
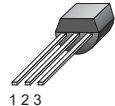


HAOPIN MICROELECTRONICS CO.,LTD.

Description

Glass passivated, sensitive gate thyristors in a plastic envelope, intended for use in general purpose switching and phase control applications. These devices are intended to be interfaced directly to microcontrollers, logic integrated circuits and other low power gate trigger circuits.

Symbol		Simplified outline	
		 TO-92	
Pin	Description		
1	Cathode		
2	anode		
3	gate		
TAB	anode		

Applications:

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

Features

- ◆ Blocking voltage to 400 V
- ◆ On-state RMS current to 0.8 A
- ◆ Ultra low gate trigger current

SYMBOL	PARAMETER	Value	Unit
V_{DRM}	Repetitive peak off-state voltages	400	V
$I_T (RMS)$	RMS on-state current (full sine wave)	0.8	A
$I_{T(AV)}$	Average on-state current	0.5	A

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
$R_{\theta jc}$	Thermal resistance Junc. To case			-	75	$^{\circ}C/W$
$R_{\theta ja}$	Thermal resistance Junc. To amb			-	200	$^{\circ}C/W$

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

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
V_{DRM}	Repetitive peak off-state Voltages	$T_j=40^{\circ}\text{C}$ to 125°C ($R_{GK}=1\text{K}$)	-	400	V
$I_{T(RMS)}$	RMS on-state current	$T_c=40^{\circ}\text{C}$	-	0.8	A
$I_{T(AV)}$	Average On-state Current	Haif Cycle= 180° $T_c=40^{\circ}\text{C}$	-	0.5	A
V_{GRM}	Reverse peak gate voltage	$I_{GR}=10\text{mA}$;	8	-	V
I_{GFM}	Peak gate current	$300\mu\text{s}$ 120pps , $T_A=25^{\circ}\text{C}$	1	-	A
T_{sld}	Soldering temperature	1.6mm from case 10s max	-	-	$^{\circ}\text{C}$
$P_{GF(AV)}$	Average gate power		-	250	W
T_{stg}	Storage temperature		-40	0.01	$^{\circ}\text{C}$
T_j	Operating junction Temperature		-40	125	$^{\circ}\text{C}$

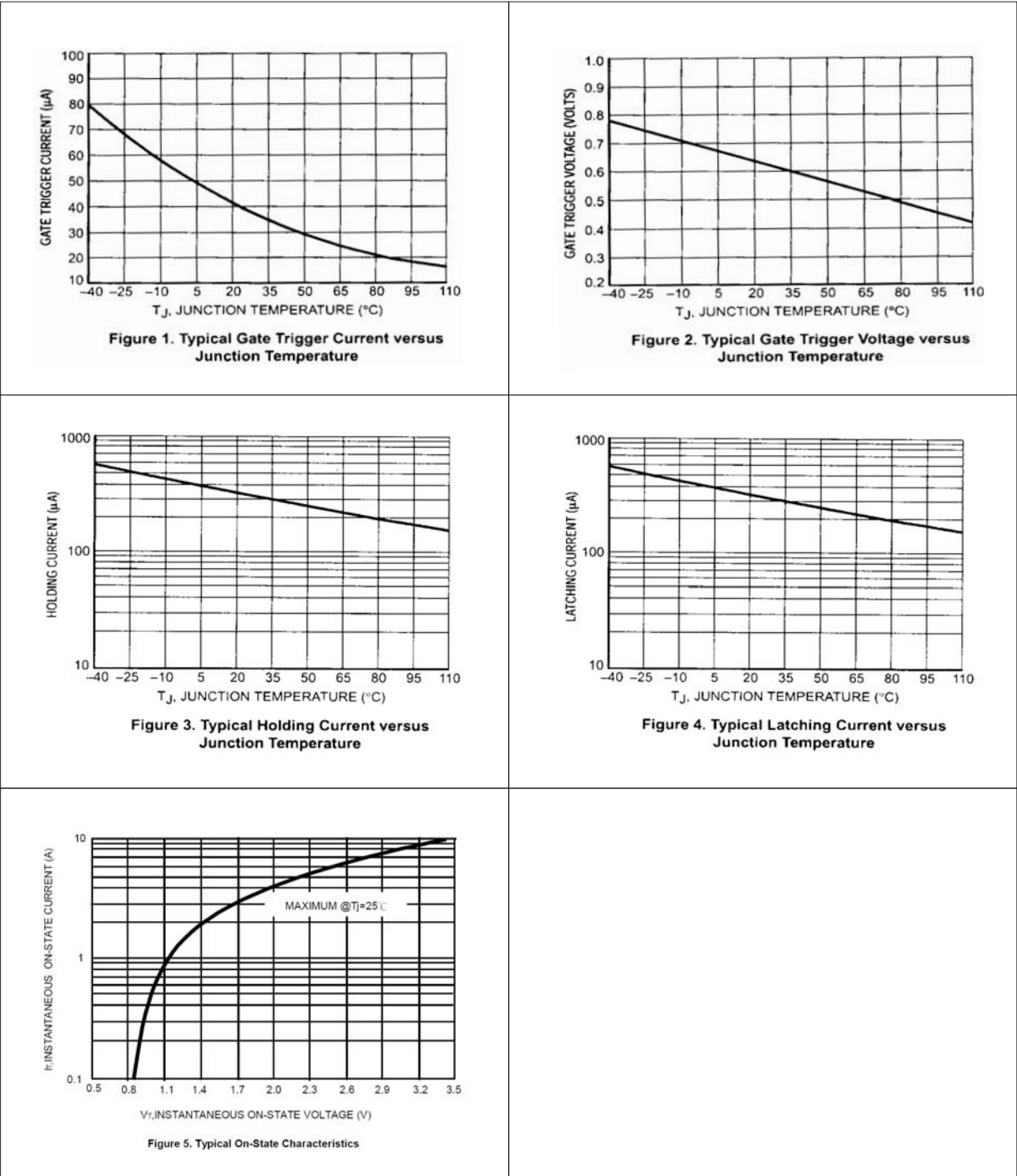
$T_j=25^{\circ}\text{C}$ unless otherwise stated

