



SUB MINI

**T0805BS –
T0805MS TRIACS**

**8.0 A 200–600 V
5/5/5/5 mA**

The T0805 series TRIAC's are high performance glass passivated PNP devices. These parts are intended for hybrid applications.

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	T0805BS	$\left[\begin{matrix} V_{DRM} \\ V_{RRM} \end{matrix} \right]$	200		V	$\left[\begin{matrix} T_j = -40^\circ\text{C to } 125^\circ\text{C} \\ R_{GK} = 1\text{K}\Omega \end{matrix} \right]$
	T0805DS		400		V	
	T0805MS		600		V	
On-State Current		$I_{T(RMS)}$	8		A	All Conduction Angles $T_C = 85^\circ\text{C}$
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 ² s	t = 10 ms
Peak Gate Current		I_{GM}	4		A	10 μ s max.
Peak Gate Dissipation		P_{GM}	10		W	10 μ s 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	150	$^\circ\text{C}$	
Case Temperature		T_C			$^\circ\text{C}$	Temperature measured on the substrate immediately adjacent to the Chip

Electrical Characteristics $T_A = 25^\circ\text{C}$ unless otherwise noted

Parameter	Symbol	Min.	Max.	Unit	Test Conditions
Off-State Leakage Current	I_{DRM}/I_{RRM}		2	mA	@ $V_{DRM} + V_{RRM}$, $R_{GK} = 1\text{K}\Omega$, $T_j = 125^\circ\text{C}$
Off-State Leakage Current	I_{DRM}/I_{RRM}		5	μA	@ $V_{DRM} + V_{RRM}$, $R_{GK} = 1\text{K}\Omega$, $T_j = 25^\circ\text{C}$
On-State Voltage	V_T		1.85	V	at $I_T = 12\text{A}$, $T_j = 25^\circ\text{C}$
On-State Threshold Voltage	$V_{T(TO)}$		1.0	V	$T_j = 125^\circ\text{C}$
On-State Slope Resistance	r_T		80	m Ω	$T_j = 125^\circ\text{C}$
Gate Trigger Current	$I_{GT} \text{ I} + (1)$		5	mA	$V_D = 12\text{V}$
Gate Trigger Current	$I_{GT} \text{ I} - (2)$		5	mA	$V_D = 12\text{V}$
Gate Trigger Current	$I_{GT} \text{ III} - (3)$		5	mA	$V_D = 12\text{V}$
Gate Trigger Current	$I_{GT} \text{ III} + (4)$		5	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		5	mA	$R_{GK} = 1\text{K}\Omega$
Critical Rate of Voltage Rise	dv/dt	10		V/ μ 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	1		V/ μ s	$I_T = 8\text{A}$, $di/dt = 3.55\text{A/ms}$, $T_j = 85^\circ\text{C}$
Thermal Resistance junc. to case	$R_{\theta jc}$		1.4	K/W	50 micron solder on backside of Chip

Parts are 100% tested in Chip form with visual inspection after assembly.
Per MIL-STD-105-D, parts will pass AQL 4.0 income inspection.