

/ Descriptions

Triac in a TO-220 Plastic Package.

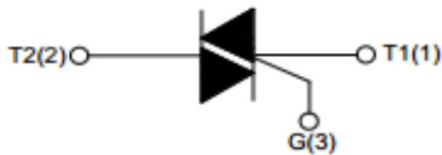
/ Features

Medium current triac, Low on state voltage drop,High reliability and stability,Low thermal resistance.

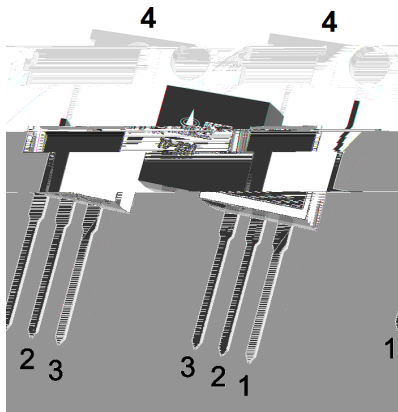
/ Applications

Suitable for general purpose AC switching .Such as static relays,heating regulation,induction motor starting circuits,motor speed controllers,etc.

/ Equivalent Circuit



/ Pinning



PIN1 Main Terminal 1 PIN 2 4 Main Terminal 2 PIN 3 Gate

/ Marking

See Marking Instructions.

/ Absolute Maximum Ratings($T_a=25^\circ\text{C}$)

Parameter	Symbol	Rating	Unit
Repetitive peak off-state/reverse voltages($T_j=125^\circ\text{C}$)	$V_{\text{DRM}}/V_{\text{RRM}}$	800	V
RMS on-state current($T_c=90^\circ\text{C}$)	$I_{\text{T(RMS)}}$	12	A
Non repetitive surge peak on-state current(full cycle, $T_j=25^\circ\text{C}$)	$I_{\text{TSM}(t=20\text{ms})}$	120	A
I^2t value for fusing($T_j=25^\circ\text{C}$)	$I^2t_{(tp=10\text{ms})}$	78	A^2s
Critical rate of rise of on-state current ($I_G=2I_{\text{GT}}$, $f=120\text{Hz}$ $T_j=125^\circ\text{C}$)	dI/dt I-II-III	50	$\text{A}/\mu\text{s}$
Peak gate current($t_p=20\mu\text{s}$ $T_j=125^\circ\text{C}$)	I_{GM}	4.0	A
Average gate power dissipation($T_j=125^\circ\text{C}$)	$P_{\text{G(AV)}}$	1	W
Operating junction temperature range	T_j	-40 125	
Storage junction temperature range	T_{stg}	-40 150	
Junction to ambient(AC)	$R_{\text{th(j-a)}}$	60	/W
Junction to case for(AC)	$R_{\text{th(j-c)}}$	1.4	

/ Electrical Characteristics($T_j=25^\circ\text{C}$)

3 / Snubberless and logic level 3 quadrants)

Symbol	Test Conditions	Quadrant	Value		Unit
I_{GT}	$V_D=12\text{V}$ $R_L=30\Omega$	I-II-III	Max.	35	mA
V_{GT}	$V_D=12\text{V}$ $R_L=30\Omega$	I-II-III	Max.	1.3	V
V_{GD}	$V_D=V_{\text{DRM}}$ $R_L=3.3\text{K}\Omega$ $T_j=125^\circ\text{C}$	I-II-III	Min.	0.2	V
I_{L}	$I_G=1.2I_{\text{GT}}$	I-III	Max.	50	mA
		II		60	
I_{H}	$I_T=100\text{mA}$		Max.	40	mA
(dV/dt)	$V_D=67\% V_{\text{DRM}}$ Gate Open	$T_j=125^\circ\text{C}$	Min.	500	$\text{V}/\mu\text{s}$
V_{TM}	$I_{\text{TM}}=17\text{A}$ $t_p=380\mu\text{s}$	$T_j=25^\circ\text{C}$	Max.	1.55	V
I_{DRM}	$V_D=V_{\text{DRM}}$ $V_R=V_{\text{RRM}}$	$T_j=25^\circ\text{C}$		5	μA
I_{RRM}		$T_j=125^\circ\text{C}$		1	mA