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
Static characteristics						
I_{GT}	Gate trigger current	Anode Voltage= 7Vdc , $R_L=100\text{ Ohms}$ $T_c=25^{\circ}\text{C}$	-	-	200	μA
V_{TM}	Forward On- voltage	$I_{TM}=1\text{A peak@}$ $T_a=25^{\circ}\text{C}$	-	-	1.7	V
					2.2	V
I_H	Holding Current	$T_c=25^{\circ}\text{C}$	-	-	5	mA
		$T_c=-40^{\circ}\text{C}$	-	-	10	mA
I_{DRM} I_{RRM}	Peak Forward or Reverse Blocking Current	$T_c=125^{\circ}\text{C}$ $T_c=25^{\circ}\text{C}$	-		100 1	μA
$V_T(TO)$	On-state Threshold voltage					V

Dynamic Characteristics

t_{gd}	Gate controlled delay tine	$I_G=10\text{mA}$, $dI_G/dt=0.1\text{A/us}$	-	-	2.2	μS
t_g	commutated tum-off time	$V_o=0.67V_{DRM}$, $T_j=85^{\circ}\text{C}$; $I_T=I_T(AV)$, $V_R=35\text{V}$;	-	-	200	μS

Description

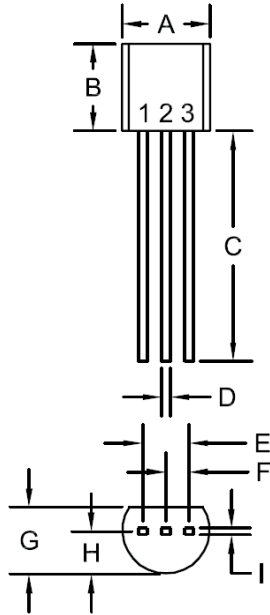


MECHANICAL DATA

Dimensions in mm

Net Mass:0.2 g

TO-92



SYMBOL	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A (DIA)	0.175	0.205	4.45	5.21
B	0.170	0.210	4.32	5.33
C	0.500	-	12.70	-
D	0.016	0.022	0.41	0.56
E	0.100		2.54	
F	0.050		1.27	
G	0.125	0.165	3.18	4.19
H	0.080	0.105	2.03	2.67
I	0.015		0.38	

TO-92 (REV: R1)

R1