

BRMAC97A6MC

Rev.D Nov.-2015

描述 / Descriptions

SOT23-3 塑封封装双向可控硅。Triac in a SOT23-3 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。

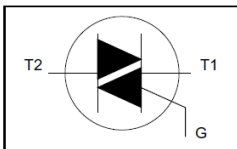
Sensitive Gate Triggering in Four Trigger Modes for all possible Combinations of Trigger Sources..

用途 / Applications

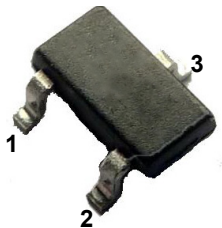
用于固态继电器、微处理器面板、TTL 逻辑门、工业灯具。

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



PIN1 : T1

PIN 2 : T2

PIN 3 : G

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}	400	V
RMS on-state current		$I_{\text{T(RMS)}}$	0.6	A
Non-repetitive peak on-state current		$I_{\text{TSM}(t=20\text{ms})}$	8.0	A
Non-repetitive peak on-state current		$I_{\text{TSM}(t=16.7\text{ms})}$	8.8	A
I^2_t for fusing		$I^2t_{(t=10\text{ms})}$	0.32	A ² S
Repetitive rate of rise of on-state current after triggering $I_{\text{TM}}=1\text{A}$, $I_{\text{G}}=0.2\text{A}$, $dl_{\text{G}}/dt=0.2\text{A}/\mu\text{s}$	dl_{T}/dt	T2+ G+	50	A/ μS
		T2+ G-	50	
		T2- G-	50	
		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		$P_{\text{GM}(t=2\mu\text{smax})}$	5.0	W
Average gate power		$P_{\text{G(AV)}}$ ($T_{\text{case}}=80^{\circ}\text{C}$ $t=2\mu\text{smax}$)	0.1	W
Junction Temperature		T_{j}	-40~125	$^{\circ}\text{C}$
Storage Temperature Range		T_{stg}	-40~150	$^{\circ}\text{C}$

