

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)
IRKT92/12, IRKH92/12	1200	1300
IRKT92/16, IRKH92/16	1600	1700
IRKT92/20, IRKH92/20	2000	2100
IRKT92/22, IRKH92/22	2200	2300

SYMBOL	CONDITIONS	VALUES
I _{TAV} I _{RMS}	Sin. 180; T _{case} =85 °C Ta = 35 °C	95 amp. 190 amp.
I _{TSM} I ² t	Tvj=25°C; 10ms Tvj=25°C	4000 amp. 20000 A ² S
I _{RRM} / I _{DRM}	Tvj=25°C Tvj=125°C	2 mA 20 mA
V _T V ₀ R ₀	Tvj=25°C (I _T =200 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	150 mA 3.0 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 °C
Mounting torque		5 Nm/Per bolt
Weight	Approx.	95 gms
V _(isol)	Ac 50 Hz rms 1 min	3000 volts
Package Outline		IR-1

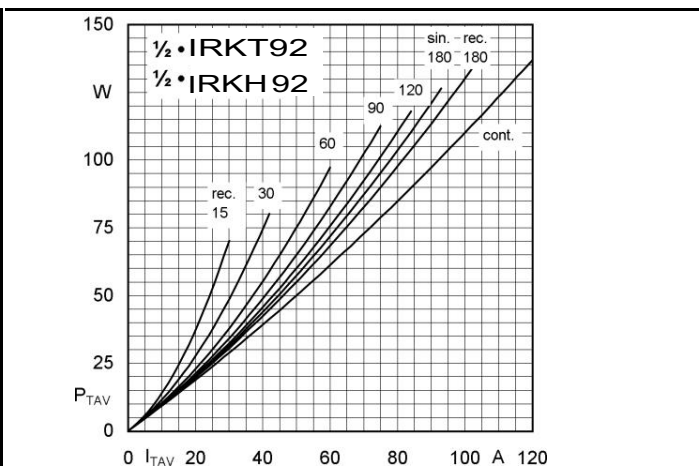


Fig. 1L Power dissipation per thyristor vs. on-state current

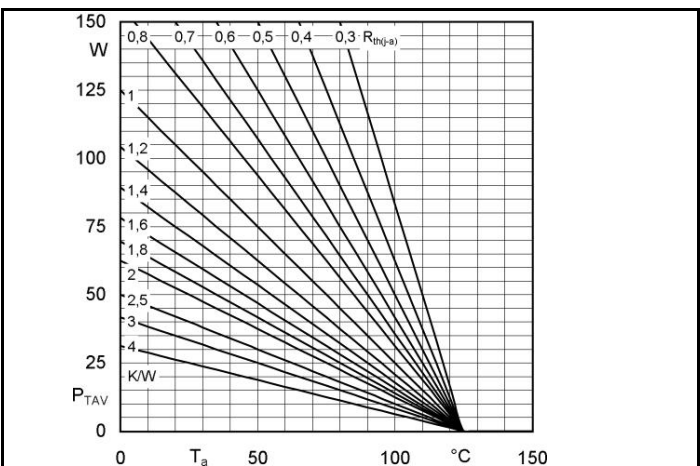


Fig. 1R Power dissipation per thyristor vs. ambient temp.

