



MAC97A6PSC

BI-Directional Triode Thyristor

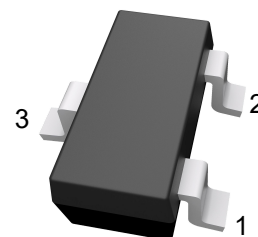
Features

- Reverse Blocking Thyristors
- Sensitive Gate Silicon Controlled Rectifiers

Equivalent Circuit



SOT-23-3



1.MT1 2.G 3.MT2

Marking Code: 97A6P

Absolute Maximum Ratings ($T_A=25^\circ\text{C}$)

Parameter	Symbol	Value	Unit
Peak Repetitive Off-State Voltage	V_{DRM}	400	V
On-State RMS Current	$I_{\text{T(RMS)}}$	0.6	A
Peak Non-Repetitive Surge Current ($t=20\text{ms}$)	I_{TSM}	8	A
Circuit Fusing Considerations ($t = 8.3\text{ms}$)	I^2t	0.3	A^2s
Forward Peak Gate Power ($t = 2 \mu\text{s max}$)	P_{GM}	5	W
Forward Average Gate Power ($t = 2 \mu\text{s max}$)	$P_{\text{G(AV)}}$	0.1	W
Peak Gate Current — Forward ($t = 2 \mu\text{s max}$)	I_{GM}	1	A
Peak Gate Voltage — Reverse ($t = 2 \mu\text{s max}$)	V_{GRM}	5	V
Operating Junction Temperature Range	T_{J}	-40 to +125	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-40 to +150	$^\circ\text{C}$



