

9097250 TOSHIBA (DISCRETE/OPTO)

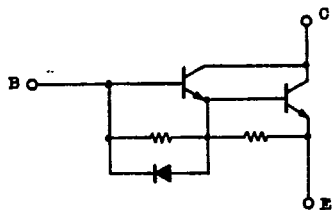
90D 16230 DT-33-35



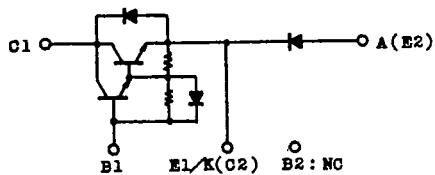
SEMICONDUCTOR

TECHNICAL DATA

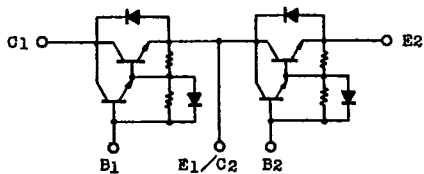
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- MG50G1JL1
- MG50G2CL3
- MG50G2DL1
- MG50G6EL1



MG50G1BL3

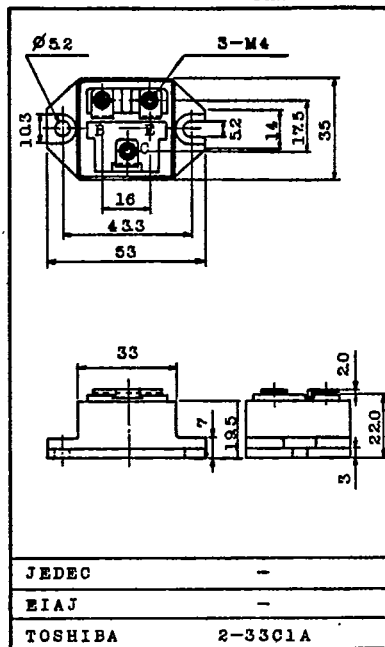


MG50G1JL1

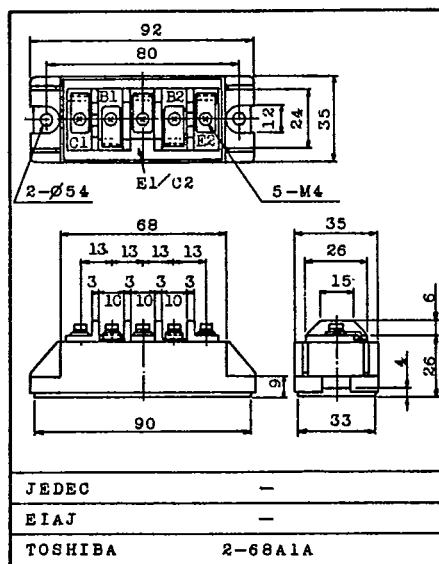


MG50G2CL3

Unit in mm



Weight : 86g



Weight : 210g

TOSHIBA CORPORATION

GT1A2A

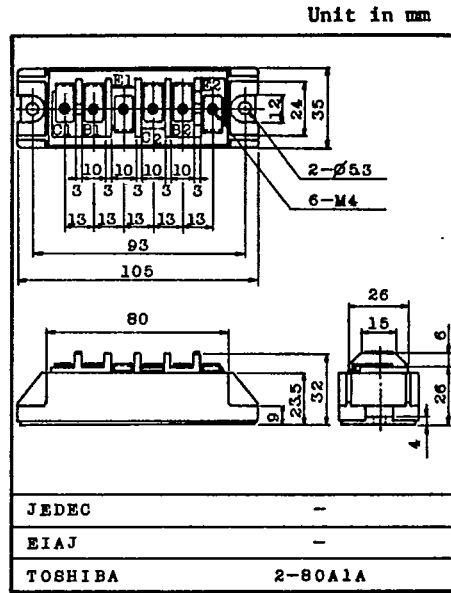
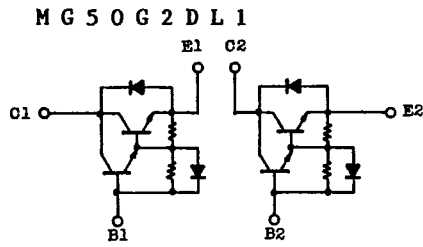
9097250 TOSHIBA (DISCRETE/OPTO)