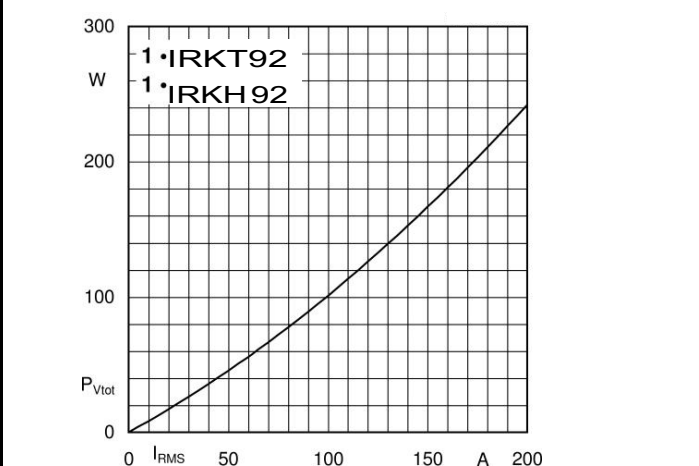


Fig. 2L Power dissipation per module vs. rms current

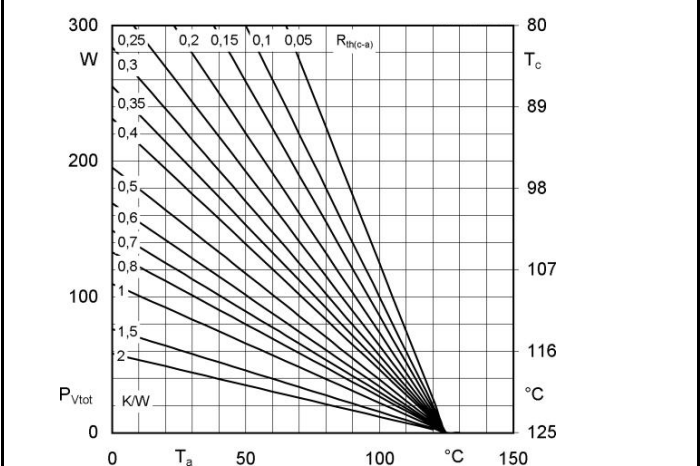


Fig. 2R Power dissipation per module vs. case temp.

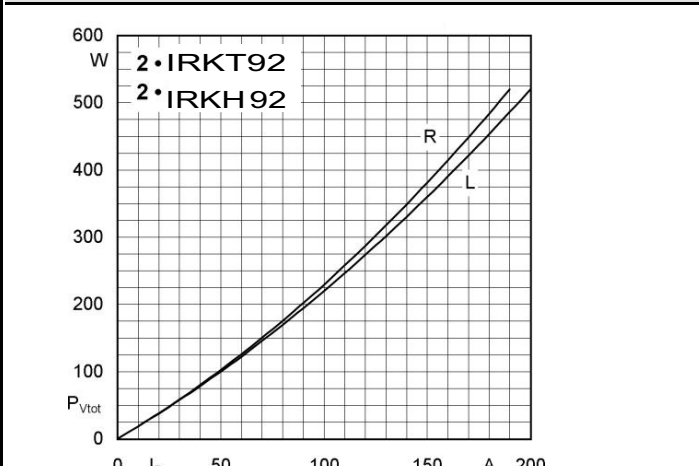


Fig. 3L Power dissipation of two modules vs. direct current

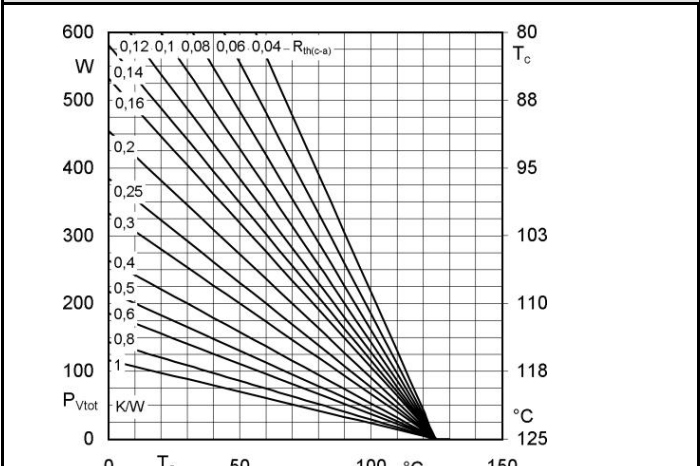


Fig. 3R Power dissipation of two modules vs. case temp.