/ Electrical Characteristic Curve

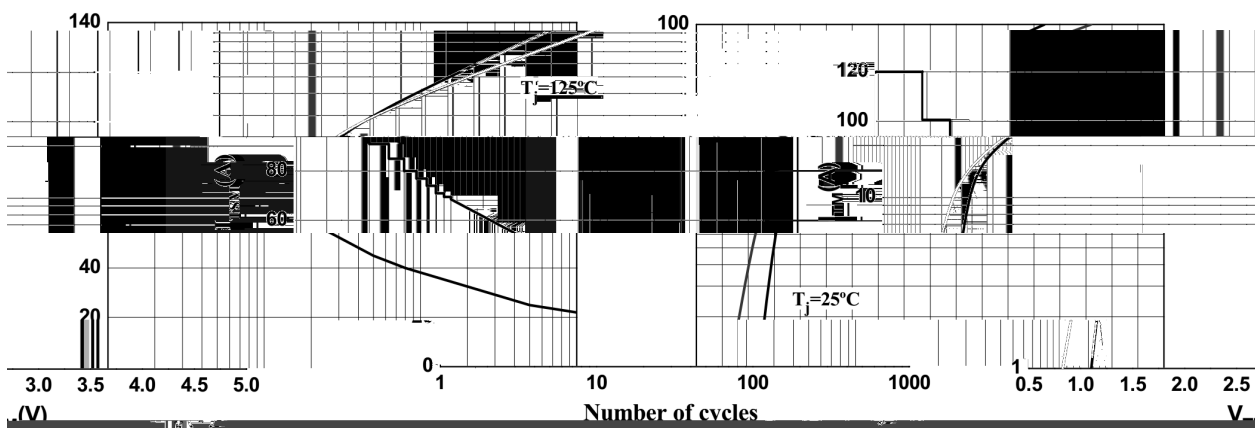
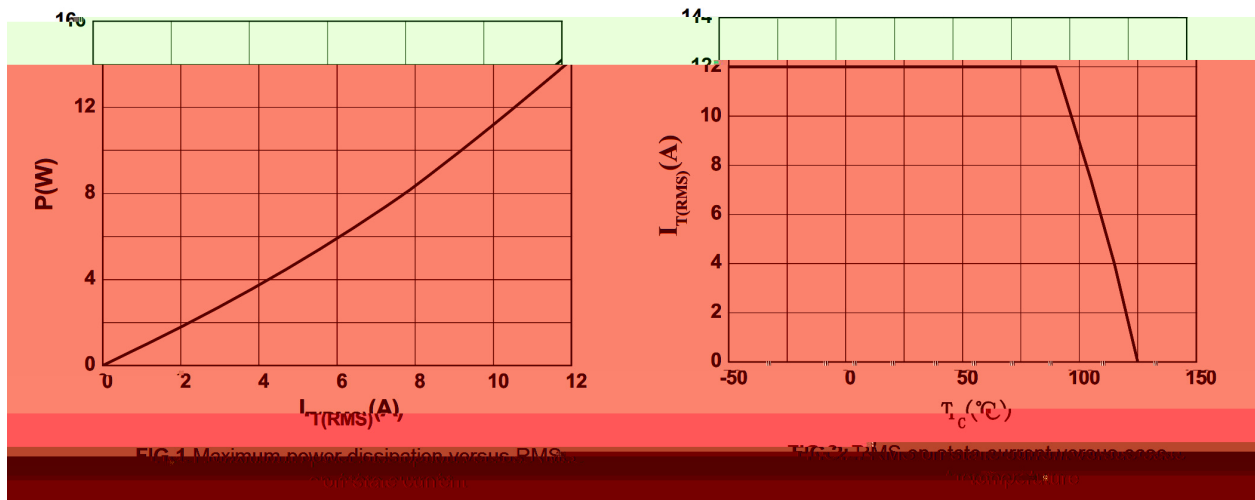


FIG.4: On-state characteristics

FIG.3: Surge peak on-state current versus number of cycles

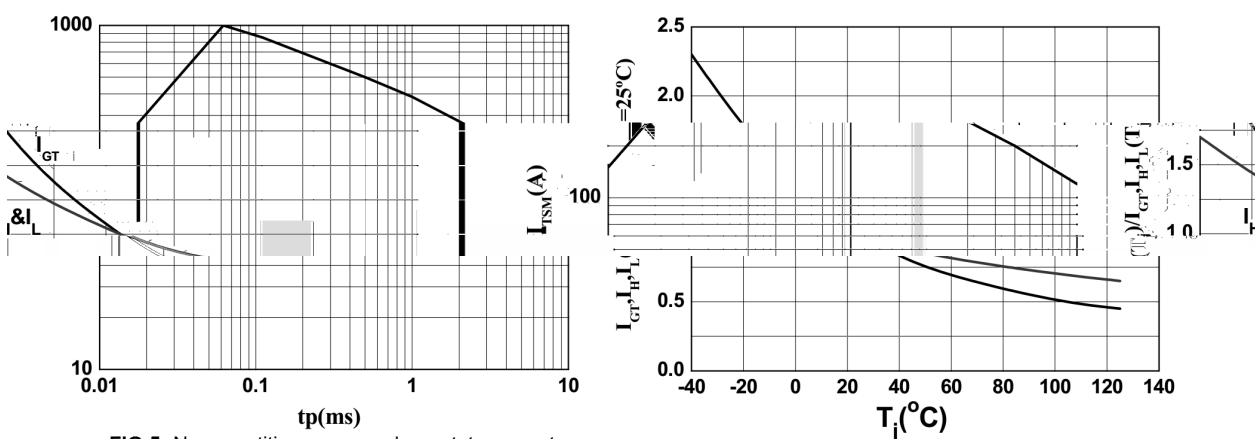
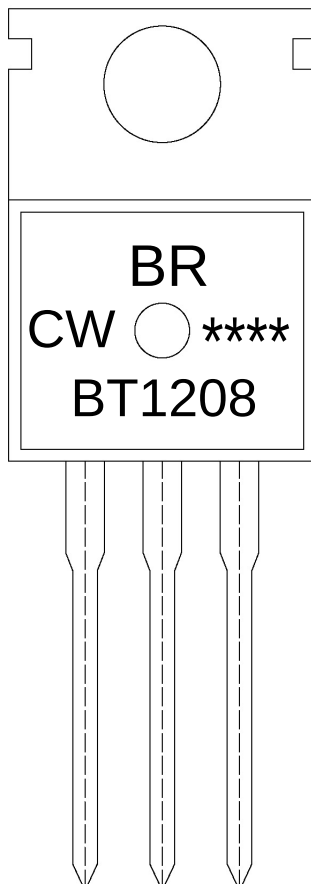
FIG.5: Negative surge peak on-state current versus pulse width ($t_p < 20ms$, and corresponding value of I_{TSM} ($dI/dt < 100A/\mu s$))

FIG.6: Safe area for surge current, holding current and switching current versus junction temperature

/ Marking Instructions



Note:

BR: Company Code

CW: I_{GT} Bracket code

****: Lot No. Code, code change with Lot No

BT1208: Product Type Code

