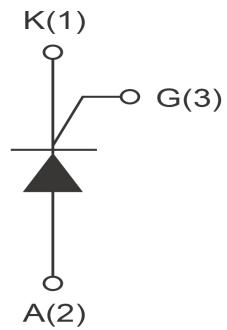
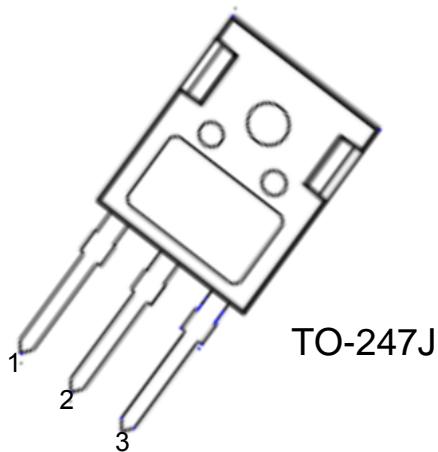


TYN75xxJ Series  
75A SCRs  
Standard SCRs



ShenZhenHanKingyuan  
Electronic CO.,Ltd



## FEATURES

- > IT(RMS):75A
- > VGT: 1.3V
- > VDRM VRMM:1200Vand1600V

## APPLICATIONS

Washing machine, vacuums, massager, solid state relay, AC Motor speed regulation and so on.

### Absolute Maximum Ratings ( $T_j=25^\circ\text{C}$ unless otherwise specified)

Symbol	Parameter	Conditions	Ratings	Unit
VDRM VRMM	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	$f=50\text{Hz}, t_p=10\text{ms}/8.3\text{ms}$	800	A
$I^2t$	$I^2t$ for fusing	$t_p=10\text{ms}$	3200	$\text{A}^2\text{s}$
PG(AV)	Average Gate Power Dissipation	$T_j=150^\circ\text{C}$	1	W
PGM	Peak Gate Current	$T_j=150^\circ\text{C}$	5	W
IGM	Peak Gate Current	$t_p=10\mu\text{s}$	4	A
$T_j$	Operating Junction Temperature		$\sim 40 \sim 150$	$^\circ\text{C}$
TSTG	Storage Temperature		$\sim 40 \sim 150$	$^\circ\text{C}$

## Electrical Characteristics ( $T_j=25^\circ\text{C}$ unless otherwise specified)

Symbol	Parameter	Test Conditions	Value	Unit
IDRM	Repetitive Peak Off-State Current	$T_c=25^\circ\text{C}$	$\leq 50$	uA
		$T_c=150^\circ\text{C}$	$\leq 10$	mA
IRRMM	Repetitive Peak Reverse Current	$T_c=25^\circ\text{C}$	$\leq 50$	uA
		$T_c=150^\circ\text{C}$	$\leq 10$	mA
VTM	Forward "on" voltage	$I_T=60\text{A}$ $t_p=380\text{us}$	$\leq 1.5$	V
VGD	Gate nontrigger voltage	$VD=VDRM, T_j=150^\circ\text{C}$ , $RL=3.3\text{K}\Omega$	$\geq 0.2$	V
IL	Latching current	$IG=1.2\text{IGT}$	$\leq 150$	mA
IH	Holding current	$VD=12\text{V}$ , $IGT=0.1\text{A}$	$\leq 120$	mA
VGT	Gate trigger voltage	$VD=12\text{V}$	$\leq 1.3$	V
IGT	Gate trigger current	$VD=12\text{V}, IT=0.1\text{A}$	$\leq 70$	mA
dv/dt	Critical-rate of rise of commutation voltage	$VD=2/3VDRM, T_j=150^\circ\text{C}$ , gate open circuit	$\geq 700$	V/us
di/dt	Critical-rate of rise of commutation current	$IG=2XIG, tr=100\text{us}, T_j=150^\circ\text{C}$	$\geq 150$	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

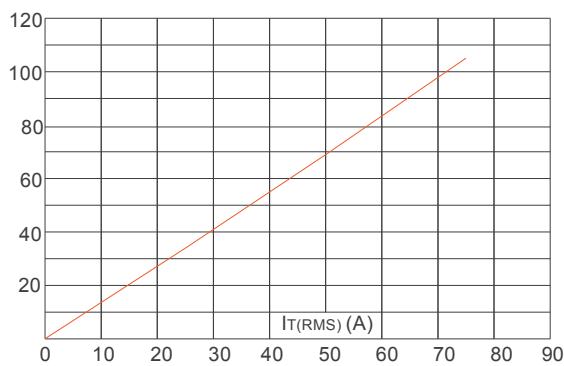
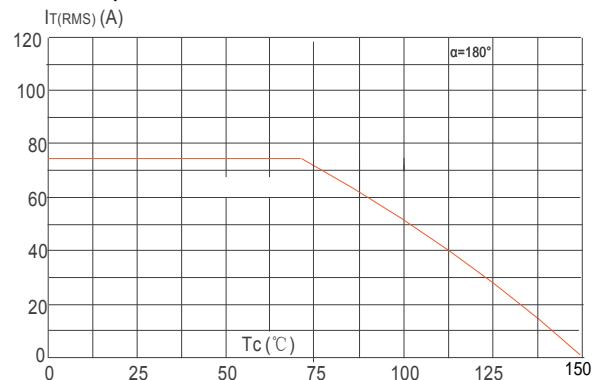


