

25A Standard SCRs

Product Summary

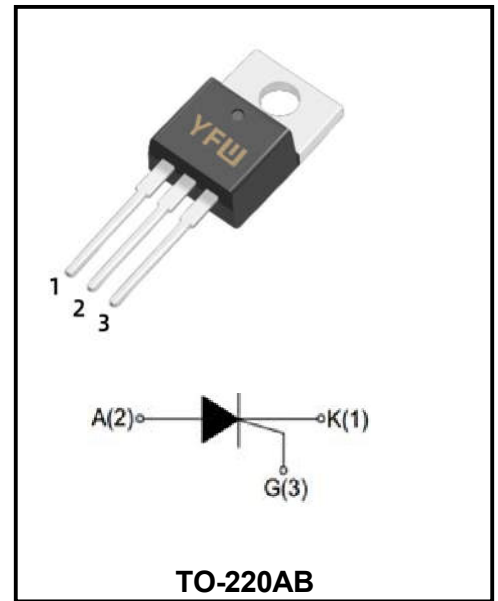
Symbol	Value	Unit
$I_{T(AV)}$	25	A
$V_{DRM} V_{RRM}$	1200	V
V_{TM}	1.6	V

Features

With high ability to withstand the shock loading of large current, Provide high dv/dt rate with strong resistance to electromagnetic interference.

Application

Power charger, T-tools, massager, solid state relay, AC Motor speed regulation and so on.



Absolute maximum ratings (Ta=25°C unless otherwise noted)

Parameter		Symbol	Value	Unit
Repetitive peak off-state voltage		V_{DRM}	1200	V
Repetitive peak reverse voltage		V_{RRM}	1200	V
Average on-state current (Tc=79°C, 180°C conduction half sine wave)		$I_{T(AV)}$	16	A
RMS on-state current(Tc=79°C, 180°C conduction half sine wave)		$I_{T(RMS)}$	25	A
One cycle Non repetitive surge current	10ms sine pulse, rated VRRM applied	I_{TSM}	250	A
	10mssinepulse, no voltage applied		260	
I ² t value for fusing	10mssInepulse, rated VRRM applied	I ² t	310	A ² S
	10ms sine pulse, no voltage applied		320	
Critical rate of rise of on-state current (Tj=25°C)		di/dt	100	A/μs
Peak gate current tp=20us, Tj=125°C		I _{GM}	4	A
Average gate power dissipation Tj=125°C		P _{G(AV)}	1	W
Junction Temperature		T _J	-40~+125	°C
Storage Temperature		T _{STG}	-40 ~+150	°C

Electrical characteristics ($T_J=25^{\circ}\text{C}$, unless otherwise noted)

Parameter	Symbol	Test Condition	Value			Unit
			min	typ	max	
Gate trigger current	I_{GT}	$T_J=125^{\circ}\text{C}$	-	-	15	mA
Gate trigger voltage	V_{GT}		-	-	1.0	V
Non-triggering gate voltage	V_{GD}	$V_D=V_{DRM}$, $T_J=125^{\circ}\text{C}$	0.2	-	-	V
Latching current	I_L	$I_G=1.2I_{GT}$	-	-	80	mA
Holding current	I_H		-	-	60	mA
Critical-rate of rise of commutation voltage	dV_D/dt	$V_D=67\%V_{DRM}$ gate open $T_J=125^{\circ}\text{C}$	500	-	-	V/μs

