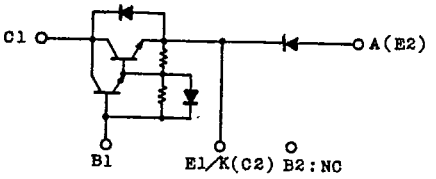
MG100G1JL1
MG100G2CL1
MG100G2DL1

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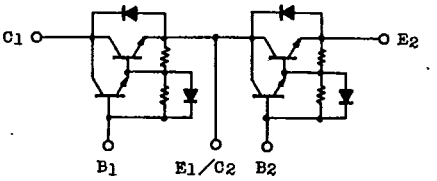
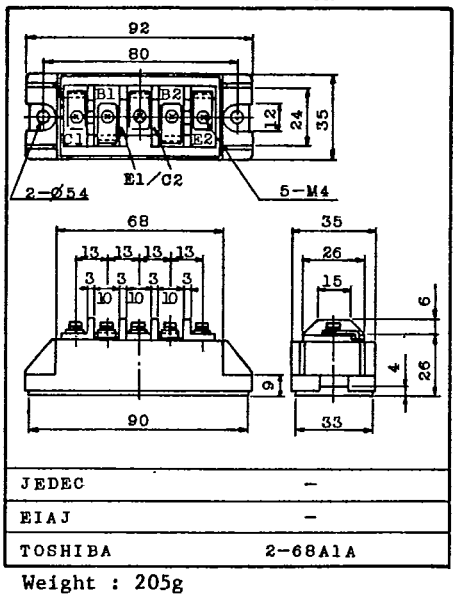


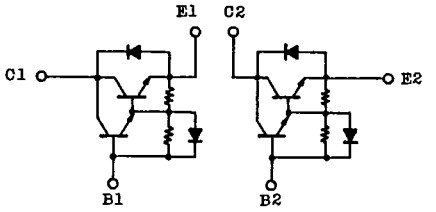

MG100G2CL1

Unit in mm



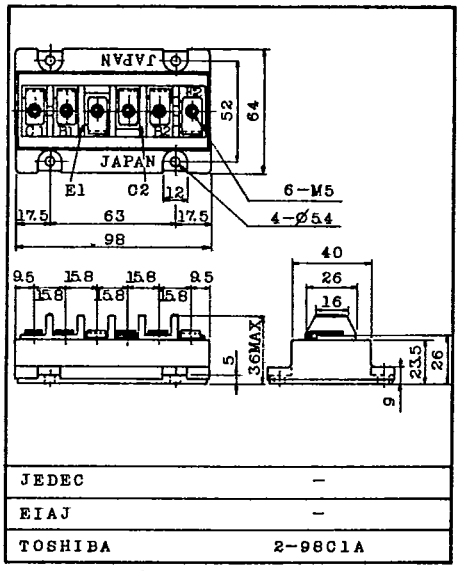

| | |
|---|---|
| JEDEC | — |
| EIAJ | — |
| TOSHIBA | 2-68A1A |

Weight : 205g




MG100G2DL1

Unit in mm




| | |
|---|---|
| JEDEC | — |
| EIAJ | — |
| TOSHIBA | 2-98C1A |

Weight : 430g

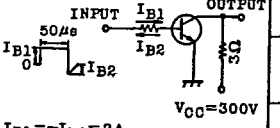
# SEMICONDUCTOR
## TECHNICAL DATA

**MG100G1JL1**
**MG100G2CL1**
**MG100G2DL1**

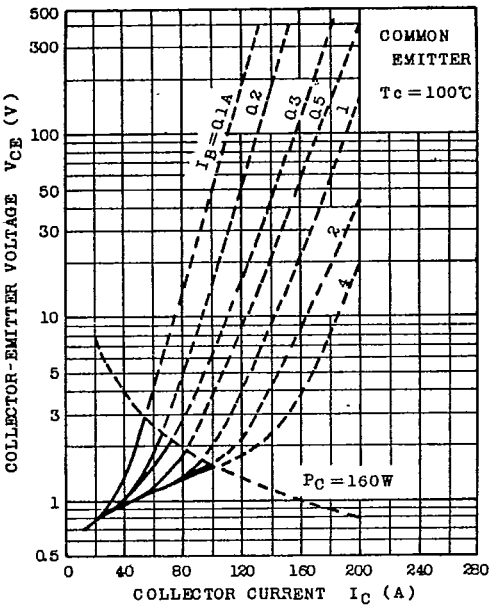
MAXIMUM RATINGS (Ta=25°C)

| CHARACTERISTIC | | SYMBOL | RATING | UNIT |
|---|---|---|---|---|
| Collector-Base Voltage | | $V_{CBO}$ | 600 | V |
| Collector-Emitter Voltage | | $V_{CEO}$ | 600 | V |
| Collector-Emitter Sustaining Voltage | | $V_{CEO(SUS)}$ | 450 | V |
| Emitter-Base Voltage | | $V_{EBO}$ | 6 | V |
| Collector Current | DC | $I_C$ | 100 | A |
| | 1ms | $I_C$ | 200 | |
| | DC | $-I_C$ | 100 | |
| Base Current | | $I_B$ | 5 | A |
| Collector Power Dissipation (Tc=25°C) | | $P_C$ | 400 | W |
| Junction Temperature | | Tj | 150 | °C |
| Storage Temperature Range | | Tstg | -40 ~ 125 | °C |
| Isolation Voltage | | VIsol | 2500(AC 1 Minute) | V |
| Screw Torque (Terminal/Mounting) | | - | 20/30 | kg.cm |

