




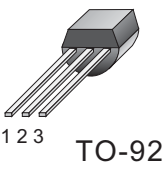
1A60

Sensitive Gate Triacs

HAOPIN MICROELECTRONICS CO.,LTD.

Description

Passivated, sensitive gate triacs in a plastic envelope, intended for use in general purpose bidirectional switching and phase control applications, where high sensitivity is required in all four quadrants.

<p>Symbol</p> 		<p>Simplified outline</p> 	
Pin	Description		
1	Main terminal 1(T1)		
2	Gate		
3	Main terminal 2 (T2)		

Applications:

- ◆ Motor control
- ◆ Industrial and domestic lighting
- ◆ Heating
- ◆ Static switching

Features

- ◆ Blocking voltage to 600 V
- ◆ On-state RMS current to 1.5 A

SYMBOL	PARAMETER	Value	UNIT
V_{DRM}	Repetitive peak off-state voltages	600	V
$I_T (RMS)$	RMS on-state current	1.5	A
I_{TSM}	Non-repetitive peak on-state current	15	A

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
$R_{th(j-c)}$	Thermal resistance	Junction to case	-	-	50	°C/W
$R_{th(j-a)}$	Thermal resistance	Junction to Ambient	-	-	120	°C/W



1A60

Sensitive Gate Triacs

HAOPIN MICROELECTRONICS CO.,LTD.

Limiting values in accordance with the Maximum system(IEC 134)

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
V_{DRM}	Repetitive peak off-state Voltages		-	600	V
$I_{T(RMS)}$	RMS on-state current	$T_C=58^{\circ}C$	-	1.5	A
I_{TSM}	Surge On-State Current	One Cycle,50Hz/60Hz,Peak, Non-Repetitive	-	13.5/15	A
I^2t	I^2t for fusing		-	0.41	A ² S
I_{GM}	Peak gate current		-	0.5	A
V_{GM}	Peak gate voltage		-	6.0	V
P_{GM}	Peak gate power		-	1	W
$P_{G(AV)}$	Average gate power		-	0.1	W
T_{stg}	Storage temperature		-40	150	$^{\circ}C$
T_j	Operating junction Temperature		-40	125	$^{\circ}C$

$T_j=25^{\circ}C$ unless otherwise stated

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
Static characteristics						
I_{GT}	Gate trigger current	$V_D=6V; R_L=10\Omega$				
			I_{GT1}^+ I	-	-	5 mA
			I_{GT1}^- II	-	-	5 mA
			I_{GT3}^+ III	-	-	5 mA
			I_{GT3}^- IV	-	-	10 mA
V_{GT}	Gate Trigger voltage	$V_D=6V; R_L=10\Omega$				
			V_{GT1}^+ I	-	-	1.8 V
			V_{GT1}^- II	-	-	1.8 V
			V_{GT3}^+ III	-	-	1.8 V
			V_{GT3}^- IV	-	-	2.0 V
I_H	Holding Current		-	4.0	-	mA
V_{GD}	Non-Trigger Gate Voltage	$T_j=125^{\circ}C; V_D=1/2V_{DRM}$	0.2	-	-	V
I_{DRM}	Repetitive Peak Off-State Current	$V_D=V_{DRM};$ single phase, Half Wave; $T_j=125^{\circ}C$	-	-	0.5	mA
V_{TM}	Peak On-State Voltage	$I_T=1.5A; Inst, Measurement$	-	-	1.6	V

Dynamic Characteristics

$(dv/dt)_c$	Critical rate of rise off-state	$T_j=125^{\circ}C; (di/dt)_c=-0.5A/ms, V_D=2/3 V_{DRM}$	2	-	-	V/ μ s
-------------	---------------------------------	---	---	---	---	------------



1A60

Sensitive Gate Triacs

HAOPIN MICROELECTRONICS CO.,LTD.

