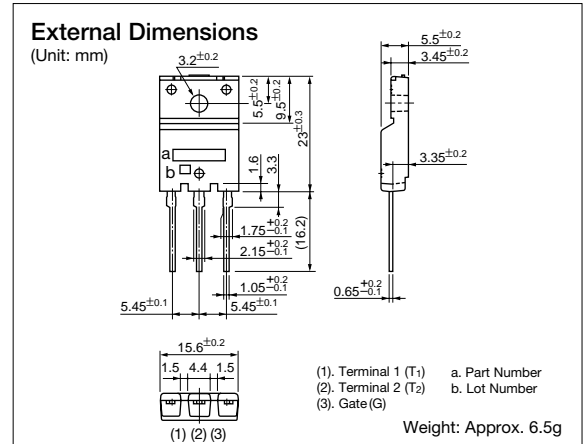


TO-3PF 25A Triac

TM2541B-L, TM2561B-L

Features

- Repetitive peak off-state voltage: $V_{DRM}=400, 600V$
- RMS on-state current: $I_{T(RMS)}=25A$
- Gate trigger current: $I_{GT}=30mA$ max (MODE I, II, III)
- Isolation voltage: $V_{ISO}=2000V(AC, 1min.)$
- UL approved type available



Absolute Maximum Ratings

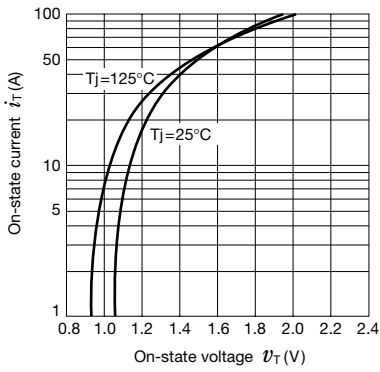
Parameter	Symbol	Ratings		Unit	Conditions
		TM2541B-L	TM2561B-L		
Repetitive peak off-state voltage	V_{DRM}	400	600	V	$R_{GK}=\infty, T_J=-40^{\circ}C$ to $+125^{\circ}C$
RMS on-state current	$I_{T(RMS)}$	25		A	Conduction angle $360^{\circ}, T_C=84^{\circ}C$
Surge on-state current	I_{TSM}	240		A	50Hz full-cycle sine wave, Peak value, Non-repetitive, $T_J=125^{\circ}C$
Peak gate voltage	V_{GM}	10		V	$f \geq 50Hz, \text{duty} \leq 10\%$
Peak gate current	I_{GM}	2		A	$f \geq 50Hz, \text{duty} \leq 10\%$
Peak gate power loss	P_{GM}	5		W	$f \geq 50Hz, \text{duty} \leq 10\%$
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}	2000		Vrms	50Hz Sine wave, RMS, Terminal to Case, 1 min.

Electrical Characteristics

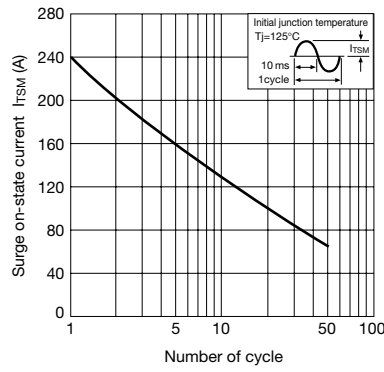
Parameter	Symbol	Ratings			Unit	Conditions	
		min	typ	max			
Off-state current	I_{DRM}		0.3	2.0	mA	$V_D=V_{DRM}, R_{GK}=\infty, T_J=125^{\circ}C$	
				0.1		$V_D=V_{DRM}, R_{GK}=\infty, T_J=25^{\circ}C$	
On-state voltage	V_{TM}			1.3	V	$I_{TM}=20A, T_C=25^{\circ}C$	
Gate trigger voltage	V_{GT}	I	0.8	2.0	V	$V_D=6V, R_L=10\Omega, T_C=25^{\circ}C$	T_2^+, G^+
		II	0.8	2.0			T_2^+, G^-
		III	0.8	2.0			T_2^-, G^-
		IV	1.0				T_2^-, G^+
Gate trigger current	I_{GT}	I	17	30	mA	$V_D=6V, R_L=10\Omega, T_C=25^{\circ}C$	T_2^+, G^+
		II	19	30			T_2^+, G^-
		III	22	30			T_2^-, G^-
		IV	50				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		40		mA	$T_J=25^{\circ}C$	
Rate-of-rise of off-state commutation voltage	$(dv/dt)_c$	10			V/ μs	$V_D=400V, T_J=125^{\circ}C$	
Thermal resistance	R_{th}			1.5	$^{\circ}C/W$	Junction to case	

TM2541B-L, TM2561B-L

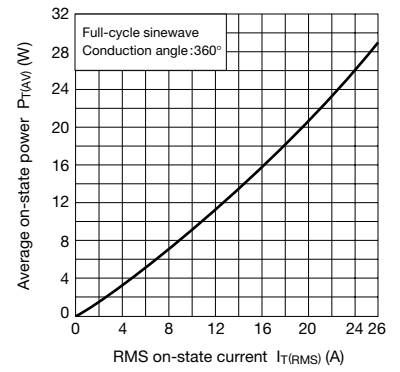
$v_T - i_T$ Characteristics (max)



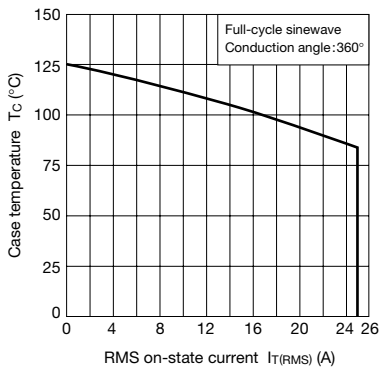
ITSM Ratings



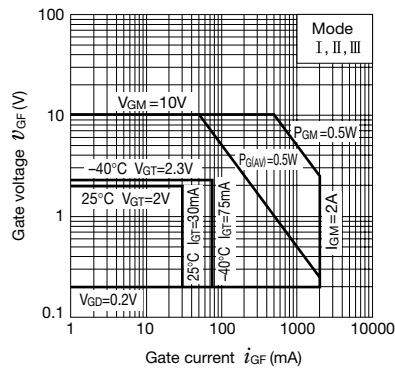
$I_T(RMS) - P_{T(AV)}$ Characteristics



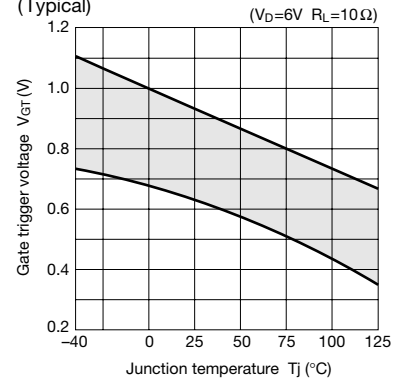
$I_T(RMS) - T_c$ Ratings



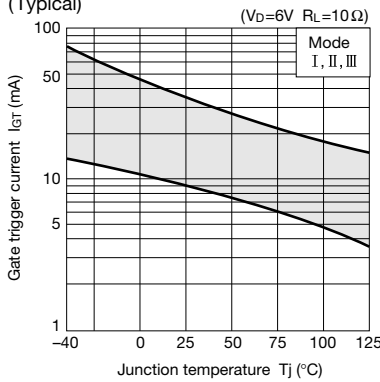
Gate Characteristics



V_{GT} temperature characteristics



I_{GT} temperature characteristics



$r_{th(j-c)} - t$ Characteristics

