

TOSHIBA THYRISTOR SILICON PLANAR TYPE

SF0R5G43, SF0R5J43

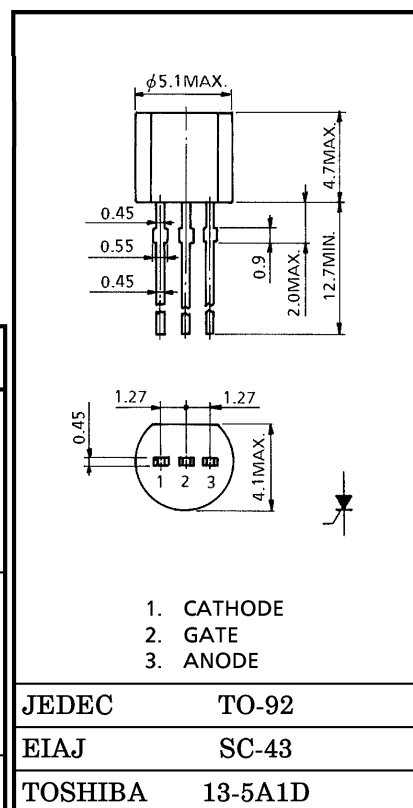
LOW POWER SWITCHING AND CONTROL APPLICATIONS

Unit in mm

- Repetitive Peak Off-State Voltage : V_{DRM}
Repetitive Peak Reverse Voltage : V_{RRM} } = 400, 600V
- Average On-State Current : $I_T(AV) = 500mA$
- Plastic Mold Type.

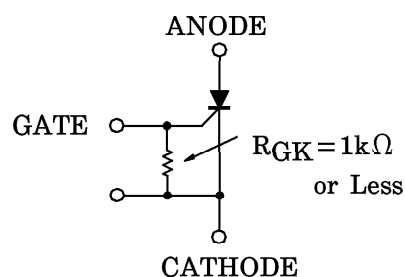
MAXIMUM RATINGS

CHARACTERISTIC	SYMBOL	RATING	UNIT
Repetitive Peak Off-State Voltage and Repetitive Peak Reverse Voltage ($R_{GK} = 1k\Omega$)	SF0R5G43	400	V
	SF0R5J43	600	
Non-Repetitive Peak Reverse Voltage (Non-Repetitive < 5ms, $R_{GK} = 1k\Omega$, $T_j = 0 \sim 110^\circ C$)	SF0R5G43	500	V
	SF0R5J43	720	
Average On-State Current (Half Sine Waveform $T_c = 30^\circ C$)	$I_T(AV)$	500	mA
R.M.S On-State Current	$I_T(RMS)$	800	mA
Peak One Cycle Surge On-State Current (Non-Repetitive)	I_{TSM}	7 (50Hz)	A
		8 (60Hz)	
I^2t Limit Value	I^2t	0.25	A^2s
Peak Gate Power Dissipation	P_{GM}	1	W
Average Gate Power Dissipation	$P_G(AV)$	0.01	W
Peak Forward Gate Voltage	V_{FGM}	8	V
Peak Reverse Gate Voltage	V_{RGM}	-5	V
Peak Forward Gate Current	I_{GM}	500	mA
Junction Temperature	T_j	-65~125	$^\circ C$
Storage Temperature Range	T_{stg}	-65~150	$^\circ C$



Weight : 0.2g

Note : Should be used with gate resistance as follows.



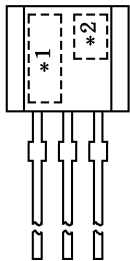
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ELECTRICAL CHARACTERISTICS (Ta = 25°C)

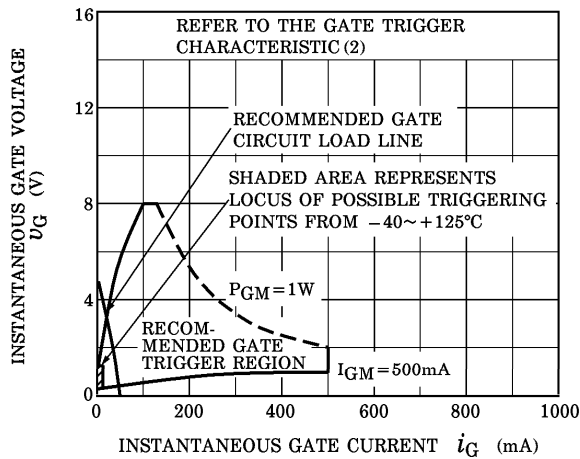
CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Repetitive Peak Off-State Current and Repetitive Peak Reverse Current	I_{DRM} I_{RRM}	$V_{DRM} = V_{RRM} = \text{Rated}$, $R_{GK} = 1k\Omega$, $T_j = 125^\circ\text{C}$	—	—	50	μA
Peak On-State Voltage	V_{TM}	$I_{TM} = 1\text{A}$	—	—	1.5	V
Gate Trigger Voltage	V_{GT}	$V_D = 6\text{V}$, $R_L = 100\Omega$, $R_{GK} = 1k\Omega$	—	—	0.8	V
Gate Trigger Current	I_{GT}		—	—	200	μA
Gate Non-Trigger Voltage	V_{GD}	$V_D = 6\text{V}$, $R_{GK} = 1k\Omega$, $T_a = 125^\circ\text{C}$	0.2	—	—	V
Holding Current	I_H	$R_L = 100\Omega$, $R_{GK} = 1k\Omega$	—	—	5	mA
Thermal Resistance	$R_{th(j-c)}$	Junction to Case	—	—	125	$^\circ\text{C} / \text{W}$
	$R_{th(j-a)}$	Junction to Ambient	—	—	230	

