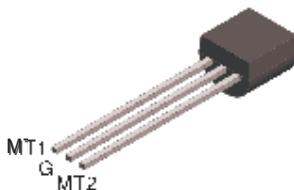
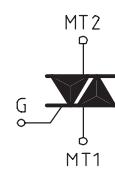


STANDARD TRIAC

TO92 (Plastic)  	On-State Current 1 Amp	Gate Trigger Current $\leq 25 \text{ mA}$
	Off-State Voltage $200 \text{ V} \div 800 \text{ V}$	
<p>This series of TRIACs uses a high performance PNPN technology.</p> <p>These parts are intended for general purpose AC switching applications with highly inductive loads.</p>		

Absolute Maximum Ratings, according to IEC publication No. 134

SYMBOL	PARAMETER	CONDITIONS	Value	Unit
$I_{T(\text{RMS})}$	RMS On-state Current (full sine wave)	All Conduction Angle, $T_C = 95^\circ\text{C}$	1	A
I_{TSM}	Non-repetitive On-State Current	Full Cycle, 60 Hz ($t = 16.7 \text{ ms}$)	8.5	A
I_{TSM}	Non-repetitive On-State Current	Full Cycle, 50 Hz ($t = 20 \text{ ms}$)	8	A
I^{2t}	Fusing Current	$t_p = 10 \text{ ms}$, Half Cycle	0.32	A^2s
I_{GM}	Peak Gate Current	$20 \mu\text{s} \text{ max. } T_j = 125^\circ\text{C}$	1	A
$P_{G(\text{AV})}$	Average Gate Power Dissipation	$T_j = 125^\circ\text{C}$	0.1	W
dl / dt	Critical rate of rise of on-state current	$I_G = 2x I_{GT}, t_r \leq 100\text{ns}$ $f = 120 \text{ Hz}, T_j = 125^\circ\text{C}$	20	$\text{A}/\mu\text{s}$
T_j	Operating Temperature		(-40 + 125)	$^\circ\text{C}$
T_{stg}	Storage Temperature		(-40 + 150)	$^\circ\text{C}$
T_{sld}	Soldering Temperature	10s max	260	$^\circ\text{C}$

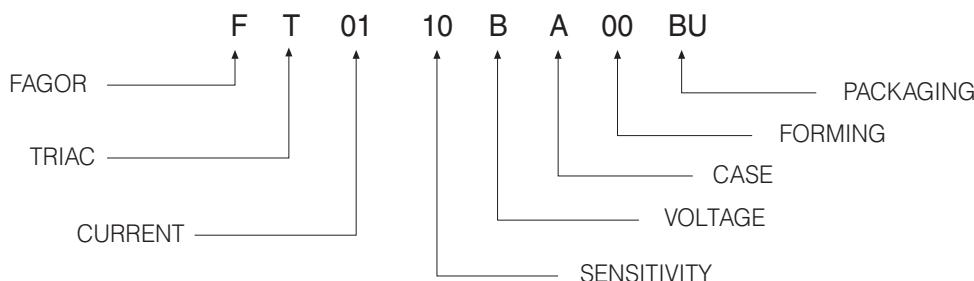
SYMBOL	PARAMETER	VOLTAGE					Unit
		B	D	M	S	N	
V_{DRM}	Repetitive Peak Off State Voltage	200	400	600	700	800	V
V_{RRM}							

