

ABNORMAL TEST RESULT

OF MODEL MGS152412, 15

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 : 2/19 ~ 15/19)

(Abnormal Test Result: 16/19 ~ 19/19)

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.

F M E A

| Component | Mode | Comment | Output Voltage (V) |
|-----------|-------|-------------------------|--------------------|
| C101 | Open | Normal operation. | |
| | Short | F101 opened, No hazard. | 0[V] |
| C102 | Open | Normal operation. | |
| | Short | F101 opened, No hazard. | 0[V] |
| C103 | Open | Normal operation. | |
| | Short | F101 opened, No hazard. | 0[V] |
| C104 | Open | Normal operation. | |
| | Short | Normal operation. | |
| C105 | Open | Normal operation. | |
| | Short | F101 opened, No hazard. | 0[V] |
| C111 | Open | Normal operation. | |
| | Short | See 16 Page. | |
| C121 | Open | Normal operation. | |
| | Short | No Hazard. | 0[V] |
| C131 | Open | Normal operation. | |
| | Short | Normal operation. | |
| C141 | Open | Normal operation. | |
| | Short | No Hazard. | 0[V] |
| C142 | Open | Normal operation. | |
| | Short | Normal operation. | |
| C151 | Open | Normal operation. | |
| | Short | No Hazard. | 0[V] |
| C152 | Open | No Hazard. | 0[V] |
| | Short | No Hazard. | 0[V] |

F M E A

| Component | Mode | | Comment | Output Voltage (V) |
|-----------|-------|---------|---|--------------------|
| C153 | Open | | Normal operation. | |
| | Short | | No Hazard. | 0[V] |
| C154 | Open | | Normal operation. | |
| | Short | | No Hazard. | 0[V] |
| C161 | Open | | Normal operation. | |
| | Short | | See 16 Page. | |
| C162 | Open | | Normal operation. | |
| | Short | | F101 opened, No hazard. | 0[V] |
| C171 | Open | | See 16 Page. | |
| | Short | | No Hazard. | 0[V] |
| C172 | Open | | Normal operation. | |
| | Short | | F101 opened, No hazard. | 0[V] |
| C181 | Open | | Normal operation. | |
| | Short | | F101 opened, No hazard. | 0[V] |
| C201 | Open | Only 12 | Normal operation. | |
| | Short | | Output voltage decreased. No hazard. | |
| C202 | Open | | See 16 Page. | |
| | Short | | See 16 Page. | |
| C203 | Open | | Normal operation. | |
| | Short | | Output voltage decreased. No hazard. | |
| C204 | Open | | Normal operation. | |
| | Short | | Output voltage decreased. No hazard. | |
| C205 | Open | | Normal operation. | |
| | Short | | Output voltage decreased. No hazard. | |

F M E A

| Component | Mode | | Comment | Output Voltage (V) |
|-----------|-------|---------|---|--------------------|
| C206 | Open | | Normal operation. | |
| | Short | | Output voltage decreased. No hazard. | |
| C207 | Open | | Normal operation. | |
| | Short | | Output voltage decreased. No hazard. | |
| C221 | Open | | Normal operation. | |
| | Short | | Output voltage decreased. No hazard. | |
| C222 | Open | | Normal operation. | |
| | Short | | Output voltage decreased. No hazard. | |
| C223 | Open | Only 12 | Normal operation. | |
| | Short | Only 12 | Output voltage decreased. No hazard. | |
| C224 | Open | | Normal operation. | |
| | Short | | Output voltage decreased. No hazard. | |
| C225 | Open | | Normal operation. | |
| | Short | | See 16 Page. | |
| D141 | Open | | Normal operation. | |
| | Short | | Normal operation. | |
| D161 | Open | | See 16 Page. | |
| | Short | | See 16 Page. | |
| D171 | Open | | Normal operation. | |
| | Short | | Normal operation. | |
| D173 | Open | | Normal operation. | |
| | Short | | See 16 Page. | |
| D181 | Open | | Normal operation. | |
| | Short | | F101 opened, No hazard. | 0[V] |

