INTERNATIONAL
IRI

STANDARD RECOVERY DIODE

DS6000SK

FEATURES

- Capsule type metal-ceramic package with precious metal pressure contacts
- Medium voltage, high current rectifier diode with slim package for lowest thermal resistance
- Low power dissipation
- Especially suited for water cooling
- Forward selections for paralleling available



TYPICAL APPLICATIONS

- Welders
- Plating rectifiers

TECHNICAL DATA

DEVICE TYPE	V_{RRM} (V)	V_{RSM} (V)
DS6000SK0404	400	500
DS6000SK0606	600	700

SYMBOL	CONDITIONS	VALUES
$I_{F(AV)}$	Maximum average forward Current TC = 85 ^{0}C	6000 A
V_{FM}	Maximum peak forward Voltage drop @ 14000 AP	1.30 V
I_{FSM}	Maximum peak one cycle (non-rep.) surge current 10 msec	60000 A
I^2t	Max. I^2t rating (non-rep.) for 10 msec	18000000 A ^{2}Sec
I_{RRM}	Peak reverse current at T_{vj} = 175^{0}C	100 mA
V_0 R_0	Tvj=max Tvj=max	0.70 V 0.04 mΩ
$R_{th(j-c)}$ $R_{th(c-h)}$ Tvj Tstg	DSC/SSC DSC/SSC Junction temperature Storage temperature	0.012/0.024°C/W 0.005/0.01 °C/W 180 °C 150 °C
Mounting force		30Nm
Weight	Approx.	130 gms
Package Outline		k

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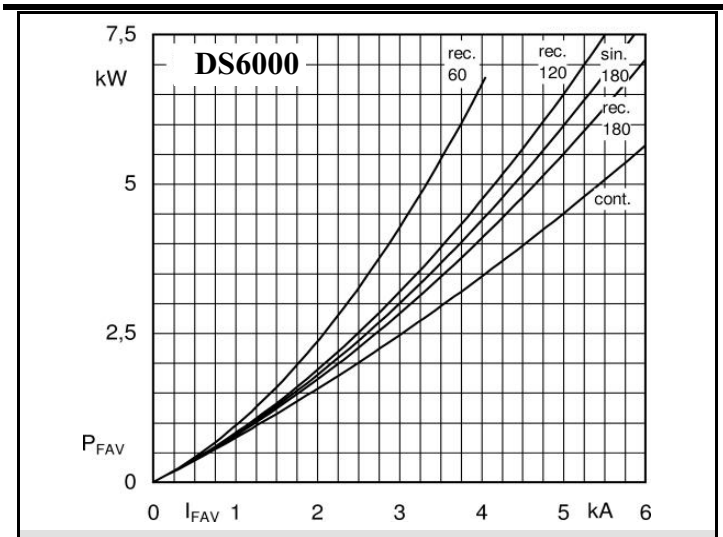


