

TOSHIBA BI-DIRECTIONAL TRIODE THYRISTOR SILICON PLANAR TYPE

# SM1L43

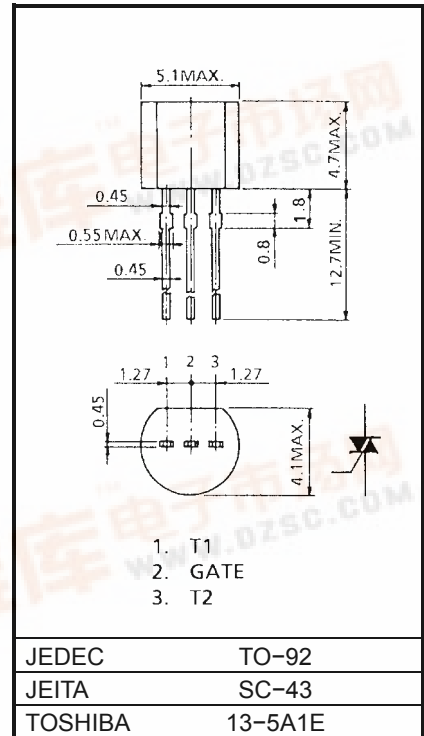
## AC POWER CONTROL APPLICATIONS

- Repetitive Peak Off-State Voltage :  $V_{DRM} = 800V$
- R.M.S. On-State Current :  $I_T (RMS) = 1A$

## MAXIMUM RATINGS

CHARACTERISTIC	SYMBOL	RATING	UNIT
Repetitive Peak Off-State Voltage	$V_{DRM}$	800	V
R.M.S. On-State Current (Full Sine Waveform $T_c = 74^\circ C$ )	$I_T (RMS)$	1.0	A
Peak One Cycle Surge On-State Current (Non-Repetitive)	$I_{TSM}$	8 (50Hz)	A
		8.8 (60Hz)	
$I^2t$ Limit Value ( $t = 1\sim 10ms$ )	$I^2t$	0.32	$A^2s$
Peak Gate Power Dissipation	$P_{GM}$	1	W
Average Gate Power Dissipation	$P_G (AV)$	0.1	W
Peak Gate Voltage	$V_{GM}$	6	V
Peak Gate Current	$I_{GM}$	0.5	A
Junction Temperature	$T_j$	-40~125	$^\circ C$
Storage Temperature Range	$T_{stg}$	-40~125	$^\circ C$

