INTERNATIONAL
IRI

POWER MODULE

IRKT106,IRKH106

FEATURES

- Heat transfer through ceramic.
- Hard solder joints for high reliabilty
- Isolated base mounting

TYPICAL APPLICATIONS

- DC motor control
- AC motor soft starters
- Temperature control for oven
- Chemical processes and professional light dimming

TECHNICAL DATA

DEVICE TYPE	V_{RRM} (V)	V_{RSM} (V)
IRKT106/12, IRKH106/12	**1200**	**1300**
IRKT106/16, IRKH106/16	**1600**	**1700**
IRKT106/20, IRKH106/20	**2000**	**2100**
IRKT106/22, IRKH106/22	**2200**	**2300**

SYMBOL	CONDITIONS	VALUES
I_{TAV} I_{RMS}	Sin. 180; T_{case} =85 °C Ta = 35 °C	106 amp. 200 amp.
I_{TSM} I^2t	Tvj=25°C; 10m Tvj=25°C	2250 amp. 25000 A^2S
I_{RRM}/ I_{DRM}	Tvj=25°C Tvj=125°C	4 mA 20 mA
V_T V_0 R_0	Tvj=25°C (I_T=300 Amp.); max Tvj=125°C Tvj=125°C	1.65 V 0.9 V 2 mΩ
I_{GT} V_{GT} I_H I_L	Tvj=25 °C Tvj=25 °C Tvj=25 °C Typical value Tvj=25 °C Typical value	100 mA 2.0 V 250 mA 600 mA
$R_{th(j-c)}$ $R_{th(c-h)}$ Tvj Tstg	Cont. } Sin. 180 } per thyristor/per module Sin. 120 } Per thyristor/per module	0.28/0.14 °C/W 0.30/0.15 °C/W 0.32/0.16 °C/W 0.20/0.10 °C/W 125 °C (-) 40 to (+)125
Mounting torque		5 Nm/Per bolt
Weight	Approx.	95 gm
$V_{(isol)}$	Ac 50 Hz rms 1 min	3000 volts
Package Outline		IR-1

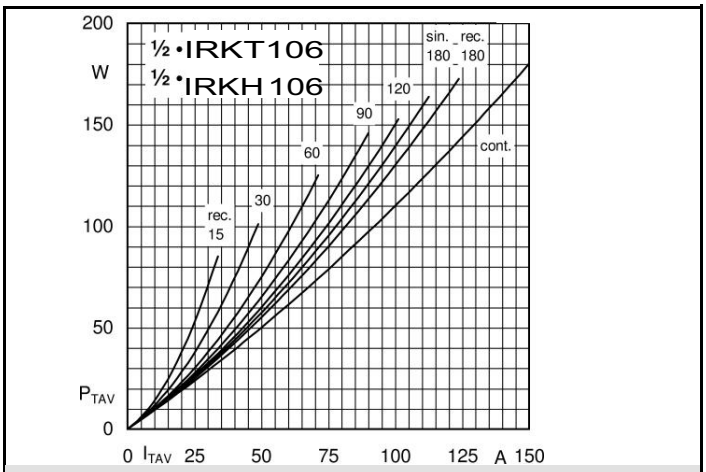


Fig. 1L Power dissipation per thyristor vs. on-state current

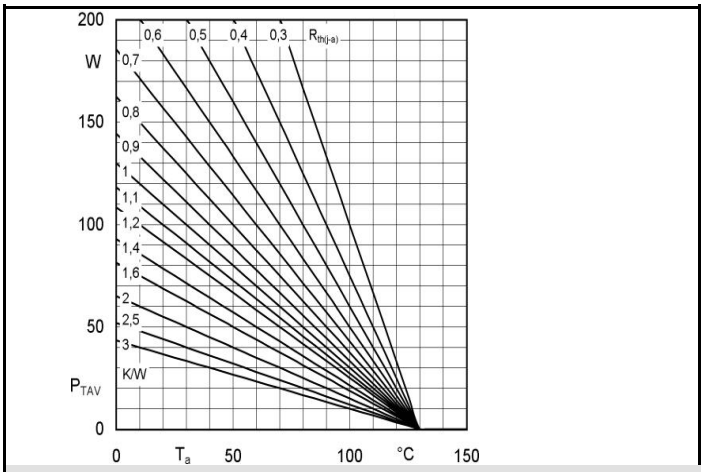


Fig. 1R Power dissipation per thyristor vs. ambient temp.

