

TOSHIBA THYRISTOR SILICON PLANAR TYPE

**S 6 7 4 4**

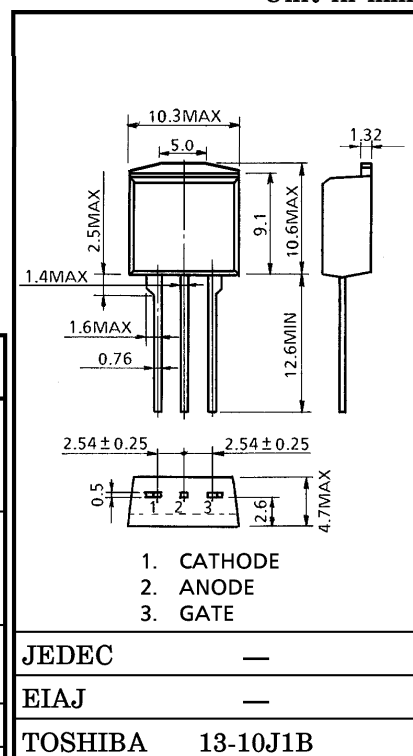
MEDIUM POWER CONTROL APPLICATIONS

Unit in mm

- Repetitive Peak Off-State Voltage :  $V_{DRM}$  } 400V  
Repetitive Peak Reverse Voltage :  $V_{RRM}$  }
- Average On-State Current :  $I_T(AV)=8A$
- A Large Current Pulse Capability

## MAXIMUM RATINGS

CHARACTERISTIC	SYMBOL	RATING	UNIT
Repetitive Peak Off-State Voltage and Repetitive Peak Reverse Voltage	$V_{DRM}$ $V_{RRM}$	400	V
Non-Repetitive Peak Reverse Voltage (Non-Repetitive < 5ms, $T_j=0\sim125^\circ\text{C}$ )	$V_{RSM}$	500	V
Average On-State Current (Half Sine Waveform $T_c=72^\circ\text{C}$ )	$I_T(AV)$	8	A
R.M.S On-State Current	$I_T(RMS)$	12.6	A
Peak One Cycle Surge On-State Current (Non-Repetitive)	$I_{TSM}$	200 (50Hz) 220 (60Hz)	A
$I^2t$ Limit Value	$I^2t$	200	$\text{A}^2\text{s}$
Repetitive Peak Surge On-State Current (Note 1)	$I_{TRM}$	1300	A
Critical Rate of Rise of On-State Current (Note 2)	$di/dt$	100	$\text{A}/\mu\text{s}$
Peak Gate Power Dissipation	$P_{GM}$	5	W
Average Gate Power Dissipation	$P_G(AV)$	0.5	W
Peak Forward Gate Voltage	$V_{FGM}$	10	V
Peak Reverse Gate Voltage	$V_{RGM}$	-5	V
Peak Forward Gate Current	$I_{GM}$	2	A
Junction Temperature	$T_j$	-40~125	$^\circ\text{C}$
Storage Temperature Range	$T_{stg}$	-40~150	$^\circ\text{C}$

Note 1 :  $C_M \leq 500\mu\text{F}$ ,  $t_w \leq 300\mu\text{s}$ ,  $V_D \leq 350\text{V}$ Note 2 :  $di/dt$  Test condition $V_{DRM}=0.5 \times \text{Rated}$ ,  $I_{TM} \leq 25\text{A}$ ,  $t_{gw} \geq 10\mu\text{s}$ ,  $t_{gr} \leq 250\text{ns}$ ,  $i_{gp}=I_{GT} \times 2.0$ 

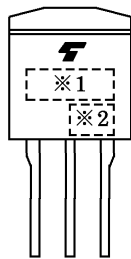
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ELECTRICAL CHARACTERISTICS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Repetitive Peak Off-State Current and Repetitive Peak Reverse Current	$I_{DRM}$ $I_{RRM}$	$V_{DRM} = V_{RRM} = \text{Rated}$	—	—	10	$\mu\text{A}$
Peak On-State Voltage	$V_{TM}$	$I_{TM} = 25\text{A}$	—	—	1.5	V
Gate Trigger Voltage	$V_{GT}$	$V_D = 6\text{V}, R_L = 10\Omega$	—	—	1.0	V
Gate Trigger Current	$I_{GT}$		—	—	20	mA
Gate Non-Trigger Voltage	$V_{GD}$	$V_D = \text{Rated} \times 2/3, T_c = 125^\circ\text{C}$	0.2	—	—	V
Critical Rate of Rise of Off-State Voltage	$dv/dt$	$V_{DRM} = \text{Rated}, T_c = 125^\circ\text{C}, \text{Exponential Rise}$	—	50	—	$\text{V}/\mu\text{s}$
Holding Current	$I_H$	$V_D = 6\text{V}, I_{TM} = 1\text{A}$	—	—	40	mA
Latching Current	$I_L$	$V_D = 6\text{V}, f = 50\text{Hz}, t_{gw} = 100\mu\text{s}, i_G = 40\text{mA}$	—	—	60	mA
Thermal Resistance	$R_{th(j-a)}$	Junction to Ambient	—	—	70	$^\circ\text{C}/\text{W}$

MARKING



※1	TYPE NAME	S6744	MARK	S6744
※2	Lot Number <div><div></div><div></div><div>Month (Starting from Alphabet A)</div><div>Year (Last Decimal Digit of the Current Year)</div></div>		Example 8A : January 1998 8B : February 1998 8L : December 1998	

