INTERNATIONAL IRI

POWER MODULE

IRKT500, IRKH500

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

MODULE

TECHNICAL DATA

DEVICE TYPE	V_{RRM} (V)	V_{RSM} (V)
IRKT500/12, IRKH500/12	**1200**	**1300**
IRKT500/16, IRKH500/16	**1600**	**1700**
IRKT500/20, IRKH500/20	**2000**	**2100**
IRKT500/22, IRKH500/22	**2200**	**2300**

SYMBOL	CONDITIONS	VALUES
I_{TAV} I_{RMS}	Sin. 180; T_{case} =85 °C Ta=45°C	540 amp. 850 amp.
I_{TSM} I^2t	Tvj=25°C; 10 ms Tvj=25°C	17000 amp. 1445000 A^2S
I_{RRM}/ I_{DRM}	Tvj=25°C Tvj=125°C	25 mA 100 mA
V_T V_0 R_0	Tvj=25°C (I_T=750 Amp.); max Tvj=125°C Tvj=125°C	1.50 V 0.925 V 0.27 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	200 mA 3.0 V 500 mA 2000 mA
$R_{th(j-c)}$ $R_{th(c-h)}$ Tvj Tstg	Cont. } Sin. 180 } per thyristor/per module Sin. 120 } Per thyristor/per module	0.11/0.055 °C/W 0.116/0.058 °C/W 0.13/0.065 °C/W 0.04/0. 02 °C/W -40…+ 130 °C -40…+ 130 °C
Mounting torque		5 Nm/Per bolt
Weight	Approx.	600 gm
$V_{(isol)}$	Ac 50 Hz rms 1 min	3000 volts
Package Outline		IR-4

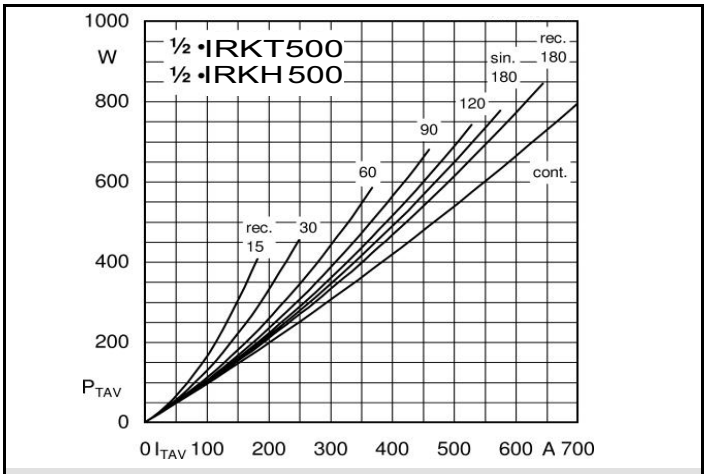


Fig. 1L Power dissipation per thyristor vs. on-state current

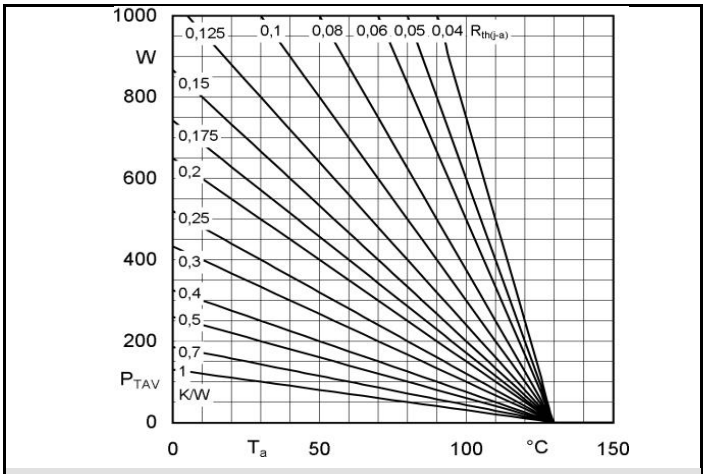


Fig. 1R Power dissipation per thyristor vs. ambient temp.

