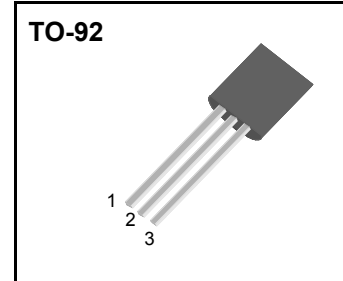
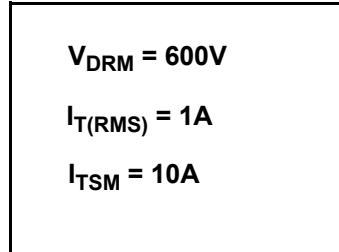
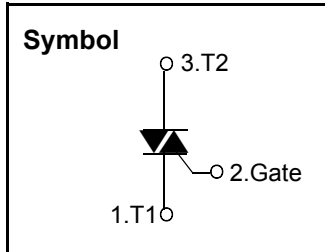


## Sensitive Triac



### Features

- ◆ Repetitive Peak Off-State Voltage : 600V
- ◆ R.M.S On-State Current (  $I_{T(RMS)} = 1 A$  )
- ◆ High Commutation dv/dt

### General 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 where high sensitivity is required in all four quadrants.

This device may substitute for Z0107MA.

### Absolute Maximum Ratings ( $T_j = 25^{\circ}C$ unless otherwise specified )

Symbol	Parameter	Condition	Ratings	Units
$V_{DRM}$	Repetitive Peak Off-State Voltage	Sine wave, 50 to 60 Hz	600	V
$I_{T(RMS)}$	R.M.S On-State Current	$T_j = 110^{\circ}C$ , Full Sine Wave	1.0	A
$I_{TSM}$	Surge On-State Current	One Cycle, 50Hz/60Hz, Peak, Non-Repetitive	10	A
$I^2t$	$I^2t$ for Fusing	$t_p = 10ms$	0.41	A <sup>2</sup> s
P <sub>GM</sub>	Peak Gate Power Dissipation		1	W
P <sub>G(AV)</sub>	Average Gate Power Dissipation		0.1	W
$I_{GM}$	Peak Gate Current		1	A
$T_j$	Operating Junction Temperature		- 40 ~ 125	$^{\circ}C$
$T_{STG}$	Storage Temperature		- 40 ~ 150	$^{\circ}C$



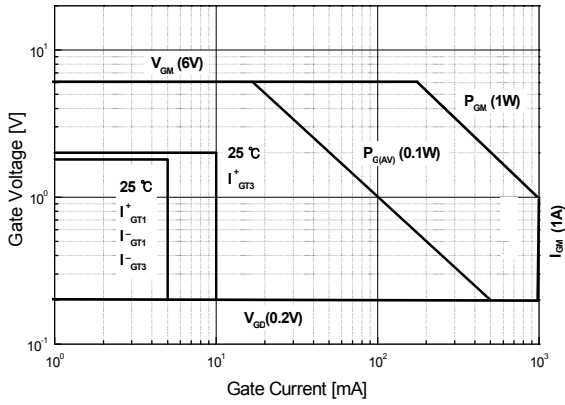
# TN1A60

## Electrical Characteristics (T<sub>j</sub> = 25°C unless otherwise specified)

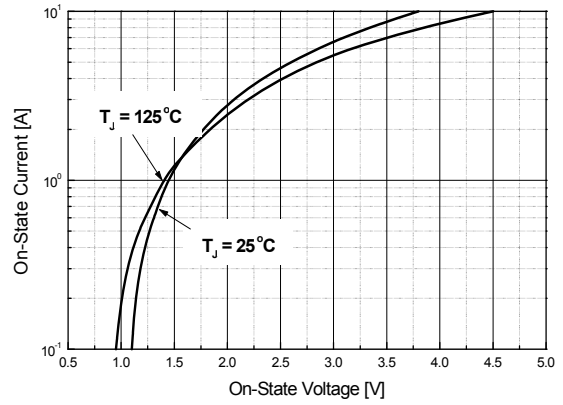
Symbol	Items		Conditions	Ratings			Unit
				Min.	Typ.	Max.	
I <sub>DRM</sub>	Repetitive Peak Off-State Current		V <sub>D</sub> = V <sub>DRM</sub> , Single Phase, Half Wave	-	-	0.5	mA
V <sub>TM</sub>	Peak On-State Voltage		I <sub>TM</sub> = 1 A, t <sub>p</sub> =380μs	-	-	1.6	V
I <sup>+</sup> <sub>GT1</sub>	I	Gate Trigger Current	V <sub>D</sub> = 12V, R <sub>L</sub> =100 Ω	-	-	10	mA
I <sup>-</sup> <sub>GT1</sub>	II			-	-	10	
I <sup>-</sup> <sub>GT3</sub>	III			-	-	10	
I <sup>+</sup> <sub>GT3</sub>	IV			-	-	30	
V <sup>+</sup> <sub>GT1</sub>	I	Gate Trigger Voltage	V <sub>D</sub> = 12V, R <sub>L</sub> =100 Ω	-	-	1.8	V
V <sup>-</sup> <sub>GT1</sub>	II			-	-	1.8	
V <sup>-</sup> <sub>GT3</sub>	III			-	-	1.8	
V <sup>+</sup> <sub>GT3</sub>	IV			-	-	2.0	
V <sub>GD</sub>	Non-Trigger Gate Voltage		V <sub>D</sub> =1/2 V <sub>DRM</sub>	0.1	-	-	V
dv/dt	Critical Rate of Rise Off-State Voltage		T <sub>j</sub> = 110 °C V <sub>D</sub> =2/3 V <sub>DRM</sub>	5	-	-	V/μs
I <sub>H</sub>	Holding Current		V <sub>D</sub> =12V, I <sub>T</sub> =0.1A	-	-	25	mA