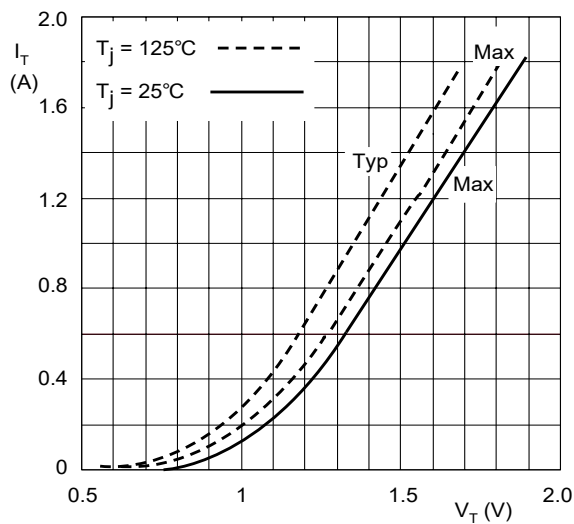
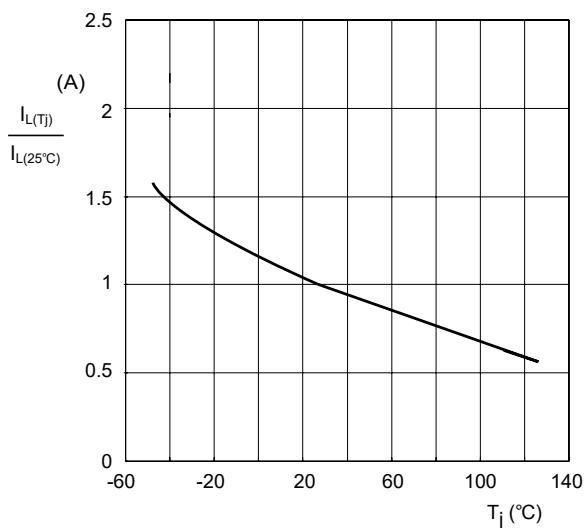
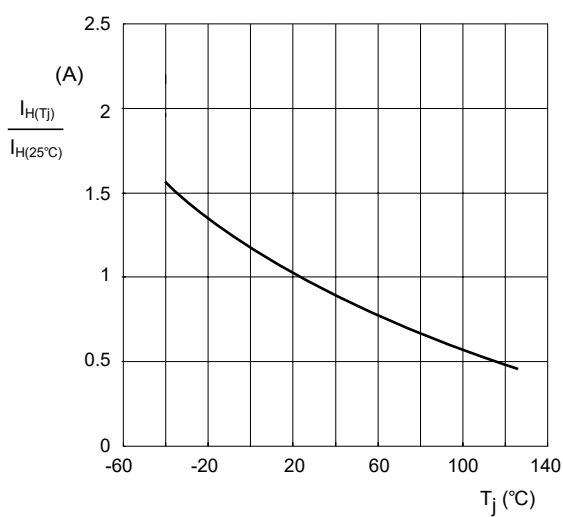
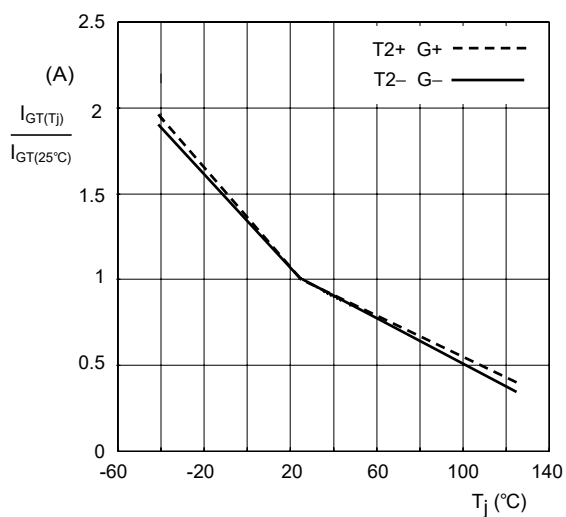
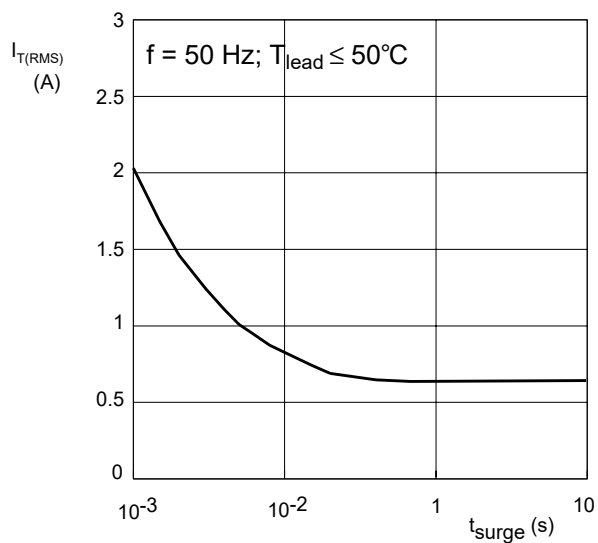
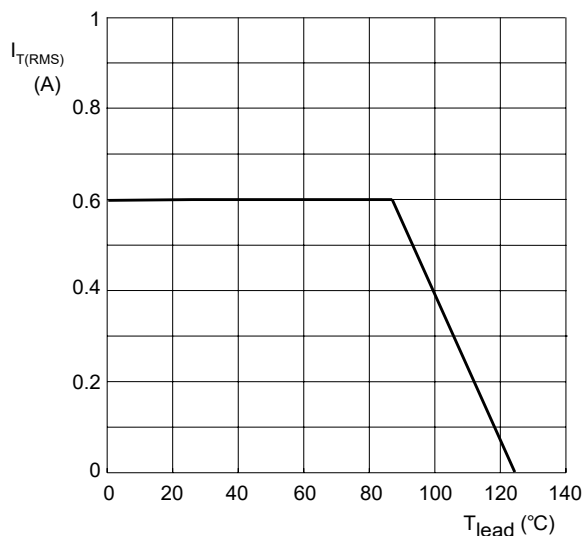
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Electrical Characteristics ($T_A=25^{\circ}\text{C}$)