F M E A

| Component | Mode | | Comment | Output Voltage (V) |
|-----------|-------|-----|-------------------|--------------------|
| D201 | Open | | Normal operation. | |
| | Short | | See 16 Page. | |
| D202 | Open | | See 16 Page. | |
| | Short | | Normal operation. | |
| D203 | Open | | See 16 Page. | |
| | Short | | See 16 Page. | |
| D221 | Open | | Normal operation. | |
| | Short | | Normal operation. | |
| D222 | Open | | Normal operation. | |
| | Short | | Normal operation. | |
| IC121 | Open | 1 | Normal operation. | |
| | | 2 | No Hazard. | 0[V] |
| | | 3 | See 16 Page. | |
| | | 4 | Normal operation. | |
| | | 5 | Normal operation. | |
| | | 6 | Normal operation. | |
| | | 7 | Normal operation. | |
| | | 8 | Normal operation. | |
| | Short | 1-2 | Normal operation. | |
| | | 2-3 | No Hazard. | 0[V] |
| | | 3-4 | Normal operation. | |
| | | 5-6 | See 16 Page. | |
| | | 6-7 | See 16 Page. | |
| | | 7-8 | Normal operation. | |

F M E A

| Component | Mode | | Comment | Output Voltage (V) |
|-----------|-------|-----|---|--------------------|
| IC151 | Open | 1 | No Hazard. | 0[V] |
| | | 2 | No Hazard. | 0[V] |
| | | 3 | See 16 Page. | |
| | | 4 | No Hazard. | 0[V] |
| | | 5 | See 16 Page. | |
| | | 6 | No Hazard. | 0[V] |
| | | 7 | No Hazard. | 0[V] |
| | | 8 | No Hazard. | 0[V] |
| | Short | 1-2 | No Hazard. | 0[V] |
| | | 2-3 | See 16 Page. | |
| | | 3-4 | See 16 Page. | |
| | | 5-6 | No Hazard. | 0[V] |
| | | 6-7 | F101 opened, No hazard. | 0[V] |
| | | 7-8 | Normal operation. | |
| IC221 | Open | A | See 16 Page. | |
| | | K | See 16 Page. | |
| | | R | See 16 Page. | |
| | Short | A-K | Output voltage decreased. No hazard. | |
| | | K-R | Output voltage decreased. No hazard. | |
| | | R-A | See 16 Page. | |
| L101 | Open | | No Hazard. | 0[V] |
| | Short | | Normal operation. | |
| L201 | Open | | See 17 Page. | |
| | Short | | Normal operation. | |

F M E A

| Component | Mode | | Comment | Output Voltage (V) |
|-----------|-------|-----------|-------------------|--------------------|
| PC151 | Open | LED. A, K | See 17 Page. | |
| | | TR. C, E | See 17 Page. | |
| | Short | LED. A-K | See 17 Page. | |
| | | TR. C-E | No Hazard. | 0[V] |
| R111 | Open | | Normal operation. | |
| R112 | Open | | Normal operation. | |
| R113 | Open | | Normal operation. | |
| R114 | Open | | Normal operation. | |
| R121 | Open | | No Hazard. | 0[V] |
| R122 | Open | | No Hazard. | 0[V] |
| R123 | Open | | Normal operation. | |
| R124 | Open | | Normal operation. | |
| R131 | Open | | Normal operation. | |
| R132 | Open | | Normal operation. | |
| R133 | Open | | Normal operation. | |
| R134 | Open | | Normal operation. | |
| R135 | Open | | Normal operation. | |
| R141 | Open | | Normal operation. | |
| R142 | Open | | Normal operation. | |
| R143 | Open | | Normal operation. | |
| R151 | Open | | No Hazard. | 0[V] |
| R152 | Open | | No Hazard. | 0[V] |
| R153 | Open | | Normal operation. | |
| R154 | Open | | No Hazard. | 0[V] |

F M E A

| Component | Mode | | Comment | Output Voltage (V) |
|-----------|------|---------|---|--------------------|
| R155 | Open | | No Hazard. | 0[V] |
| R156 | Open | | Normal operation. | |
| R157 | Open | | Normal operation. | |
| R158 | Open | | Output voltage decreased. No hazard. | |
| R159 | Open | | Normal operation. | |
| R161 | Open | | Normal operation. | |
| R162 | Open | | Normal operation. | |
| R163 | Open | | Normal operation. | |
| R164 | Open | | See 17 Page. | |
| R165 | Open | | Normal operation. | |
| R166 | Open | | Normal operation. | |
| R167 | Open | | Normal operation. | |
| R169 | Open | | Normal operation. | |
| R171 | Open | | No Hazard. | 0[V] |
| R172 | Open | | F101 opened, No hazard. | 0[V] |
| R173 | Open | | Normal operation. | |
| R174 | Open | | Normal operation. | |
| R175 | Open | | No Hazard. | 0[V] |
| R176 | Open | | Normal operation. | |
| R177 | Open | | See 17 Page. | |
| R181 | Open | | Normal operation. | |
| R201 | Open | Only 12 | Normal operation. | |
| R202 | Open | | Normal operation. | |
| R203 | Open | | See 17 Page. | |

