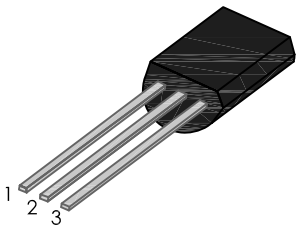
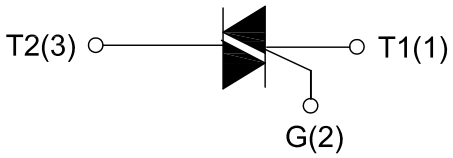
RS02xxE Series 2A TRIACs

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.

TO-92





MAIN FEATURES

Symbol	Value	Unit
$I_{T(AV)}$	2	A
V_{DRM}/V_{RRM}	600	V
V_{TM}	≤1.5	V

ABSOLUTE MAXIMUM RATINGS

Parameter		Symbol	Value	Unit
Storage junction temperature range		Tstg	- 40 to +150	˚C
Operrating junction temperature range		Tj	- 40 to +125	˚C
Repetitive Peak Off-state Voltage	Tj=25˚C	V_{DRM}	600	V
Repetitive Peak Reverse Voltage	Tj=25˚C	V_{RRM}	600	V
Non repetitive Surge Peak Off-state Voltage	Tj=25˚C	V_{DSM}	700	V
Non repetitive Peak Reverse Voltage	Tj=25˚C	V_{RSM}	700	V
RMS on-state current (full sine wave)	Tc=110˚C	$I_{T(RMS)}$	2	A
Non repetitive surge peak on-state current (One Full Cycle,Sine Wave,Tc=110˚C)	tp=10ms	I_{TSM}	16	A
	tp=8.3ms		18	A
I^2t Value for fusing	tp=10ms	I^2t	0.72	A^2s
Peak gate current tp≤ 2us,Tj=80˚C		I_{GM}	1	A
Average gate power dissipation tp≤ 10mS Tj=80˚C		$P_{G(AV)}$	0.5	W
Peak gate power dissipation tp≤ 10mS Tj=80˚C		P_{GM}	5	W

ELECTRICAL CHARACTERISTICS(Tj=25℃ unless otherwise specified)

Symbol	Test Condition	Quadrant		Ratings	Unit
I_{GT}	V_D=12V R_L=33Ω	I-II-III IV	MAX.	5 10	mA
V_{GT}		ALL	MAX.	1.3	V
V_{GD}	V_D=V_{DRM} R_L=3.3KΩ Tj =125℃	ALL	MIN.	0.2	V
I_H	I_T =200mA		MAX.	5	mA
dV/dt	V_D=67%V_{DRM} gate open Tj=125℃		MIN.	5	V/μs
(dV/dt)c	(dI/dt)c=0.3A/ms Tj=125℃		MIN.	1	V/μs

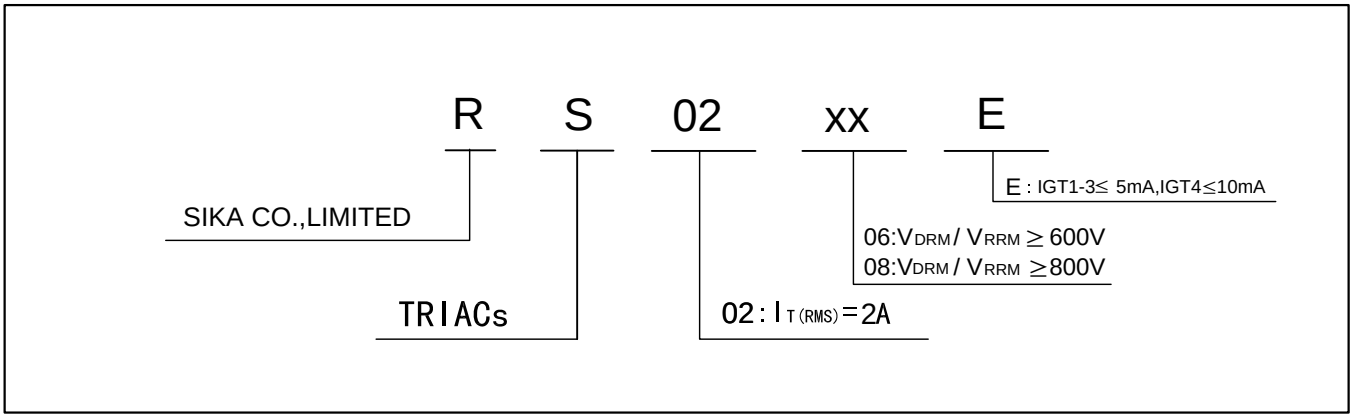
STATIC CHARACTERISTICS

Symbol	Parameter		Value(MAX.)	Unit
V_{TM}	I_{TM}=2A,tp=380μs	Tj=25℃	1.5	V
I_{DRM} I_{RRM}	V_D=V_{DRM} V_R=V_{RRM}	Tj=25℃	10	μA
		Tj=125℃	500	μA

THERMAL RESISTANCES

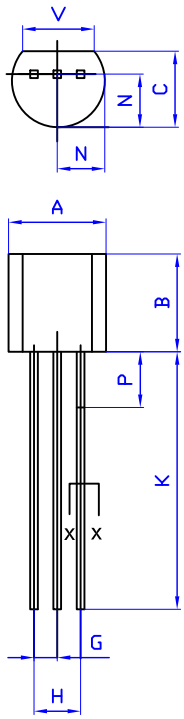
Symbol	Parameter		Value	Unit
$R_{th(J-C)}$	Junction to Case(AC)	TO-92	60	℃/W

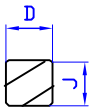
ORDERING INFORMATION



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.

