

**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)
IRKT70/12, IRKH70/12	1200	1300
IRKT70/16, IRKH70/16	1600	1700
IRKT70/20, IRKH70/20	2000	2100
IRKT70/22, IRKH70/22	2200	2300

SYMBOL	CONDITIONS	VALUES
I <sub>TAV</sub> I <sub>RMS</sub>	Sin. 180; T <sub>case</sub> =85 °C T <sub>a</sub> =45°C	70 amp. 155 amp.
I <sub>TSM</sub> I <sup>2</sup> t	T <sub>vj</sub> =25°C; 10 ms T <sub>vj</sub> =25°C	1600 amp. 13000 A <sup>2</sup> S
I <sub>RRM</sub> / I <sub>DRM</sub>	T <sub>vj</sub> =25°C T <sub>vj</sub> =125°C	4 mA 20 mA
V <sub>T</sub> V <sub>0</sub> R <sub>0</sub>	T <sub>vj</sub> =25°C (I <sub>T</sub> =300 Amp.); max T <sub>vj</sub> =125°C T <sub>vj</sub> =125°C	1.90 V 0.9 V 3.5 mΩ
I <sub>GT</sub> V <sub>GT</sub> I <sub>H</sub> I <sub>L</sub>	T <sub>vj</sub> =25 °C T <sub>vj</sub> =25 °C T <sub>vj</sub> =25 °C Typical value T <sub>vj</sub> =25 °C Typical value	150 mA 3.0 V 250 mA 600 mA
R <sub>th(j-c)</sub>  R <sub>th(c-h)</sub> T <sub>vj</sub> T <sub>stg</sub>	Cont. } Sin. 180 } per thyristor/per module Sin. 120 } Per thyristor/per module	0.35/0.18 °C/W 0.37/0.19 °C/W 0.39/0.2 °C/W 0.20/0.10 °C/W 125 °C 125 °C
Mounting torque		5 Nm/Per bolt
Weight	Approx.	95 gms
V <sub>(isol)</sub>	Ac 50 Hz rms 1 min	3000 volts
Package Outline		IR-1

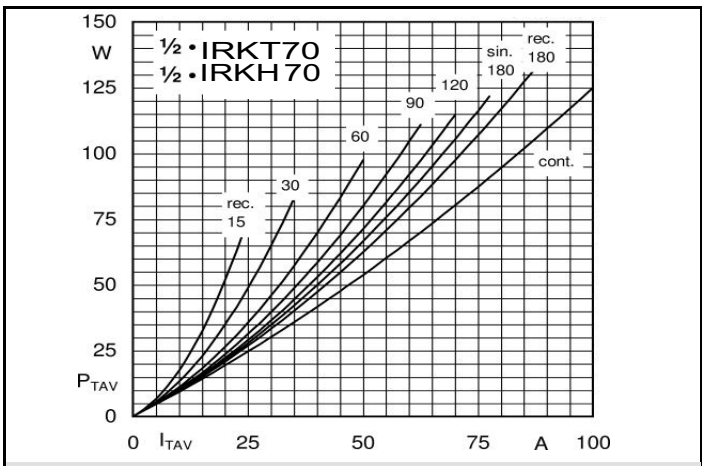


Fig. 1L Power dissipation per thyristor vs. on-state current

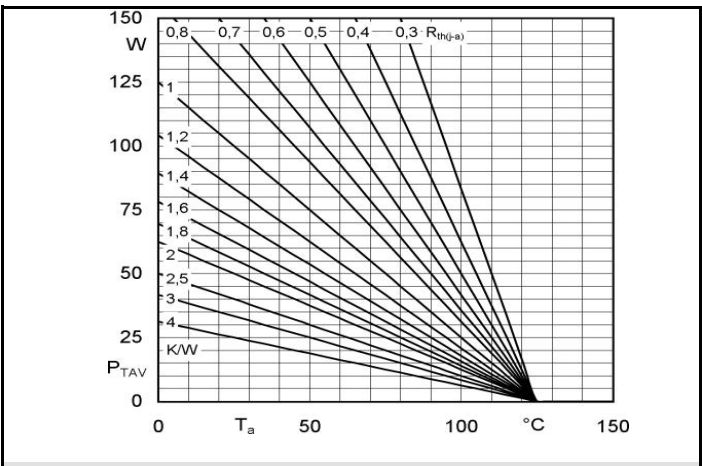


Fig. 1R Power dissipation per thyristor vs. ambient temp.

