

SM1G43,SM1J43

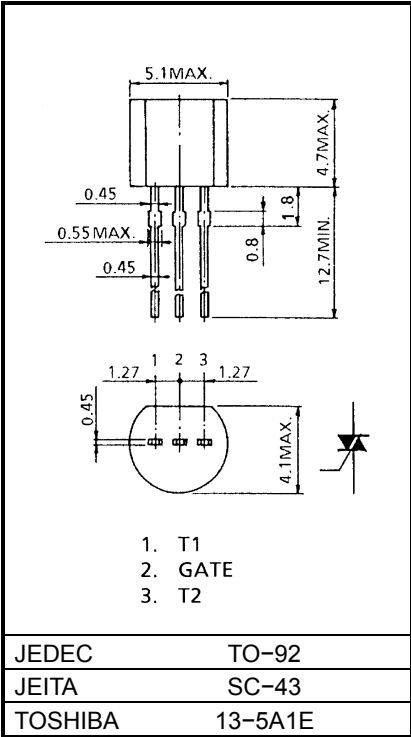
AC POWER CONTROL APPLICATIONS

- Repetitive Peak Off-State Voltage :  $V_{DRM} = 400, 600V$
- R.M.S On-State Current :  $I_T (RMS) = 1A$
- 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 $T_c = 74^{\circ}C$ )		$I_T (RMS)$	1.0	A
Peak One Cycle Surge On-State Current (Non-Repetitive)		$I_{TSM}$	8 (50Hz)	A
			8.8 (60Hz)	
$I^2_t$ Limit Value		$I^2_t$	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

