S848

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-251

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 5 A
- Ultra low gate trigger current

SYMBOL	PARAMETER	Value	Unit
V_{DRM}	Repetitive peak off-state voltages	600	V
$I_{T\ (RMS)}$	RMS on-state current （full sine wave）	7.8	A
I_{TAV}	Average On-state Current	5	A

SYMBOL	PARAMETER	CONDITIONS	Value	TYP	MAX	UNIT
Rth(j-c)	Junction to case		-	-	3.0	℃/W
Rth(j-l)	Junction to lead for DC		-	-	-	℃/W

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

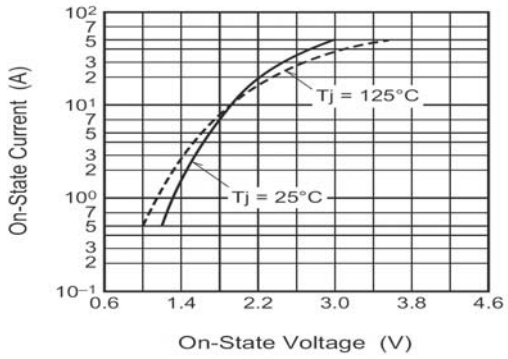
SYMBOL	PARAMETER	CONDITIONS	MIN	Value	UNIT
V_{RRM}	Repetitive peak reverse voltage		-	600	V
$I_{T(RMS)}$	RMS on-state current		-	5	A
I_{FGM}	Peak gate forward current		-	0.3	A
I^2t	I^2t for fusing	Value corresponding to 1cycle of half wave 60Hz,surge on-state current	-	33	A^2s
I_{TSM}	Surge on-state current	60Hz sine half wave 1 full cycle,peak value,non-repetitive	-	90	A
				-	A
$P_{G(AV)}$	Average gate power dissipation		-	0.1	W
T_j	Junction temperature		-40	125	℃
T_{stg}	Storage temperature		-40	125	℃
P_{GM}	Peak gate power dissipation		-	0.5	W

T_J=25°C unless otherwise stated

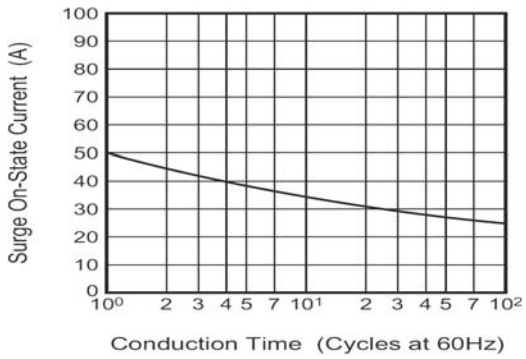
SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
Static characteristics						
I_{GT}	Gate trigger current	Ta=25℃,VD=6V,IT=0.1A	1	-	200	μA
V_{GT}	Gate trigger voltage	Ta=25℃,VD=6V,IT=0.1A	-	-	0.8	V
V_{GD}	Gate non-trigger voltage	Tj=125℃,VD=1/2VDRM,RGK=1KΩ	0.1	-	-	V
V_{TM}	On-state voltage	Ta=25℃,itm=0.6A,instantaneous value	-	-	1.8	V
I_H	Holding current	Tj=25℃,VD=12V RGK=1KΩ	-	-	3.5	mA
I_{DRM}	Repetitive peak off-state current	Tj=125℃,V_{DRM} applied,R_{GK}=220Ω	-	-	2.0	mA
I_{RRM}	Repetitive peak veverse current	Tj=125℃,V_{RRM} applied	-	-	2.0	

