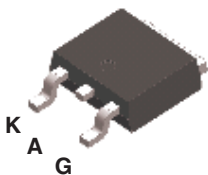
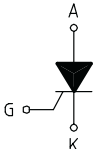


SENSITIVE GATE SCR

DPAK (Plastic)  	On-State Current Gate Trigger Current 4 Amp < 200 μA 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.
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Absolute Maximum Ratings, according to IEC publication No. 134

SYMBOL	PARAMETER	CONDITIONS	Value	Unit
$I_{T(RMS)}$	On-state Current	180° Conduction Angle, $T_c = 110^\circ\text{C}$	4	A
$I_{T(AV)}$	Average On-state Current	Half Cycle, $\Theta = 180^\circ$, $T_c = 110^\circ\text{C}$	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	$t_b = 10\text{ms}$, Half Cycle	4.5	A^2s
I_{GM}	Peak Gate Current	20 μs max.	1.2	A
P_{GM}	Peak Gate Dissipation	20 μs max.	3	W
$P_{G(AV)}$	Gate Dissipation	20ms 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

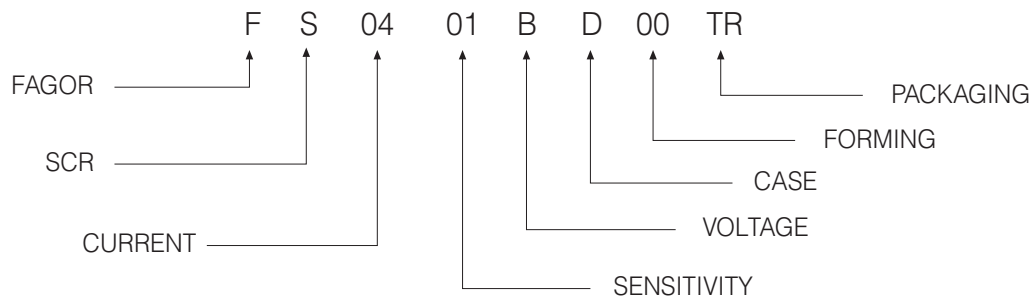
SYMBOL	PARAMETER	CONDITIONS	VOLTAGE					Unit
			B	D	M	S	N	
V_{DRM} V_{RRM}	Repetitive Peak Off State Voltage	$R_{GK} = 1\text{ k}\Omega$	200	400	600	700	800	V

SENSITIVE GATE SCR

Electrical Characteristics

SYMBOL	PARAMETER	CONDITIONS		SENSITIVITY				Uni
				01	02	03	04	
I _{GT}	Gate Trigger Current	V _D = 12 V _{DC} , R _L = 140Ω. T _j = 25 °C	MIN MAX	1 20	200 200	20 200	15 50	μA
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 = 3.3kΩ, R _{GK} = 220Ω 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} = 1kΩ 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 _{I0}	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}		V _D = V _{DRM} , R _{GK} = 1kΩ T _j = 125 °C V _R = V _{RRM} , T _j = 25 °C	MAX MAX	1 5				mA mA
R _{th(j-c)}	Thermal Resistance Junction-Case for DC	for AC 360 ° conduction angle		1.6				°C/W
R _{th(j-a)}	Thermal Resistance Junction-Amb for DC	S = 1cm ²		70				°C/W

PART NUMBER INFORMATION



SENSITIVE GATE SCR

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

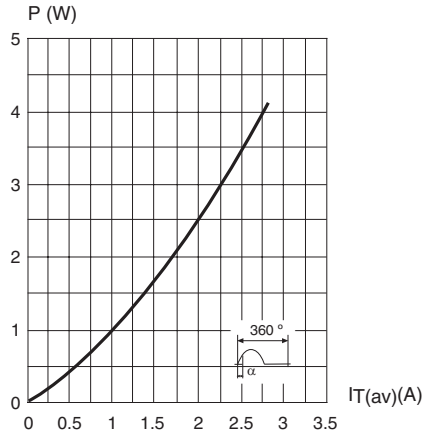


Fig. 3: Relative variation of thermal impedance junction to case versus pulse duration

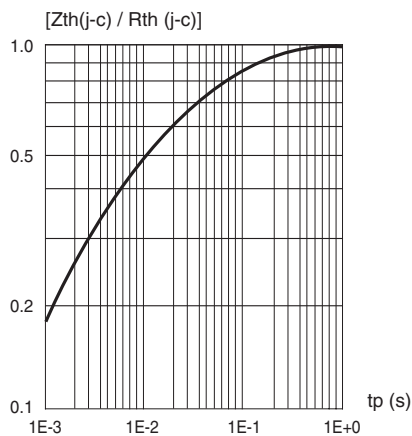


Fig. 5: Relative variation of holding current versus gate-cathode resistance (typical values).

