

TOSHIBA BI-DIRECTIONAL TRIODE THYRISTOR SILICON PLANAR TYPE

SM8LZ47

AC POWER CONTROL APPLICATIONS

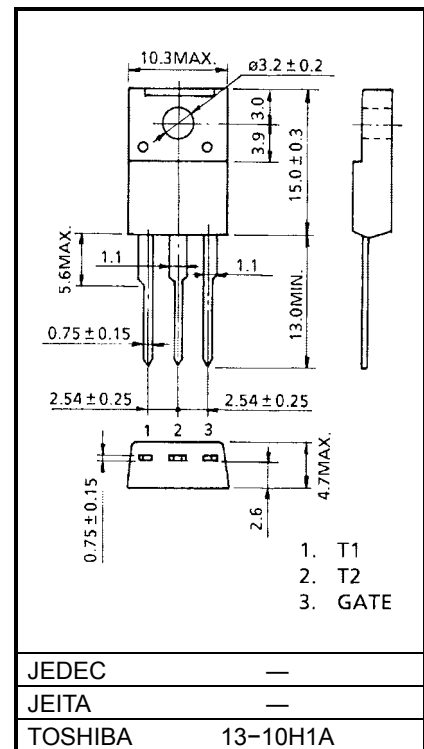
- Repetitive Peak Off-State Voltage : $V_{DRM} = 800V$
- R.M.S ON-State Current : $I_{T(RMS)} = 8A$
- High Commutating (dv / dt) : $(dv / dt)_c = 10V / \mu s$ (Min.)
- Isolation Voltage : $V_{ISOL} = 1500V$ AC

MAXIMUM RATINGS

CHARACTERISTIC	SYMBOL	RATING	UNIT
Repetitive Peak Off-State Voltage	V_{DRM}	800	V
R.M.S On-State Current (Full Sine Waveform)	$I_{T(RMS)}$	8	A
Peak One Cycle Surge On-State Current (Non-Repetitive)	I_{TSM}	70 (50Hz)	A
		80 (60Hz)	
I^2t Limit Value	I^2t	24.5	A^2s
Critical Rate of Rise of On-State Current (Note 1)	di / dt	50	A / μs
Peak Gate Power Dissipation	P_{GM}	5	W
Average Gate Power Dissipation	$P_G (AV)$	0.5	W
Peak Gate Voltage	V_{FGM}	10	V
Peak Gate Current	I_{GM}	2	A
Junction Temperature	T_j	-40~125	°C
Storage Temperature Range	T_{stg}	-40~125	°C
Isolation Voltage (AC, t = 1min.)	V_{ISOL}	1500	V

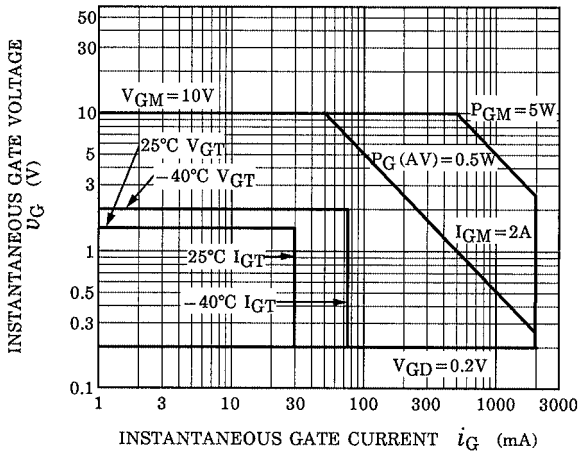
Note: di / dt test condition
 $V_{DRM} = 400V$, $I_{TM} \leq 12A$, $t_{gw} \geq 10\mu s$, $t_{gr} \leq 250ns$,
 $i_{gp} = I_{GT} \times 2.0$

