

25A Standard SCRs

Product Summary

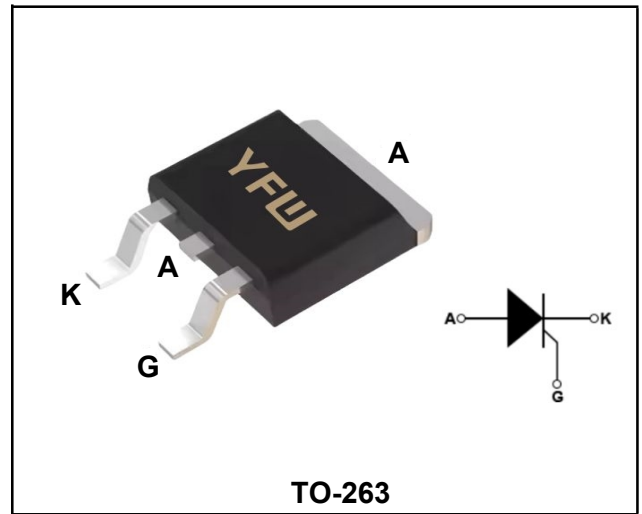
Symbol	Value	Unit
$I_{T(RMS)}$	25	A
$V_{DRM} V_{RRM}$	1200	V
V_{TM}	1.6	V

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	I_{TSM}	10ms sine pulse,rated VRRM applied	250
		10mssinepulse,no voltage applied	260
I^2t value for fusing	I^2t	10msslnepulse,ratedVRRMapplied	310
		10ms sine pulse,no voltage applied	320
Critical rate of rise of on-state current (Tj=25°C)	di/dt	100	A/ μ s
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°C, unless otherwise noted)

Parameter	Symbol	Test Condition	Value			Unit
			min	typ	max	
Gate trigger current	I _{GT}	T _J =125°C	-	-	15	mA
Gate trigger voltage	V _{GT}	T _J =125°C	-	-	1.0	V
Non-triggering gate voltage	V _{GD}	V _D =V _{DRM} , T _J =125°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°C	500	-	-	V/μs

