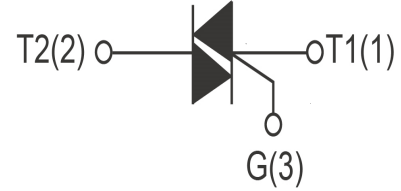
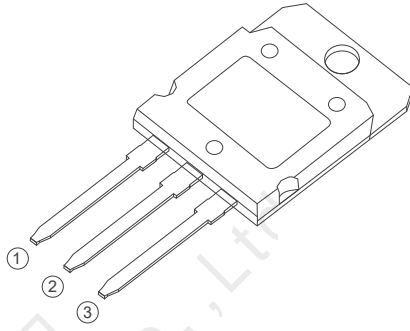


BTA80 Series  
80A TRIACs  
3 Quadrants



ShenZhenHanKingyuan  
Electronic CO.,Ltd



ITO-247 Insulated

### FEATURES

- > IT(RMS):80A
- > VGT: 1.5V
- > VDRM VRRM:1200Vand1600V

### APPLICATIONS

Washing machine,vacuums, massager,solid state relay, AC Motor speed regulation and so on.

### Absolute Maximum Ratings (Tj=25°C unless otherwise specified)

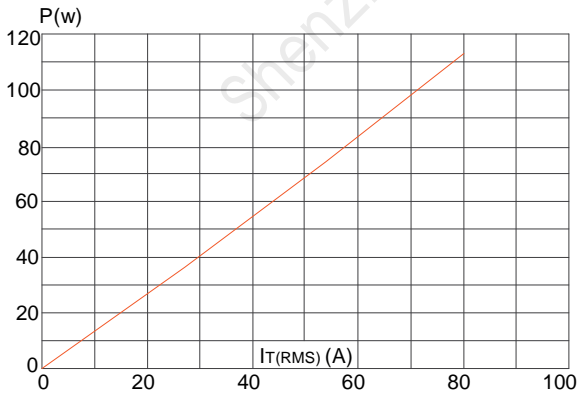
Symbol	Parameter	Conditions	Ratings	Unit
VDRM VRRM	Repetitive Peak Off-State Voltage	BTA80-1200B	1200	V
		BTA80-1600B	1600	
IT(RMS)	R.M.S On-State Current	ITO-247(Ins) Tc=70°C	80	A
ITSM	Surge On-State Current	Tp=20ms	800	A
I <sup>2</sup> t	I <sup>2</sup> t for fusing	Tp=10ms	3200	A <sup>2</sup> s
PG(AV)	Average Gate Power Dissipation	Tj=125°C	2	W
IGM	Peak Gate Current	Tj=125°C	8	A
PGM	Peak Gate power		10	W
Tj	Operating Junction Temperature		~40~125	°C
TSTG	Storage Temperature		~40~150	

**Electrical Characteristics** (Tj=25°C unless otherwise specified)

Symbol	Parameter	Test Conditions	Value	Unit	
IDRM	Repetitive Peak Off-State Current	Tj=25°C	20	uA	
		Tj=125°C	10	mA	
IRRM	Repetitive Peak Reverse Current	Tj=25°C	20	uA	
		Tj=125°C	10	mA	
V <sub>TM</sub>	Forward "on" voltage	I <sub>T</sub> =120A, t <sub>p</sub> =380us, Tj=25°C	≤1.6	V	
V <sub>GT</sub>	Gate trigger voltage	V <sub>D</sub> =12V, R <sub>L</sub> =33Ω	≤1.3	V	
di/dt	V <sub>D</sub> =2/3V <sub>D</sub> RM Gate Open, Tj=125°C I,II,III,IV	F=100Hz, I <sub>G</sub> =2xI <sub>GT</sub> , tr≤100ns	100	A/us	
I <sub>GT</sub>	Gate trigger current	I,II,III V <sub>D</sub> =12V, R <sub>L</sub> =33Ω	≤50	mA	
I <sub>H</sub>	Holding current	I <sub>T</sub> =100mA	≤80		
V <sub>GD</sub>	Gate non-trigger voltage	V <sub>D</sub> =V <sub>DRM</sub> , T <sub>J</sub> =125°C, R <sub>L</sub> =3.3KΩ	0.2	V	
dv/dt	Critical-rate of rise of commutation voltage	T <sub>J</sub> =125°C, V <sub>D</sub> =2/3V <sub>D</sub> RM, Gate open circuit	≥1500	V/us	
R <sub>th(j-c)</sub>	Thermal resistance	Junction to case	ITO-247(Ins)	0.35	°C/W

