

TOSHIBA BI-DIRECTIONAL TRIODE THYRISTOR SILICON PLANAR TYPE

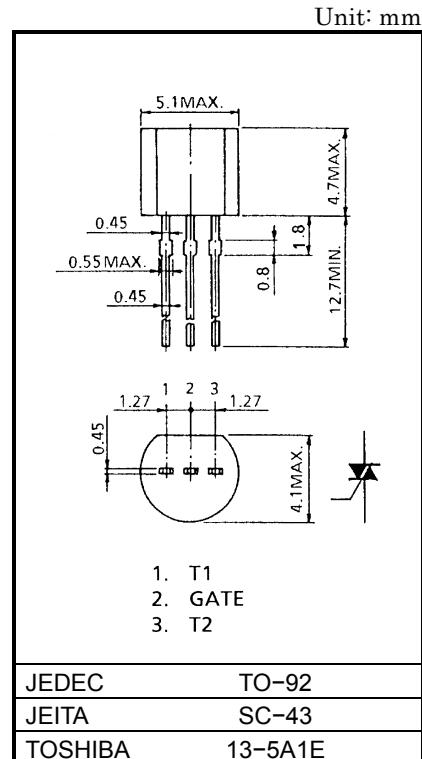
SM1G43,SM1J43

AC POWER CONTROL APPLICATIONS

- Repetitive Peak Off-State Voltage : $V_{DRM} = 400, 600V$
- R.M.S On-State Current : $I_T (\text{RMS}) = 1A$
- Higt Commutating (dv / dt)

MAXIMUM RATINGS

CHARACTERISTIC	SYMBOL	RATING	UNIT
Repetitive Peak Off-State Voltage SM1G43	V_{DRM}	400	V
SM1J43		600	
R.M.S On-State Current (Full Sine Waveform $T_c = 74^\circ\text{C}$)	$I_T (\text{RMS})$	1.0	A
Peak One Cycle Surge On-State Current (Non-Repetitive)	I_{TSM}	8 (50Hz)	A
		8.8 (60Hz)	
I^2t Limit Value	I^2t	0.32	A^2s
Peak Gate Power Dissipation	P_{GM}	1	W
Average Gate Power Dissipation	$P_G (\text{AV})$	0.1	W
Peak Gate Voltage	V_{GM}	6	V
Peak Gate Current	I_{GM}	0.5	A
Junction Temperature	T_j	-40~125	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	-40~125	$^\circ\text{C}$

