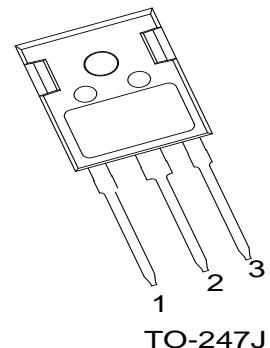


IT(RMS)		75A
VDRM/VRRM		1200V
VTM		1.5V



FEATURES

IT(RMS): 75A

VGT: 1.3V

VDRM VRRM:1200V

High Junction Temperature

Good Commutation Performance

APPLICATIONS

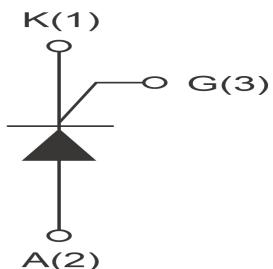
Heater Control

Motor Speed Controller

Washing machine

Vacuums

Solid state relay



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

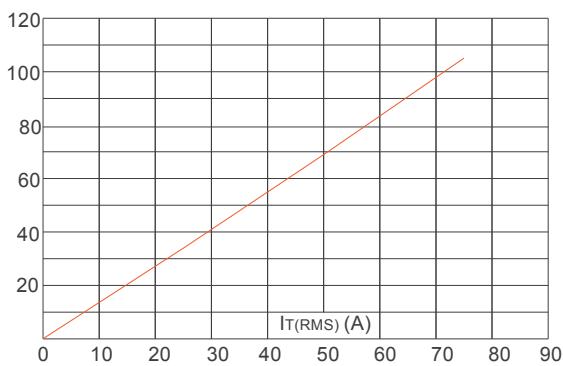
Symbol	Parameter	Conditions	Ratings	Unit
VDRM VRRM	Repetitive Peak Off-State Voltage	TYN7512	1200	V
		TYN7516	1600	V
IT(RMS)	R.M.S On-State Current		75	A
ITSM	Surge On-State Current	F=50Hz, tp=10ms/8.3ms	800	A
I ² t	I ² t for fusing	Tp=10ms	3200	A ² s
PG(AV)	Average Gate Power Dissipation	Tj=125°C	1	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 ($T_j=25^\circ\text{C}$ unless otherwise specified)

Symbol	Parameter	Test Conditions	Value	Unit
IDRM	Repetitive Peak Off-State Current	$T_c=25^\circ\text{C}$	≤ 50	uA
		$T_c=125^\circ\text{C}$	≤ 10	mA
IRRMM	Repetitive Peak Reverse Current	$T_c=25^\circ\text{C}$	≤ 50	uA
		$T_c=125^\circ\text{C}$	≤ 10	mA
VTM	Forward "on" voltage	$I_T=60\text{A}$ $t_p=380\text{us}$	≤ 1.5	V
VGD	Gate nontrigger voltage	$V_D=V_{DRM}, T_j=125^\circ\text{C}$, $R_L=3.3\text{K}\Omega$	≥ 0.2	V
IL	Latching current	$I_G=1.2I_{GT}$	≤ 150	mA
IH	Holding current	$V_D=12\text{V}$, $I_{GT}=0.1\text{A}$	≤ 120	mA
VGT	Gate trigger voltage	$V_D=12\text{V}$	≤ 1.3	V
IGT	Gate trigger current	$V_D=12\text{V}, I_T=0.1\text{A}$	≤ 70	mA
dv/dt	Critical-rate of rise of commutation voltage	$V_D=2/3V_{DRM}, T_j=125^\circ\text{C}$, gate open circuit	≥ 700	V/us
di/dt	Critical-rate of rise of commutation current	$I_G=2XIG, tr=100\text{us}, T_j=125^\circ\text{C}$	≥ 150	A/us
Rth(j-c)	Thermal resistance	Junction to case	0.53	$^\circ\text{C}/\text{W}$