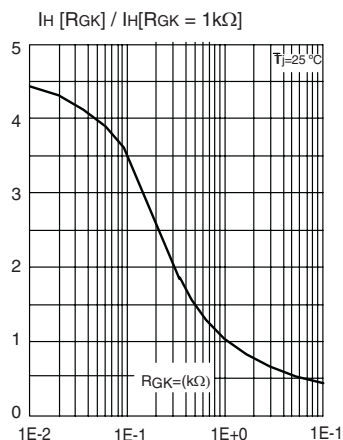


Fig. 2: Average and D.C. on-state current versus case temperature

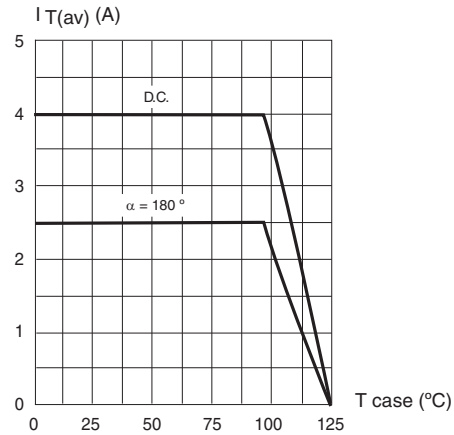


Fig. 4: Relative variation of gate trigger current, holding and latching current versus junction temperature

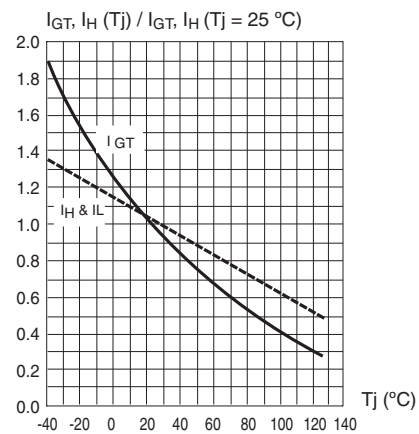
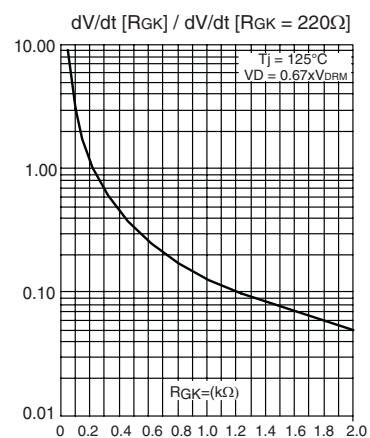


Fig. 6: Relative variation of dV/dt immunity versus gate-cathode resistance (typical values).



SENSITIVE GATE SCR

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

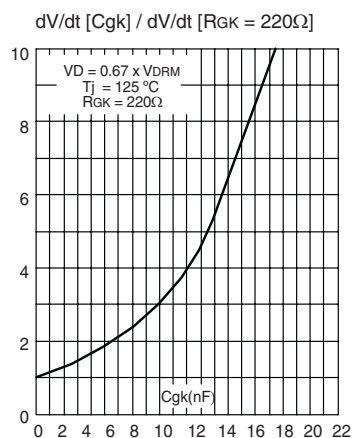


Fig. 8: Non repetitive surge peak on-state current versus number of cycles.