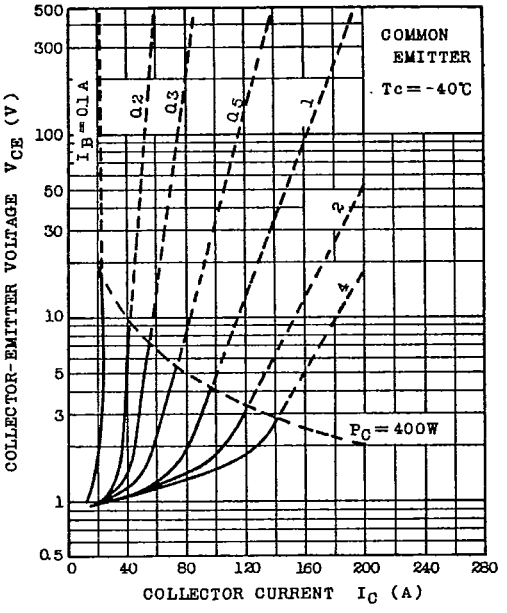
ELECTRICAL CHARACTERISTICS (Ta=25°C)

| CHARACTERISTIC | | SYMBOL | TEST CONDITION | MIN. | TYP. | MAX. | UNIT |
|---|---|---|---|---|---|---|---|
| Collector Cut-off Current | | $I_{CBO}$ | $V_{CB}$=600V, $I_E$=0 | - | - | 2.0 | mA |
| Emitter Cut-off Current | | $I_{EBO}$ | $V_{EB}$=6V, $I_C$=0 | - | - | 200 | mA |
| Collector-Emitter Sustaining Voltage | | $V_{CEO(SUS)}$ | $I_C$=0.5A L=40mH | 450 | - | - | V |
| DC Current Gain | | $h_{FE}$ | $V_{CE}$=5V, $I_C$=100A | 100 | - | - | - |
| Collector-Emitter Saturation Voltage | | $V_{CE(sat)}$ | $I_C$=100A, $I_B$=2A | - | - | 2.0 | V |
| Base-Emitter Saturation Voltage | | $V_{BE(sat)}$ | | - | - | 2.7 | V |
| Emitter-Collector Voltage | | $V_{ECO}$ | $I_E$=100A, $I_B$=0 | - | - | 1.6 | V |
| Reverse Recovery Time | | $t_{rr}$ | $-I_C$=100A, $V_{EB}$=3V<br>$V_{CC}$=300V, di/dt=100A/μs | - | - | 2.0 | μs |
| Collector Output Capacitance | | $C_{ob}$ | $V_{CB}$=50V, $I_E$=0<br>f=1MHz | - | 1000 | - | pF |
| Switching Time | Turn-on Time | $t_{on}$ |  | - | - | 2.0 | μs |
| | Storage Time | $t_{stg}$ | | - | - | 12 | |
| | Fall Time | $t_f$ | $I_{B1}$=-$I_{B2}$=2A<br>DUTY CYCLE=0.5% | - | - | 2.0 | |
| Thermal Resistance (Junction to Case) | | $R_{th(j-c)}$ | Transistor | - | - | 0.31 | °C/W |
| | | | Diode | - | - | 1.3 | |

