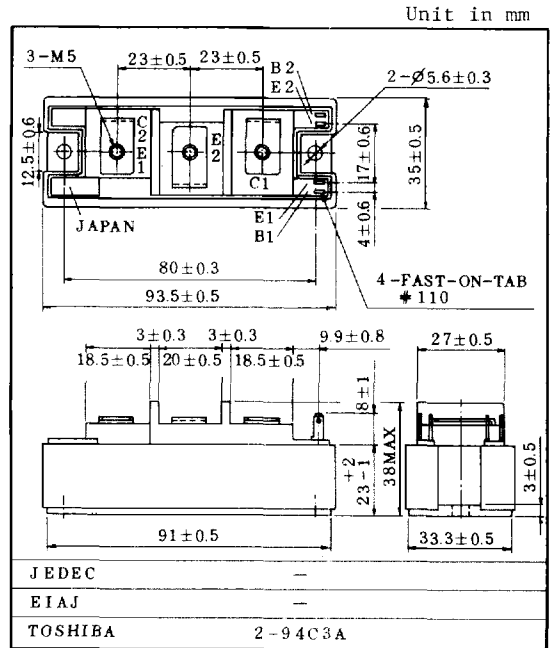
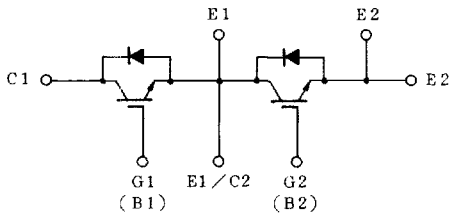


HIGH POWER SWITCHING APPLICATIONS.
MOTOR CONTROL APPLICATIONS.

- . High Input Impedance
- . High Speed : $t_f=0.35\mu s(\text{Max.})$
 $t_{rr}=0.25\mu s(\text{Max.})$
- . Low Saturation Voltage
: $V_{CE}(\text{sat})=4.0V(\text{Max.})$
- . Enhancement-Mode
- . Includes a Complete Half Bridge in One Package.
- . The Electrodes are Isolated from Case.

EQUIVALENT CIRCUIT

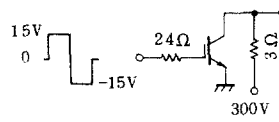


Weight: 205g

MAXIMUM RATINGS (Ta=25°C)

| CHARACTERISTIC | SYMBOL | RATING | UNIT |
|--|-------------------|---------------------|-------|
| Collector-Emitter Voltage | V _{CES} | 600 | V |
| Gate-Emitter Voltage | V _{GES} | ±20 | V |
| Collector Current | DC | I _C | A |
| | 1ms | I _{CP} | |
| Forward Current | DC | I _F | A |
| | 1ms | I _{FM} | |
| Collector Power Dissipation (T _c =25°C) | P _C | 400 | W |
| Junction Temperature | T _j | 150 | °C |
| Storage Temperature Range | T _{stg} | -40~125 | °C |
| Isolation Voltage | V _{Isol} | 2500 (AC, 1 minute) | V |
| Screw Torque (Terminal/Mounting) | - | 30/30 | kg·cm |

ELECTRICAL CHARACTERISTICS (Ta=25°C)

| CHARACTERISTIC | | SYMBOL | TEST CONDITION | MIN. | TYP. | MAX. | UNIT |
|--------------------------------------|---------------|----------------------|---|------|------|------|------|
| Gate Leakage Current | | IGES | V _{GE} =±20V, V _{CE} =0 | - | - | ±500 | nA |
| Collector Cut-off Current | | ICES | V _{CE} =600V, V _{GE} =0 | - | - | 1.0 | mA |
| Collector-Emitter Breakdown Voltage | | V(BR)CES | I _C =10mA, V _{GE} =0 | 600 | - | - | V |
| Gate-Emitter Cut-off Voltage | | V _{GE(OFF)} | I _C =100mA, V _{CE} =5V | 3.0 | - | 6.0 | V |
| Collector-Emitter Saturation Voltage | | V _{CE(sat)} | I _C =100A, V _{GE} =15V | - | 3.0 | 4.0 | V |
| Input Capacitance | | C _{ies} | V _{CE} =10V, V _{GE} =0, f=1MHz | - | 8200 | - | pF |
| Switching Time | Rise Time | t _r |  | - | 0.30 | 0.60 | μs |
| | Turn-on Time | t _{on} | | - | 0.40 | 0.80 | |
| | Fall Time | t _f | | - | 0.15 | 0.35 | |
| | Turn-off Time | t _{off} | | - | 0.50 | 1.00 | |
| Forward Voltage | | V _F | I _F =100A, V _{GE} =0 | - | 2.0 | 2.70 | V |
| Reverse Recovery Time | | t _{rr} | I _F =100A, V _{GE} =-10V di/dt=100A/μs | - | 0.15 | 0.25 | μs |
| Thermal Resistance | | R _{th(j-c)} | Transistor | - | - | 0.31 | °C/W |
| | | | Diode | - | - | 0.83 | |