Fig. 1L Power dissipation vs. forward current

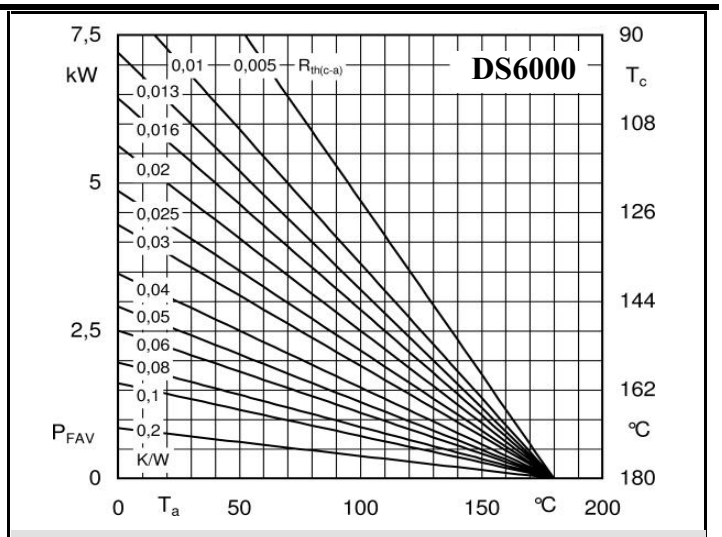


Fig. 1R Power dissipation vs. ambient temperature

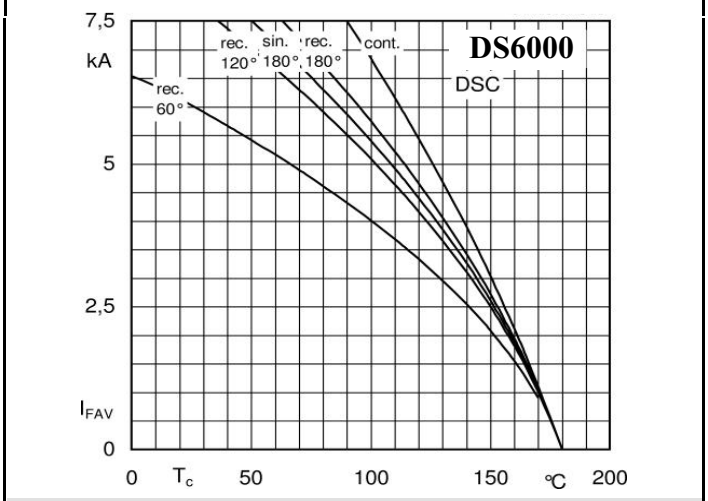


Fig. 2 Forward current vs. case temperature

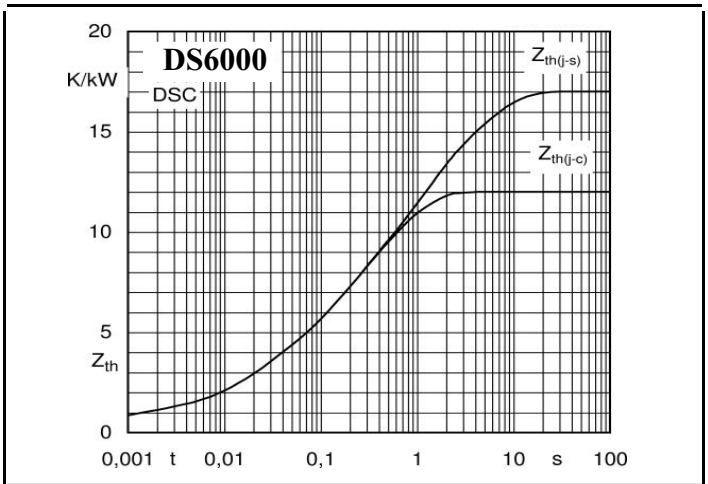


Fig. 4a Transient thermal impedance (double sided cooling)

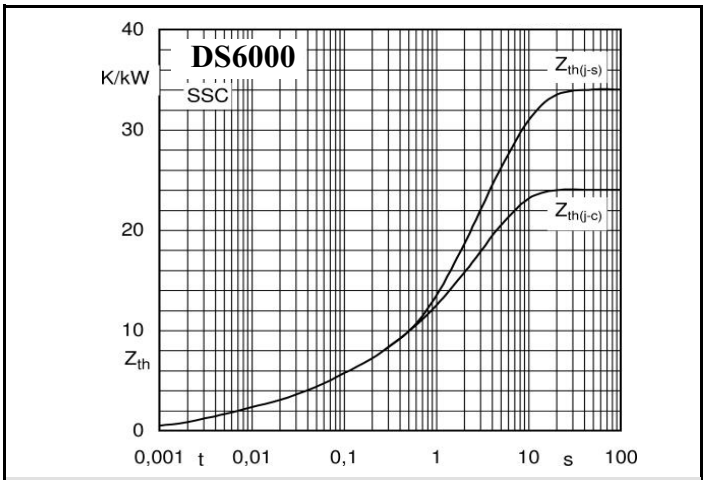


Fig. 4b Transient thermal impedance (single sided cooling)

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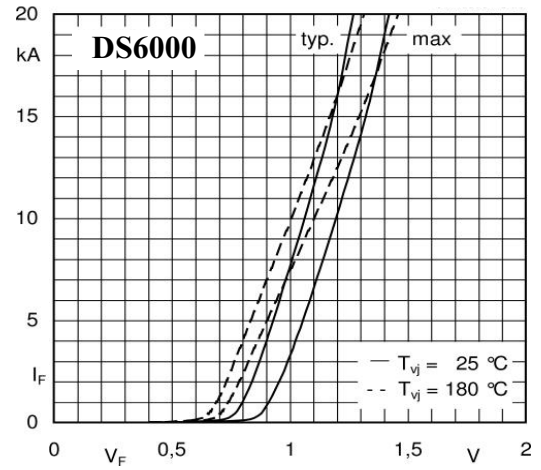


