

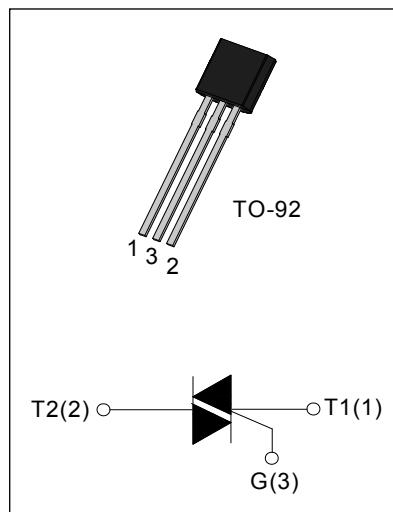


### DESCRIPTION:

With low holding and latching current, 97A8 triacs are especially recommended for use on middle and small resistance type power load. Package TO-92 is RoHS compliant. (2011/65/EU)

### MAIN FEATURES

Symbol	Value	Unit
$I_{T(RMS)}$	0.8	A
$V_{TM}$	1.5	V



### ABSOLUTE MAXIMUM RATINGS

Parameter	Symbol	Value	Unit
Storage junction temperature range	$T_{stg}$	-40 - 150	°C
Operating junction temperature range	$T_j$	-40 - 125	°C
Repetitive peak off-state voltage ( $T_j=25^{\circ}C$ )	$V_{DRM}$	600/800	V
Repetitive peak reverse voltage ( $T_j=25^{\circ}C$ )	$V_{RRM}$	600/800	V
RMS on-state current	$I_{T(RMS)}$	0.8	A
TO-92 ( $T_c=50^{\circ}C$ )			
Non repetitive surge peak on-state current (full cycle, F=50Hz)	$I_{TSM}$	9	A
$I^2t$ value for fusing ( $t_p=10ms$ )	$I^2t$	0.45	$A^2s$
Critical rate of rise of on-state current ( $I_G=2 \times I_{GT}$ )	I - II - III	50	$A/\mu s$
	IV	20	
Peak gate current	$I_{GM}$	1	A
Average gate power dissipation	$P_{G(AV)}$	0.1	W
Peak gate power	$P_{GM}$	1	W

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

Symbol	Test Condition	Quadrant		Value	Unit
$I_{GT}$	$V_D=12\text{V}$	I - II - III	MAX	5	mA
		IV		10	
$V_{GT}$		ALL	MAX	1.3	V
$V_{GD}$	$V_D=V_{DRM}$ $T_j=125^{\circ}\text{C}$ $R_L=3.3\text{K}\Omega$	ALL	MIN	0.2	V
$I_L$	$I_G=1.2I_{GT}$	I - III - IV	MAX	10	mA
		II		20	
$I_H$	$I_T=100\text{mA}$		MAX	7	mA
dV/dt	$V_D=2/3V_{DRM}$ Gate Open $T_j=125^{\circ}\text{C}$		MIN	30	V/ $\mu\text{s}$

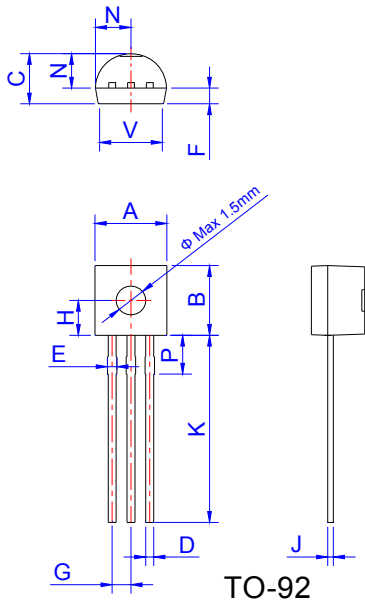
**STATIC CHARACTERISTICS**

Symbol	Parameter		Value(MAX)	Unit
$V_{TM}$	$I_{TM}=1.1\text{A}$ $t_p=380\mu\text{s}$	$T_j=25^{\circ}\text{C}$	1.5	V
$I_{DRM}$	$V_D=V_{DRM}$ $V_R=V_{RRM}$	$T_j=25^{\circ}\text{C}$	5	$\mu\text{A}$
$I_{RRM}$		$T_j=125^{\circ}\text{C}$	100	$\mu\text{A}$

**THERMAL RESISTANCES**

Symbol	Parameter		Value	Unit
$R_{th(j-c)}$	junction to case(AC)	TO-92	75	$^{\circ}\text{C}/\text{W}$

**PACKAGE MECHANICAL DATA**

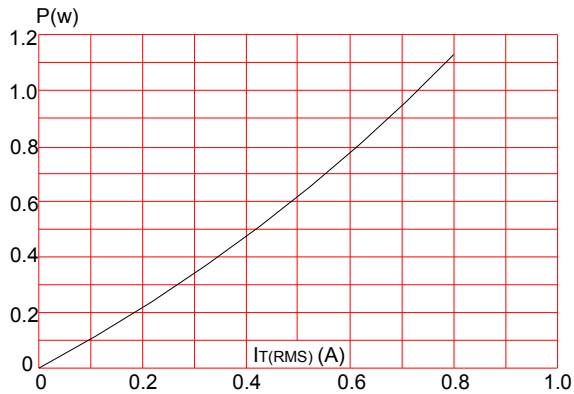


Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	4.45		5.20	0.175		0.205
B	4.32		5.33	0.170		0.210
C	3.18		4.19	0.125		0.165
D	0.407		0.533	0.016		0.021
E	0.50		0.70	0.020		0.028
F	-	1.1	-	-	0.043	-
G	-	1.27	-	-	0.050	-
H	-	2.30	-	-	0.091	-
J	0.36		0.50	0.014		0.020
K	12.70		15.0	0.500		0.591
N	2.04		2.66	0.080		0.105
P	1.86		2.06	0.073		0.081
V	-		4.3	-		0.169

