Rectifier Diode
ADWN 6000

V_{RSM} V	V_{RRM} V	I_{FRMS} = 10000 A (maximum value for continuous operation) I_{FAV} = 6000 A (sin. 180; T_C = 85°C)		
200 400 600	200 400 600	ADWN 6000-02 ADWN 6000-04 ADWN 6000-06		

Symbols and parameters			Values	Units
I_{FAV}	Mean forward current	sin 180; DSC; T_C = 85 (100)°C	6000 (5400)	A
I_{FSM}	Surge forward current	T_{vj} = 25°C; 10 ms T_{vj} = 180°C; 10 ms	60000 50000	A A
i^2t	I^2t value, rating for fusing	T_{vj} = 25°C; 8.3…10 ms T_{vj} = 180°C; 8.3…10 ms	18000000 12500000	A^2s A^2s
V_F	Forward voltage	T_{vj} = 25°C; I_F = 14000 A	max. 1.3	V
$V_{(TO)}$	On-state threshold voltage	T_{vj} = 180°C	max. 0.7	V
r_T	On-state slope resistance	T_{vj} = 180°C	max. 0.04	mΩ
I_{RD}	Direct reverse current	T_{vj} = 180°C; V_{RD} = V_{RRM}	max. 100	mA
$R_{th(j-c)}$	Thermal resistance, junction to case	DSC / SSC	0.012 / 0.024	K/W
$R_{th(c-s)}$	Thermal resistance, junction to heatsink	DSC / SSC	0.005 / 0.01	K/W
T_{vj}	(Virtual) junction temperature		-40 … +180	°C
T_{stg}	Storage temperature range		-40 … +150	°C
V_{isol}	Insulation test voltage (r.m.s.)		-	V~
F	Mounting force		24…30	kN
a	Maximum allowable acceleration		-	m/s^2
W	Weight		130	g

