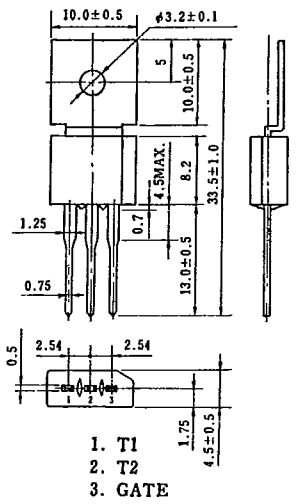
# BI-DIRECTIONAL TRIODE THYRISTOR (TRIAC)



**SM2G41** 400V 2A

Unit in mm




| | |
|---|---|
| JEDEC | TO-202 |
| EIAJ | – |
| TOSHIBA | 13-10A1B |

## MAXIMUM RATINGS

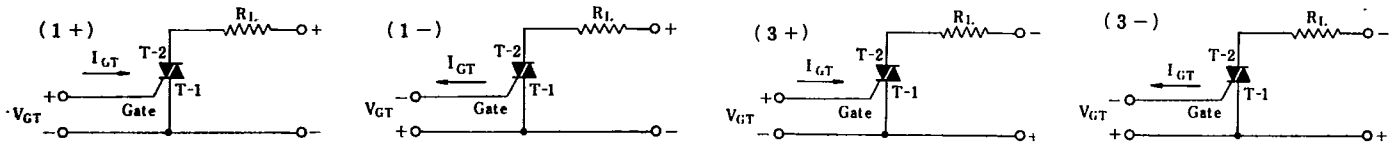
| CHARACTERISTIC | | SNMBOL | RATING | UNIT; |
|---|---|---|---|---|
| Peak Off-State Voltage | SM2B41 | $V_{DRM}$ | 100 | V |
| | SM2D41 | | 200 | |
| | SM2G41 | | 400 | |
| R.M.S On-State Current $T_c$=70°C) | | $I_{T(RMS)}$ | 2.0 | A |
| Peak One Sycle Surge On-State Current (Non-Repetitive) | | $I_{TSM}$ | 13 (60Hz) | A |
| | | | 12 (50Hz) | |
| Peak Gete Power Dissipation | | $P_{GM}$ | 3 | W |
| Average Gate Power Dissipation | | $P_{G(AV)}$ | 0.3 | W |
| Junction Temperature | | $T_j$ | −25~110 | °C |
| Storage Temperature Range | | $T_{stg}$ | −25~110 | °C |

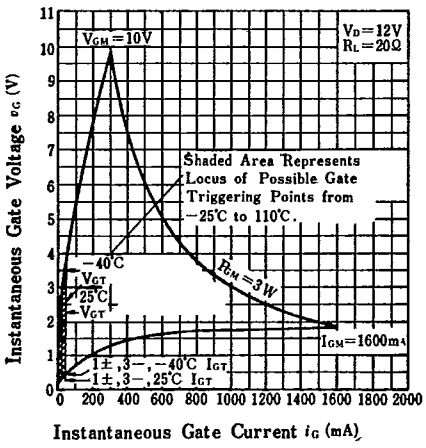
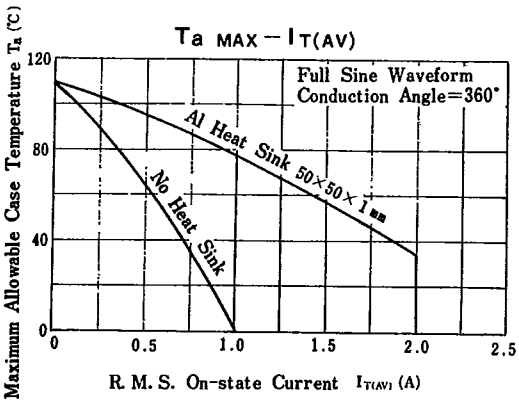
## ELECTRICAL CHARACTERISTICS

| CHARACTERISTIC | | SYMBOL | CONDITION | MIN. | TYP. | MAX. | UNIT |
|---|---|---|---|---|---|---|---|
| Repetitive Peak Off-State Current | | $I_{DRM}$ | $V_{DRM}$=Rated, $T_j$=110°C | – | – | 100 | μA |
| ** Gate Trigger Current | (1+) | $I_{GT}$ | $V_D$=12V, $R_L$=20Ω, Tc=25°C | – | – | 15 | mA |
| | (1−) | | | – | – | 15 | |
| | (3+) | | | – | 30 | – | |
| | (3−) | | | – | – | 15 | |
| ** Gate Trigger Voltage | (1+) | $V_{GT}$ | $V_D$=12V, $R_L$=20Ω, Tc=25°C | – | – | 2.3 | V |
| | (1−) | | | – | – | 2.3 | |
| | (3+) | | | – | 1.8 | – | |
| | (3−) | | | – | – | 2.3 | |
| Gate Non-Triggre Voltage | | $V_{GD}$ | $V_D$=Rated, Tc=110°C | 0.2 | – | – | V |
| Peak On-State Voltage | | $V_{TM}$ | $I_{TM}$=6A, Tc=25°C | – | – | 2.6 | V |
| Holding Current | | $I_H$ | $R_L$=100Ω, Tc=25°C | – | – | 25 | mA |
| Thermal Resistance * | | $R_{th(j-c)}$ | AC | – | – | 12 | °C/W |

* Junction to Case.

** Principal Voltage-Current Characteristics as follows.




## GATE TRIGGERING CHARACTERISTICS