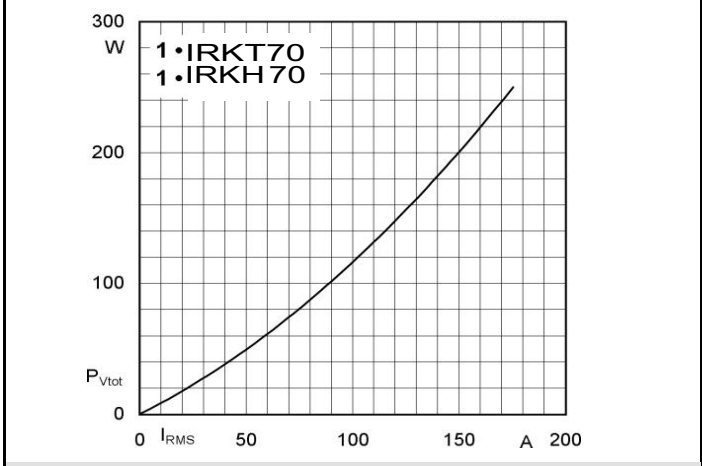


Fig. 2L Power dissipation per module vs. rms current

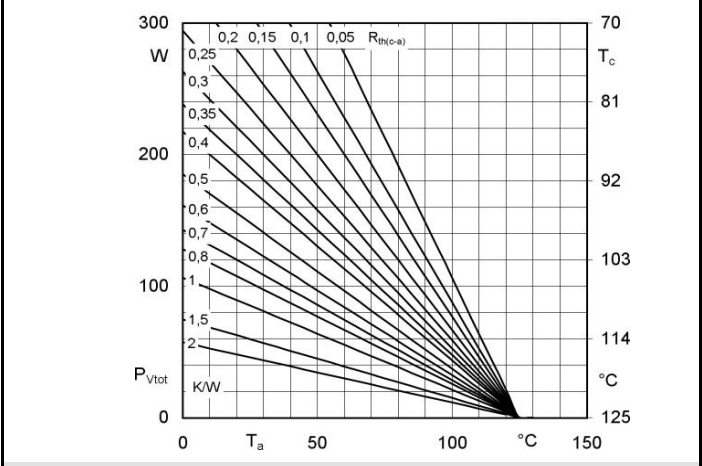


Fig. 2R Power dissipation per module vs. case temp.