MARKING

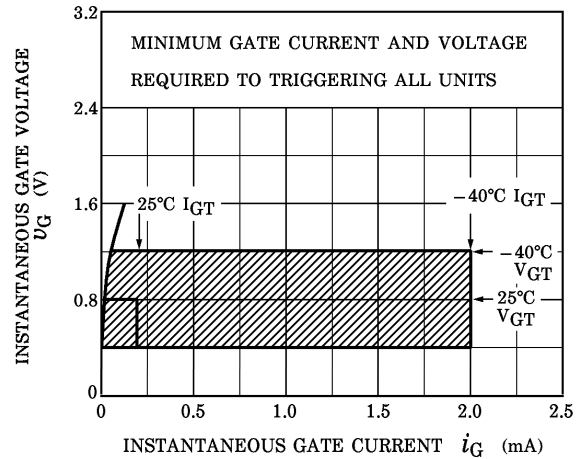
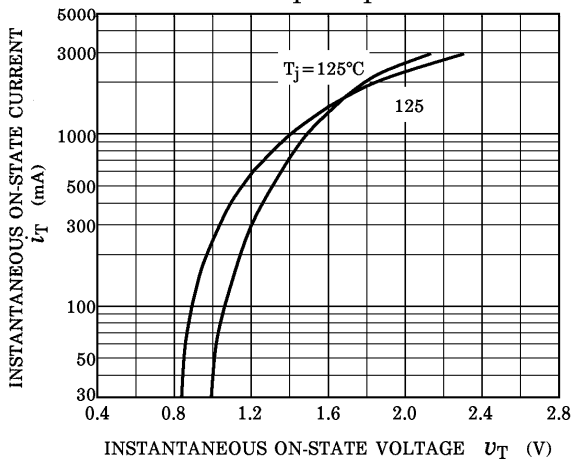


NUMBER	SYMBOL		MARK
*1	TYPE	SF0R5G43	F0R5G
		SF0R5J43	F0R5J
*2	Lot Number □ □ Month (Starting from Alphabet A) Year (Last Decimal Digit of the Current Year)		Example 8A : January 1998 8B : February 1998 8L : December 1998

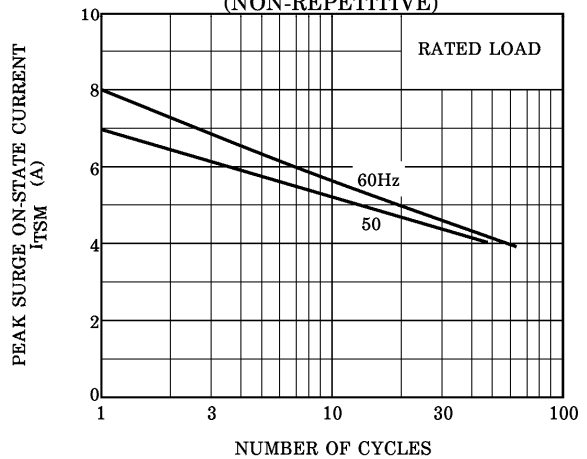
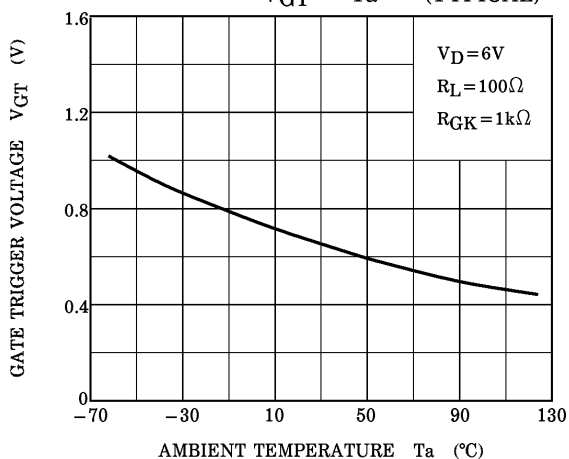
GATE TRIGGER CHARACTERISTIC (1)



GATE TRIGGER CHARACTERISTIC (2)

 $i_T - v_T$ 

SURGE ON-STATE CURRENT (NON-REPETITIVE)

 $V_{GT} - T_a$ (TYPICAL) $I_{GT} - T_a$ (TYPICAL)