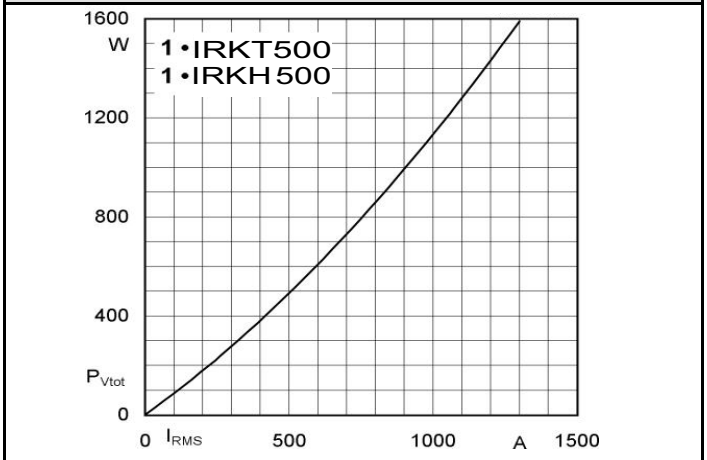


Fig. 2L Power dissipation per module vs. rms current

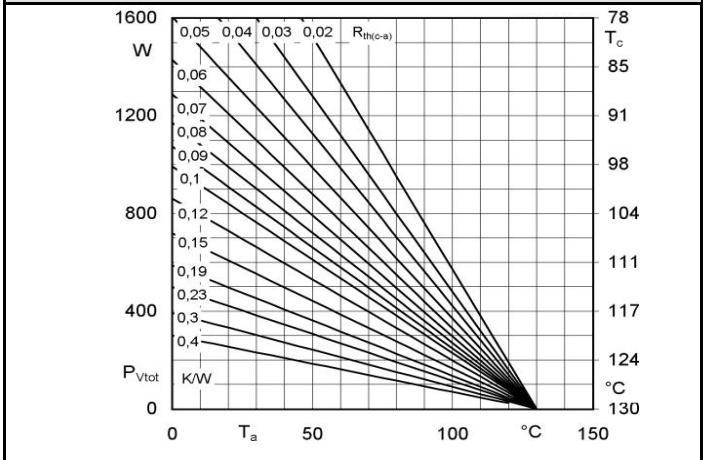


Fig. 2R Power dissipation per module vs. case temp.

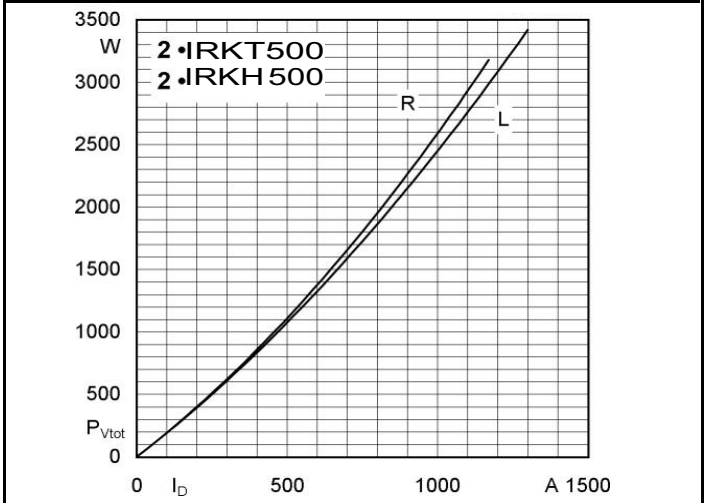


Fig. 3L Power dissipation of two modules vs. direct current

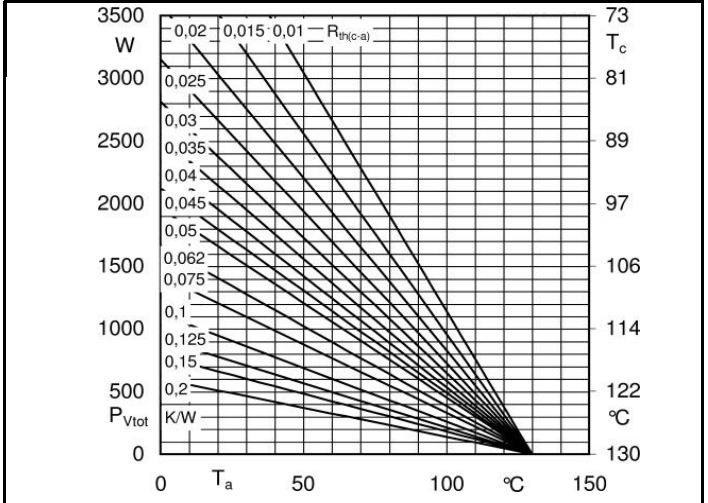


Fig. 3R Power dissipation of two modules vs. case temp.

