

**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 <sub>RRM</sub> (V)	V <sub>RSM</sub> (V)
IRKT250/12, IRKH250/12	1200	1300
IRKT250/16, IRKH250/16	1600	1700
IRKT250/20, IRKH250/20	2000	2100
IRKT250/24, IRKH250/24	2400	2500

SYMBOL	CONDITIONS	VALUES
I <sub>TAV</sub> I <sub>RMS</sub>	Sin. 180; T <sub>case</sub> =85 °C Ta=45°C	250 amp. 566 amp.
I <sub>TSM</sub> I <sup>2</sup> t	Tvj=25°C; 10 ms Tvj=25°C	9000 amp. 405000 A <sup>2</sup> s
I <sub>RRM</sub> / I <sub>DRM</sub>	Tvj=25°C Tvj=125°C	20 mA 85 mA
V <sub>T</sub> V <sub>0</sub> R <sub>0</sub>	Tvj=25°C (I <sub>T</sub> =750 Amp.); max Tvj=125°C Tvj=125°C	1.40 V 0.925 V 0.45 mΩ
I <sub>GT</sub> V <sub>GT</sub> t <sub>q</sub> I <sub>H</sub> I <sub>L</sub>	Tvj=25 °C Tvj=25 °C Tvj=130 °C Tvj=25 °C Typical value Tvj=25 °C Typical value	200 mA 3.0 V 150 μs 500 mA 2000 mA
R <sub>th(j-c)</sub>  R <sub>th(c-h)</sub> Tvj Tstg	Cont. } Sin. 180 } per thyristor/per module Sin. 120 } Per thyristor/per module	0.14/0.07 °C/W 0.15/0.075 °C/W 0.165/0.083 °C/W 130 °C 130 °C
Mounting torque		15 Nm/bolt
Weight	Approx.	600 gram
V <sub>(isol)</sub>	Ac 50 Hz rms 1 min	3000 volts
Package Outline		IR-3

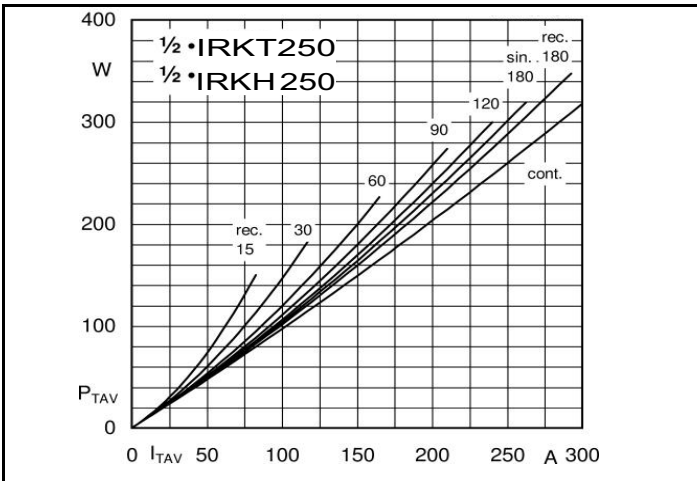


Fig. 1L Power dissipation per thyristor vs. on-state current

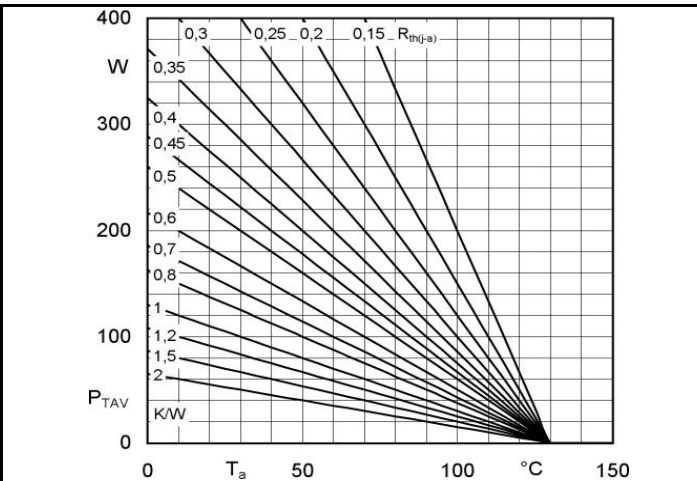


Fig. 1R Power dissipation per thyristor vs. ambient temp.