Fig. 5 Forward characteristics

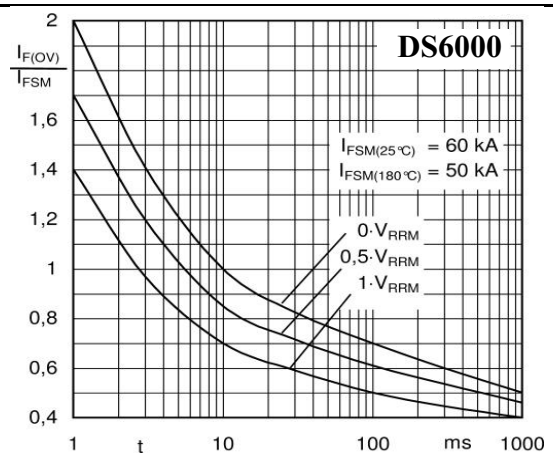


Fig. 6 Surge overload current vs. time

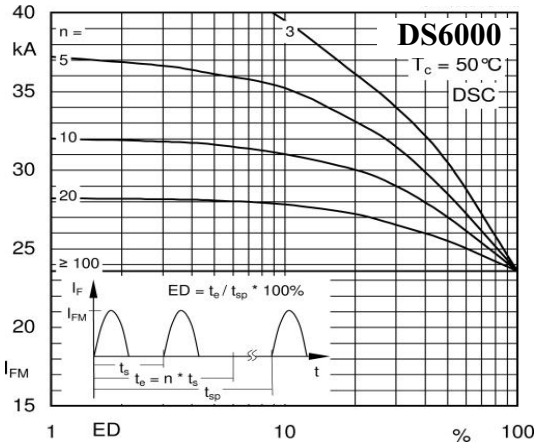


Fig. 10a Peak forward current vs. duty cycle (T_c = 50°C)

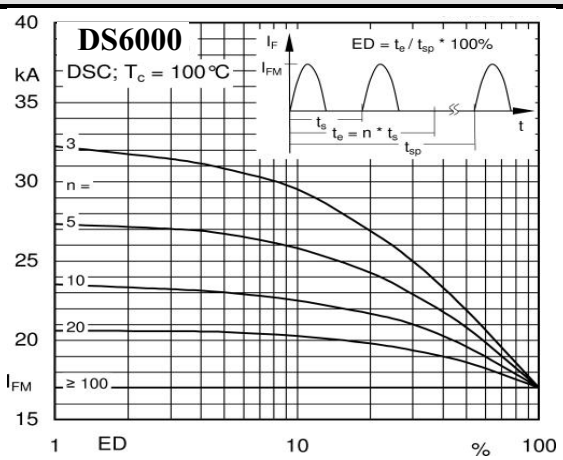


Fig. 10b Peak forward current vs. duty cycle (T_c = 100°C)

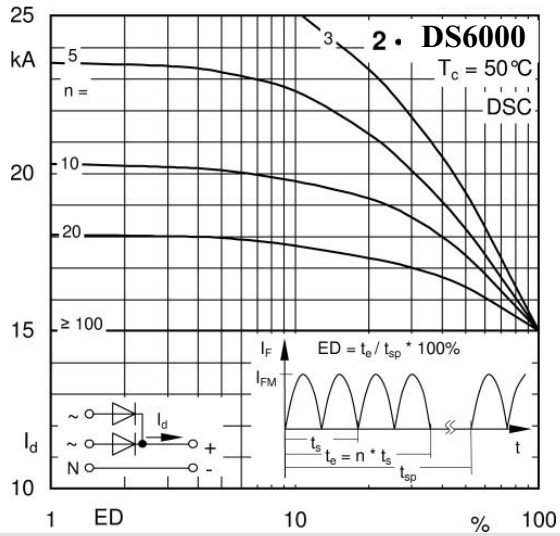


Fig. 11a Direct output current vs. duty cycle (T_c = 50°C)

