TYN75xxJ Series

75A SCRs

Standard SCRs

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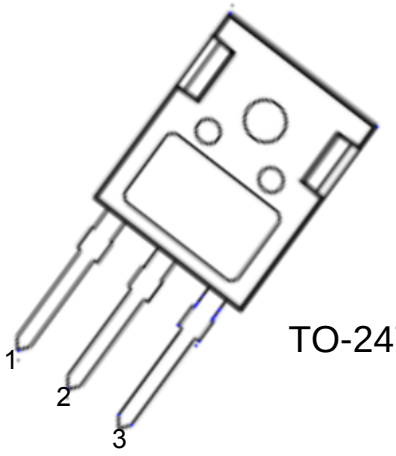

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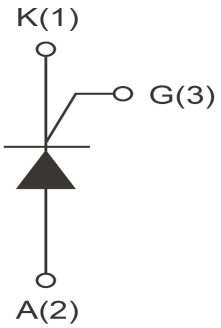


FEATURES

› IT(RMS):75A › VGT: 1.3V › VDRM VRRM:1200Vand1600V

APPLICATIONS

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

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

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
I²t	I²t for fusing	Tp=10ms	3200	A²s
PG(AV)	Average Gate Power Dissipation	Tj=150°C	1	W
PGM	Peak Gate Current	Tj=150°C	5	W
IGM	Peak Gate Current	tp=10us	4	A
Tj	Operating Junction Temperature		~40~150	°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=150°C	≤10	mA
IRRM	Repetitive Peak Reverse Current	Tc=25°C	≤50	uA
		Tc=150°C	≤10	mA
VTM	Forward "on" voltage	IT=60A tp=380us	≤1.5	V
VGD	Gate nontrigger voltage	VD=VDRM,Tj=150°C , RL=3.3KΩ	≥0.2	V
IL	Latching current	IG=1.2IGT	≤150	mA
IH	Holding current	VD=12V ,IGT=0.1A	≤120	mA
VGT	Gate trigger voltage	VD=12V	≤1.3	V
IGT	Gate trigger current	VD=12V,IT=0.1A	≤70	mA
dv/dt	Critical-rate of rise of commutation voltage	VD=2/3VDRM,Tj=150°C ,gate open circuit	≥700	V/us
di/dt	Critical-rate of rise of commutation current	IG=2XIG,tr100us, Tj=150°C	≥150	A/us
Rth(j-c)	Thermal resistance	Junction to case	0.53	°C/W

