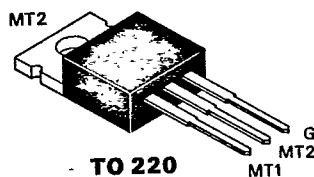


TAG SEMICONDUCTORS LTD

**T1612BH –
T1612NH TRIACS**
**16.0 A 200–800 V
50/50/50/50 mA**

The T1612 series of TRIAC's are high performance glass passivated PNP devices. These parts are intended for general purpose high current applications where moderate gate insensitivity is required.


TO 220
Absolute Maximum Ratings $T_A = 25^\circ\text{C}$ unless otherwise noted

Parameter	Part Nr.	Symbol	Min.	Max.	Unit	Test Conditions
Repetitive Peak Off State Voltage	T1612BH T1612DH T1612MH T1612NH	V_{DRM}	200 400 600 800		V	$T_j = -40^\circ\text{C}$ to 125°C $R_{GK} = 1\text{K}\Omega$
On-State Current		$I_{T(RMS)}$	16		A	
Nonrept. On-State Current		I_{TSM}	165		A	
Nonrept. On-State Current		I_{TSM}	150		A	
Fusing Current		I^2t	112		A^2s	$t = 10\text{ ms}$
Peak Gate Current		I_{GM}	4		A	10 μs max.
Peak Gate Dissipation		P_{GM}	10		W	10 μs max.
Gate Dissipation		$P_{G(AV)}$	1		W	20 ms max.
Operating Temperature		T_j	-40	125	$^\circ\text{C}$	
Storage Temperature		T_{stg}	-40	125	$^\circ\text{C}$	
Soldering Temperature		T_{sld}		250	$^\circ\text{C}$	1.6 mm from case, 10 s max.

Electrical Characteristics $T_A = 25^\circ\text{C}$ unless otherwise noted

Parameter	Symbol	Min.	Max.	Unit	Test Conditions
Off-State Leakage Current	I_{DRM}		2.5	mA	$V_D = V_{DRM}$ $R_{GK} = 1\text{K}\Omega$ $T_j = 125^\circ\text{C}$
Off-State Leakage Current	I_{DRM}		10	μA	$V_D = V_{DRM}$ $R_{GK} = 1\text{K}\Omega$ $T_j = 25^\circ\text{C}$
On-State Voltage	V_T		1.48	V	at $I_T = 24\text{ A}$, $T_j = 25^\circ\text{C}$
On-State Threshold Voltage	$V_{T(TO)}$		0.9	V	$T_j = 125^\circ\text{C}$
On-State Slope Resistance	r_T		25	m Ω	$T_j = 125^\circ\text{C}$
Gate Trigger Current	$I_{GT I+ (1)}$		50	mA	$V_D = 12\text{ V}$
	$I_{GT I- (2)}$		50	mA	$V_D = 12\text{ V}$
	$I_{GT III- (3)}$		50	mA	$V_D = 12\text{ V}$
	$I_{GT III+ (4)}$		50	mA	$V_D = 12\text{ V}$
Gate Trigger Voltage	V_{GT}		2.5	V	$V_D = 12\text{ V}$ All Quadrants
Holding Current	I_H		50	mA	$R_{GK} = 1\text{K}\Omega$
Critical Rate of Voltage Rise	dv/dt	500		V/ μs	$V_D = .67 \times V_{DRM}$ $R_{GK} = 1\text{K}\Omega$ $T_j = 125^\circ\text{C}$
Critical Rate of Rise, Off-State	dv/dt_o	5		V/ μs	$I_T = 16\text{ A}$ $di/dt = 7.1\text{ A/ms}$ $T_C = 85^\circ\text{C}$
Thermal Resistance junc. to case	$R_{\theta jc}$		1.8	K/W	
Thermal Resistance junc. to amb.	$R_{\theta ja}$		60	K/W	

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