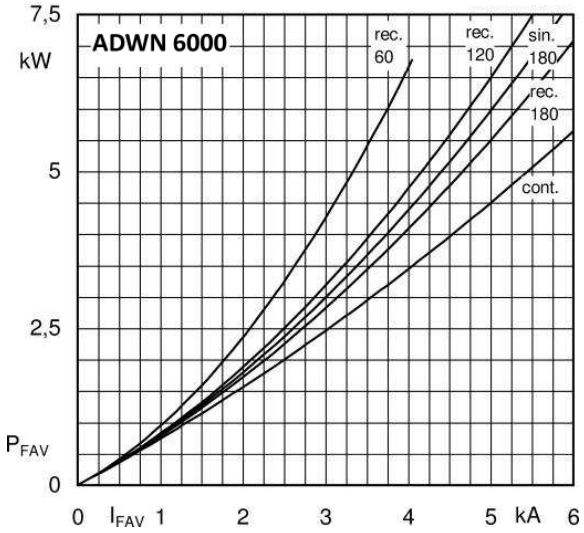


Fig. 1L Power dissipation vs. forward current

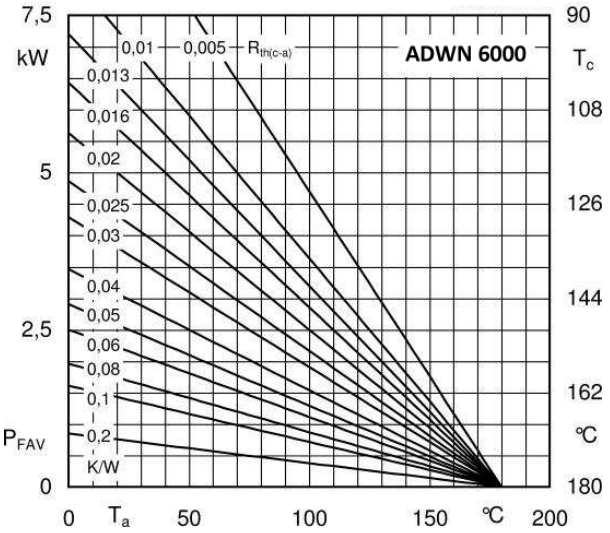


Fig. 1R Power dissipation vs. ambient temperature

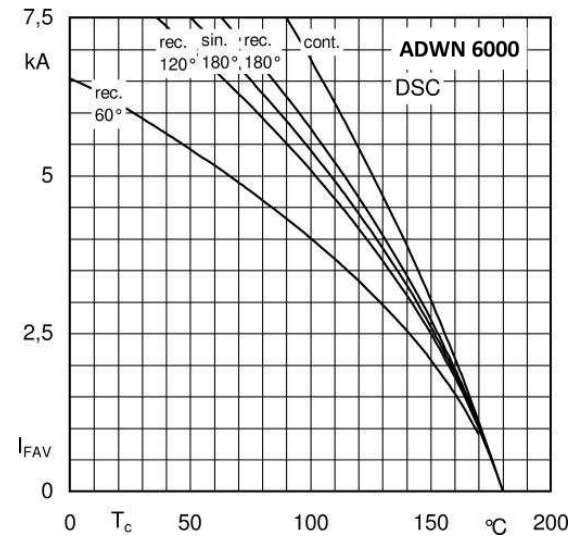


Fig. 2 Forward current vs. case temperature

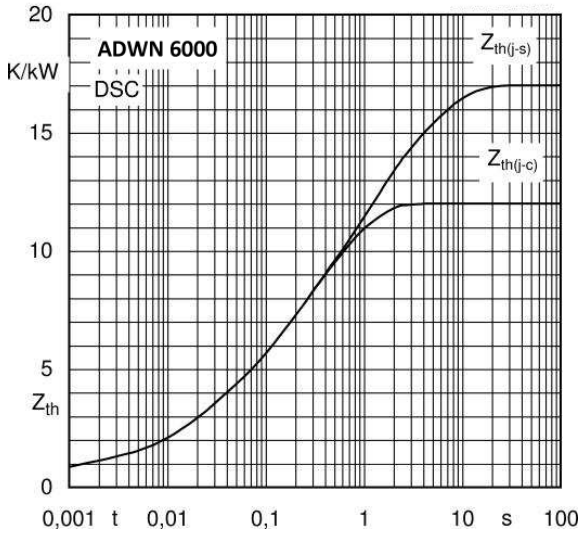


Fig. 4a Transient thermal impedance (double sided cooling)

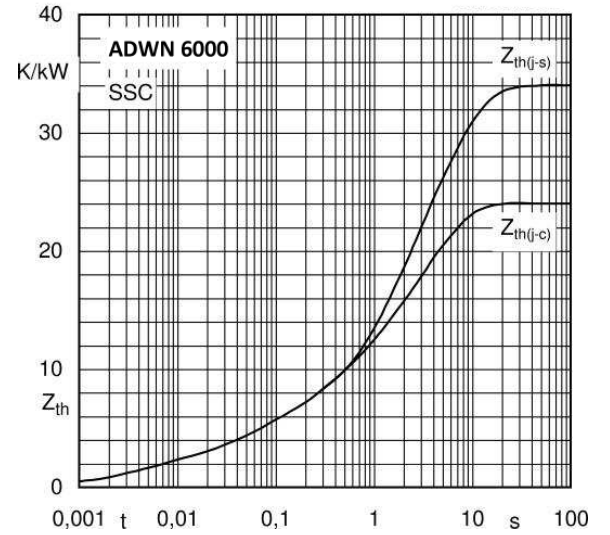


Fig. 4b Transient thermal impedance (single sided cooling)

