IT(RMS)		80A
VDRM/VRRM		1200V
VTM		1.8V

FEATURES

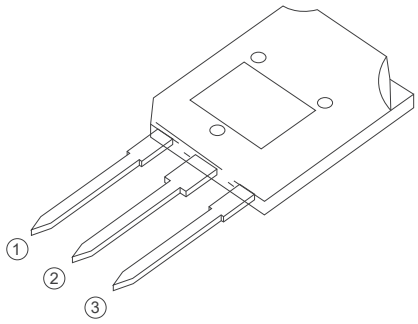
IT(RMS): 80A

VGT: 1.5V

VDRM VRRM:1200V

High Junction Temperature

Good Commutation Performance



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APPLICATIONS

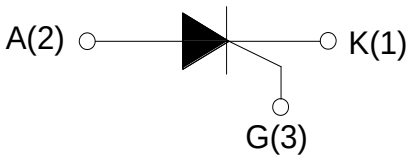
Heater Control

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	TYN8012	1200	V
		TYN8016	1600	V
IT(RMS)	R.M.S On-State Current		80	A
ITSM	Surge On-State Current	F=50Hz,tp=10ms/8.3ms	800	A
I^2t	I^2t for fusing	Tp=10ms	7800	A^2s
PG(AV)	Average Gate Power Dissipation	Tj=125°C	1	W
PGM	Peak Gate Current	Tj=125°C	5	W
IGM	Peak Gate Current	tp=10us	4	A
Tj	Operating Junction Temperature		~40~125	°C
TSTG	Storage Temperature		~40~150	°C

Electrical Characteristics (Tj=25°C unless otherwise specifed)

Symbol	Parameter	Test Conditions	Value	Unit
IDRM	Repetitive Peak Off-State Current	Tc=25°C	≤50	uA
		Tc=125°C	≤10	mA
IRRM	Repetitive Peak Reverse Current	Tc=25°C	≤50	uA
		Tc=125°C	≤10	mA
VTM	Forward "on" voltage	IT=100A tp=380us	≤1.8	V
VGD	Gate nontrigger voltage	VD=VDRM,Tj=125°C, RL=3.3KΩ	≥0.25	V
IL	Latching current	IG=1.2IGT	≤200	mA
IH	Holding current	VD=12V ,IGT=0.1A	≤150	mA
VGT	Gate trigger voltage	VD=12V	≤1.5	V
IGT	Gate trigger current	VD=12V,IT=0.1A	≤80	mA
dv/dt	Critical-rate of rise of commutation voltage	VD=2/3VDRM,Tj=125°C,gate open circuit	≥1000	V/us
di/dt	Critical-rate of rise of commutation current	IG=2XIG,tr100us, Tj=125°C	≥150	A/us
Rth(j-c)	Thermal resistance	Junction to case	0.43	°C/W