F M E A

| Component | Mode | | Comment | Output Voltage (V) |
|-----------|------|---------|---|--------------------|
| R204 | Open | | See 17 Page. | |
| R205 | Open | | Normal operation. | |
| R206 | Open | | Normal operation. | |
| R207 | Open | | Normal operation. | |
| R208 | Open | | Normal operation. | |
| R221 | Open | Only 12 | See 17 Page. | |
| R222 | Open | | See 17 Page. | |
| R223 | Open | | See 17 Page. | |
| R225 | Open | | Normal operation. | |
| R226 | Open | | Normal operation. | |
| R227 | Open | | Output voltage decreased. No hazard. | |
| R228 | Open | | Output voltage decreased. No hazard. | |
| R229 | Open | | See 17 Page. | |
| R231 | Open | Only 12 | Normal operation. | |
| R232 | Open | | Normal operation. | |
| R233 | Open | | Normal operation. | |
| R234 | Open | | Normal operation. | |
| R235 | Open | | Normal operation. | |
| T101 | Open | 1 | Output voltage decreased. No hazard. | 0[V] |
| | | 2 | Output voltage decreased. No hazard. | 0[V] |
| | | 3 | Normal operation. | |
| | | 4 | Normal operation. | |
| | | 5 | See 17 Page. | |
| | | 6 | See 17 Page. | |

F M E A

| Component | Mode | | Comment | Output Voltage (V) |
|-----------|-------|-----|---|--------------------|
| T101 | Open | 7 | Output voltage decreased. No hazard. | 0[V] |
| | | 8 | Output voltage decreased. No hazard. | 0[V] |
| | Short | 1-2 | Output voltage decreased. No hazard. | |
| | | 2-3 | Normal operation. | |
| | | 3-4 | Output voltage decreased. No hazard. | |
| | | 5-6 | Output voltage decreased. No hazard. | |
| | | 6-7 | Normal operation. | |
| | | 7-8 | Output voltage decreased. No hazard. | |
| T161 | Open | 1 | No Hazard. | 0[V] |
| | | 2 | No Hazard. | 0[V] |
| | | 3 | See 17 Page. | |
| | | 4 | See 17 Page. | |
| | Short | 1-2 | See 17 Page. | |
| | | 3-4 | See 17 Page. | |
| T171 | Open | 1 | See 17 Page. | |
| | | 2 | See 17 Page. | |
| | | 3 | See 17 Page. | |
| | | 4 | See 17 Page. | |
| | Short | 1-2 | See 17 Page. | |
| | | 3-4 | See 17 Page. | |
| TR101 | Open | D | See 18 Page. | |
| | | G | See 18 Page. | |
| | | S | See 18 Page. | |
| | Short | D-S | See 18 Page. | |

F M E A

| Component | Mode | | Comment | Output Voltage (V) |
|-----------|-------|-----|-------------------|--------------------|
| TR101 | Short | G-D | See 18 Page. | |
| | | S-G | See 18 Page. | |
| TR111 | Open | B | See 18 Page. | |
| | | C | Normal operation. | |
| | | E | See 18 Page. | |
| | Short | B-C | Normal operation. | |
| | | C-E | Normal operation. | |
| | | E-B | Normal operation. | |
| TR112 | Open | B | Normal operation. | |
| | | C | Normal operation. | |
| | | E | Normal operation. | |
| | Short | B-C | Normal operation. | |
| | | C-E | Normal operation. | |
| | | E-B | Normal operation. | |
| TR113 | Open | B | Normal operation. | |
| | | C | Normal operation. | |
| | | E | Normal operation. | |
| | Short | B-C | Normal operation. | |
| | | C-E | Normal operation. | |
| | | E-B | Normal operation. | |
| TR131 | Open | B | Normal operation. | |
| | | C | Normal operation. | |
| | | E | Normal operation. | |
| | Short | B-C | No Hazard. | 0[V] |

