



MAC97A8

描述 / Descriptions

塑封封装双向可控硅。 Triac in a Plastic Package.

特征 / Features

四种灵敏的门触发模式适合于各种组合的触发电源。

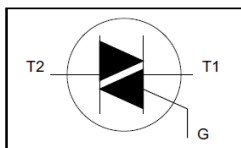
Sensitive Gate Triggering in Four Trigger Modes for all possible Combinations of Trigger Sources..

用途 / Applications

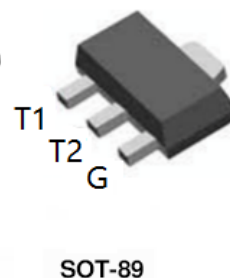
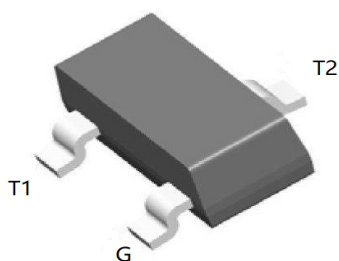
用于固态继电器、微处理器面板、TTL 逻辑门、工业灯具。

Used in solid state relays. MPU interface. TTL logic and any other industrial application.

内部等效电路 / Equivalent Circuit



引脚排列 / Pinning



放大及印章代码 / h_{FE} Classifications & Marking

见印章说明。 See Marking Instructions.

极限参数 / Absolute Maximum Ratings(Ta=25°C)

参数 Parameter		符号 Symbol	数值 Rating	单位 Unit
Repetitive peak off-state voltages		V_{DRM}	600	V
RMS on-state current		$I_{\text{T(RMS)}}$	1.0	A
Non-repetitive peak on-state current		$I_{\text{TSM}(t=20\text{ms})}$	10	A
Non-repetitive peak on-state current		$I_{\text{TSM}(t=16.7\text{ms})}$	12	A
I^2_t for fusing		$I^2t_{(t=10\text{ms})}$	0.32	A^2S
Repetitive rate of rise of on-state current after triggering	d_{IT}/dt $I_{\text{TM}}=1\text{A}$, $I_{\text{G}}=0.2\text{A}$ $d_{\text{IG}}/dt=0.2\text{A}/\mu\text{s}$	T2+G+	50	A/ μS
Repetitive rate of rise of on-state current after triggering		T2+G-	50	
Repetitive rate of rise of on-state current after triggering		T2-G-	50	
Repetitive rate of rise of on-state current after triggering		T2-G+	10	
Peak gate current		$I_{\text{GM}(t=2\mu\text{smax})}$	1.0	A
Peak gate voltages		$V_{\text{GM}(t=2\mu\text{smax})}$	5.0	V
Peak gate power		$P_{\text{GM}(t=2\mu\text{smax})}$	0.3	W
Average gate power		$P_{\text{G(AV)}}$ ($T_{\text{case}}=80^{\circ}\text{C}$ $t=2\mu\text{smax}$)	0.1	W
Peak gate current		I_{GM}	1.2	A
Junction Temperature		T_{j}	-40~125	$^{\circ}\text{C}$
Storage Temperature Range		T_{stg}	-40~150	$^{\circ}\text{C}$

电性能参数 / Electrical Characteristics(Ta=25°C)

参数 Parameter	符号 Symbol	测试条件 Test Conditions	最小值 Min	典型值 Typ	最大值 Max	单位 Unit
Gate trigger current	I_{GT}	$V_{\text{D}}=12\text{V}$, $I_{\text{T}}=0.1\text{A}$	T2+G+	1.0	5.0	mA
			T2+G-	2.0	5.0	
			T2-G-	2.0	5.0	
			T2-G+	4.0	7.0	
Latching current	I_{L}	$V_{\text{D}}=12\text{V}$; $I_{\text{GT}}=0.1\text{A}$	T2+G+	1.0	10	mA
			T2+G-	5.0	10	
			T2-G-	1.0	10	
			T2-G+	2.0	10	
Holding current	I_{H}	$V_{\text{D}}=12\text{V}$ $I_{\text{GT}}=0.1\text{A}$		1.0	10	mA
On-state voltage	V_{T}	$I_{\text{T}}=1.0\text{A}$	1.4		1.9	V

极限参数 / Absolute Maximum Ratings(Ta=25°C)

参数 Parameter	符号 Symbol	测试条件 Test Conditions	最小值 Min	典型值 Typ	最大值 Max	单位 Unit
Gate trigger voltage	V_{GT}	$V_D=12V$ $I_T=0.1A$		0.9	2.0	V
		$V_D=V_{DRM}$ $I_T=0.1A$ $T_J=110^{\circ}C$	0.1	0.7		
Off-state leakage current	I_D	$V_D=V_{DRM(max)}$ $T_J=110^{\circ}C$		3.0	100	μA
Gate Controlled Turn-On Time	tgt	$I_{TM}=1.0A$ $V_D=V_{DRM}$ $I_G=25mA, dI_G/dt=5A/\mu s$		2.0		μs
Critical Rate-of-Rise of Commutation Voltage	dV_D/dt	$V_D=67\%$ of $V_{DM(max)}$, $T_{case}=110^{\circ}C$ exponential waveform gate open circuit	30	45		V/ μs
Critical Rate-of-Rise of Off State Voltage	dV_{com}/dt	$V_D=rated V_{DRM}$ $T_{case}=50^{\circ}C$ $I_{TM}=0.84A$, commutating $dI/dt=0.3A/\mu s$		5.0		V/ μs
Critical rate of rise of off-state current	I_{DRM}	$V_{DRM}=600V$				
Repetitive peak off-state current	I_{RRM}	$V_{RRM}=600V$				

电参数曲线图 / Electrical Characteristic Curve

