BTA08 S/A BTB08 S/A

勝 特 力 材 料 886-3-5753170 胜特力电子(上海) 86-21-54151736 胜特力电子(深圳) 86-755-83298787 Http://www.100y.com.tw

SENSITIVE GATE TRIACS

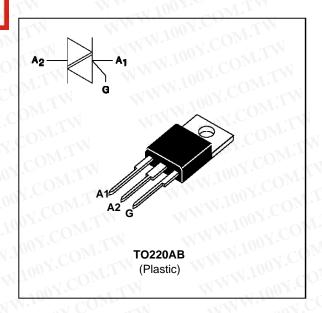
FEATURES

- VERY LOW IGT = 10mA max
- LOW I_H = 25mA max
- BTA Family:
 INSULATING VOLTAGE = 2500V_(RMS)
 (UL RECOGNIZED : E81734)



The BTA/BTB08 S/A triac family are high performance glass passivated PNPN devices.

These parts are suitables for general purpose applications where gate high sensitivity is required. Application on 4Q such as phase control and static switching.



ABSOLUTE RATINGS (limiting values)

Symbol	Parameter			Value	Unit
I _{T(RMS)}	RMS on-state current	ВТА	Tc = 75°C	8 W.T.W.	A10
	(360° conduction angle)	втв	Tc = 80°C	OM.TW	WW.1
ITSM	1 9 11 1		tp = 8.3 ms	84	Α
	(Tj initial = 25°C)		tp = 10 ms	80 80	N V
ı2 _t	I ² t value		tp = 10 ms	32	A ² s
dl/dt	Critical rate of rise of on-state current Gate supply: I _G = 50mA di _G /dt = 0.1A/μs		Repetitive F = 50 Hz	10 10 N	A/μs
	WWW.100Y.COM.	TW TW	Non Repetitive	50	
Tstg Tj	Storage and operating junction temperature range			- 40 to + 150 - 40 to + 110	°C
TI	Maximum lead temperature for soldering during 10 s at 4.5 mm from case		260	°C	

Symbol	Parameter	BTA / BTB08-			
	MAN. 100x	400 S/A	600 S/A	700 S/A	
VDRM VRRM	Repetitive peak off-state voltage Tj = 110°C	400	600	700	V

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Symbol	Parameter	WWW.1	Value	Unit
Rth (j-a)	Junction to ambient	WWW	60	√\ °C/W
Rth (j-c) DC	Junction to case for DC	ВТА	4.4	°C/W
ON.CON	LTW WWW.100Y.COM.T	втв	3.2	LTW
	Junction to case for 360° conduction angle	вта	3.3	°C/W
	(F= 50 Hz)	втв	2.4	MITW

GATE CHARACTERISTICS (maximum values)

 $I_{GM} = 4A \text{ (tp = 20 } \mu\text{s)}$ $V_{GM} = 16V \text{ (tp = 20 } \mu\text{s)}.$ $P_{G} (AV) = 1W \qquad P_{GM} = 10W (tp = 20 \mu s)$

ELECTRICAL CHARACTERISTICS

Symbol	Test Conditions		Quadrant	drant		Suffix	
	Ino COM. TA MANA		NI.		s	A	I.CO
lGT	V _D =12V (DC) R _L =33Ω	Tj=25°C	1-11-111	MAX	10	10	mA
	W.100Y.COM.	NW.100Y.	IV	MAX	10	25	00V.
VGT	V _D =12V (DC) R _L =33Ω	Tj=25°C	I-II-III-IV	MAX	11	.5	10V
V _{GD} √	V _D =V _{DRM} R _L =3.3kΩ	Tj=110°C	I-II-III-IV	MIN	0.2		17 (V)
tgt	V _D =V _{DRM} I _G = 40mA dI _G /dt = 0.5A/μs	Tj=25°C	I-II-III-IV	TYP	2		μs
ΙL	IG= 1.2 I _{GT}	Tj=25°C	I-III-IV	I-III-IV TYP	20	20	mA
	MAM. TOOK COM.	WWW.	TOOM CO		40	40	
l _H *	IT= 100mA gate open	Tj=25°C	-100 Y.C	MAX	25	25	mA
V _{TM} *	I _{TM} = 11A tp= 380μs	Tj=25°C	N.100Y.	MAX	1.75		V
IDRM	VDRM Rated	Tj=25°C	1001	MAX	0.01		mA
IRRM	V _{RRM} Rated	Tj=110°C	Tj=110°C		0.75		W
dV/dt *	Linear slope up to V _D =67%V _{DRM} gate open	Tj=110°C	NWW.10	MIN	10	10	V/µs
(dV/dt)c *	(dl/dt)c= 3.5A/ms	Tj=110°C	MMM	TYP	5	5	V/µs

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^{*} For either polarity of electrode A2 voltage with reference to electrode A1. WWW.100Y.COM.

