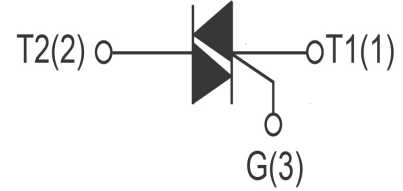
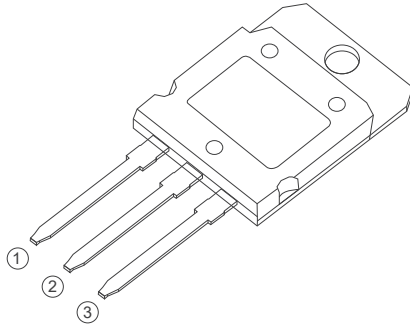


BTA80 Series
80A TRIACs
3 Quadrants



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 ² t	I ² t for fusing	Tp=10ms	3200	A ² 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 _{TM}	Forward "on" voltage	I _T =120A, t _p =380us, Tj=25°C	≤1.6	V	
V _{GT}	Gate trigger voltage	V _D =12V, R _L =33Ω	≤1.3	V	
di/dt	V _D =2/3V _{DRM} Gate Open, Tj=125°C I,II,III,IV	F=100Hz, I _G =2xI _{GT} , tr≤100ns	100	A/us	
I _{GT}	Gate trigger current	I,II,III V _D =12V, R _L =33Ω	≤50	mA	
I _H	Holding current	I _T =100mA	≤80		
V _{GD}	Gate non-trigger voltage	V _D =V _{DRM} , T _J =125°C, R _L =3.3KΩ	0.2	V	
dv/dt	Critical-rate of rise of commutation voltage	T _J =125°C, V _D =2/3V _{DRM} , Gate open circuit	≥1500	V/us	
R _{th(j-c)}	Thermal resistance	Junction to case	ITO-247(Ins)	0.35	°C/W

FIG1

Maximum power dissipation versus RMS on-state current

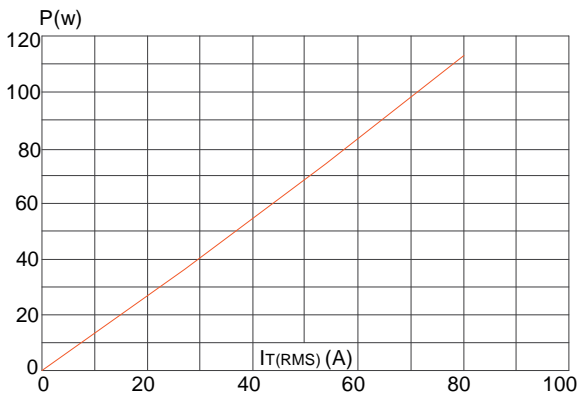


FIG2

RMS on-state current versus case temperature

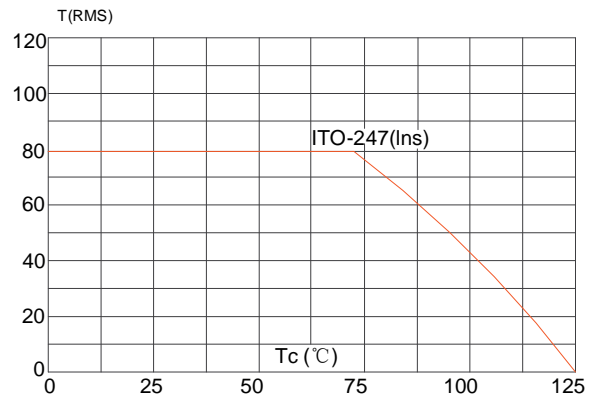


FIG3

Surge peak on-state current versus number of cycles

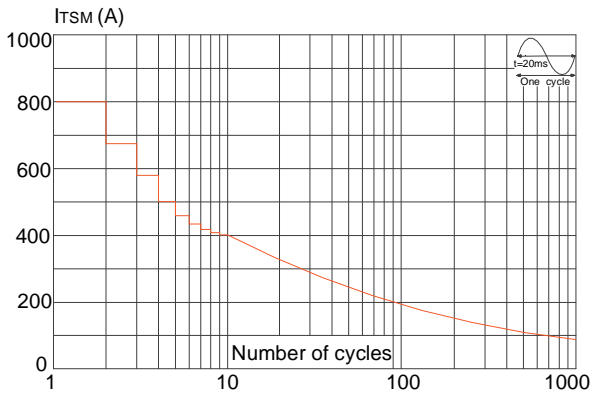


FIG4

On-state characteristics (maximum values)

