

FEATURES

- Heat transfer through ceramic.
- Hard solder joints for high reliability
- 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; $T_{case} = 85^{\circ}C$ $T_a = 35^{\circ}C$	106 amp. 200 amp.
I_{TSM} I^2t	$T_{vj} = 25^{\circ}C$; 10m $T_{vj} = 25^{\circ}C$	2250 amp. 25000 A^2S
I_{RRM}/I_{DRM}	$T_{vj} = 25^{\circ}C$ $T_{vj} = 125^{\circ}C$	4 mA 20 mA
V_T V_0 R_0	$T_{vj} = 25^{\circ}C$ ($I_T = 300$ Amp.); max $T_{vj} = 125^{\circ}C$ $T_{vj} = 125^{\circ}C$	1.65 V 0.9 V 2 m Ω
I_{GT} V_{GT} I_H I_L	$T_{vj} = 25^{\circ}C$ $T_{vj} = 25^{\circ}C$ $T_{vj} = 25^{\circ}C$ Typical value $T_{vj} = 25^{\circ}C$ Typical value	100 mA 2.0 V 250 mA 600 mA
$R_{th(j-c)}$ $R_{th(c-h)}$ T_{vj} T_{stg}	Cont. } Sin. 180 } per thyristor/per module Sin. 120 } Per thyristor/per module	0.28/0.14 $^{\circ}C/W$ 0.30/0.15 $^{\circ}C/W$ 0.32/0.16 $^{\circ}C/W$ 0.20/0.10 $^{\circ}C/W$ 125 $^{\circ}C$ (-) 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

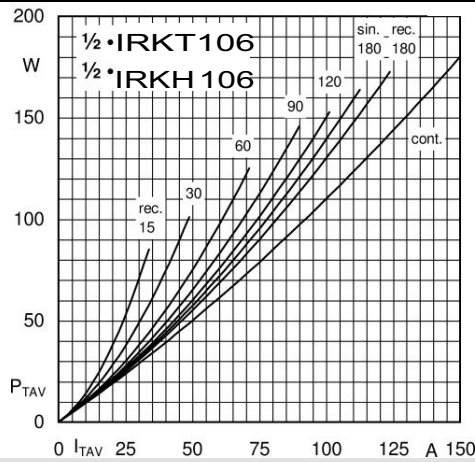


Fig. 1L Power dissipation per thyristor vs. on-state current

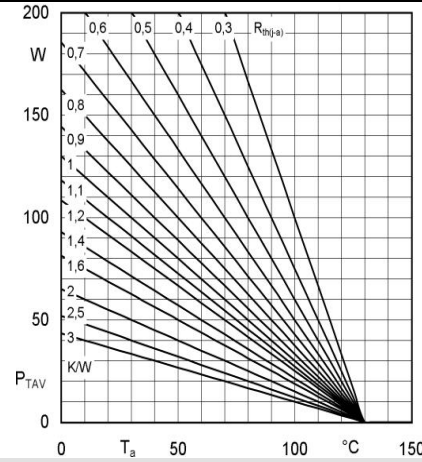


Fig. 1R Power dissipation per thyristor vs. ambient temp.

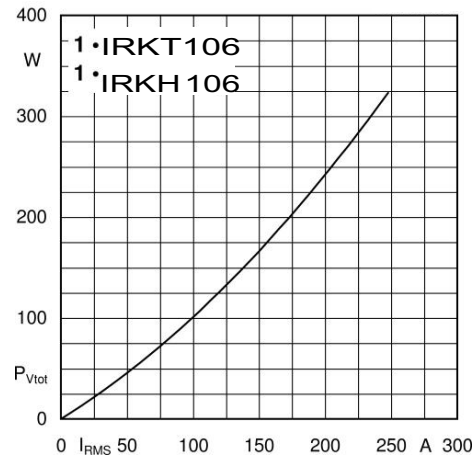


Fig. 2L Power dissipation per module vs. rms current

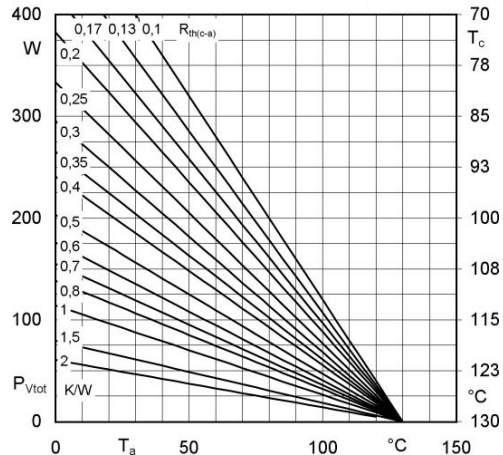


Fig. 2R Power dissipation per module vs. case temp.

