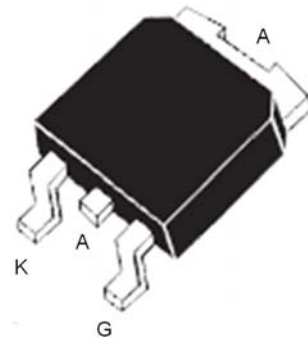


**RS-04 Series 4A SCRS**
**DESCRIPTION:**

Highly sensitive triggering levels, the RS-04 Series SCRs is suitable for all applications, where the available gate current is limited, such as capacitive discharge ignitions, motor control in kitchen aids, overvoltage crowbar protection in low power supplies...

**MAIN FEATURES**

Symbol	Value	Unit
$I_{T(RMS)}$	4	A
$V_{DRM}/V_{RRM}$	600	V
$I_{GT}$	30-100	$\mu A$

**TO-252(DPAK)**

**ABSOLUTE MAXIMUM RATINGS**

Parameter	Symbol	Value	Unit
Storage junction temperature range	$T_{stg}$	-40 to +150	$^{\circ}C$
Operating junction temperature range	$T_j$	-40 to +110	$^{\circ}C$
Repetitive Peak Off-state Voltage	$V_{DRM}$	600	V
Repetitive Peak Reverse Voltage	$V_{RRM}$	600	V
$T_j=25^{\circ}C$			
RMS on-state current (180 $^{\circ}$ conduction angle)	$I_{T(RMS)}$	4	A
$T_I=60^{\circ}C$			
Average on-state current (180 $^{\circ}$ conduction angle)	$I_{T(AV)}$	2.5	A
$T_I=60^{\circ}C$			
Non repetitive surge peak on-state current ( $T_j=25^{\circ}C$ )	$I_{TSM}$	$t_p=10ms$	30
		$t_p=8.3ms$	33
$I^2t$ Value for fusing	$I^2t$	4.5	$A^2s$
$t_p=10ms$			
Critical rate of rise of on-state current	$di/dt$	50	A/ $\mu s$
$I_G=2 \times I_{GT}$ , $t_r \leq 100 ns$ , $f=50Hz$ , $T_j=110^{\circ}C$			
Peak gate current	$I_{GM}$	1.2	A
$t_p=20\mu s$ , $T_j=110^{\circ}C$			
Average gate power dissipation	$P_{G(AV)}$	0.2	W
$T_j=110^{\circ}C$			

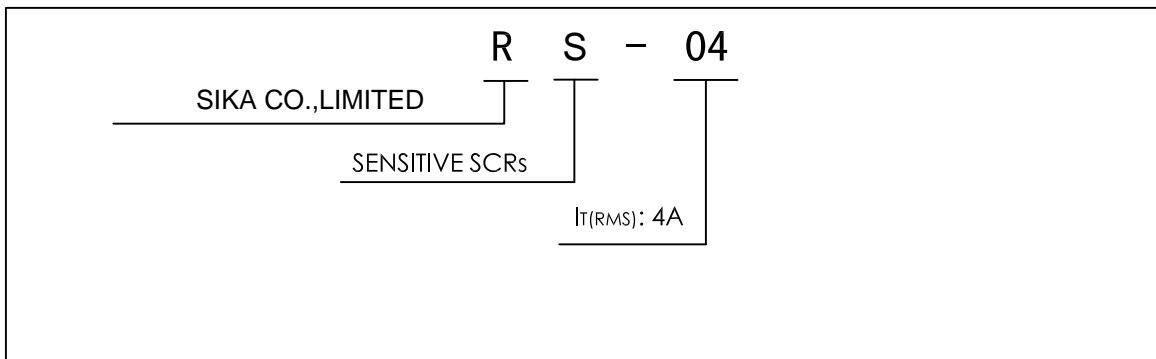
ELECTRICAL CHARACTERISTICS (Tj=25°C unless otherwise specified)