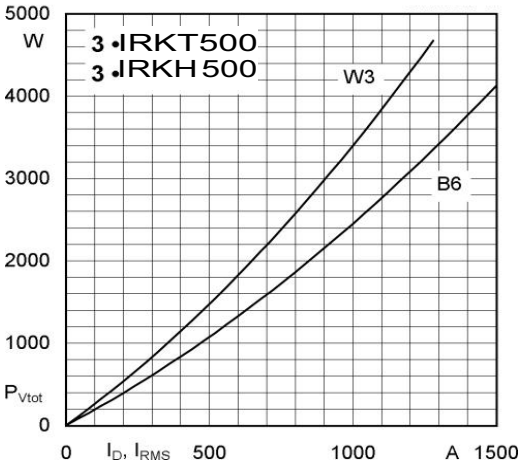


Fig. 4L Power dissipation of three modules vs. direct and rms current

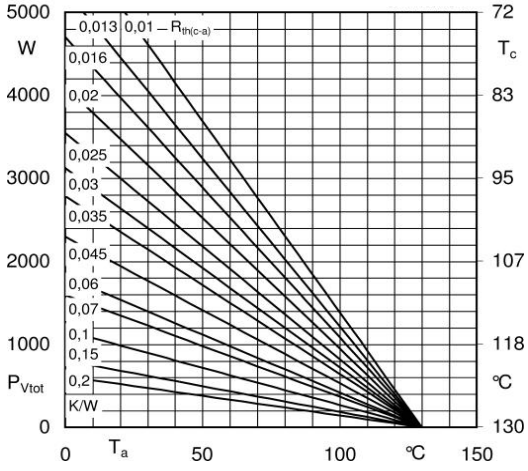


Fig. 4R Power dissipation of three modules vs. case temp.