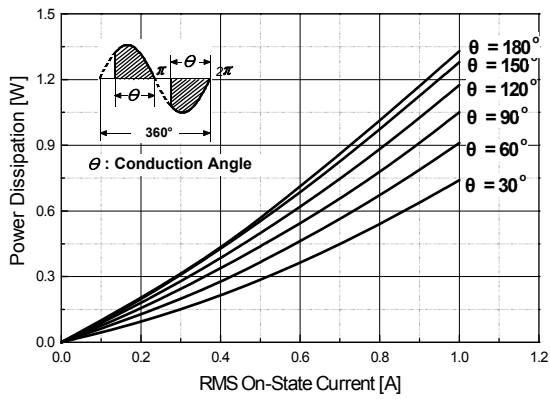
**Fig 1. Gate Characteristics**



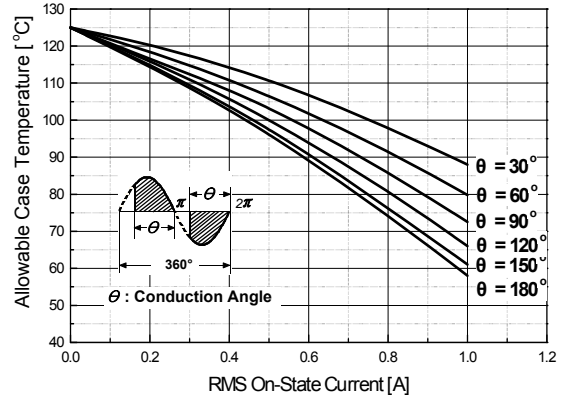
**Fig 2. On-State Voltage**



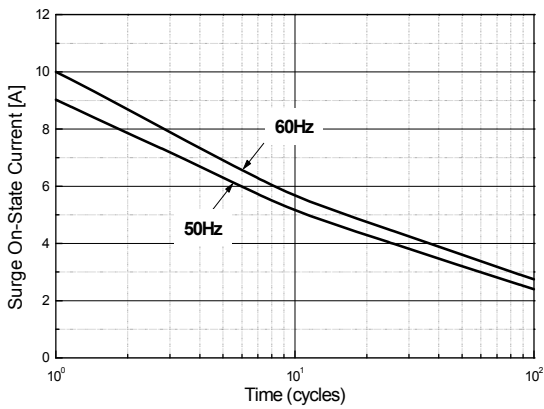
**Fig 3. On State Current vs. Maximum Power Dissipation**



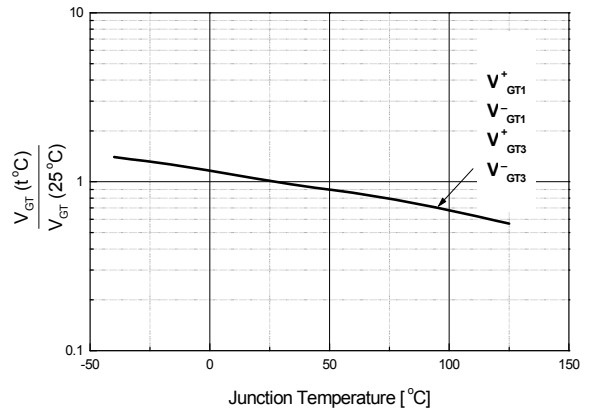
**Fig 4. On State Current vs. Allowable Case Temperature**



**Fig 5. Surge On-State Current Rating ( Non-Repetitive )**



**Fig 6. Gate Trigger Voltage vs. Junction Temperature**





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Fig 7. Gate Trigger Current vs. Junction Temperature

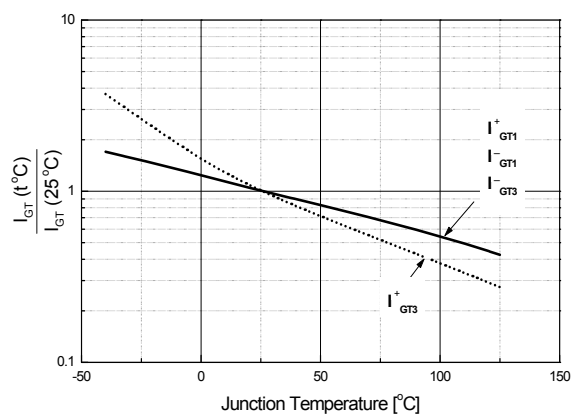
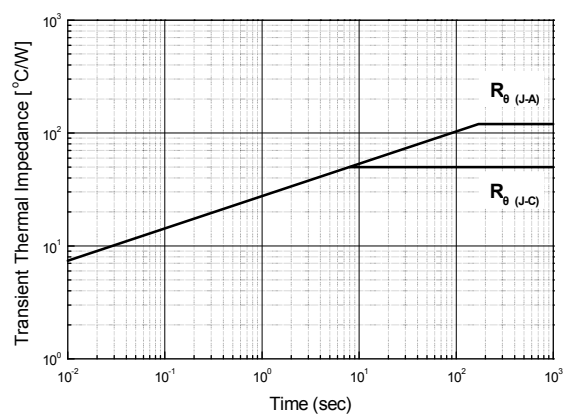


Fig 8. Transient Thermal Impedance





## TO-92 Package Dimension

Dim.	mm			Inch		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A		4.2			0.165	
B			3.7			0.146
C	4.43		4.83	0.174		0.190
D	14.07		14.87	0.554		0.585
E			0.4			0.016
F	4.43		4.83	0.174		0.190
G			0.45			0.017
H		2.54			0.100	
I		2.54			0.100	
J	0.33		0.48	0.013		0.019

