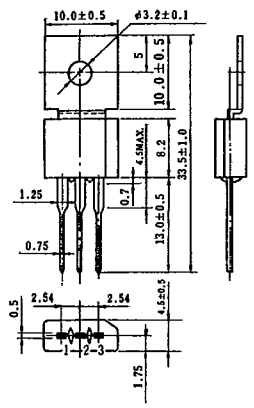
PHASE CONTROL THYRISTOR

in mm

SF2J41 600V 2A

MAXIMUM RATINGS

CHARACTERISTIC		SYMBOL	RATING	UNIT
Repetitive Peak Off-State Voltage and Repetitive Peak Reverse Voltage	SF2B41	V_{DRM} and V_{RRM}	100	V
	SF2D41		200	
	SF2G41		400	
	SF2J41		600	
Non-Repetitive Peak Reverse Voltage (Non-Rep <5ms) T_c=0~110°C	SF2B41	V_{RSM}	150	V
	SF2D41		300	
	SF2G41		500	
	SF2J41		720	
R.M.S On-State Current		$I_{T(RMS)}$	3.1	A
Average On-State Current (Half Sine Waveform Tc=45°C)		$I_{T(AV)}$	2.0	A
Peak One Cycle Surge On-State Current (Non-Repetitive)		I_{TSM}	22(60Hz) 20(50Hz)	A
I^2t Limit Value (t=1ms~10ms)		I^2T	1.6	A^2S
Peak Gate Power Dissipation		P_{GM}	0.1	W
Average Gate Power Dissipation		$P_{G(AV)}$	0.01	W
Peak Forward Gate Voltage		I_{GM}	100	mA
Peak Reverse Gate Voltage		V_{RGM}	−5	V
Junction Temperature		T_j	−40~110	°C
Storage Temperature Range		T_{stg}	−40~110	°C
Weight			1.5	g



1. CATHODE
2. ANODE
3. GATE

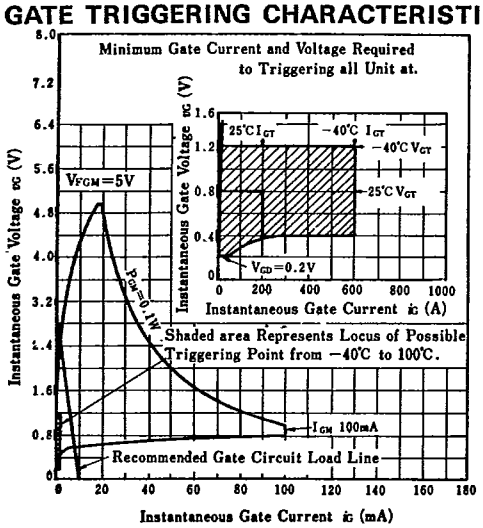
JEDEC	—
EIAJ	—
TOSHIBA	13−10A1A

ELECTRICAL CHARACTERISTICS

CHARACTERISTIC	SYMBOL	CONDITION	MIN.	TYP.	MAX.	UNIT
Repetitive Peak Off-State Current and Repetitive Peak Reverse Current	I_{DRM} and I_{RRM}	$V_{DRM}=V_{RRM}$=Rated, T_j=110°C, R_{GK}=1kΩ	—	—	200	μA
Peak On-State Voltage	V_{TM}	I_{TM}=10A, T_c=25°C	—	—	2.0	V
Gate Trigger Voltage	V_{GT}	V_D=6V, R_L=100Ω, R_{GK}=1kΩ T_c=25°C	—	—	0.8	V
Gate Trigger Current	I_{GT}	V_D=6V, R_L=100Ω, R_{GK}=1kΩ, T_c=25°C	—	—	200	μA
Gate Non-Trigger Voltage	V_{GD}	V_D=Rated, R_{GK}=1kΩ, T_c=110°C	0.2	—	—	V
Critical Rate of Rise of Off-State Voltage	dv/dt	V_{DRM}=Rated, R_{GK}=1kΩ, Exponential rise T_j=110°C		15 ✱10	—	V/μs
Holding Current	I_H	R_L=100Ω, R_{GK}=1kΩ, T_c=25°C	—	3.0	—	mA
Thermal Resistance ✱	$R_{th(j-c)}$	DC	—	—	12	°C/W

✱ Junction to Case ✱ SF2J41

GATE TRIGGERING CHARACTERISTICS



$T_{C\ MAX} - I_{T(AV)}$