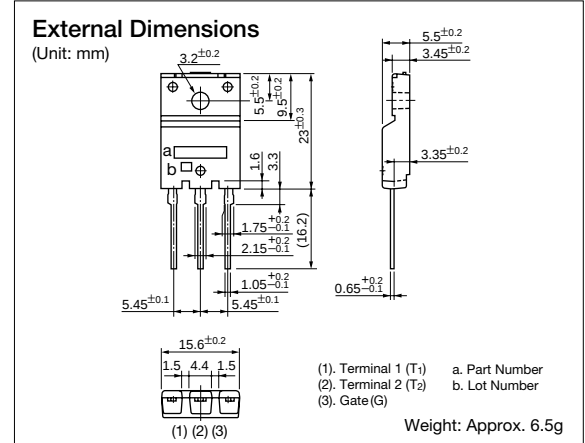


TO-3PF 12A Triac

TM1262B-R

■ Features

- Repetitive peak off-state voltage: $V_{DRM}=600V$
- RMS on-state current: $I_{T(RMS)}=12A$
- Gate trigger current: $I_{GT}=8mA$ max (MODE I, II, III)
- Isolation voltage: $V_{ISO}=2000V$ (AC, 1min.)
- For resistive load
- UL approved type available



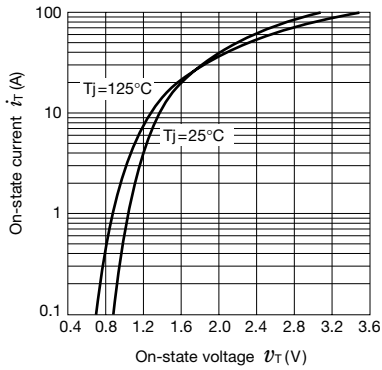
■ Absolute Maximum Ratings

Parameter	Symbol	Ratings	Unit	Conditions
Repetitive peak off-state voltage	V_{DRM}	600	V	$R_{GK}=\infty$, $T_J=-40^{\circ}C$ to $+125^{\circ}C$
RMS on-state current	$I_{T(RMS)}$	12	A	Conduction angle 360° , $T_C=98^{\circ}C$
Surge on-state current	I_{TSM}	120	A	50Hz full-cycle sine wave, Peak value, Non-repetitive, $T_J=125^{\circ}C$
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.

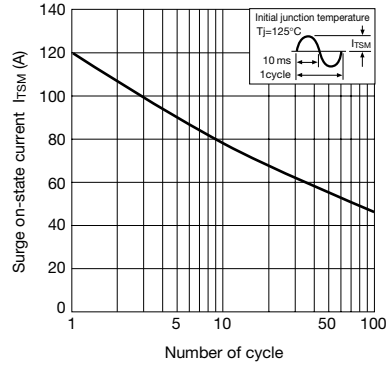
■ Electrical Characteristics

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}			1.6	V	I _{TM} =16A, T _C =25°C	
Gate trigger voltage	I	V _{GT}	0.8	1.1	1.8	V	V _D =20V, R _L =40Ω, T _C =25°C	T ₂ ⁺ , G ⁺
	II		0.4	0.6	1.2			T ₂ ⁺ , G ⁻
	III		0.4	0.7	1.2			T ₂ ⁻ , G ⁻
	IV			2.1				T ₂ ⁻ , G ⁺
Gate trigger current	I	I _{GT}	2.0	5.0	8.0	mA	V _D =20V, R _L =40Ω, T _C =25°C	T ₂ ⁺ , G ⁺
	II		2.0	4.5	8.0			T ₂ ⁺ , G ⁻
	III		2.0	5.0	8.0			T ₂ ⁻ , G ⁻
	IV			25				T ₂ ⁻ , G ⁺
Gate non-trigger voltage		V _{GD}	0.1			V	V _D =1/2×V _{DRM} , T _j =125°C	
Holding current		I _H		6		mA	T _j =25°C	
Thermal resistance		R _{th}			2.0	°C/W	Junction to case	