Unit: mm

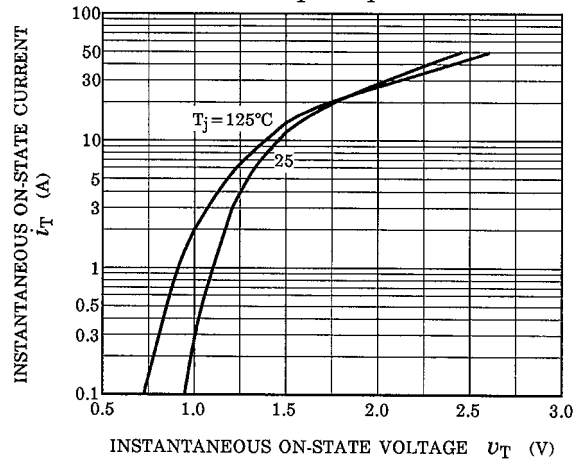


Weight: 1.7g

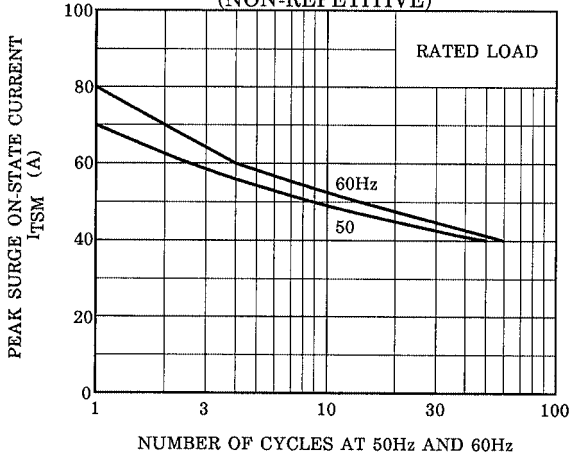
GATE TRIGGER CHARACTERISTIC



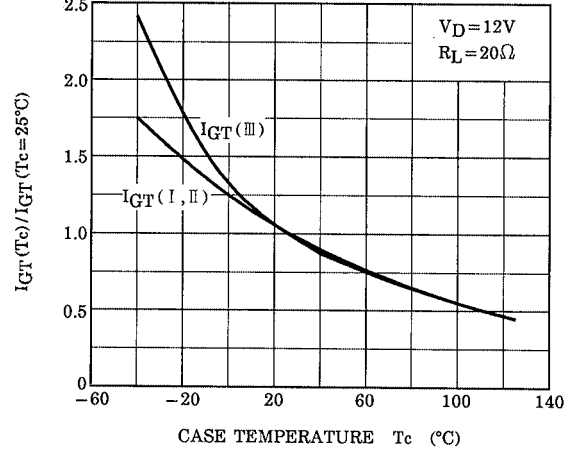
$i_T - v_T$



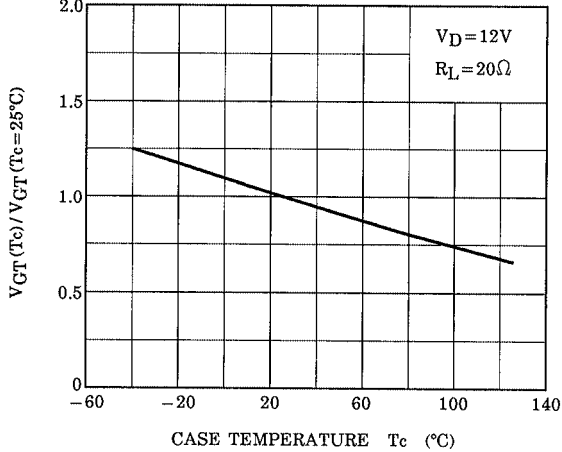
SURGE ON-STATE CURRENT (NON-REPETITIVE)



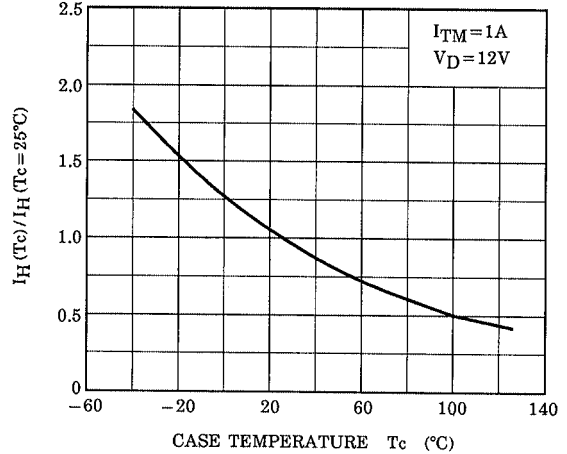
$I_{GT}(T_c) / I_{GT}(T_c=25^\circ C) - T_c$ (TYPICAL)

