

PHASE CONTROL THYRISTOR

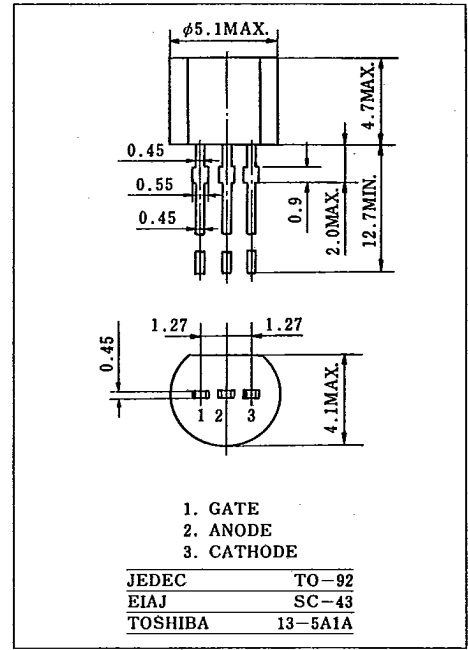
SFOR3J42

600V 0.3A

Unit in mm

MAXIMUM RATINGS

CHARACTERISTIC	SYMBOL	RATING	UNIT
Repetitive Peak Off-State Voltage and Repetitive Peak Reverse Voltage	SFOR3B42	100	V
	SFOR3D42	200	
	SFOR3G42	400	
	SFOR3J42	600	
Non-Repetitive Peak Reverse Voltage (Non-Rep <5ms) $T_j = 0 \sim 110^\circ\text{C}$	SFOR3B42	150	V
	SFOR3D42	300	
	SFOR3G42	500	
	SFOR3J42	720	
Average On-State Current (Half Sine Waveform $T_c = 30^\circ\text{C}$)	$I_{T(AV)}$	300	mA
R.M.S On-State Current	$I_{T(RMS)}$	450	mA
Peak One Cycle Surge On-State Current (Non-Repetitive)	I_{TSM}	9	A
I^2t Limit Value ($t = 1\text{ms} \sim 10\text{ms}$)	I^2t	0.4	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	V_{FGM}	3.5	V
Peak Reverse Gate Voltage	V_{RGM}	-5	V
Peak Forward Gate Current	I_{GM}	125	mA
Junction Temperature	T_j	-40~110	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	-40~125	$^\circ\text{C}$
Weight		0.2	g

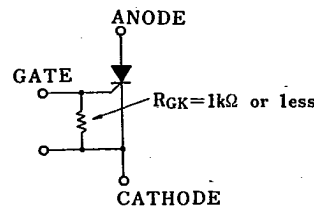


ELECTRICAL CHARACTERISTICS

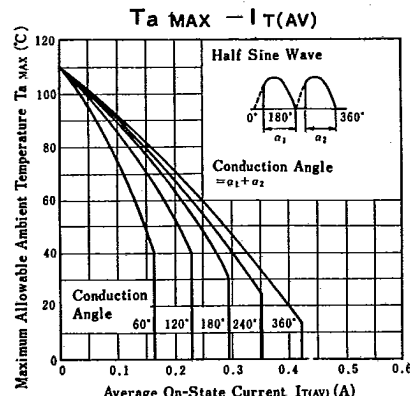
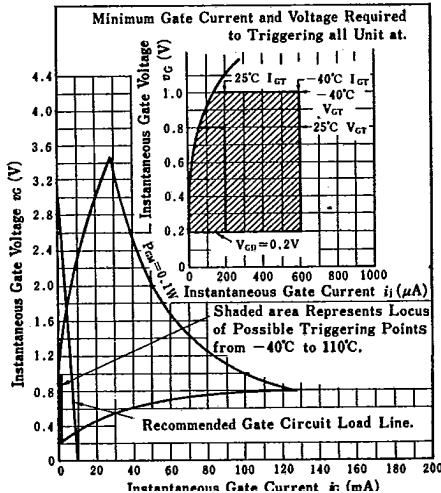
CHARACTERISTIC	SYMBOL	CONDITION	MIN.	TYP.	MAX.	UNIT
Repetitive Peak Off-State Current and Repetitive Peak Reverse Current	I_{DRM} and I_{RRM}	$V_{DRM} = V_{RRM} = \text{Rated}$ $R_{GK} = 1\text{k}\Omega$, $T_j = 110^\circ\text{C}$	-	-	100	μA
Peak On-State Voltage	V_{TM}	$I_{TM} = 2\text{A}$, $T_c = 25^\circ\text{C}$	-	-	2.0	V
Gate Trigger Current	I_{GT}	$V_D = 6\text{V}$, $R_L = 100\Omega$ $T_c = 25^\circ\text{C}$, $R_{GK} = 1\text{k}\Omega$	-	-	200	μA
Gate Trigger Voltage	V_{GT}	$V_D = 6\text{V}$, $R_L = 100\Omega$ $T_c = 25^\circ\text{C}$, $R_{GK} = 1\text{k}\Omega$	-	-	0.8	V
Gate Non-Trigger Voltage	V_{GD}	$V_D = 6\text{V}$, $R_{GK} = 1\text{k}\Omega$ $T_c = 110^\circ\text{C}$	0.2	-	-	V
Holding Current	I_H	$R_L = 100\Omega$, $R_{GK} = 1\text{k}\Omega$ $T_c = 25^\circ\text{C}$	-	4	-	mA
Thermal Resistance (Note 1)	$R_{th(j-a)}$	DC	-	-	250	$^\circ\text{C/W}$

Notes : 1. Junction to Ambient.

2. Gate-Cathode Resistance is Necessary for all Conditions.



GATE TRIGGER CHARACTERISTICS



49