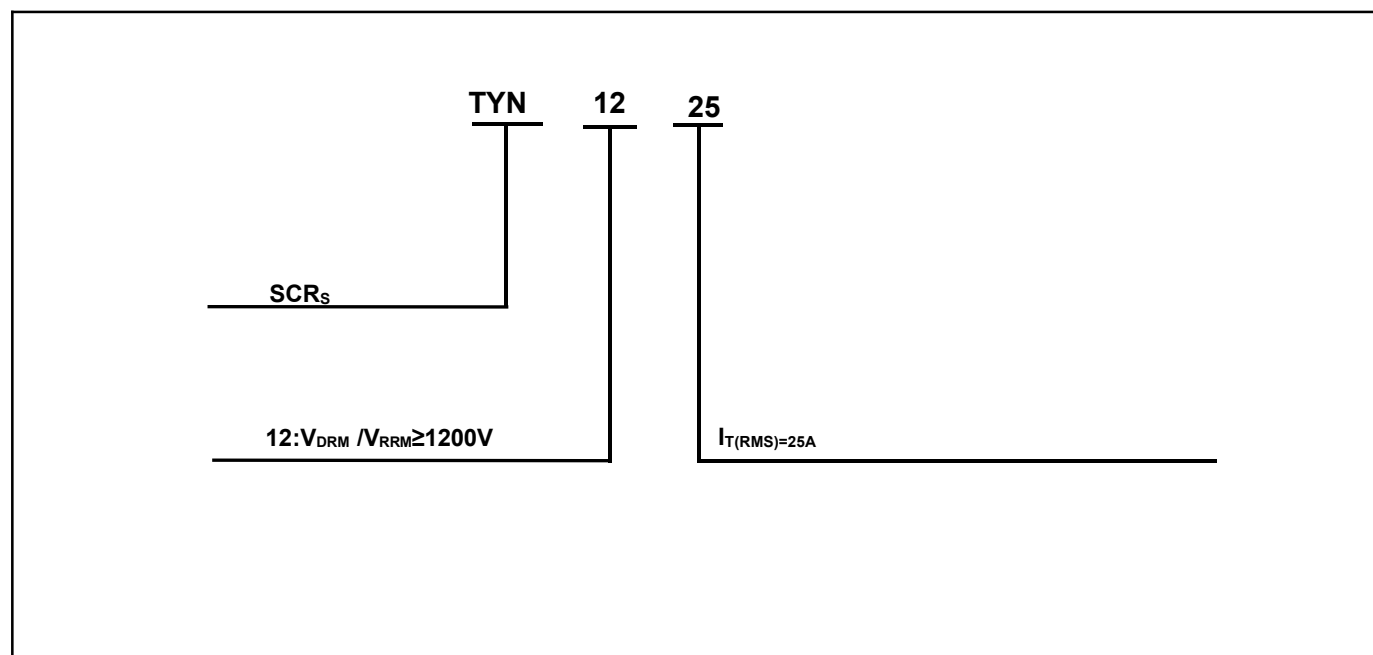
STATIC CHARACTERISTICS

On-state Voltage	V_{TM}	$I_{TM}=50\text{A}$ $t_p=380\mu\text{s}$	$T_J=25^{\circ}\text{C}$	-	-	1.6	V
Repetitive Peak Off-State Current	I_{DRM}	$V_D=V_{DRM}$	$T_J=25^{\circ}\text{C}$	-	-	10	μA
Repetitive Peak Reverse Current	I_{RRM}	$V_R=V_{RRM}$	$T_J=125^{\circ}\text{C}$	-	-	4	mA

THERMAL RESISTANCES

Thermal resistance	$R_{th(j-c)}$	Junction to case	TYP.	1.9	$^{\circ}\text{C/W}$
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Ordering Information



Typical Characteristics

FIG.1: Maximum average power dissipation versus average on-state current

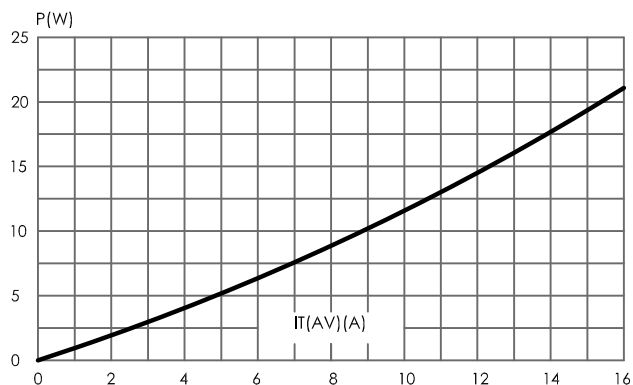


FIG.2: RMS on-state current versus case temperature.

