

TO-92 Plastic-Encapsulate Thyristors

MAC97A6,A8 TRIAC

MAIN FEATURES

Symbol	value	unit
$I_{T(RMS)}$	1	A
V_{DRM}/V_{RRM}	MAC97A6	400
	MAC97A8	600
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	$T_j = 25 \text{ to } 125^\circ\text{C}$ $T_j = 25 \text{ to } 125^\circ\text{C}$	400 600	V
I_{GM}	gate current(peak value)	$t = 2\mu\text{s max}$	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_a=25°C unless otherwise specified)

Parameter		Symbol	Test conditions		Min	Max	Unit
Rated repetitive peak off-state/reverse voltage		$V_{\text{DRM}}, V_{\text{RRM}}$	$I_{\text{D}}=10\mu\text{A}$	MAC97A6 MAC97A8	400 600		V
Rated repetitive peak off-state current		I_{DRM}	$V_{\text{D}}=V_{\text{DRM}}$			10	μA
On-state voltage		V_{TM}	$I_{\text{T}}=1\text{A}, I_{\text{G}}=50\text{mA}$			1.9	V
Gate trigger current	I	I_{GT}	$T_2(+), G(+)$	$V_{\text{D}}=12\text{V}$ $R_{\text{L}}=100\Omega$		5	mA
	II		$T_2(+), G(-)$			5	mA
	III		$T_2(-), G(-)$			5	mA
	IV		$T_2(-), G(+)$			-	mA
Gate trigger voltage	I	V_{GT}	$T_2(+), G(+)$	$V_{\text{D}}=12\text{V}$ $R_{\text{L}}=100\Omega$		1.5	V
	II		$T_2(+), G(-)$			1.5	V
	III		$T_2(-), G(-)$			1.5	V
	IV		$T_2(-), G(+)$			-	V
Holding current		I_{H}	$I_{\text{T}}=600\text{mA}, I_{\text{G}}=20\text{mA}$			10	mA