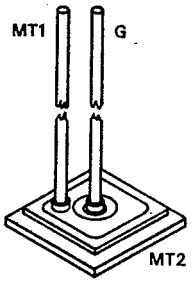
TAG SEMICONDUCTORS LTD



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 PNPN devices. These parts are intended for hybrid applications.

Absolute Maximum Ratings

$T_A = 25\,°C$ unless otherwise noted

Parameter	Part Nr.	Symbol	Min.	Max.	Unit	Test Conditions
Repetitive Peak Off State Voltage	T0805BS	V_{DRM} V_{RRM}	200		V	Tj = −40 °C to 125 °C, R_{GK} = 1 KΩ
	T0805DS		400		V	
	T0805MS		600		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	10µs max.
Peak Gate Dissipation		P_{GM}	10		W	10µs max.
Gate Dissipation		$P_{G(AV)}$	1		W	20 ms max.
Operating Temperature		Tj	−40	125	°C	
Storage Temperature		T_{stg}	−40	150	°C	
Case Temperature		T_C			°C	Temperature measured on the substrate immediately adjacent to the Chip

Electrical Characteristics

$T_A = 25\,°C$ 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 KΩ, Tj = 125 °C
Off-State Leakage Current	I_{DRM}/I_{RRM}		5	µA	@$V_{DRM} + V_{RRM}$, R_{GK} = 1 KΩ, Tj = 25 °C
On-State Voltage	V_T		1.85	V	at I_T = 12 A, Tj = 25 °C
On-State Threshold Voltage	$V_{T(TO)}$		1.0	V	Tj = 125 °C
On-State Slope Resistance	r_T		80	mΩ	Tj = 125 °C
Gate Trigger Current	I_{GT} I+ (1)		5	mA	V_D = 12 V
Gate Trigger Current	I_{GT} I− (2)		5	mA	V_D = 12 V
Gate Trigger Current	I_{GT} III− (3)		5	mA	V_D = 12 V
Gate Trigger Current	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 KΩ
Critical Rate of Voltage Rise	dv/dt	10		V/µs	V_D = .67xV_{DRM} R_{GK} = 1 KΩ Tj = 125 °C
Critical Rate of Rise, Off-State	dv/dt_c	1		V/µs	I_T = 8 A, di/dt = 3.55 A/ms, Tj = 85 °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.