TO805BH – TO805NH TRIACS
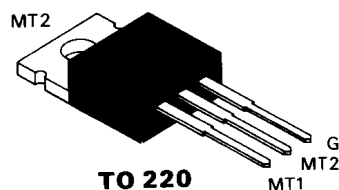
8.0 A 200–800 V
5/5/5/5 mA

The TO805 series of TRIAC's are high performance glass passivated PNPN devices. These parts are intended for general purpose applications where logic compatible gate sensitivity is required.

TO 220

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

Parameter	Part Nr.	Symbol	Min.	Max.	Unit	Test Conditions
Repetitive Peak Off State Voltage	**TO805BH**	V_{DRM}	200		V	$T_j = -40\,°C$ to $125\,°C$
	TO805DH		400		V	$R_{GK} = 1\,K\Omega$
	TO805MH		600		V	
	TO805NH		800		V	
On-State Current		$I_{T(RMS)}$	8		A	All Conduction Angles $T_C = 85\,°C$
Nonrept. On-State Current		I_{TSM}	77		A	Half Cycle, 60 Hz
Nonrept. On-State Current		I_{TSM}	70		A	Half Cycle, 50 Hz
Fusing Current		I^2t	24		A^2s	$t = 10$ ms
Peak Gate Current		I_{GM}	4		A	$10\,\mu s$ max.
Peak Gate Dissipation		P_{GM}	10		W	$10\,\mu s$ 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		1.85	V	at $I_T = 12$ A, $T_j = 25\,°C$
On-State Threshold Voltage	$V_{T(TO)}$		1.0	V	$T_j = 125\,°C$
On-State Slope Resistance	r_T		80	mΩ	$T_j = 125\,°C$
Gate Trigger Current	$I_{GT}I+$ (1)		5	mA	$V_D = 12$ V
	$I_{GT}I-$ (2)		5	mA	$V_D = 12$ V
	$I_{GT}III-$ (3)		5	mA	$V_D = 12$ V
	$I_{GT}III+$ (4)		5	mA	$V_D = 12$ V
Gate Trigger Voltage	V_{GT}		2.5	V	$V_D = 12$ V All Quadrants
Holding Current	I_H		5	mA	$R_{GK} = 1\,K\Omega$
Critical Rate of Voltage Rise	dv/dt	10		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	1		V/μs	$I_T = 8$ A $di/dt = 3.55$ 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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