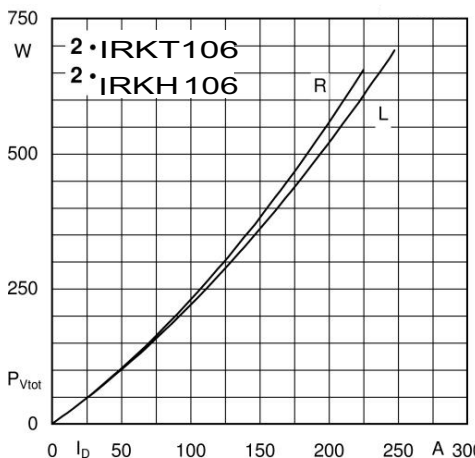


Fig. 3L Power dissipation of two modules vs. direct current

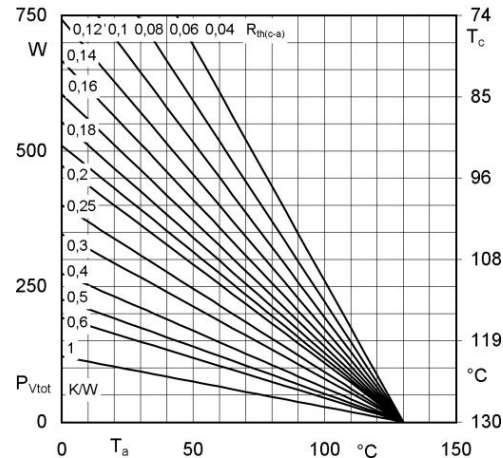


Fig. 3R Power dissipation of two modules vs. case temp.

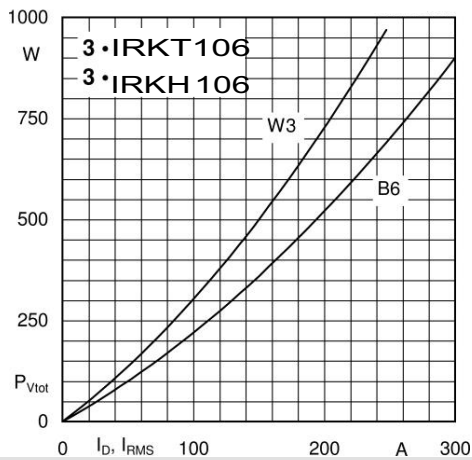


Fig. 4L Power dissipation of three modules vs. direct and rms current

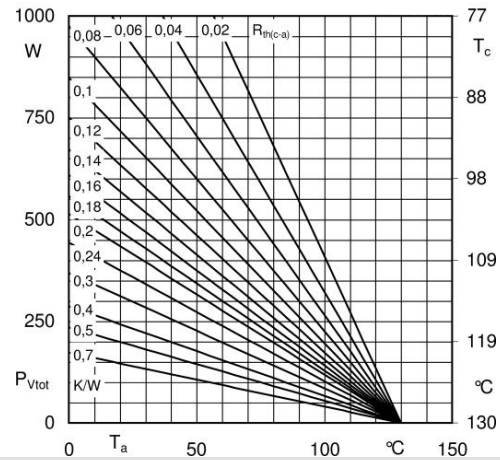


Fig. 4R Power dissipation of three modules vs. case temp.