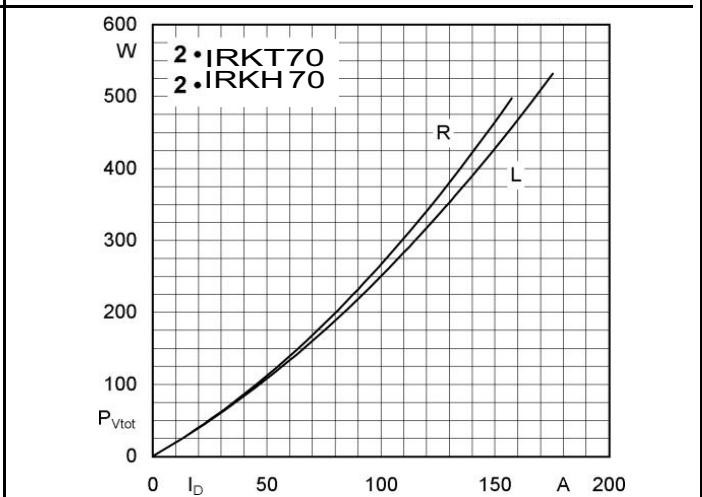


Fig. 3L Power dissipation of two modules vs. direct current

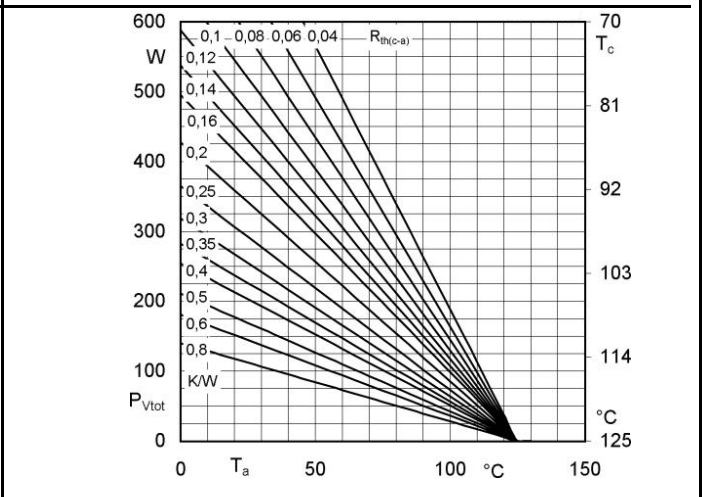


Fig. 3R Power dissipation of two modules vs. case temp.

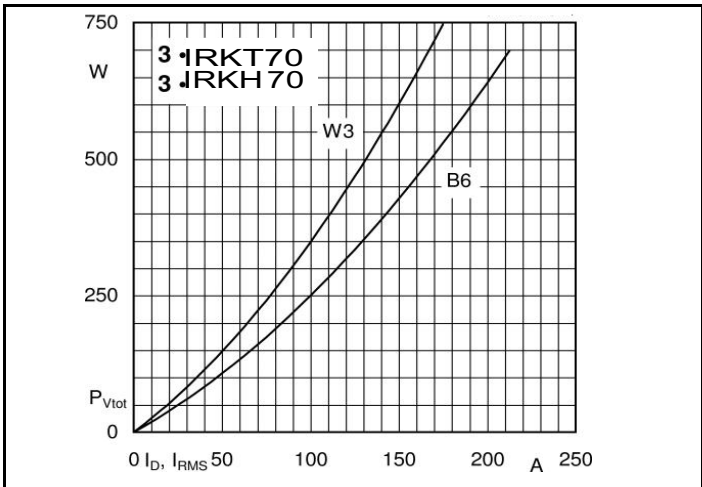


Fig. 4L Power dissipation of three modules vs. direct and rms current

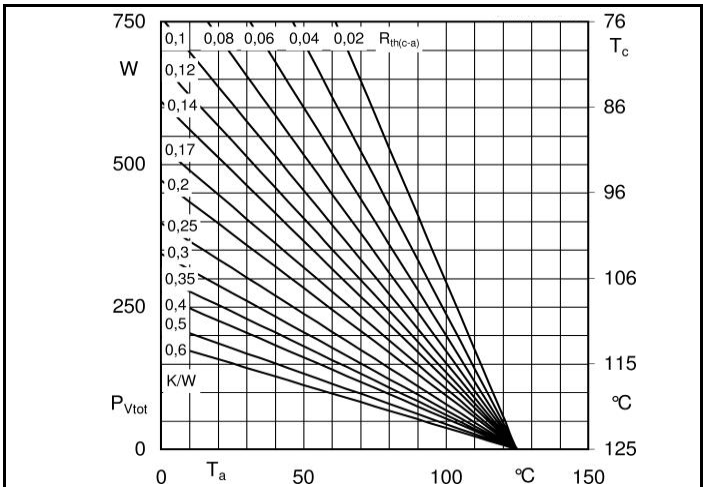


Fig. 4R Power dissipation of three modules vs. case temp.

