



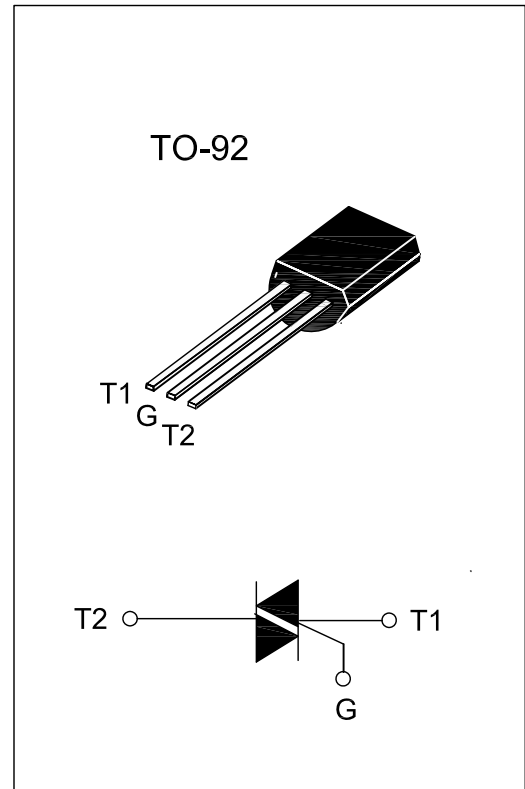
## JST97 Series 0.6A TRAICs

### 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
$V_{TM}$	$\leq 1.9$	V



### ABSOLUTE MAXIMUM RATINGS

Parameter		Symbol	Value	Unit
Storage junction temperature range		$T_{stg}$	- 40 to +150	$^{\circ}C$
Operrating junction temperature range		$T_j$	- 40 to +110	$^{\circ}C$
Repetitive Peak Off-state Voltage	$T_j=25^{\circ}C$	$V_{DRM}$	400 and 600	V
Repetitive Peak Reverse Voltage	$T_j=25^{\circ}C$	$V_{RRM}$	400 and 600	V
Non repetitive Surge Peak Off-state Voltage	$T_j=25^{\circ}C$	$V_{DSM}$	500 and 700	V
Non repetitive Peak Reverse Voltage	$T_j=25^{\circ}C$	$V_{RSM}$	500 and 700	V
RMS on-state current (full sine wave)	$T_c=50^{\circ}C$	$I_{T(RMS)}$	0.6	A
Non repetitive surge peak on-state current (One Full Cycle, Sine Wave, $T_c=110^{\circ}C$ )	$tp=10ms$	$I_{TSM}$	7	A
	$tp=8.3ms$		8	A
$I^2t$ Value for fusing	$tp=10ms$	$I^2t$	0.245	$A^2s$
Peak gate current	$tp \leq 2\mu s, T_j=80^{\circ}C$	$I_{GM}$	1	A
Average gate power dissipation	$tp \leq 10mS, T_j=80^{\circ}C$	$P_{G(AV)}$	0.1	W
Peak gate power dissipation	$tp \leq 10mS, T_j=80^{\circ}C$	$P_{GM}$	5	W

ELECTRICAL CHARACTERISTICS( $T_j=25^\circ\text{C}$  unless otherwise specified)

Symbol	Test Condition	Quadrant		Ratings	Unit
$I_{GT}$	$V_D=12V$ $R_L=33\Omega$	I-II-III IV	MAX.	5 7	mA
$V_{GT}$		ALL	MAX.	2.0	V
$V_{GD}$	$V_D=V_{DRM}$ $R_L=3.3K\Omega$ $T_j=110^\circ\text{C}$	ALL	MIN.	0.2	V
$I_H$	$I_T=200\text{mA}$		MAX.	10	mA
$dV/dt$	$V_D=67\%V_{DRM}$ gate open $T_j=110^\circ\text{C}$		MIN.	10	$V/\mu\text{s}$
$(dV/dt)_c$	$(dI/dt)_c=0.3\text{A/ms}$ $T_j=110^\circ\text{C}$		MIN.	1.5	$V/\mu\text{s}$

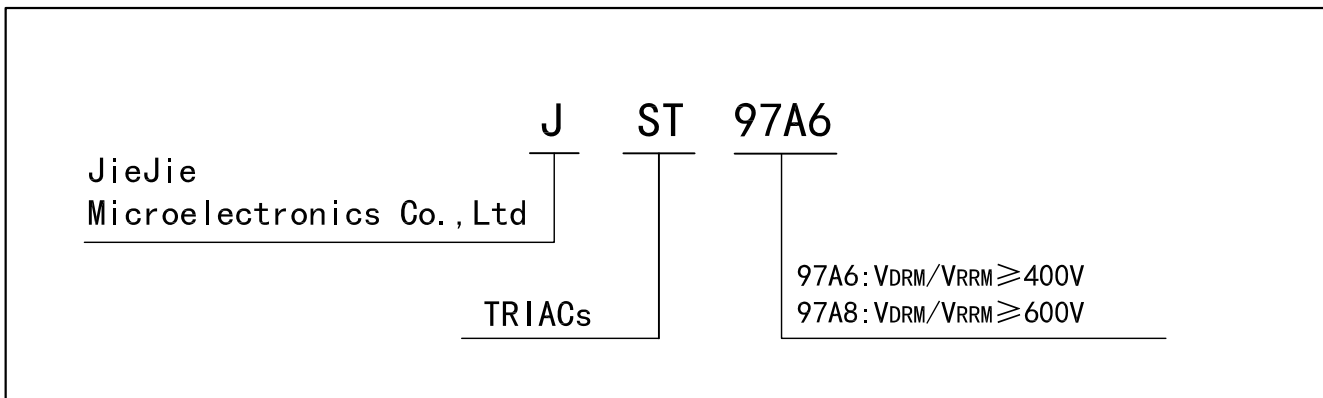
## STATIC CHARACTERISTICS

Symbol	Parameter		Value(MAX.)	Unit
$V_{TM}$	$I_{TM}=0.85\text{A}$ , $t_p=380\mu\text{s}$	$T_j=25^\circ\text{C}$	1.9	V
$I_{DRM}$ $I_{RRM}$	$V_D=V_{DRM}$ $V_R=V_{RRM}$	$T_j=25^\circ\text{C}$	10	$\mu\text{A}$
		$T_j=110^\circ\text{C}$	100	$\mu\text{A}$