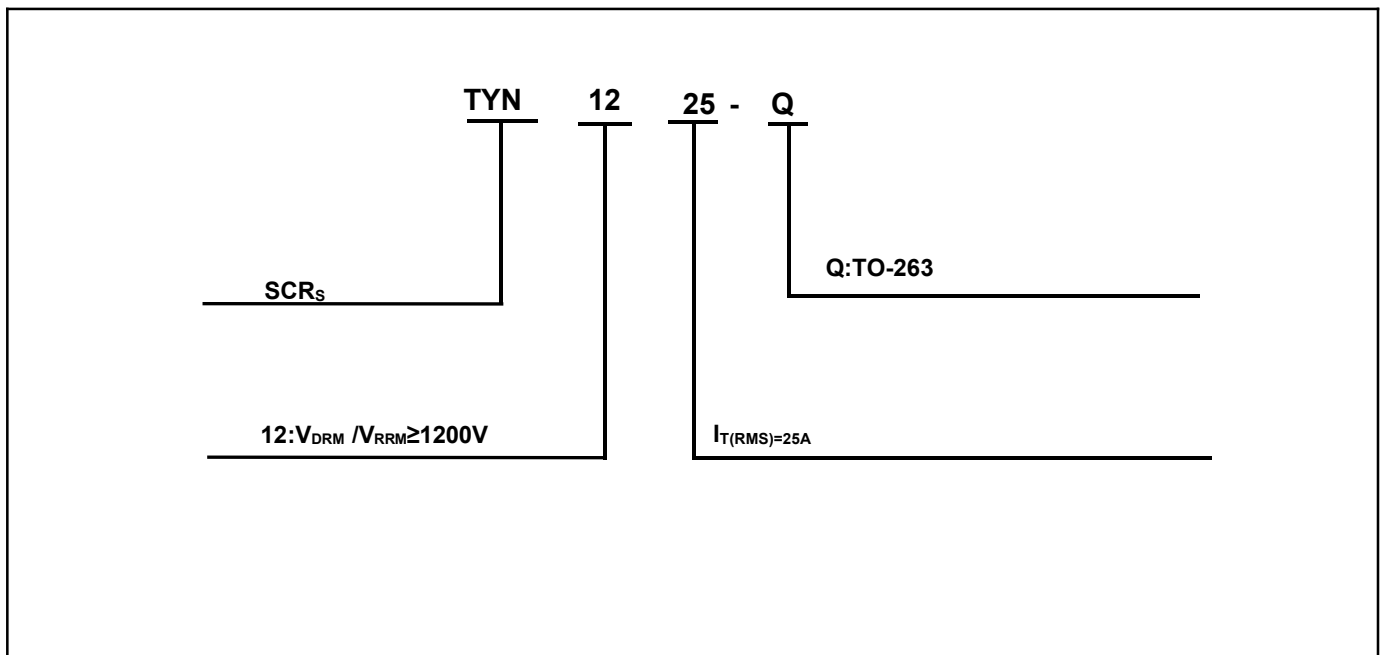
STATIC CHARACTERISTICS

On-state Voltage	V _{TM}	I _{TM} =50A tp=380us	T _J =25°C	-	-	1.6	V
Repetitive Peak Off-State Current	I _{DRM}	V _D =V _{DRM}	T _J =25°C	-	-	10	μA
Repetitive Peak Reverse Current	I _{RRM}	V _R = V _{RRM}	T _J =125°C	-	-	4	mA

THERMAL RESISTANCES

Thermal resistance	R _{th (j-c)}	Junction to case		TYP.	1.0	°C/W
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Ordering Information



Typical Characteristics

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

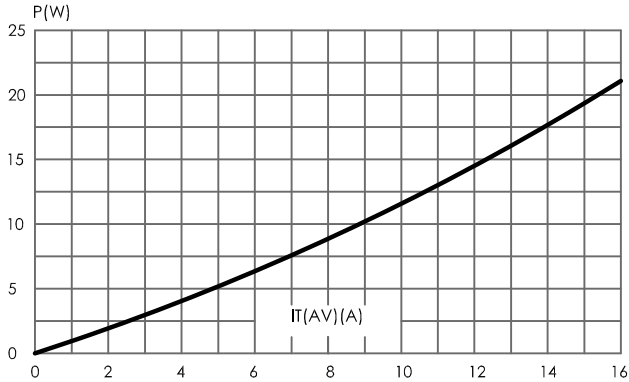


FIG.2: RMS on-state current versus case temperature.

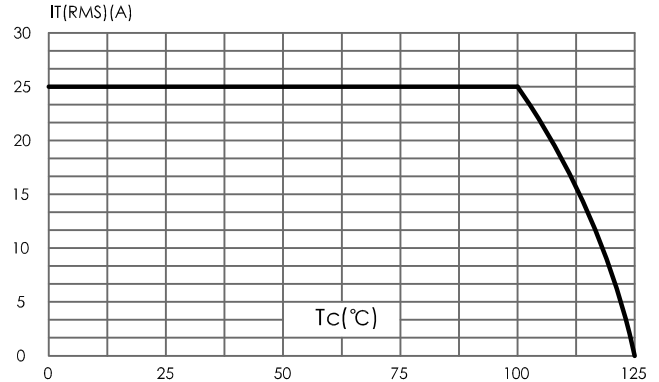


FIG.3: Relative variation of gate trigger current, holding current and latching current versus junction temperature.

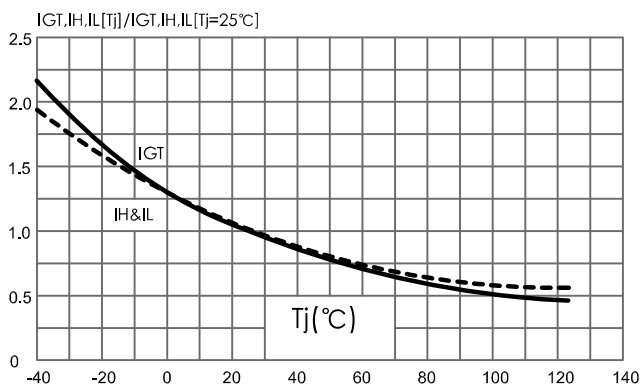


FIG.4: Surge peak on-state current versus number of cycles.

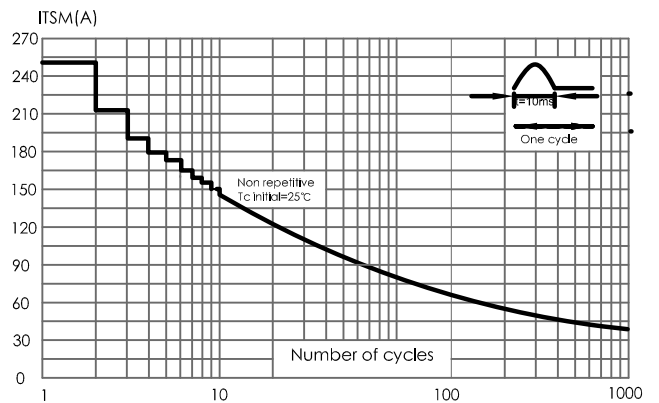


FIG.5: Non-repetitive surge peak on-state current for a sinusoidal pulse with width $t_p < 10$ ms, and corresponding value of I^2t