Fig 1. Gate Characteristics

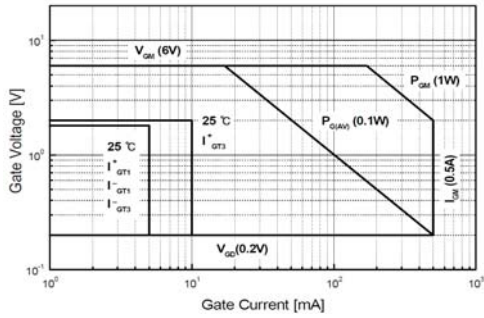


Fig 2. On-State Voltage

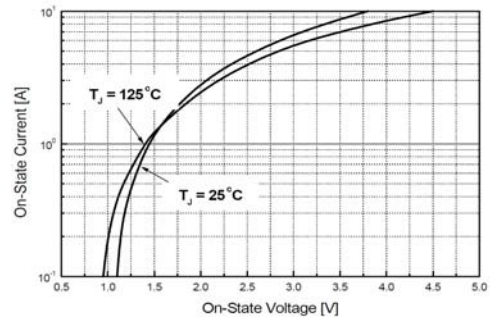


Fig 3. On State Current vs. Maximum Power Dissipation

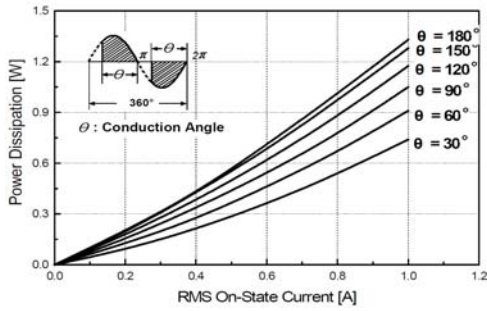


Fig 4. On State Current vs. Allowable Case Temperature

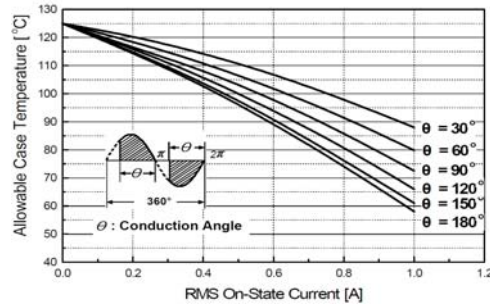


Fig 5. Surge On-State Current Rating (Non-Repetitive)

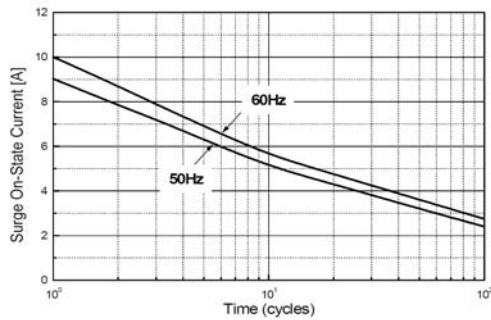
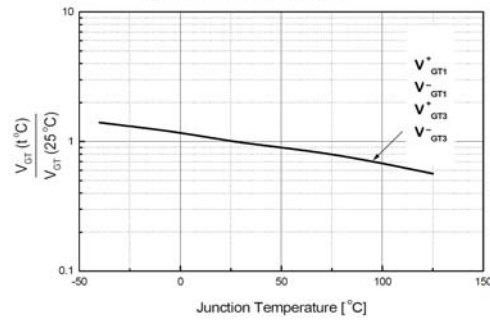


Fig 6. Gate Trigger Voltage vs. Junction Temperature





1A60

Sensitive Gate Triacs

HAOPIN MICROELECTRONICS CO.,LTD.

Fig 7. Gate Trigger Current vs. Junction Temperature

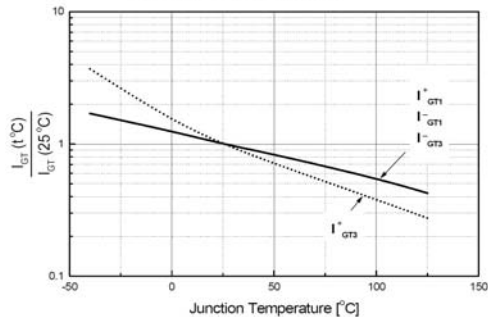
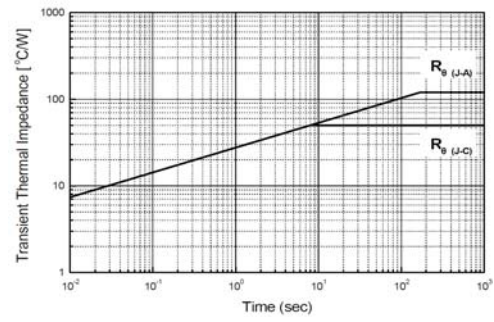


Fig 8. Transient Thermal Impedance





1A60

Sensitive Gate Triacs

HAOPIN MICROELECTRONICS CO.,LTD.

MECHANICAL DATA

Dimensions in mm

Net Mass: 0.2 g

TO-92

REF.	DIMENSIONS					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A		1.35			0.053	
B			4.70			0.185
C		2.54			0.100	
D	4.40			0.173		
E	12.70			0.500		
F			3.70			0.146
a			0.50			0.019

