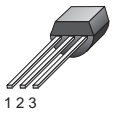
PCR406（606）

SCRs

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 600 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	PCR406 PCR606	400 600	V
$I_{T(RMS)}$	RMS on-state current （full sine wave）		0.8	A
I_{TAV}	Average On-state Current		0.5	A

SYMBOL	PARAMETER	CONDITIONS	Value	TYP	MAX	UNIT
$R_{\theta JC}$	Thermal Resistance. junction to Case		75	-	-	℃/W
$R_{\theta JA}$	Thermal Resistance. Junction to Ambient		200	-	-	℃/W

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

SYMBOL	PARAMETER	CONDITIONS	MIN	Value	UNIT
V_{DRM} V_{RRM}	Peak Repetitive Forward and Reverse Blocking Voltage	Tj=25to125℃ ,RGK=1KΩ PCR406 PCR606	-	400 600	V
$I_{T(RMS)}$	Forwrd Current RMS seeFigures1&2	All Conduction Angles	-	0.8	A
I_{GFM}	Peak Gate Current-Forward	Ta=25℃	-	1	A
I^2t	Circuit Fusing Considerations	t=8.3ms	-	0.415	A^2s
I_{TSM}	Peak Forward surge Current,TA=25°C	1/2Cycle,Sing Wave,60H_z	-	10	A
			-	-	A
$P_{GF(AV)}$	Average gate Power-Forward	Ta=25℃	-	0.01	W
T_j	Operating junction temperature range@rated	V_{RRM} and V_{DRM}	-40	125	℃
T_{stg}	Storage temperature Range		-40	125	℃
P_{GM}	Peak gate power -Forward	Ta=25℃	-	0.1	W

T_J=25°C unless otherwise stated

SYMBOL	TEST	CONDITIONS	MIN	TYP	MAX	UNIT
Static characteristics						
I_{GT}	Gate trigger current Contionuous dc	Ta=25℃,Anode Voltage=7Vdc,RL=100Ohms	-	-	200	μA
V_{GT}	Gate trigger voltage Continuous dc	Anode voltage=7vdc, RL=100Ohms TC=25℃ TC=-40℃ Anode voltage=Rated V_{DRM}, RL=100Ohms TC=125℃	- - 0.1	- - -	0.8 1.2 -	V V V
V_{TM}	Forward On Voltage	ITM=1A Peak@TA=25℃	-	-	1.7	V
I_H	Holding current	TC=25℃ / TC=-40℃	-	-	5/10	mA
I_{DRM} I_{RRM}	Peak Forward or Reverse Blocking Current	Tc=25℃, Tc=125℃,	- -	- -	10 100	μA
IFGM	Peak gate forward current		-	-	-	A

Description

FIGURE 1 – PCR606 CURRENT DERATING
(REFERENCE: CASE TEMPERATURE)

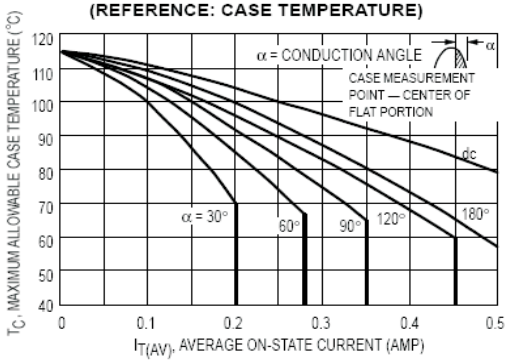
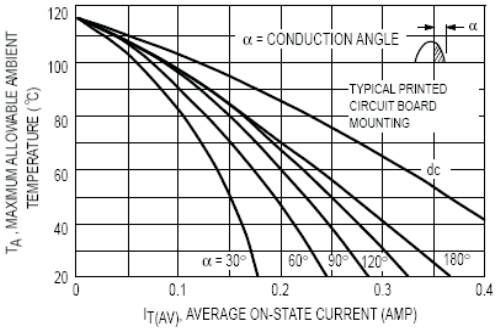


FIGURE 2 – PCR606 CURRENT DERATING
(REFERENCE: AMBIENT TEMPERATURE)



MECHANICAL DATA

Dimensions in mm

Net Mass:0.2 g

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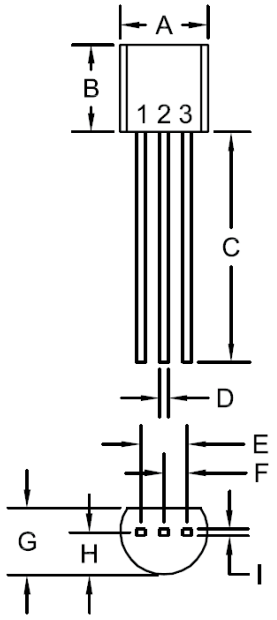

R1

DIMENSIONS				
	INCHES		MILLIMETERS	
SYMBOL	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	

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