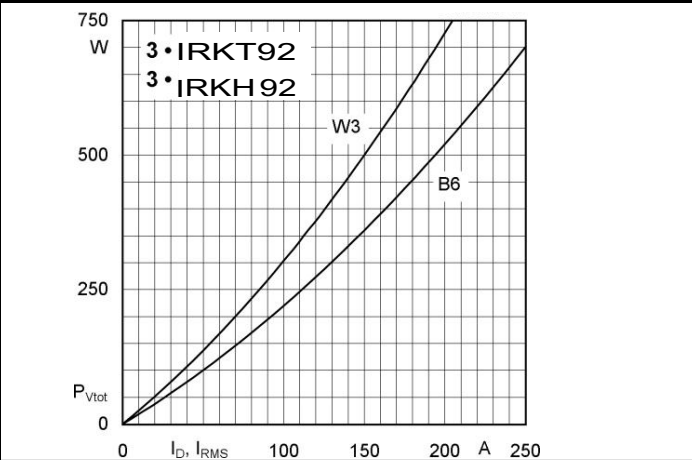


Fig. 4L Power dissipation of three modules vs. direct and rms current

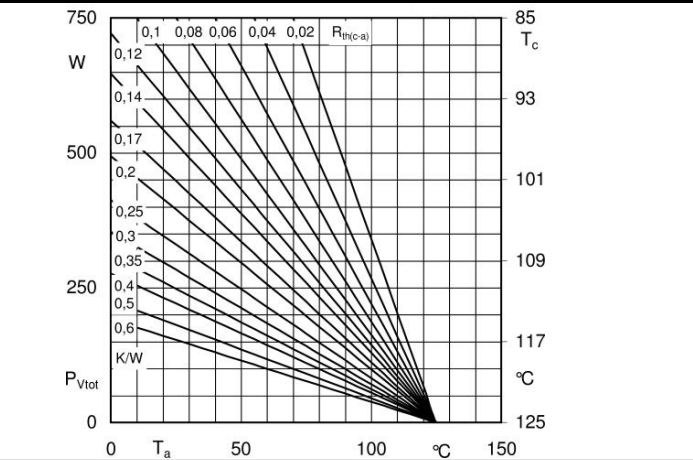


Fig. 4R Power dissipation of three modules vs. case temp.