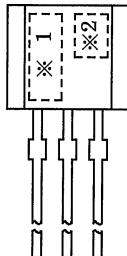


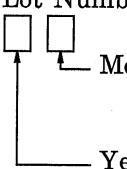
Weight: 0.2g

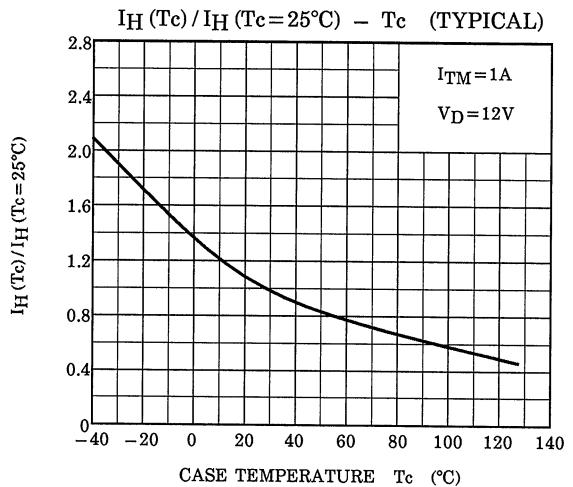
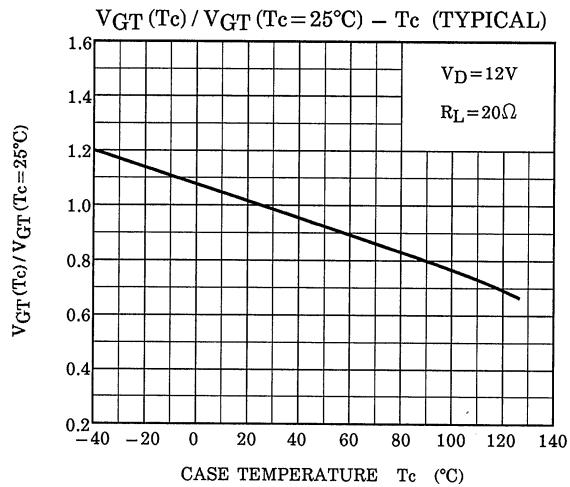
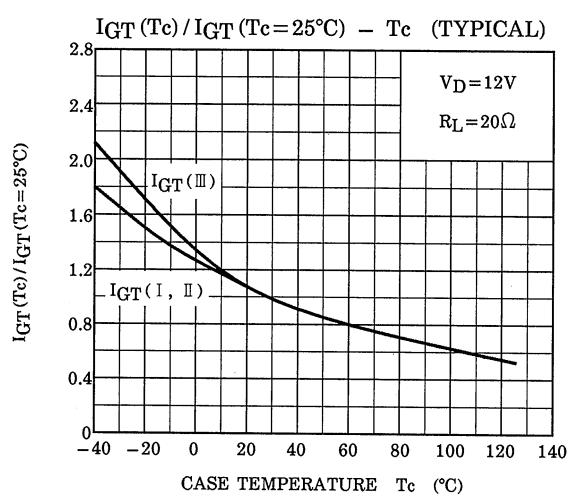
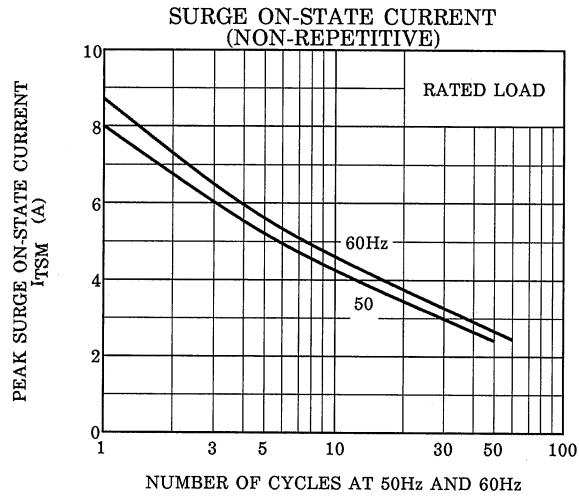
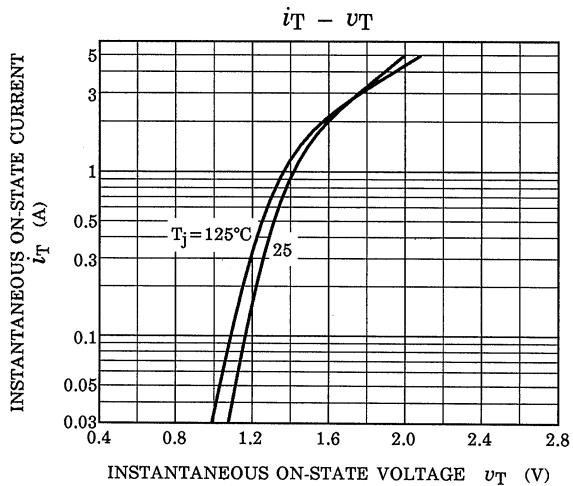
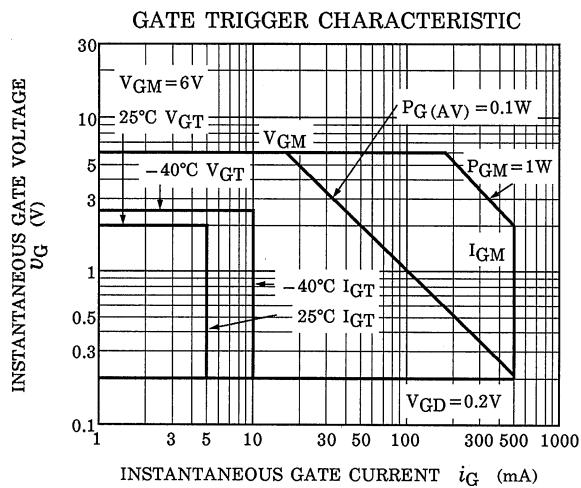
ELECTRICAL CHARACTERISTICS (Ta = 25°C)

