BTA60 Series
60A TRIACs
3 Quadrants

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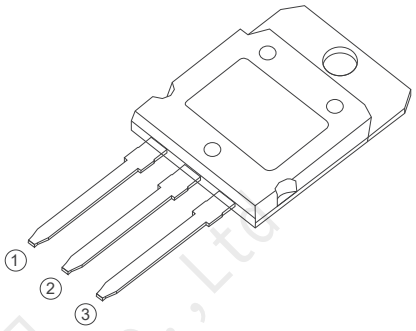
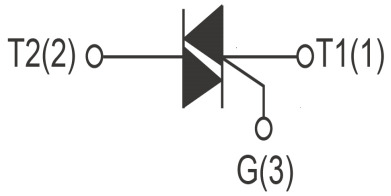




ITO-247 Insulated

FEATURES

› IT(RMS):60A › 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 specifed)

Symbol	Parameter	Conditions	Ratings	Unit
VDRM VRRM	Repetitive Peak Off-State Voltage	BTA60-1200B	1200	V
		BTA60-1600B	1600	
IT(RMS)	R.M.S On-State Current	ITO-247(Ins) Tc=70°C	60	A
		TG-C Tc=95°C		
ITSM	Surge On-State Current	Tp=20ms	600	A
I²t	I²t for fusing	Tp=10ms	1800	A²s
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 specifed)

Symbol	Parameter	Test Conditions	Value	Unit
IDRM	Repetitive Peak Off-State Current	Tj=25°C	20	uA
		Tj=125°C	8	mA
IRRM	Repetitive Peak Reverse Current	Tj=25°C	20	uA
		Tj=125°C	8	mA
VTM	Forward "on" voltage	IT=80A, tp=380us,Tj=25°C	≤1.5	V
VGT	Gate trigger voltage	VD=12V ,RL=33Ω	≤1.3	V
di/dt	VD=2/3VDRM Gate Open，Tj=125℃ I,II,III,IV	F=100Hz, IG=2xIGT, tr≤100ns	100	A/us
IGT	Gate trigger current I,II,III	VD=12V, RL=33Ω	≤50	mA
IH	Holding current	IT=100mA	≤80	
VGD	Gate non-trigger voltage	VD=VDRM, TJ=125°C,RL=3.3KΩ	0.2	V
dv/dt	Critical-rate of rise of commutation voltage	TJ=125°C, VD=2/3VDRM, Gate open circuit	≥1500	V/us
Rth(j-c)	Thermal resistance	Junction to case（AC） ITO-247(Ins)	0.5	°C/W

