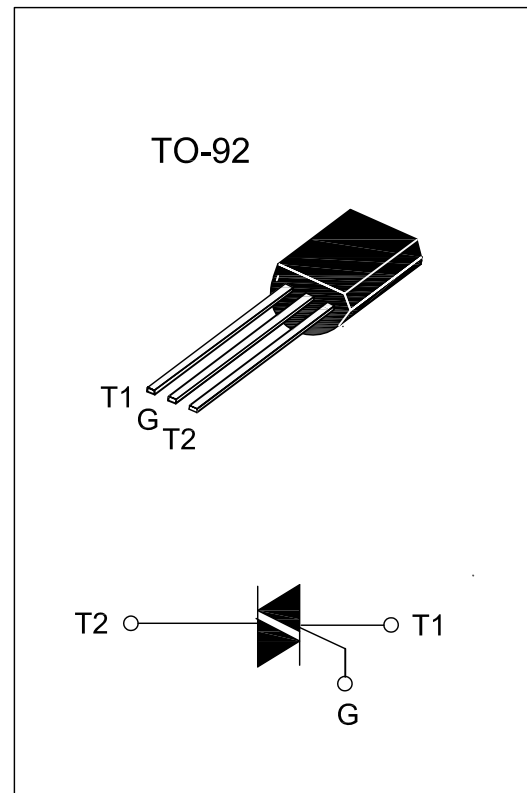


**RS0106E Series 1A TRIACs**
**DESCRIPTION:**

This device is suitable for low power AC switching application, phase control application such as fan speed and temperature modulation control, lighting control and static switching relay.

**MAIN FEATURES**

Symbol	Value	Unit
$I_{T(RMS)}$	1	A
$V_{DRM}/V_{RRM}$	600	V
$V_{TM}$	$\leq 1.5$	V


**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 +125	$^{\circ}C$
Repetitive Peak Off-state Voltage	$T_j=25^{\circ}C$	$V_{DRM}$	600	V
Repetitive Peak Reverse Voltage	$T_j=25^{\circ}C$	$V_{RRM}$	600	V
Non repetitive Surge Peak Off-state Voltage	$T_j=25^{\circ}C$	$V_{DSM}$	700	V
Non repetitive Peak Reverse Voltage	$T_j=25^{\circ}C$	$V_{RSM}$	700	V
RMS on-state current (full sine wave)	$T_c=110^{\circ}C$	$I_{T(RMS)}$	1	A
Non repetitive surge peak on-state current (One Full Cycle, Sine Wave, $T_c=110^{\circ}C$ )	$t_p=10ms$	$I_{TSM}$	9	A
	$t_p=8.3ms$		9.5	A
$I^2t$ Value for fusing	$t_p=10ms$	$I^2t$	0.45	$A^2s$
Peak gate current	$t_p \leq 2\mu s, T_j=80^{\circ}C$	$I_{GM}$	1	A
Average gate power dissipation	$t_p \leq 10ms, T_j=80^{\circ}C$	$P_{G(AV)}$	0.1	W
Peak gate power dissipation	$t_p \leq 10ms, T_j=80^{\circ}C$	$P_{GM}$	1	W

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

Symbol	Test Condition	Quadrant		Ratings	Unit
I <sub>GT</sub>	V <sub>D</sub> =12V R <sub>L</sub> =33Ω	I-II-III IV	MAX.	5 15	mA
V <sub>GT</sub>		ALL	MAX.	1.5	V
V <sub>GD</sub>	V <sub>D</sub> =V <sub>DRM</sub> R <sub>L</sub> =3.3KΩ T <sub>j</sub> =125°C	ALL	MIN.	0.2	V
I <sub>H</sub>	I <sub>T</sub> =200mA		MAX.	5	mA
dV/dt	V <sub>D</sub> =67%V <sub>DRM</sub> gate open T <sub>j</sub> =125°C		MIN.	25	V/μs
(dV/dt) <sub>c</sub>	(dI/dt) <sub>c</sub> =0.3A/ms T <sub>j</sub> =125°C		MIN.	0.5	V/μs

