

## TO-92 Plastic-Encapsulate Thyristors

### MAC97A6,A8 TRIAC

#### MAIN FEATURES

Symbol	value	unit
$I_{T(RMS)}$	1	A
$V_{DRM}/V_{RRM}$	MAC97A6	400 V
	MAC97A8	600 V
$I_{TSM}$	8	A

#### TO-92

1. ANODE
2. GATE
3. ANODE



#### DESCRIPTION

Logic level sensitive gate triac intended to be interfaced directly to microcontrollers, logic integrated circuits and other low power gate trigger circuits.

#### FEATURES

- Blocking voltage to 400 V (MAC97A6)
- RMS on-state current to 0.6 A
- General purpose bidirectional switching

#### APPLICATIONS

- General purpose bidirectional switching
- Phase control applications
- Solid state relays

#### Limiting values

Symbol	Parameter	Conditions	Value	Unit
$V_{DRM}/V_{RRM}$	repetitive peak off-state voltage	MAC97A6 $T_j = 25 \text{ to } 125 \text{ } ^\circ\text{C}$	400	V
		MAC97A8 $T_j = 25 \text{ to } 125 \text{ } ^\circ\text{C}$	600	
$I_{GM}$	gate current(peak value)	$t = 2\mu\text{s max}$	1	A
$V_{GM}$	gate voltage(peak value)	$t = 2\mu\text{s max}$	5	V
$P_{GM}$	gate power(peak value)	$t = 2\mu\text{s max}$	5	W
$T_j$	Junction Temperature	-	-40 ~ 125	$^\circ\text{C}$
$T_{sta}$	Storage Temperature	-	-40 ~ 150	$^\circ\text{C}$

**ELECTRICAL CHARACTERISTICS (T<sub>a</sub>=25°C unless otherwise specified)**

Parameter		Symbol	Test conditions	Min	Max	Unit	
Rated repetitive peak off-state/reverse voltage		V <sub>DRM</sub> , V <sub>RRM</sub>	I <sub>D</sub> =10μA    MAC97A6 MAC97A8	400 600		V	
Rated repetitive peak off-state current		I <sub>DRM</sub>	V <sub>D</sub> =V <sub>DRM</sub>		10	μA	
On-state voltage		V <sub>TM</sub>	I <sub>T</sub> =1A, I <sub>G</sub> =50mA		1.9	V	
Gate trigger current	I	I <sub>GT</sub>	T <sub>2</sub> (+), G(+)	V <sub>D</sub> =12V R <sub>L</sub> =100Ω		5	mA
	II		T <sub>2</sub> (+), G(-)			5	mA
	III		T <sub>2</sub> (-), G(-)			5	mA
	IV		T <sub>2</sub> (-), G(+)			-	mA
Gate trigger voltage	I	V <sub>GT</sub>	T <sub>2</sub> (+), G(+)	V <sub>D</sub> =12V R <sub>L</sub> =100Ω		1.5	V
	II		T <sub>2</sub> (+), G(-)			1.5	V
	III		T <sub>2</sub> (-), G(-)			1.5	V
	IV		T <sub>2</sub> (-), G(+)			-	V
Holding current		I <sub>H</sub>	I <sub>T</sub> =600mA, I <sub>G</sub> =20mA		10	mA	