Parameter		Symbol	Typ.	Max.	Unit
Peak Forward On-State Voltage at $I_{TM} = 0.85\text{ A}$		V_{TM}	1.4	1.9	V
Gate Trigger Current at $V_D = 12\text{ V}$, $I_T = 0.1\text{ A}$	T2+,G+	I_{GT}	--	5	mA
	T2+,G-		--	-5	
	T2-,G-		--	-5	
Gate Trigger Voltage at $V_D = 12\text{ V}$, $I_T = 0.1\text{ A}$	T2+,G+	V_{GT}	0.8	1.2	V
	T2+,G-		-0.8	-1.2	
	T2-,G-		-0.8	-1.2	
Holding Current at $V_D = 12\text{ V}$, $I_{GT} = 0.06\text{ A}$	T2+,G+	I_H	1	10	mA
	T2-,G-		-1	-10	
Latch Current at $V_D = 12\text{ V}$, $I_{GT} = 0.06\text{ A}$	T2+,G+	I_L	--	10	mA
	T2+,G-		--	-10	
	T2-,G-		--	-10	

Typical Characteristic Curves





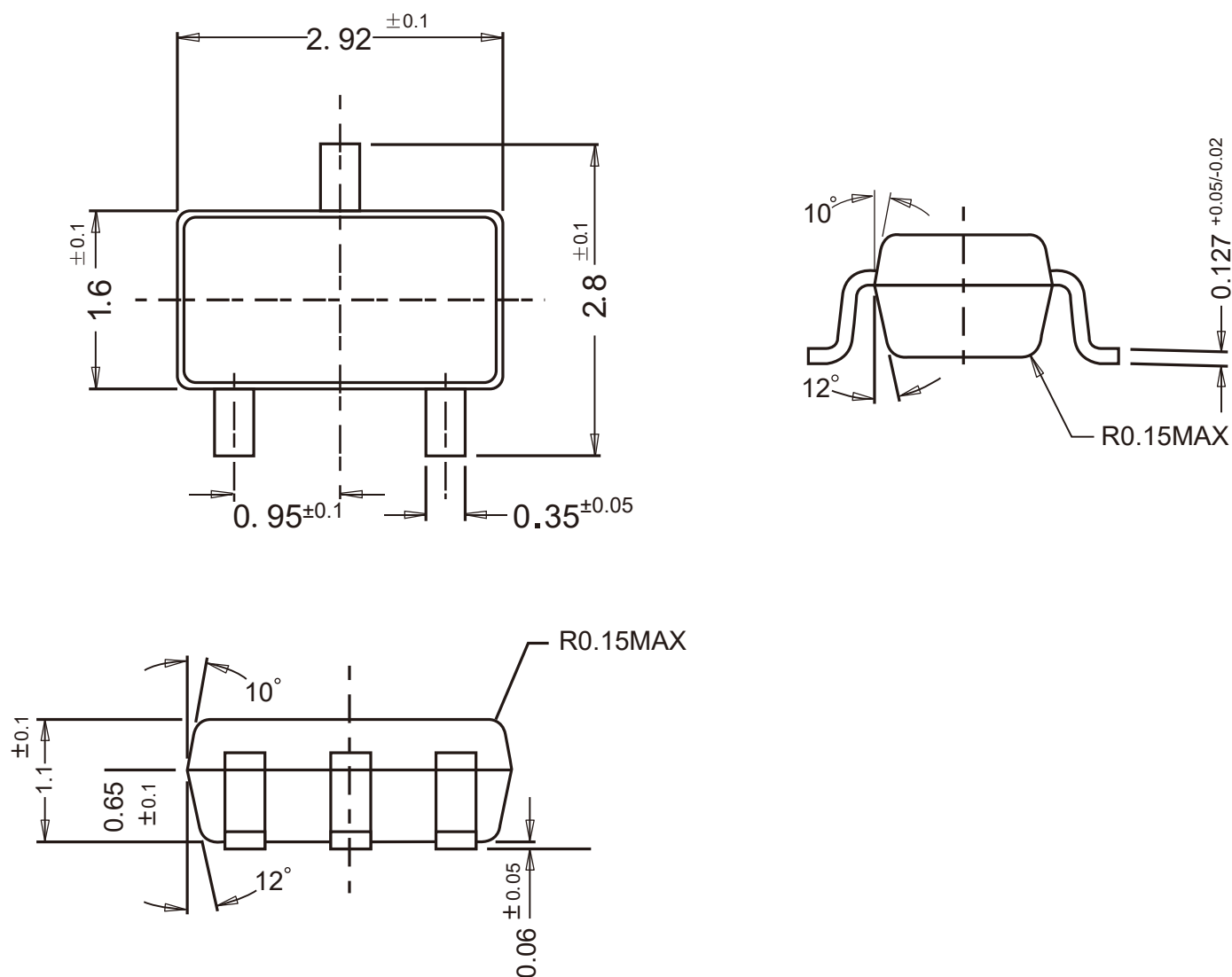
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Package Outline

