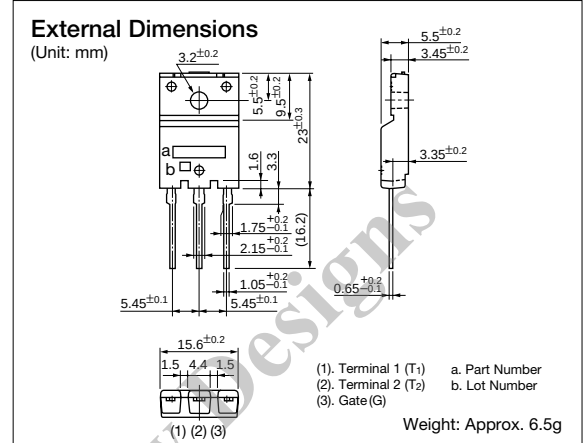


TO-3PF 25A Triac

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

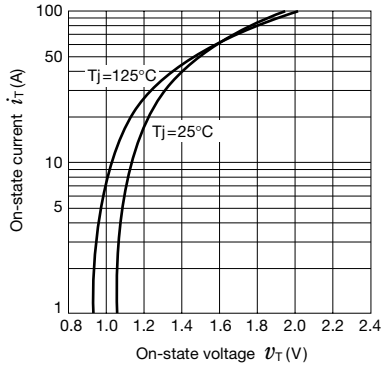
Parameter	Symbol	Ratings		Unit	Conditions
		TM2541B-L	TM2561B-L		
Repetitive peak off-state voltage	V_{DRM}	400	600	V	$R_{GK}=\infty$, $T_J=-40^{\circ}C$ to $+125^{\circ}C$
RMS on-state current	$I_{T(RMS)}$	25		A	Conduction angle 360° , $T_C=84^{\circ}C$
Surge on-state current	I_{TSM}	240		A	50Hz full-cycle 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

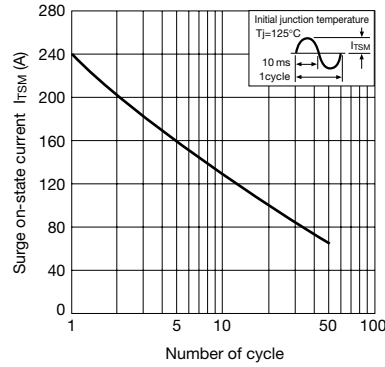
Parameter		Symbol	Ratings			Unit	Conditions	
			min	typ	max			
Off-state current		I _{DRM}		0.3	2.0	mA	V _D =V _{DRM} , R _{GK} =∞, T _j =125°C	
					0.1		V _D =V _{DRM} , R _{GK} =∞, T _j =25°C	
On-state voltage		V _{TM}			1.3	V	I _{TM} =20A, T _C =25°C	
Gate trigger voltage	I	V _{GT}		0.8	2.0	V	V _D =6V, R _L =10Ω, T _C =25°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	I _{GT}		17	30	mA	V _D =6V, R _L =10Ω, T _C =25°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×V _{DRM} , T _j =125°C	
Holding current		I _H		40		mA	T _j =25°C	
Rate-of-rise of off-state commutation voltage		(dv/dt) _c	10			V/μs	V _D =400V, T _j =125°C	
Thermal resistance		R _{th}			1.5	°C/W	Junction to case	

TM2541B-L, TM2561B-L

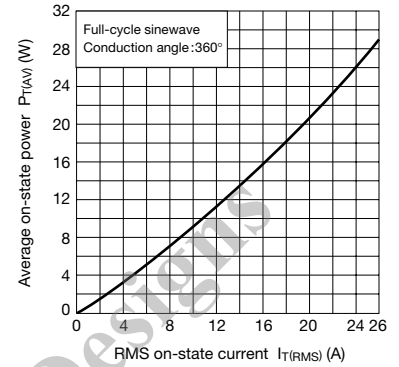
$V_T - I_T$ Characteristics (max)



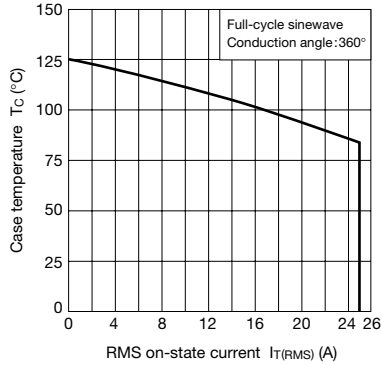
I_{TSM} Ratings



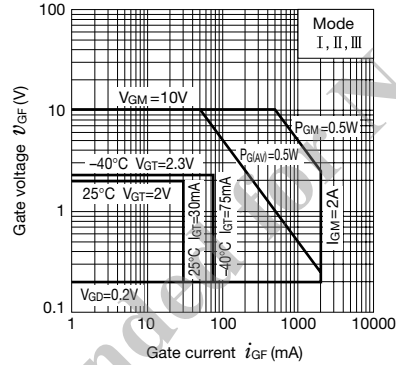
$I_T(\text{RMS}) - P_{T(AV)}$ Characteristics



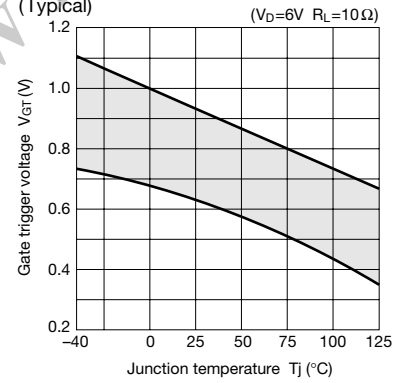
$I_T(\text{RMS}) - T_C$ Ratings



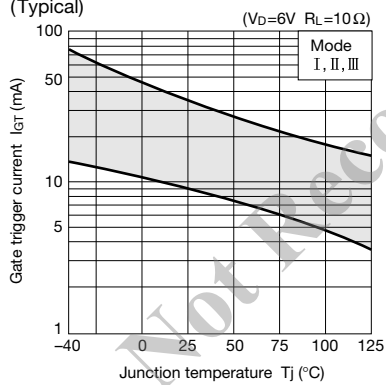
Gate Characteristics



V_{GT} temperature characteristics (Typical)



I_{GT} temperature characteristics (Typical)



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