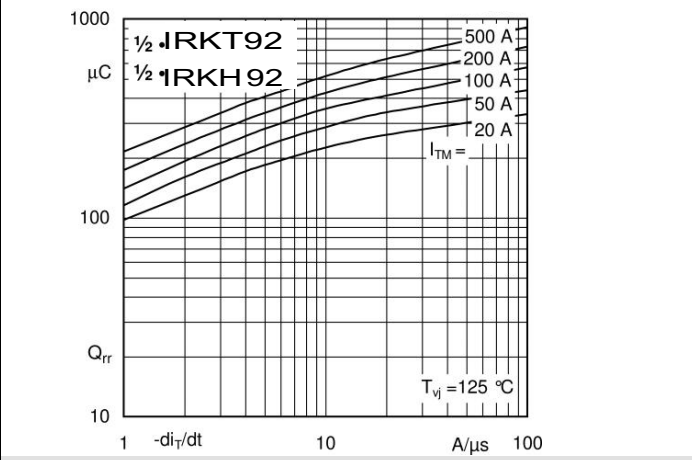


Fig. 5 Recovered charge vs. current decrease

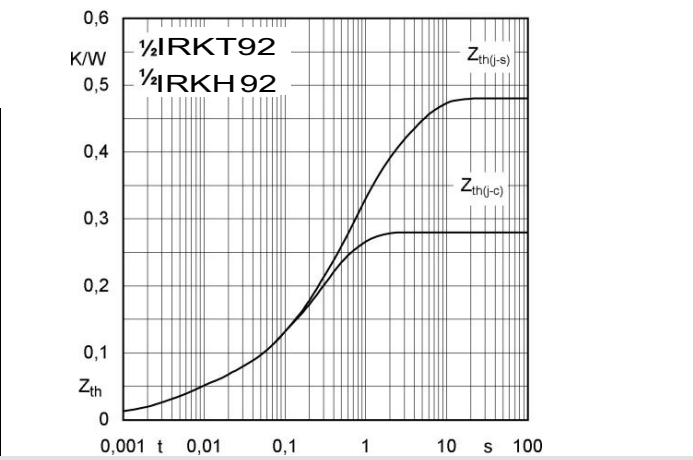


Fig. 6 Transient thermal impedance vs. time

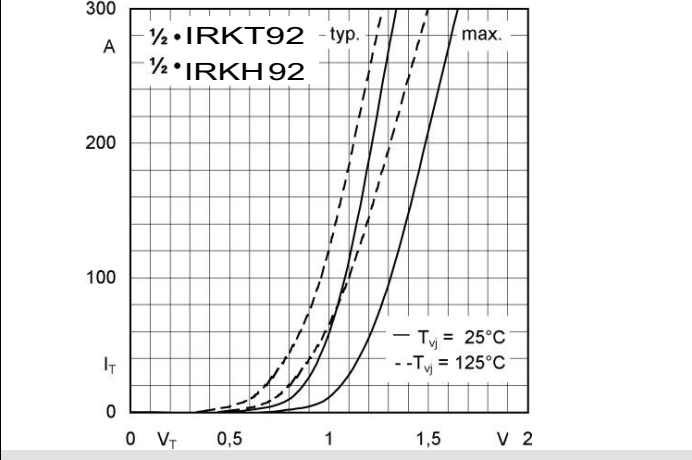


Fig. 7 On-state characteristics

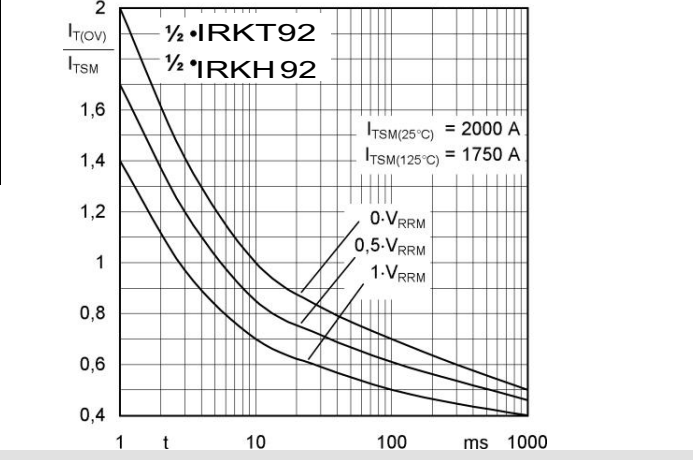
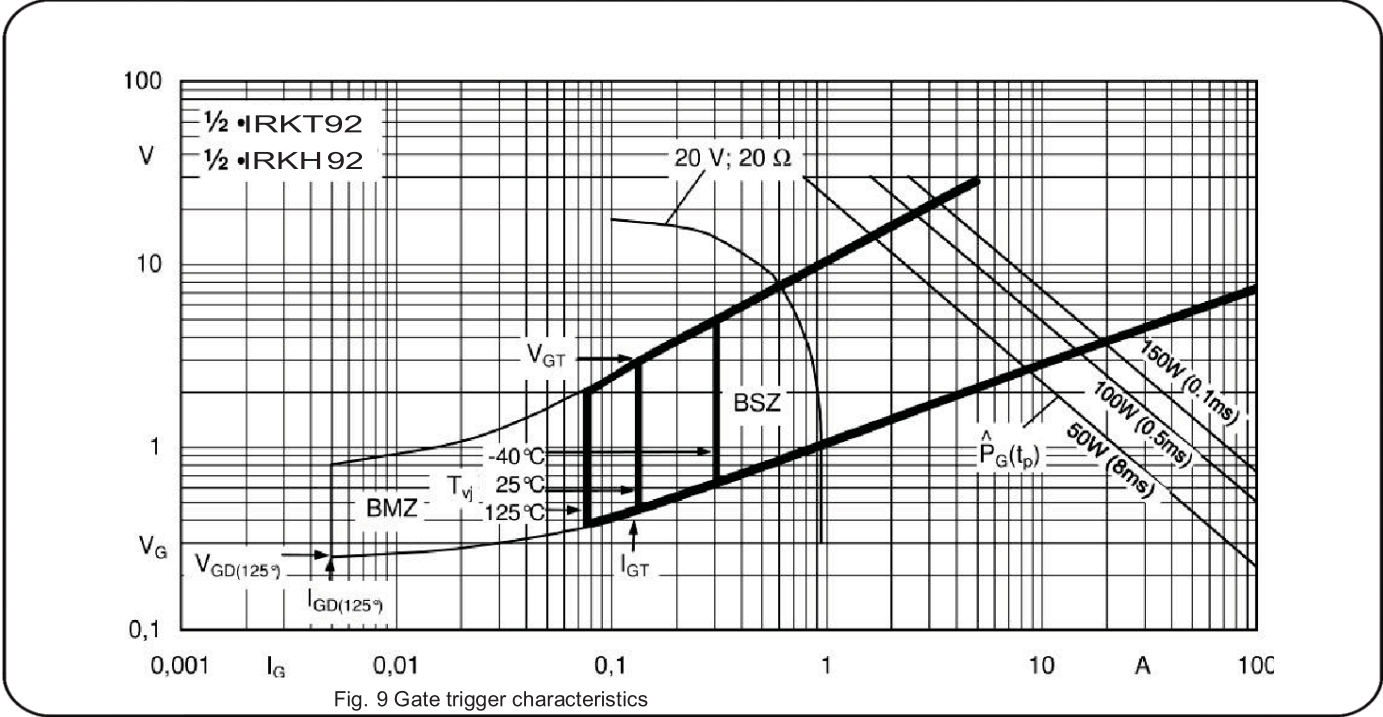
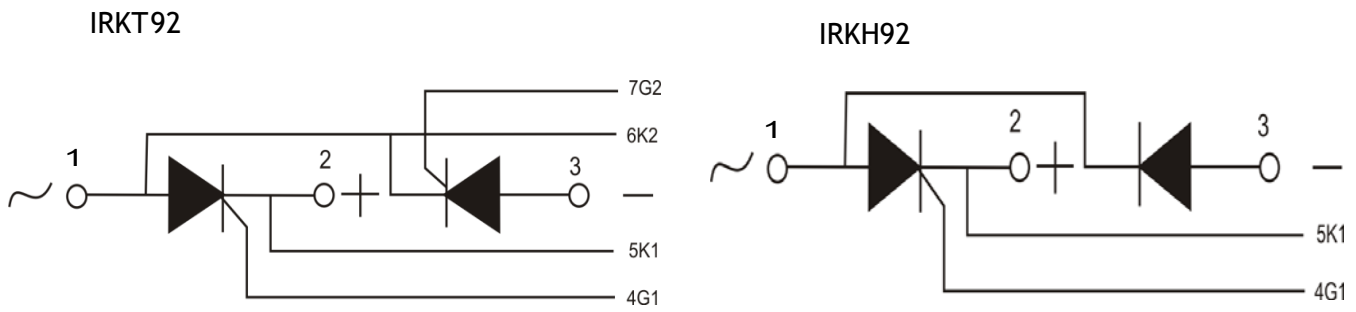


