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Product: Standard Gate SCRs

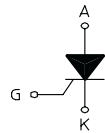
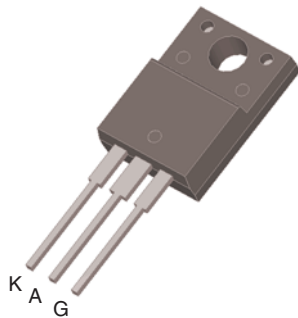
Standard SCRs uses a high performance glass passivated technology.

This general purpose Family of Silicon Controlled Rectifiers is designed for power supplies.

Product	Family	$I_{T(RMS)}$	V_{RRM}/V_{DRM} (V)	I_{TSM} (A)	$I_{GT\ min}$ (μA)	$I_{GT\ min}$ (mA)	$I_{GT\ max}$ (μA)	$I_{GT\ max}$ (mA)	$dv/dt_{(min)}$ V/ μs	PACKAGE
FS2510MW	FS25W(StG)	25	600	270	2			25	500	TO220F

STANDARD SCR

**TO220-F
(FULLY ISOLATED CASE)**



On-State Current

25 Amp

Gate Trigger Current

2 mA to 40 mA

Off-State Voltage

200 V ÷ 800 V

These series of **Silicon Controlled Rectifier** use a high performance PNP technology.

These parts are intended for general purpose applications where high gate sensitivity is required.

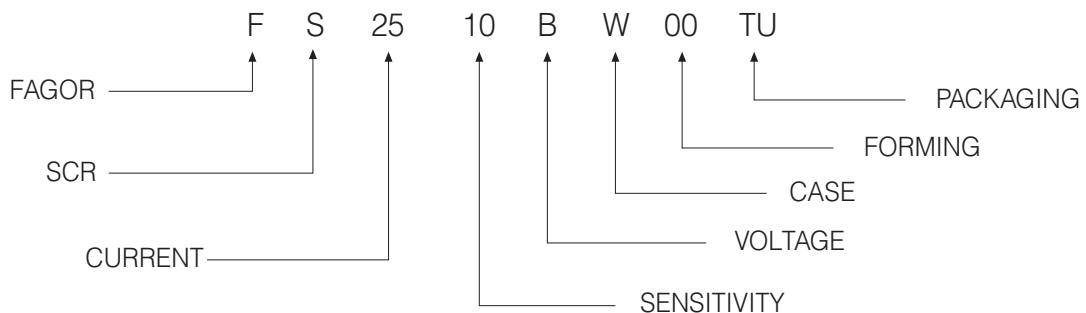
Absolute Maximum Ratings, according to IEC publication No. 134

SYMBOL	PARAMETER	CONDITIONS	Value	Unit
$I_{T(RMS)}$	On-state Current	180 ° Conduction Angle, $T_c = 110\text{ °C}$	25	A
$I_{T(AV)}$	Average On-state Current	Half Cycle, $\Theta = 180\text{ °}$, $T_c = 110\text{ °C}$	16	A
I_{TSM}	Non-repetitive On-State Current	Half Cycle, 60 Hz	300	A
I_{TSM}	Non-repetitive On-State Current	Half Cycle, 50 Hz	270	A
I^2t	Fusing Current	$t_p = 10\text{ms}$, Half Cycle	364	A ² s
I_{GM}	Peak Gate Current	20 μs max.	4	A
P_{GM}	Peak Gate Dissipation	20 μs max.	20	W
$P_{G(AV)}$	Gate Dissipation	20 ms max.	1	W
T_j	Operating Temperature		(-40 to + 125)	°C
T_{stg}	Storage Temperature		(-40 to + 125)	°C
T_{sld}	Soldering Temperature	10 ms max.	260	°C
V_{RGM}	Reverse Gate Voltage		5	V
V_{iso}	R.M.S. isolation voltage 50/60 Hz sinusoidal waveform		2.500	Vac

SYMBOL	PARAMETER	CONDITIONS	VOLTAGE					Unit
			B	D	M	S	N	
V_{DRM}	Repetitive Peak Off State	$R_{GK} = 1\text{ k}\Omega$	200	400	600	700	800	V
V_{RRM}	Voltage							

