



HUTSON INDUSTRIES, INC.

TO-202 SENSITIVE GATE TRIAC

| MAXIMUM RATINGS | SYMBOL | VDRM | DEVICE NUMBERS | | | | UNITS |
|---|-------------------|-------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|
| REPETITIVE PEAK OFF-STATE VOLTAGE (1) GATE OPEN, AND $T_J = 110^\circ\text{C}$ | VDRM | 200 400 600 | T106B*SS T106D*SS T106M*SS | T106B*SD T106D*SD T106M*SD | T106B*SG T106D*SG T106M*SG | T106B*SH T106D*SH T106M*SH | VOLT |
| RMS ON-STATE CURRENT AT $T_C = 80^\circ\text{C}$ AND CONDUCTION, ANGLE OF 360° | IT(RMS) | | 4.0 | 4.0 | 4.0 | 4.0 | AMP |
| PEAK SURGE (NON-REPETITIVE) ON-STATE CURRENT, ONE-CYCLE, AT 50HZ OR 60HZ | ITSM | | 40 | 40 | 40 | 40 | AMP |
| PEAK GATE - TRIGGER CURRENT FOR $3\mu\text{SEC. MAX.}$ | IGTM | | 1.2 | 1.2 | 1.2 | 1.2 | AMP |
| PEAK GATE-POWER DISSIPATION AT $IGT \leq IGTM$ | PGM | | 15 | 15 | 15 | 15 | WATT |
| AVERAGE GATE - POWER DISSIPATION | PG(AV) | | 0.3 | 0.3 | 0.3 | 0.3 | WATT |
| STORAGE TEMPERATURE RANGE | Tstg | | -40 to +150 | | | | $^\circ\text{C}$ |
| OPERATING TEMPERATURE RANGE, T_J | Topep | | -40 to +110 | | | | $^\circ\text{C}$ |
| ELECTRICAL CHARACTERISTICS AT SPECIFIED CASE TEMPERATURES | | | | | | | |
| PEAK OFF - STATE CURRENT (1) GATE OPEN $T_C = 110^\circ\text{C}$ VDRM = MAX. RATING | IDRM | | 0.5 | 0.5 | 0.5 | 0.5 | MA MAX. |
| MAXIMUM ON - STATE VOLTAGE, (1) AT $T_C = 25^\circ\text{C}$ AND $IT = \text{RATED AMPS}$ | VTM | | 1.6 | 1.6 | 1.6 | 1.6 | VOLT MAX. |
| DC HOLDING CURRENT, (1) GATE OPEN AND $T_C = 25^\circ\text{C}$ | IHO | | 5 | 10 | 15 | 25 | MA MAX. |
| CRITICAL RATE-OR-RISE OF OFF-STATE VOLTAGE, (1) FOR $V_D = V_{DRM}$ GATE OPEN, $T_C = 110^\circ\text{C}$ | CRITICAL dv/dt | | 10 | 10 | 15 | 25 | $\text{V}/\mu\text{SEC.}$ |
| CRITICAL RATE-OF-RISE OF COMMUNICATION VOLTAGE, (1) AT $T_C = 80^\circ\text{C}$, GATE UNENERGIZED, $V_D = V_{DRM}$, $IT = IT(\text{RMS})$ | COMMUTATING dv/dt | | 1 | 1 | 1 | 1 | $\text{V}/\mu\text{SEC.}$ |
| DC GATE - TRIGGER CURRENT FOR $V_D = 12\text{VDC}$. $RL = 60\text{ OHM}$ AND AT $T_C = 25^\circ\text{C}$ ($T_2 + \text{GATE} - T_2 - \text{GATE}-$) Q 1 & 3 ($T_2 + \text{GATE} - T_2 - \text{GATE}+$) Q 2 & 4 | IGT | | 3 | 5 | 10 | 25 | MA MAX. |
| DC GATE - TRIGGER VOLTAGE FOR $V_D = 12\text{VDC}$. $RL = 60\text{ OHM}$ AND AT $T_C = 25^\circ\text{C}$ | VGT | | 2.0 | 2.0 | 2.0 | 2.0 | VOLT MAX. |
| GATE CONTROLLED TURN-ON TIME FOR $V_D = V_{DRM}$ $IGT = 80\text{MA}$ $TR = 0.1\mu\text{SEC.}$, $IT = 6\text{A (PEAK)}$ AND $T_C = 25^\circ\text{C}$ | Tgt | | 3 | 3 | 3 | 3 | $\mu\text{SEC.}$ |
| THERMAL RESISTANCE, JUNCTION-TO-CASE | $R_{\theta J-C}$ | | 4 | 4 | 4 | 4 | $^\circ\text{C}/\text{WATT TYP}$ |

***NOTES:**

- (1) All values apply in either direction
- *Part Number requires a "1" for Type 1 or a "2" for Type 2