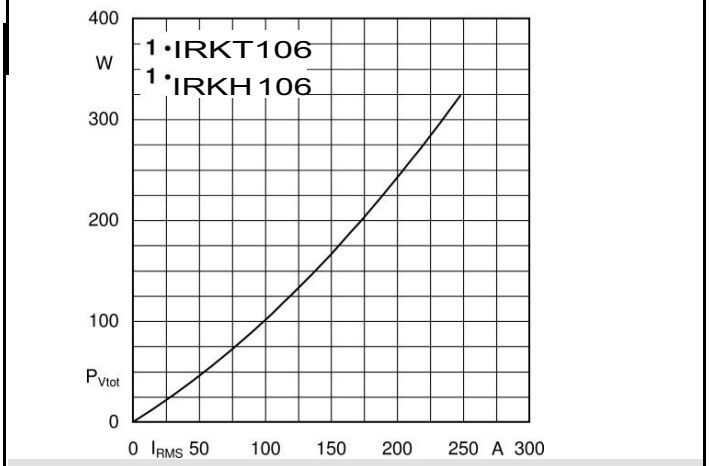


Fig. 2L Power dissipation per module vs. rms current

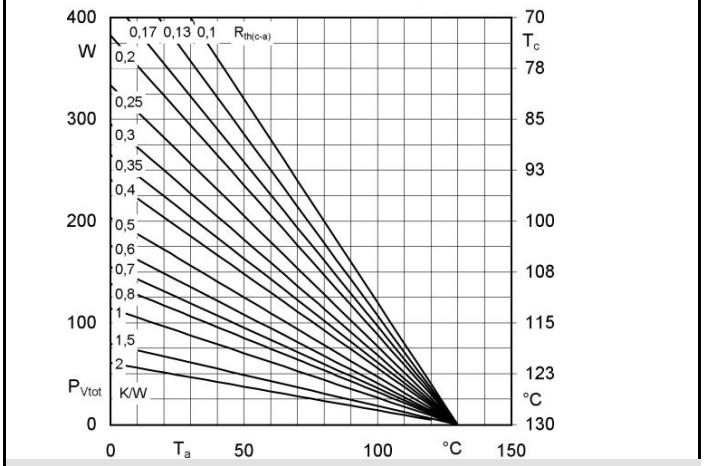


Fig. 2R Power dissipation per module vs. case temp.