SOT-23-3

Dimensions in mm



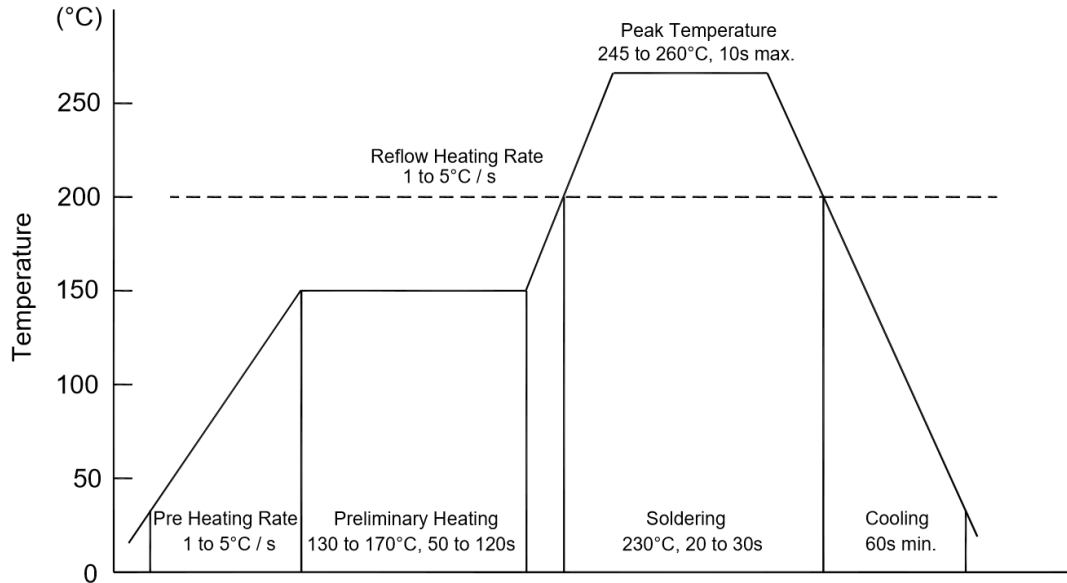
Ordering Information

Device	Package	Shipping
MAC97A6PSC	SOT-23-3	3,000PCS/Reel&7inches



Conditions of Soldering and Storage

◆ Recommended condition of reflow soldering



Recommended peak temperature is over 245 °C. If peak temperature is below 245 °C, you may adjust the following parameters:

- Time length of peak temperature (longer)
- Time length of soldering (longer)
- Thickness of solder paste (thicker)