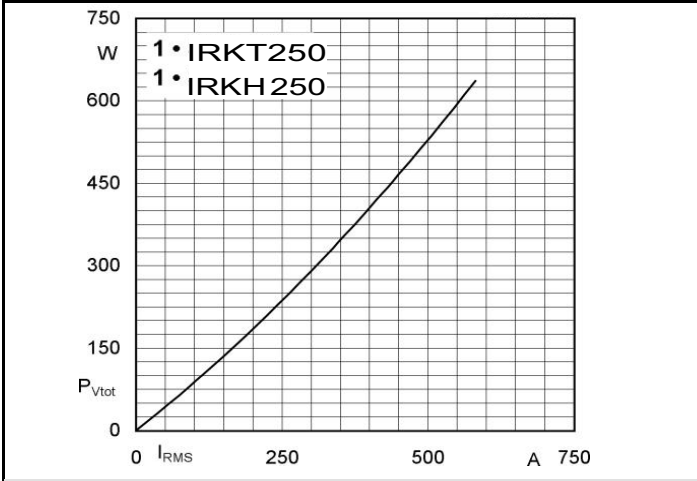


Fig. 2L Power dissipation per module vs. rms current

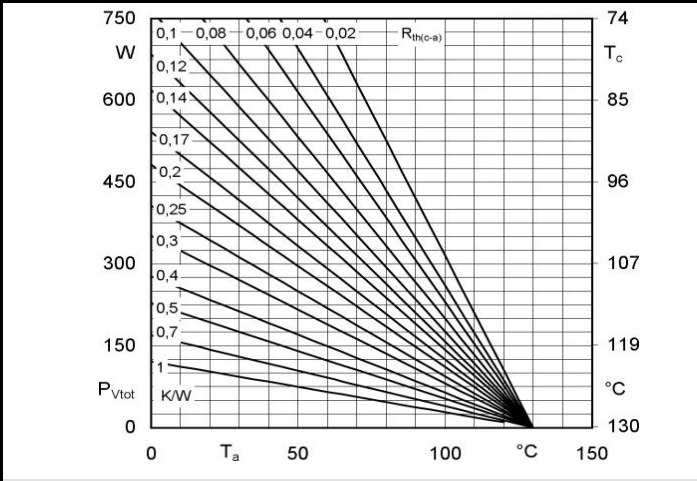


Fig. 2R Power dissipation per module vs. case temp.

