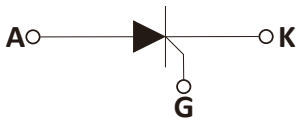
4A SCRs

Features

> Planar passivated for voltage ruggedness and reliability
> Sensitive gate
> Direct triggering from low power gate circuits and logic ICs
> Surface mountable package



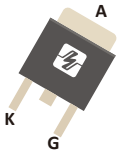
Schematic Symbol

Applications

> General purpose switching
> Protection circuits

Description

Planar passivated SCR with sensitive gate in a TO-252 (DPAK) surface mountable plastic package. These devices are intended to be interfaced directly to microcontrollers,logic integrated circuits and other low power gate trigger circuits.



TO-252 Package

Absolute Maximum Ratings

Parameter	Symbol	Conditions	Value	Units
Repetitive peak off-state voltage	V_{DRM}		600	V
Repetitive peak reverse voltage	V_{RRM}		600	
RMS on-state current	$I_{T(RMS)}$	T_C=90℃	4	A
Non repetitive surge peak on-state current	I_{TSM}	tp=10ms	30	
I^2t value for fusing	I^2t	tp=10ms	4.5	A^2s
Critical rate of rise of on-state current	dI/dt		50	A/μs
Peak gate current	I_{GM}	tp=20μs, T_j=110℃	1.2	A
Average gate power dissipation	$P_{G(AV)}$	T_j=110℃	0.2	W
Peak gate power	P_{GM}	tp=20μs, T_j=110℃	2	
Storage junction temperature range	T_{stg}		-40 to 150	℃
Operating junction temperature range	T_j		-40 to 110	℃

Electrical Characteristics (T_j=25℃ unless otherwise specified)

Parameter	Symbol	Test Condition	Value			Units
			Min	Typ	Max	
Gate trigger current	I_{GT}	V_D=12V R_L=33Ω	-	50	200	μA
Gate trigger voltage	V_{GT}		-	0.6	0.8	V
Gate no-trigger Voltage	V_{GD}	V_D=V_{DRM} T_j=110℃	0.2	-	-	V
Latching current	I_L	I_G=1.2I_{GT}	-	-	6	mA
Holding current	I_H	I_T=50mA	-	-	5	mA
Rate of rise of off-state voltage	dV/dt	V_D=2/3V_{DRM} T_j=110℃ RGK=1KΩ	10	-	-	V/μs

Static Characteristics

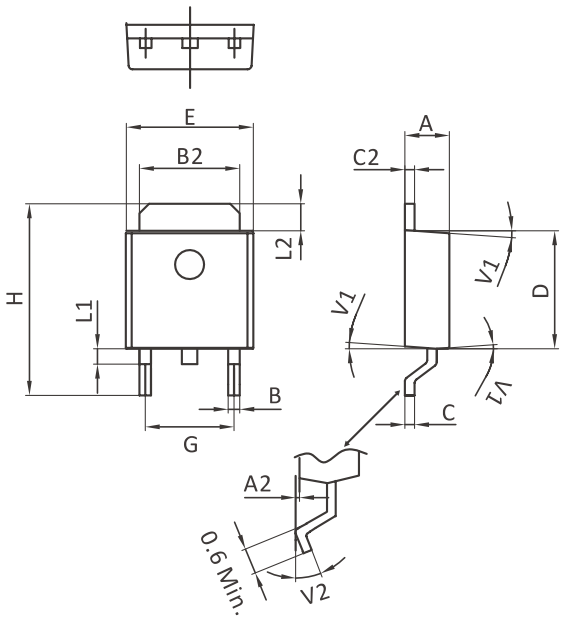
Parameter	Symbol	Test Condition		Value	Units
On-state voltage	V_{TM}	I_T=4A tp=380μs	Max	1.5	V
Repetitive peak off-state current	I_{DRM}	V_D=V_{DRM} V_R=V_{RRM} T_j=25℃	Max	5	μA
Repetitive peak reverse current	I_{RRM}	V_D=V_{DRM} V_R=V_{RRM} T_j=110℃	Max	100	

Thermal Resistances

Parameter	Symbol	Value	Units
junction to case	Rth(j-c)	6.5	℃/W

Package Outline Dimensions

Symbol	Millimeters		Inches	
	Min	Max	Min	Max
A	2.200	2.400	0.087	0.094
A2	0.030	0.230	0.001	0.009
B	0.550	0.650	0.022	0.026
B2	5.100	5.400	0.201	0.213
C	0.450	0.620	0.018	0.024
C2	0.480	0.620	0.019	0.024
D	6.000	6.200	0.236	0.244
E	6.400	6.700	0.252	0.264
G	4.400	4.700	0.173	0.185
H	9.350	10.100	0.368	0.398
L1	1.300	1.700	0.051	0.067
L2	1.370	1.500	0.054	0.059
V1	4°		4°	
V2	0°	8°	0°	8°



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