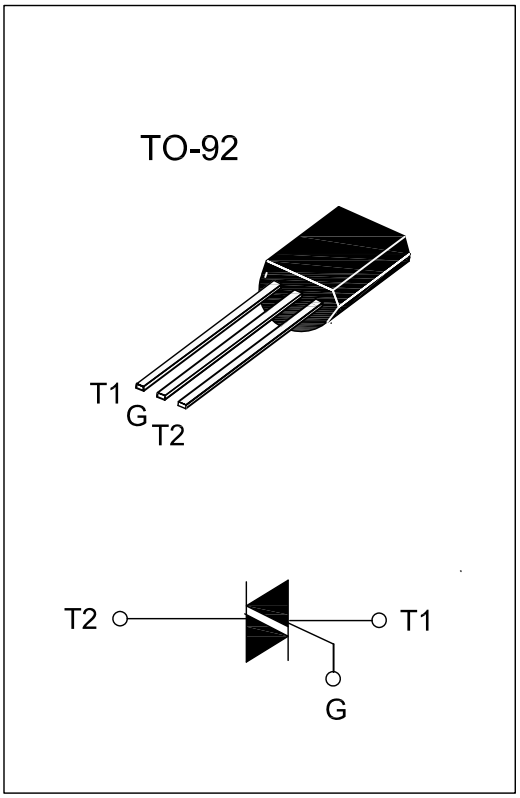
JST97 Series 0.6A TRAICs

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
$I_{T(AV)}$	0.6	A
V_{DRM}/V_{RRM}	400 and 600	V
V_{TM}	≤1.9	V

ABSOLUTE MAXIMUM RATINGS

Parameter		Symbol	Value	Unit
Storage junction temperature range		Tstg	- 40 to +150	℃
Operrating junction temperature range		Tj	- 40 to +110	℃
Repetitive Peak Off-state Voltage	Tj=25℃	V_{DRM}	400 and 600	V
Repetitive Peak Reverse Voltage	Tj=25℃	V_{RRM}	400 and 600	V
Non repetitive Surge Peak Off-state Voltage	Tj=25℃	V_{DSM}	500 and 700	V
Non repetitive Peak Reverse Voltage	Tj=25℃	V_{RSM}	500 and 700	V
RMS on-state current (full sine wave)	Tc=50℃	$I_{T(RMS)}$	0.6	A
Non repetitive surge peak on-state current (One Full Cycle,Sine Wave,Tc=110℃)	tp=10ms	I_{TSM}	7	A
	tp=8.3ms		8	A
I^2t Value for fusing	tp=10ms	I^2t	0.245	A^2s
Peak gate current tp≤ 2us,Tj=80℃		I_{GM}	1	A
Average gate power dissipation tp≤ 10mS Tj=80℃		$P_{G(AV)}$	0.1	W
Peak gate power dissipation tp≤ 10mS Tj=80℃		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 7	mA
V_{GT}		ALL	MAX.	2.0	V
V_{GD}	V_D=V_{DRM} R_L=3.3KΩ Tj =110℃	ALL	MIN.	0.2	V
I_H	I_T =200mA		MAX.	10	mA
dV/dt	V_D=67%V_{DRM} gate open Tj=110℃		MIN.	10	V/μs
(dV/dt)c	(dI/dt)c=0.3A/ms Tj=110℃		MIN.	1.5	V/μs

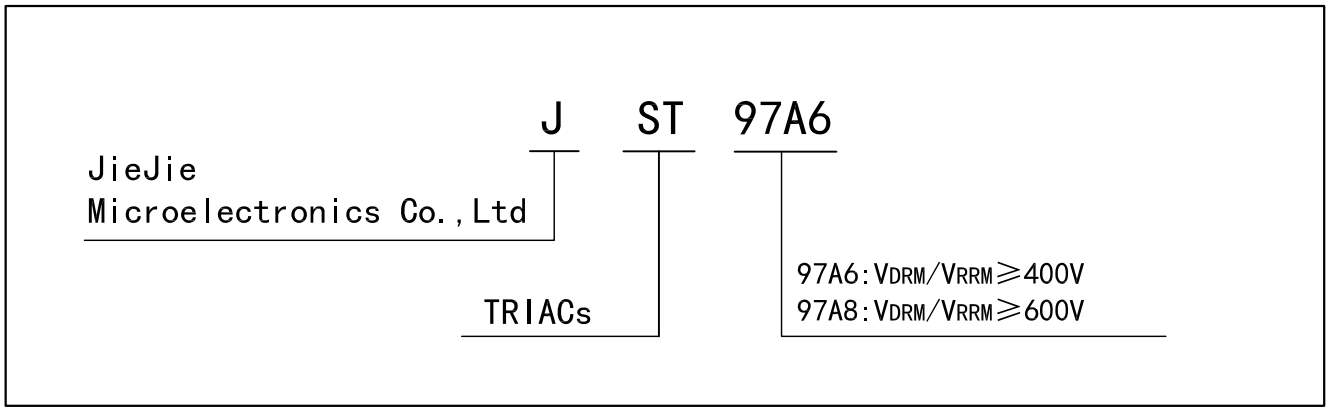
STATIC CHARACTERISTICS

Symbol	Parameter		Value(MAX.)	Unit
V_{TM}	I_{TM}=0.85A,tp=380μs	Tj=25℃	1.9	V
I_{DRM} I_{RRM}	V_D=V_{DRM} V_R=V_{RRM}	Tj=25℃	10	μA
		Tj=110℃	100	μA

