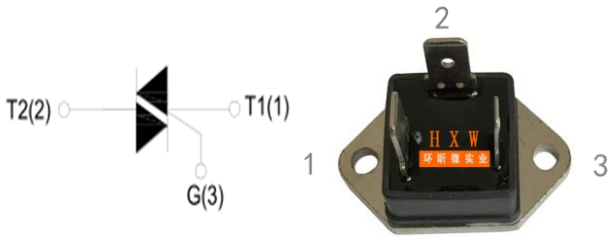
东莞市环昕微实业有限公司

TG80E160.PDF

TG-C

Features
- IT(RMS): 80A
- VDRM VRRM:
  600V/800V
  1200V/1600V/1800V



ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Value
IT(RMS)	RMS on-state current	80A
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)	800A
I²t	I²t value for fusing (tp=10ms)	3200A²S
dI/dt	Critical rate of rise of on-state current(I G =2×I GT)	100A/μs
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
			TG80E160
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-III	＜80mA
		II	＜120mA
IH	IT=100mA		＜70mA
dV/dt	VD=2/3VDRM Gate Open Tj=125℃		＞1500V/μs
VTM	ITM=120A tp=380μs (Tj =25℃)		＜1.5V
IDRM	VD=VDRMVR=VRRM	Tj =25℃	＜20μA
IRRM		Tj =125℃	＜10mA
Rth(j-c)	junction to case(AC)	TG-C	0.31℃/W

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FIG.1 Maximum power dissipation versus RMSon-state current

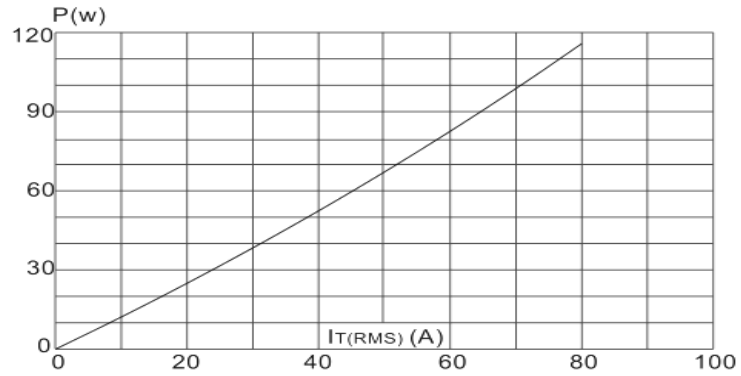


FIG.2: RMS on-state current versus case temperature

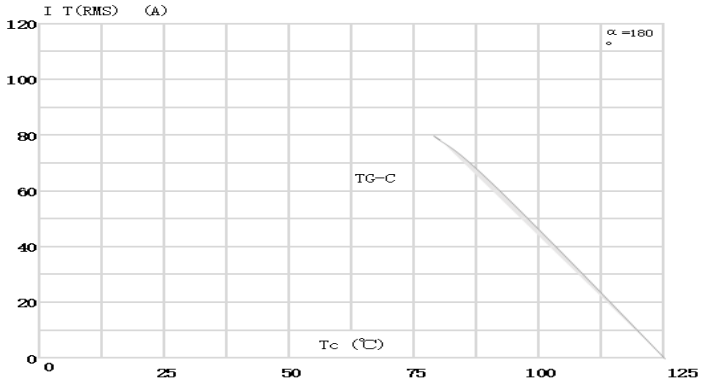


FIG.3: Surge peak on-state current versusnumber of cycles

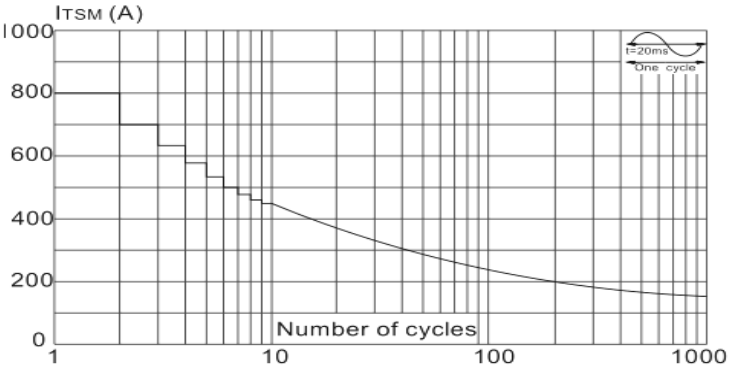


FIG.4: On-state characteristics (maximumvalues)

