

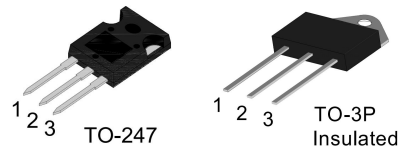
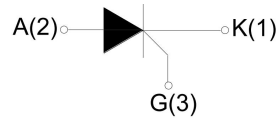
S7560 75A SCRs

FEATURES

- High thermal cycling performance
- High voltage capacity
- Very high current surge capability

APPLICATIONS

- Line rectifying 50/60 Hz
- Softstart AC motor control
- DC Motor control
- Power converter
- AC power control
- Lighting and temperature control



Parameters Summary

VD/VR:1200/1600V

IT(RMS):75A

IGT :60mA

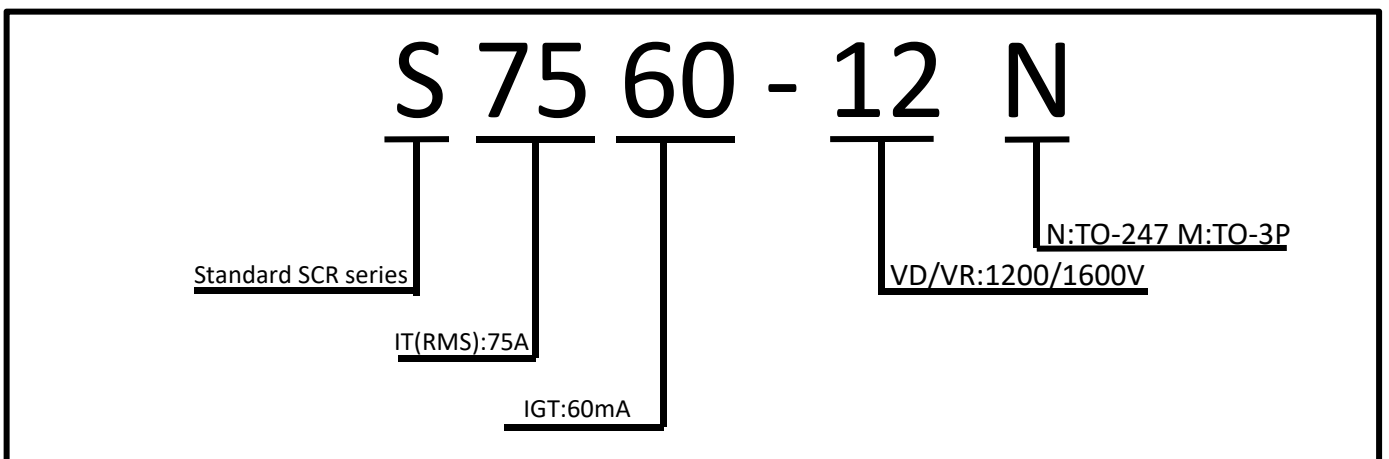
ABSOLUTE MAXIMUM RATINGS			
Parameter	Symbol	Value	Unit
Storage junction temperature range	Tstg	-40 ~150	°C
Operating junction temperature range	Tj	-40~125	°C
Repetitive peak off-state voltage (T =25°C)	V _{DRM}	1200/1600	V
Repetitive peak reverse voltage (T =25°C)	V _{RRM}	1200/1600	V
Non repetitive surge peak Off-state voltage	V _{DSM}	V _{DRM} +100	V
Non repetitive peak reverse voltage	V _{RSM}	V _{RRM} +100	V
RMS on-state current (T =100°C)	I _{T(RMS)}	75	A
Non repetitive surge peak on-state current	I _{TSM}	700	A
I ² t value for fusing (tp=10ms)	I ² t	2450	A ² S
Critical rate of rise of on-state current t(I =2×IGT, tr ≤ 100 ns)	di/dt	150	A/μS
Peak gate current	I _{GM}	5	A
Average gate power dissipation	P _{G(AV)}	2	W

Thermal Resistances					
Symbol	Parameter		Value	Unit	
Rth(j-c)	Junction to case (DC)		TO-3P	0.60	°C/W
			TO-247	0.55	