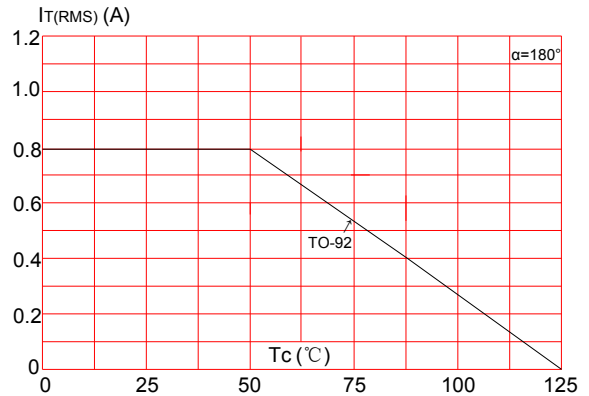
**PACKAEG INFORMATION**

PACKAGE	WEIGHT (PER PCS)	OUTLINE	BAG (PCS)	INNER BOX (PCS)	PER CARTON
TO-92	0.1894g	Shielding Bag	1,000	10,000	30,000
TO-92	0.1894g	Shielding Bag	1,000	10,000	50,000
TO-92	0.1894g	Shielding Bag	1,000	10,000	100,000

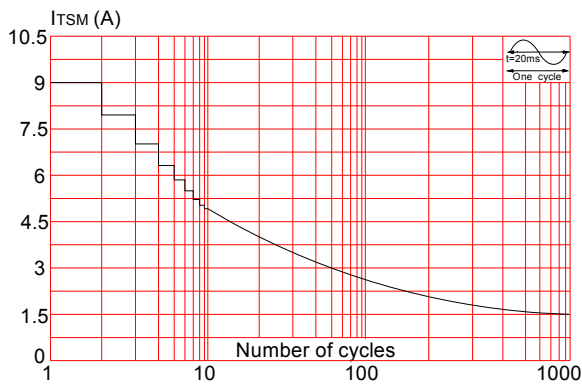
**FIG.1:** Maximum power dissipation versus RMS on-state current



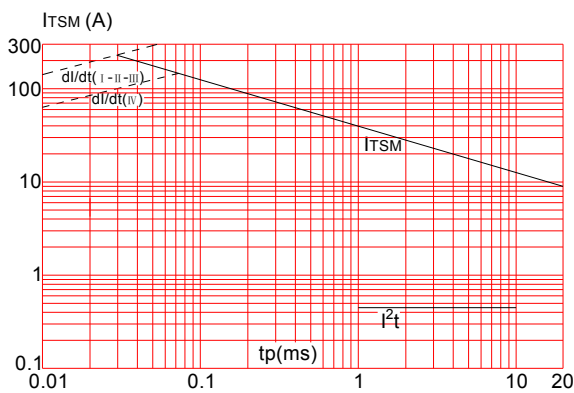
**FIG.2:** RMS on-state current versus case temperature



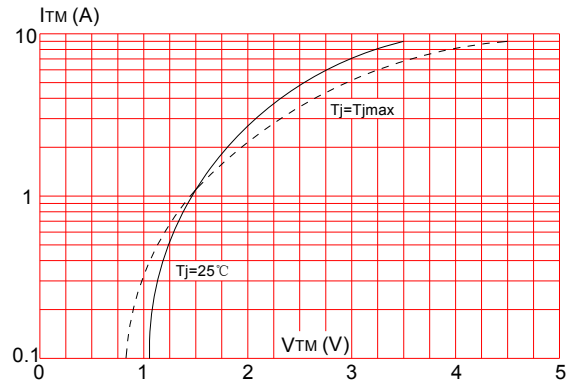
**FIG.3:** Surge peak on-state current versus number of cycles



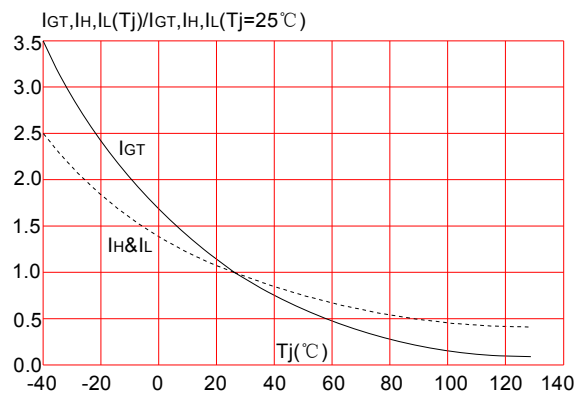
**FIG.5:** Non-repetitive surge peak on-state current for a sinusoidal pulse with width  $t_p < 20\text{ms}$  ( I - II - III:  $di/dt < 50\text{A}/\mu\text{s}$ ; IV:  $di/dt < 20\text{A}/\mu\text{s}$ )




**FIG.4:** On-state characteristics (maximum values)



**FIG.6:** Relative variations of gate trigger current, holding current and latching current versus junction temperature



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