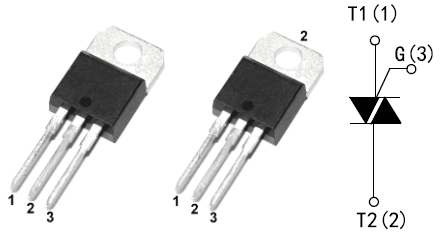
BTA04 / BTB04

4A TRIACS

DRAWING



BTA04 **BTB04**

(Insulated)

General Description

- Package：TO-220T
- High current density due to double mesa technology, SIPOS and Glass passivation . BTA04/ BTB04 series triacs is Suitable for general purpose AC switching. They can be used as an ON/OFF function is applications such as static relays, heating regulation, induction motor stating circuits… or phase control operation light dimmers, motor speed controllers.
- BTA04/ BTB04 series are 3 Quadrants triacs, They are specially recommended for use on inductive loads.

Absolute Maximum Ratings

Parameter		Symbol	Value	Unit
Storage junction temperature range		Tstg	-40 to +150	℃
Operating junction temperature range		Tj	-40 to + 125	℃
Repetitive Peak OFF-state Voltage	Tj=25℃	V_{DRM}	800	V
Repetitive Peak Reverse Voltage	Tj=25℃	V_{RRM}	800	V
Non repetitive surge peak off-state voltage		V_{DSM}	800	V
Non repetitive peak reverse voltage	Tp=10ms,Tj=25℃	V_{RSM}	800	V
RMS on-state current(full sine wave)	TC=107℃	IT(RMS)	4	A
Non repetitive surge peak on-state current(full	f=60Hz,t=16.7ms		27	
cycle,TJ=25℃)	f=50Hz,t=20ms	ITSM	25	A
I^2t Value for fusing	Tp=10ms	I^2t	3.1	A^2s
Critical rate of rise of on-state	Ⅰ-Ⅱ-Ⅲ		50	
current IG=2*IGT,tr≤100ns,f=120Hz,Tj=125℃	Ⅳ	dI/dt	20	A/us
Peak gate current(tp=20us,Tj=125℃)		I_{GM}	2	A
Peak gate power dissipation(tp=20us,Tj=125℃)		P_{GM}	5	W
Average gate power dissipation(Tj=125℃)		PG(AV)	0.5	W

Electrical Characteristics (Tj=25℃,unless otherwise specified)

Symbol	Test Condition	Quadrant		Limit				Unit
				D	E	F	G	
I_{GT}	V_D=12V,R_L=33Ω	Ⅰ-Ⅱ-Ⅲ Ⅳ	MAX	5 10	10 25	25 70	50 100	mA
V_{GT}		ALL	MAX	1.3				V
V_{GD}	V_D=V_{DRM} R_L=3.3KΩ Tj=125℃	ALL	MIN	0.2				V
IL	I_G=1.2I_{GT}	Ⅰ-Ⅲ-Ⅳ	MAX	15	30	40	60	mA
		Ⅱ	MAX	20	40	60	90	mA
IH	I_T=100mA		MAX	10	25	30	60	mA
Dv/dt	VD=67%VDRM gate open TJ=125℃		MIN	5	10	50	200	V/us
(Dv/dt)c	(dI/dt)c=1.1A/ms Tj=125℃		MIN	1	2	5	10	V/us

Static Characteristics

Symbol	Parameter	Value	Unit
Rth(J-C)	Junction to case(AC)	3.7	℃/W

Thermal Resistances

Symbol	Parameter		Value(MAX)	Unit
V_{TM}	ITM=5A,tp=380us	Tj=25℃	1.7	V
I_{DRM}	VD=V_{DRM} VR=V_{RRM}	Tj=25℃	5	uA
I_{RRM}		Tj=125℃	1	mA