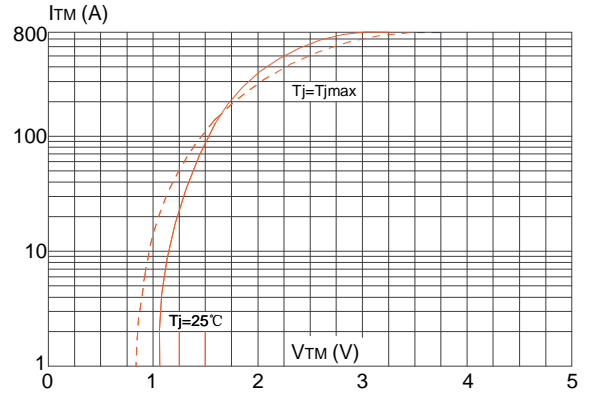


FIG5

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

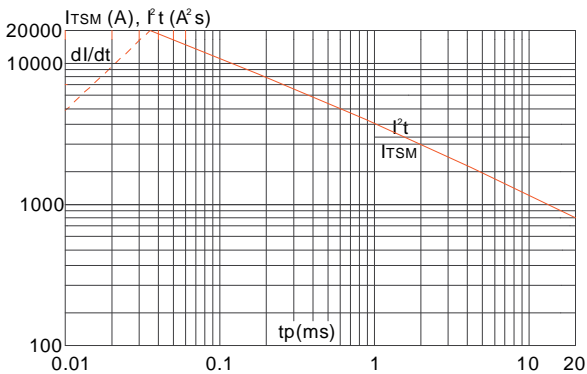
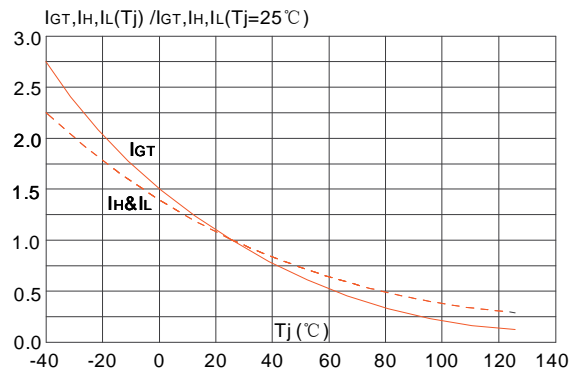
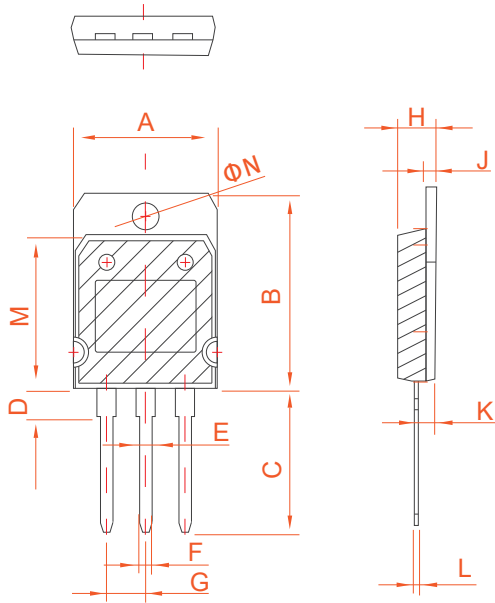


FIG6

FIG.6: 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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