F M E A

| Component | Mode | | Comment | Output Voltage (V) |
|-----------|-------|-----|---|--------------------|
| TR131 | Short | C-E | No Hazard. | 0[V] |
| | | E-B | Normal operation. | |
| TR141 | Open | B | Output voltage decreased. No hazard. | |
| | | C | Output voltage decreased. No hazard. | |
| | | E | Output voltage decreased. No hazard. | |
| | Short | B-C | Normal operation. | |
| | | C-E | Normal operation. | |
| | | E-B | Output voltage decreased. No hazard. | |
| TR151 | Open | B | No Hazard. | 0[V] |
| | | C | Normal operation. | |
| | | E | No Hazard. | 0[V] |
| | Short | B-C | Normal operation. | |
| | | C-E | Normal operation. | |
| | | E-B | Normal operation. | |
| TR152 | Open | B | Normal operation. | |
| | | C | Normal operation. | |
| | | E | Normal operation. | |
| | Short | B-C | No Hazard. | 0[V] |
| | | C-E | No Hazard. | 0[V] |
| | | E-B | Normal operation. | |
| TR161 | Open | 1E | Normal operation. | |
| | | 2B | Normal operation. | |
| | | 3C | Normal operation. | |
| | | 4E | Output voltage decreased. No hazard. | |

F M E A

| Component | Mode | | Comment | Output Voltage (V) |
|-----------|-------|-------|---|--------------------|
| TR161 | Open | 5B | Normal operation. | |
| | | 6C | Normal operation. | |
| | Short | 1E-2B | Normal operation. | |
| | | 2B-6C | Output voltage decreased. No hazard. | |
| | | 3C-4E | Normal operation. | |
| | | 4E-5B | Normal operation. | |
| | | 5B-3C | No Hazard. | 0[V] |
| | | 6C-1E | Output voltage decreased. No hazard. | |
| TR171 | Open | B | No Hazard. | 0[V] |
| | | C | See 18 Page. | |
| | | E | No Hazard. | 0[V] |
| | Short | B-C | Normal operation. | |
| | | C-E | F101 opened, No hazard. | 0[V] |
| | | E-B | Normal operation. | |
| TR172 | Open | B | Normal operation. | |
| | | C | Normal operation. | |
| | | E | Normal operation. | |
| | Short | B-C | No Hazard. | 0[V] |
| | | C-E | No Hazard. | 0[V] |
| | | E-B | F101 opened, No hazard. | 0[V] |
| TR173 | Open | B | Normal operation. | |
| | | C | Normal operation. | |
| | | E | Normal operation. | |
| | Short | B-C | No Hazard. | 0[V] |

F M E A

| Component | Mode | | Comment | Output Voltage (V) |
|-----------|-------|-------|---|--------------------|
| TR173 | Short | C-E | No Hazard. | 0[V] |
| | | E-B | F101 opened, No hazard. | 0[V] |
| TR174 | Open | B | See 18 Page. | |
| | | C | See 18 Page. | |
| | | E | See 18 Page. | |
| | Short | B-C | See 18 Page. | |
| | | C-E | See 18 Page. | |
| | | E-B | See 18 Page. | |
| TR201 | Open | D | See 18 Page. | |
| | | G | See 18 Page. | |
| | | S | See 18 Page. | |
| | Short | D-S | See 18 Page. | |
| | | G-D | See 18 Page. | |
| | | S-G | See 18 Page. | |
| TR202 | Open | 1S | See 18 Page. | |
| | | 2G | See 18 Page. | |
| | | 3D | See 18 Page. | |
| | | 4S | See 19 Page. | |
| | | 5G | See 19 Page. | |
| | | 6D | See 19 Page. | |
| | Short | 1S-2G | See 19 Page. | |
| | | 2G-6D | Output voltage decreased. No hazard. | |
| | | 3D-4S | See 19 Page. | |
| | | 4S-5G | See 19 Page. | |

F M E A

| Component | Mode | | Comment | Output Voltage (V) |
|-----------|-------|---------|---|--------------------|
| TR202 | Short | 5G-3D | See 19 Page. | |
| | | 6D-1S | Output voltage decreased. No hazard. | |
| ZD111 | Open | | Normal operation. | |
| | Short | | Normal operation. | |
| ZD112 | Open | | Normal operation. | |
| | Short | | Normal operation. | |
| ZD221 | Open | Only 15 | See 19 Page. | |
| | Short | Only 15 | Normal operation. | |
| ZD223 | Open | | Normal operation. | |
| | Short | | Output voltage decreased. No hazard. | |