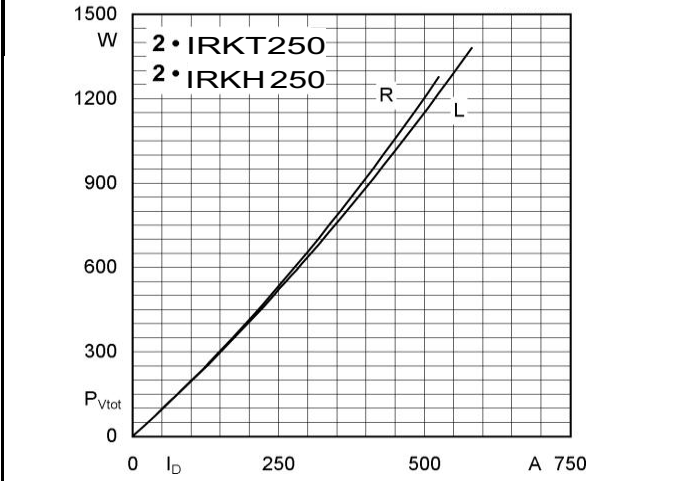


Fig. 3L Power dissipation of two modules vs. direct current

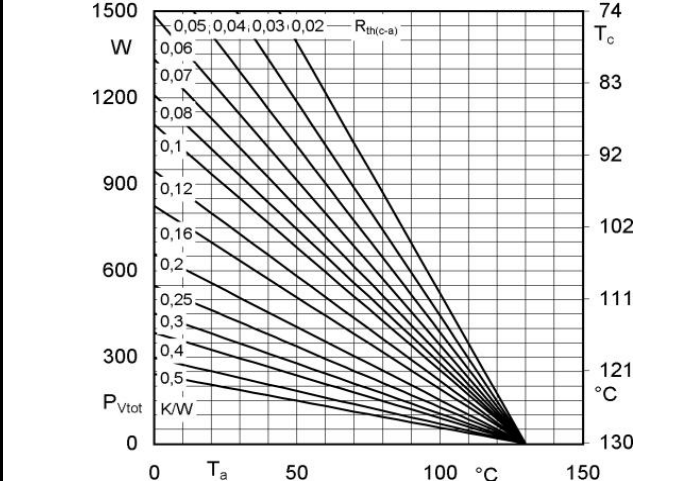


Fig. 3R Power dissipation of two modules vs. case temp.

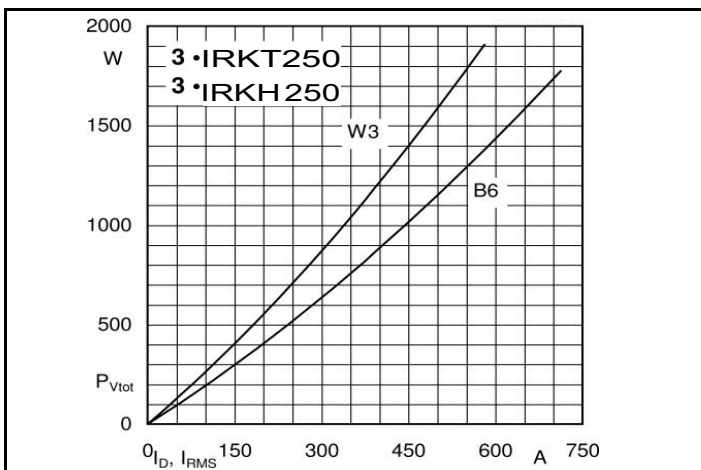


Fig. 4L Power dissipation of three modules vs. direct and rms current

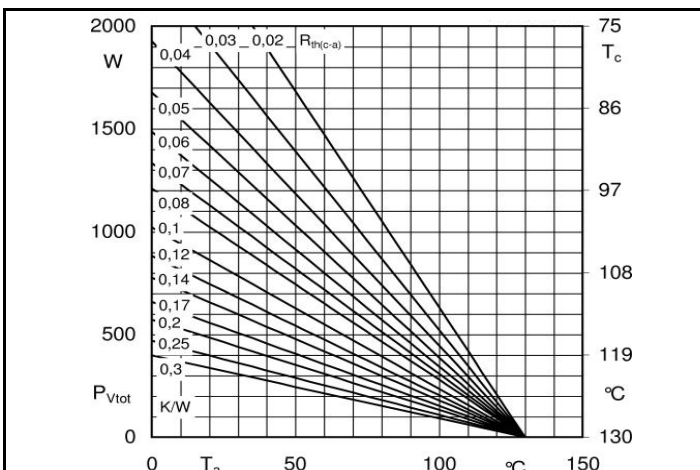


Fig. 4R Power dissipation of three modules vs. case temp.