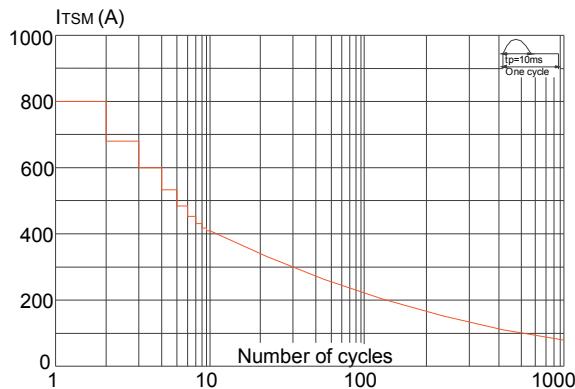
FIG2

RMS on-state current versus case temperature



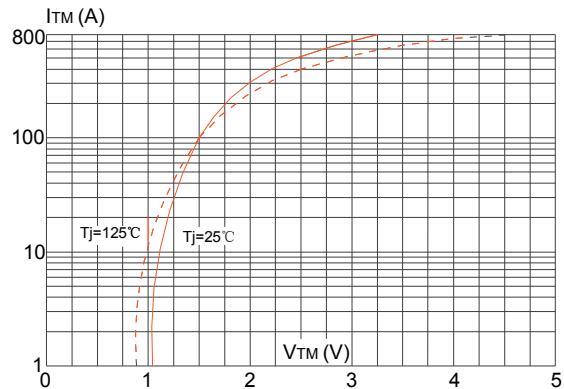
**FIG3**

Surge peak on-state current versus number of cycles



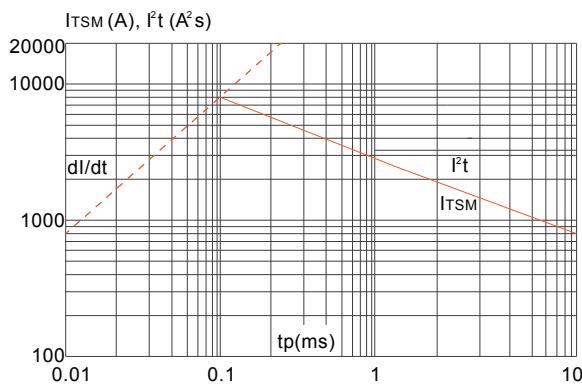
**FIG4**

On-state characteristics (maximum values)



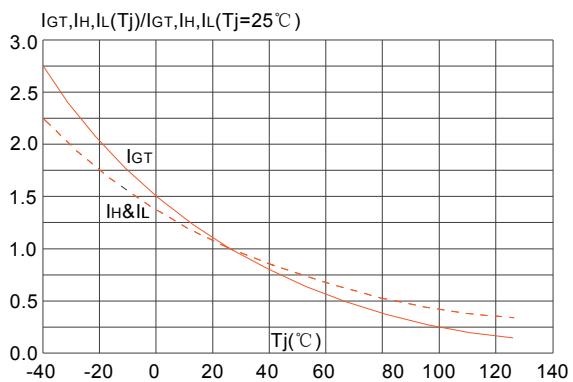
**FIG5**

Non-repetitive surge peak on-state current for a sinusoidal pulse with width  $tp < 20ms$ , and corresponding value of  $I^2t$  ( $dl/dt < 100A/\mu s$ )

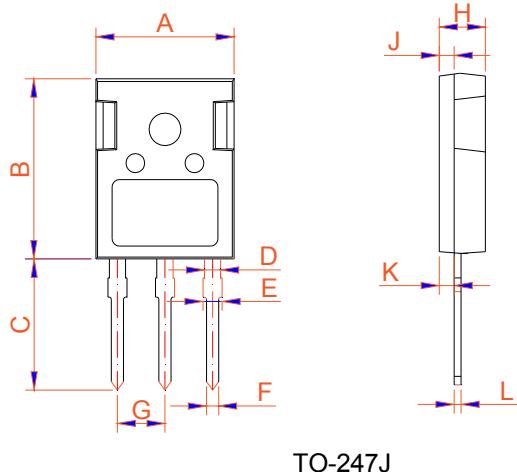


**FIG6**

**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	0.828	0.874
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		5.44			0.214	
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

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