## THERMAL RESISTANCES

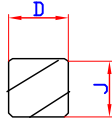
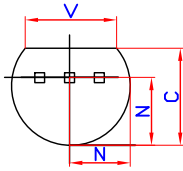
Symbol	Parameter		Value	Unit
$R_{th(J-C)}$	Junction to Case(AC)	TO-92	75	$^\circ\text{C/W}$

## ORDERING INFORMATION

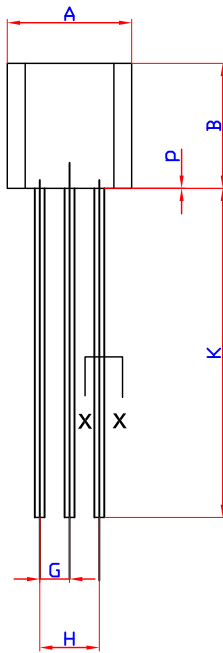

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PACKAGE MECHANICAL DATA

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.

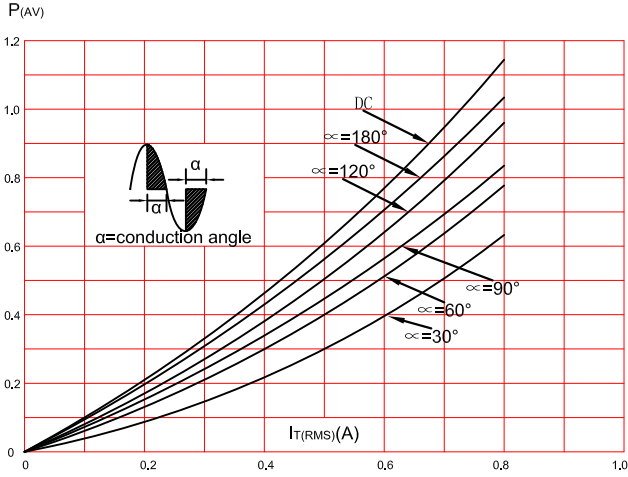


FIG.3: On-state characteristics (maximum values)

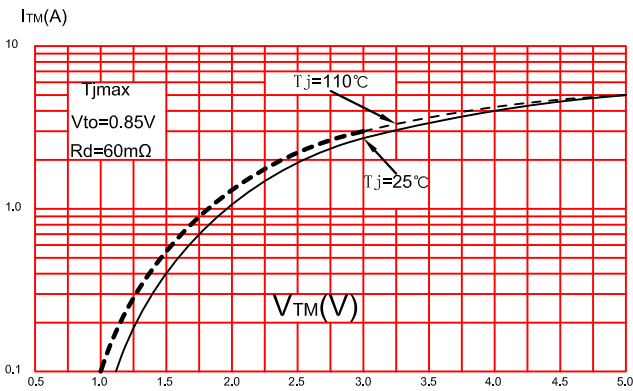


FIG.5: Relative variation of gate trigger current, holding current and latching current versus junction temperature (typical values).

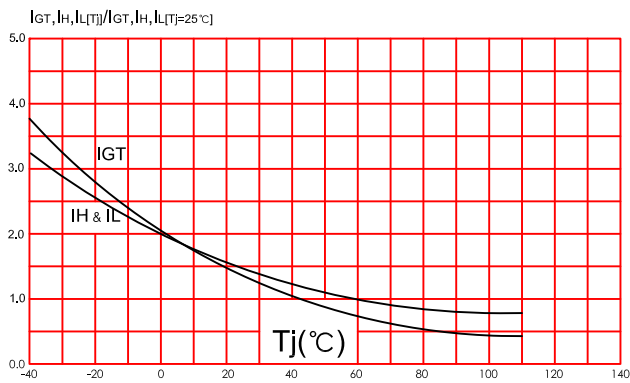


FIG.2: RMS on-state current versus case temperature.

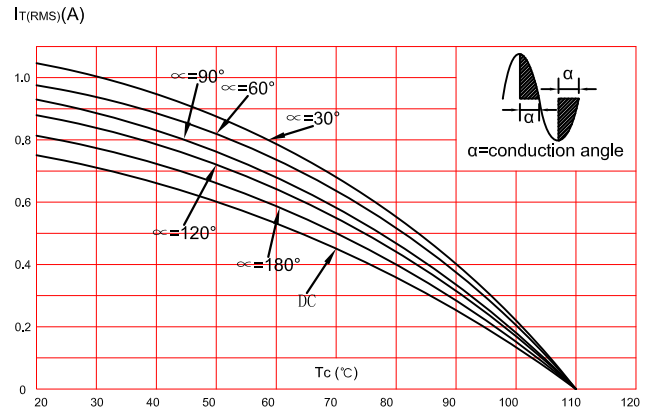


FIG.4: Surge peak on-state current versus number of cycles.