STANDARD TRIAC
Electrical Characteristics

SYMBOL	PARAMETER	CONDITIONS	Quadrant		SENSITIVITY	Unit
					10	
$I_{GT}^{(1)}$	Gate Trigger Current	$V_D = 12 \text{ V}_{DC}$, $R_L = 33\Omega$, $T_j = 25^\circ\text{C}$	Q1÷Q3 Q4	MAX MAX	25 25	mA mA
V_{GT}	Gate Trigger Voltage	$V_D = 12 \text{ V}_{DC}$, $R_L = 33\Omega$, $T_j = 25^\circ\text{C}$	Q1÷Q4	MAX	1.3	V
V_{GD}	Gate Non Trigger Voltage	$V_D = V_{DRM}$, $R_L = 3.3\text{K}\Omega$, $T_j = 125^\circ\text{C}$	Q1÷Q4	MIN	0.2	V
$I_H^{(2)}$	Holding Current	$I_T = 100 \text{ mA}$, Gate open, $T_j = 25^\circ\text{C}$		MAX	25	mA
I_L	Latching Current	$I_G = 1.2 I_{GT}$, $T_j = 25^\circ\text{C}$	Q1,Q3,Q4 Q2	MAX MAX	25 50	mA
$dV/dt^{(2)}$	Critical Rate of Voltage Rise	$V_D = 0.67 \times V_{DRM}$, Gate open $T_j = 125^\circ\text{C}$		MIN	200	V/ μ s
$(dV/dt)c^{(2)}$	Critical rise rate of Commutating off-state voltage	$(dI/dt)c = 2.7 \text{ A/ms}$ $T_j = 125^\circ\text{C}$		MIN	4.4	V/ μ s
$V_{TM}^{(2)}$	On-state Voltage	$I_T = 1.1 \text{ Amp}$, $t_p = 380 \mu\text{s}$, $T_j = 25^\circ\text{C}$		MAX	1.5	V
$V_{t(o)}^{(2)}$	Threshold Voltage	$T_j = 125^\circ\text{C}$		MAX	0.95	V
$r_d^{(2)}$	Dynamic Resistance	$T_j = 125^\circ\text{C}$		MAX	1000	m Ω
I_{DRM}/I_{RRM}	Off-State Leakage Current	$V_D = V_{DRM}$, $T_j = 125^\circ\text{C}$ $V_R = V_{RRM}$, $T_j = 25^\circ\text{C}$		MAX MAX	0.5 5	mA μ A
$R_{th(j-c)}$	Thermal Resistance Junction-Case	for AC 360° conduction angle			80	°C/W
$R_{th(j-a)}$	Thermal Resistance Junction- Ambient				150	°C/W

(1) Minimum I_{GT} is guaranteed at 5% of I_{GT} max.

(2) For either polarity of electrode MT2 voltage with reference to electrode MT1.

PART NUMBER INFORMATION


STANDARD TRIAC

Fig. 1: Maximum power dissipation versus RMS on-state current (full cycle).

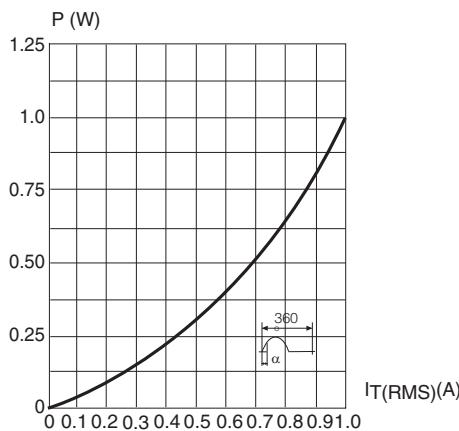


Fig. 3.: Relative variation of thermal impedance versus pulse duration.

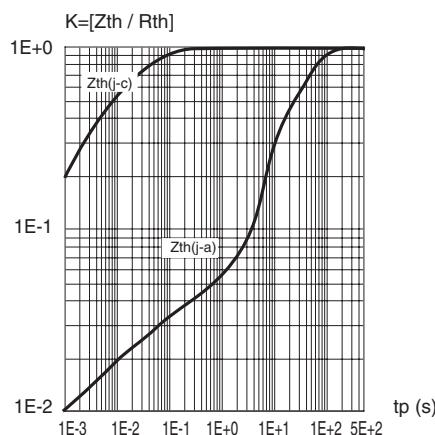


Fig. 5: Surge peak on-state current versus number of cycles

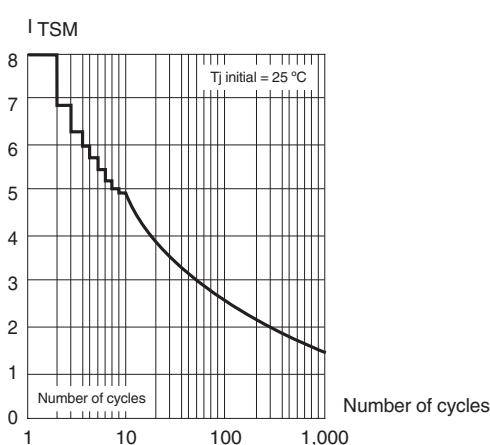


Fig. 2: RMS on-state current versus case temperature (full cycle).