Description

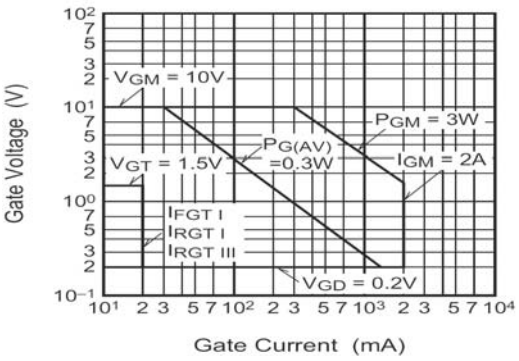
Maximum On-State Characteristics



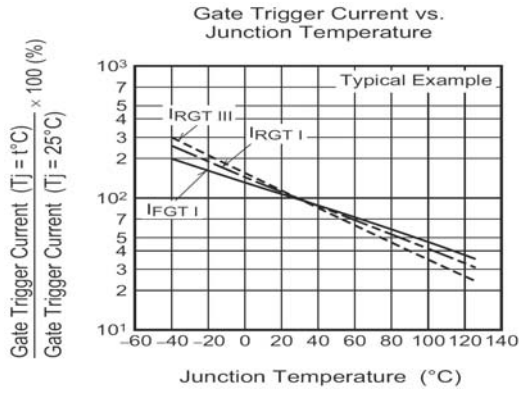
Rated Surge On-State Current



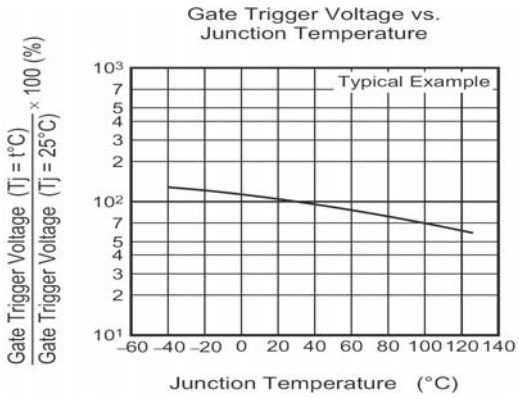
Gate Characteristics (I, II and III)



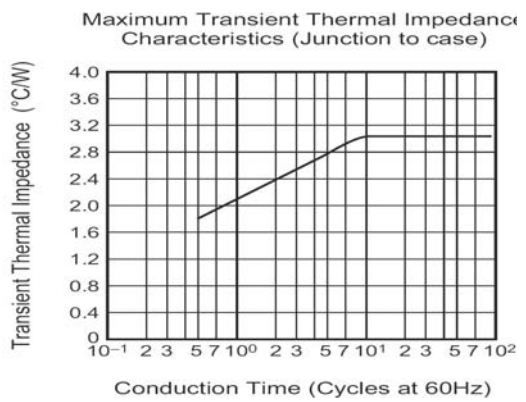
Gate Trigger Current vs. Junction Temperature



Gate Trigger Voltage vs. Junction Temperature



Maximum Transient Thermal Impedance Characteristics (Junction to case)



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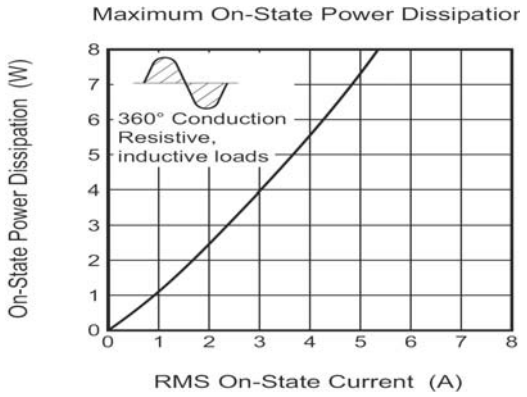

