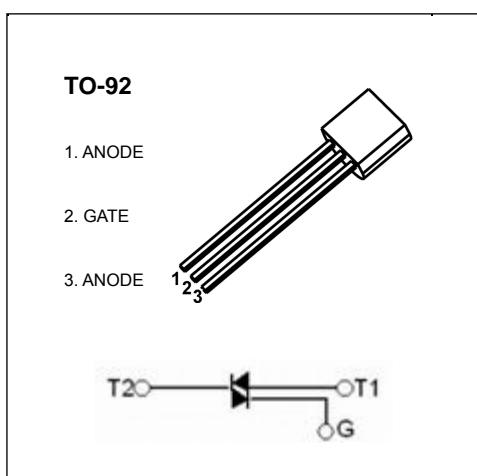


## TO-92 Plastic-Encapsulate Thyristors

### MAC97A6,A8 TRIAC

#### MAIN FEATURES

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



#### 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 MAC97A8	$T_j = 25 \text{ to } 125^\circ\text{C}$ $T_j = 25 \text{ to } 125^\circ\text{C}$	400 600	V
$I_{GM}$	gate current(peak value)	$t = 2\mu\text{s} \text{ max}$	1	A
$V_{GM}$	gate voltage(peak value)	$t = 2\mu\text{s} \text{ max}$	5	V
$P_{GM}$	gate power(peak value)	$t = 2\mu\text{s} \text{ max}$	5	W
$T_j$	Junction Temperature	-	-40 ~ 125	$^\circ\text{C}$
$T_{stg}$	Storage Temperature	-	-40 ~ 150	$^\circ\text{C}$

**ELECTRICAL CHARACTERISTICS ( $T_a=25^\circ\text{C}$  unless otherwise specified)**

Parameter	Symbol	Test conditions		Min	Max	Unit
<b>Rated repetitive peak off-state/reverse voltage</b>	$V_{\text{DRM}}, V_{\text{RRM}}$	$I_D=10\mu\text{A}$	MAC97A6	400		V
<b>Rated repetitive peak off-state current</b>	$I_{\text{DRM}}$	$V_D=V_{\text{DRM}}$			10	$\mu\text{A}$
<b>On-state voltage</b>	$V_{\text{TM}}$	$I_T=1\text{A}, I_G=50\text{mA}$			1.9	V
<b>Gate trigger current</b>	I	$I_{\text{GT}}$	$T_2(+), G(+)$	$V_D=12\text{V}$	5	mA
	II		$T_2(+), G(-)$		5	mA
	III		$T_2(-), G(-)$		5	mA
	IV		$T_2(-), G(+)$		-	mA
<b>Gate trigger voltage</b>	I	$V_{\text{GT}}$	$T_2(+), G(+)$	$R_L=100\Omega$	1.5	V
	II		$T_2(+), G(-)$		1.5	V
	III		$T_2(-), G(-)$		1.5	V
	IV		$T_2(-), G(+)$		-	V
<b>Holding current</b>	$I_H$	$I_T=600\text{mA}, I_G=20\text{mA}$			10	mA