

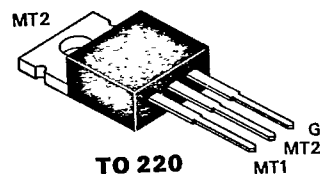
8834750 TAG SEMICONDUCTORS LTD

63C 00819 DT-25-15

TAG SEMICONDUCTORS LTD

**T1013BH -  
T1013NH TRIACS****10.0 A 200-800 V  
50/50/50/75 mA**

The T1013 series of TRIAC's are high performance glass passivated PNP devices. These parts are intended for general purpose 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	<b>T1013BH</b>	$V_{DRM}$	200		V	$T_J = -40^\circ\text{C}$ to $125^\circ\text{C}$ $R_{GK} = 1\text{K}\Omega$
	<b>T1013DH</b>		400		V	
	<b>T1013MH</b>		600		V	
	<b>T1013NH</b>		800		V	
On-State Current		$I_T(\text{RMS})$	10		A	All Conduction Angles $T_C = 85^\circ\text{C}$
Nonrept. On-State Current		$I_{TSM}$	110		A	Half Cycle, 60 Hz
Nonrept. On-State Current		$I_{TSM}$	100		A	Half Cycle, 50 Hz
Fusing Current		$I_{ft}$	50		A <sup>2</sup> s	$t = 10\text{ ms}$
Peak Gate Current		$I_{GM}$	4		A	$10\mu\text{s max.}$
Peak Gate Dissipation		$P_{GM}$	10		W	$10\mu\text{s max.}$
Gate Dissipation		$P_{G(AV)}$	1		W	$20\text{ ms max.}$
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	mA	$V_D = V_{DRM}$ $R_{GK} = 1\text{K}\Omega$ $T_J = 125^\circ\text{C}$
Off-State Leakage Current	$I_{DRM}$		10	$\mu\text{A}$	$V_D = V_{DRM}$ $R_{GK} = 1\text{K}\Omega$ $T_J = 25^\circ\text{C}$
On-State Voltage	$V_T$		1.75	V	at $I_T = 15\text{ A}$ , $T_J = 25^\circ\text{C}$
On-State Threshold Voltage	$V_{T(0)}$		1.05	V	$T_J = 125^\circ\text{C}$
On-State Slope Resistance	$r_T$		52	m $\Omega$	$T_J = 125^\circ\text{C}$
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	$V_D = 12\text{ V}$
	$I_{GT III+ (4)}$		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		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		V/ $\mu\text{s}$	$I_T = 10\text{ A}$ $di/dt = 4.45\text{ A/ms}$ $T_C = 85^\circ\text{C}$
Thermal Resistance junc. to case	$R_{\theta jc}$		2.5	K/W	
Thermal Resistance junc. to amb.	$R_{\theta ja}$		60	K/W	