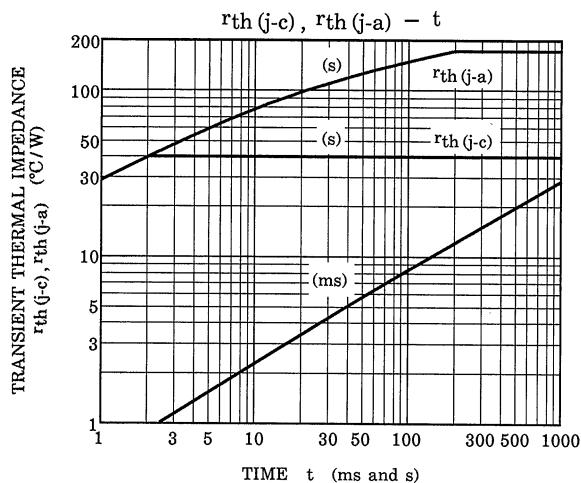
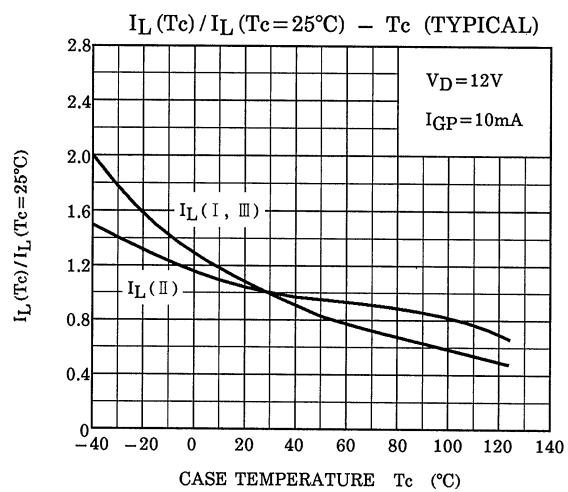
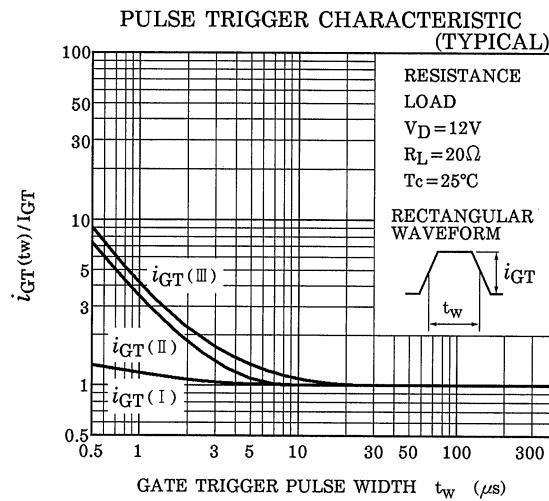
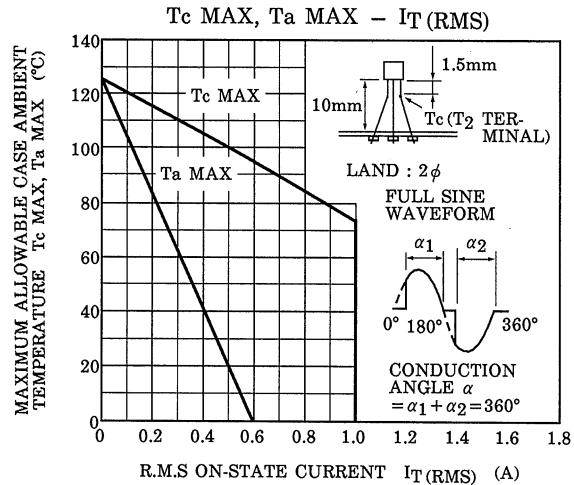
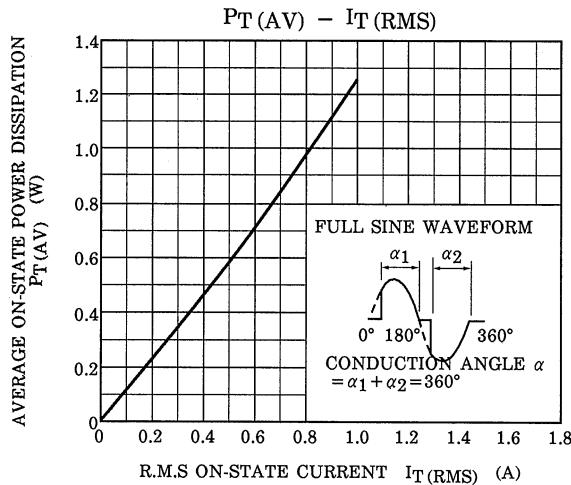
CHARACTERISTIC		SYMBOL	TEST CONDITION		MIN	TYP.	MAX	UNIT
Repetitive Peak Off-State Current		I _{DRM}	V _{DRM} = Rated		—	—	10	µA
Gate Trigger Voltage	I	V _{GT}	V _D = 12V, R _L = 20Ω	T2 (+) , Gate (+)	—	—	2	V
	II			T2 (+) , Gate (-)	—	—	2	
	III			T2 (-) , Gate (-)	—	—	2	
	IV			T2 (-) , Gate (+)	—	2	—	
Gate Trigger Current	I	I _{GT}	V _D = 12V, R _L = 20Ω	T2 (+) , Gate (+)	—	—	5	mA
	II			T2 (+) , Gate (-)	—	—	5	
	III			T2 (-) , Gate (-)	—	—	5	
	IV			T2 (-) , Gate (+)	—	10	—	
Peak On-State Voltage		V _{TM}	I _{TM} = 1.5A		—	—	1.5	V
Gate Non-Trigger Voltage		V _{GD}	V _D = Rated, T _c = 125°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	°C / W
Thermal Resistance		R _{th} (j-a)	Junction to Ambient, AC		—	—	180	°C / W

MARKING



NUMBER	SYMBOL		MARK
*1	TYPE	SM1G43	M1G43
		SM1J43	M1J43
*2	Lot Number  Month (Starting from Alphabet A) Year (Last Decimal Digit of the Current Year)		Example 8A : January 1998 8B : February 1998 8L : December 1998





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000707EAA

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