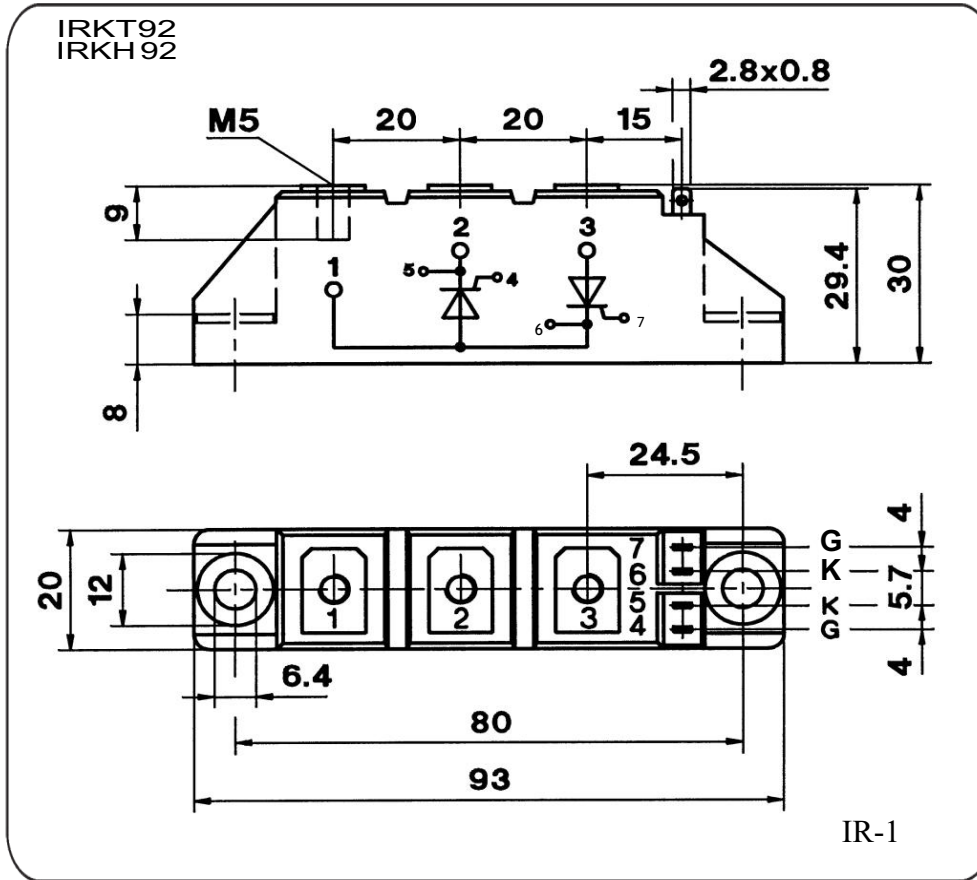
Fig. 8 Surge overload current vs. time



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