90D 16231 DT-33-35

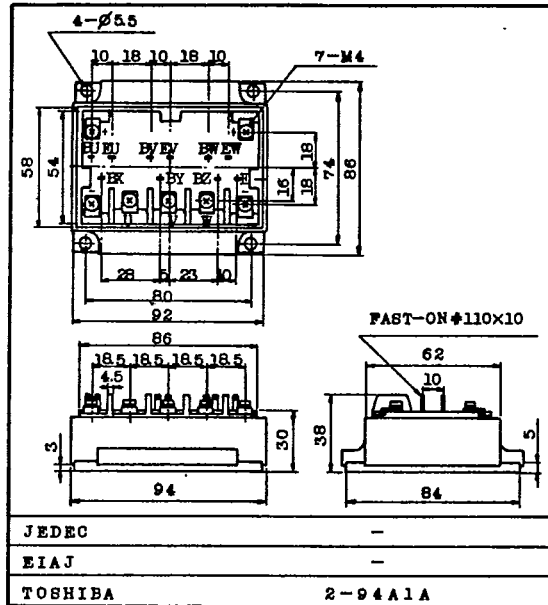
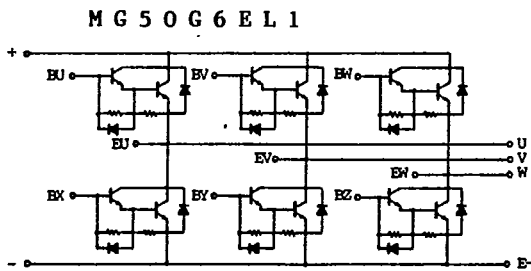


**SEMICONDUCTOR**  
TECHNICAL DATA

- MG50G1BL3
- MG50G1JL1
- MG50G2CL3
- MG50G2DL1
- MG50G6EL1



Weight : 245g



Weight : 600g

TOSHIBA CORPORATION

GT1A2A

9097250 TOSHIBA (DISCRETE/OPTO)

90D 16232 DT-33-35



SEMICONDUCTOR

东芝

TECHNICAL DATA

M G 5 0 G 1 B L 3

M G 5 0 G 1 J L 1

M G 5 0 G 2 C L 3

M G 5 0 G 2 D L 1

M G 5 0 G 6 E L 1

## MAXIMUM RATINGS (Ta=25°C)

| CHARACTERISTIC                        |     | SYMBOL                | RATING             | UNIT  |
|---------------------------------------|-----|-----------------------|--------------------|-------|
| Collector-Base Voltage                |     | V <sub>CB0</sub>      | 600                | V     |
| Collector-Emitter Voltage             |     | V <sub>CEO</sub>      | 600                | V     |
| Collector-Emitter Sustaining Voltage  |     | V <sub>CEO(SUS)</sub> | 450                | V     |
| Emitter-Base Voltage                  |     | V <sub>EB0</sub>      | 6                  | V     |
| Collector Current                     | DC  | I <sub>C</sub>        | 50                 | A     |
|                                       | 1ms | I <sub>C</sub>        | 100                | A     |
|                                       | DC  | -I <sub>C</sub>       | 50                 | A     |
| Base Current                          |     | I <sub>B</sub>        | 3                  | A     |
| Collector Power Dissipation (Tc=25°C) |     | P <sub>C</sub>        | 300                | W     |
| Junction Temperature                  |     | T <sub>j</sub>        | 150                | °C    |
| Storage Temperature Range             |     | T <sub>stg</sub>      | -40~125            | °C    |
| Isolation Voltage                     |     | V <sub>isol</sub>     | 2500 (AC 1 Minute) | V     |
| Screw Torque (Terminal/Mounting)      |     |                       | 20/30              | kg·cm |