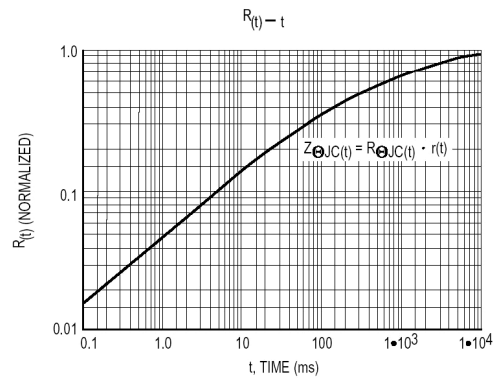
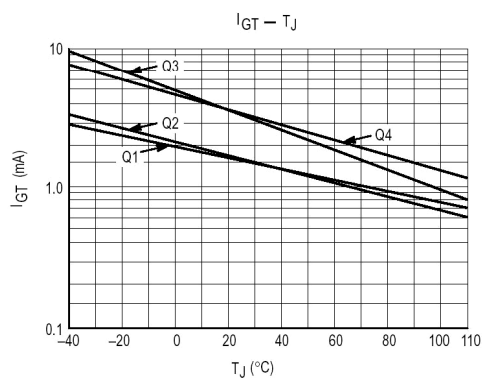
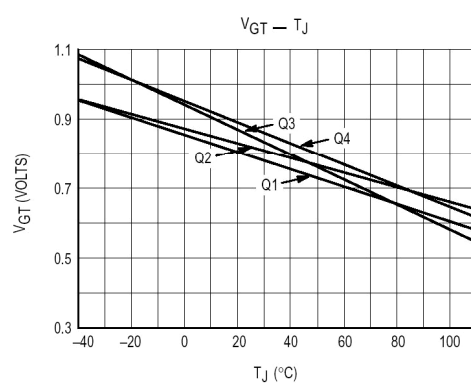
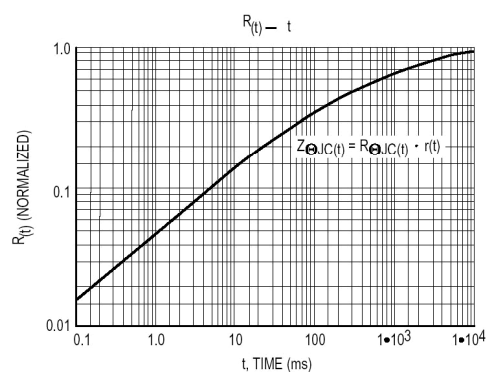
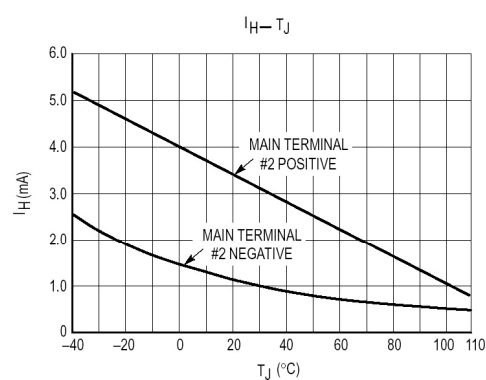
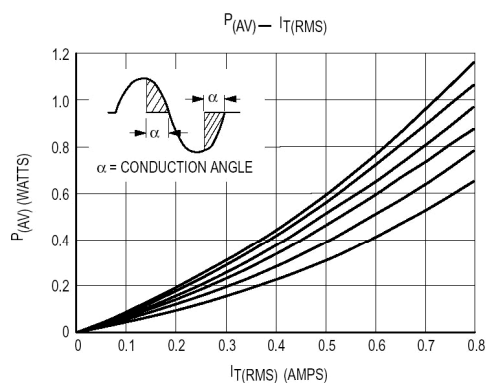
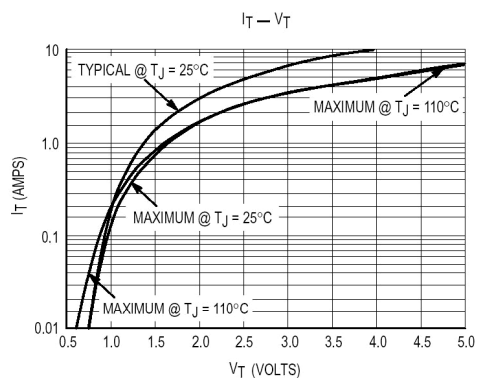
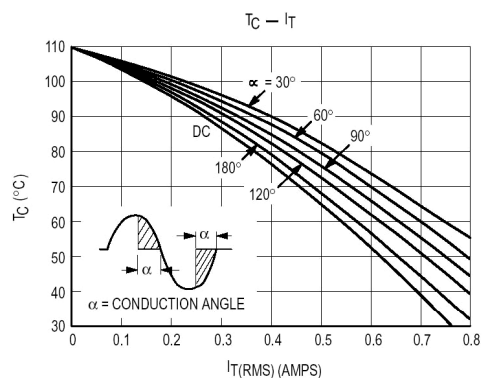
电性能参数 / Electrical Characteristics(Ta=25°C)

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}	$I_{\text{T}}=0.85\text{A}$		1.4	1.9	V