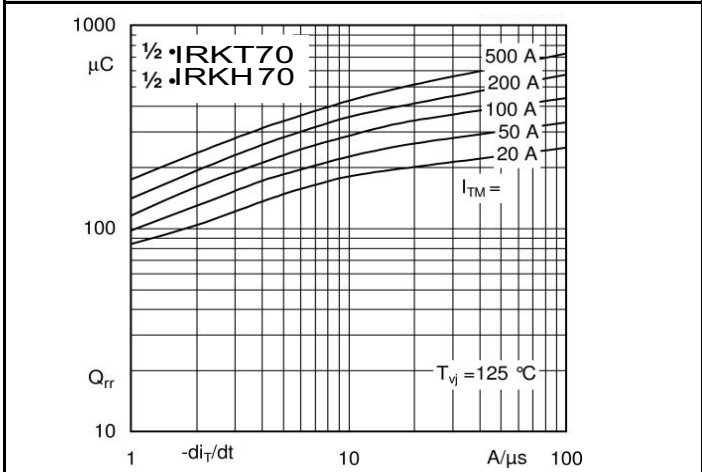


Fig. 5 Recovered charge vs. current decrease

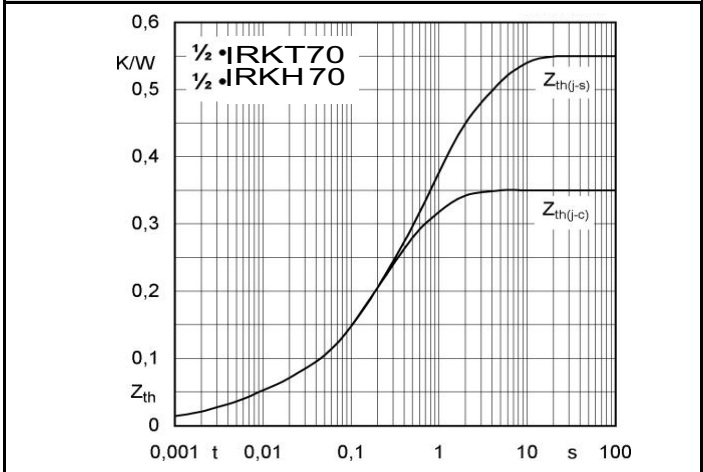


Fig. 6 Transient thermal impedance vs. time

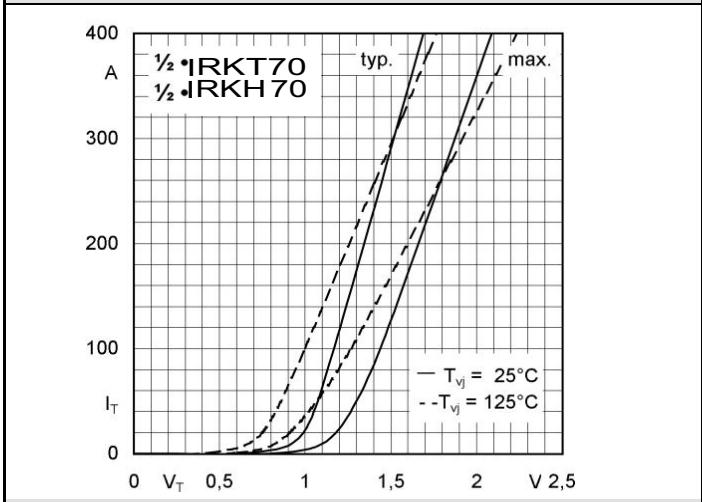


