

SB7560S 75A SCRs

FEATURES

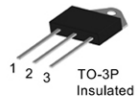
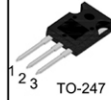
- High thermal conductivity performance
- High voltage capacity
- Very high current surge capability

APPLICATIONS

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

Parameters Summary

ICP/TVE221003 Invt. (T) RMS 75A RTJ 360mA



ABSOLUTE MAXIMUM RATINGS

Parameter	Symbol	Value	Unit
Storage junction temperature range	T _{stg}	-40 ~ 150	°C
Operating junction temperature range	T _J	-40 ~ 125	°C
Repetitive peak on-state voltage (T = 25°C)	V _{DRM}	1200/1000	V
Repetitive peak reverse voltage (T = 25°C)	V _{KRM}	1200/1000	V
Non repetitive surge peak Off-state voltage	V _{DSM}	V _{DRM} + 100	V
Non repetitive peak reverse voltage	V _{KSM}	V _{KRM} + 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 (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	°C/W
		TO-247	

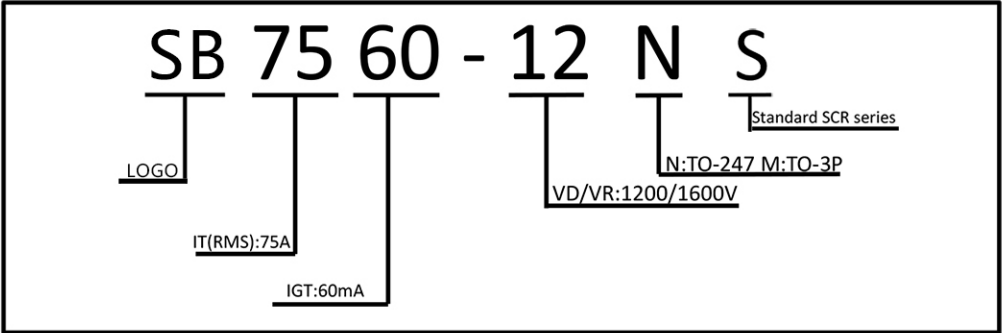
ELECTRICAL CHARACTERISTICS (T=25°C unless otherwise specified)

Symbol	Parameter
V_{GT}	$V_{GT} = 12V$ $R = 140\Omega$
V_{DRM}	$V_{DRM} = 125V$ $T = 25^\circ C$ $R = 140\Omega$
I_T	$I_T = 75A$
α	$\alpha = 0.95$

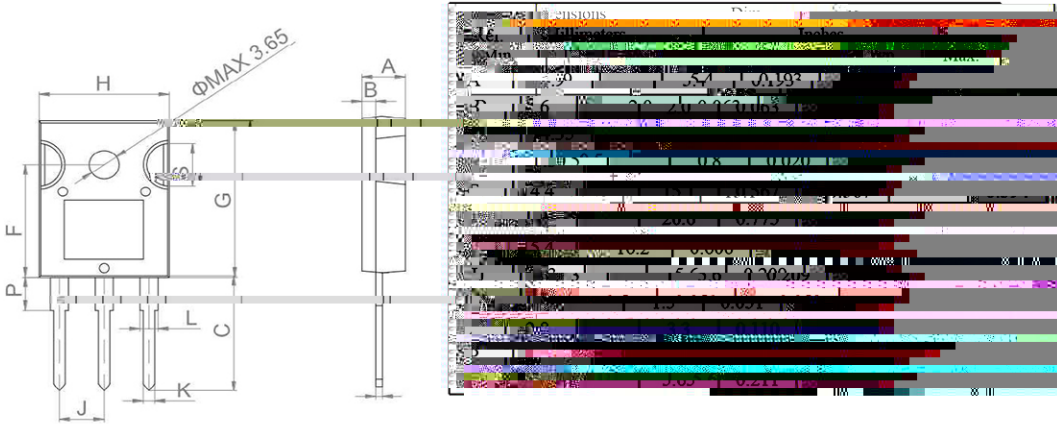
STATIC CHARACTERISTICS

Symbol	Parameter	Value
V_{TM}	$I_{TM} = 140A$ $t_p = 380\mu s$	
I_{DRM}	$V_D = V_{DRM}$ $V_G = V_{GT}$	
I_{RRM}		

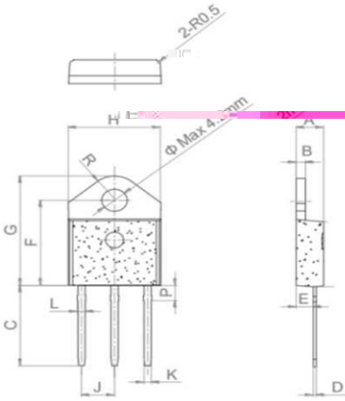
Ordering Information Scheme



TO-247 Package Mechanical Data



TO-3P Package Mechanical Data



Ref.	Dimensions					
	Millimeters			Inches		
	Millimeters	Millimeters	Millimeters	Inches	Millimeters	Millimeters
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		0.815
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	

FIG.1 Maximum power dissipation versus on-state current

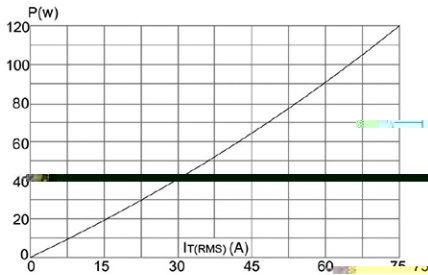


FIG.2: on-state current versus case temperature

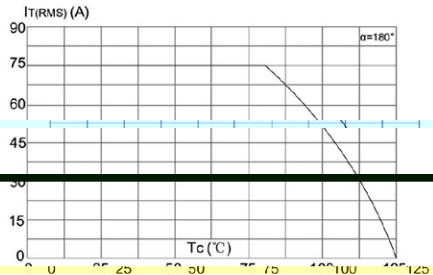


FIG.3: Surge peak on-state current versus number of cycles

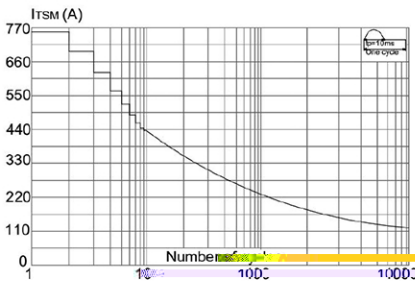


FIG.4: On-state characteristics (maximum values)

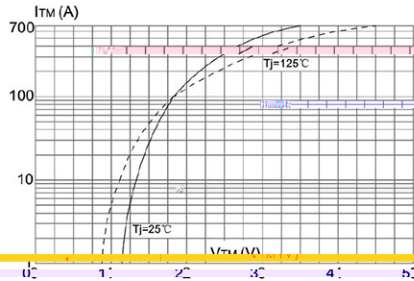


FIG.5: Non-repetitive surge peak on-state current for a sinusoidal pulse with width $t_p < 10\text{ms}$, and corresponding value of $I_2 t$ ($di/dt < 50\text{A}/\mu\text{s}$)

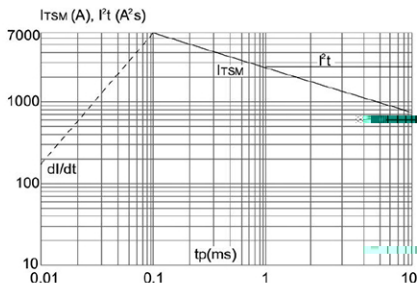


FIG.6: Relative variations of gate trigger current, holding current and latching current versus junction temperature