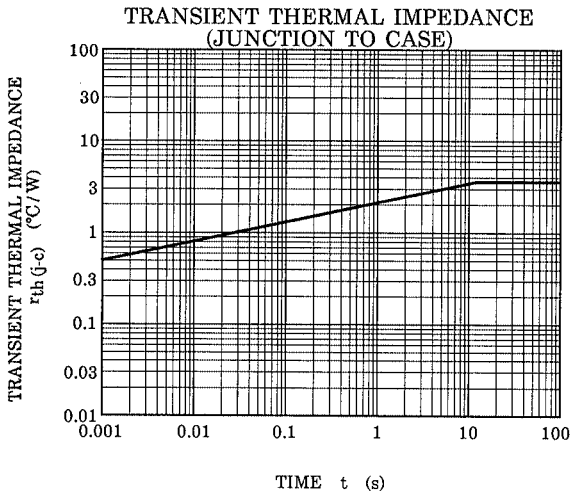
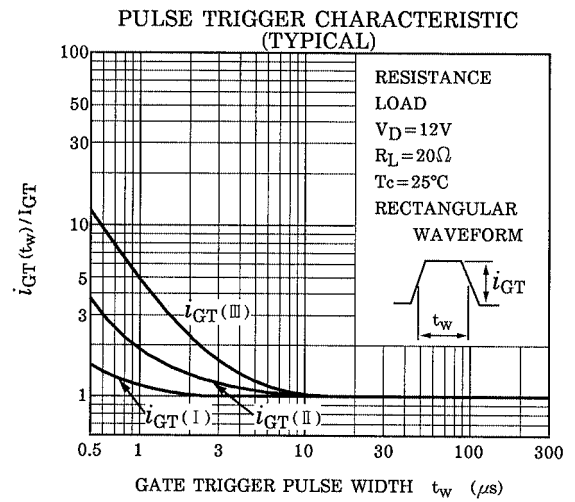
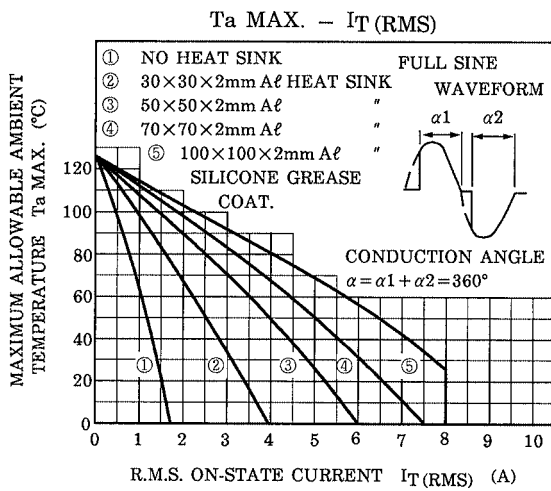
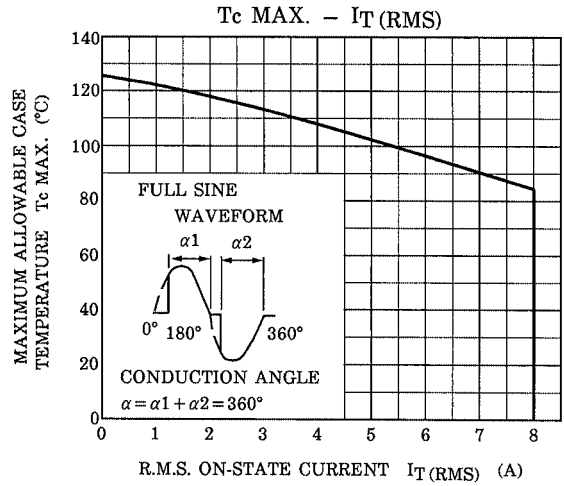
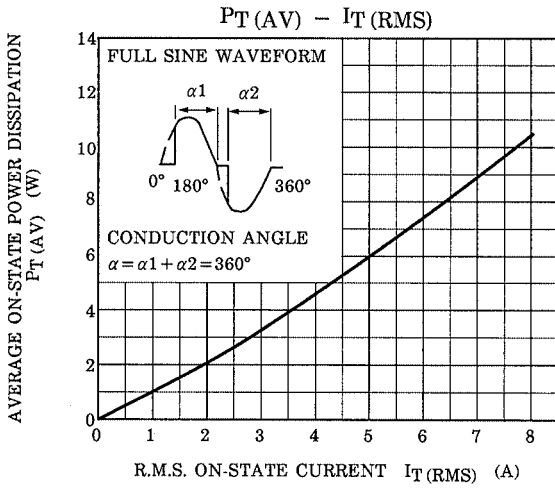


$V_{GT}(T_c) / V_{GT}(T_c=25^\circ C) - T_c$ (TYPICAL)



$I_H(T_c) / I_H(T_c=25^\circ C) - T_c$ (TYPICAL)





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