◆ Conditions of hand soldering

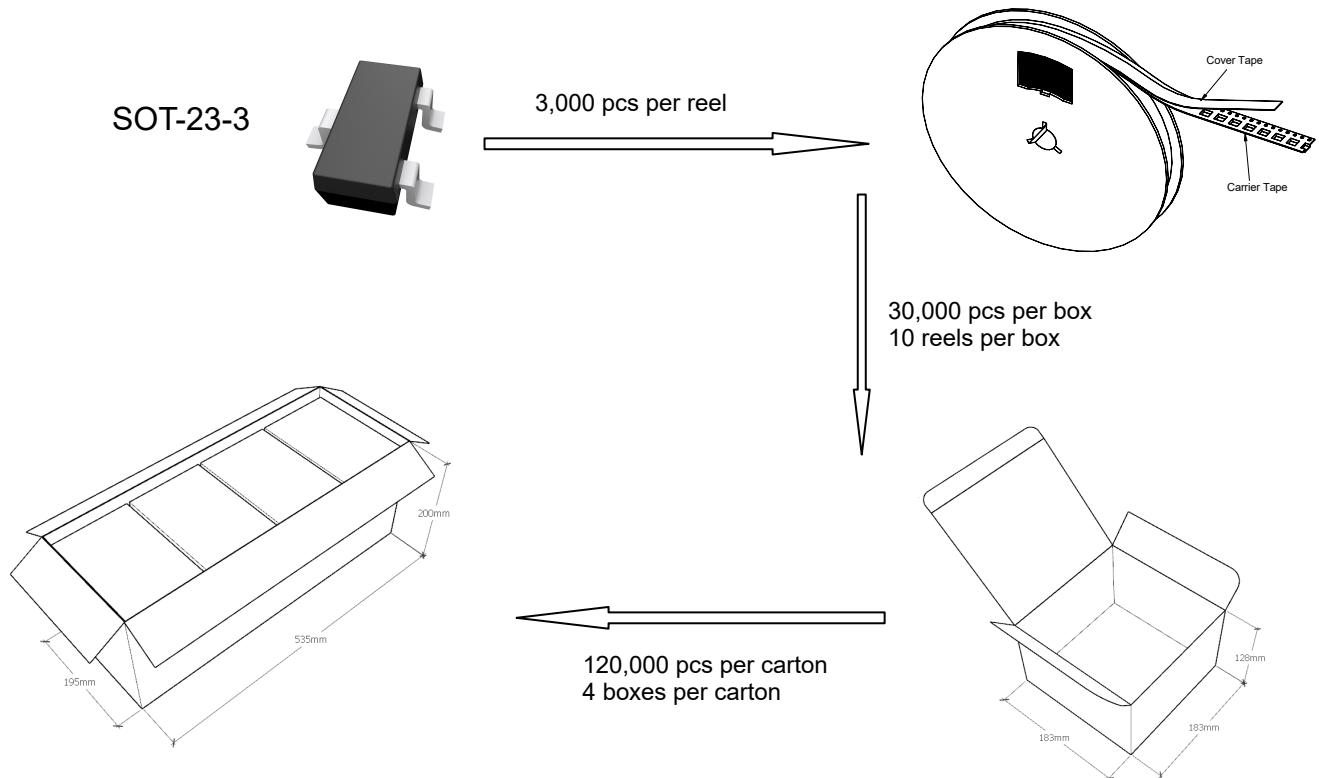
- Temperature: 370 °C
- Time: 3s max.
- Times: one time

◆ Storage conditions

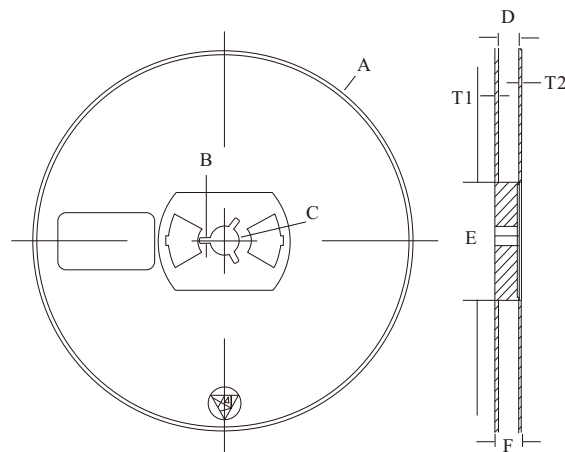
- **Temperature**
5 to 40 °C
- **Humidity**
30 to 80% RH
- **Recommended period**
One year after manufacturing

Package Specifications

- The method of packaging



◆ Embossed tape and reel data



Symbol	Value (unit: mm)
A	Ø 177.8±1
B	2.7±0.2
C	Ø 13.5±0.2
E	Ø 54.5±0.2
F	12.3±0.3
D	9.6+2/-0.3
T1	1.0±0.2
T2	1.2±0.2

Reel (7")

