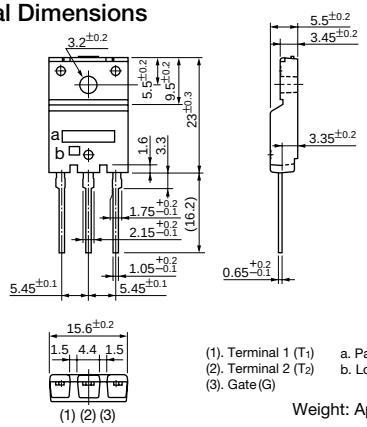
TO-3PF 12A Triac

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

External Dimensions
(Unit: mm)



(1). Terminal 1 (T_1)
(2). Terminal 2 (T_2)
(3). Gate(G)

a. Part Number
b. Lot Number

Weight: Approx. 6.5g

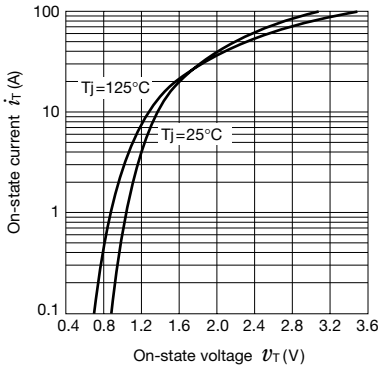
■Absolute Maximum Ratings

Parameter	Symbol	Ratings	Unit	Conditions
Repetitive peak off-state voltage	V_{DRM}	600	V	R_{GK}=∞, Tj=−40°C to +125°C
RMS on-state current	$I_{T(RMS)}$	12	A	Conduction angle 360°, Tc=98°C
Surge on-state current	I_{TSM}	120	A	50Hz full-cycle sinewave, Peak value, Non-repetitive, Tj=125°C
Peak gate current	I_{GM}	2	A	f≧50Hz, duty≦10%
Peak gate power loss	P_{GM}	5	W	f≧50Hz, duty≦10%
Average gate power loss	$P_{G(AV)}$	0.5	W	
Junction temperature	Tj	−40 to +125	°C	
Storage temperature	Tstg	−40 to +125	°C	
Isolation voltage	V_{ISO}	2000	Vrms	50Hz Sine wave, RMS, Terminal to Case, 1 min.

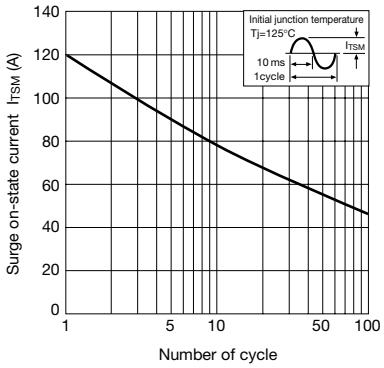
■Electrical Characteristics

Parameter		Symbol	Ratings			Unit	Conditions	
			min	typ	max			
Off-state current		I_{DRM}		0.3	2.0	mA	V_D=V_{DRM}, R_{GK}=∞, Tj=125°C	
					0.1		V_D=V_{DRM}, R_{GK}=∞, Tj=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}, Tj=125°C	
Holding current		I_H		6		mA	Tj=25°C	
Thermal resistance		Rth			2.0	°C/W	Junction to case	

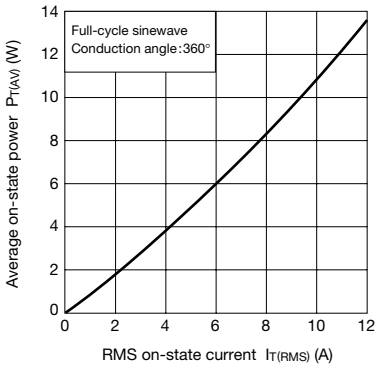
$v_T - i_T$ Characteristics (max)