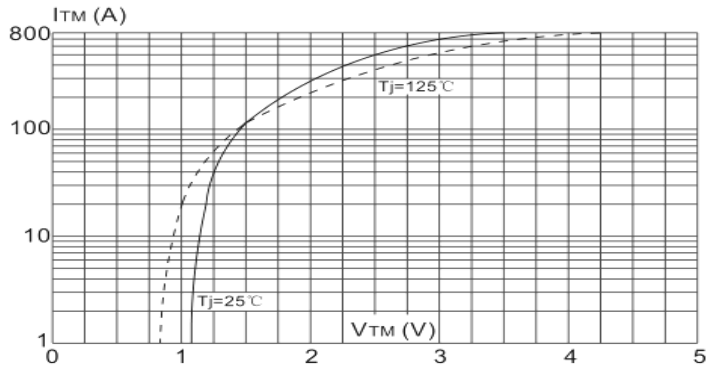


FIG.5: Non-repetitive surge peak on-state currentfor a sinusoidal pulse with width tp<20ms, andcorresponging value of I²t (dI/dt < 100A/μs)

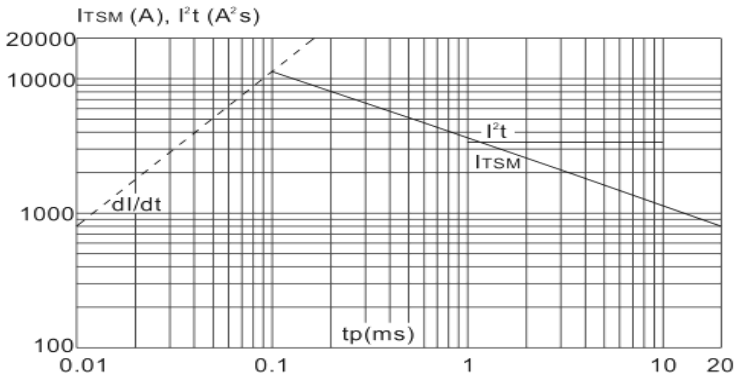
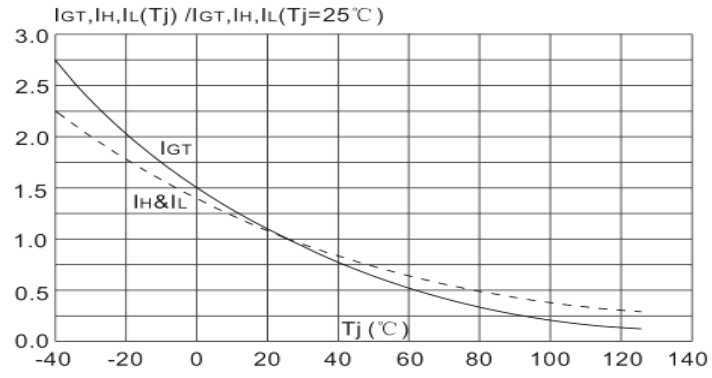
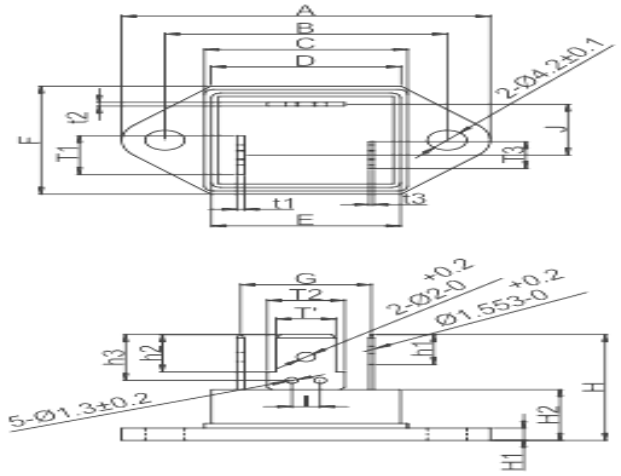


FIG.6: Relative variations of gate trigger current, holding current and latching current versusjunction temperature



PACKAGE MECHANICAL DATA

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	



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