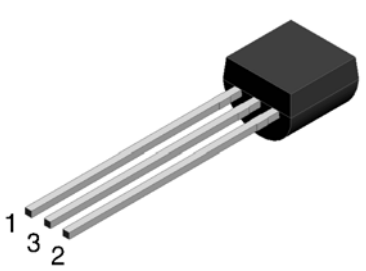
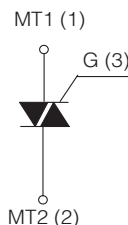




**LOGIC LEVEL TRIAC**

<p><b>TO-92</b></p>  	<p><b>On-State Current</b> 1 Amp</p>	<p><b>Gate Trigger Current</b> &lt; 10 mA</p>	
	<p><b>Off-State Voltage</b> 400 V ÷ 800 V</p>		
	<p><b>FEATURES</b></p> <ul style="list-style-type: none"> <li>• Glass/passivated die junctions</li> <li>• Low current Triac</li> <li>• Low thermal resistance</li> <li>• High surge current capability</li> <li>• Low forward voltage drop</li> <li>• Solder dip 260°C, 10s</li> <li>• Component in accordance to RoHS 2011/65/EU and WEEE 2002/96/EC</li> <li>• Meets MSL level 3, per J-STD-020, LF maximum peak of 260° C</li> </ul>		  <b>RoHS COMPLIANT</b>
	<p><b>MECHANICAL DATA</b></p> <ul style="list-style-type: none"> <li>• <b>Case:</b> TO-92. Epoxy meets UL 94V-0 flammability rating.</li> <li>• <b>Polarity:</b> As marked on the body.</li> <li>• <b>Terminals:</b> Matte tin plated leads, solderable per MIL-STD-750 Method 2026, J-STD-002 and JESD22-B102. Consumer grade, meets JESD 201 class 1A whisker test.</li> </ul>		
<p><b>TYPICAL APPLICATIONS</b></p> <p>Logic level versions are designed to interface directly with low power drivers such as microcontrollers.</p>			

**Maximum Ratings and Electrical Characteristics at 25°C**

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

SYMBOL	PARAMETER	VOLTAGE			Unit
		D	M	N	
$V_{DRM}/V_{RRM}$	Repetitive Peak Off State Voltage	400	600	800	V



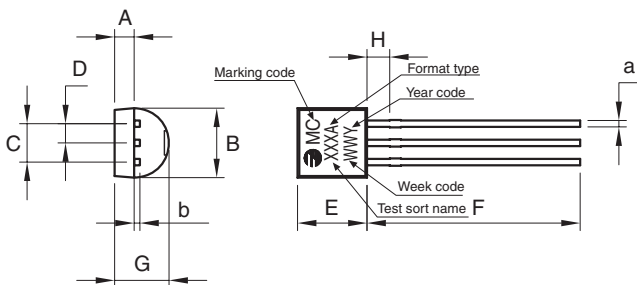
**LOGIC LEVEL TRIAC**

**Ordering information**

PREFERRED P/N	PACKAGE CODE	DELIVERY MODE	BASE QUANTITY	UNIT WEIGHT (g)
FT0103MA 00AM	AM	AMMO	2,000	0.2
FT0103MA 00BU	BU	BULK	10,000	0.2

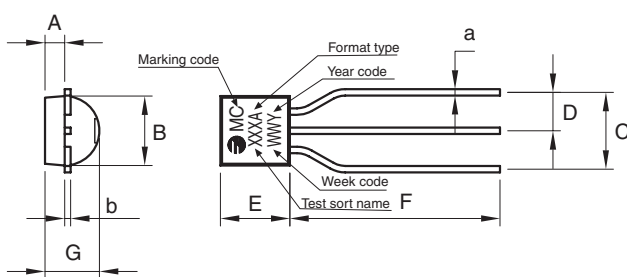
**Package Outline Dimensions: (mm) TO-92**

**TO-92 (BU)**



REF.	DIMENSIONS		
	Milimeters		
	Min.	Typ.	Max.
A	0.90	1.20	1.50
B	4.40	4.60	4.80
C	2.34	2.54	2.74
D	1.07	1.27	1.47
E	4.40	4.60	4.80
F	12.70	14.10	15.50
G	3.40	3.60	3.86
H	1.30	1.50	1.70
a	0.38	0.44	0.51
b	0.33	0.41	0.51

