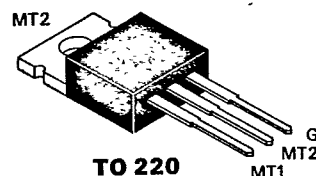


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63C 00828

DT-25-15

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**T1613BH -
T1613NH TRIACS**
**16.0 A 200-800 V
50/50/50/75 mA**

The T1613 series of TRIAC's are high performance glass passivated PNP devices. These parts are intended for general purpose high current applications where high gate insensitivity is required.

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

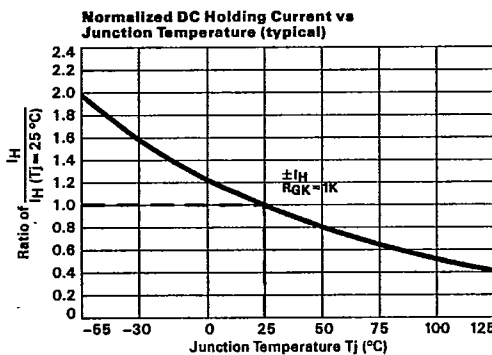
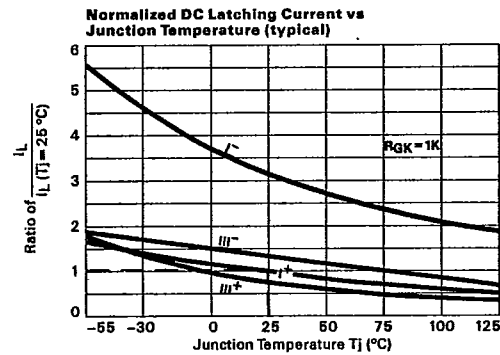
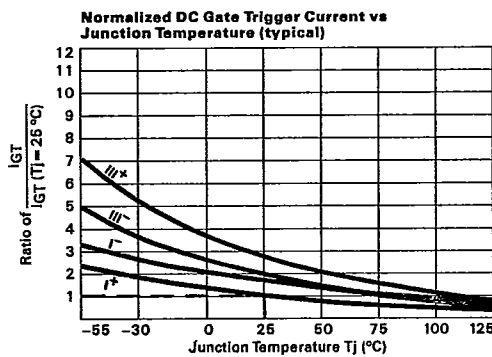
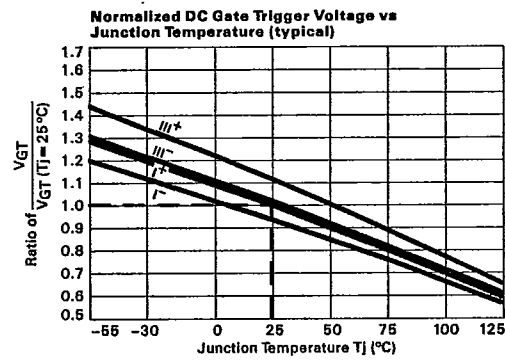
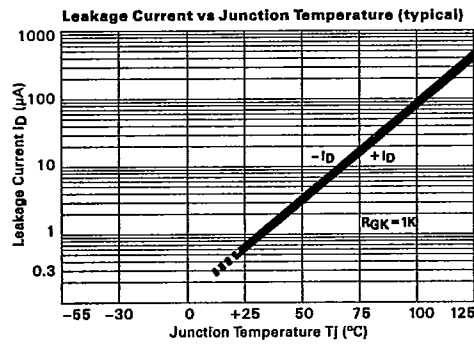
Parameter	Part Nr.	Symbol	Min.	Max.	Unit	Test Conditions
Repetitive Peak Off State Voltage	T1613BH	V_{DRM}	200		V	$T_j = -40^\circ\text{C}$ to 125°C $R_{GK} = 1\text{K}\Omega$
	T1613DH		400		V	
	T1613MH		600		V	
	T1613NH		800		V	
On-State Current		$I_T(\text{RMS})$	16		A	All Conduction Angles $T_C = 85^\circ\text{C}$
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	$t = 10\text{ ms}$
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	$\text{m}\Omega$	$T_j = 125^\circ\text{C}$
Gate Trigger Current	$I_{GT} \text{ I} + (1)$		50	mA	$V_D = 12\text{ V}$
	$I_{GT} \text{ I} - (2)$		50	mA	$V_D = 12\text{ V}$
	$I_{GT} \text{ III} - (3)$		50	mA	$V_D = 12\text{ V}$
	$I_{GT} \text{ III} + (4)$		75	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		75	mA	$R_{GK} = 1\text{K}\Omega$
Critical Rate of Voltage Rise	dv/dt	500		$\text{V}/\mu\text{s}$	$V_D = .67 \times V_{DRM}$ $R_{GK} = 1\text{K}\Omega$ $T_j = 125^\circ\text{C}$
Critical Rate of Rise, Off-State	dv/dt_c	5		$\text{V}/\mu\text{s}$	$I_T = 16\text{ A}$ $di/dt = 7.1\text{ A/ms}$ $T_C = 85^\circ\text{C}$
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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Typical Characteristics T16 - Chips



T16

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Typical Characteristics T16 - Packaged Parts