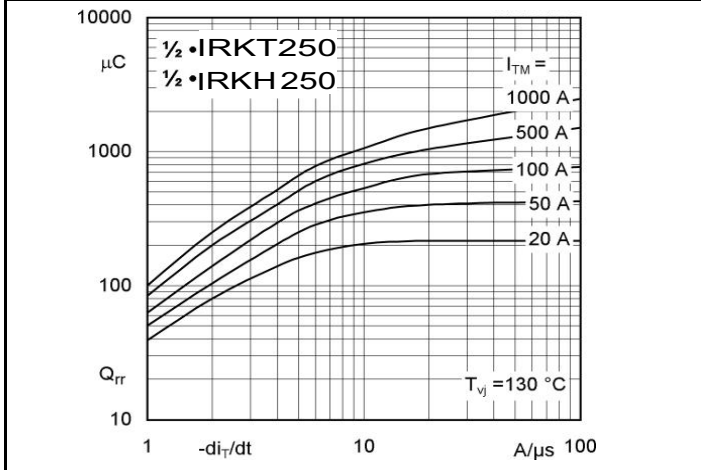


Fig. 5 Recovered charge vs. current decrease

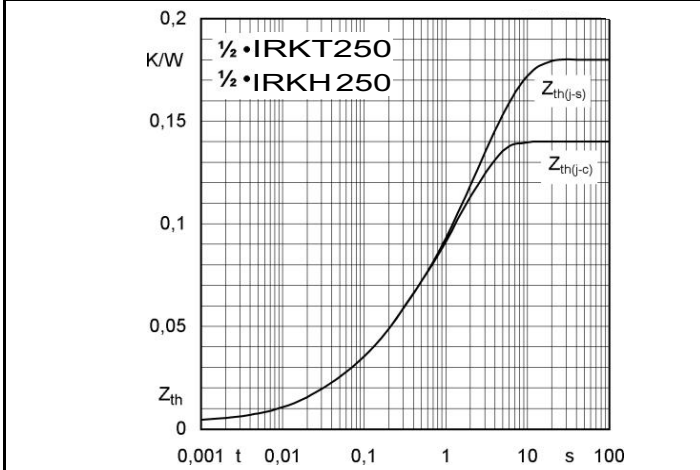


Fig. 6 Transient thermal impedance vs. time