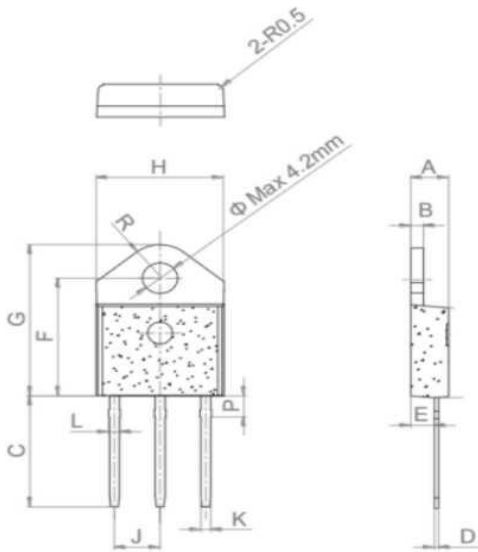
ELECTRICAL CHARACTERISTICS (T=25°C unless otherwise specified)					
Symbol	Test Condition	Value			Unit
		MIN.	TYP.	MAX.	
I _{GT}	V = 12V R = 140Ω	20	40	60	mA
V _{GT}				1.3	V
V _{GD}	VD = V _{DRM} Tj = 125°C R = 1KΩ	0.2			V
I _L	I _G = 1.2I _{GT}			300	mA
I _H	IT = 50mA			200	mA
dV/dt	V _D = 2/3 V _{DRM} Gate Open Tj = 125°C	500			V/μs

STATIC CHARACTERISTICS				
Symbol	Parameter		Value(MAX.)	Unit
V _{TM}	ITM = 140A tp = 380μs	Tj = 25°C	1.8	V
I _{DRM}	V _D = V _{DRM} V _R = V _{RRM}	Tj = 25°C	200	μA
I _{RRM}		Tj = 125°C	8	mA

Ordering Information Scheme

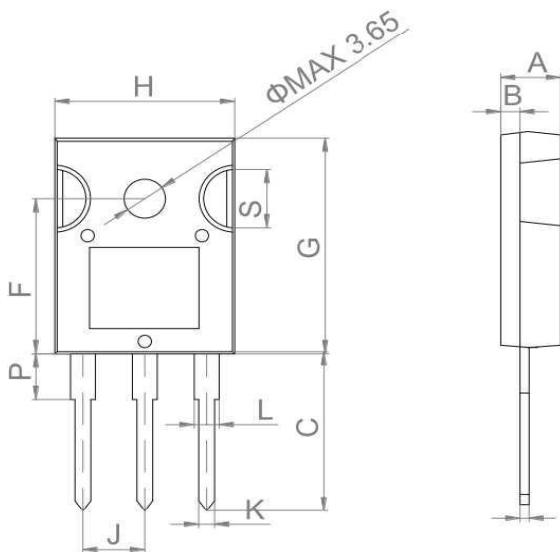


TO-3P Package Mechanical Data



Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	4.40		4.60	0.173		0.181
B	1.40		1.60	0.055		0.062
C	15.48		15.88	0.609		0.625
D	0.50		0.70	0.019		0.027
E	2.70		2.90	0.106		0.114
F	15.92		16.32	0.626		0.642
G	20.27		20.67	0.798		0.813
H	15.15		15.35	0.590		0.604
J		5.45			0.214	0.216
K	1.10		1.30	0.043		0.051
L	1.15		1.35	0.045		0.053
P	2.68		3.08	0.105		0.121
R		4.20			0.165	

TO-247 Package Mechanical Data



Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	4.9		5.4	0.193		0.213
B	1.6		2.0	0.063		0.079
C	14.35		15.4	0.565		0.606
D	0.5		0.8	0.020		0.031
F	14.4		15.1	0.567		0.594
G	19.7		20.6	0.775		0.811
H	15.4		16.2	0.606		0.638
J	5.3		5.6	0.209		0.220
K	1.3		1.5	0.051		0.059
L	2.8		3.3	0.110		0.130
P	3.7		4.2	0.146		0.165
S	5.35		5.65	0.211		0.222

