YZPST

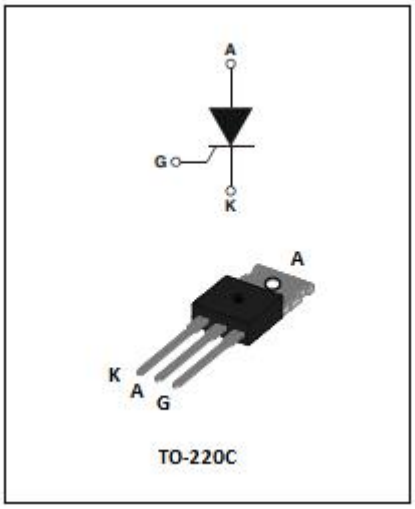
YANGZHOU POSITIONING TECH. CO., LTD

PSTS2535 Series 25A SCRs

Rev：1.0

DESCRIPTION:

Glass passivated thyristors in a plastic envelope, The PSTS2535SCRs series is suitable to fit all modes of control, found in applications such as overvoltage crowbar protection, motor control circuits in power tools and kitchen aids, inrush current limiting circuits, capacitive discharge ignition, Softstart AC motor control and voltage regulation circuits…



Symbol	Value	Unit
$I_{T(RMS)}$	40	A
V_{DRM} V_{RRM}	1200	V
I_{GT}	35	mA

ABSOLUTE MAXIMUM RATINGS

Parameter	Symbol	Value	Unit
Storage junction temperature range	Tstg	-40 ~150	℃
Operating junction temperature range	Tj	-40~125	℃
Repetitive peak off-state voltage (T =25℃)	V_{DRM}	1200	V
Repetitive peak reverse voltage (T =25℃)	V_{RRM}	1200	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℃)	$I_{T(RMS)}$	40	A
Non repetitive surge peak on-state current	I_{TSM}	350	A
Average on-state current (180° conduction angle)	$I_{T(AV)}$	25	A
I^2t value for fusing (tp=10ms)	I^2t	450	A^2S
Critical rate of rise of on-state current (I =2×IGT, tr ≤ 100 ns)	dI/dt	150	A/μS
Peak gate current	I_{GM}	4	A
Average gate power dissipation	$P_{G(AV)}$	1	W

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ELECTRICAL CHARACTERISTICS (T=25℃unless otherwise specified)

Symbol	Test Condition		Value	Unit
I_{GT}	V =12V R =140Ω	MAX.	35	mA
V_{GT}		MAX.	1.3	V
V_{GD}	V_D=V_{DRM} Tj=125℃ R=1KΩ	MIN.	0.2	V
I_L	I_G=1.2I_{GT}	MAX.	75	mA
I_H	IT=50mA	MAX.	50	mA
dV/dt	V_D=2/3V_{DRM} Gate Open Tj=125℃	MIN.	500	V/μs

STATIC CHARACTERISTICS

Symbol	Parameter		Value(MAX.)	Unit
V_{TM}	I_{TM} =40A tp=380μs	Tj =25℃	1.65	V
I_{DRM}	V_D=V_{DRM} V_R=V_{RRM}	Tj =25℃	500	μA
I_{RRM}		Tj =125℃	6	mA

Thermal Resistances

Symbol	Parameter	Value(MAX.)	Unit
Rth(j-a)	junction to ambient(DC)	60	℃/W
Rth(j-c)	Junction to case (DC)	0.9	

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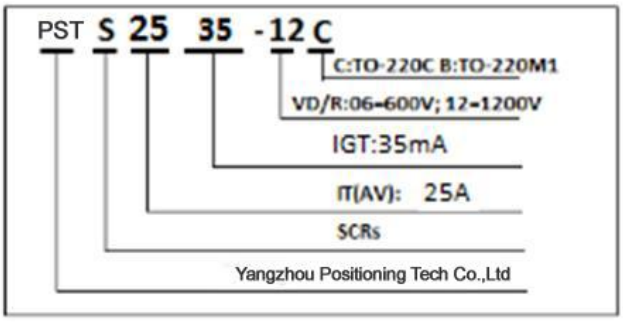
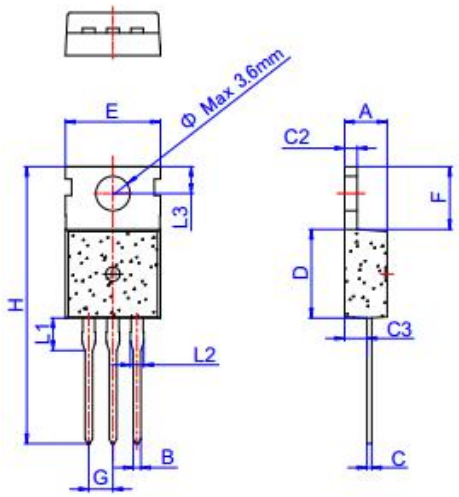
Ordering information

scheme



TO-220C Package Mechanical Data



TO-220C

Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	4.40		4.60	0.173		0.181
B	0.70		0.90	0.028		0.035
C	0.45		0.60	0.018		0.024
C2	1.23		1.32	0.048		0.052
C3	2.20		2.60	0.087		0.102
D	8.90		9.90	0.350		0.390
E	9.90		10.3	0.390		0.406
F	6.30		6.90	0.248		0.272
G		2.54			0.1	
H	28.0		29.8	1.102		1.173
L1		3.39			0.133	
L2	1.14		1.70	0.045		0.067
L3	2.65		2.95	0.104		0.116
Φ		3.6			0.142	