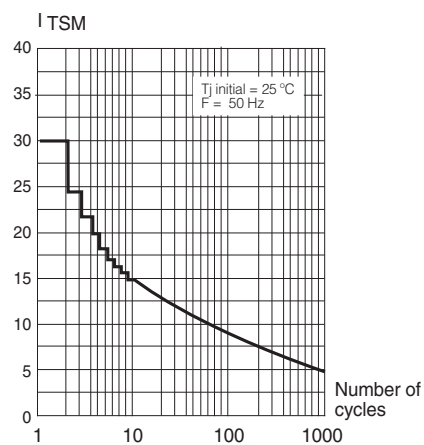


Fig.9: Non repetitive surge peak on-state current for a sinusoidal pulse with width: $t_p < 10 \text{ ms}$, and corresponding value of I^2t

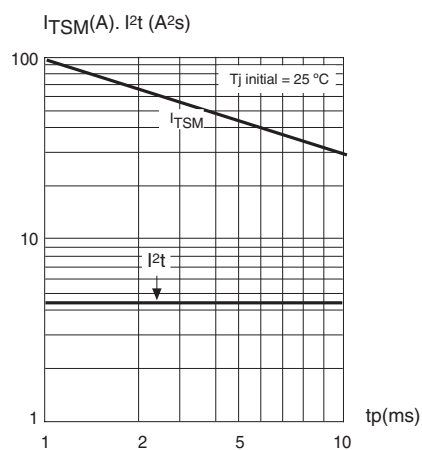
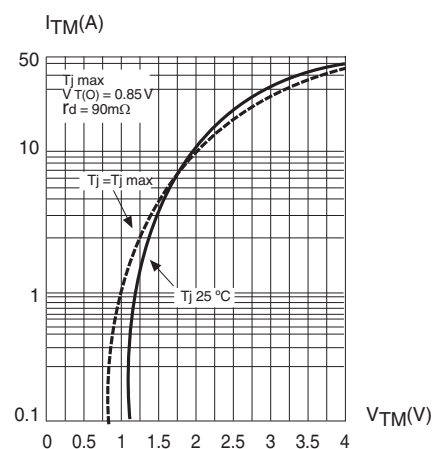
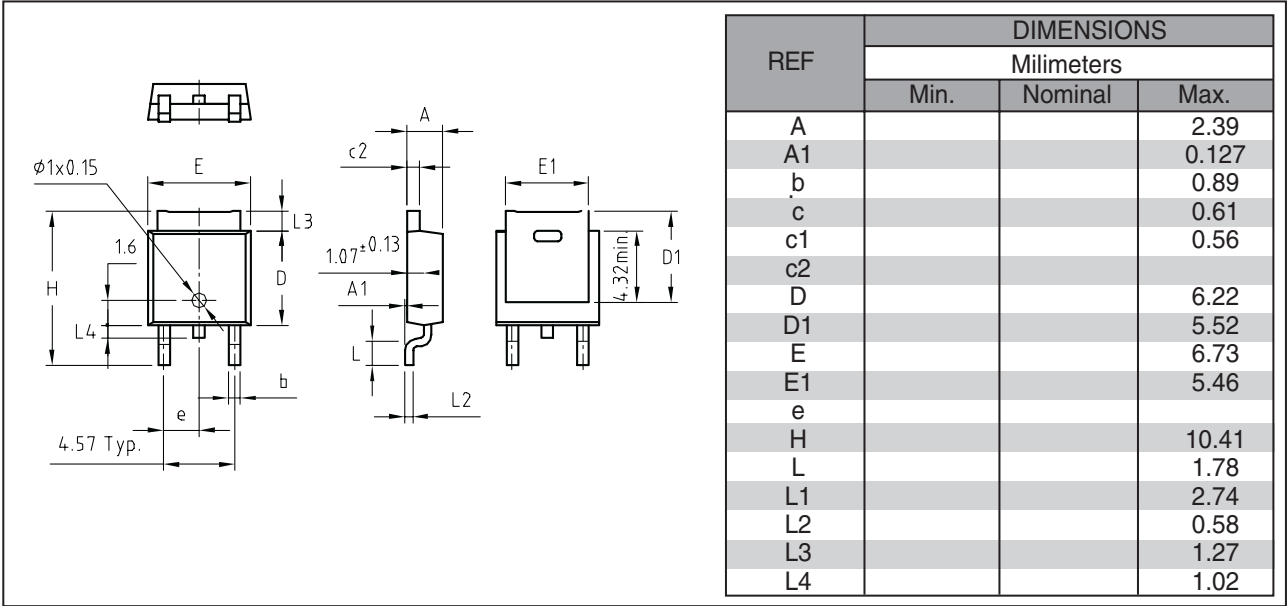


Fig. 10: On-state characteristics (maximum values)



SENSITIVE GATE SCR

PACKAGE MECHANICAL DATA **DPAK TO**



Marking: type number
Weight: 0.2 g