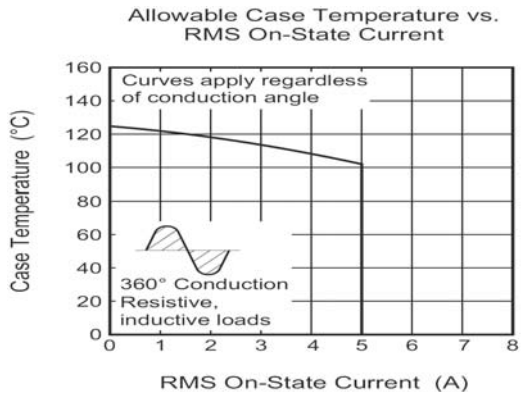

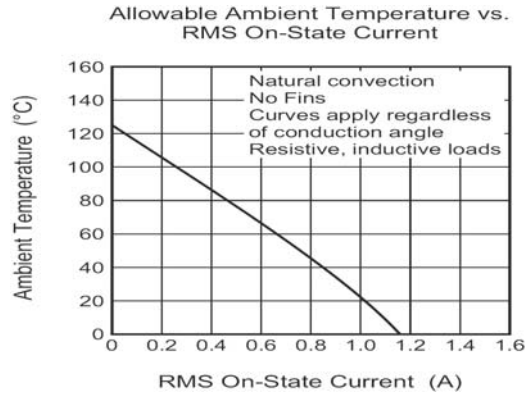

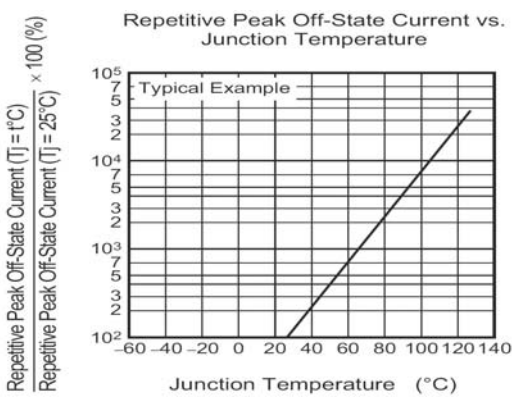

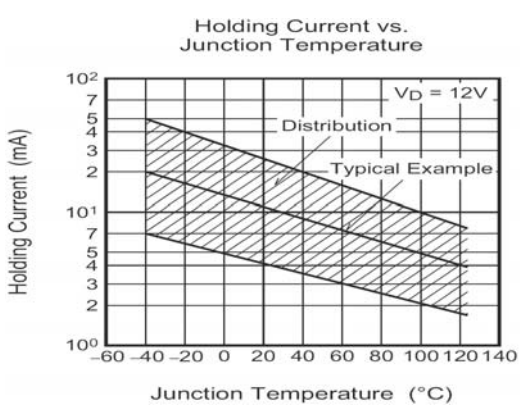

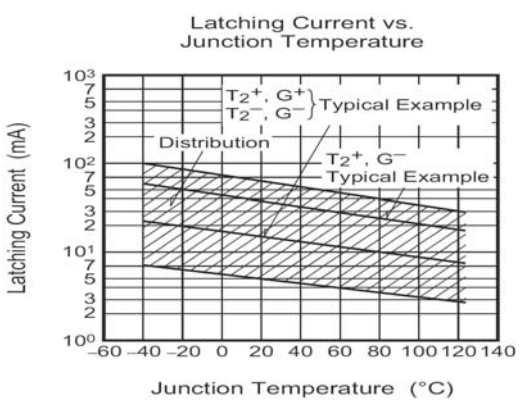

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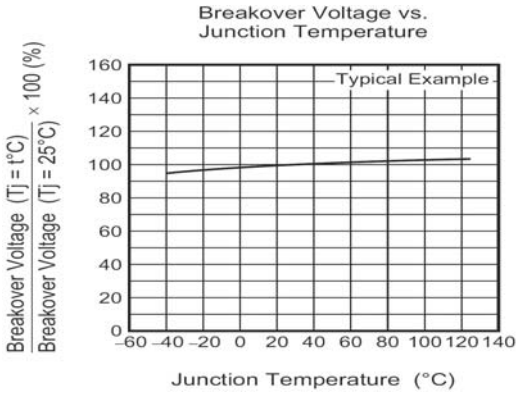

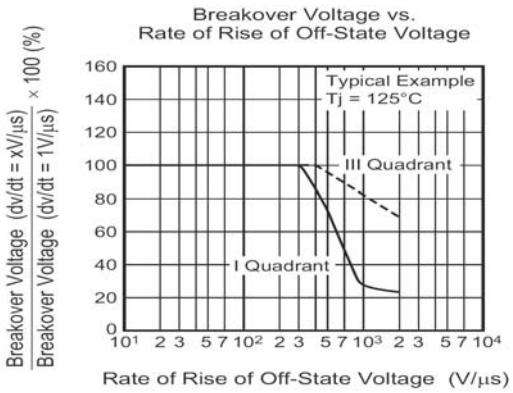

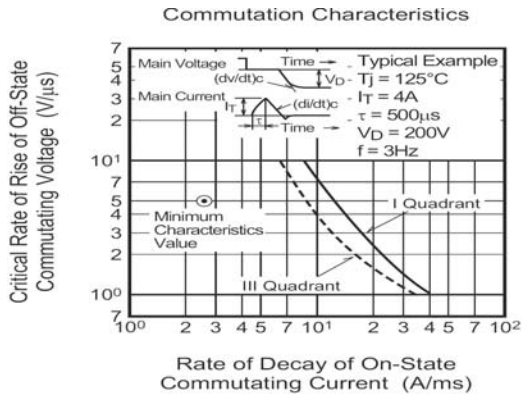

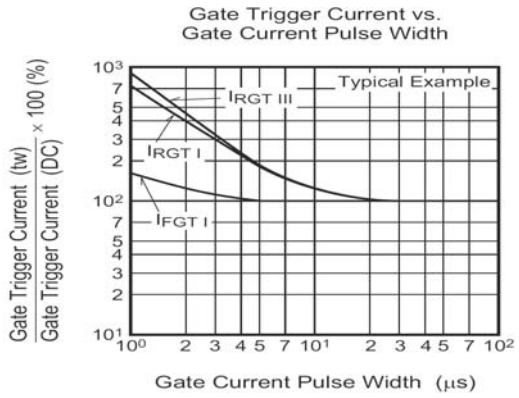

MECHANICAL DATA

Dimensions in mm

Net Mass:0.2 g

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