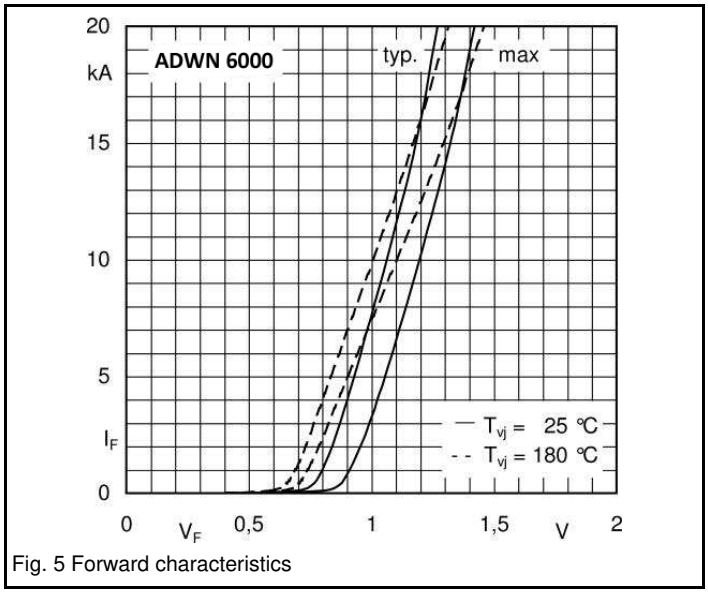


Fig. 5 Forward characteristics

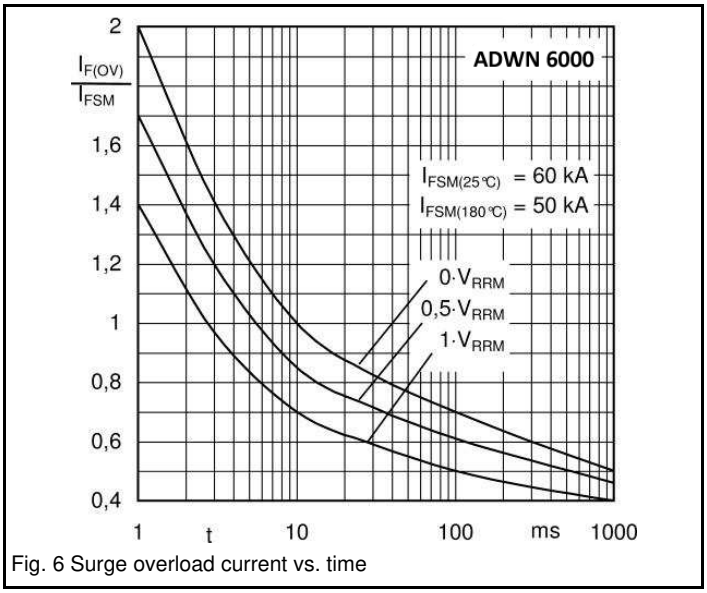


Fig. 6 Surge overload current vs. time

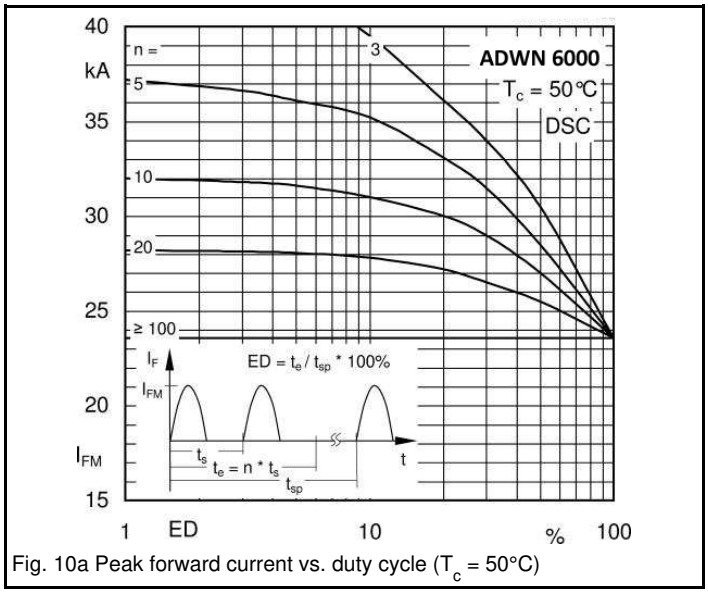


Fig. 10a Peak forward current vs. duty cycle (T_c = 50°C)