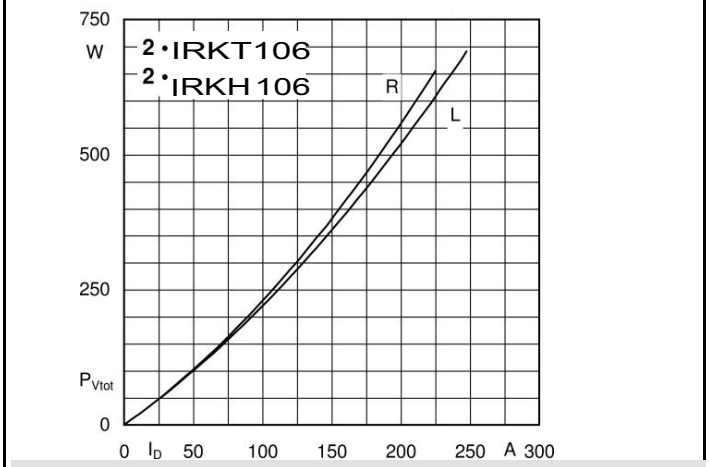


Fig. 3L Power dissipation of two modules vs. direct current

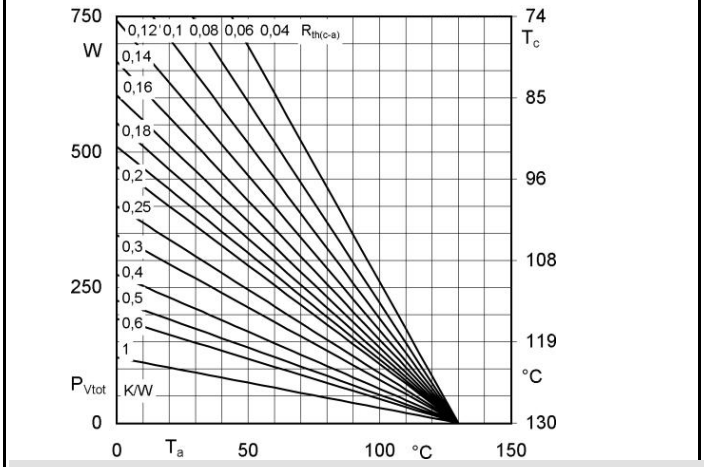


Fig. 3R Power dissipation of two modules vs. case temp.

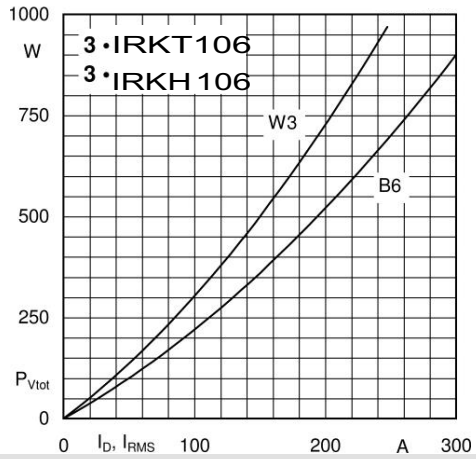


Fig. 4L Power dissipation of three modules vs. direct and rms current

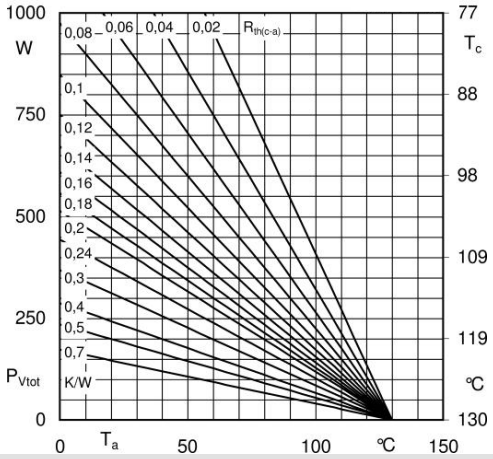


Fig. 4R Power dissipation of three modules vs. case temp.

