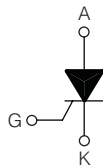
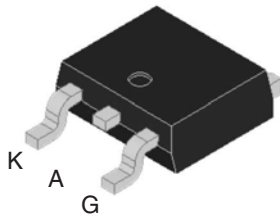


SENSITIVE GATE SCR
**DPAK
(Plastic)**


On-State Current **Gate Trigger Current**
 4 Amp < 200 μ A

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.

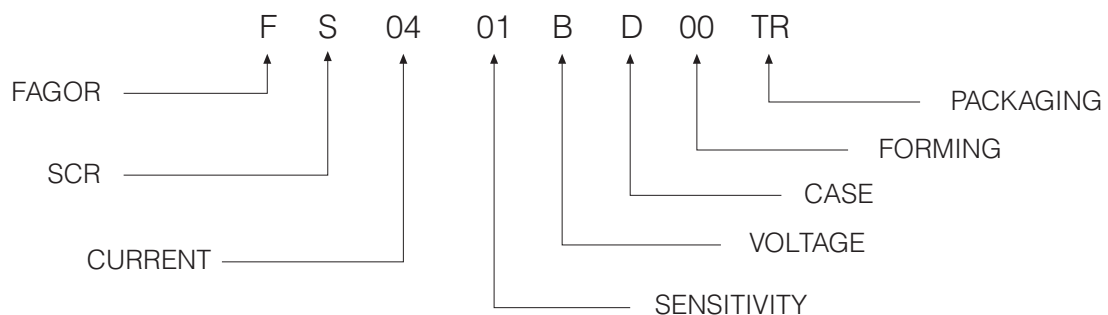
Absolute Maximum Ratings, according to IEC publication No. 134

SYMBOL	PARAMETER	CONDITIONS	Value	Unit
$I_{T(RMS)}$	On-state Current	180° Conduction Angle, $T_C = 110\text{ }^\circ\text{C}$	4	A
$I_{T(AV)}$	Average On-state Current	Half Cycle, $\Theta = 180\text{ }^\circ$, $T_C = 110\text{ }^\circ\text{C}$	2.5	A
I_{TSM}	Non-repetitive On-State Current	Half Cycle, 60 Hz	33	A
I_{TSM}	Non-repetitive On-State Current	Half Cycle, 50 Hz	30	A
I^2t	Fusing Current	$t_p = 10\text{ms}$, Half Cycle	4.5	A^2s
I_{GM}	Peak Gate Current	20 μ s max.	1.2	A
P_{GM}	Peak Gate Dissipation	20 μ s max.	3	W
$P_{G(AV)}$	Gate Dissipation	20 ms max.	0.2	W
T_j	Operating Temperature		(-40 to + 125)	$^\circ\text{C}$
T_{stg}	Storage Temperature		(-40 to + 150)	$^\circ\text{C}$
T_{sld}	Soldering Temperature	10s max.	260	$^\circ\text{C}$
V_{RGM}	Reverse Gate Voltage		5	V

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

SENSITIVE GATE SCR
Electrical Characteristics

SYMBOL	PARAMETER	CONDITIONS	SENSITIVITY				Unit	
			01	02	03	04		
I _{GT}	Gate Trigger Current	V _D = 12 V _{DC} , R _L = 140Ω. T _j = 25 °C	MIN	1		20	15	μA
			MAX	20	200	200	50	
V _{GT}	Gate Trigger Voltage	V _D = 12 V _{DC} , R _L = 140Ω. T _j = 25 °C	MAX	0.8				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	0.1				V
V _{RGM}	Reverse Gate Voltage	I _{RG} = 10μA,	MIN	8				V
I _H	Holding Current	I _T = 50 mA, R _{GK} = 1 kΩ T _j = 25 °C	MAX	5				mA
I _L	Latching Current	I _G = 1 mA, R _{GK} = 1 kΩ	MAX	6				mA
dV/dt	Critical Rate of Voltage Rise	V _D = 0.67 x V _{DRM} , R _{GK} = 1 kΩ, T _j = 125 °C	MIN	10	5	10	10	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	50				A/μs
V _{TM}	On-state Voltage	at I _T = 8 Amp, tp = 380 μs, T _j = 25 °C	MAX	1.6				V
V _{t0}	Threshold Voltage	T _j = 125 °C	MAX	0.85				V
r _d	Dynamic resistance	T _j = 125 °C	MAX	90				mΩ
I _{DRM} /I _{RRM}	Off-State Leakage Current	V _D = V _{DRM} , R _{GK} = 1kΩ T _j = 125 °C	MAX	1				mA
		V _R = V _{RRM} , T _j = 25 °C	MAX	5				mA
R _{th(j-c)}	Thermal Resistance Junction-Amb for DC	for AC 360° conduction angle		1.6				°C/W
R _{th(j-a)}	Thermal Resistance Junction-Amb for DC	S = 1 cm ²		70				°C/W

PART NUMBER INFORMATION


SENSITIVE GATE SCR

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

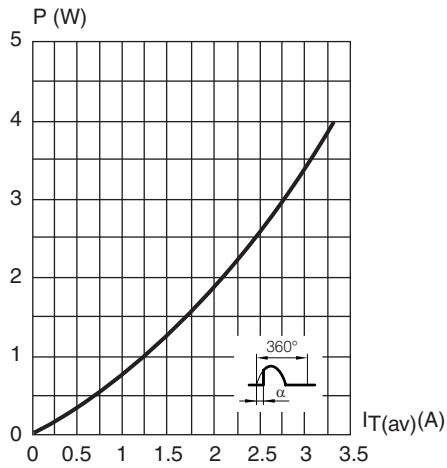


Fig. 2: Average and D.C. on-state current versus case temperature.