Fig. 7 On-state characteristics

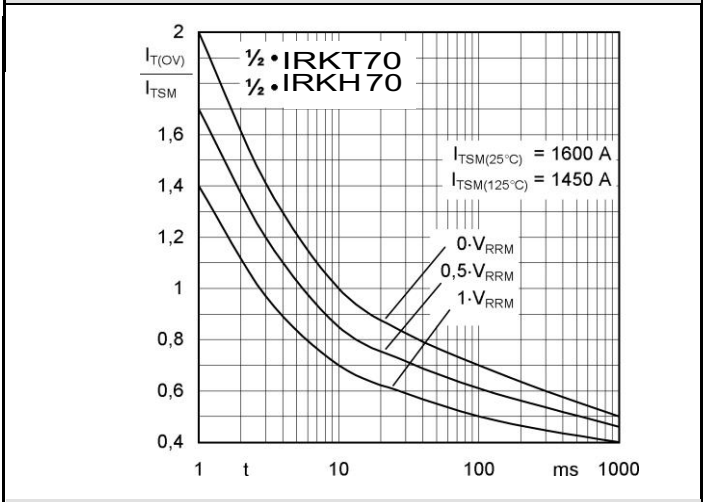


Fig. 8 Surge overload current vs. time

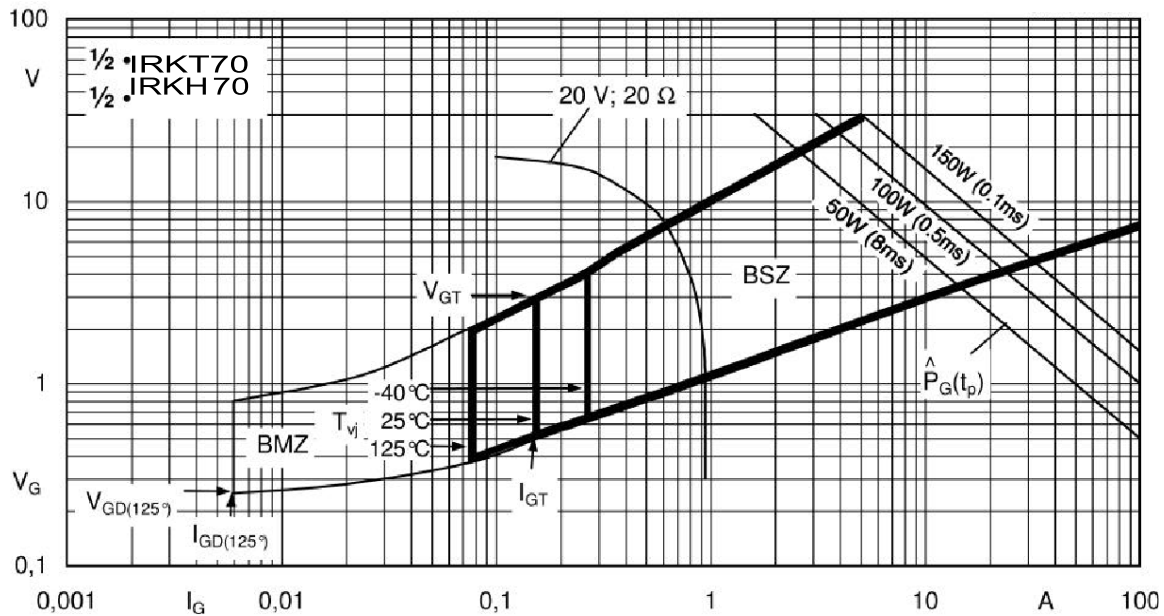
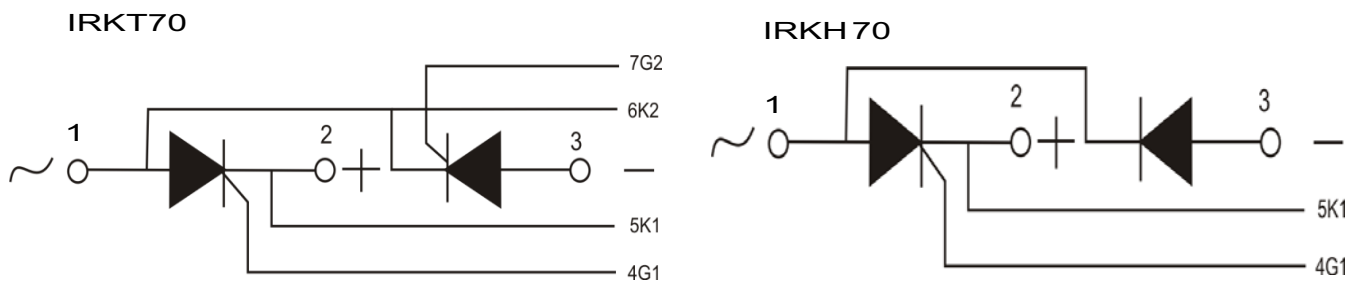