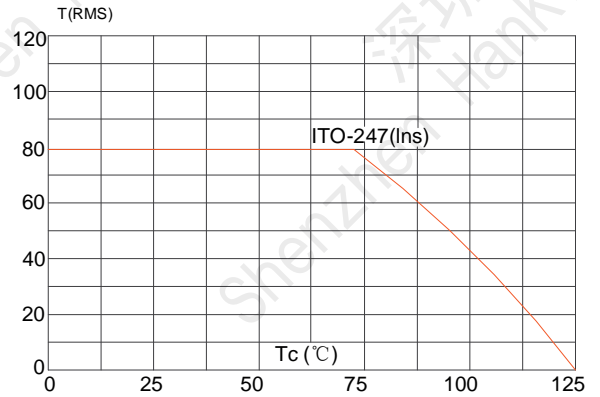
**FIG1**

Maximum power dissipation versus RMS on-state current



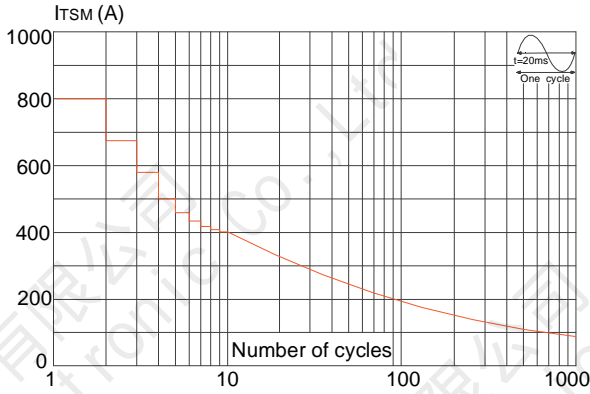
**FIG2**

RMS on-state current versus case temperature



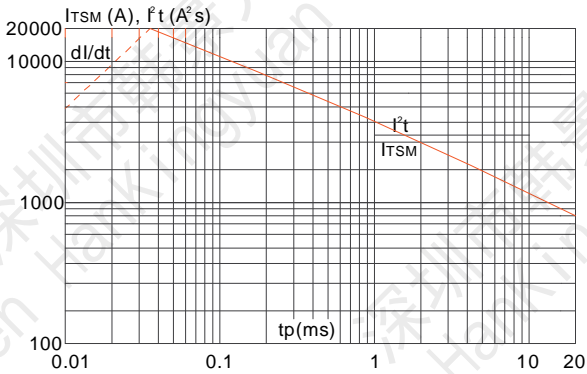
**FIG3**

Surge peak on-state current versus number of cycles



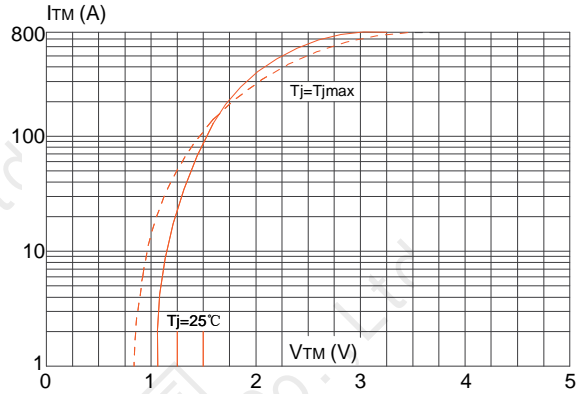
**FIG5**

Non-repetitive surge peak on-state current for a sinusoidal pulse with width  $t_p < 20\text{ms}$ , and corresponding value of  $I^2t$  ( $dI/dt < 100\text{A}/\mu\text{s}$ )



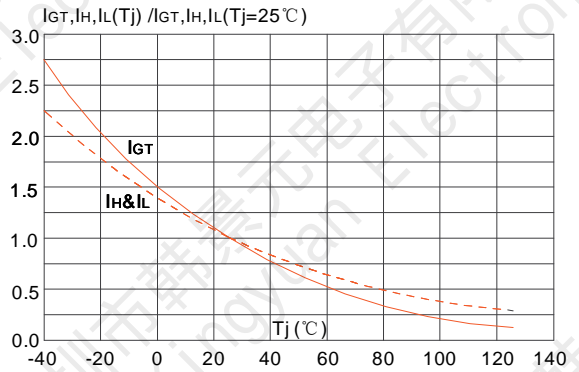
**FIG4**

On-state characteristics (maximum values)

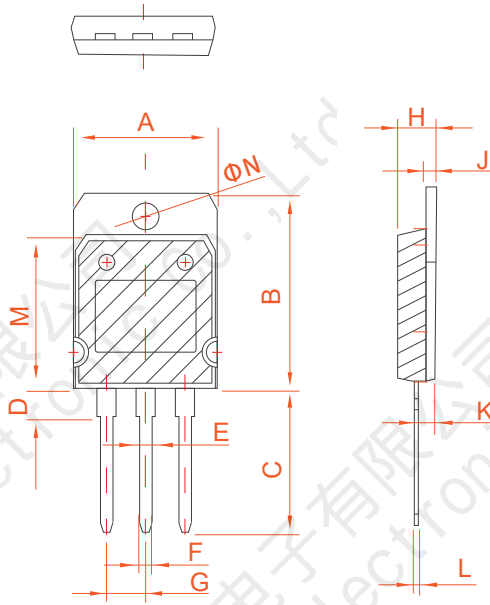


**FIG6**

Relative variations of gate trigger current, holding current and latching current versus junction temperature



**PACKAGE MECHANICAL DATA**



ITO-247 (Ins)

Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	19.7	19.9	20.1	0.776	0.783	0.791
B	26.9	27.1	27.3	1.059	1.067	1.075
C	19.4	19.9	20.4	0.764	0.783	0.803
D	3.80	3.90	4.00	0.150	0.154	0.157
E	2.56	2.66	2.76	0.101	0.105	0.109
F	1.66	1.76	1.86	0.065	0.069	0.073
G		5.45			0.215	
H	5.05	5.10	5.50	0.199	0.201	0.217
J	1.45	1.50	1.55	0.057	0.059	0.061
K	2.20	2.30	2.40	0.087	0.091	0.094
L	0.60	0.70	0.80	0.024	0.028	0.031
M	21.2	21.3	21.4	0.835	0.839	0.843
N	3.20	3.30	3.40	0.126	0.130	0.134



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