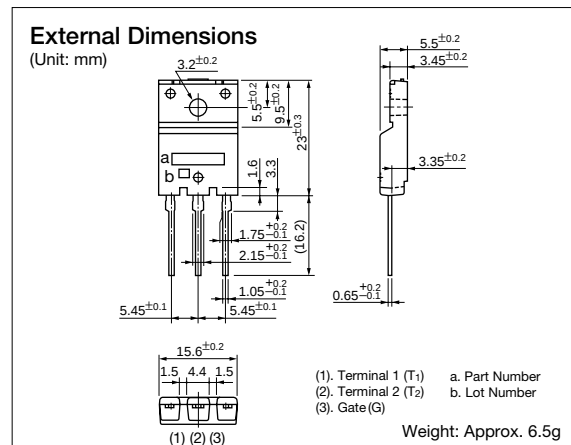


TO-3PF 25A Triac

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

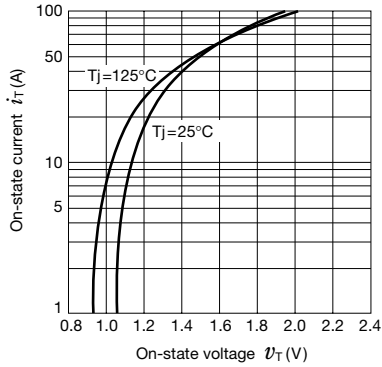
Parameter	Symbol	Ratings		Unit	Conditions
		TM2541B-L	TM2561B-L		
Repetitive peak off-state voltage	V_{DRM}	400	600	V	$R_{GK}=\infty$, $T_J=-40^{\circ}C$ to $+125^{\circ}C$
RMS on-state current	$I_{T(RMS)}$	25		A	Conduction angle 360° , $T_C=84^{\circ}C$
Surge on-state current	I_{TSM}	240		A	50Hz full-cycle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

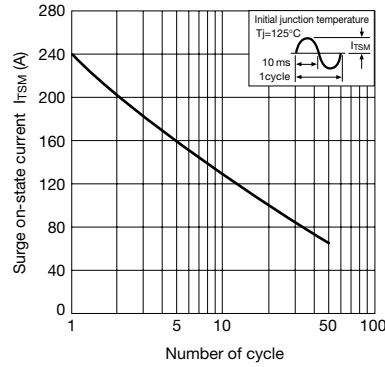
Parameter		Symbol	Ratings			Unit	Conditions
			min	typ	max		
Off-state current		I_{DRM}		0.3	2.0	mA	$V_D=V_{DRM}$, $R_{GK}=\infty$, $T_J=125^{\circ}C$
					0.1		$V_D=V_{DRM}$, $R_{GK}=\infty$, $T_J=25^{\circ}C$
On-state voltage		V_{TM}			1.3	V	$I_{TM}=20A$, $T_C=25^{\circ}C$
Gate trigger voltage	I	V_{GT}		0.8	2.0	V	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	I_{GT}		17	30	mA	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

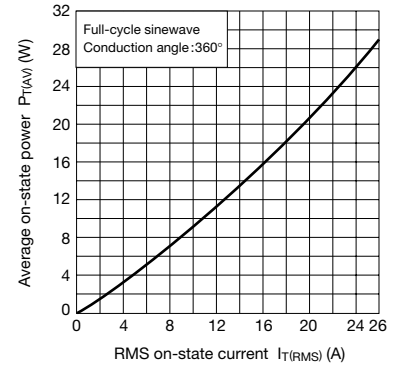
$V_T - I_T$ Characteristics (max)



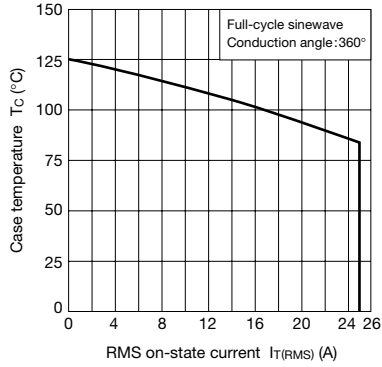
I_{TSM} Ratings



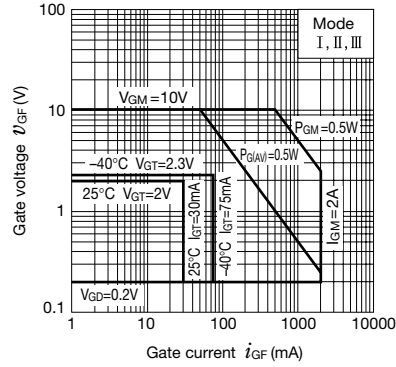
$I_T(\text{RMS}) - P_{T(AV)}$ Characteristics



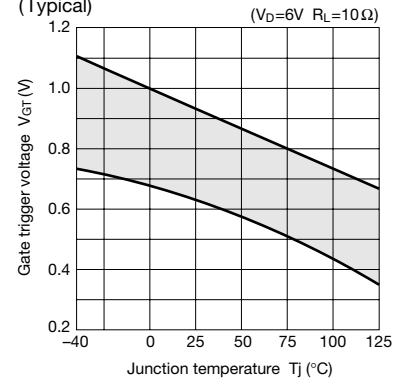
$I_T(\text{RMS}) - T_C$ Ratings



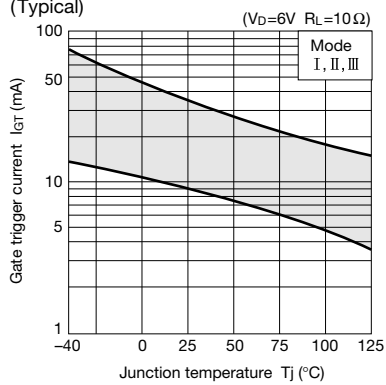
Gate Characteristics



V_{GT} temperature characteristics



I_{GT} temperature characteristics



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