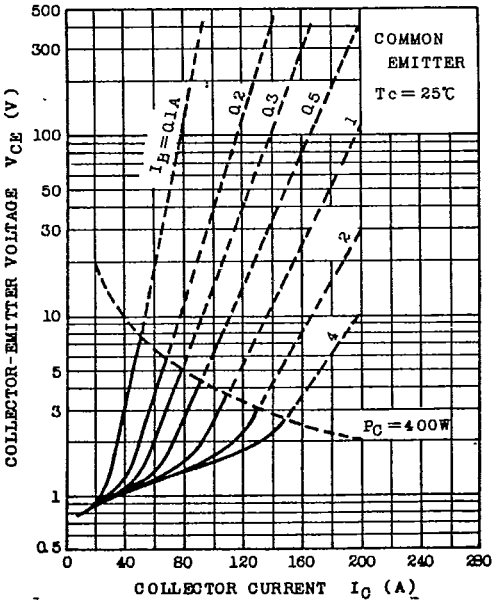
$V_{CE}$ – $I_C$



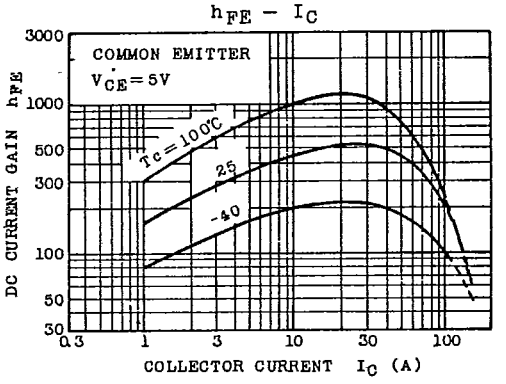

$V_{CE}$ – $I_C$



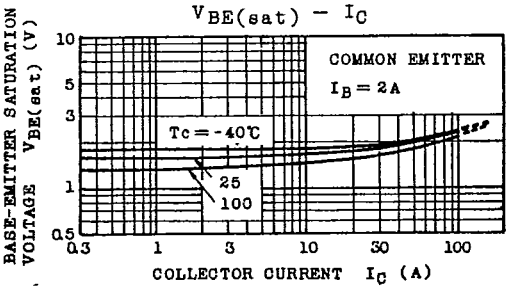

$V_{CE}$ – $I_C$



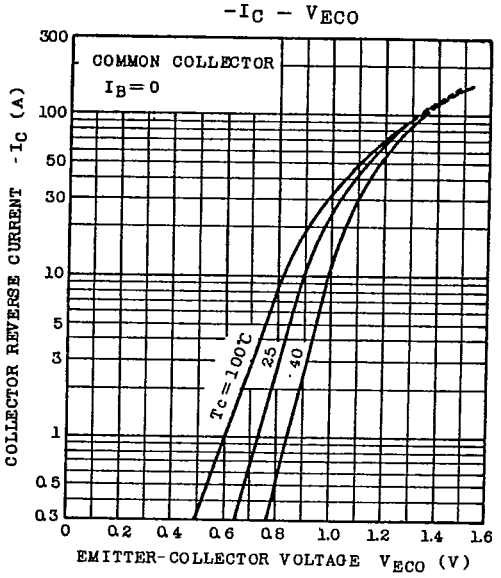

$h_{FE}$ – $I_C$



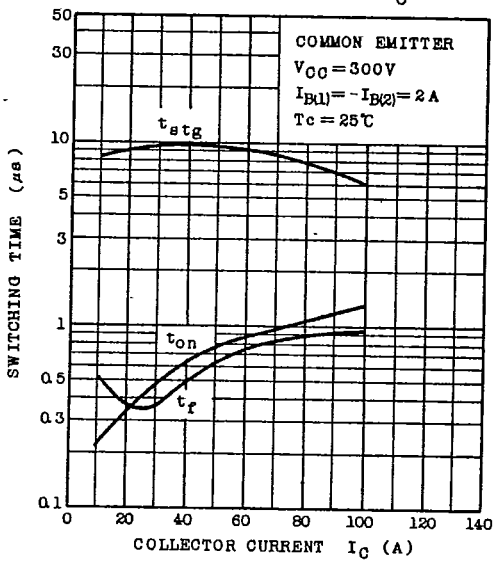

$V_{BE(sat)}$ – $I_C$



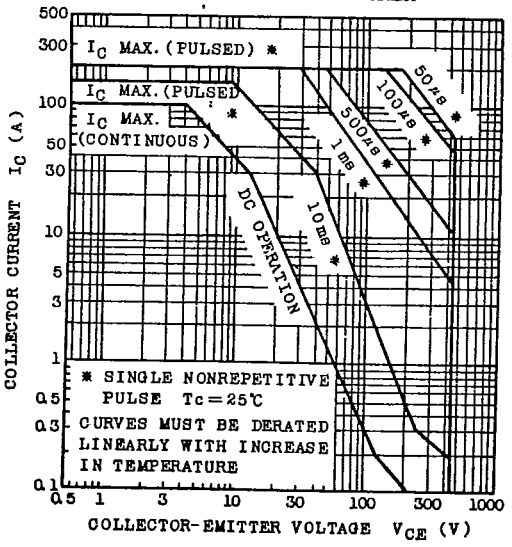
$-I_C - V_{ECO}$



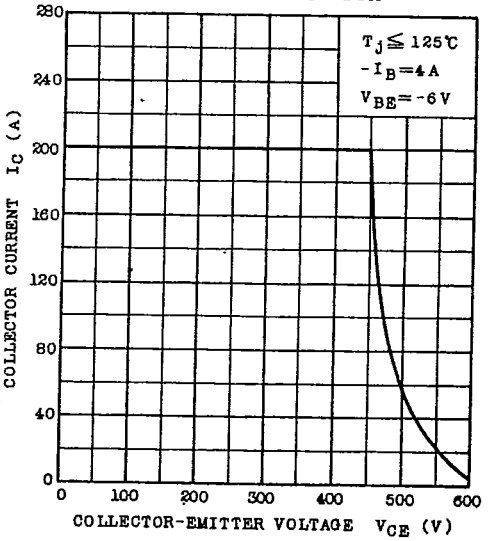

SWITCHING TIME – $I_C$




SAFE OPERATING AREA




REVERSE BIAS SOA



MG100G1JL1
MG100G2CL1
MG100G2DL1