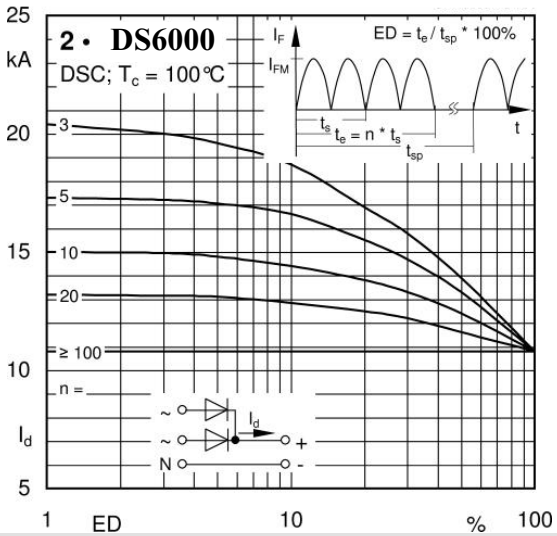
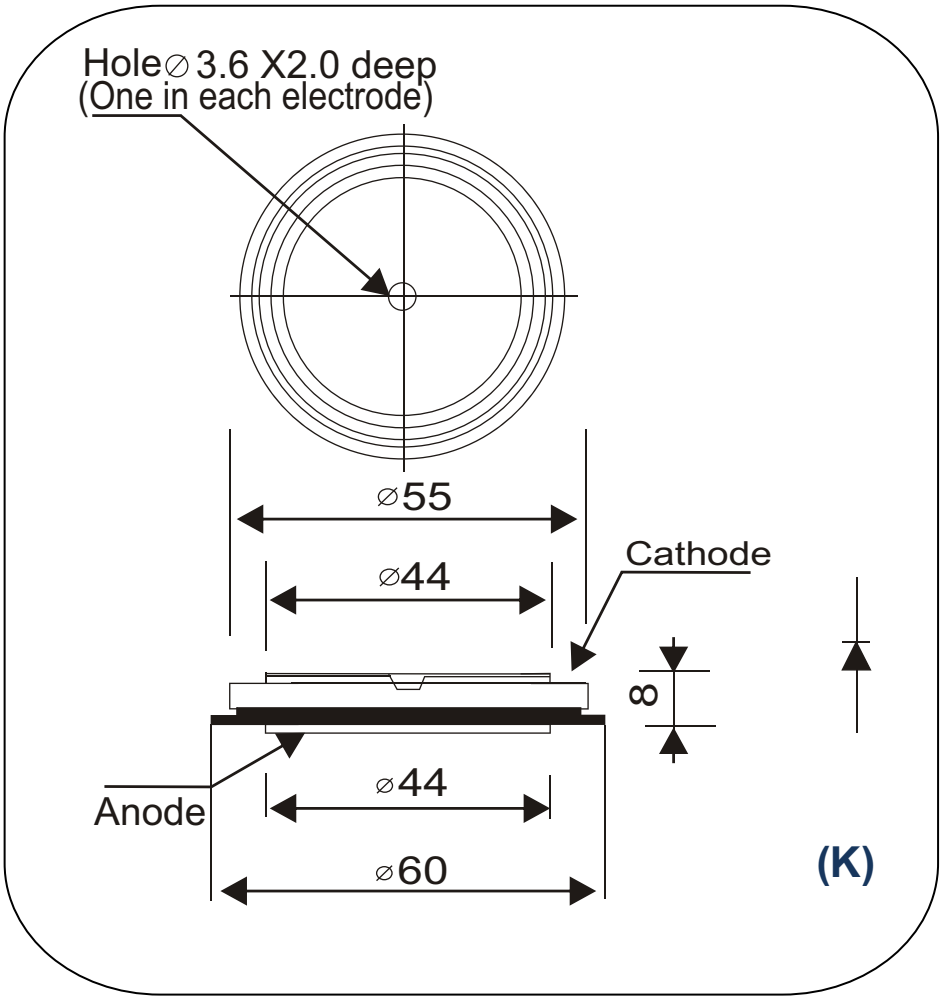


Fig. 11b Direct output current vs. duty cycle (T_c = 100°C)

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PACKAGE OUTLINE



All dimensions are in mm.

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