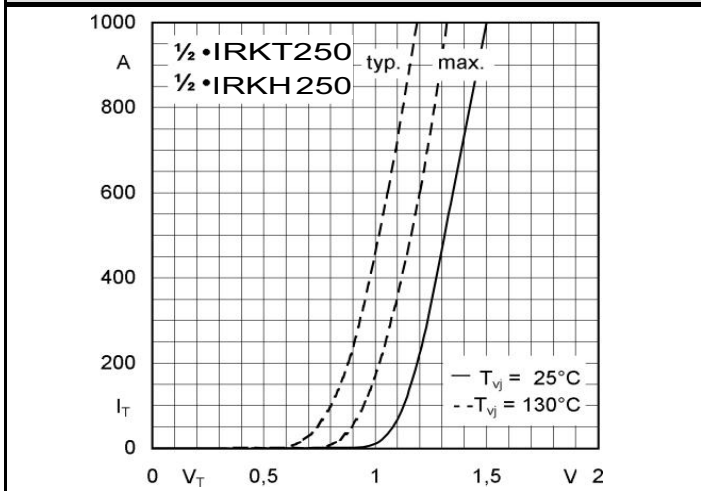


Fig. 7 On-state characteristics

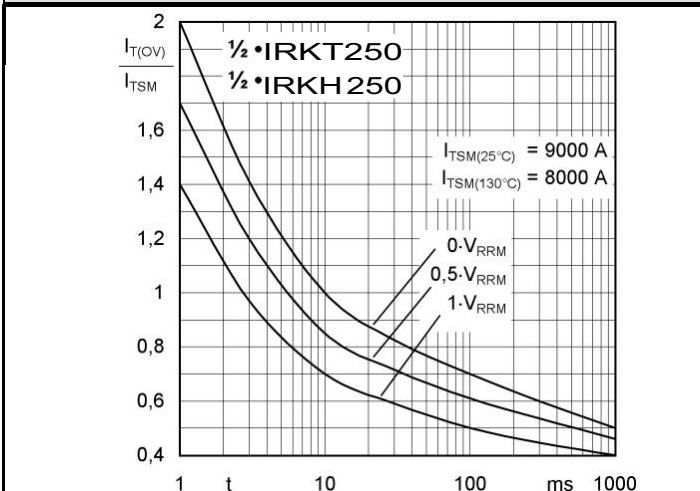
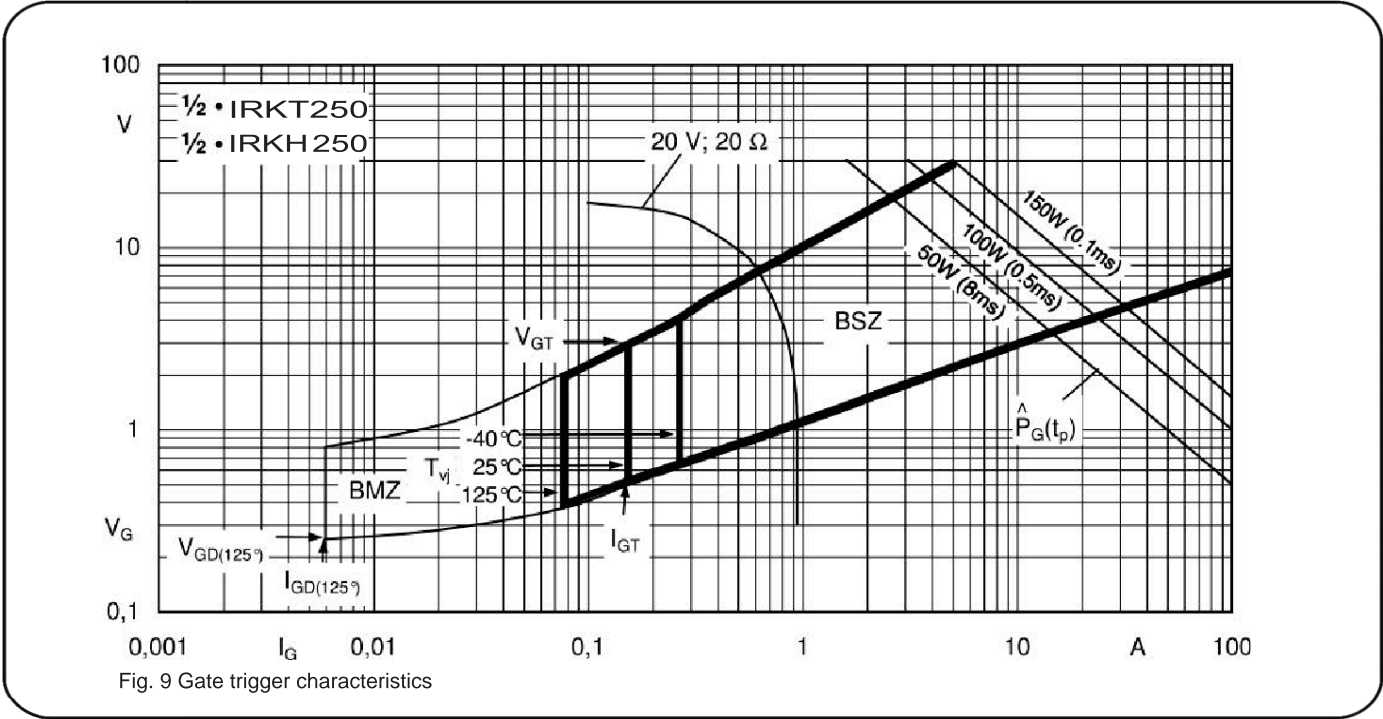


