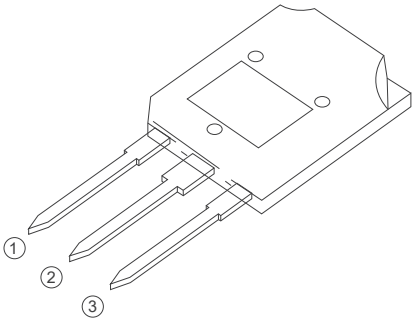
IT(RMS)		80A
VDRM/VRRM	BAT80-1200	1200V
	BAT80-1600	1600V
VTM		1.5V



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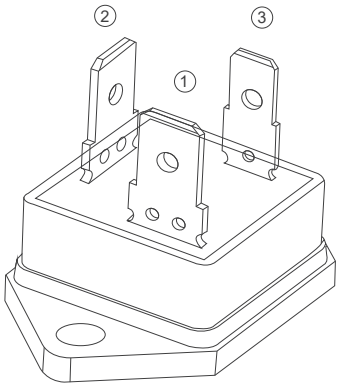
FEATURES

IT(RMS): 80A
VGT: 1.3 V
VDRM VRRM:1200V~1600V
High Junction Temperature
Good Commutation Performance
High dV/dt and dI/dt



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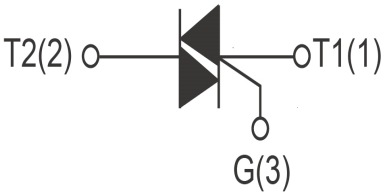
APPLICATIONS

Heater Control
Motor Speed Controller
Washing machine
Vacuums
Solid state relay



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

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	Tc=70°C	80	A
ITSM	Surge On-State Current	tp=16.7ms	800	
I²t	I²t for fusing	Tp=10ms	3200	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
			Tc=125°C	10	mA
IRRM	Repetitive Peak Reverse Current		Tc=25°C	20	uA
			Tc=125°C	10	mA
VTM	Forward "on" voltage		IT=120A, tp=380us	≤1.5	V
VGT	Gate trigger voltage		VD=12V ,RL=30Ω	≤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=30Ω	≤50	mA
IH	Holding current		IT=0.2A	≤90	
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 ≥1000	V/us
Rth(j-c)	Thermal resistance		Junction to case	0.35	°C/W

FIG1

Maximum power dissipation versus RMS on-state current

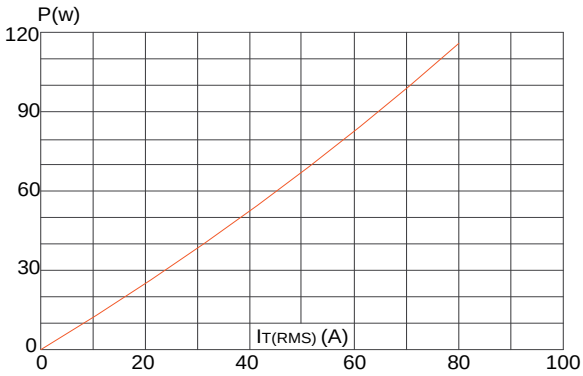


FIG2

RMS on-state current versus case temperature

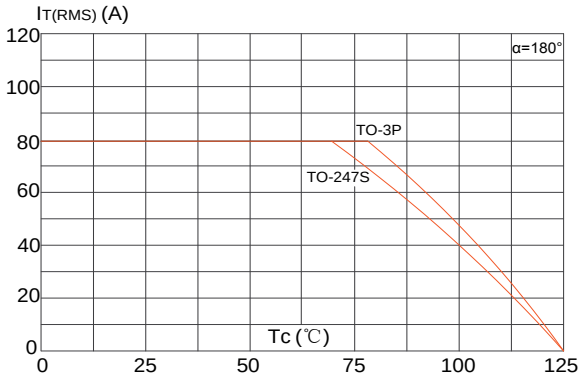


FIG3

Surge peak on-state current versus number of cycles

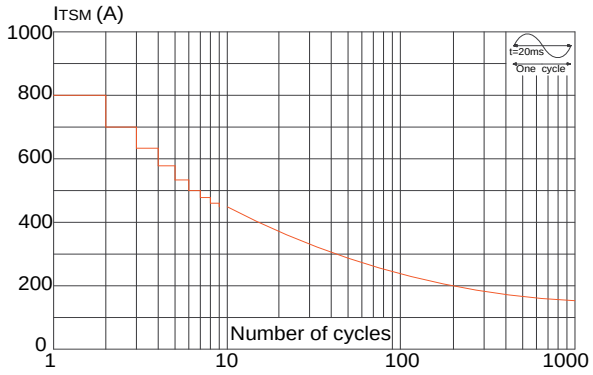


FIG4

On-state characteristics (maximum values)

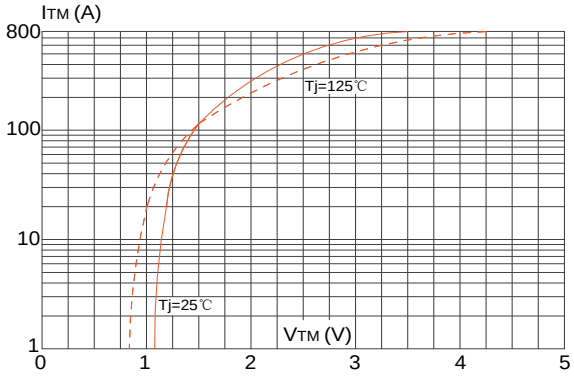


FIG5

Non-repetitive surge peak on-state current for a sinusoidal pulse with width tp<20ms, and corresponging value of I²t (dI/dt < 100A/μs)

