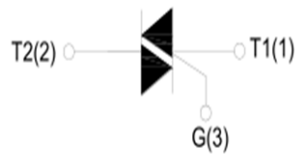


Features

IT(RMS): 100A

VDRM VRRM:
600V/800V
1200V/1600V/1800V



BTA100. PDF

T0-3PS

ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Value
IT(RMS)	RMS on-state current	100A
VDRM	Repetitive peak off-state voltage	600V/800V/1200V/1600V/1800V
VRRM	Repetitive peak reverse voltage	600V/800V/1200V/1600V/1800V
Tj	Operating junction temperature range	~40℃~125℃
Tstg	Storage junction temperature range	~40℃~150℃
VDSM	Non repetitive surge peak Off-state voltage	VDRM+100V
VRSM	Non repetitive peak reverse voltage	VRRM+100V
ITSM	Non repetitive surge peak on-state current (tp=20ms)	1100A
I² t	I² t value for fusing (tp=10ms)	5500A² S
dI/dt	Critical rate of rise of on-state current(I G =2×I GT)	100A/μ s
IGM	Peak gate current	8A
PG(AV)	Average gate power dissipation	2W
PGM	Peak gate power	10W

ELECTRICAL CHARACTERISTICS (Tj =25℃ unless otherwise specified)

Symbol	Test Condition	Quadrant	Value
			BTA100
IGT	VD=12V RL=33Ω	I - II -III	<50mA
VGT		ALL	<1.3V
VGD	VD=VDRM Tj=125℃ RL=3.3KΩ	ALL	>0.2V
IL	IG=1.2IGT	I - II -III	<180mA
IH	IT=100mA		<100mA
dV/dt	VD=2/3VDRM Gate Open Tj=125℃		>1500V/μ s
VTM	ITM=150A tp=380μ s (Tj =25℃)		<1.5V
IDRM	VD=VDRMVVR=VR	Tj =25℃	<20μ A
IRRM	RM	Tj =125℃	<12mA
Rth(j-c)	junction to case (AC)	T0-3PS	0.3℃/W

FIG.1 Maximum power dissipation versus RMS on-state current

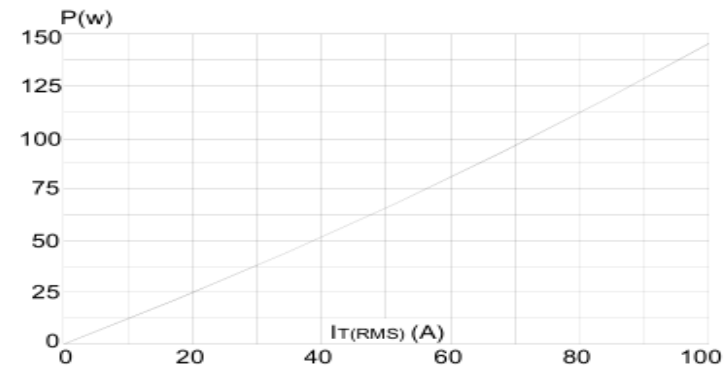


FIG.2: RMS on-state current versus case temperature

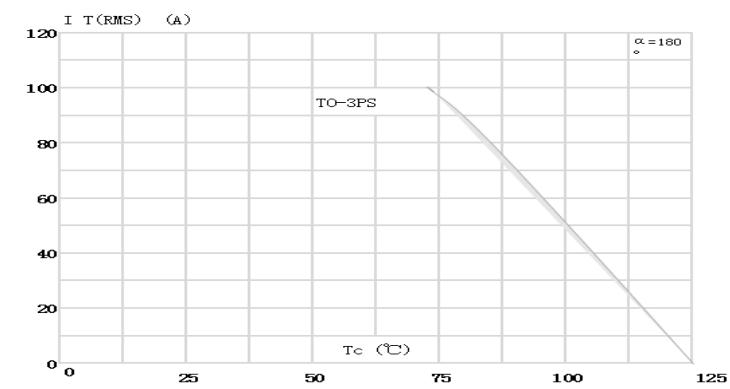


FIG.3: Surge peak on-state current versus number of cycles

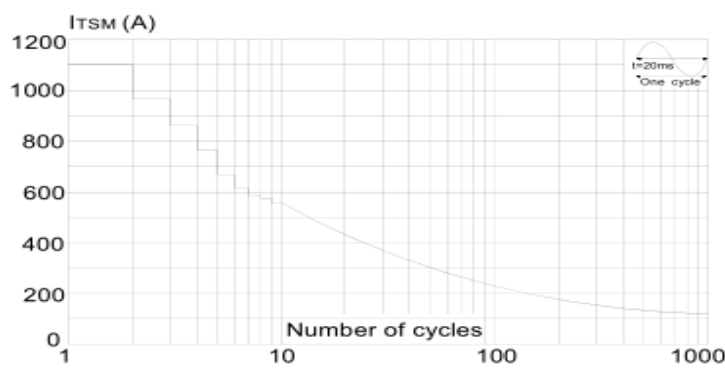


FIG.4: On-state characteristics (maximum values)

