

TO-92 Plastic-Encapsulate Thyristors

BT131 TRIAC

MAIN FEATURES

Symbol	value	unit
$I_{T(RMS)}$	1.2	A
V_{DRM}/V_{RRM}	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	$T_j = 25 \text{ to } 125 \text{ } ^\circ\text{C}$	600	V
I_{GM}	gate current(peak value)	$t = 2\mu\text{s max}$	1.2	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 ($T_a=25^\circ\text{C}$ unless otherwise specified)

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