## ELECTRICAL CHARACTERISTICS (Ta=25°C)

| CHARACTERISTIC                        |              | SYMBOL                | TEST CONDITION                                                   | MIN.                                                     | TYP. | MAX. | UNIT |
|---------------------------------------|--------------|-----------------------|------------------------------------------------------------------|----------------------------------------------------------|------|------|------|
| Collector Cut-off Current             |              | I <sub>CBO</sub>      | V <sub>CB</sub> =600V, I <sub>E</sub> =0                         | -                                                        | -    | 1.0  | mA   |
| Emitter Cut-off Current               |              | I <sub>EBO</sub>      | V <sub>EB</sub> =6V, I <sub>C</sub> =0                           | -                                                        | -    | 200  | mA   |
| Collector-Emitter Sustaining Voltage  |              | V <sub>CEO(SUS)</sub> | I <sub>C</sub> =0.5A, L=40mH                                     | 450                                                      | -    | -    | V    |
| DC Current Gain                       |              | h <sub>FE</sub>       | V <sub>CE</sub> =5V, I <sub>C</sub> =50A                         | 100                                                      | -    | -    |      |
| Collector-Emitter Saturation Voltage  |              | V <sub>CE(sat)</sub>  | I <sub>C</sub> =50A, I <sub>B</sub> =1A                          | -                                                        | -    | 2.0  | V    |
| Base-Emitter Saturation Voltage       |              | V <sub>BE(sat)</sub>  |                                                                  | -                                                        | -    | 2.5  | V    |
| Emitter-Collector Voltage             |              | V <sub>ECO</sub>      | I <sub>E</sub> =50A, I <sub>B</sub> =0                           | -                                                        | -    | 1.5  | V    |
| Reverse Recovery Time                 |              | t <sub>rr</sub>       | -I <sub>C</sub> =50A, V <sub>EB</sub> =3V, V <sub>CE</sub> =300V | -                                                        | -    | 2.0  | μs   |
| Switching Time                        | Turn-on Time | t <sub>on</sub>       |                                                                  | -                                                        | -    | 1.0  | μs   |
|                                       | Storage Time | t <sub>stg</sub>      |                                                                  | -                                                        | -    | 12   |      |
|                                       | Fall Time    | t <sub>f</sub>        |                                                                  | I <sub>B1</sub> =-I <sub>B2</sub> =1A<br>DUTY CYCLE=0.5% | -    | -    |      |
| Thermal Resistance (Junction to Case) |              | R <sub>th(j-c)</sub>  | Transistor                                                       | -                                                        | -    | 0.41 | °C/W |
|                                       |              |                       | Diode                                                            | -                                                        | -    | 1.3  |      |

TOSHIBA CORPORATION

GT1A2

9097250 TOSHIBA (DISCRETE/OPTO)

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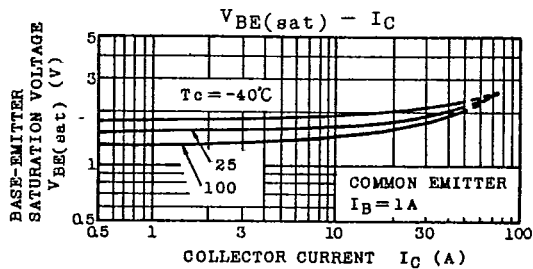
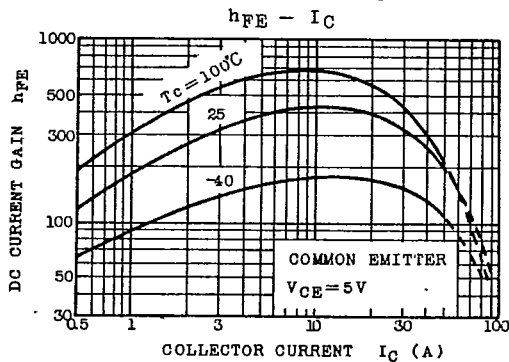
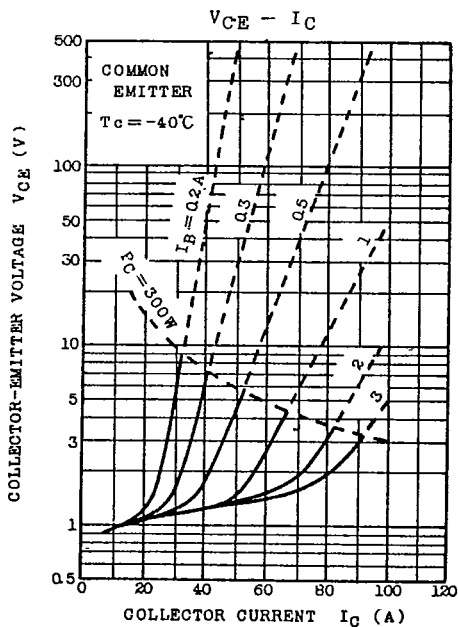
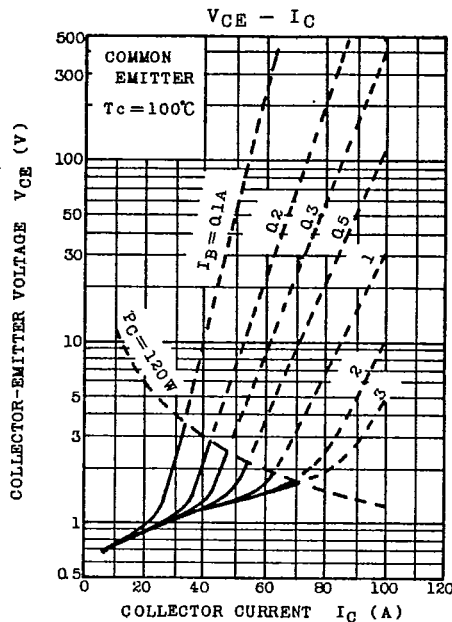
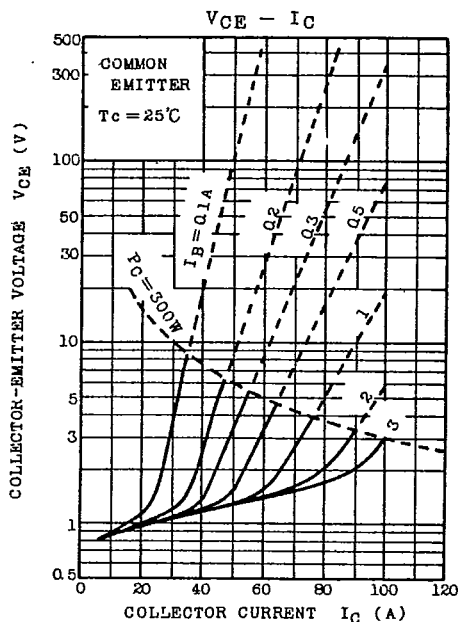
DT-33-35



