

THYRISTOR
SILICON DIFFUSED TYPE

SF3(B,D,G,J)42

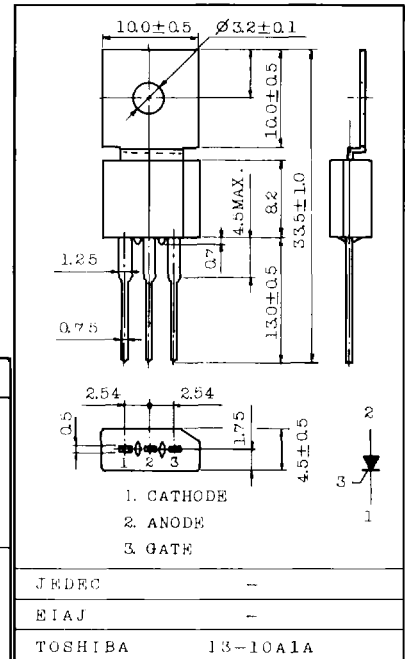
LOW POWER CONTROL APPLICATIONS.

Unit in mm

- Repetitive Peak Off-State Voltage : V_{DRM} } = 100 ~ 600V
- Repetitive Peak Reverse Voltage : V_{RRM}
- Average On-State Current : $I_T(AV)$ = 3A
- Gate Trigger Current : I_{GT} = 200 μ A (Max.)
- Plastic Mold Package

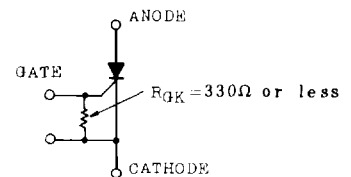
MAXIMUM RATINGS

CHARACTERISTIC		SYMBOL	RATING	UNIT
Repetitive Peak Off-State Voltage and Repetitive Peak Reverse Voltage ($R_{GK}=330\Omega$)	SF3B42	V_{DRM}	100	V
	SF3D42		200	
	SF3G42	V_{RRM}	400	
	SF3J42		600	
Non-Repetitive Peak Reverse Voltage (Non-Repetitive < 5ms, $T_j=0 \sim 125^\circ\text{C}$, $R_{GK}=330\Omega$)	SF3B42	V_{RMS}	150	V
	SF3D42		300	
	SF3G42		500	
	SF3J42		720	
Average On-State Current (Half Sine Waveform)		$I_T(AV)$	3	A
R.M.S On-State Current		$I_T(RMS)$	4.7	A
Peak One Cycle Surge On-State Current (Non-Repetitive)		I_{TSM}	65(50Hz)	A
			70(60Hz)	
I^2t Limit Value ($t=1 \sim 10\text{ms}$)		I^2t	20	A^2s
Peak Gate Power Dissipation		P_{GM}	0.5	W
Average Gate Power Dissipation		$R_G(AV)$	0.05	W
Peak Forward Gate Voltage		V_{FGM}	5	V
Peak Reverse Gate Voltage		V_{RCM}	-5	V
Peak Forward Gate Current		I_{GM}	200	mA
Junction Temperature		T_j	-40 ~ 125	$^\circ\text{C}$
Storage Temperature Range		T_{stg}	-40 ~ 125	$^\circ\text{C}$



Weight : 1.5g

Note : Should be used with gate resistance as follows.

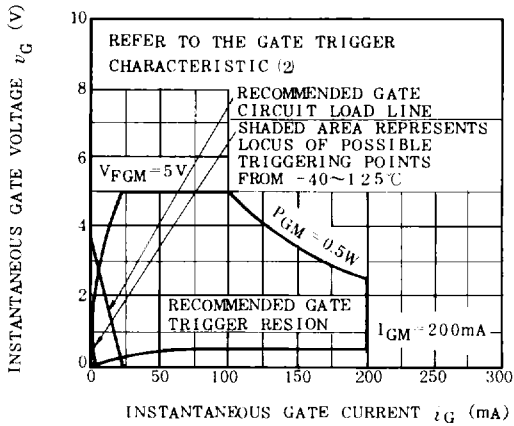


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ELECTRICAL CHARACTERISTICS (Ta=25°C)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Repetitive Peak Off-State Current and Repetitive Peak Reverse Current	I _{DRM} I _{RRM}	V _{DRM} =V _{RRM} =Rated R _{GK} =330Ω, T _j =125°C	-	-	2	mA
Peak On-State Voltage	V _{TM}	I _{TM} =12A	-	-	1.6	V
Gate Trigger Voltage	V _{GT}	V _D =6V, R _L =100Ω	-	-	0.8	V
Gate Trigger Current	I _{GT}	R _{GK} =330Ω	-	-	200	μA
Gate Non-Trigger Voltage	V _{GD}	V _D =2/3 Rated, T _j =125°C R _{GK} =330Ω	0.2	-	-	V
Critical Rate of Rise of Off-State Voltage	dv/dt	V _D =2/3 Rated, T _j =75°C R _{GK} =330Ω Exponential rise	-	50	-	V/μs
Holding Current	I _H	R _L =100Ω, R _{GK} =330Ω	-	4	-	mA
Thermal Resistance	R _{th(j-c)}	Junction to Case	-	-	6	°C/W

GATE TRIGGER CHARACTERISTIC (1)



GATE TRIGGER CHARACTERISTIC (2)