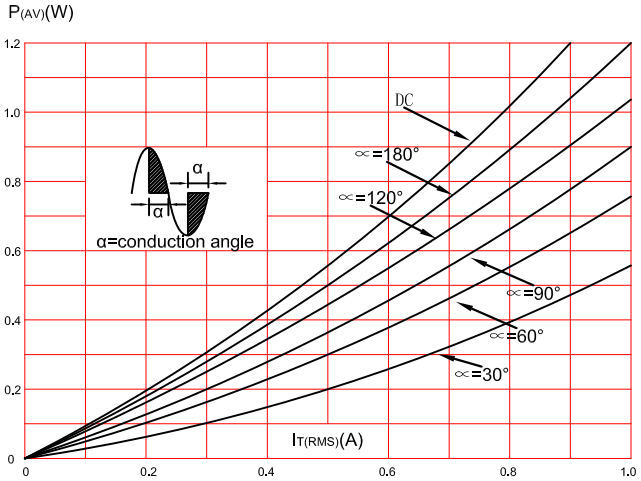


FIG.2: RMS on-state current versus case temperature.

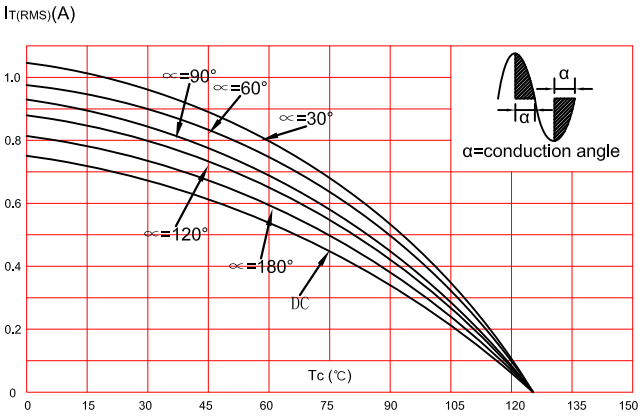


FIG.3: On-state characteristics (maximum values)

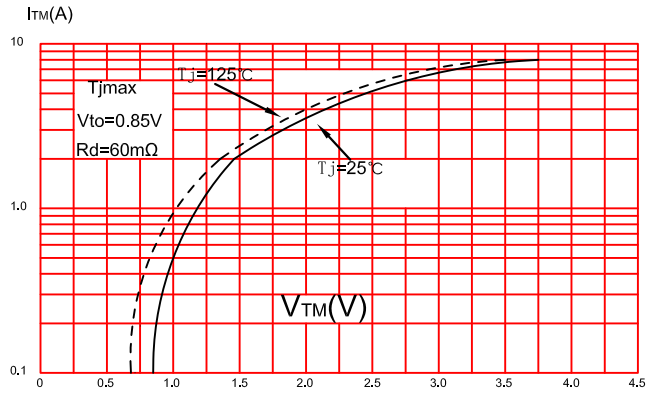


FIG.4: Surge peak on-state current versus number of cycles.

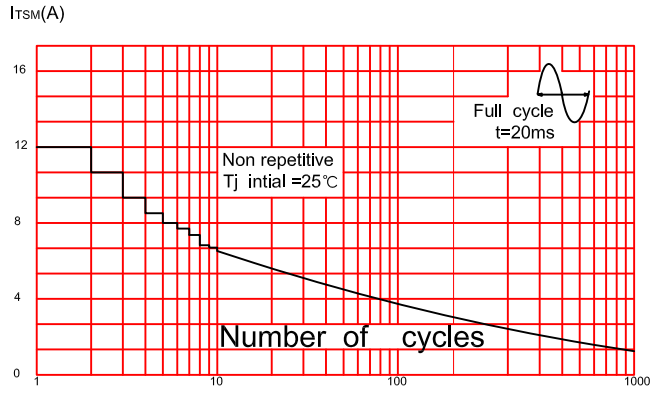
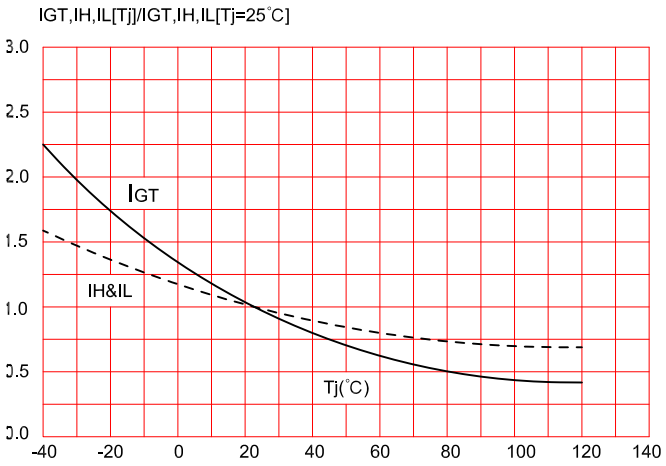


FIG.5: Relative variation of gate trigger current,holding current and latching current versus junction temperature(typical values).



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