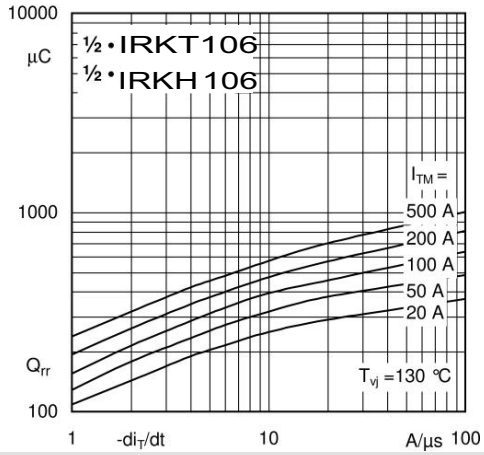


Fig. 5 Recovered charge vs. current decrease

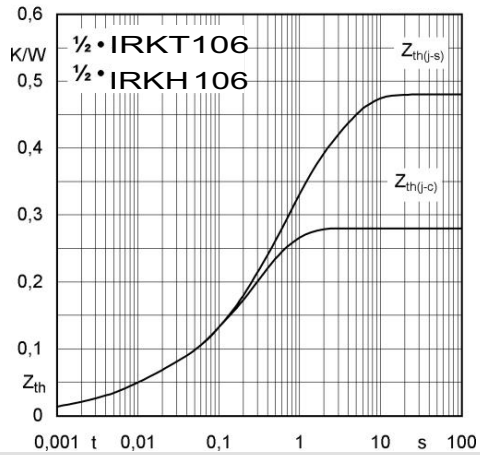


Fig. 6 Transient thermal impedance vs. time

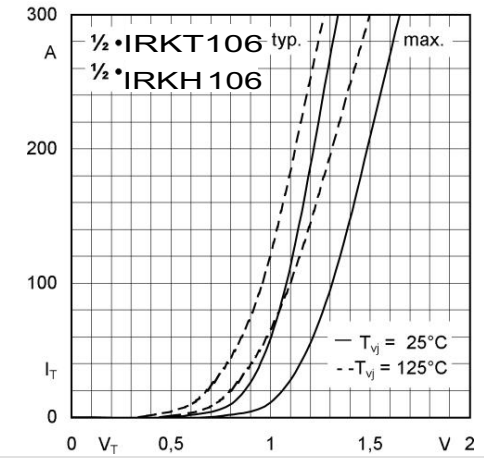


Fig. 7 On-state characteristics

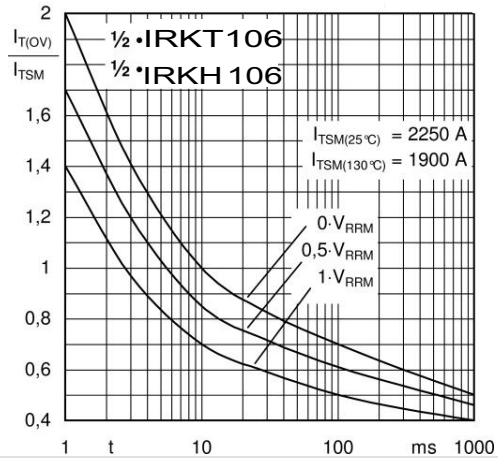


Fig. 8 Surge overload current vs. time

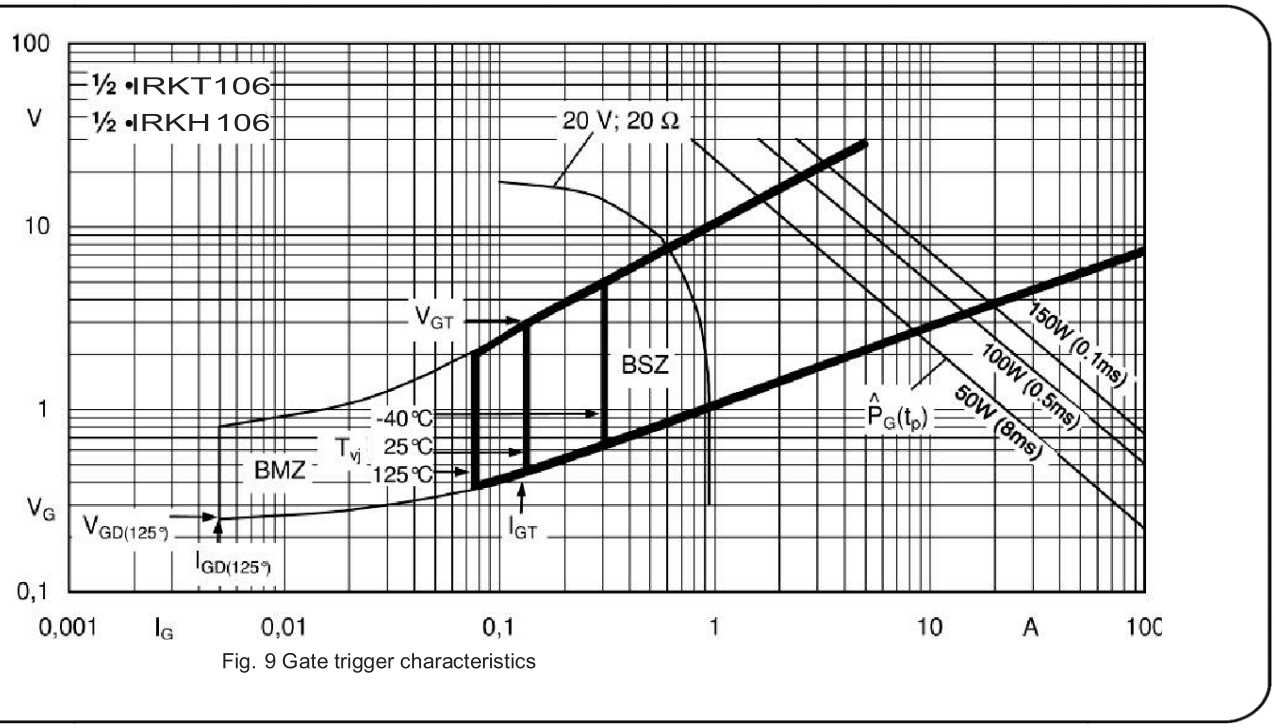
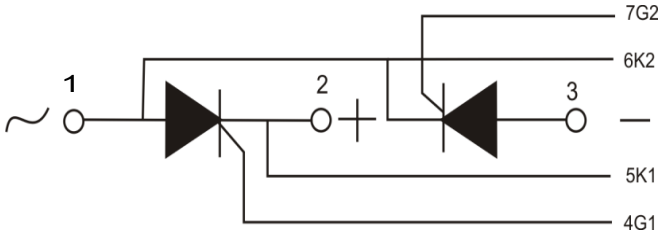