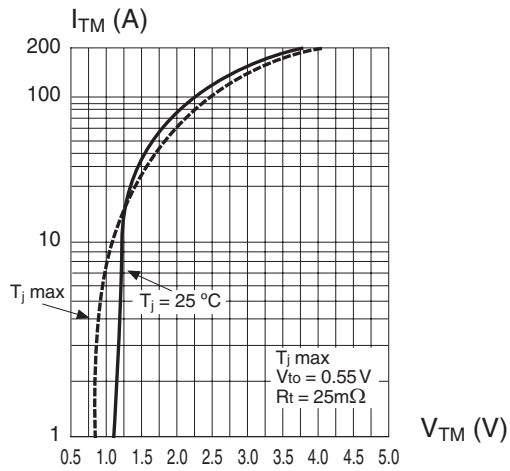
STANDARD SCR
Electrical Characteristics

SYMBOL	PARAMETER	CONDITIONS		SENSITIVITY		Unit
				10	14	
I _{GT}	Gate Trigger Current	V _D = 12 V _{DC} , R _L = 140Ω, T _j = 25 °C	MIN	2	4	m A
			MAX	25	40	
V _{GT}	Gate Trigger Voltage	V _D = 12 V _{DC} , R _L = 140Ω, T _j = 25 °C	MAX	1.3		V
V _{GD}	Gate Non Trigger Voltage	V _D = V _{DRM} , R _L = 3.3 kΩ, R _{GK} = 220 Ω T _j = 125 °C	MIN	0.2		V
I _H	Holding Current	I _T = 500 mA,	MAX	40	50	m A
I _L	Latching Current	I _G = 1.2 I _{GT}	MAX	60	90	m A
dV / dt	Critical Rate of Voltage Rise	V _D = 0.67 x V _{DRM} , Gate open T _j = 125 °C	MIN	500	1000	V/μs
dI / dt	Critical Rate of Current Rise	I _G = 2 x I _{GT} tr ≤ 100 ns, f = 60 Hz, T _j = 125 °C	MIN	100		A/μs
V _{TM}	On-state Voltage	at I _T = 50 Amp, tp = 380 μs, T _j = 25 °C	MAX	1.5		V
V _{t(o)}	Threshold Voltage	T _j = 125 °C	MAX	0.75		V
r _d	Dynamic resistance	T _j = 125 °C	MAX	16.5		mΩ
I _{DRM} / I _{RRM}	Off-State Leakage Current	V _D = V _{DRM} , R _{GK} = 1kΩ V _R = V _{RRM} ,	T _j = 125 °C	MAX	2	m A
			T _j = 25 °C	MAX	5	μA
R _{th(j-c)}	Thermal Resistance Junction-Case for DC	for AC 360° conduction angle		2.5		°C/W
R _{th(j-a)}	Thermal Resistance Junction-Amb for DC	S = 1 cm ²		50		°C/W

PART NUMBER INFORMATION


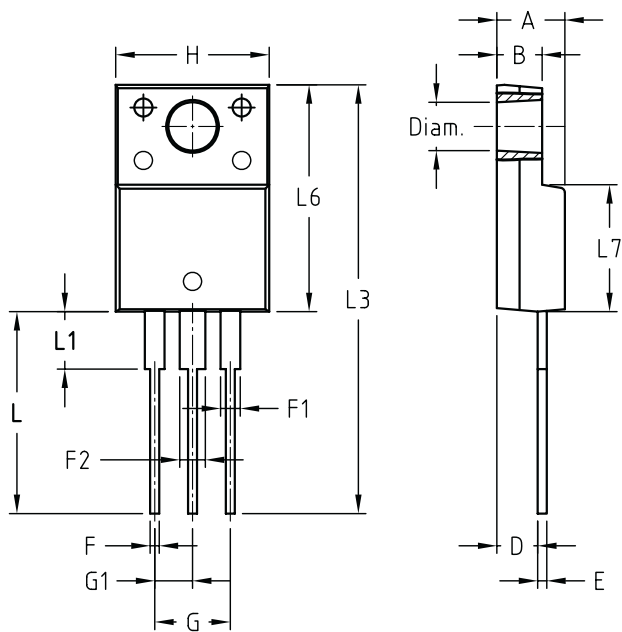
STANDARD SCR

Fig. 7: On-state characteristics (maximum values).



PACKAGE MECHANICAL DATA

TO220-F



REF.	DIMENSIONS		
	Milimeters		
	Min.	Nominal	Max.
A	3.55	4.50	4.90
B	2.34	3.00	3.70
D	2.03	2.70	2.96
E	0.35	0.60	0.70
F	0.25	0.60	1.01
F1	0.70	1.30	1.78
F2	0.70	1.70	1.78
G	4.88	5.00	5.28
G1	2.34	2.50	2.74
H	9.65	10.15	10.67
L	12.70	13.35	14.73
L1	2.93	3.75	6.35
L3	26.90	28.35	31.20
L6	14.22	15.00	16.50
L7	8.30	8.40	9.59
Diam.	3.00	3.20	3.28