

5 é / Descriptions

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Triac in a TO-220F Plastic Package.

□^a / Features

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

Đ ÷ / Applications

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

Ã W] Ô • / Equivalent Circuit

• Ů - æ / Pinning

PIN1 y Main Terminal 1 PIN 2 y Main Terminal 2 PIN 3 ÖGate

, M V / Marking

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See Marking Instructions.

Table 1 Absolute Maximum Ratings($T_a=25^\circ\text{C}$;)

Parameter @ f	Symbol	Rating $f >$	Unit %
Repetitive peak off-state/reverse voltages($T_j=25^\circ\text{C}$ -)	$V_{\text{DRM}}/V_{\text{RRM}}$	800	V
RMS on-state current($T_c=0^\circ\text{C}$ -)	$I_{\text{T(RMS)}}$	16	A
Non repetitive surge peak on-state current(full cycle, $T_j=25^\circ\text{C}$)	$I_{\text{TSM}(t=20\text{ms})}$	160	A
I^2t value for fusing($T_j=25^\circ\text{C}$ -)	$I^2t_{(tp=10\text{ms})}$	128	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	A/ s
Peak gate current($t_p=20^\circ\text{C}$ $T_j=125^\circ\text{C}$ -)	I_{GM}	4	A
Average gate power dissipation($T_j=125^\circ\text{C}$ -)	$P_{\text{G(AV)}}$	0.5	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)	$R_{\text{th(j-c)}}$	2.3	

Table 2 Electrical Characteristics($T_j=25^\circ\text{C}$;)

± 1% — x ý í Ô t c 3 Š a d / Snubberless and logic level c 3 quadrants)

Symbol	Test Conditions	Quadrant	Value $f >$		Unit %
I_{GT}	$V_D=12\text{V}$ $R_L=33$	I-II-III	Max.	35	mA
V_{GT}	$V_D=12\text{V}$ $R_L=33$	I-II-III	Max.	1.3	V
V_{GD}	$V_D=V_{\text{DRM}}$ $R_L=3.3\text{K}$ $T_j=125$	I-II-III	Min.	0.2	V
I_{L}	$I_G=1.2I_{\text{GT}}$	I-III	Max.	50	mA
		II		70	
I_{H}	$I_T=500\text{mA}$		Max.	50	mA
(dV/dt)	$V_D=67\% V_{\text{DRM}}$ Gate Open	$T_j=125$	Min.	1000	V/ s
V_{TM}	$I_{\text{TM}}=23\text{A}$ $t_p=380^\circ\text{C}$	$T_j=25$	Max.	1.55	V
I_{DRM}	$V_D=V_{\text{DRM}}$ $V_R=V_{\text{RRM}}$	$T_j=25$		10	A
I_{RRM}		$T_j=125$		1	mA

Ô ? d • Ž ¢ / Electrical Characteristic Curve

, M y f / Marking Instructions

BR
BT1608
CW ****

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Note:

BR: Company Code

BT1608: Product Type Code

CW: IGT Bracket code

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