Symbol	Test Condition		Rating	Unit
IGT	V <sub>D</sub> =6V R <sub>L</sub> =140Ω		30-100	μA
V <sub>GT</sub>		MAX.	0.8	V
V <sub>GD</sub>	V <sub>D</sub> =V <sub>DRM</sub> R <sub>L</sub> =3.3KΩ R <sub>GK</sub> =1KΩ T <sub>j</sub> =110°C	MIN.	0.1	V
I <sub>L</sub>	I <sub>G</sub> =1mA R <sub>GK</sub> =1KΩ	MAX.	6	mA
I <sub>H</sub>	I <sub>T</sub> =50mA R <sub>GK</sub> =1KΩ	MAX.	5	mA
V <sub>TM</sub>	I <sub>T</sub> =8A t <sub>p</sub> =380μs T <sub>j</sub> =25°C	MAX.	1.8	V
dV/dt	V <sub>D</sub> =67%V <sub>DRM</sub> R <sub>GK</sub> =1KΩ T <sub>j</sub> =110°C	MIN.	15	V/μs
I <sub>DRM</sub> I <sub>RRM</sub>	V <sub>DRM</sub> = V <sub>RRM</sub> R <sub>GK</sub> =1KΩ T <sub>j</sub> =25 °C	MAX.	5	μA
	V <sub>DRM</sub> = V <sub>RRM</sub> R <sub>GK</sub> =1KΩ T <sub>j</sub> =110 °C		1	
R <sub>GK</sub>			6 - 45	K Ω