FIG1

Maximum power dissipation versus RMS on-state current

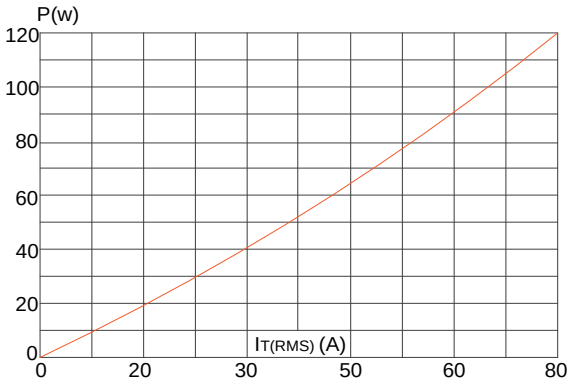


FIG2

RMS on-state current versus case temperature

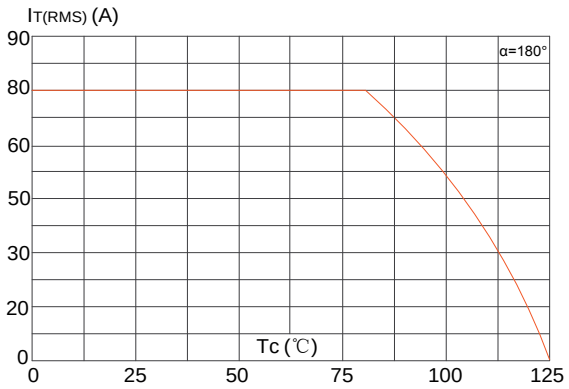


FIG3

Surge peak on-state current versus number of cycles

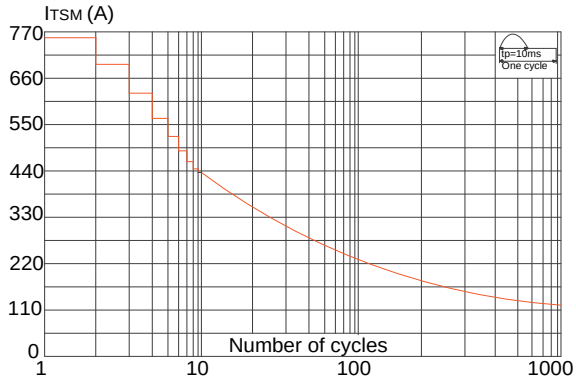


FIG4

On-state characteristics (maximum values)

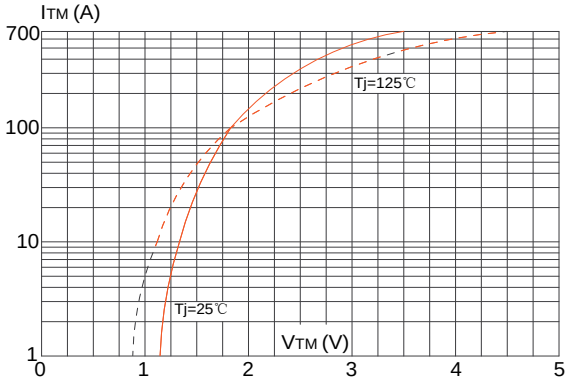


FIG5

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)

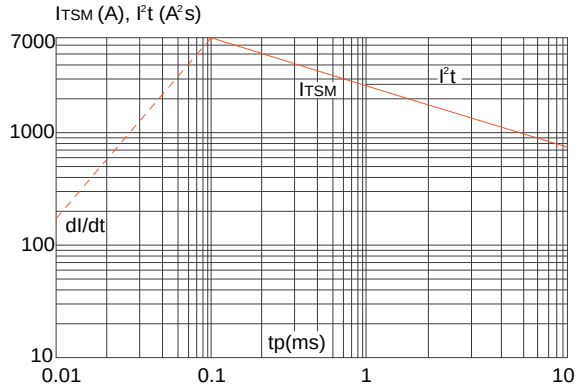
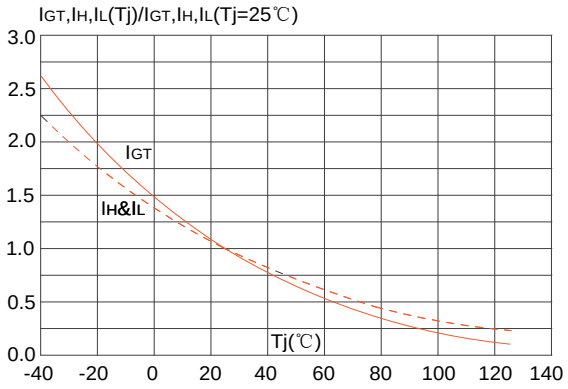
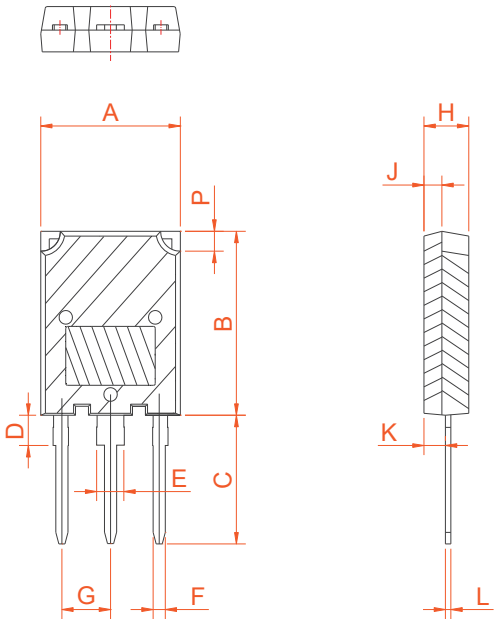


FIG6

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



PACKAGE MECHANICAL DATA



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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