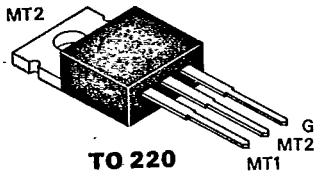
TAG SEMICONDUCTORS LTD

T0610BH – T0610NH TRIACS

6.0 A 200–800 V 25/25/25/25 mA



TO 220

The T0610 series of TRIAC's are high performance glass passivated PNPN devices. These parts are intended for general purpose applications where moderate gate sensitivity 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	**T0610BH**	V_{DRM}	200		V	
	T0610DH		400		V	$T_j = -40\,°C$ to $125\,°C$
	T0610MH		600		V	$R_{GK} = 1\,K\Omega$
	T0610NH		800		V	
On-State Current		$I_{T(RMS)}$	6		A	All Conduction Angles $T_C = 85\,°C$
Nonrept. On-State Current		I_{TSM}	66		A	Half Cycle, 60 Hz
Nonrept. On-State Current		I_{TSM}	60		A	Half Cycle, 50 Hz
Fusing Current		I^2t	18		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		T_j	−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	mA	$V_D = V_{DRM}$ $R_{GK} = 1\,K\Omega$ $T_j = 125\,°C$
Off-State Leakage Current	I_{DRM}		5	µA	$V_D = V_{DRM}$ $R_{GK} = 1\,K\Omega$ $T_j = 25\,°C$
On-State Voltage	V_T		2.24	V	at $I_T = 9$ A, $T_j = 25\,°C$
On-State Threshold Voltage	$V_{T(TO)}$		1.10	V	$T_j = 125\,°C$
On-State Slope Resistance	r_T		150	mΩ	$T_j = 125\,°C$
Gate Trigger Current	I_{GT} I+ (1)		25	mA	$V_D = 12$ V
	I_{GT} I− (2)		25	mA	$V_D = 12$ V
	I_{GT} III− (3)		25	mA	$V_D = 12$ V
	I_{GT} III+ (4)		25	mA	$V_D = 12$ V
Gate Trigger Voltage	V_{GT}		2.5	V	$V_D = 12$ V All Quadrants
Holding Current	I_H		25	mA	$R_{GK} = 1\,K\Omega$
Critical Rate of Voltage Rise	dv/dt	200		V/µs	$V_D = .67 \times V_{DRM}$ $R_{GK} = 1\,K\Omega$ $T_j = 125\,°C$
Critical Rate of Rise, Off-State	dv/dt_c	4		V/µs	$I_T = 6$ A di/dt = 2.6 A/ms $T_C = 85\,°C$
Thermal Resistance junc. to case	$R\Theta_{jc}$		3	K/W	
Thermal Resistance junc. to amb.	$R\Theta_{ja}$		60	K/W	

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