SEMICONDUCTOR

TECHNICAL DATA

- MG 50 G 1 B L 3
- MG 50 G 1 J L 1
- MG 50 G 2 C L 3
- MG 50 G 2 D L 1
- MG 50 G 6 E L 1



TOSHIBA CORPORATION

GT1A2

9097250 TOSHIBA (DISCRETE/OPTO)

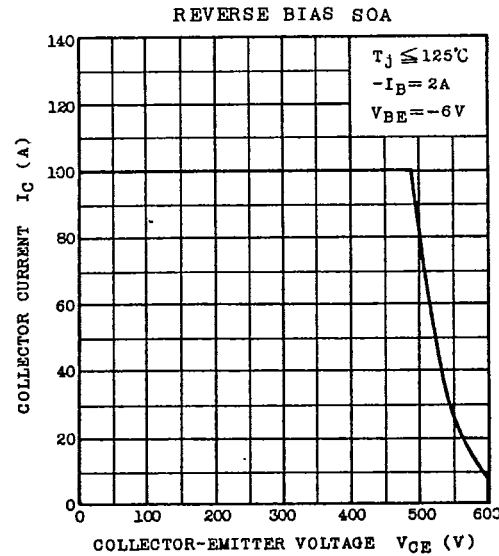
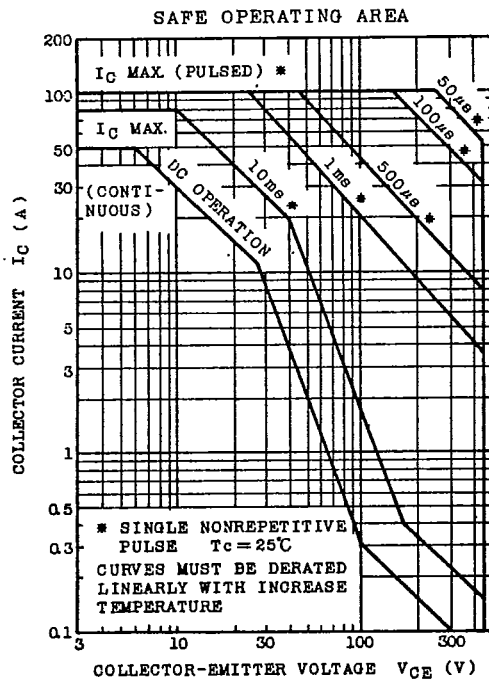
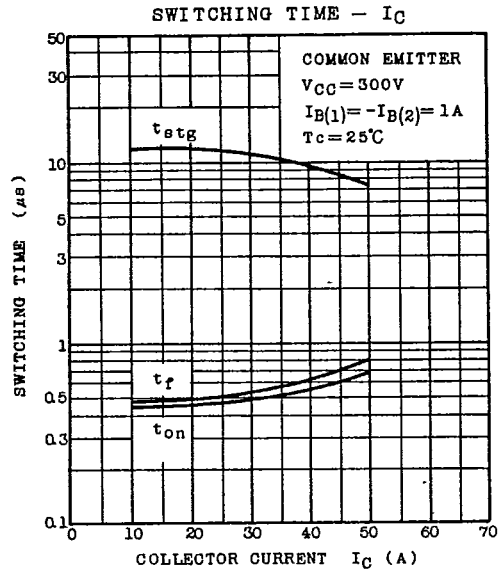
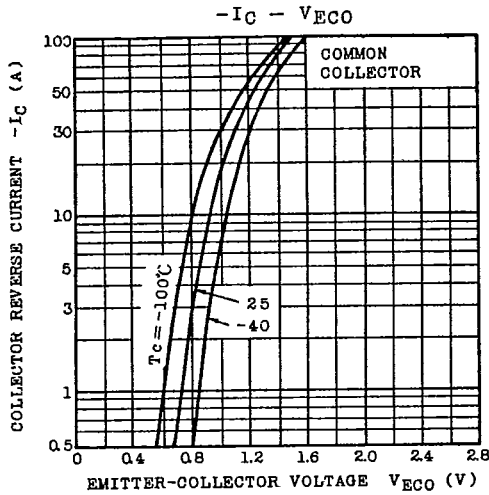
90D 16234 DT-33-35



