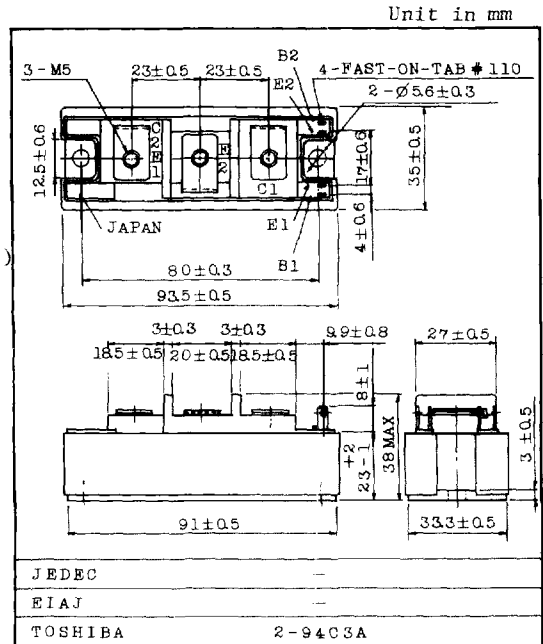
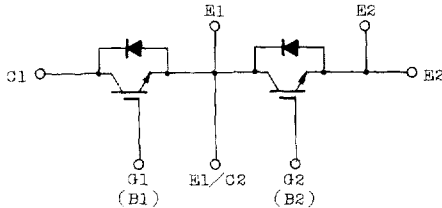


HIGH POWER SWITCHING APPLICATIONS.
MOTOR CONTROL APPLICATIONS.

FEATURES:

- . High Input Impedance
- . High Speed : $t_f=1.0\mu s(\text{Max.})$
 $t_{rr}=0.5\mu s(\text{Max.})$
- . Low Saturation Voltage : $V_{CE}(\text{sat})=5.0V(\text{Max.})$
- . Enhancement-Mode
- . Includes a Complete Half Bridge in One Package.
- . The Electrodes are Isolated from Case.

EQUIVALENT CIRCUIT



Weight : 220g

MAXIMUM RATINGS ($T_a=25^\circ\text{C}$)

| CHARACTERISTIC | SYMBOL | RATING | UNIT |
|----------------------------------|------------|---------------------|------------------|
| Collector-Emitter Voltage | V_{CES} | 500 | V |
| Gate-Emitter Voltage | V_{GES} | ± 20 | V |
| Collector Current | DC | I_C | 25 |
| | lms | I_{CP} | 50 |
| Forward Current | DC | I_F | 25 |
| | lms | I_{FM} | 50 |
| Collector Power Dissipation | P_C | 125 | W |
| Junction Temperature | T_j | 150 | $^\circ\text{C}$ |
| Storage Temperature Range | T_{stg} | -40 125 | $^\circ\text{C}$ |
| Isolation Voltage | V_{isol} | 2500 (AC, 1 minute) | V |
| Screw Torque (Terminal/Mounting) | - | 30/30 | kg·cm |

MG25H2YS1

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} =500V, V _{GE} =0 | - | - | 1.0 | mA |
| Collector-Emitter Breakdown Voltage | | V(BR)CES | I _C =10mA, V _{GE} =0 | 500 | - | - | V |
| Gate-Emitter Cut-off Voltage | | V _{GE(OFF)} | I _C =25mA, V _{CE} =5V | 3.0 | - | 6.0 | V |
| Collector-Emitter Saturation Voltage | | V _{CE(sat)} | I _C =25A, V _{GE} =15V | - | 3.5 | 5.0 | V |
| Input Capacitance | | C _{ies} | V _{CE} =10V, V _{GE} =0 f=1MHz | - | 1500 | - | pF |
| Switching Time | Rise Time | t _r | | - | 0.4 | 1.0 | μs |
| | Turn-on Time | t _{on} | | - | 0.5 | 1.0 | |
| | Fall Time | t _f | | - | 0.4 | 1.0 | |
| | Turn-off Time | t _{off} | | - | 0.9 | 1.5 | |
| Forward Voltage | | V _F | I _F =25A, V _{GE} =0 | - | 1.0 | 2.5 | V |
| Reverse Recovery Time | | t _{rr} | I _F =25A, V _{GE} =-10V di/dt=50A/μs | - | 0.3 | 0.5 | μs |
| Thermal Resistance | | R _{th(j-c)} | Transistor | - | - | 1.00 | °C/W |
| | | | Diode | - | - | 1.25 | |