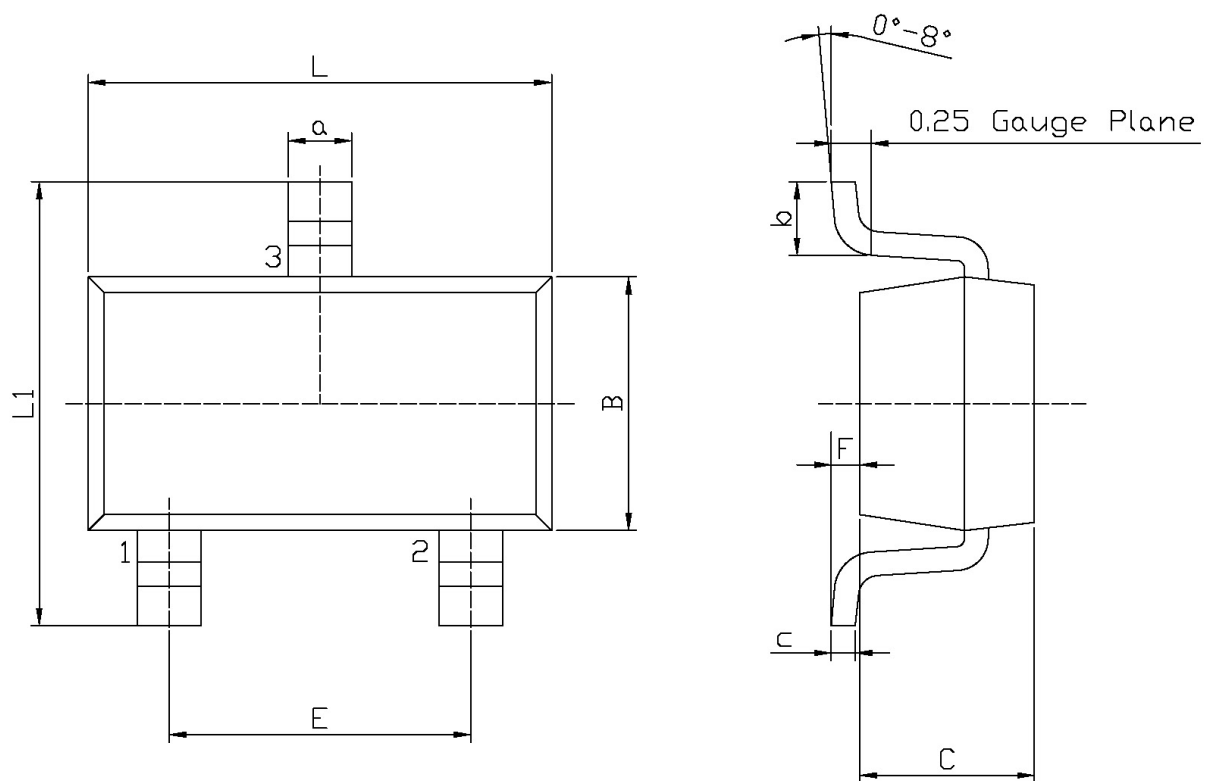
电性能参数 / Electrical Characteristics(Ta=25°C)

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 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 $dI/dt=0.3A/ms$		5.0		V/ μs
Critical rate of rise of off-state current	I_{DRM}	$V_D=Rated V_{DRM}$ $T_J=110^\circ C$			0.1	mA
Repetitive peak off-state current	I_{RRM}	Gate Open			0.1	mA

电参数曲线图 / Electrical Characteristic Curve



外形尺寸图 / Package Dimensions

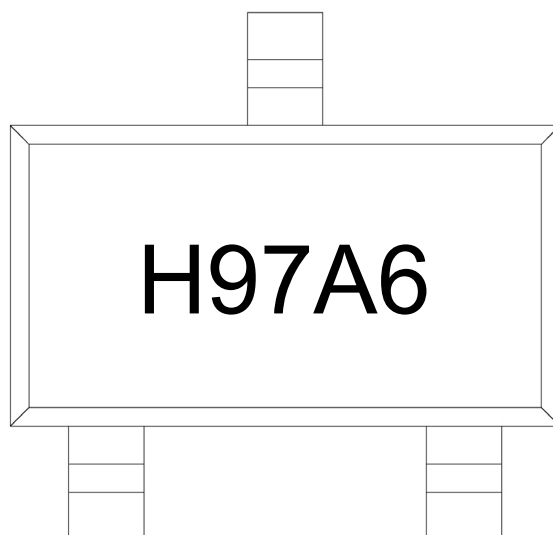


Unit: mm

Symbol	Dimensions In Millimeters		Symbol	Dimensions In Millimeters	
	Min	Max		Min	Max
L	2.82	3.02	a	0.35	0.50
B	1.50	1.70	c	0.10	0.20
C	0.90	1.30	b	0.35	0.55
L1	2.60	3.00	F	0	0.15
E	1.80	2.00			