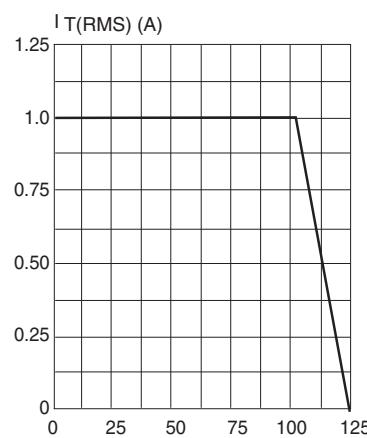


Fig. 4: On-state characteristics (maximum values)

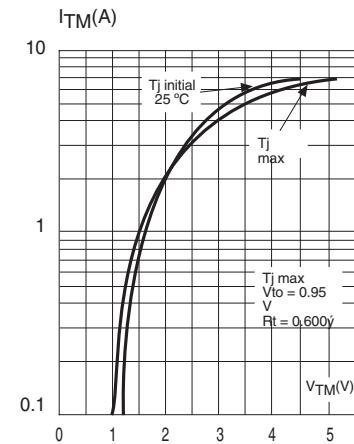
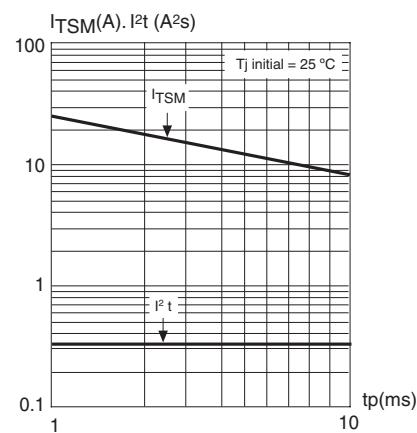


Fig. 6: Non-repetitive surge peak on-state current for a sinusoidal pulse with width tp<10ms, and corresponding value of I²t.



STANDARD TRIAC

Fig. 7: Relative variation of gate trigger current, holding current and latching versus junction temperature (typical values)

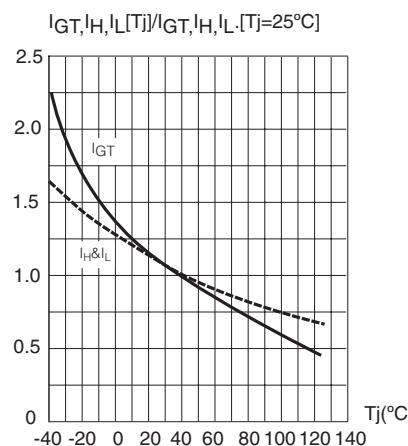


Fig. 8: Relative variation of critical rate of decrease of main current versus junction temperature