ABNORMAL TEST RESULT

| Component | Mode | | Comment | Output Voltage (V) |
|-----------|-------|-----|---|--------------------|
| C111 | Short | | No Hazard. | 0[V] |
| C161 | Short | | F101 opened, No hazard. | 0[V] |
| C171 | Open | | No Hazard. | |
| C202 | Open | | No Hazard. | |
| | Short | | No Hazard. | |
| C225 | Short | | Normal operation. | |
| D161 | Open | | F101 opened, No hazard. | 0[V] |
| | Short | | Normal operation. | |
| D173 | Short | | No Hazard. | |
| D201 | Short | | Output voltage decreased. No hazard. | |
| D202 | Open | | No Hazard. | |
| D203 | Open | | No Hazard. | |
| | Short | | Normal operation. | |
| IC121 | Open | 3 | Normal operation. | |
| | Short | 5-6 | No Hazard. | 0[V] |
| | | 6-7 | Normal operation. | |
| IC151 | Open | 3 | F101 opened, No hazard. | 0[V] |
| | | 5 | No Hazard. | 0[V] |
| | Short | 2-3 | F101 opened, No hazard. | 0[V] |
| | | 3-4 | No Hazard. | 0[V] |
| IC221 | Open | A | Output voltage increased. No hazard. | |
| | | K | Output voltage increased. No hazard. | |
| | | R | Output voltage increased. No hazard. | |
| | Short | R-A | Output voltage increased. No hazard. | |

ABNORMAL TEST RESULT

| Component | Mode | | Comment | Output Voltage (V) |
|-----------|-------|-----------|---|--------------------|
| L201 | Open | | R207 opened, No hazard. | |
| PC151 | Open | LED. A, K | Output voltage increased. No hazard. | |
| | | TR. C, E | Output voltage increased. No hazard. | |
| | Short | LED. A-K | Output voltage increased. No hazard. | |
| R164 | Open | | F101 opened, No hazard. | 0[V] |
| R177 | Open | | Normal operation. | |
| R203 | Open | | No Hazard. | |
| R204 | Open | | No Hazard. | |
| R221 | Open | Only 12 | Output voltage increased. No hazard. | |
| R222 | Open | | Output voltage increased. No hazard. | |
| R223 | Open | | Output voltage increased. No hazard. | |
| R229 | Open | | Output voltage increased. No hazard. | |
| T101 | Open | 5 | No Hazard. | |
| | | 6 | No Hazard. | |
| T161 | Open | 3 | F101 opened, No hazard. | 0[V] |
| | | 4 | F101 opened, No hazard. | 0[V] |
| | Short | 1-2 | F101 opened, No hazard. | 0[V] |
| | | 3-4 | F101 opened, No hazard. | 0[V] |
| T171 | Open | 1 | No Hazard. | |
| | | 2 | No Hazard. | |
| | | 3 | No Hazard. | |
| | | 4 | No Hazard. | |
| | Short | 1-2 | No Hazard. | |
| | | 3-4 | No Hazard. | |

ABNORMAL TEST RESULT

| Component | Mode | | Comment | Output Voltage (V) |
|-----------|-------|-----|---|--------------------|
| TR101 | Open | D | No Hazard. | 0[V] |
| | | G | No Hazard. | 0[V] |
| | | S | No Hazard. | 0[V] |
| | Short | D-S | F101 opened, No hazard. | 0[V] |
| | | G-D | No Hazard. | 0[V] |
| | | S-G | No Hazard. | 0[V] |
| TR111 | Open | B | Normal operation. | |
| | | E | Normal operation. | |
| TR171 | Open | C | No Hazard. | |
| TR174 | Open | B | No Hazard. | |
| | | C | No Hazard. | |
| | | E | No Hazard. | |
| | Short | B-C | No Hazard. | |
| | | C-E | F101 opened, No hazard. | 0[V] |
| | | E-B | No Hazard. | |
| TR201 | Open | D | No Hazard. | |
| | | G | No Hazard. | |
| | | S | No Hazard. | |
| | Short | D-S | Output voltage decreased. No hazard. | |
| | | G-D | Output voltage decreased. No hazard. | |
| | | S-G | No Hazard. | |
| TR202 | Open | 1S | No Hazard. | |
| | | 2G | No Hazard. | |
| | | 3D | No Hazard. | |

ABNORMAL TEST RESULT

| Component | Mode | | Comment | Output Voltage (V) |
|-----------|-------|---------|---|--------------------|
| TR202 | Open | 4S | No Hazard. | |
| | | 5G | No Hazard. | |
| | | 6D | No Hazard. | |
| | Short | 1S-2G | No Hazard. | |
| | | 3D-4S | No Hazard. | |
| | | 4S-5G | No Hazard. | |
| | | 5G-3D | No Hazard. | |
| ZD221 | Open | Only 15 | Output voltage increased. No hazard. | |