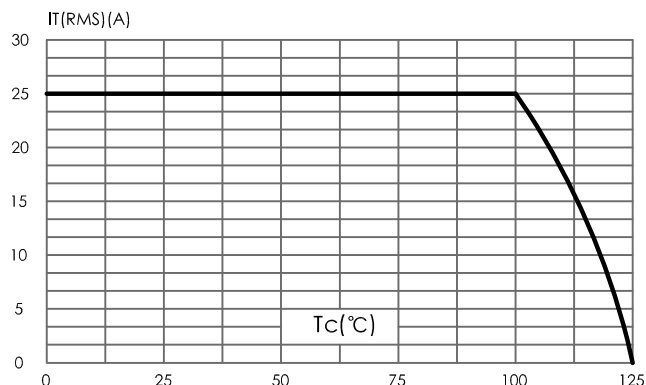


FIG.3: Relative variation of gate trigger current, holding current and latching current versus junction temperature.

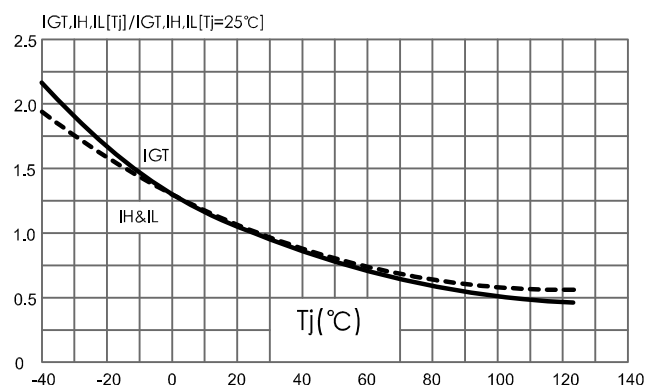


FIG.4: Surge peak on-state current versus number of cycles.

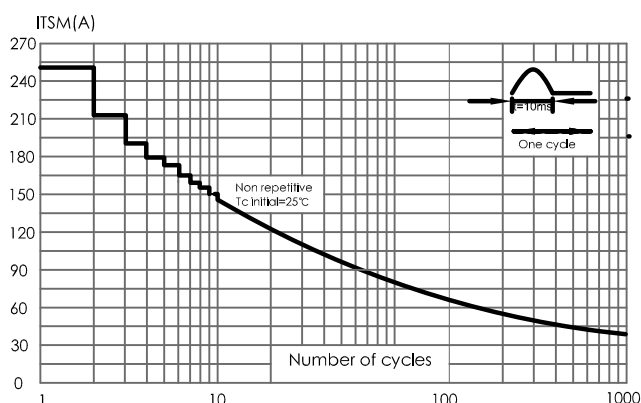


FIG.5: Non-repetitive surge peak on-state current for a sinusoidal pulse with width $t_p < 10$ ms, and corresponding value of I^2t