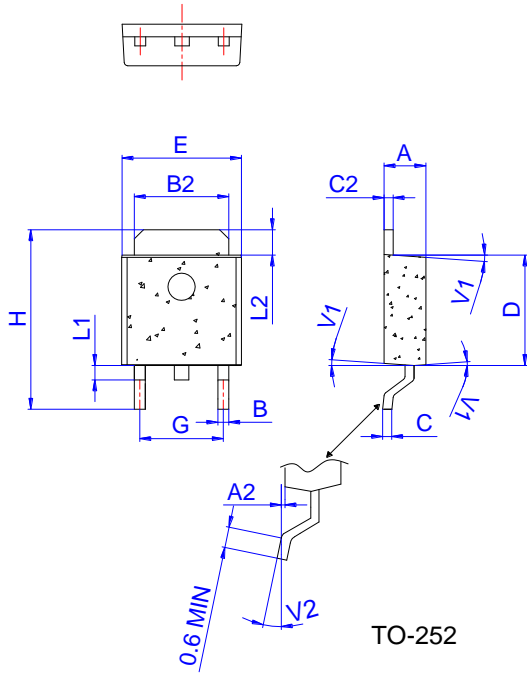
THERMAL RESISTANCES

Symbol	Parameter	Value	Unit
R <sub>th</sub> (J-J)	Junction to Leads (DC)	15	°C/W

ORDERING INFORMATION

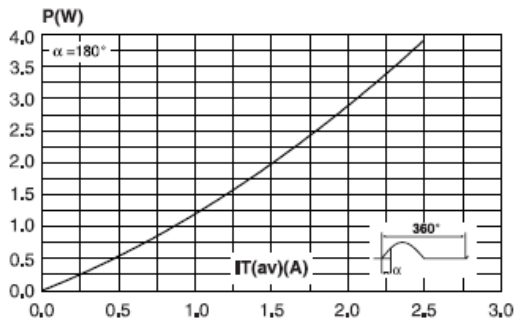


PACKAGE MECHANICAL DATA

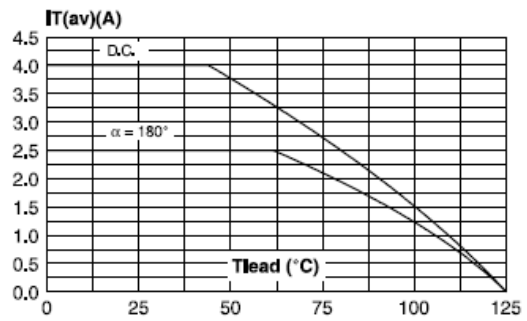


Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	2.20		2.40	0.086		0.095
A2	0.03		0.23	0.001		0.009
B	0.55		0.65	0.022		0.026
B2	5.10		5.40	0.200		0.213
C	0.45		0.62	0.018		0.024
C2	0.48		0.62	0.019		0.024
D	6.00		6.20	0.236		0.244
E	6.40		6.70	0.252		0.264
G	4.40		4.70	0.173		0.185
H	9.35		10.6	0.368		0.417
L1	1.30		1.70	0.051		0.067
L2	1.37		1.50	0.054		0.059
V1		4°			4°	
V2	0°		8°	0°		8°

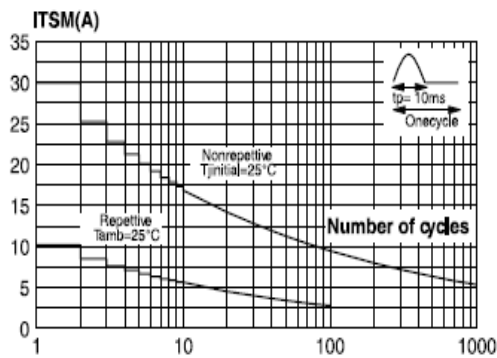
**Fig. 1:** Maximum average power dissipation versus average on-state current.



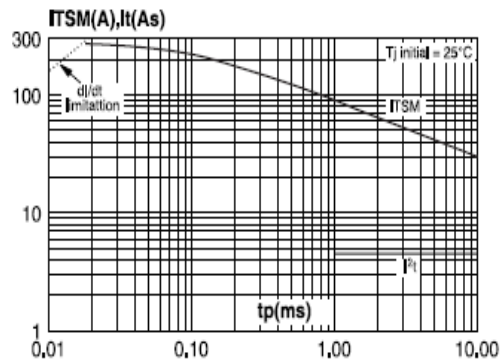
**Fig. 2:** Average and D.C. on-state current versus lead temperature.



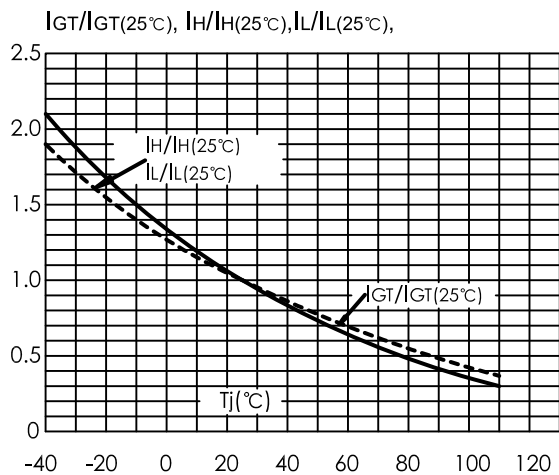
**Fig. 3:** Surge peak on-state current versus number of cycles.



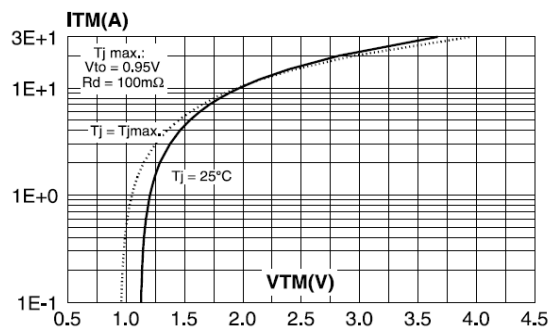
**Fig. 4:** Non-repetitive surge peak on-state current for a sinusoidal pulse with width  $t_p < 10$  ms, and corresponding value of  $I^2t$ .



**Fig. 5:** Relative variation of gate trigger current, holding current and latching current versus junction temperature (typical values).



**Fig.6:** On-state characteristics (maximum values).



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