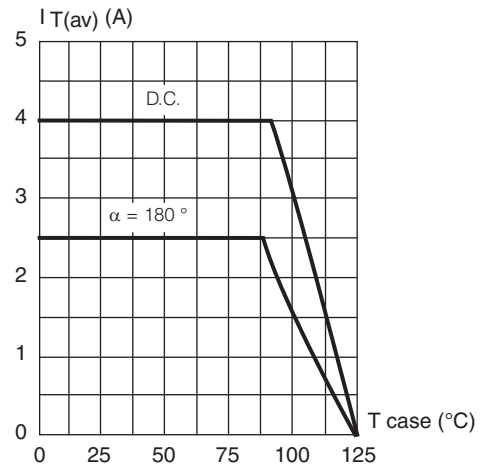


Fig. 3: Relative variation of thermal impedance junction to case versus pulse duration.

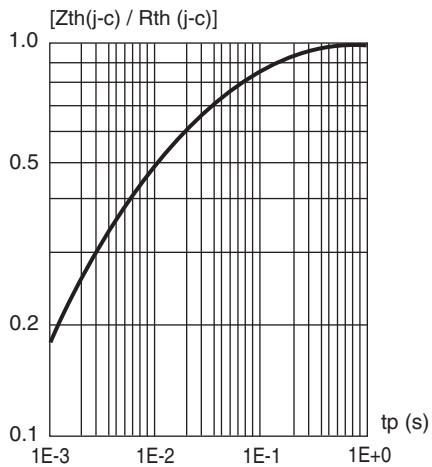


Fig. 4: Relative variation of gate trigger current, holding and latching current versus junction temperature.

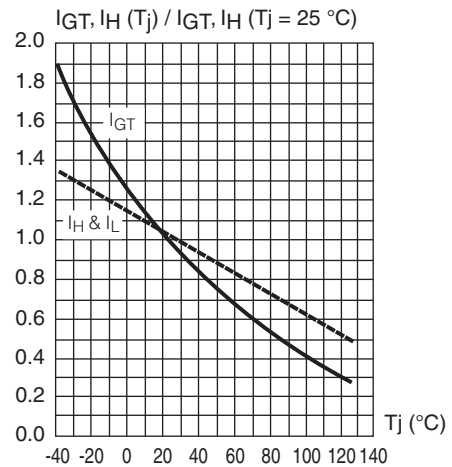


Fig. 5: Relative variation of holding current versus gate-cathode resistance (typical values).

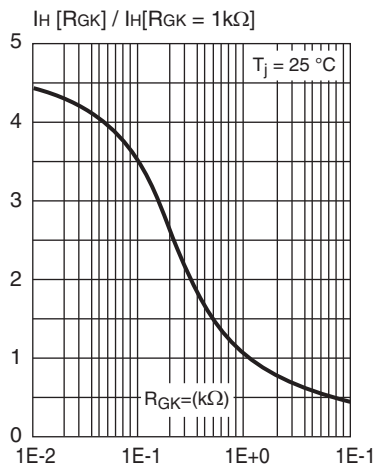
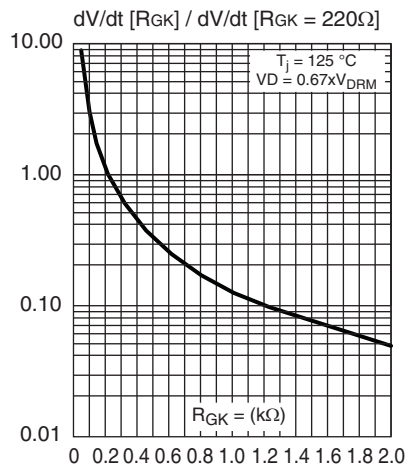


Fig. 6: Relative variation of dV/dt immunity versus gate-cathode resistance (typical values).



SENSITIVE GATE SCR

Fig. 7: Relative variation of dV/dt immunity versus gate-cathode resistance (typical values).

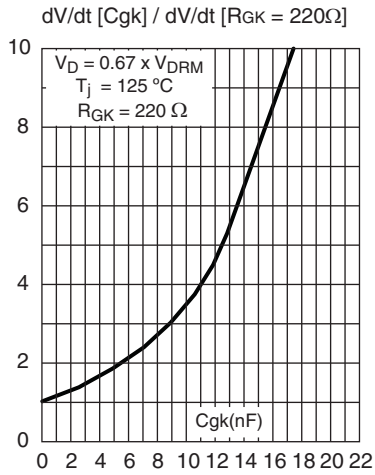


Fig. 8: Non repetitive surge peak on-state current versus number of cycles.

