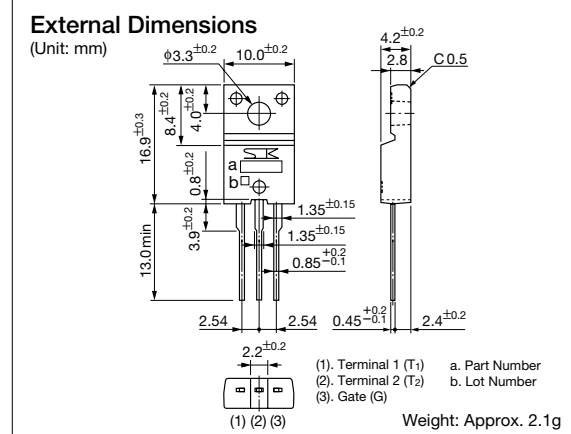


TO-220F 5A Triac

TM541S-R, TM561S-R

■ Features

- Repetitive peak off-state voltage: $V_{DRM}=400, 600V$
- RMS on-state current: $I_{T(RMS)}=5A$
- Gate trigger current: $I_{GT}=12mA$ max (MODE I, II, III)
- Isolation voltage: $V_{ISO}=1500V$ (50Hz Sine wave, RMS)
- For resistive load
- UL approved type available



■ Absolute Maximum Ratings

Parameter	Symbol	Ratings		Unit	Conditions
		TM541S-R	TM561S-R		
Repetitive peak off-state voltage	V_{DRM}	400	600	V	
RMS on-state current	$I_{T(RMS)}$	5.0		A	Conduction angle 360°, $T_c=104^{\circ}C$
Surge on-state current	I_{TSM}	50		A	50Hz full-cycle sine wave, Peak value, Non-repetitive, $T_j=125^{\circ}C$
Peak gate voltage	V_{GM}	—		V	
Peak gate current	I_{GM}	1		A	
Peak gate power loss	P_{GM}	5		W	
Average gate power loss	$P_{G(AV)}$	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

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	Pulse test, $I_{TM}=7A$	
Gate trigger voltage	I	V_{GT}		1.3	1.8	V	$V_D=6V$, $R_L=10\Omega$, $T_c=25^{\circ}C$	T_2^+, G^+
	II			0.7	1.2			T_2^+, G^-
	III			0.8	1.2			T_2^-, G^-
	IV			3.1				T_2^-, G^+
Gate trigger current	I	I_{GT}		8	12	mA	$V_D=6V$, $R_L=10\Omega$, $T_c=25^{\circ}C$	T_2^+, G^+
	II			8.5	12			T_2^+, G^-
	III			9	12			T_2^-, G^-
	IV			70				T_2^-, G^+
Gate non-trigger voltage		V_{GD}	0.1			V	$V_D=1/2 \times V_{DRM}$, $T_j=125^{\circ}C$	
Holding current		I_H		14		mA	$V_D=6V$	
Thermal resistance		R_{th}			4.0	$^{\circ}C/W$	Junction to case	