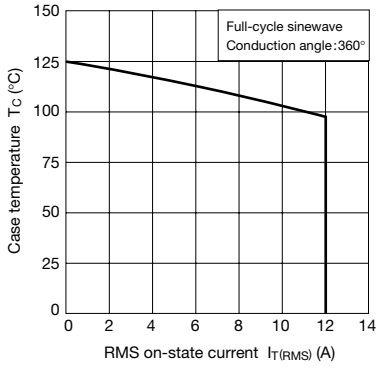
I_{TSM} Ratings



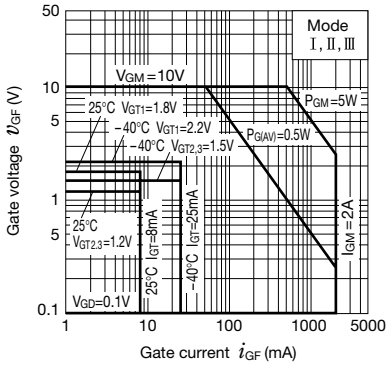
$I_{T(RMS)} - P_{T(AV)}$ Characteristics



$I_{T(RMS)} - T_C$ Ratings

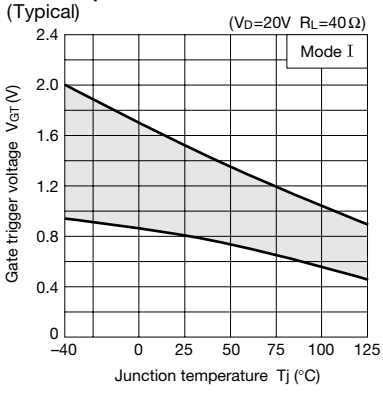


Gate Characteristics



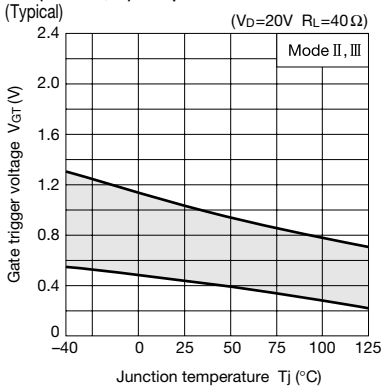
V_{GT} temperature characteristics

(Typical)



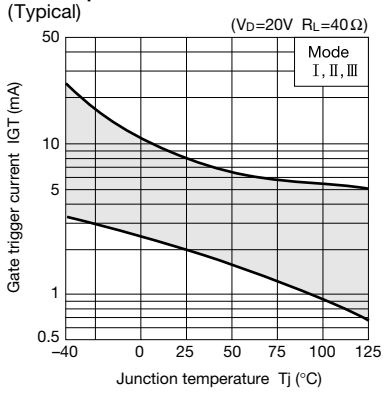
V_{GT} (Mode Ⅱ, Ⅲ) temperature characteristics

(Typical)



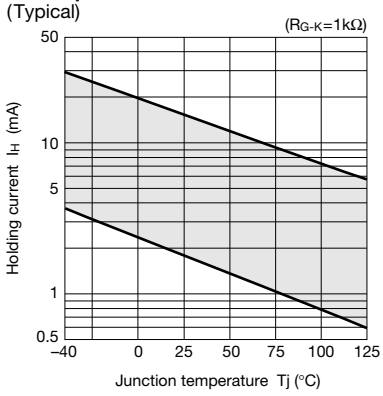
I_{GT} temperature characteristics

(Typical)



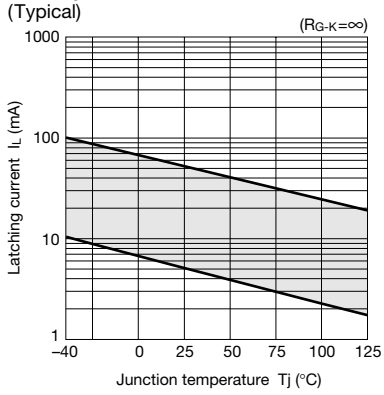
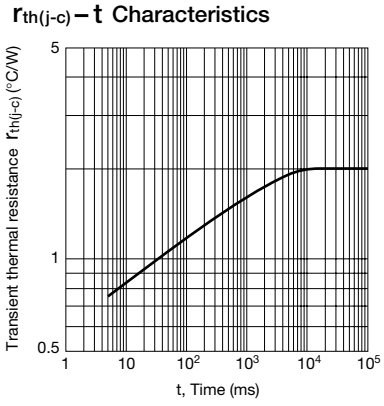
I_H temperature characteristics

(Typical)



I_L temperature characteristics

(Typical)



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