FIG1

Maximum power dissipation versus RMS on-state current

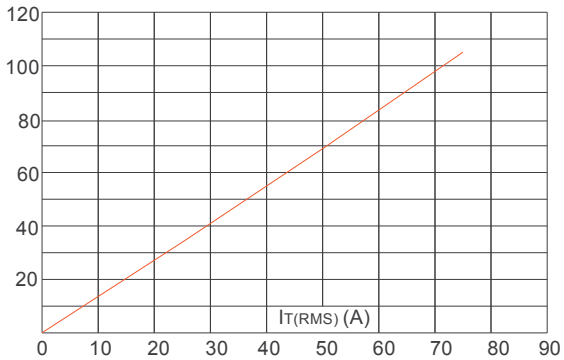


FIG2

RMS on-state current versus case temperature

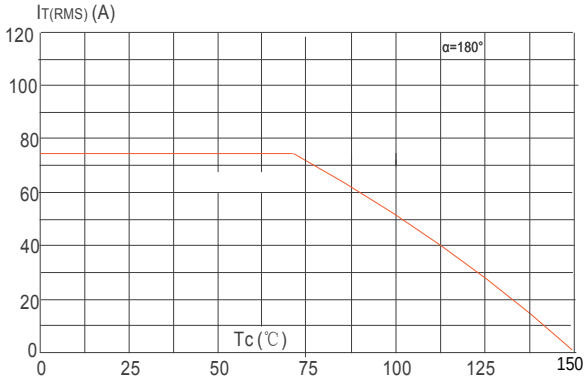


FIG3

Surge peak on-state current versus number of cycles

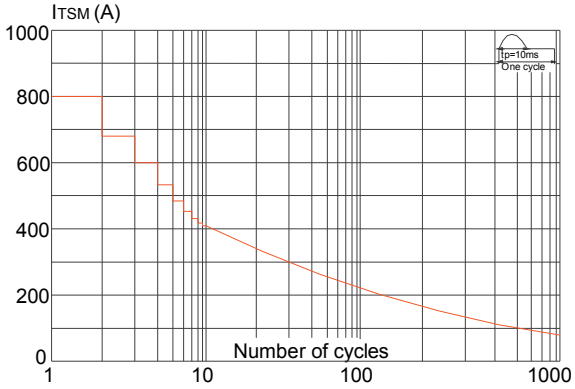


FIG4

On-state characteristics (maximum values)

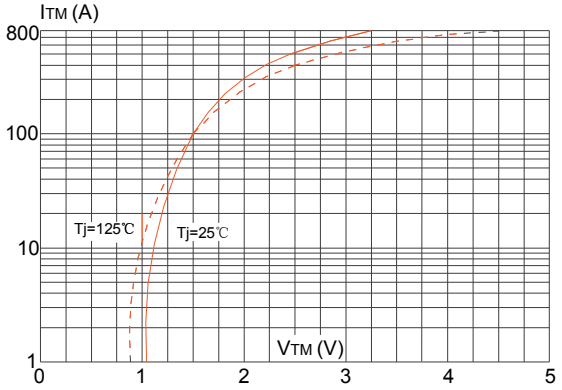


FIG5

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)

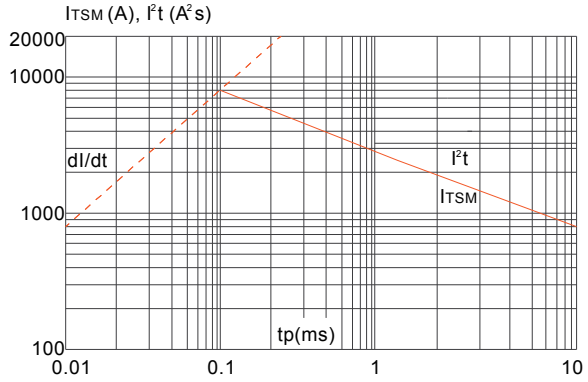
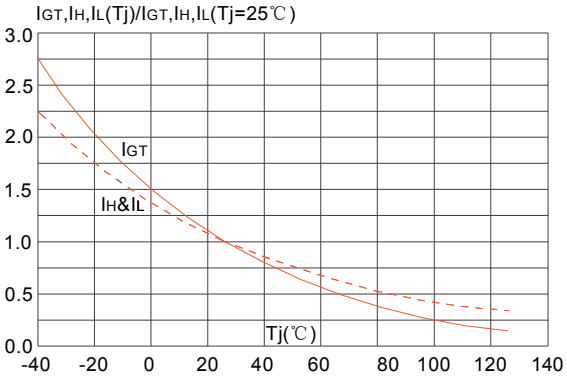
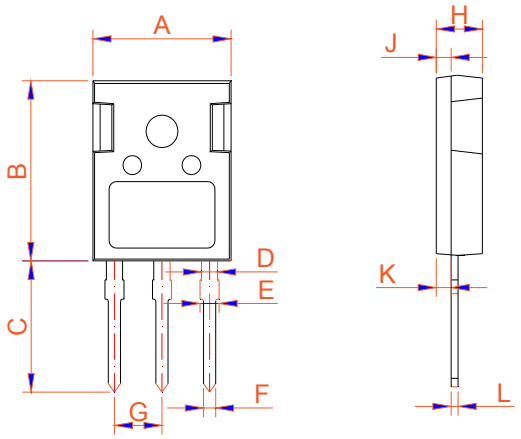


FIG6

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	15.50	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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