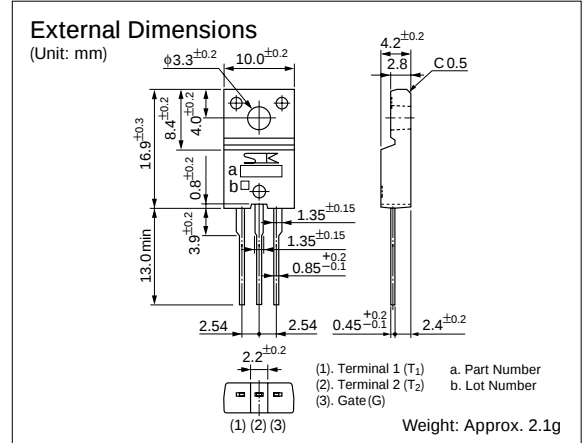


TO-220F 5A Triac

TM583S-L

Features

- Repetitive peak off-state voltage: $V_{DRM}=800V$
- RMS on-state current: $I_{T(RMS)}=5A$
- Gate trigger current: $I_{GT}=20mA$ max (MODE I, II, III)
- Isolation voltage: $V_{ISO}=1500V$ (50Hz Sine wave, RMS)



Absolute Maximum Ratings

Parameter	Symbol	Ratings	Unit	Conditions
Repetitive peak off-state voltage	V_{DRM}	800	V	$R_{GK}=\infty$, $T_J=-40$ to $+125^{\circ}C$
RMS on-state current	$I_{T(RMS)}$	5.0	A	Conduction angle=360°, $T_c=101^{\circ}C$
Surge on-state current	I_{TSM}	45	A	50Hz full-cycle sine wave, Peak value, Non-repetitive, $T_J=125^{\circ}C$
Peak gate voltage	V_{GM}	10	V	$f \geq 50Hz$, duty $\leq 10\%$
Peak gate current	I_{GM}	2	A	$f \geq 50Hz$, duty $\leq 10\%$
Peak gate power dissipation	P_{GM}	5	W	$f \geq 50Hz$, duty $\leq 10\%$
Average gate power dissipation	$P_{G(AV)}$	0.5	W	
Junction temperature	T_J	-40 to $+125$	$^{\circ}C$	
Storage temperature	T_{stg}	-40 to $+125$	$^{\circ}C$	
Isolation voltage	V_{ISO}	1500	Vrms	50Hz Sine wave, RMS, Terminal to Case, 1 min.

Electrical Characteristics

($T_J=25^{\circ}C$, unless otherwise specified)

Parameter	Symbol	Ratings			Unit	Conditions	
		min	typ	max			
Off-state current	I_{DRM}			2.0	mA	$V_D=V_{DRM}$, $R_{GK}=\infty$, $T_J=125^{\circ}C$	
				0.1		$V_D=V_{DRM}$, $R_{GK}=\infty$, $T_J=25^{\circ}C$	
On-state voltage	V_{TM}			1.6	V	$I_{TM}=7A$, $T_c=25^{\circ}C$	
Gate trigger voltage	V_{GT}		1.3	2.0	V	$V_D=6V$, $R_L=10\Omega$, $T_c=25^{\circ}C$	T_2^+ , G^+
			0.7	2.0			T_2^+ , G^-
			0.8	2.0			T_2^- , G^-
Gate trigger current	I_{GT}		7	20	mA	$V_D=6V$, $R_L=10\Omega$, $T_c=25^{\circ}C$	T_2^+ , G^+
			10	20			T_2^+ , G^-
			12	20			T_2^- , G^-
Gate non-trigger voltage	V_{GD}	0.2			V	$V_D=1/2 \times V_{DRM}$, $T_J=125^{\circ}C$	
Holding current	I_H		20		mA	$T_J=25^{\circ}C$	
Rising rate of off-state voltage in commutating	$(dv/dt)_c$	5			V/ μs	$V_D=400V$, $(di/dt)_c=-2A/ms$, $T_J=125^{\circ}C$, $I_T=1A$	
Thermal resistance	R_{th}			4.0	$^{\circ}C/W$	Junction to Case	