SOT23-3

印章说明 / Marking Instructions



说明：

H： 为公司代码

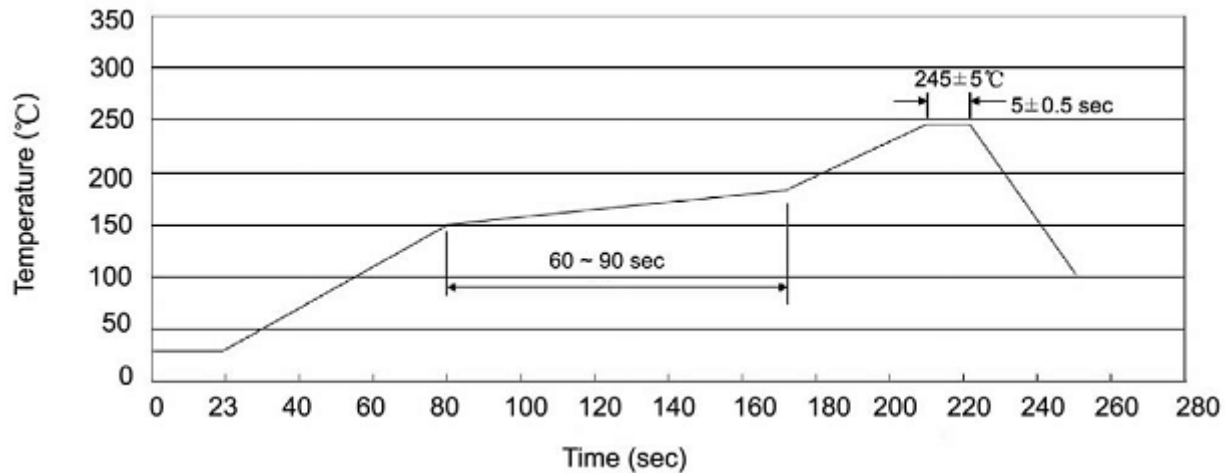
97A6： 为型号代码

Note:

H: Company Code.

97A6: Product Type.

回流焊温度曲线图(无铅) / Temperature Profile for IR Reflow Soldering(Pb-Free)



说明：

- 1、预热温度 25 ~ 150°C，时间 60 ~ 90sec;
- 2、峰值温度 245±5°C，时间持续为 5±0.5sec;
- 3、焊接制程冷却速度为 2 ~ 10°C/sec.

Note:

- 1.Preheating:25~150°C, Time:60~90sec.
- 2.Peak Temp.:245±5°C, Duration:5±0.5sec.
3. Cooling Speed: 2~10°C/sec.

耐焊接热试验条件 / Resistance to Soldering Heat Test Conditions

温度：260±5°C

时间：10±1 sec.

Temp.:260±5°C

Time:10±1 sec

包装规格 / Packaging SPEC.

卷盘包装 / REEL

Package Type 封装形式	Units 包装数量					Dimension 包装尺寸 (unit: mm ³)		
	Units/Reel 只/卷盘	Reels/Inner Box 卷盘/盒	Units/Inner Box 只/盒	Inner Boxes/Outer Box 盒/箱	Units/Outer Box 只/箱	Reel	Inner Box 盒	Outer Box 箱
SOT-23-3	3,000	10	30,000	4	120,000	7" x8	210×205×205	445×230×435

使用说明 / Notices