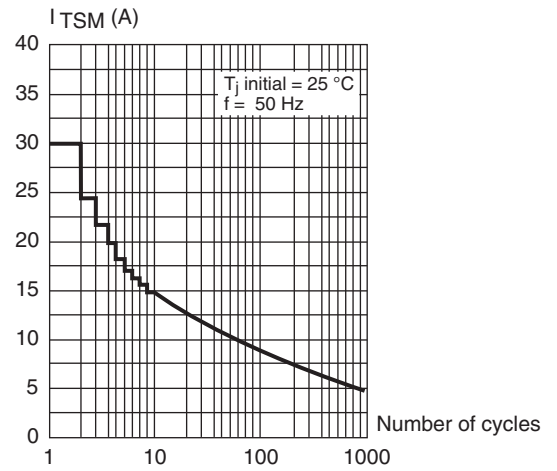


Fig. 9: Non repetitive surge peak on-state current for a sinusoidal pulse with width: $t_p < 10 \text{ ms}$, and corresponding value of $I^2 t$.

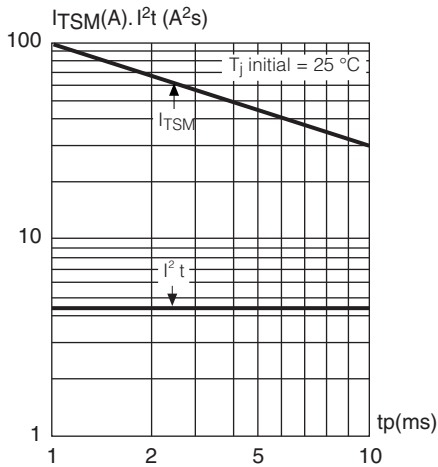
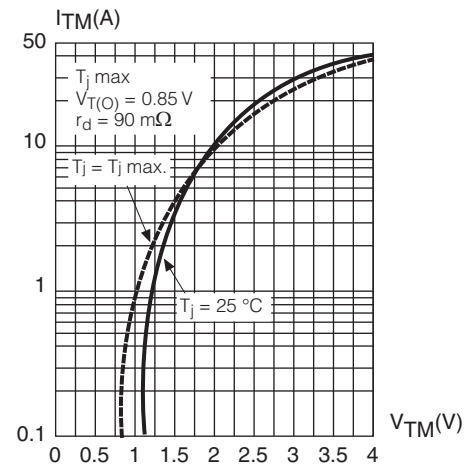


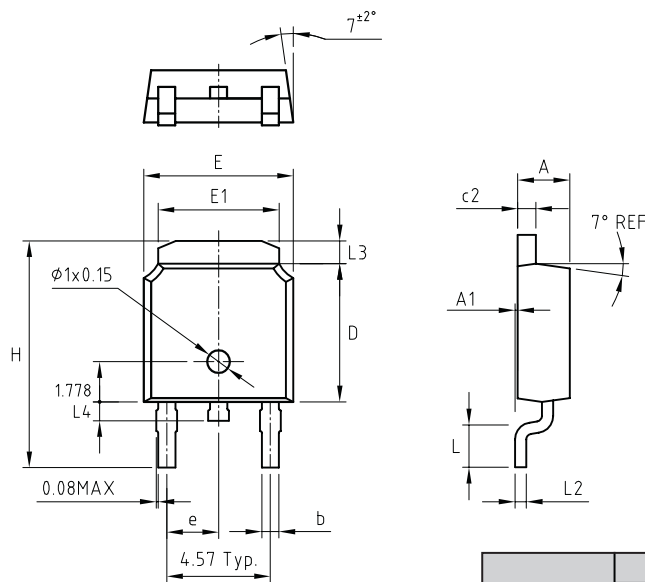
Fig. 10: On-state characteristics (maximum values).



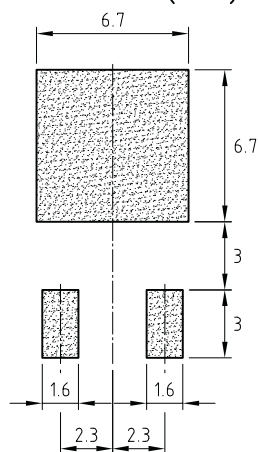
SENSITIVE GATE SCR

PACKAGE MECHANICAL DATA

DPAK / TO252-AA



FOOT PRINT (mm)



REF.	DIMENSIONS		
	Milimeters		
	Min.	Nominal	Max.
A	2.18	2.3	2.39
A1	0	0.127	0.127
b	0.64	0.75	0.89
c2	0.46	0.51	0.56
D	5.97	6.1	6.22
E	6.47	6.6	6.73
E1	5.20	5.34	5.46
e	2.28BSC		
H	9.77	10.03	10.28
L	1.31	1.44	1.57
L2	0.46	0.51	0.56
L3	0.89	1.02	1.14
L4	0.51	0.76	1.02

Marking: type number
Weight: 0.2 g