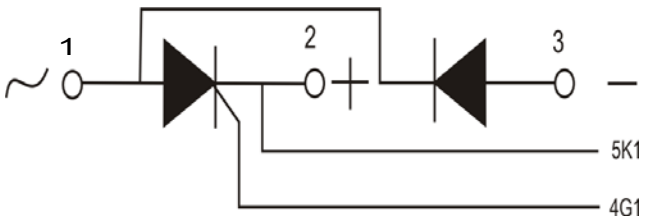
Fig. 9 Gate trigger characteristics

CIRCUIT DIAGRAM

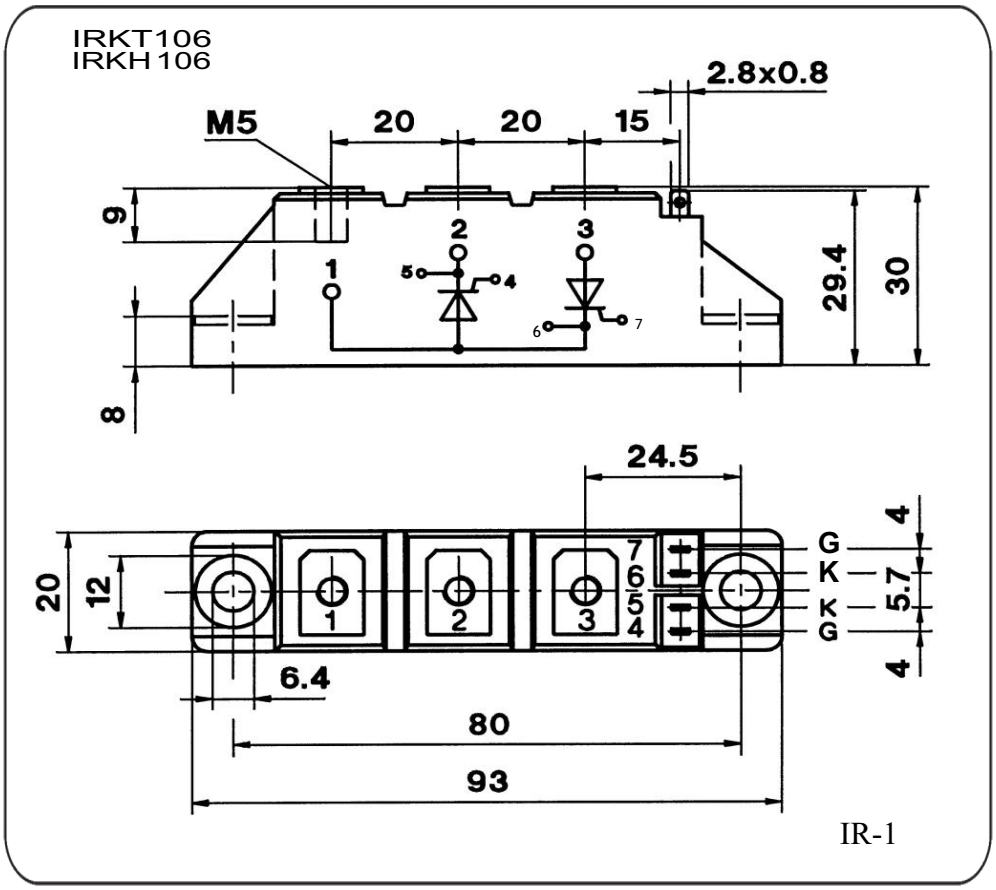
IRKT106



IRKH106



PACKAGE OUTLINE



All dimension are in mm .

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