

TOSHIBA THYRISTOR SILICON PLANAR TYPE

SF1G53

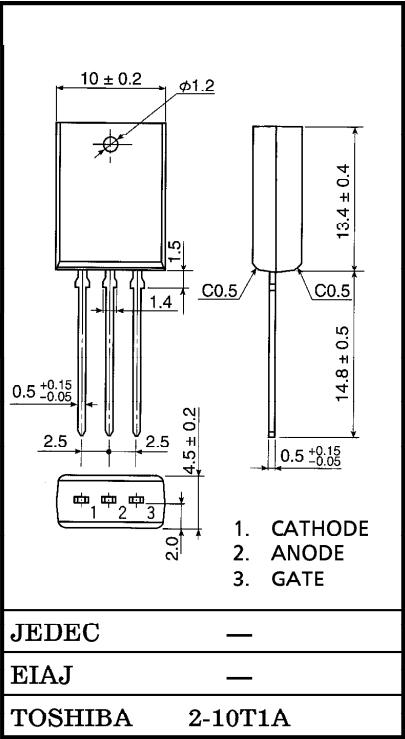
LOW POWER SWITCHING AND CONTROL APPLICATIONS

- Radial Taping
- Repetitive Peak Off-State Voltage :  $V_{DRM}$   
Repetitive Peak Reverse Voltage :  $V_{RRM}$  } = 400V
- Average On-State Current :  $I_T(AV)=1A$
- Plastic Mold Type

MAXIMUM RATINGS (Ta = 25°C)

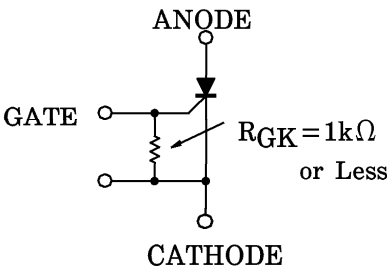
CHARACTERISTIC	SYMBOL	RATING	UNIT
Repetitive Peak Off-State Voltage and Repetitive Peak Reverse Voltage (R <sub>GK</sub> = 1kΩ)	$V_{DRM}$	400	V
	$V_{RRM}$		
Non-Repetitive Peak Reverse Voltage (Non-Repetitive < 5ms, R <sub>GK</sub> = 1kΩ, T <sub>j</sub> = 0~125°C)	$V_{RSM}$	500	V
Average On-State Current (Full Sine Waveform Ta = 37°C)	$I_T(AV)$	1	A
R.M.S On-State Current	$I_T(RMS)$	1.57	A
Peak One Cycle Surge On-State Current (Non-Repetitive)	$I_{TSM}$	8 (50Hz)	A
		8.8 (60Hz)	
I <sup>2</sup> t Limit Value (t = 1~10ms)	I <sup>2</sup> t	0.32	A <sup>2</sup> s
Peak Gate Power Dissipation	P <sub>GM</sub>	0.1	W
Average Gate Power Dissipation	P <sub>G(AV)</sub>	0.01	W
Peak Forward Gate Voltage	$V_{FGM}$	5	V
Peak Reverse Gate Voltage	$V_{RGM}$	-5	V
Peak Forward Gate Current	I <sub>GM</sub>	100	mA
Junction Temperature	T <sub>j</sub>	-40~125	°C
Storage Temperature Range	T <sub>stg</sub>	-40~125	°C

Unit in mm



Weight : 1.5g

(Note) Should be used with gate resistance as follows.



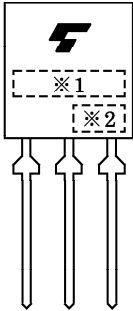
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ELECTRICAL CHARACTERISTICS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Repetitive Peak Off-State Current and Repetitive Peak Reverse Current	$I_{\text{DRM}}$ $I_{\text{RRM}}$	$V_{\text{DRM}} = V_{\text{RRM}} = \text{Rated}$ $R_{\text{GK}} = 1\text{k}\Omega$ , $T_{\text{j}} = 125^{\circ}\text{C}$	—	—	200	$\mu\text{A}$
Peak On-State Voltage	$V_{\text{TM}}$	$I_{\text{TM}} = 2\text{A}$	—	—	1.7	V
Gate Trigger Voltage	$V_{\text{GT}}$	$V_{\text{D}} = 6\text{V}$ , $R_{\text{L}} = 100\Omega$ , $R_{\text{GK}} = 1\text{k}\Omega$	—	—	0.8	V
Gate Trigger Current	$I_{\text{GT}}$		—	—	200	$\mu\text{A}$
Gate Non-Trigger Voltage	$V_{\text{GD}}$	$V_{\text{D}} = 6\text{V}$ , $R_{\text{GK}} = 1\text{k}\Omega$ , $T_{\text{c}} = 125^{\circ}\text{C}$	0.2	—	—	V
Holding Current	$I_{\text{H}}$	$R_{\text{L}} = 100\Omega$ , $R_{\text{GK}} = 1\text{k}\Omega$	—	3	—	mA
Thermal Resistance	$R_{\text{th (j-a)}}$	Junction to Ambient	—	—	69	$^{\circ}\text{C} / \text{W}$

MARKING



NUMBER	SYMBOL		MARK
※1	TYPE	SF1G53	SF1G53
※2	<div>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</div> <div>8A : January 1998</div> <div>8B : February 1998</div> <div>8L : December 1998</div>