Unit: mm

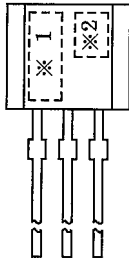


Weight: 0.2g

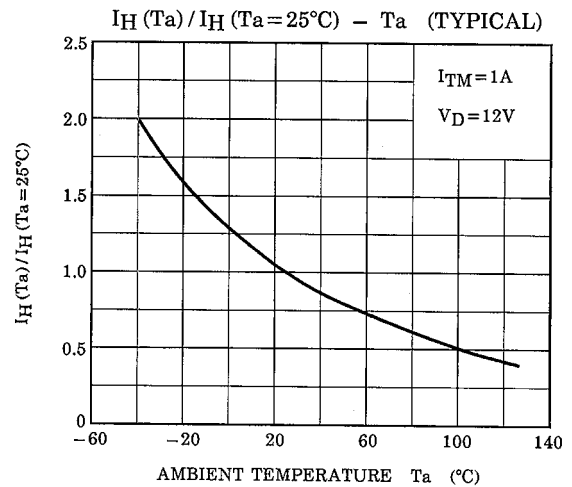
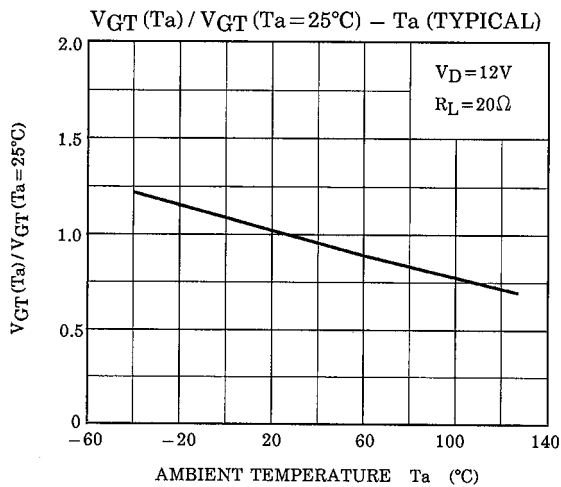
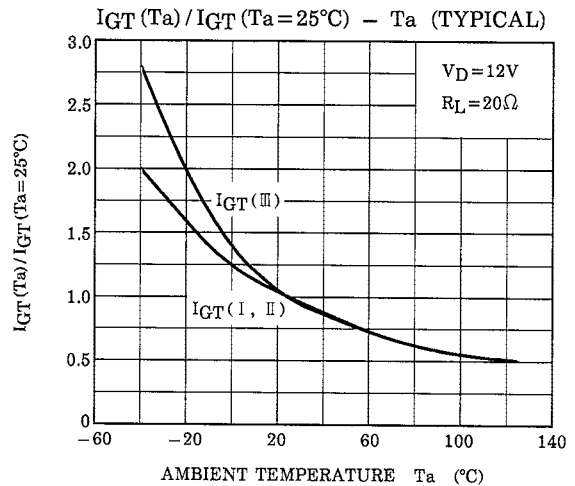
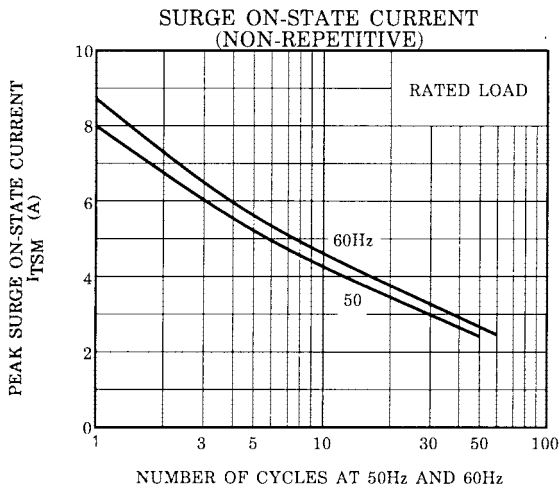
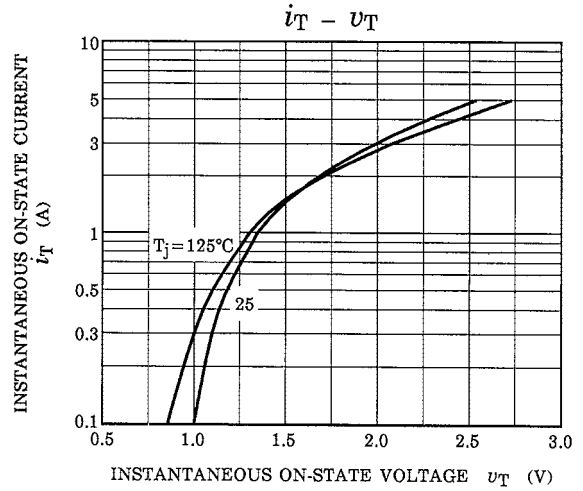
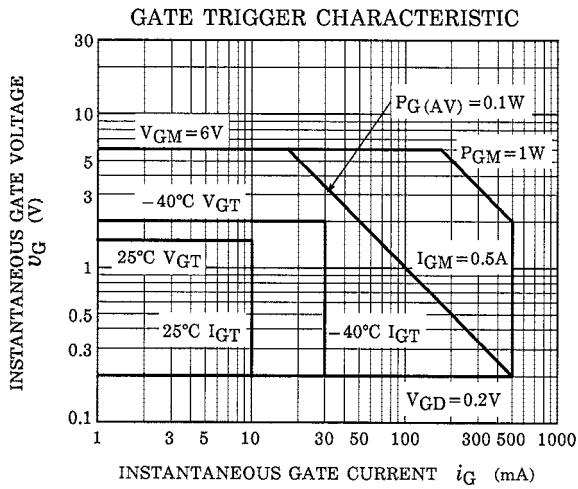
## ELECTRICAL CHARACTERISTICS (Ta = 25°C)