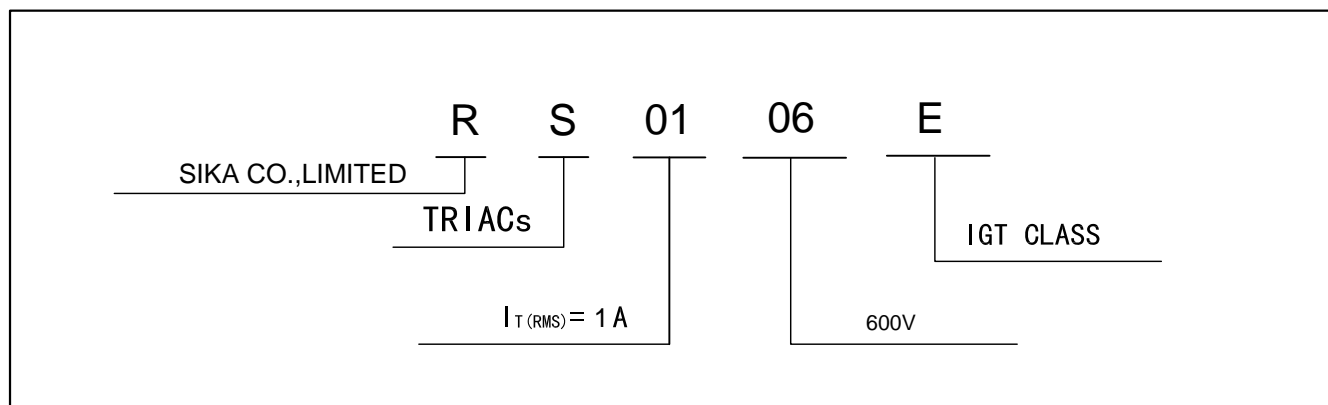
STATIC CHARACTERISTICS

Symbol	Parameter		Value(MAX.)	Unit
V <sub>TM</sub>	I <sub>TM</sub> =1.1A, t <sub>p</sub> =380μs	T <sub>j</sub> =25°C	1.5	V
I <sub>DRM</sub> I <sub>RRM</sub>	V <sub>D</sub> =V <sub>DRM</sub> V <sub>R</sub> =V <sub>RRM</sub>	T <sub>j</sub> =25°C	5	μA
		T <sub>j</sub> =125°C	100	μA

THERMAL RESISTANCES

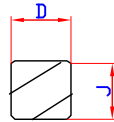
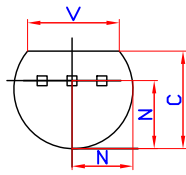
Symbol	Parameter		Value	Unit
R <sub>th</sub> (J-C)	Junction to Case(AC)	TO-92	75	°C/W

ORDERING INFORMATION

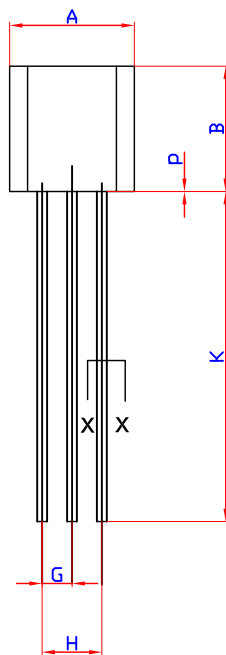


PACKAGE MECHANICAL DATA

TO-92(TO-226AA)



SECTION X-X



Ref.	Dimensions			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	4.45	5.2	0.175	0.205
B	4.32	5.33	0.170	0.210
C	3.18	4.19	0.125	0.165
D	0.407	0.533	0.016	0.021
G	1.15	1.39	0.045	0.055
H	2.42	2.66	0.095	0.105
J	0.39	0.50	0.015	0.020
K	12.70	-	0.500	-
N	2.04	2.66	0.080	0.105
P	-	2.54	-	0.100
V	3.43	-	0.135	-