FIG.1 Maximum power dissipation versus on-state current

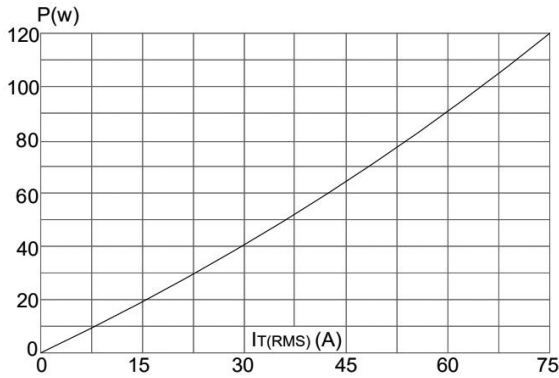


FIG.2: on-state current versus case temperature

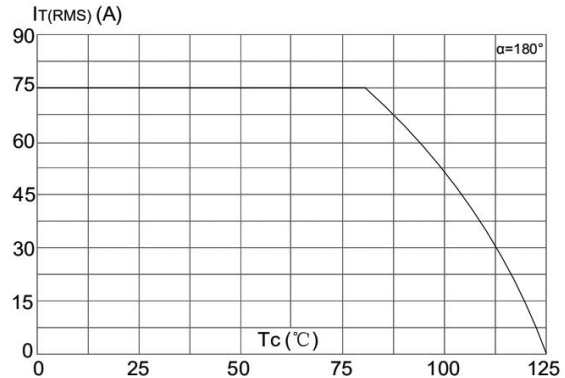


FIG.3: Surge peak on-state current versus number of cycles

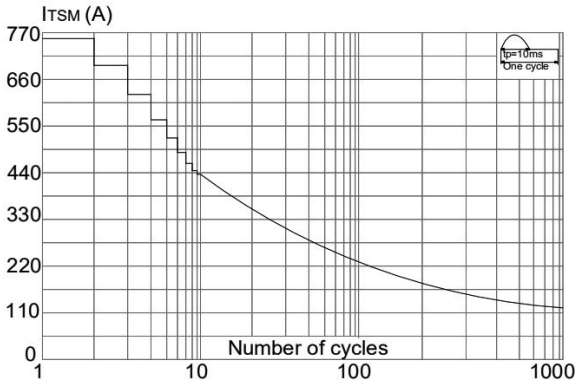


FIG.4: On-state characteristics (maximum values)

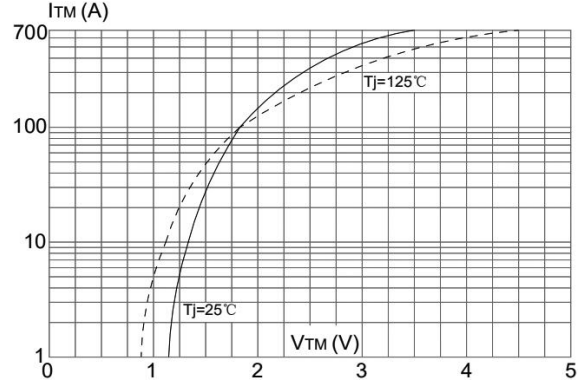


FIG.5: Non-repetitive surge peak on-state current for a sinusoidal pulse with width $t_p < 10\text{ms}$, and corresponding value of $I_2 t$ ($di/dt < 50\text{A}/\mu\text{s}$)

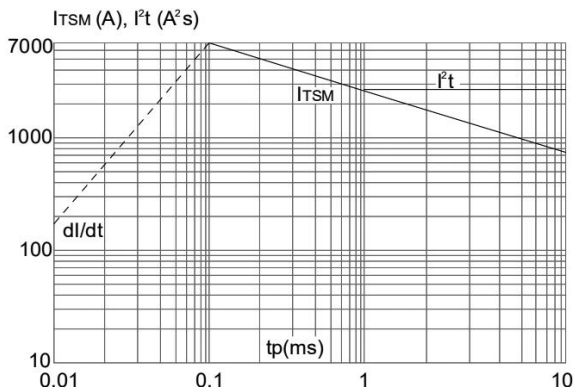


FIG.6: Relative variations of gate trigger current holding current and latching current versus junction temperature

