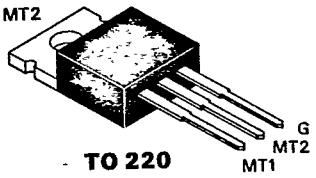
TAG SEMICONDUCTORS LTD

T1612BH – T1612NH TRIACS

16.0 A 200–800 V 50/50/50/50 mA



TO 220

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

Absolute Maximum Ratings $T_A = 25\,°C$ unless otherwise noted

Parameter	Part Nr.	Symbol	Min.	Max.	Unit	Test Conditions
Repetitive Peak Off State Voltage	**T1612BH**	V_{DRM}	200		V	[Tj = −40 °C to 125 °C, R_{GK} = 1 KΩ]
	T1612DH		400		V	
	T1612MH		600		V	
	T1612NH		800		V	
On-State Current		$I_{T(RMS)}$	16		A	All Conduction Angles $T_C = 85\,°C$
Nonrept. On-State Current		I_{TSM}	165		A	Half Cycle, 60 Hz
Nonrept. On-State Current		I_{TSM}	150		A	Half Cycle, 50 Hz
Fusing Current		I^2t	112		A^2s	t = 10 ms
Peak Gate Current		I_{GM}	4		A	10µs max.
Peak Gate Dissipation		P_{GM}	10		W	10µs max.
Gate Dissipation		$P_{G(AV)}$	1		W	20 ms max.
Operating Temperature		Tj	−40	125	°C	
Storage Temperature		T_{stg}	−40	125	°C	
Soldering Temperature		T_{sld}		250	°C	1.6 mm from case, 10 s max.

Electrical Characteristics $T_A = 25\,°C$ 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 KΩ Tj = 125 °C
Off-State Leakage Current	I_{DRM}		10	µA	$V_D = V_{DRM}$ R_{GK} = 1 KΩ Tj = 25 °C
On-State Voltage	V_T		1.48	V	at I_T = 24 A, Tj = 25 °C
On-State Threshold Voltage	$V_{T(TO)}$		0.9	V	Tj = 125 °C
On-State Slope Resistance	r_T		25	mΩ	Tj = 125 °C
Gate Trigger Current	I_{GT} I + (1)		50	mA	V_D = 12 V
	I_{GT} I − (2)		50	mA	V_D = 12 V
	I_{GT} III − (3)		50	mA	V_D = 12 V
	I_{GT} III + (4)		50	mA	V_D = 12 V
Gate Trigger Voltage	V_{GT}		2.5	V	V_D = 12 V All Quadrants
Holding Current	I_H		50	mA	R_{GK} = 1 KΩ
Critical Rate of Voltage Rise	dv/dt	500		V/µs	V_D = .67xV_{DRM} R_{GK} = 1 KΩ Tj = 125 °C
Critical Rate of Rise, Off-State	dv/dt_c	5		V/µs	I_T = 16 A di/dt = 7.1 A/ms T_C = 85 °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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