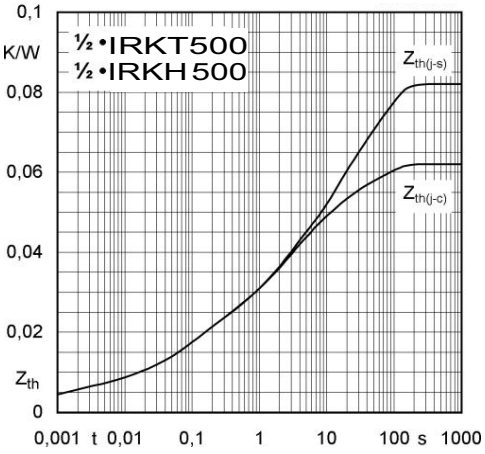


Fig. 6 Transient thermal impedance vs. time

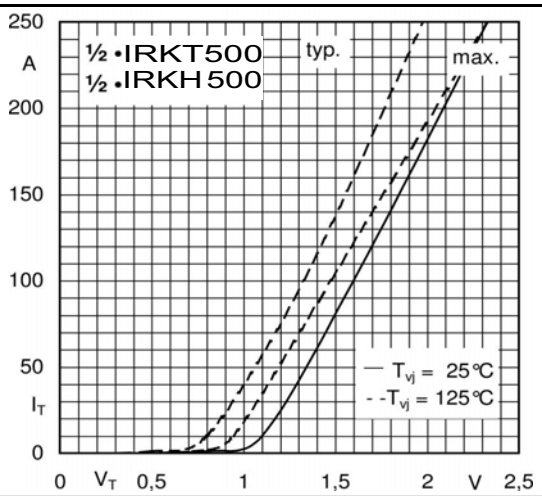


Fig. 7 On-state-characteristics

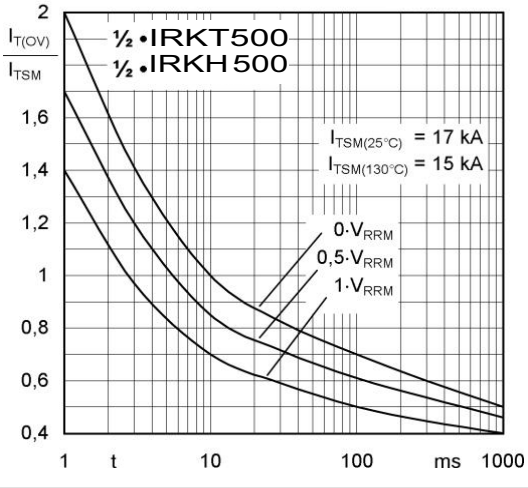


Fig. 8 Surge overload current vs. time

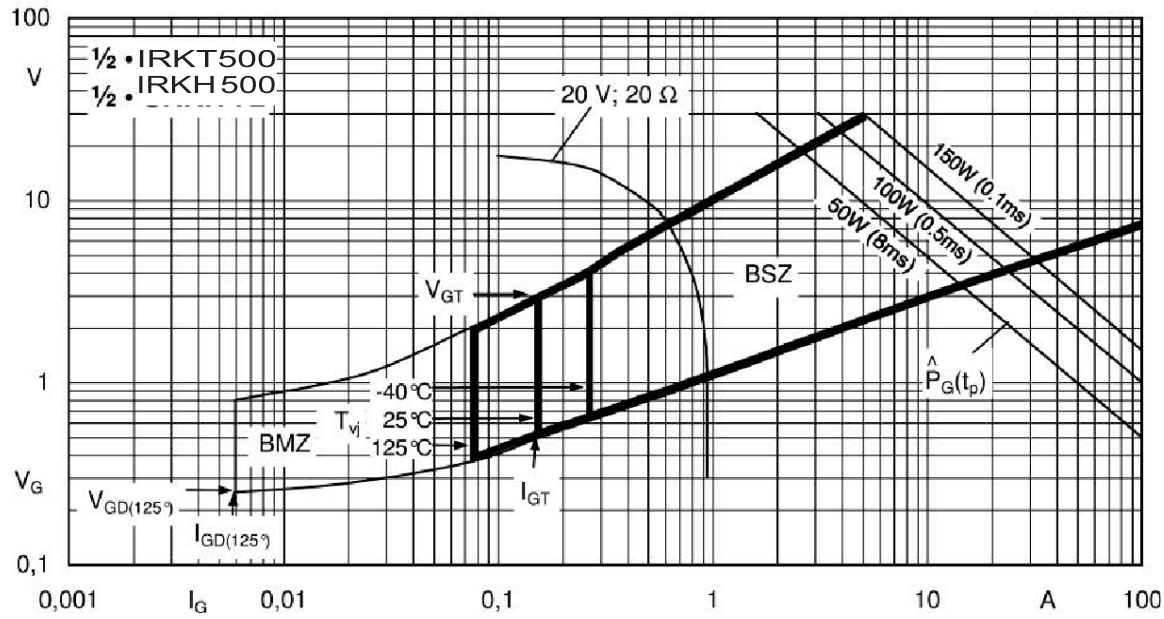
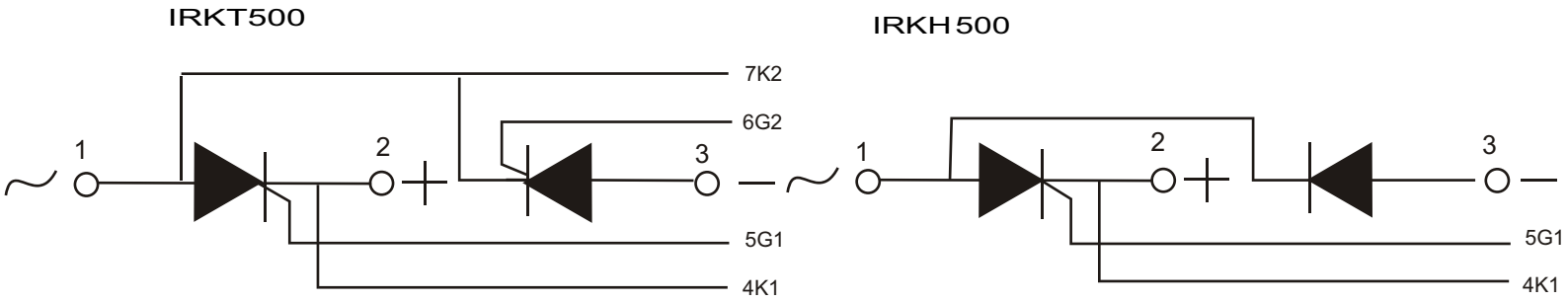
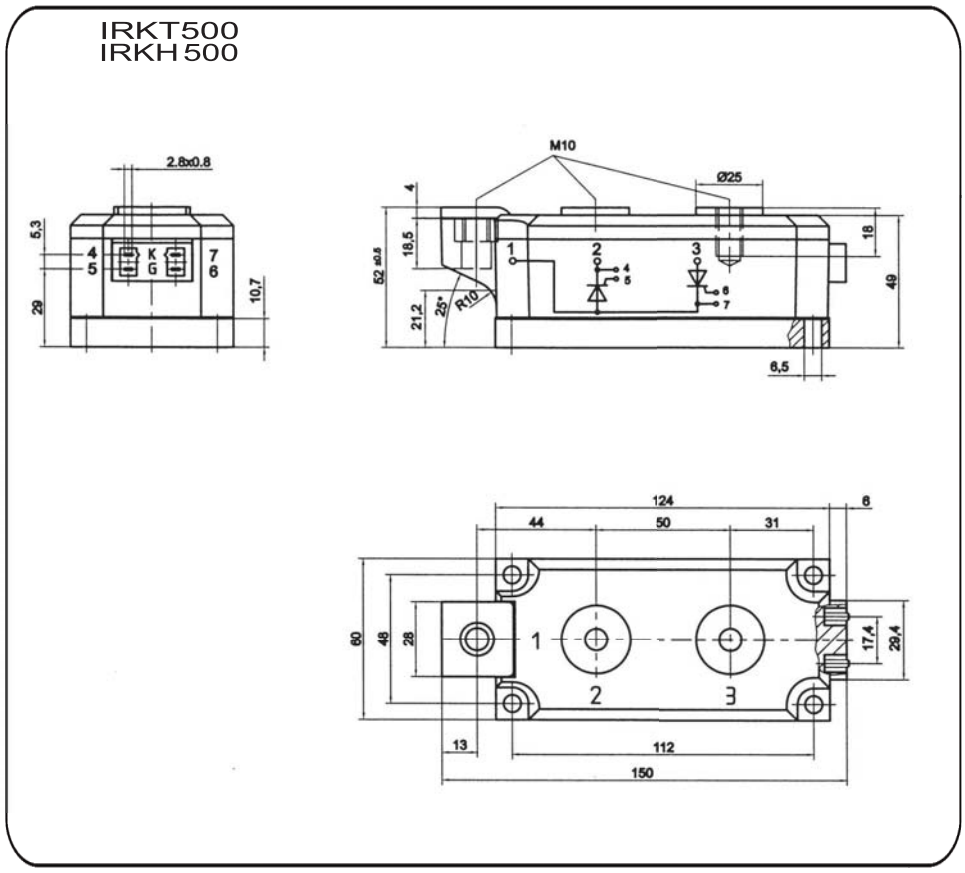


Fig. 9 Gate trigger characteristics

CIRCUIT DIAGRAM



PACKAGE OUTLINE



All dimension are in mm .

Insel Rectifiers (India) Pvt. Ltd.

(An ISO 9001:2015, ISO 14001:2015 Certified Company)

Plot No 151, Udyog Kendra, Extn.-II, Ecotech-III, Greater Noida-201306

Toll Free No.: 1800 3070 9989, Fax : 011-27491404

E-mail : insel@rectifierindia.com, sales@rectifierindia.com