THERMAL RESISTANCES

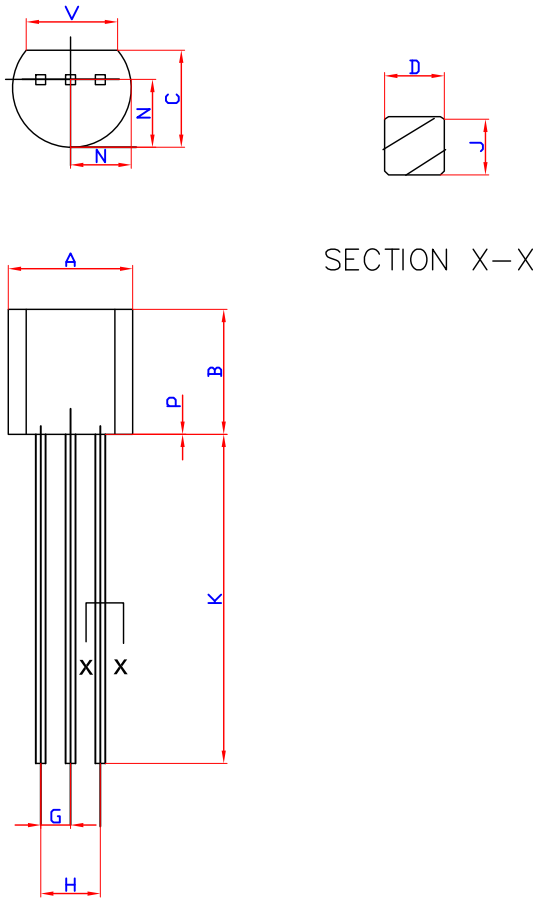
Symbol	Parameter		Value	Unit
$R_{th(J-C)}$	Junction to Case(AC)	TO-92	75	℃/W

ORDERING INFORMATION



PACKAGE MECHANICAL DATA

TO-92(TO-226AA)



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.

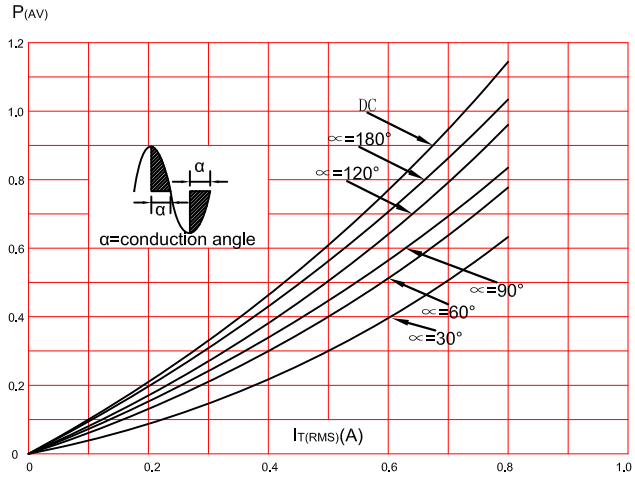


FIG.2: RMS on-state current versus case temperature.

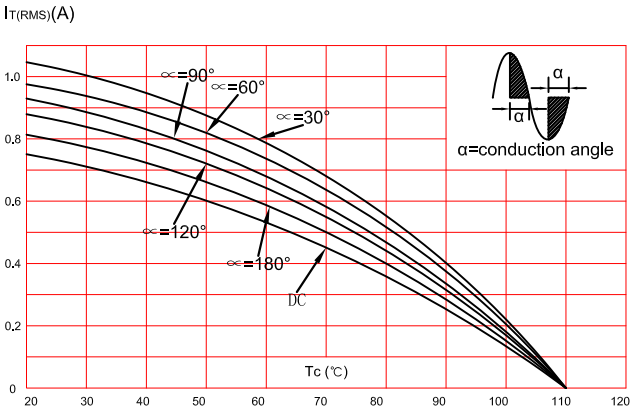


FIG.3: On-state characteristics (maximum values)

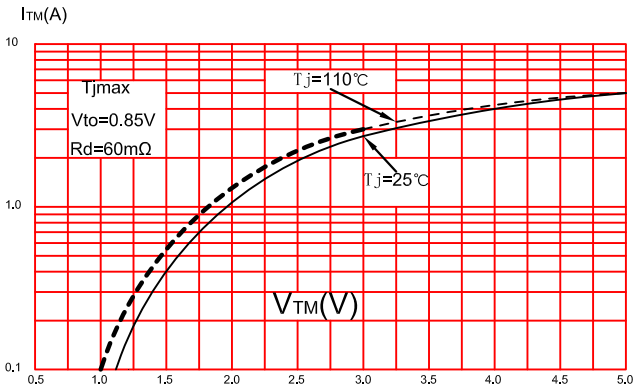


FIG.4: Surge peak on-state current versus number of cycles.

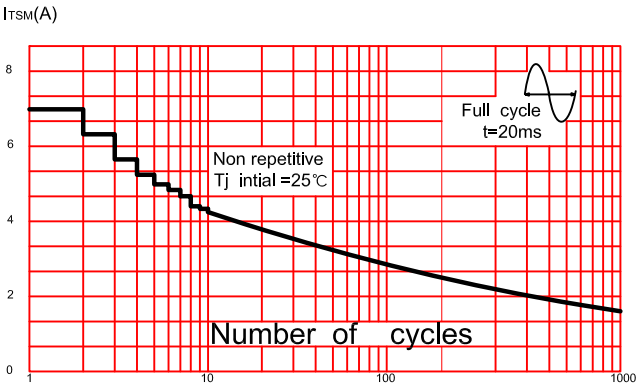


FIG.5: Relative variation of gate trigger current,holding current and latching current versus junction temperature(typical values).