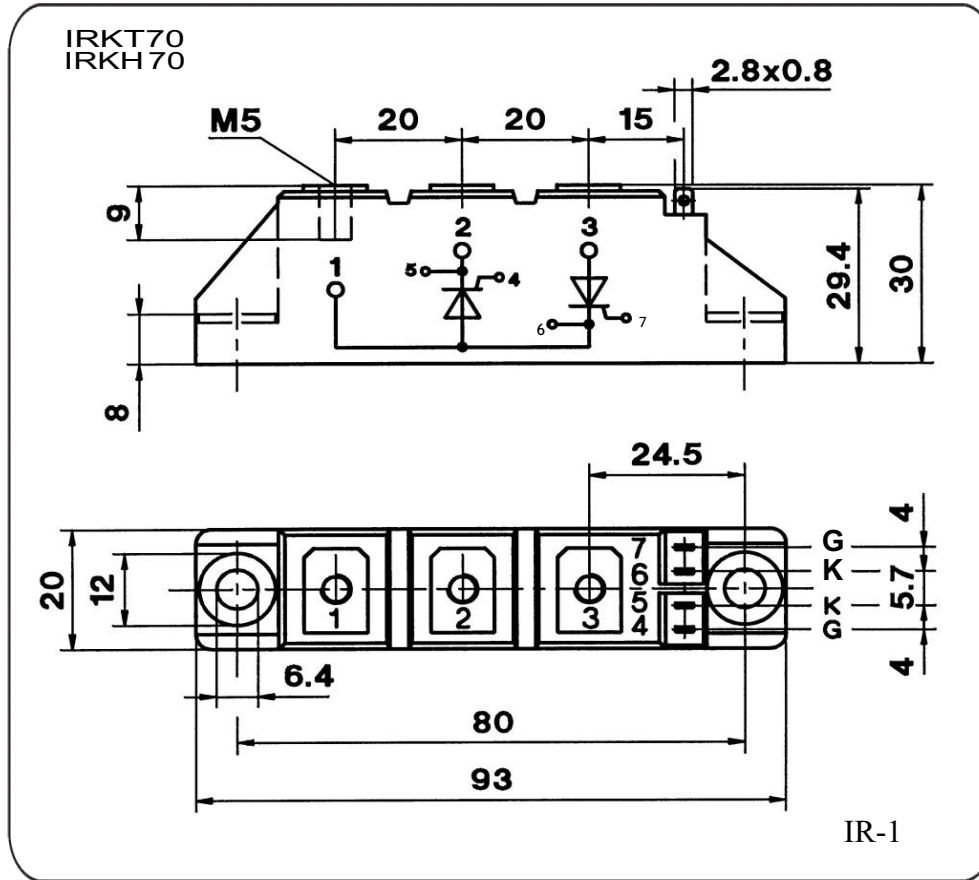


Fig. 9 Gate trigger characteristics

### CIRCUIT DIAGRAM



PACKAGE OUTLINE



All dimension are in mm .

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