SEMICONDUCTOR

TECHNICAL DATA

- MG 5 0 G 1 B L 3
- MG 5 0 G 1 J L 1
- MG 5 0 G 2 C L 3
- MG 5 0 G 2 D L 1
- MG 5 0 G 6 E L 1



TOSHIBA CORPORATION

GT1A2

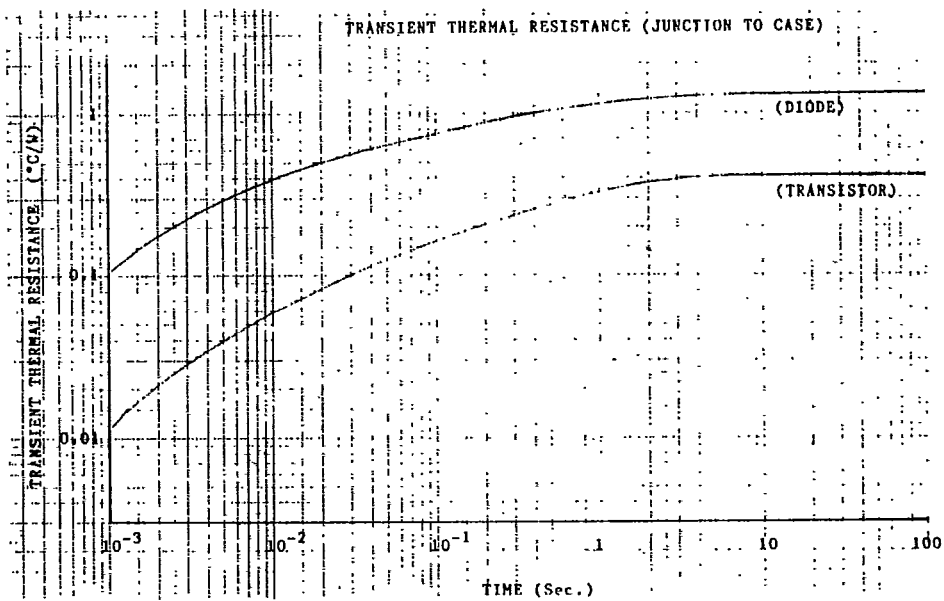
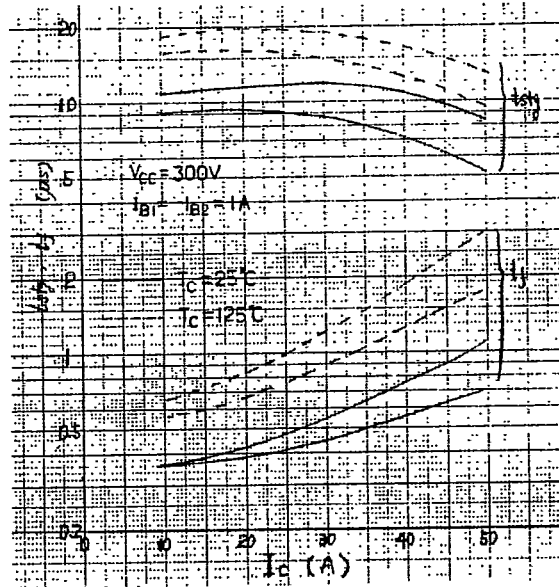
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90D 16235 DT-33-35