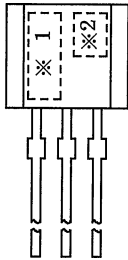


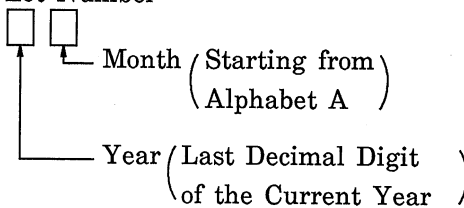
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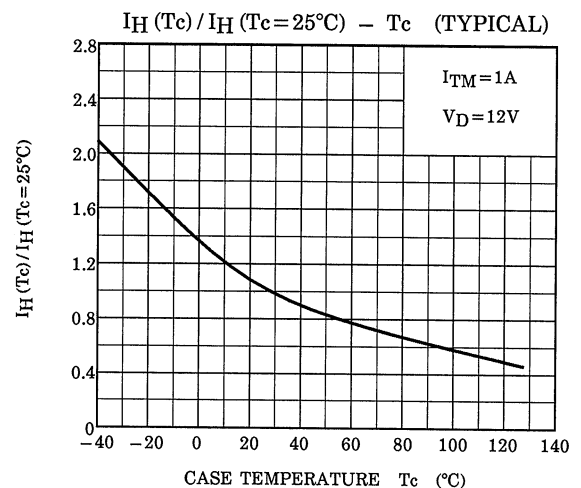
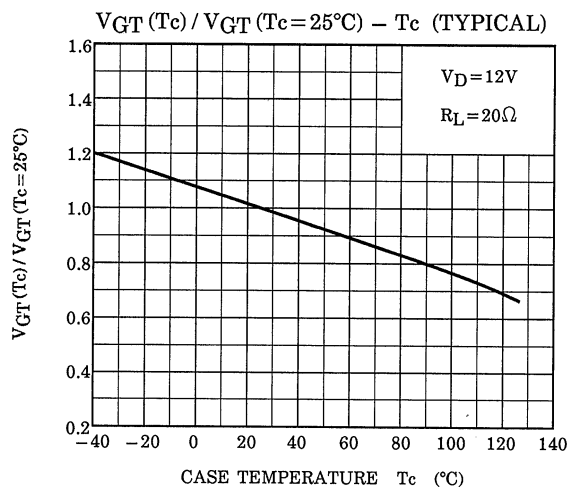
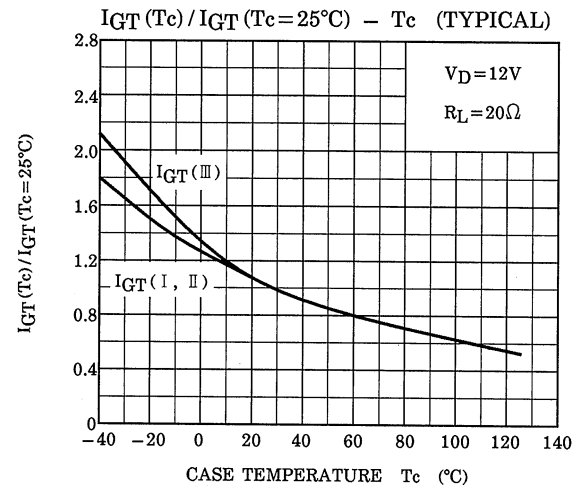
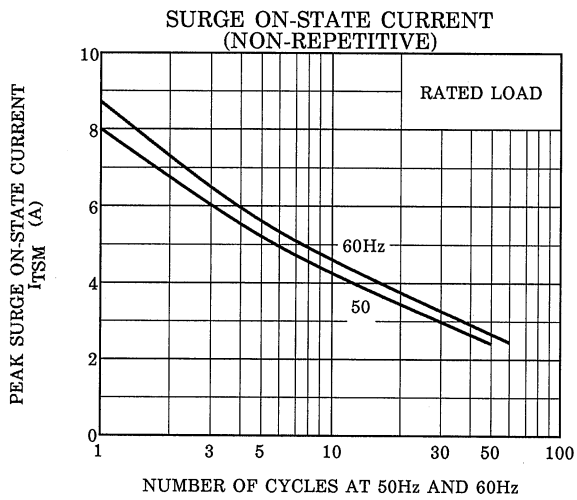
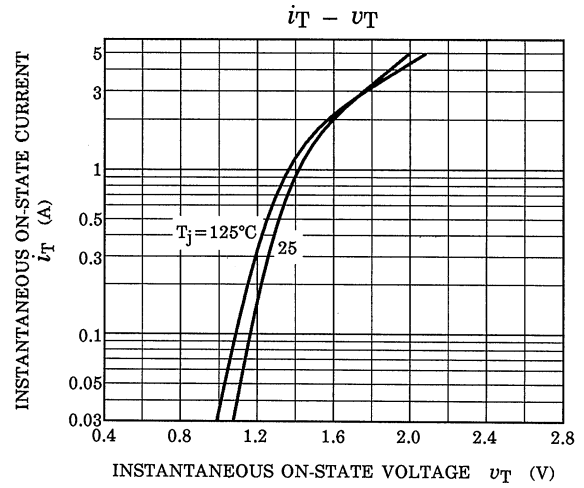
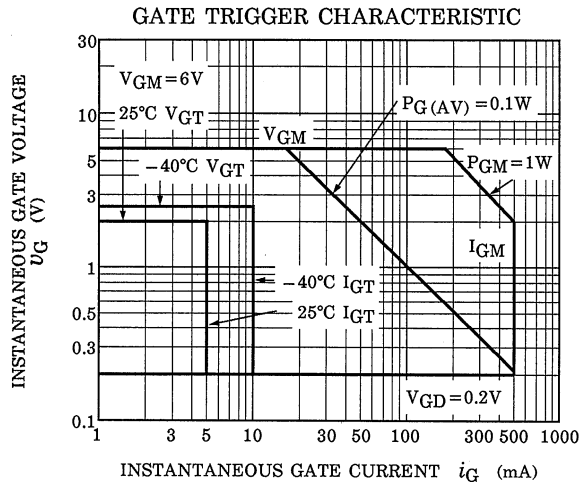
## ELECTRICAL CHARACTERISTICS (Ta = 25°C)