FIG1

Maximum power dissipation versus RMS on-state current

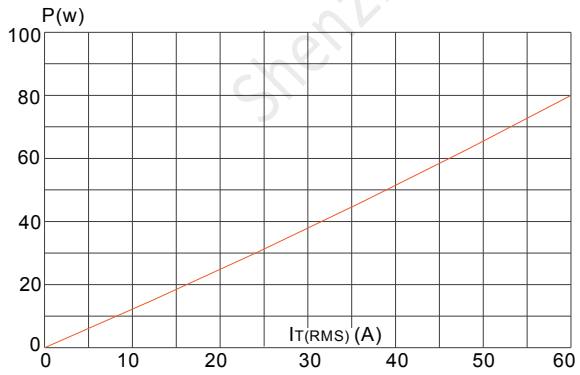


FIG2

RMS on-state current versus case temperature

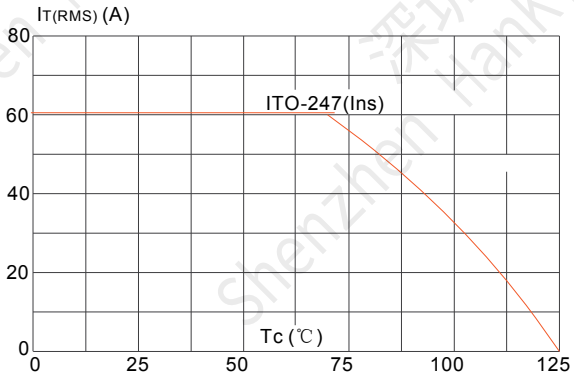


FIG3

Surge peak on-state current versus number of cycles

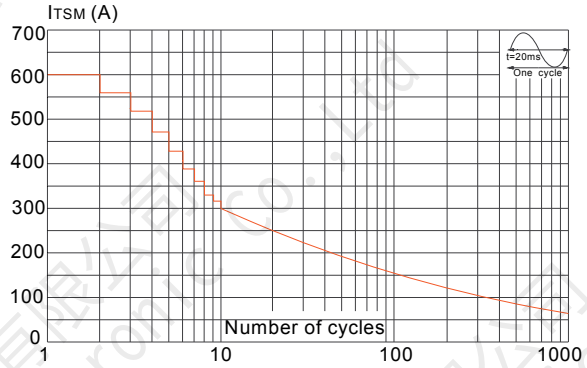


FIG4

On-state characteristics (maximum values)

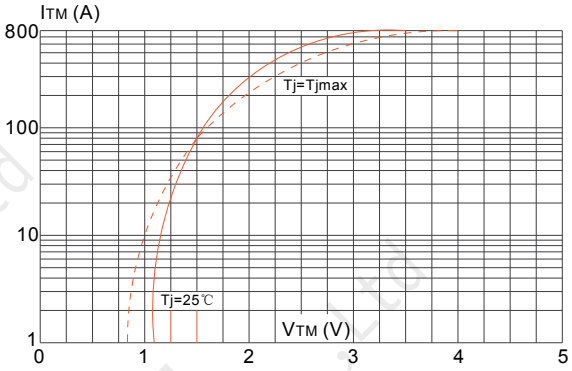


FIG5

Non-repetitive surge peak on-state current for a sinusoidal pulse with width tp<20ms, and corresponging value of I^2t (dI/dt < 100A/μs)

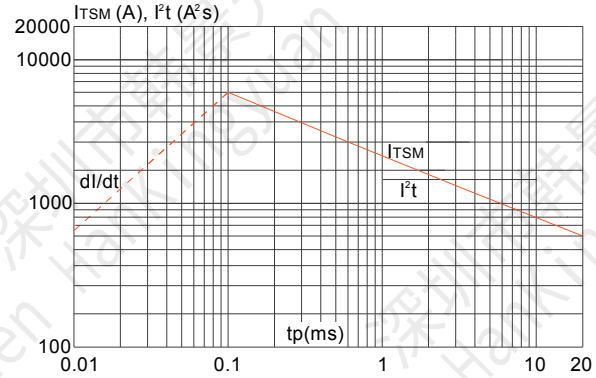
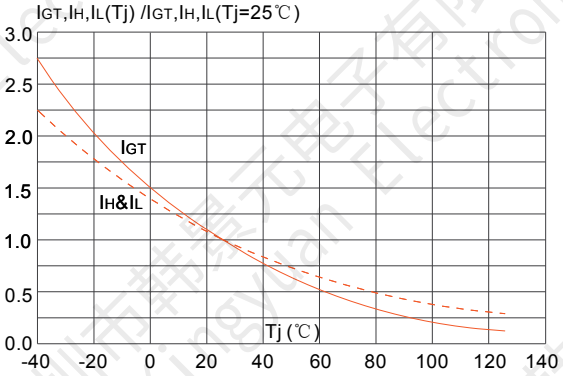
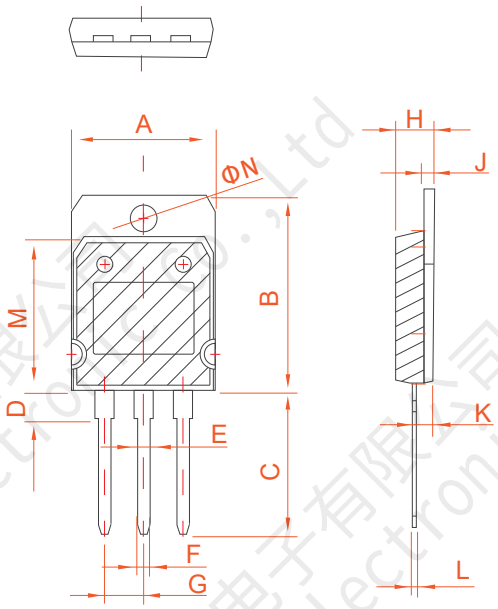


FIG6

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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