FIG1

Maximum power dissipation versus RMS on-state current

**FIG2**

RMS on-state current versus case temperature

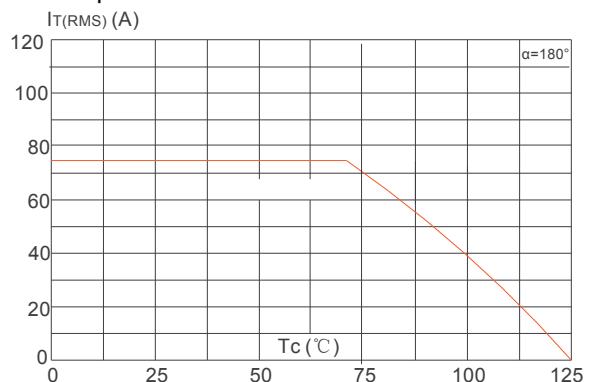
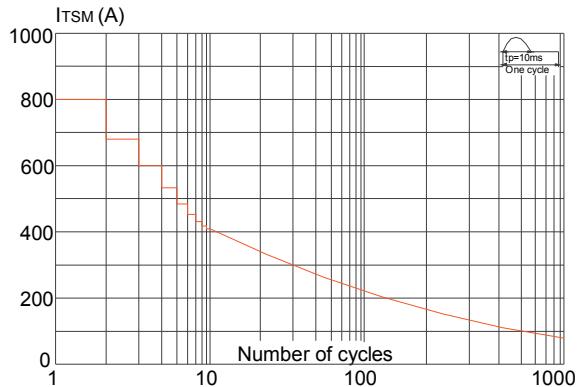
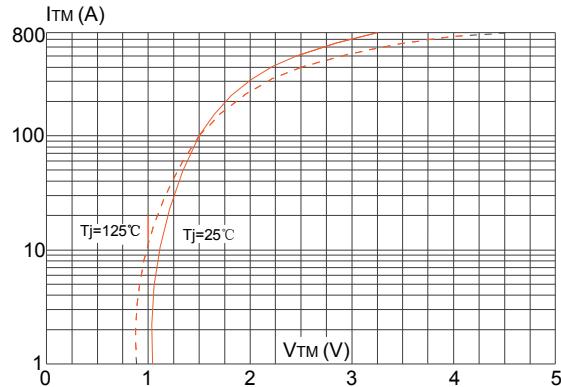


FIG3

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 corresponding value of I^2t ($dl/dt < 100A/\mu s$)

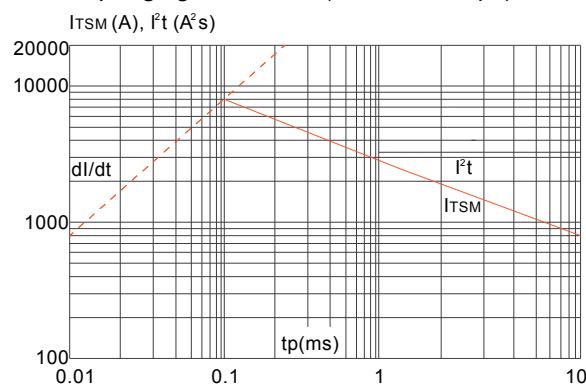
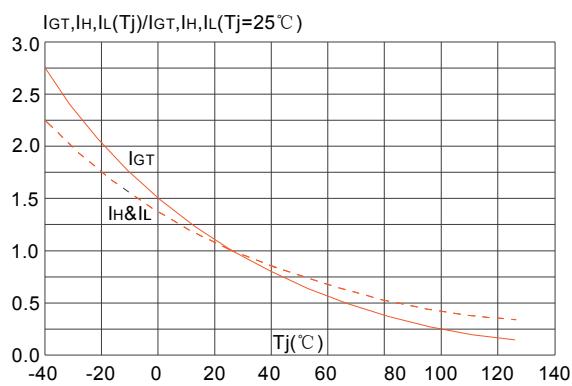
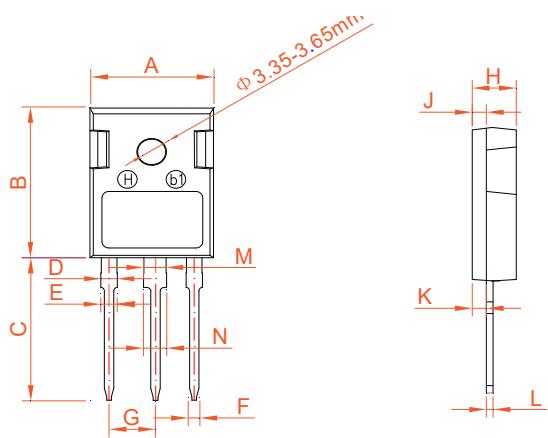

FIG6

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	15.50	15.80	16.10	0.610	0.622	0.634
B	20.80	21.00	22.20	0.819	0.827	0.835
C	19.70	20.00	20.30	0.776	0.787	0.799
D	1.80	2.00	2.20	0.071	0.079	0.087
E	1.90	2.10	2.30	0.075	0.083	0.091
F	1.00	1.20	1.40	0.039	0.047	0.055
G	5.25		5.65	0.207		0.222
H	4.80	5.00	5.20	0.189	0.197	0.205
J	1.90	2.00	2.10	0.075	0.079	0.083
K	2.20	2.35	2.50	0.087	0.093	0.098
L	0.41	0.60	0.79	0.016	0.024	0.031
M	2.80	3.00	3.20	0.110	0.118	0.126
N	2.90	3.10	3.30	0.114	0.122	0.130

DELIVERY MODE

