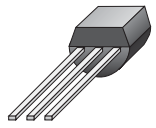
2CQ60

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.

Symbol	Simplified outline
	

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 2 A

SYMBOL	PARAMETER	Value	Unit
V_{DRM}	Repetitive peak off-state voltages	600	V
$I_{T\ (RMS)}$	RMS on-state current	2	A
I_{TSM}	Non-repetitive peak on-state current	10	A

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
$R_{th\ j\text{-}mb}$	Thermal resistance, Junction to mounting base	Full cycle	-	-	60	K/W
		Half cycle	-	-	80	K/W
$R_{th(j\text{-}a)}$	Thermal resistance, Junction to Ambient	Pcb mounted; lead length=4mm	-	150	-	K/W

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

SYMBOL	PARAMETER	CONDITIONS	MIN	Value	UNIT
V_{DRM}	Repetitive peak off-state Voltages		-	600	V
$I_{T(RMS)}$	RMS on-state current	full sine wave;T_{lead}≤ 50℃	-	2	A
I_{TSM}	Non-repetitive peak on-state current	full sine wave; half sine wave	- -	10 12	A
$P_{G(AV)}$	Average gate power	Over any 20 ms period	-	0.3	W
I_{GM}	Peak gate current		-	0.2	A
T_L	Lead temperature 1.6mm from case for 10 seconds		-	230	℃
T_{stg}	Storage temperature range		-40	150	℃
T_c	Operating case Temperature range		-40	110	℃

T_J=25°C unless otherwise stated

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
Static characteristics						
I_{GT}	Gate trigger current	V_D=12V; I_T=0.1A	- -	- -	8 10	mA
V_{GT}	Latching current	V_D=12V;I_T=0.1A V_D=400V;I_T=0.1A;T_J=150°C	-	-	2.5	V
I_H	Holding current	V_D=12V; I_{GT}=0.1A	-	-	30	mA
I_L	Latching current	V_D=12V; I_{GT}=0.1A	-	-	40	mA

Dynamic Characteristics

V_{TM}	Peak on-state voltage	I_{TM}=2.0A	-	-	2.2	V
I_{DRM}	Repetitive peak off-state current	V_D=ratedV_{DRM} I_G=0	-	-	±20	μA

Description

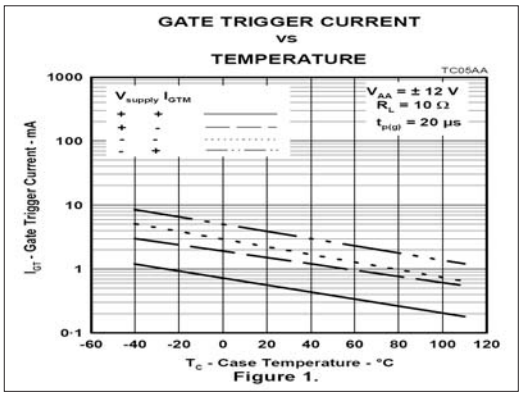


Figure 1.

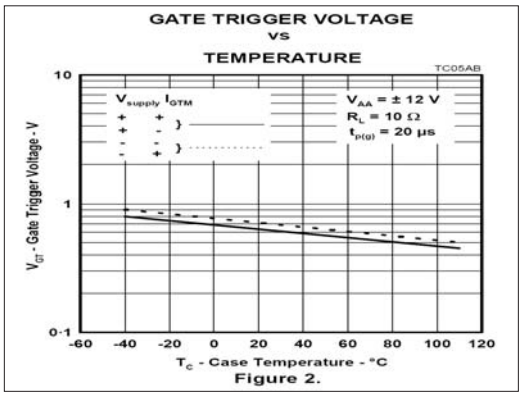


Figure 2.

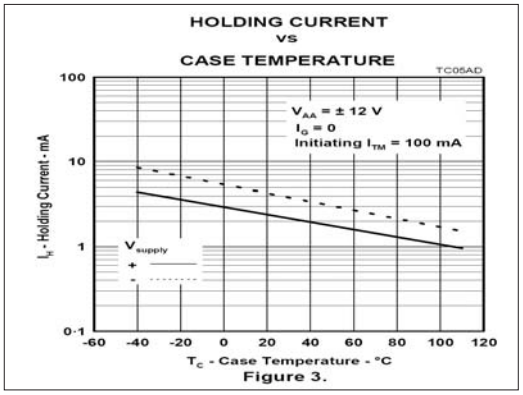


Figure 3.

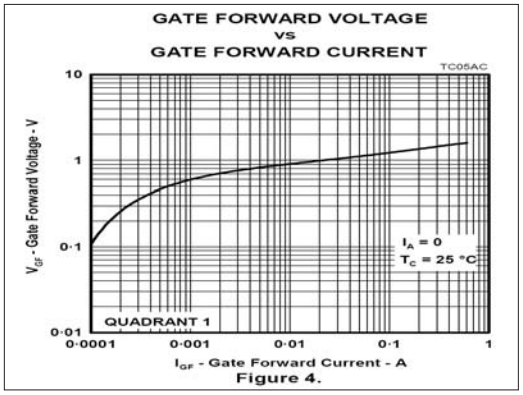


Figure 4.

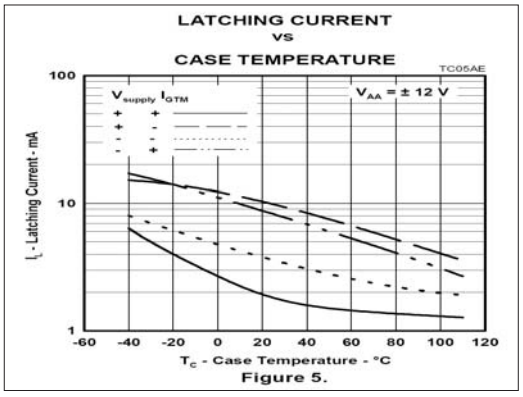


Figure 5.

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