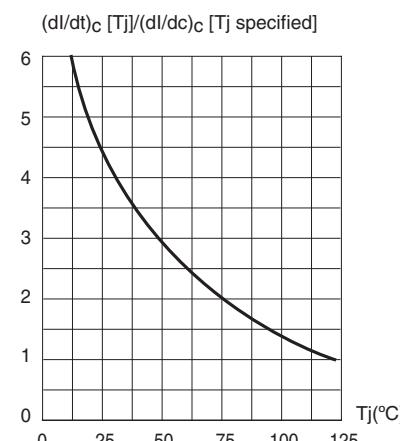
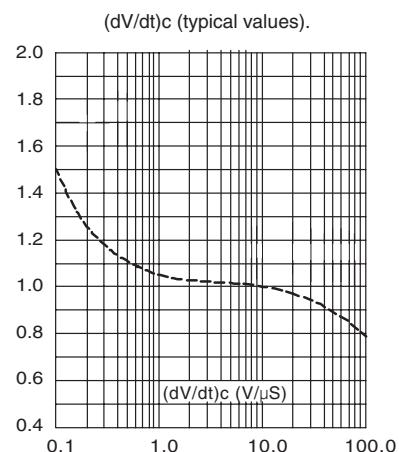
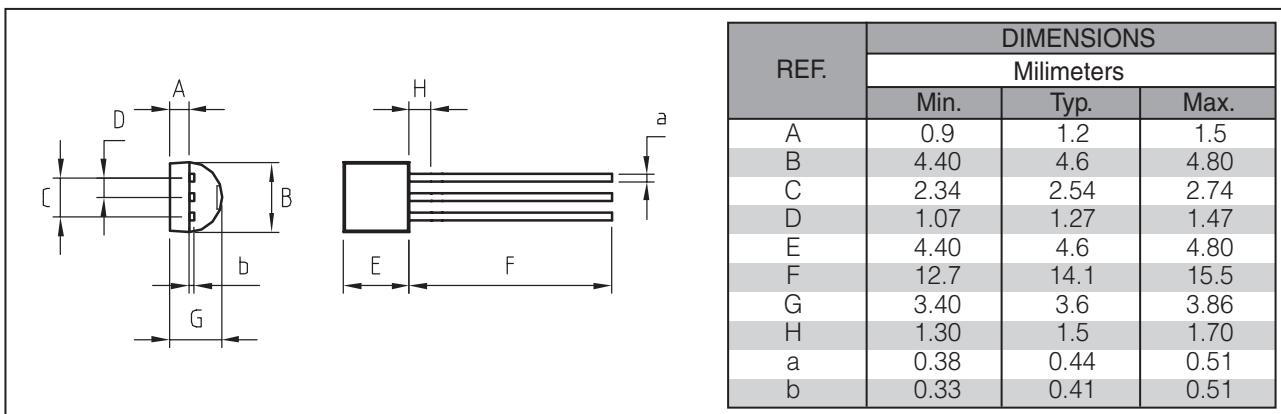


Fig. 9: Relative variation of critical rate of decrease of main current versus



PACKAGE MECHANICAL DATA

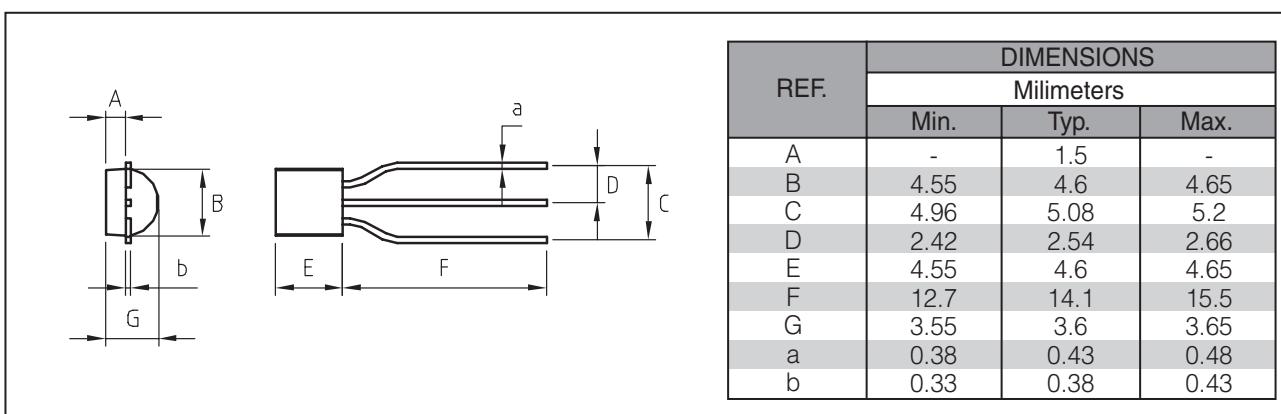
TO92



Marking: type number
Weight: 0.2 g

PACKAGE MECHANICAL DATA

TO92 (FORTAPE & REEL)



Marking: type number
Weight: 0.2 g

Mar - 05