**TO-92 (AMMO)**



REF.	DIMENSIONS		
	Milimeters		
	Min.	Typ.	Max.
A	0.90	1.20	1.50
B	4.40	4.60	4.80
C	4.96	5.08	5.20
D	2.42	2.54	2.66
E	4.40	4.60	4.80
F	12.30	13.70	15.50
G	3.40	3.60	3.86
H	1.30	1.50	1.70
a	0.38	0.44	0.51
b	0.33	0.41	0.51

**LOGIC LEVEL TRIAC**

**Ratings and Characteristics (Ta 25 °C unless otherwise noted)**

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

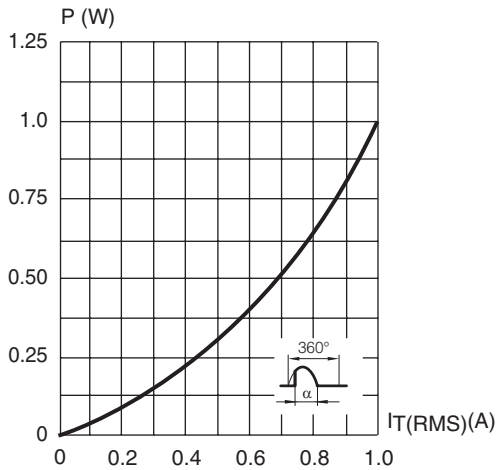


Fig. 2: RMS on-state current versus case temperature (full cycle).

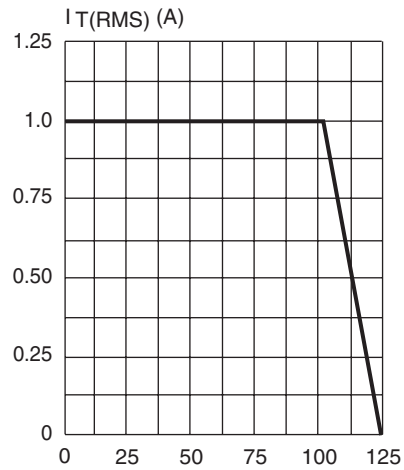


Fig. 3: Relative variation of thermal impedance versus pulse duration.

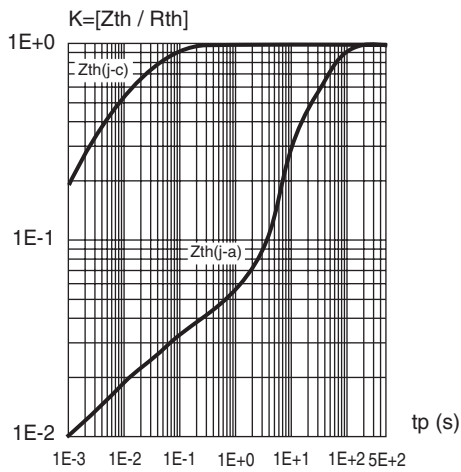
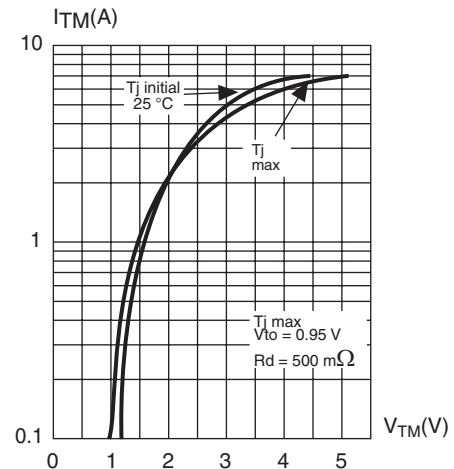