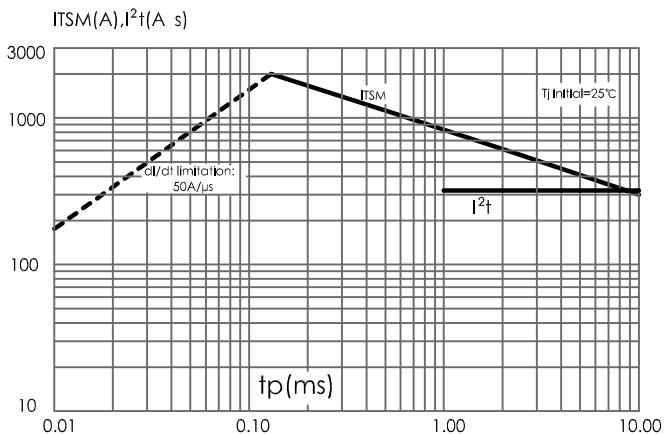
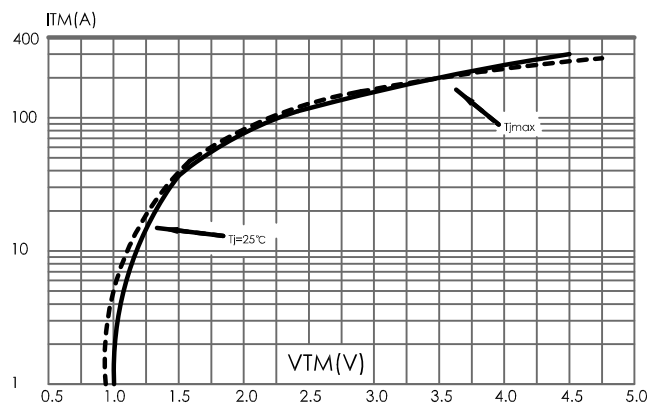
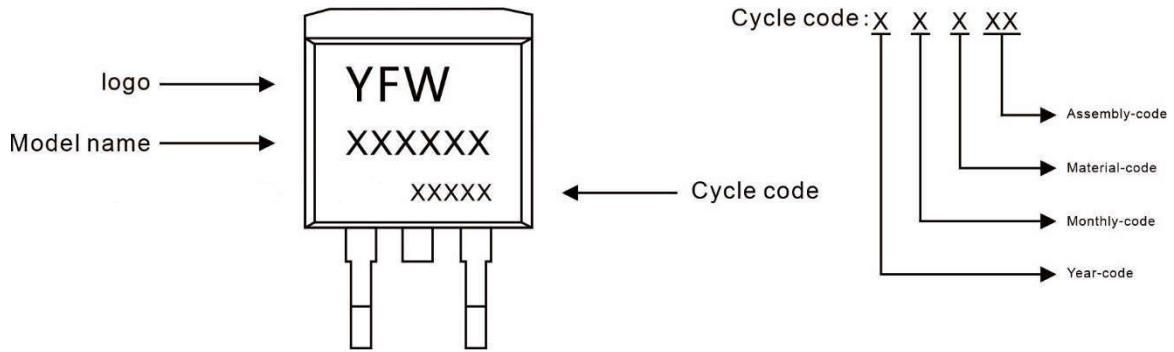


FIG.6: On-state characteristics (maximum values).



Marking Diagram



Ordering information

Model name	Package	Unit Weight	Base Quantity	Packing Quantity
TYN1225Q	TO-263	0.04oz(1.16g)	800pcs/reel	1600pcs/box 8000pcs/Carton

Package Dimensions

TO-263

Dim	Millimeter		Inches	
	Min.	Max.	Min.	Max.
A	4.30	4.70	0.169	0.185
A1	0.00	0.15	0.000	0.006
A2	4.30	4.55	0.169	0.179
B	1.10	1.50	0.043	0.059
b	0.70	0.90	0.028	0.035
b1	1.20	1.50	0.047	0.059
c	0.30	0.60	0.012	0.024
c1	1.17	1.37	0.046	0.054
D	9.90	10.35	0.390	0.407
E	8.50	9.5	0.335	0.374
e	2.44	2.64	0.096	0.104
e1	4.88	5.28	0.192	0.208
L	15.00	15.55	0.591	0.612
L1	4.30	5.30	0.169	0.208
L2	2.40	2.60	0.094	0.102
L3	1.60	1.80	0.063	0.071

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