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

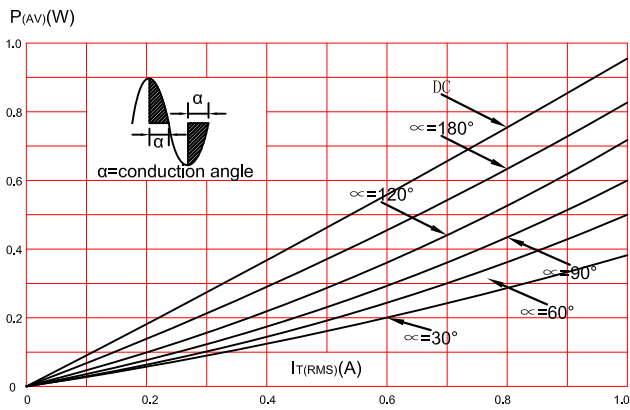


FIG.2: RMS on-state current versus case temperature.

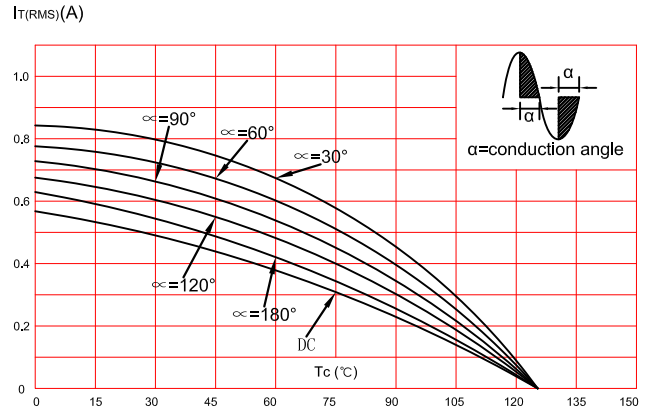


FIG.3: On-state characteristics (maximum values)

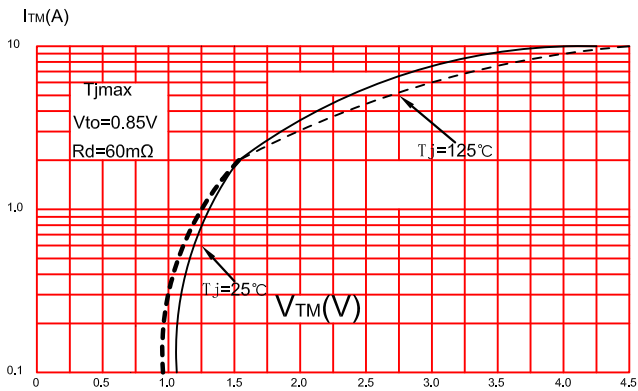


FIG.4: Surge peak on-state current versus number of cycles.

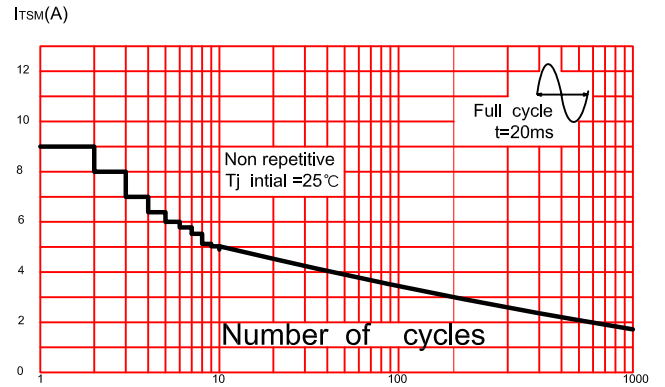


FIG.5: Relative variation of gate trigger current, holding current and latching current versus junction temperature (typical values).