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ORDERING INFORMATION

Package	I _{T(RMS)} V _{DRM} / V _{RRM}		Sensitivity Specification	
COMMENT	IT(RMS)	V V		I COM
вта	A 8	400	X	A
(Insulated)	WWW.1	600	X	X
100Y.COMITW	WWW.	700	X	DOY.COX.TW
BTB	MMA	400	X	TOOL CXV.I.M
(Uninsulated)	MM	600	X	1100 X W.T.
		700	X	V.100 x XOV.3.

Fig.1: Maximum RMS power dissipation versus RMS on-state current (F=50Hz). (curves are cut off by (dl/dt)c limitation)

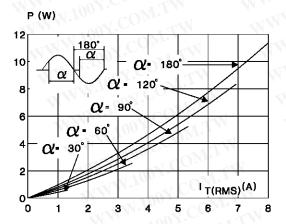


Fig.3 : Correlation between maximum RMS power dissipation and maximum allowable temperatures (T_{amb} and T_{case}) for different thermal resistances heatsink + contact (BTB).

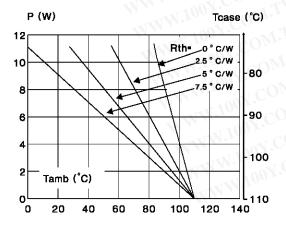


Fig.2 : Correlation between maximum RMS power dissipation and maximum allowable temperatures (T_{amb} and T_{case}) for different thermal resistances heatsink + contact (BTA).

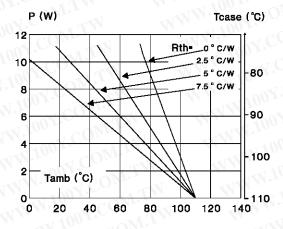


Fig.4: RMS on-state current versus case temperature.

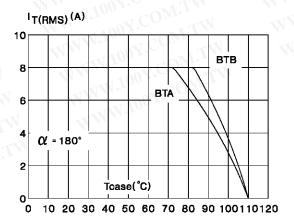


Fig.5 : Relative variation of thermal impedance versus pulse duration.

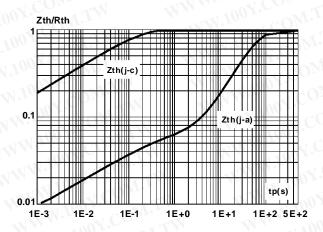


Fig.7 : Non Repetitive surge peak on-state current versus number of cycles.

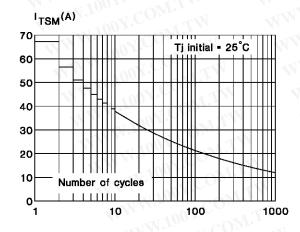


Fig.9: On-state characteristics (maximum values).

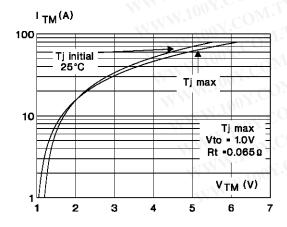


Fig.6: Relative variation of gate trigger current and holding current versus junction temperature.

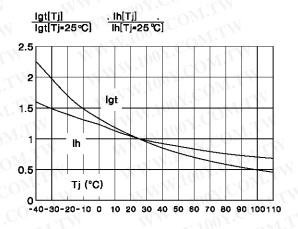
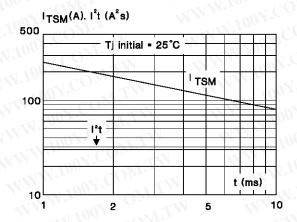


Fig.8 : Non repetitive surge peak on-state current for a sinusoidal pulse with width : $t \leq 10 ms,$ and corresponding value of $I^2t.$



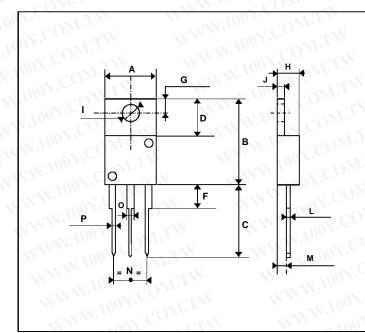
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PACKAGE MECHANICAL DATA

TO220AB Plastic

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REF.	DIMENSIONS				
	Millimeters		Inches		
	Min.	Max.	Min.	Max.	
Α	10.20	10.50	0.401	0.413	
В	14.23	15.87	0.560	0.625	
С	12.70	14.70	0.500	0.579	
D	5.85	6.85	0.230	0.270	
F	411	4.50	N.CO	0.178	
G	2.54	3.00	0.100	0.119	
H	4.48	4.82	0.176	0.190	
	3.55	4.00	0.140	0.158	
J	1.15	1.39	0.045	0.055	
L	0.35	0.65	0.013	0.026	
M	2.10	2.70	0.082	0.107	
N	4.58	5.58	0.18	0.22	
0.1	0.80	1.20	0.031	0.048	
P	0.64	0.96	0.025	0.038	

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Cooling method: C Marking: type number Weight: 2.3 g

Recommended torque value : 0.8 m.N. WWW.100Y.COM.TW Maximum torque value : 1 m.N.

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