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FIG.1 power dissipation versus Average RMS on-state current

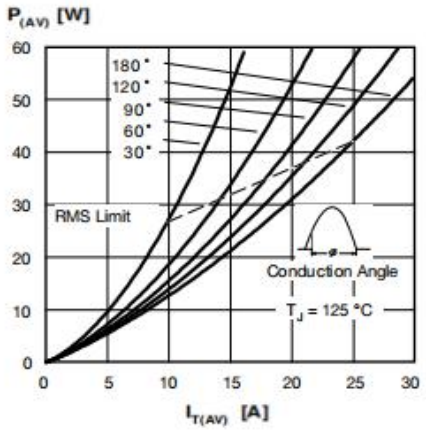


FIG.2: Average on-state current versus case temperature

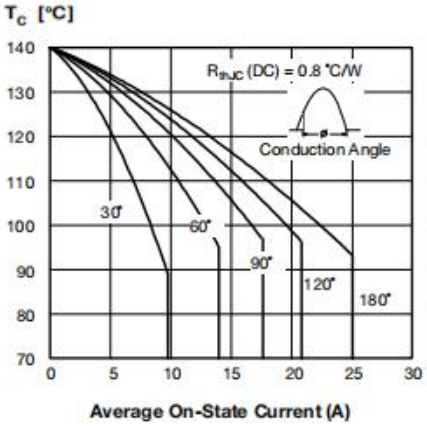


FIG.3: maximum Non repetitive **Surge current**

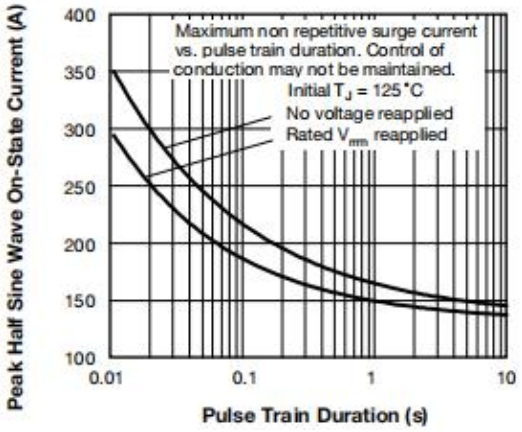


FIG.4: On-state characteristics (maximum values)

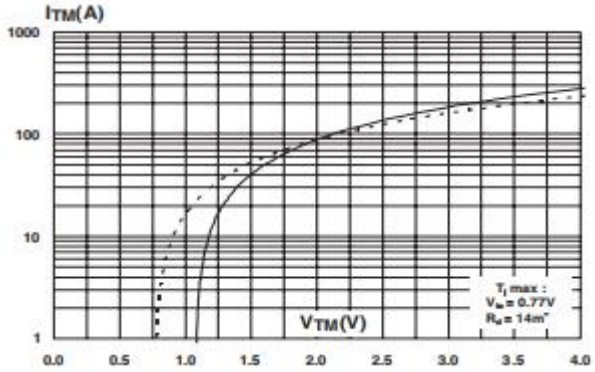
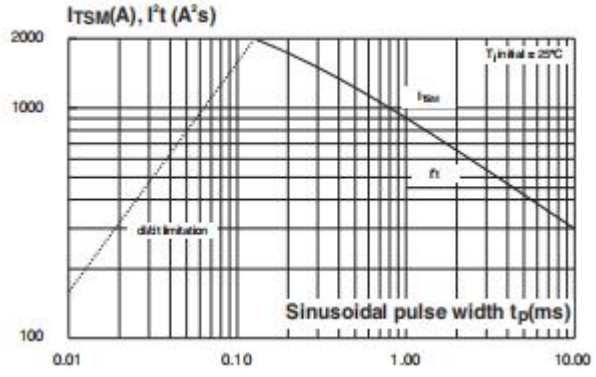
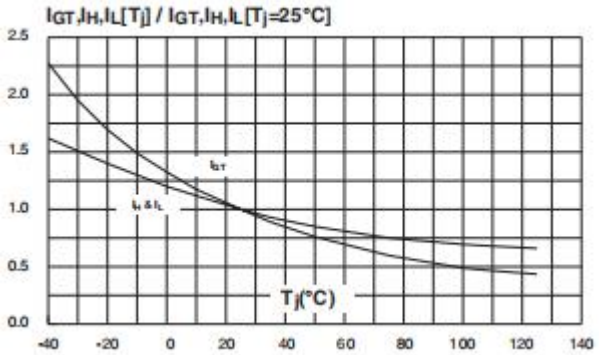


FIG.5: Non-repetitive surge peak on-state currentfor a sinusoidal pulse with width tp<10ms, and corresponding value of I^2t (dI/dt < 50A/µs)

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





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