | Normal operation. | |
| R556 | Open | Except 3, 5, 7 | Normal operation. | |
| R557 | Open | Except 3, 5, 7 | Normal operation. | |
| R560 | Open | | Normal operation. | |
| R561 | Open | Except 3, 5 | Normal operation. | |
| R562 | Open | Except 3, 5 | Normal operation. | |
| R563 | Open | Except 3, 5 | Normal operation. | |
| R564 | Open | Except 3, 5, 7 | Normal operation. | |
| R565 | Open | Except 3, 5, 7 | Normal operation. | |
| R566 | Open | Except 3, 5, 7 | Normal operation. | |
| R567 | Open | Except 3, 5, 7 | Normal operation. | |
| R568 | Open | Only 36 | Normal operation. | |

Ver 1.7

**COSEL**

<u>F  M  E  A</u>

| Component | Mode | | Comment | Output Voltage (V) |
|---|---|---|---|---|
| R569 | Open | Only 36 | Normal operation. | |
| R610 | Open | | No Hazard. | AVR1:0 |
| R611 | Open | | No Hazard. | AVR1:0 |
| R612 | Open | | Normal operation. | |
| R613 | Open | | Normal operation. | |
| R614 | Open | | Normal operation. | |
| R615 | Open | | Normal operation. | |
| R616 | Open | | No Hazard. | AVR1:0 |
| R617 | Open | | Output voltage decreased. No hazard. | AVR1:decreased |
| R618 | Open | | No Hazard. | AVR1:0 |
| R619 | Open | | No Hazard. | AVR1:0 |
| R620 | Open | | Output voltage decreased. No hazard. | AVR1:decreased |
| R622 | Open | | No Hazard. | AVR1:0 |
| R623 | Open | | No Hazard. | AVR1:0 |
| R624 | Open | | No Hazard. | AVR1:0 |
| R625 | Open | | Output voltage decreased. No hazard. | AVR1:decreased |
| R626 | Open | | Output voltage decreased. No hazard. | AVR1:decreased |
| R627 | Open | | No Hazard. | AVR1:0 |
| R628 | Open | | No Hazard. | AVR1:0 |
| R630 | Open | | No Hazard. | AVR1:0 |
| R633 | Open | | Normal operation. | |
| R634 | Open | | Normal operation. | |
| R635 | Open | | Normal operation. | |
| R636 | Open | | Normal operation. | |

Ver 1.7

COSEL

F M E A

| Component | Mode | | Comment | Output Voltage (V) |
|-----------|------|--|---------|--------------------|
| R637 | Open | | Normal operation. | |
| R638 | Open | Only 5, 36 | Normal operation. | |
| R647 | Open | | No Hazard. | AVR1:0 |
| R648 | Open | | No Hazard. | AVR1:0 |
| R650 | Open | | Output voltage decreased. No hazard. | AVR1:decreased |
| R651 | Open | | Output voltage decreased. No hazard. | AVR1:decreased |
| R652 | Open | | Output voltage decreased. No hazard. | AVR1:decreased |
| R653 | Open | | Output voltage decreased. No hazard. | AVR1:decreased |
| R654 | Open | | Normal operation. | |
| R656 | Open | | Normal operation. | |
| R658 | Open | | Normal operation. | |
| R663 | Open | Except 48 | Output voltage decreased. No hazard. | AVR1:decreased |
| R666 | Open | | No Hazard. | AVR1:0 |
| R673 | Open | | Normal operation. | |
| R701 | Open | | Normal operation. | |
| R702 | Open | | Normal operation. | |
| R707 | Open | | No Hazard. | AVR1:0 |
| R709 | Open | | Normal operation. | |
| R710 | Open | | Normal operation. | |
| R711 | Open | | No Hazard. | AVR1:0 |
| R713 | Open | | Normal operation. | |
| R714 | Open | | Normal operation. | |
| R718 | Open | | Normal operation. | |
| R719 | Open | | Normal operation. | |

Ver 1.7

**COSEL**

F  M  E  A

| Component | Mode | Comment | Output Voltage (V) |
|-----------|------|---------|--------------------|
| R723 | Open | Normal operation. | |
| R724 | Open | Normal operation. | |
| R725 | Open | Normal operation. | |
| R726 | Open | Normal operation. | |
| R727 | Open | Normal operation. | |
| R730 | Open | Normal operation. | |
| R732 | Open | Normal operation. | |
| R733 | Open | Normal operation. | |

Ver 1.7

# 参考資料

**COSEL**

ABNORMAL TEST RESULT

| Component | Mode | | Comment | Output Voltage (V) |
|---|---|---|---|---|
| C119 | Open | | Normal operation. | |
| C120 | Open | | Normal operation. | |
| D403 | Short | | No Hazard. | AVR1:0 |
| D406 | Short | | No Hazard. | AVR1:0 |
| IC301 | Short | 1-2 | No Hazard. | AVR1:0 |
| TR101 | Open | D | No Hazard. | AVR1:0 |
| | | S | No Hazard. | AVR1:0 |
| | | G | F101 opened, No hazard. | AVR1:0 |
| | Short | D-S | F101 opened, No hazard. | AVR1:0 |
| | | S-G | No Hazard. | AVR1:0 |
| | | G-D | F101 opened, No hazard. | AVR1:0 |
| TR308 | Open | D | No Hazard. | AVR1:0 |
| | | S | No Hazard. | AVR1:0 |
| | | G | R114 opened, No hazard. | AVR1:0 |
| | Short | D-S | R114 opened, No hazard. | AVR1:0 |
| | | S-G | No Hazard. | AVR1:0 |
| | | G-D | R114 opened, No hazard. | AVR1:0 |
| R115 | Open | | No Hazard. | AVR1:0 |

Ver 1.7