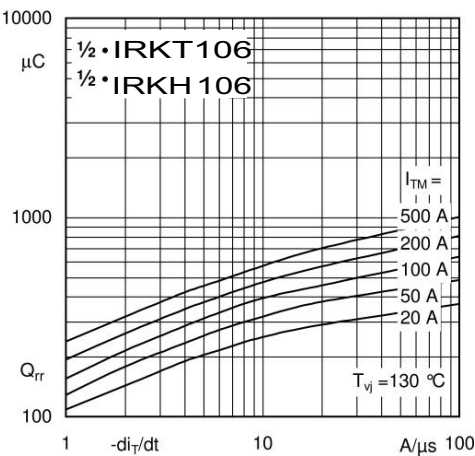


Fig. 5 Recovered charge vs. current decrease

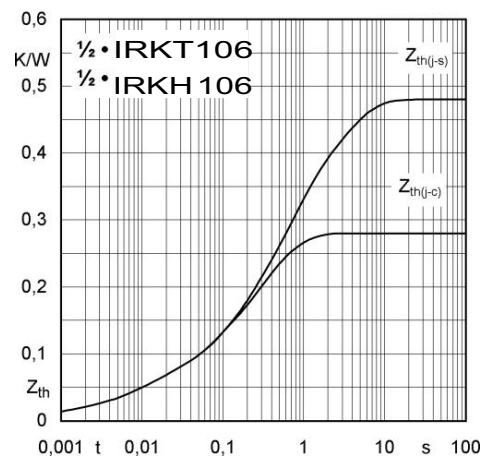


Fig. 6 Transient thermal impedance vs. time

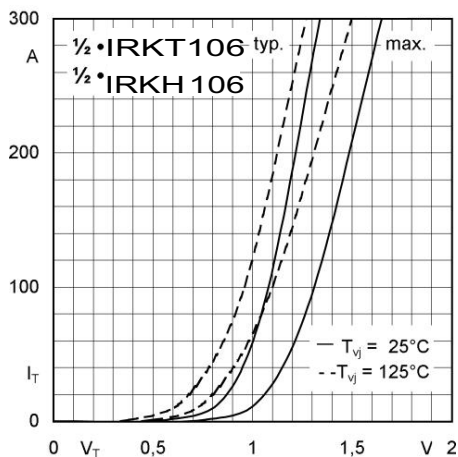


Fig. 7 On-state characteristics

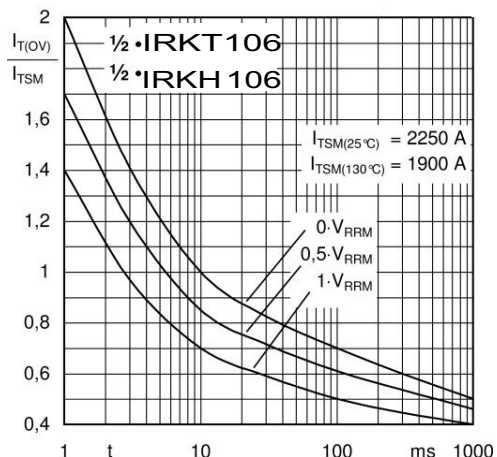


Fig. 8 Surge overload current vs. time

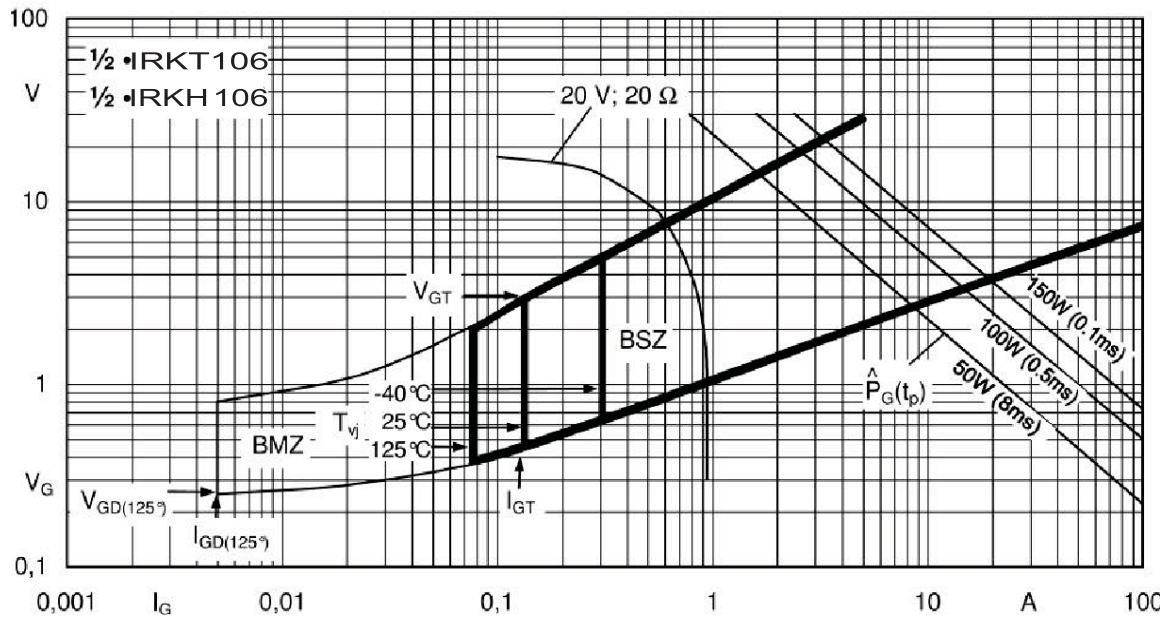
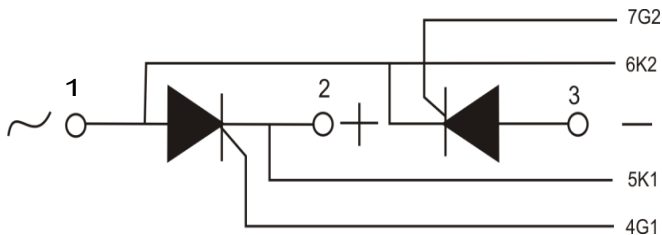