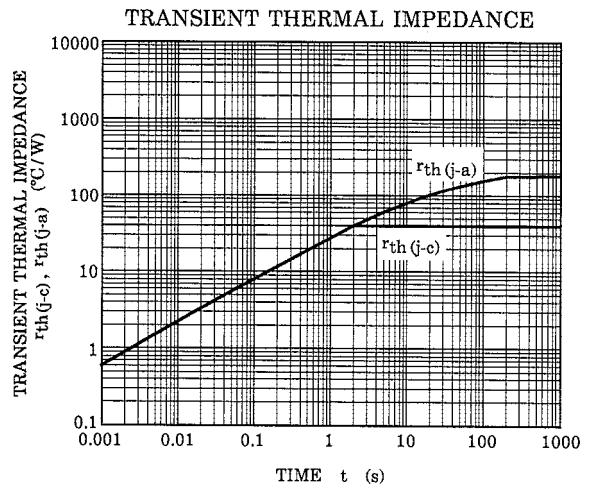
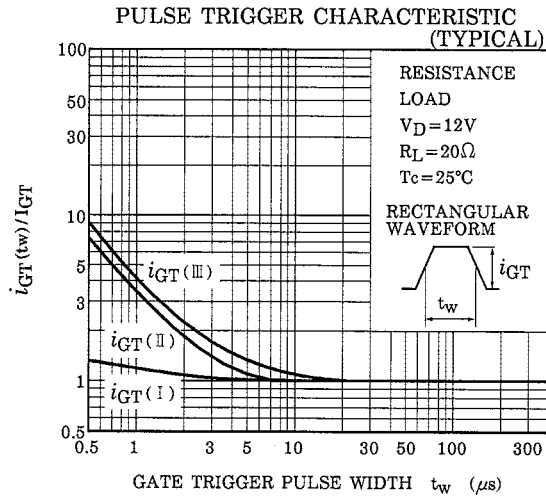
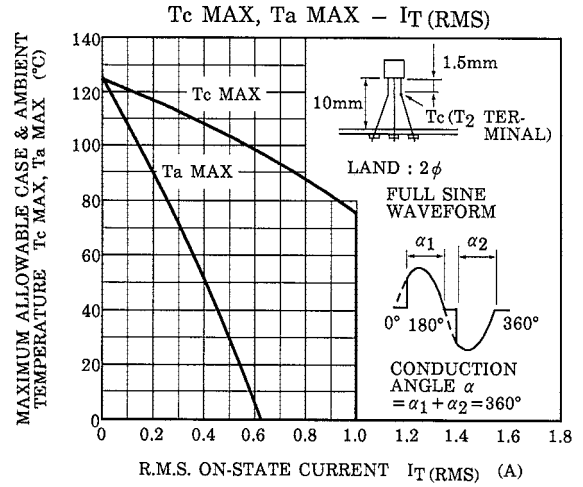
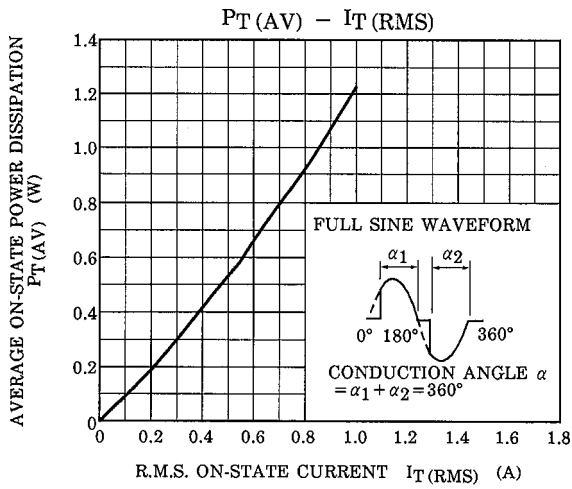
CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN	TYP.	MAX	UNIT	
Repetitive Peak Off-State Current	$I_{DRM}$	$V_{DRM} = 800V$	—	—	10	$\mu A$	
Gate Trigger Voltage	I	$V_D = 12V,$ $R_L = 20\Omega$	T2 (+), Gate (+)	—	—	1.5	V
	II		T2 (+), Gate (-)	—	—	1.5	
	III		T2 (-), Gate (-)	—	—	1.5	
Gate Trigger Current	I	$V_D = 12V,$ $R_L = 20\Omega$	T2 (+), Gate (+)	—	—	10	mA
	II		T2 (+), Gate (-)	—	—	10	
	III		T2 (-), Gate (-)	—	—	10	
Peak On-State Voltage	$V_{TM}$	$I_{TM} = 1.5A$	—	—	1.5	V	
Gate Non-Trigger Voltage	$V_{GD}$	$V_D = \text{Rated}, T_c = 125^\circ C$	0.2	—	—	V	
Holding Current	$I_H$	$V_D = 12V, I_{TM} = 1A$	—	—	10	mA	
Thermal Resistance	$R_{th(j-c)}$	Junction to Case, AC	—	—	40	$^\circ C / W$	
Thermal Resistance	$R_{th(j-a)}$	Junction to Ambient, AC	—	—	180	$^\circ C / W$	

## MARKING



NUMBER	SYMBOL		MARK
*1	TYPE	SM1L43	M1L43
*2	Lot Number 		Example 8A : January 1998 8B : February 1998 8L : December 1998





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000707EAA

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