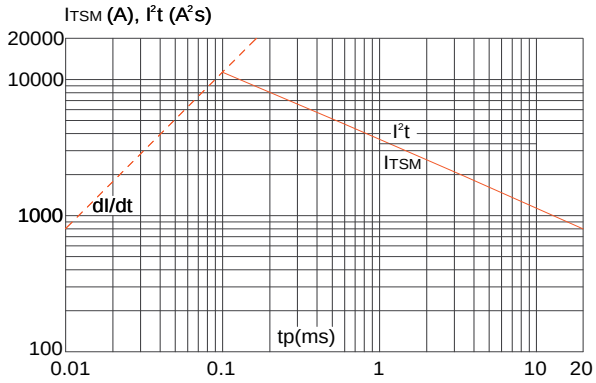
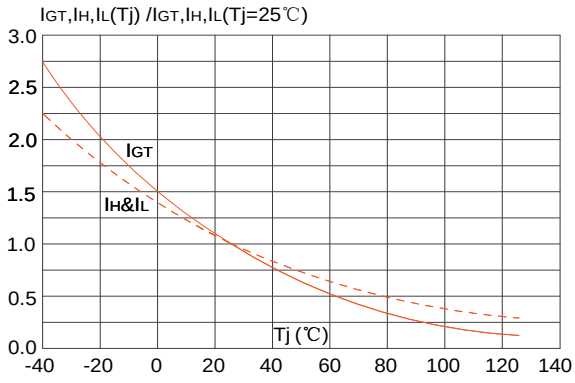
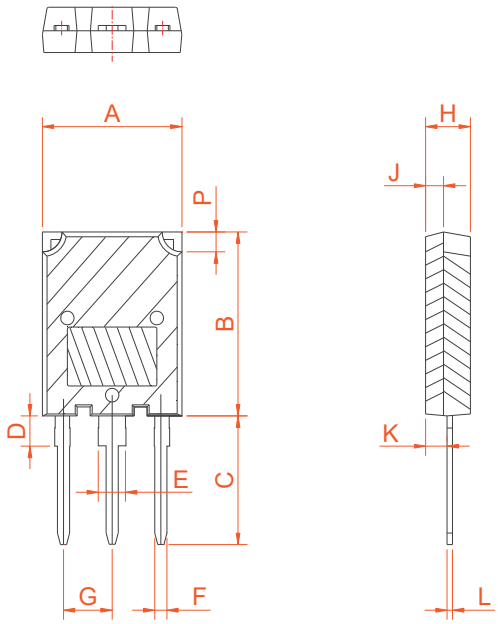


FIG6

FIG.6: Relative variations of gate trigger current, holding current and latching current versus junction temperature



PACKAGE MECHANICAL DATA



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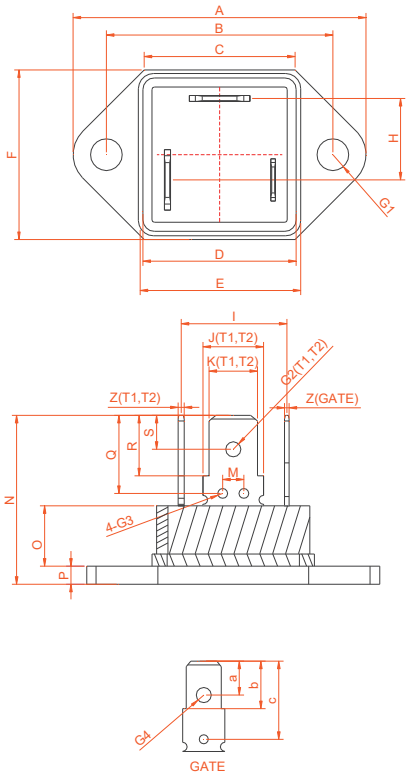
Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	15.1		16.1	0.594		0.634
B	19.8		20.8	0.78		0.819
C	13.8		14.8	0.543		0.583
D	3.00		4.00	0.118		0.157
E	2.75		3.35	0.108		0.132
F	1.30		1.50	0.051		0.059
G	5.10		5.80	0.201		0.228
H	4.50		5.50	0.177		0.217
J	1.45		2.15	0.057		0.085
K	1.90		2.80	0.075		0.110
L	0.55		0.80	0.022		0.031
P	2.00		2.40	0.079		0.094

Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A			39.2			1.543
B	29.8	30.0	30.2	1.173	1.181	1.189
C			21.6			0.85
D			20.2			0.795
E			20.5			0.791
F			23			0.906
T1、T2		8.10			0.318	
T3		5.65			0.222	
T'		6.35			0.25	
t1、t2		0.8			0.031	
t3		0.6			0.023	
G		13.9			0.547	
H1		2.6			0.102	
H2		10.8			0.425	
H			22.8			0.886
h1	6.2	6.35	6.5	0.244	0.25	0.256
h2	7.8	7.95	8.1	0.307	0.313	0.319
h3	9.45	9.75	10.05	0.372	0.384	0.396
I	2.7	3.0	3.3	0.106	0.118	0.130
J		10.8			0.425	



TG-C