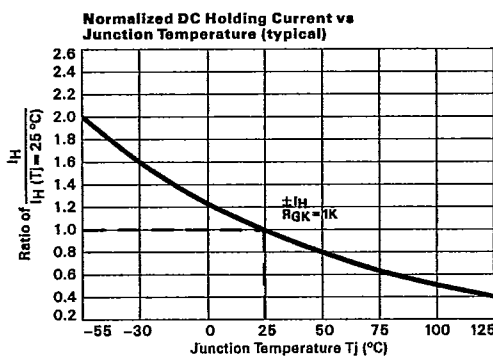
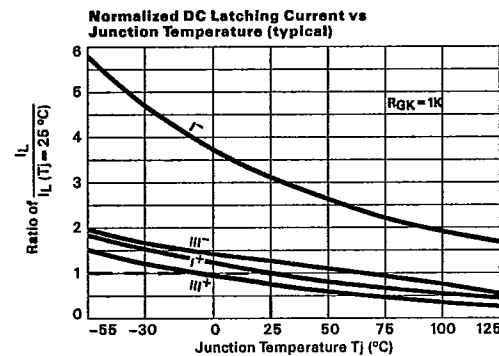
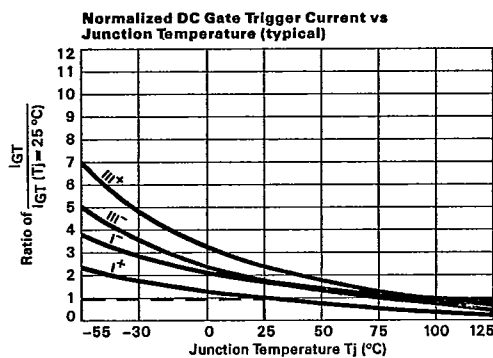
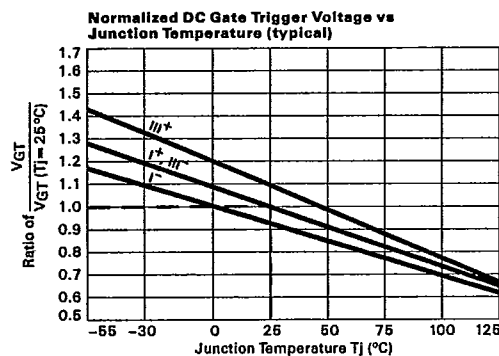
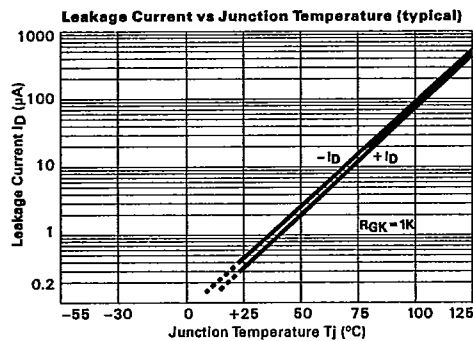
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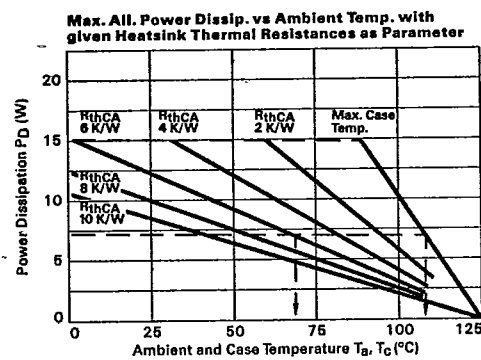
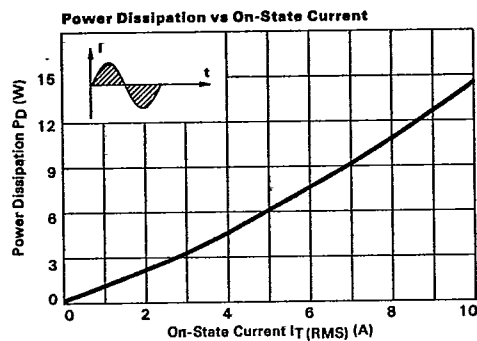
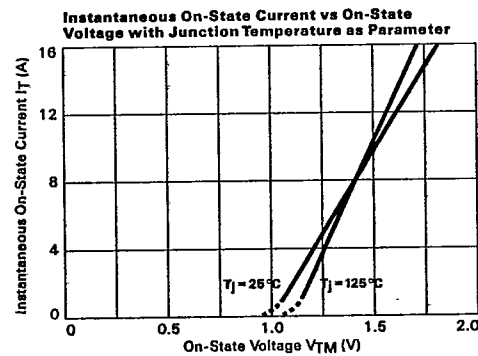
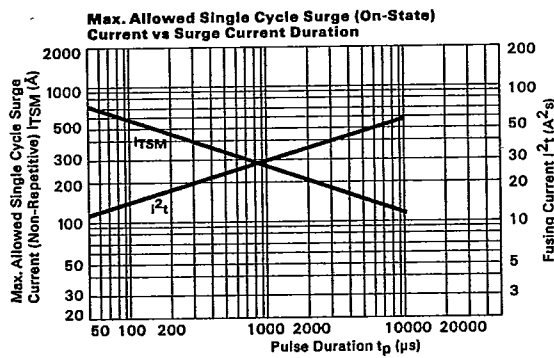
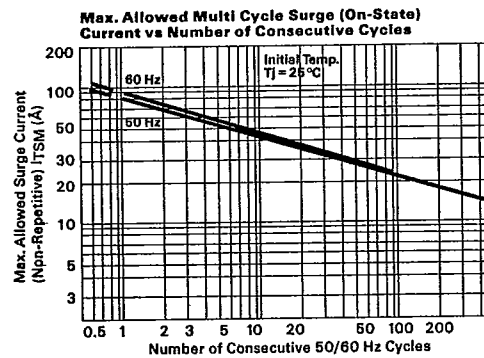
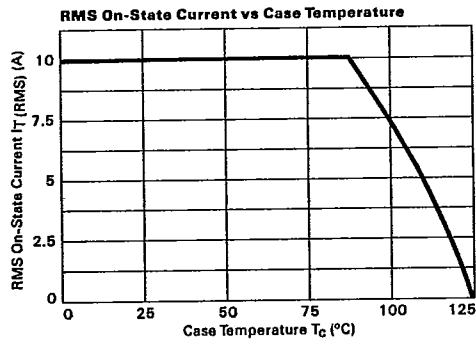
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# Typical Characteristics T10 - Chips



# Typical Characteristics T10 - Packaged Parts



T10