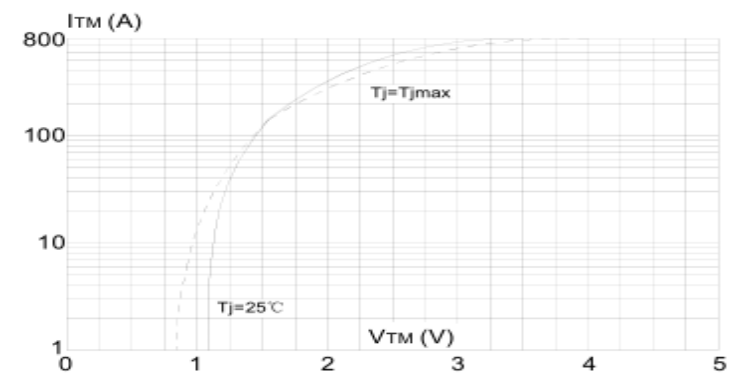


FIG.5: Non-repetitive surge peak on-state current for a sinusoidal pulse with width tp<20ms, and corresponding value of I²t (dI/dt < 100A/μ s)

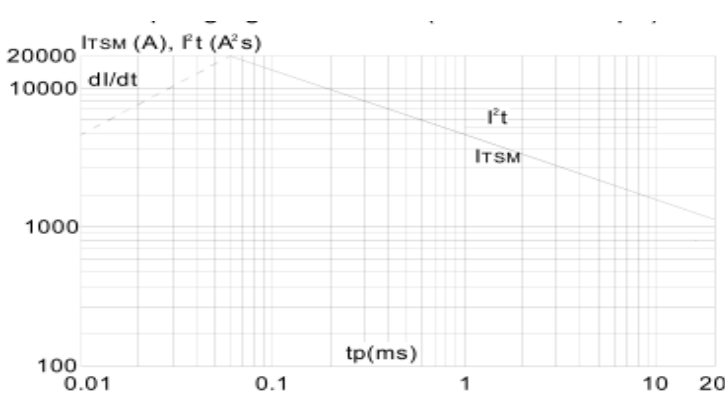
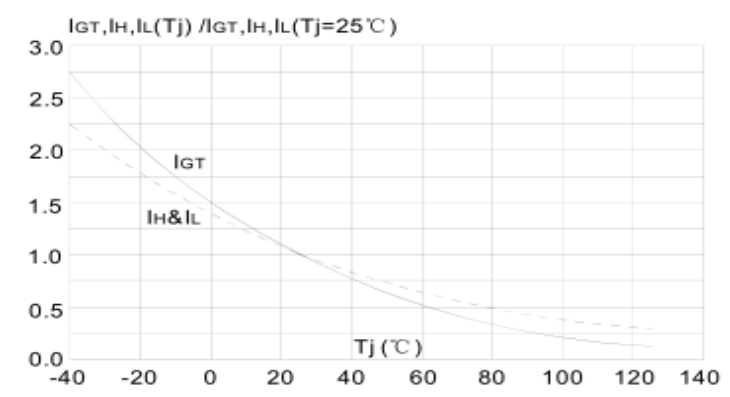
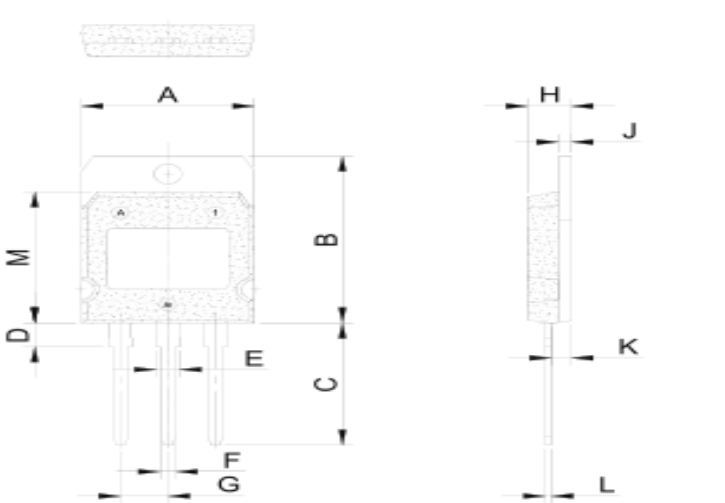


FIG.6: Relative variations of gate trigger current, holding current and latching current versus junction temperature



PACKAGE MECHANICAL DATA



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	3.8	3.9	4.0	0.15	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	5.5	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