**SEMICONDUCTOR**  
TECHNICAL DATA

- MG50G1BL3
- MG50G1JL1
- MG50G2CL3
- MG50G2DL1
- MG50G6EL1



TOSHIBA CORPORATION

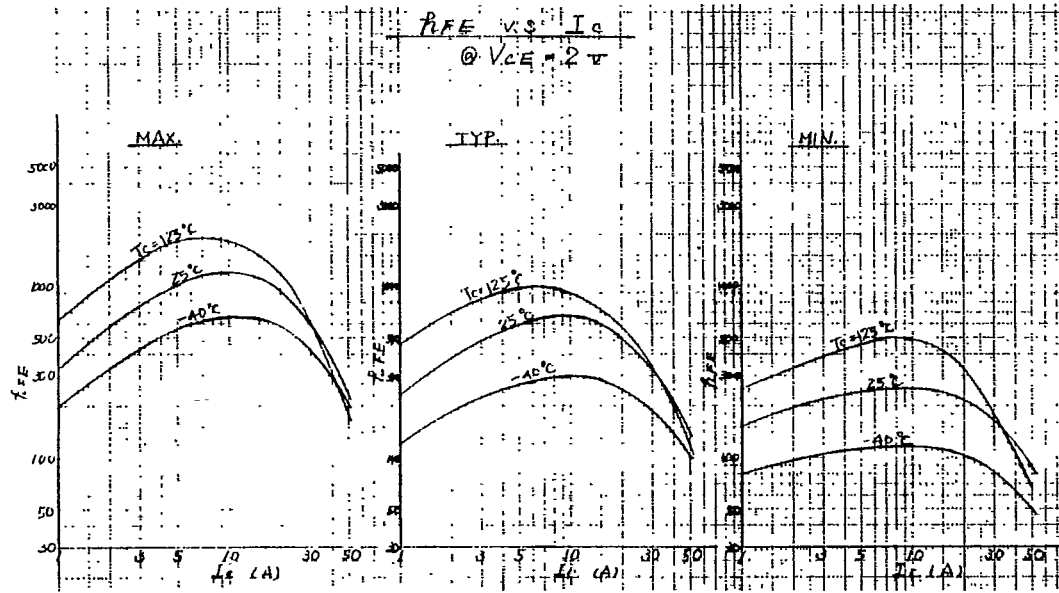
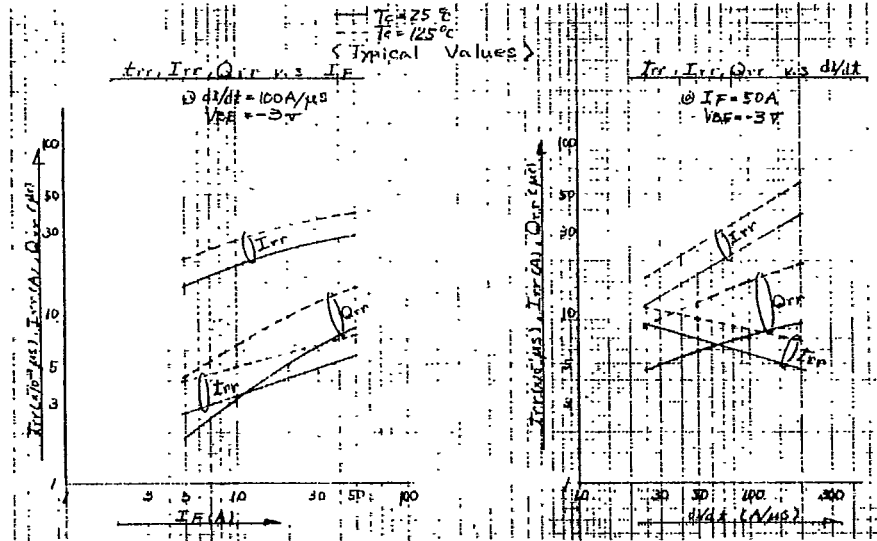
GT1A2A



SEMICONDUCTOR

TECHNICAL DATA

- MG50G1BL3
- MG50G1JL1
- MG50G2CL3
- MG50G2DL1
- MG50G6EL1



TOSHIBA CORPORATION