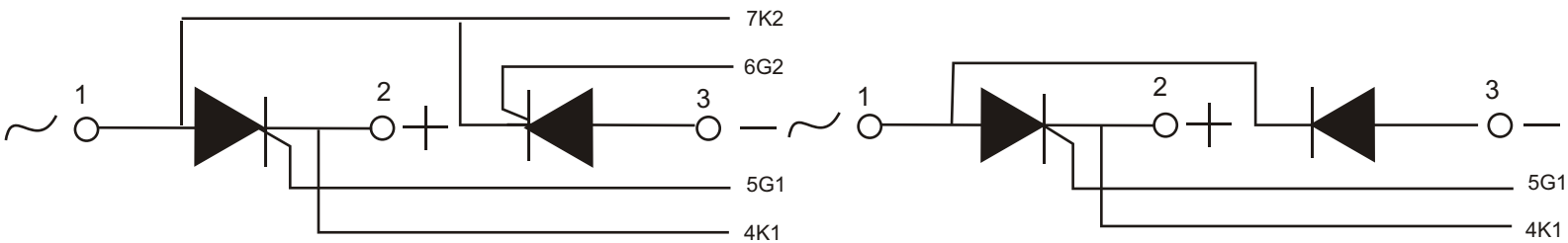
Fig. 8 Surge overload current vs. time



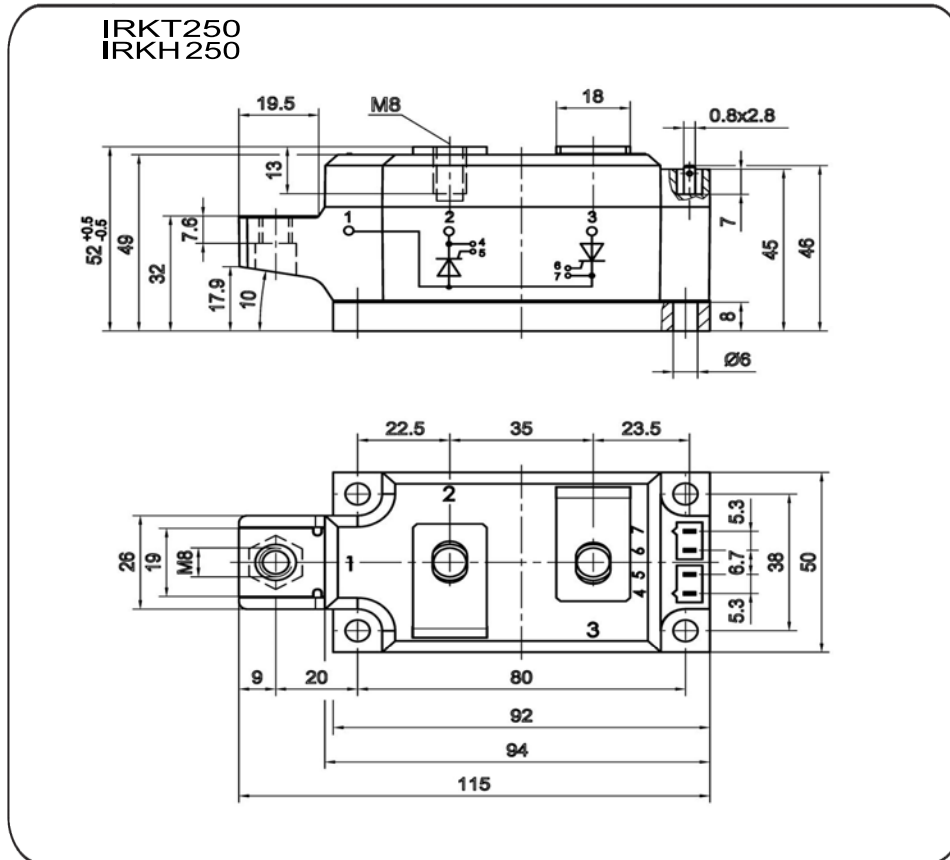
**CIRCUIT DIAGRAM**

IRKT250

IRKH250



### PACKAGE OUTLINE



All dimension are in mm .

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