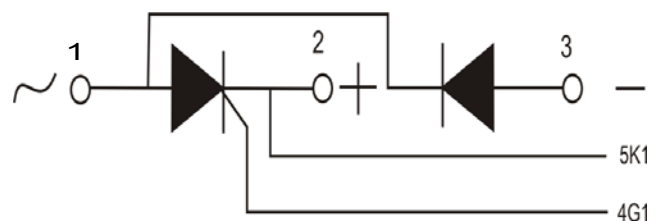
Fig. 9 Gate trigger characteristics

CIRCUIT DIAGRAM

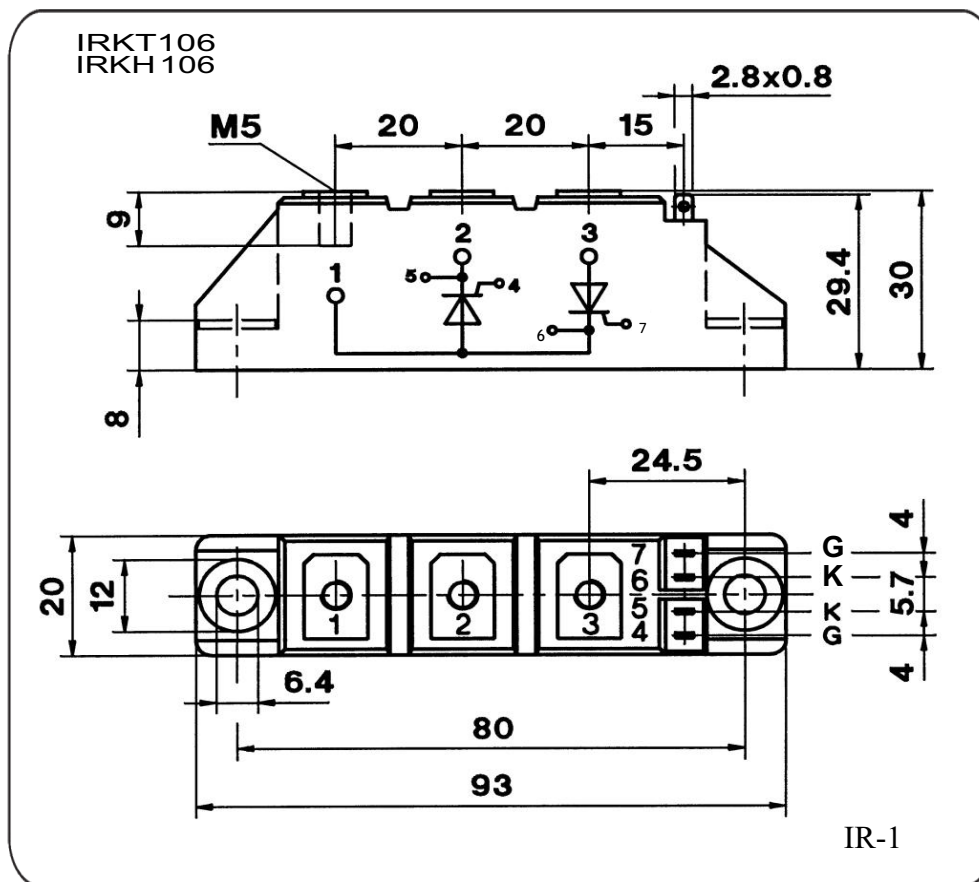
IRKT106



IRKH106



PACKAGE OUTLINE



All dimension are in mm .

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