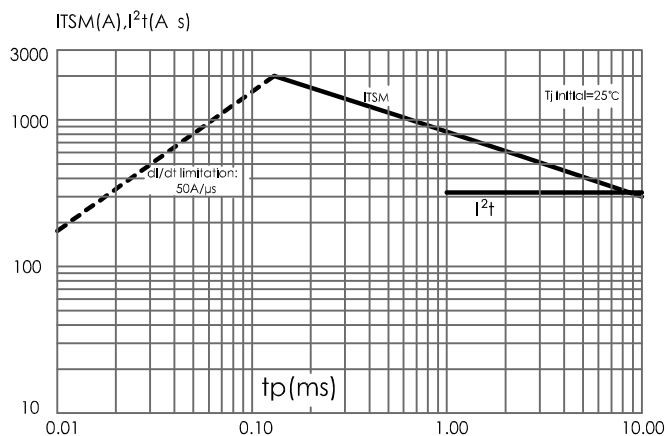
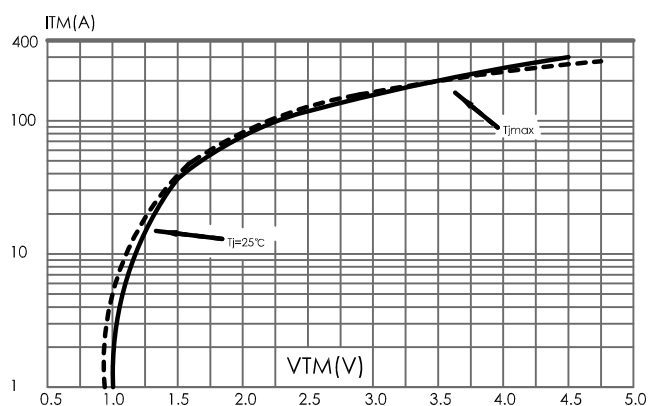
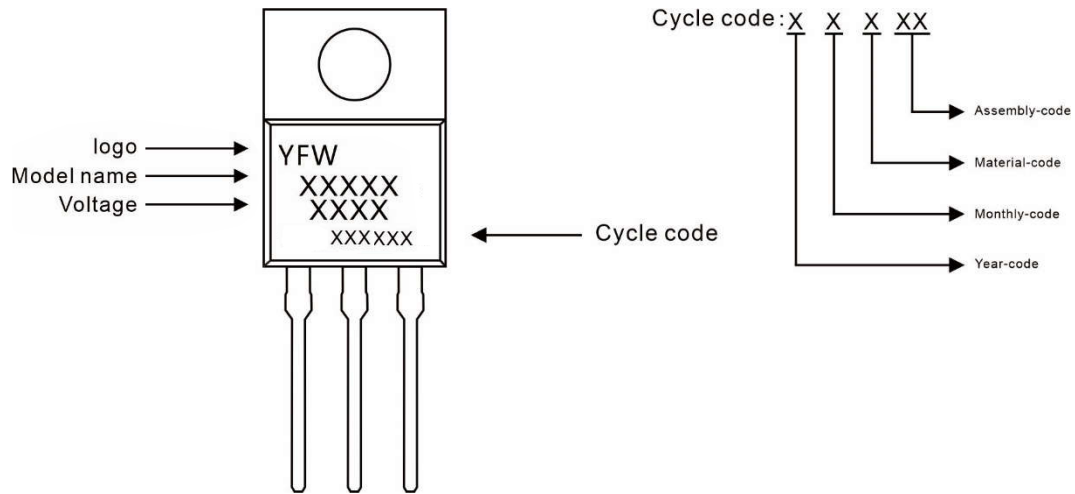


FIG.6: On-state characteristics (maximum values).



Marking Diagram



Ordering information

Model name	Package	Unit Weight	Base Quantity	Packing Quantity
TYN1225	TO-220AB	0.07oz(1.96g)	50pcs/tube	1000PCS/Box 5000PCS/Carton

Package Dimensions

TO-220AB

Symbol	Millimeter		Inches	
	Min.	Max.	Min.	Max.
A	4.30	4.70	0.169	0.185
A1	2.52	2.82	0.099	0.111
b	0.71	0.91	0.028	0.036
b1	1.17	1.37	0.046	0.054
c	0.30	0.50	0.012	0.020
c1	1.17	1.37	0.046	0.054
D	9.90	10.20	0.390	0.402
E	8.50	8.90	0.335	0.350
E1	12.00	12.50	0.472	0.492
e	2.44	2.64	0.096	0.104
e1	4.88	5.28	0.192	0.208
F	2.60	2.80	0.102	0.110
L	13.20	13.80	0.520	0.543
L1	3.80	4.20	0.150	0.165
Φ	3.60	3.96	0.142	0.156

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