

THYRISTOR
SILICON PLANAR TYPE

SFOR1(A,B,D,G)42

LOW POWER SWITCHING AND CONTROL APPLICATIONS.

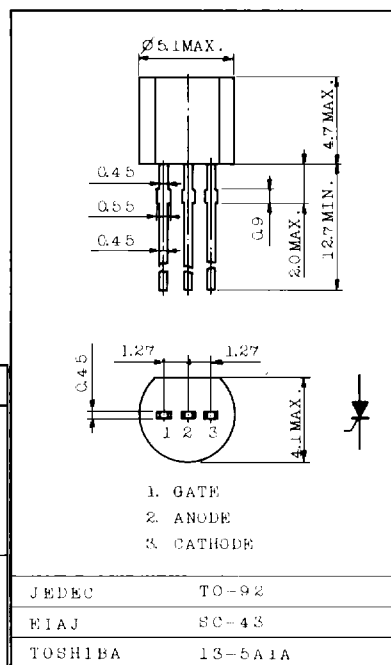
Unit in mm

FEATURES:

- Repetitive Peak Off-State Voltage: V_{DRM} } = 50 ~ 400V
Repetitive Peak Reverse Voltage : V_{RRM}
- Average On-State Current : $I_T(AV)$ = 100mA
- Plastic Mold Type

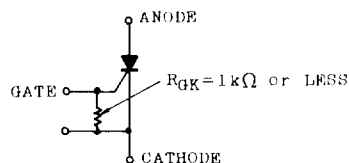
MAXIMUM RATINGS

CHARACTERISTIC	SYMBOL	RATING	UNIT
Repetitive Peak Off-State Voltage and Repetitive Peak Reverse Voltage ($R_{GK}=1k\Omega$)	SFOR1A42	50	V
	SFOR1B42	100	
	SFOR1D42	200	
	SFOR1G42	400	
Non-Repetitive Peak Reverse Voltage (Non-Repetitive <5ms, $R_{GK}=1k\Omega$, $T_j=0 \sim 125^\circ C$)	SFOR1A42	75	V
	SFOR1B42	150	
	SFOR1D42	300	
	SFOR1G42	500	
Average On-State Current (Half Sine Waveform $T_a=80^\circ C$)	$I_T(AV)$	100	mA
R.M.S On-State Current	$I_T(RMS)$	150	mA
Peak One Cycle Surge On-State Current (Non-Repetitive)	I_{TSM}	4 (50Hz)	A
		4.4 (60Hz)	
I^2t Limit Value ($t=1 \sim 10ms$)	I^2t	0.08	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 ~ 125	$^\circ C$
Storage Temperature Range	T_{stg}	-40 ~ 125	$^\circ C$



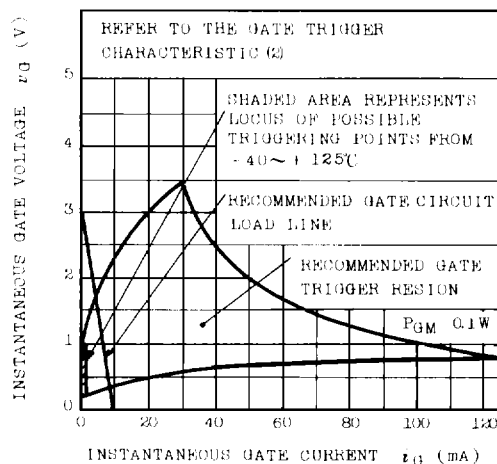
Weight : 0.2g

Note : Should be used with gate resistance as follows.



ELECTRICAL CHARACTERISTICS ($T_a=25^{\circ}\text{C}$)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Repetitive Peak Off-State Current and Repetitive Peak Reverse Current	I_{DRM} I_{RRM}	$V_{\text{DRM}}=V_{\text{RRM}}=\text{Rated}$, $T_j=125^{\circ}\text{C}$, $R_{\text{GK}}=1\text{k}\Omega$	-	-	100	μA
Peak On-State Voltage	V_{TM}	$I_{\text{TM}}=1\text{A}$	-	-	2.5	V
Gate Trigger Voltage	V_{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_{GT}		-	-	200	μA
Gate Non-Trigger Voltage	V_{GD}	$V_{\text{D}}=6\text{V}$, $R_{\text{GK}}=1\text{k}\Omega$, $T_a=125^{\circ}\text{C}$	0.2	-	-	V
Holding Current	I_{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	-	-	250	$^{\circ}\text{C/W}$

GATE TRIGGER CHARACTERISTIC (1)

GATE TRIGGER CHARACTERISTIC (2)