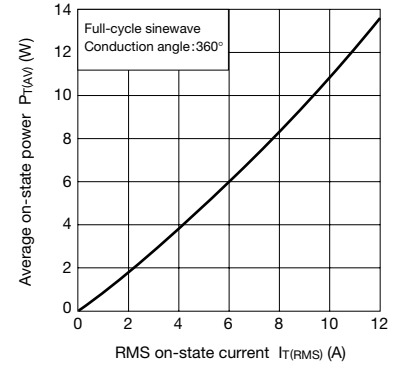
$V_T - I_T$ Characteristics (max)



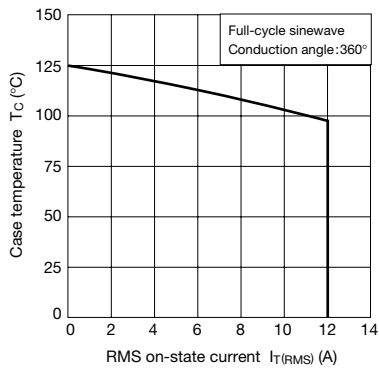
I_{TSM} Ratings



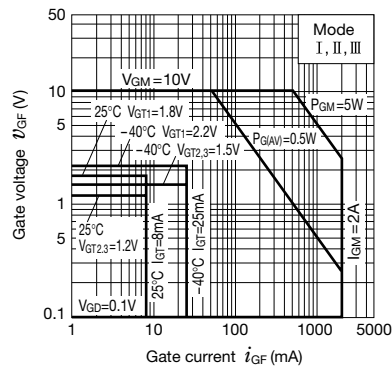
$I_T(RMS) - P_T(AV)$ Characteristics



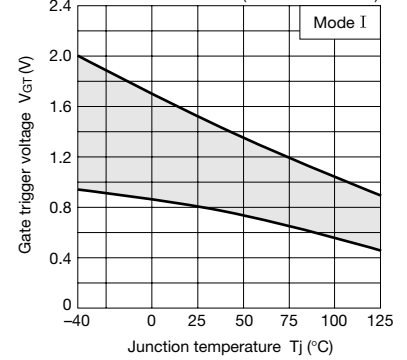
$I_T(RMS) - T_C$ Ratings



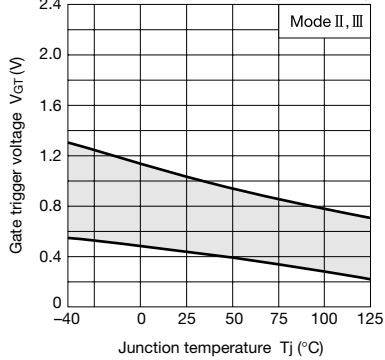
Gate Characteristics



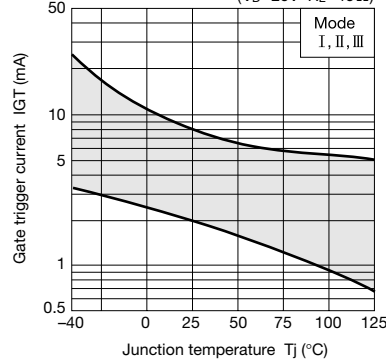
V_{GT} temperature characteristics (Typical)



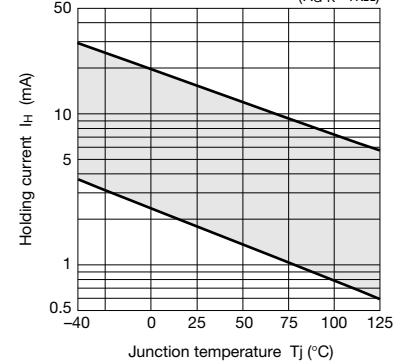
V_{GT} (Mode II, III) temperature characteristics (Typical)



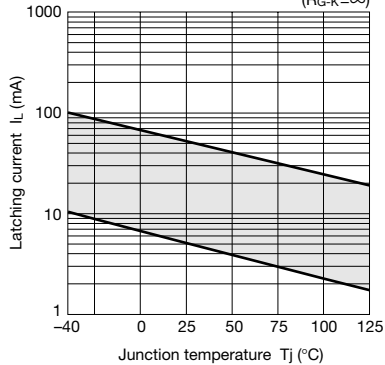
I_{GT} temperature characteristics (Typical)



I_H temperature characteristics (Typical)



I_L temperature characteristics (Typical)



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