Fig. 4: On-state characteristics (maximum values)



tp (s) Fig. 5: Surge peak on-state current versus number of cycles

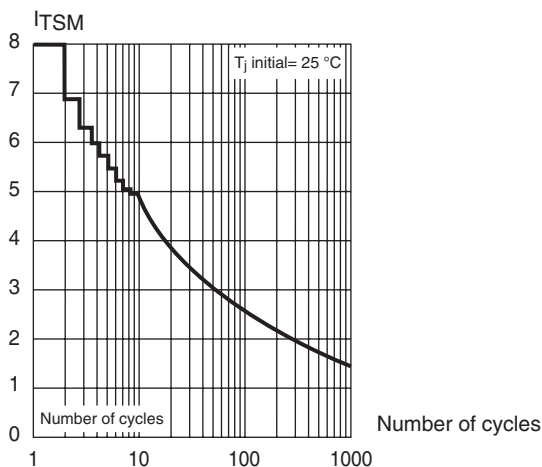
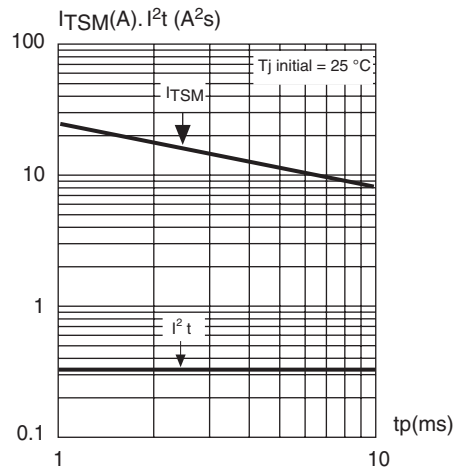


Fig. 6: Non-repetitive surge peak on-state current for a sinusoidal pulse with width tp<10ms, and corresponding value of I²t.



**LOGIC LEVEL TRIAC**

**Ratings and Characteristics (Ta 25 °C unless otherwise noted)**

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

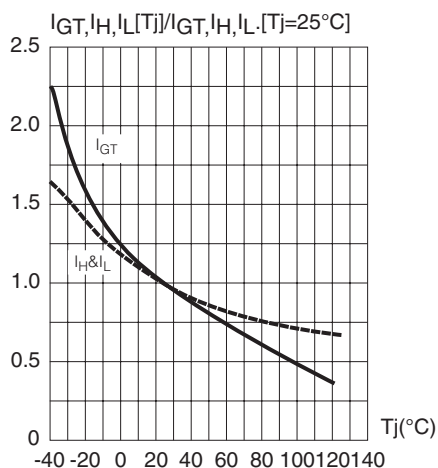


Fig. 8: Relative variation of critical rate of decrease of main current versus junction temperature

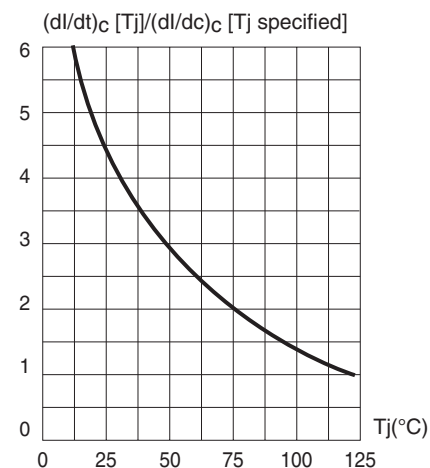
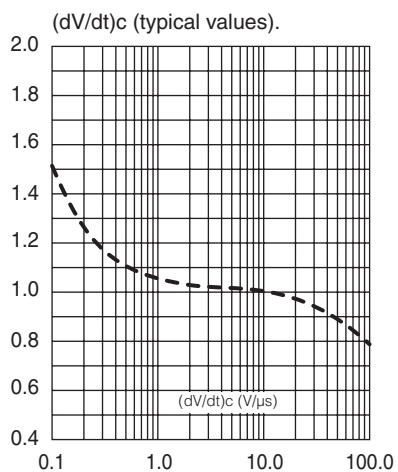


Fig. 9: Relative variation of critical rate of decrease of main current versus



**LOGIC LEVEL TRIAC****Revision History**

Date	Revision	Description of Changes
Oct-2014	0	Original Data Sheet
May-2016	1	Sensitivity 05 eliminated

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