

SF1500(G,J,L,Q)27

THYRISTOR

SILICON DIFFUSED TYPE

HIGH POWER CONTROL APPLICATIONS.

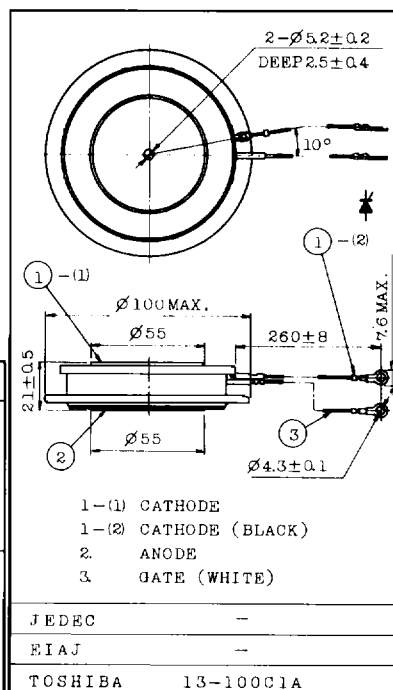
- Repetitive Peak Off-State Voltage : V_{DRM} } = 400 ~ 1200V
- Repetitive Peak Reverse Voltage : V_{RRM} }
- Average On-State Current : $I_T(AV)=1500A$
- Critical Rate of Rise of On-State Current : $di/dt=200A/\mu s$
- Critical Rate of Rise of Off-State Voltage : $dv/dt=500V/\mu s$
- Flat Package

MAXIMUM RATINGS

CHARACTERISTIC	SYMBOL	RATING	UNIT
Repetitive Peak Off-State Voltage and Repetitive Peak Reverse Voltage	SF1500G27	400	V
	SF1500J27	600	
	SF1500L27	800	
	SF1500Q27	1200	
Non-Repetitive Peak Reverse Voltage (Non-Repetitive < 5ms, $T_j=0 \sim 125^\circ C$)	SF1500G27	500	V
	SF1500J27	720	
	SF1500L27	960	
	SF1500Q27	1350	
R.M.S On-State Current	$I_T(RMS)$	2355	A
Average On-State Current $T_f=62^\circ C$	$I_T(AV)$	1500	A
Peak One Cycle Surge On-State Current (Non-Repetitive)	I_{TSM}	30000(50Hz)	A
		33000(60Hz)	
I^2t Limit Value	I^2t	4500×10^3	A^2s
Critical Rate of Rise of On-State Current (Note)	di/dt	200	$A/\mu s$
Peak Gate Power Dissipation	P_{GM}	30	W
Average Gate Power Dissipation	$P_{G(AV)}$	4	W
Peak Forward Gate Current	I_{GM}	6	A
Peak Forward Gate Voltage	V_{FGM}	20	V
Peak Reverse Gate Voltage	V_{RGM}	5	V
Junction Temperature	T_j	$-40 \sim 125$	$^\circ C$
Storage Temperature Range	T_{stg}	$-40 \sim 125$	$^\circ C$
Mounting Force	-	2000 ± 200	kg

Note : $V_p=1/2$ Rated, $T_c=120^\circ C$, Gate Supply ($V_G=15V$, $R_G=8\Omega$, $t_r \leq 1\mu s$)

Unit in mm



Weight : 630g

ELECTRICAL CHARACTERISTICS

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	MAX.	UNIT
Repetitive Peak Off-State Current and Repetitive Peak Reverse Current	I_{DRM} I_{RRM}	$V_{DRM}=V_{RRM}=\text{Rated}$, $T_j=125^\circ\text{C}$	-	50	mA
Peak On-State Voltage	V_{TM}	$I_{TM}=5000\text{A}$, $T_c=25^\circ\text{C}$	-	1.55	V
Gate Trigger Voltage	V_{GT}	$V_D=6\text{V}$, $R_L=6\Omega$	$T_c=-40^\circ\text{C}$	-	3.5
			$T_c=25^\circ\text{C}$	0.6	2.5
Gate Trigger Current	I_{GT}		$T_c=-40^\circ\text{C}$	-	400
			$T_c=25^\circ\text{C}$	15	250
Gate Non-Trigger Voltage	V_{GD}	$V_D=1/2 \text{ Rated}$, $T_c=125^\circ\text{C}$	0.2	-	V
Gate Non-Trigger Current	I_{GD}		5	-	mA
Delay Time	t_d	$V_D=0.5 \text{ Rated}$, $T_c=25^\circ\text{C}$	-	4	μs
Gate Turn-On Time	t_{gt}	Gate Supply ($V_G=15\text{V}$, $R_G=8\Omega$, $t_r \leq 1\mu\text{s}$)	-	6	μs
Holding Current	I_H	$T_c=25^\circ\text{C}$, $R_L=6\Omega$	-	300	mA
Critical Rate of Rise of Off-State Voltage	dv/dt	$V_{DRM}=2/3 \text{ Rated}$, $T_j=125^\circ\text{C}$ Gate Open, Exponential Rise	500	-	V/ μs
Thermal Resistance	$R_{th(j-f)}$	Junction to Fin	-	0.025	$^\circ\text{C/W}$