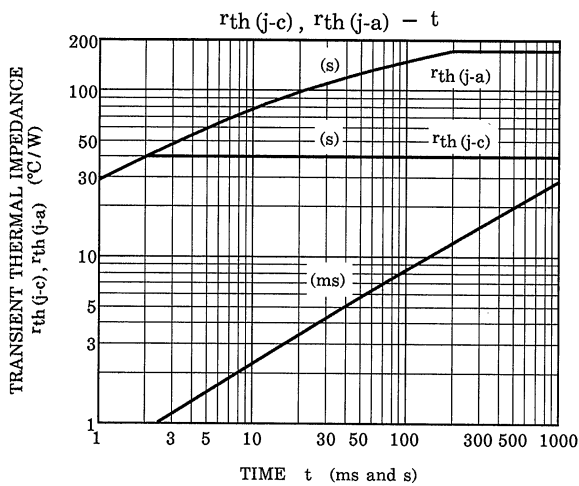
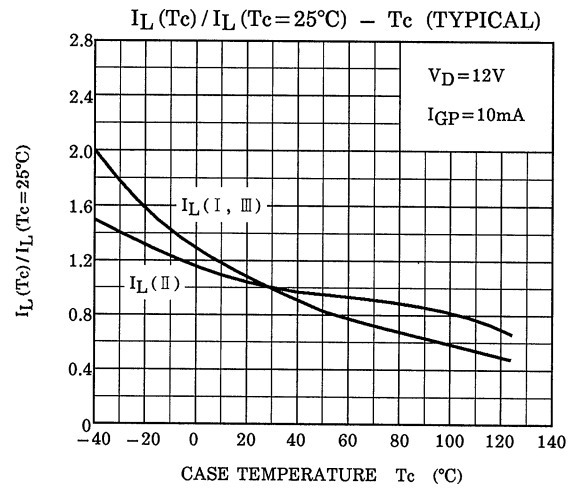
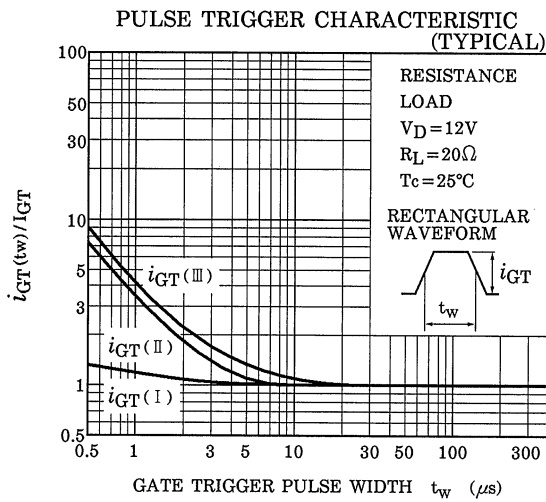
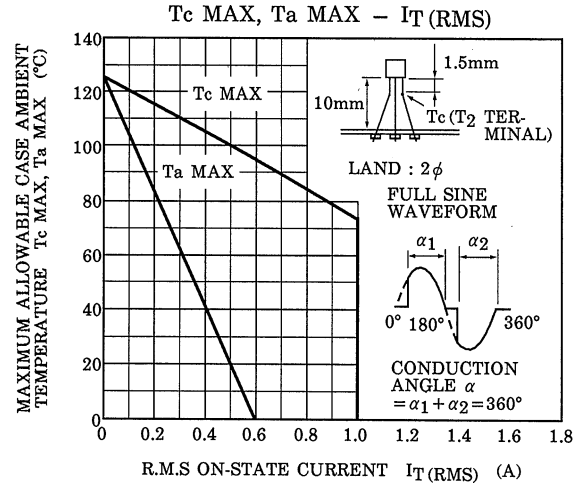
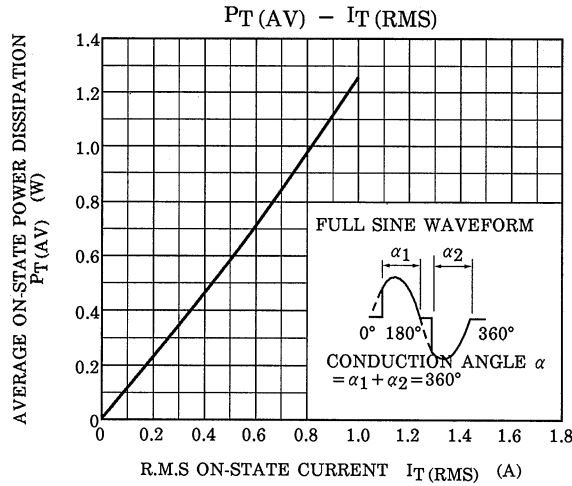
CHARACTERISTIC		SYMBOL	TEST CONDITION		MIN	TYP.	MAX	UNIT
Repetitive Peak Off-State Current		$I_{DRM}$	$V_{DRM} = \text{Rated}$		—	—	10	$\mu\text{A}$
Gate Trigger Voltage	I	$V_{GT}$	$V_D = 12\text{V}, R_L = 20\Omega$	T2 (+), Gate (+)	—	—	2	V
	II			T2 (+), Gate (-)	—	—	2	
	III			T2 (-), Gate (-)	—	—	2	
	IV			T2 (-), Gate (+)	—	2	—	
Gate Trigger Current	I	$I_{GT}$	$V_D = 12\text{V}, R_L = 20\Omega$	T2 (+), Gate (+)	—	—	5	mA
	II			T2 (+), Gate (-)	—	—	5	
	III			T2 (-), Gate (-)	—	—	5	
	IV			T2 (-), Gate (+)	—	10	—	
Peak On-State Voltage		$V_{TM}$	$I_{TM} = 1.5\text{A}$		—	—	1.5	V
Gate Non-Trigger Voltage		$V_{GD}$	$V_D = \text{Rated}, T_c = 125^\circ\text{C}$		0.2	—	—	V
Holding Current		$I_H$	$V_D = 12\text{V}, I_{TM} = 1\text{A}$		—	—	10	mA
Thermal Resistance		$R_{th(j-c)}$	Junction to Case, AC		—	—	40	$^\circ\text{C} / \text{W}$
Thermal Resistance		$R_{th(j-a)}$	Junction to Ambient, AC		—	—	180	$^\circ\text{C} / \text{W}$

## MARKING



NUMBER	SYMBOL		MARK
*1	TYPE	SM1G43	M1G43
		SM1J43	M1J43
*2	Lot Number 		Example 8A : January 1998 8B : February 1998 8L : December 1998





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000707EAA

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