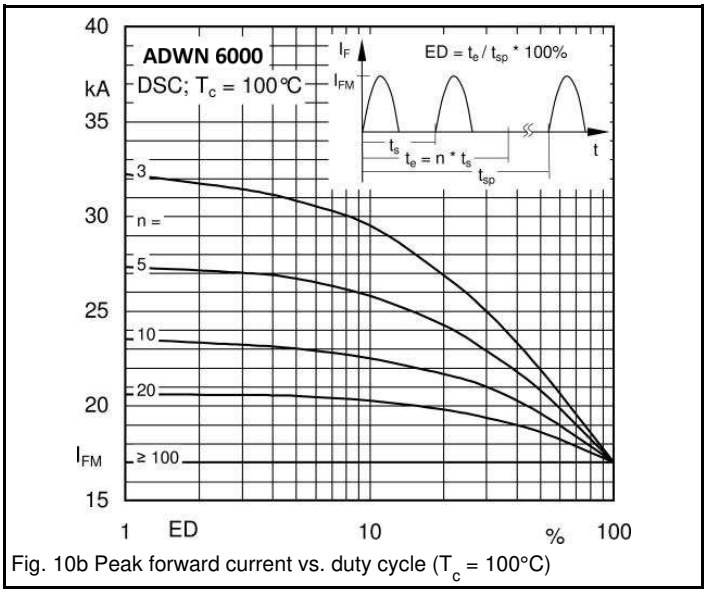


Fig. 10b Peak forward current vs. duty cycle (T_c = 100°C)

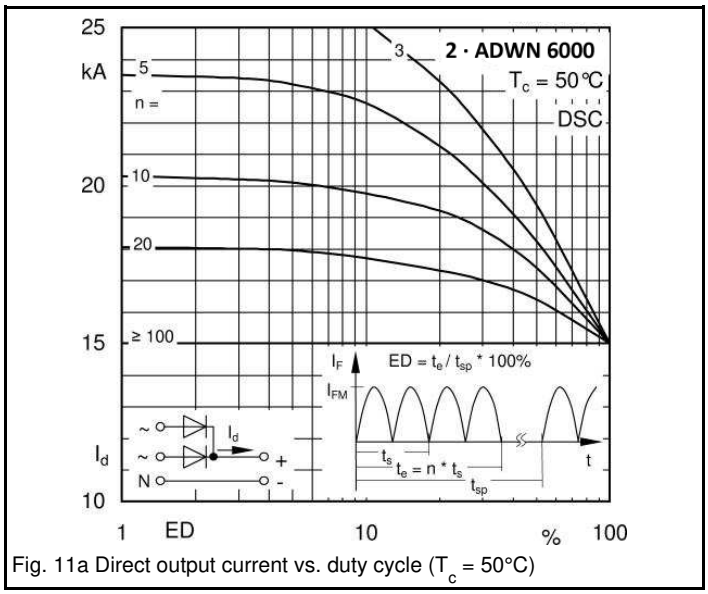


Fig. 11a Direct output current vs. duty cycle (T_c = 50°C)

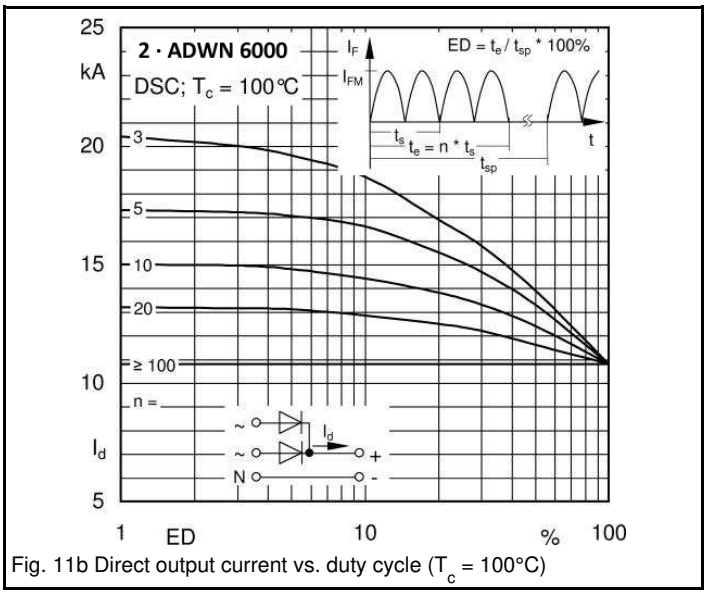
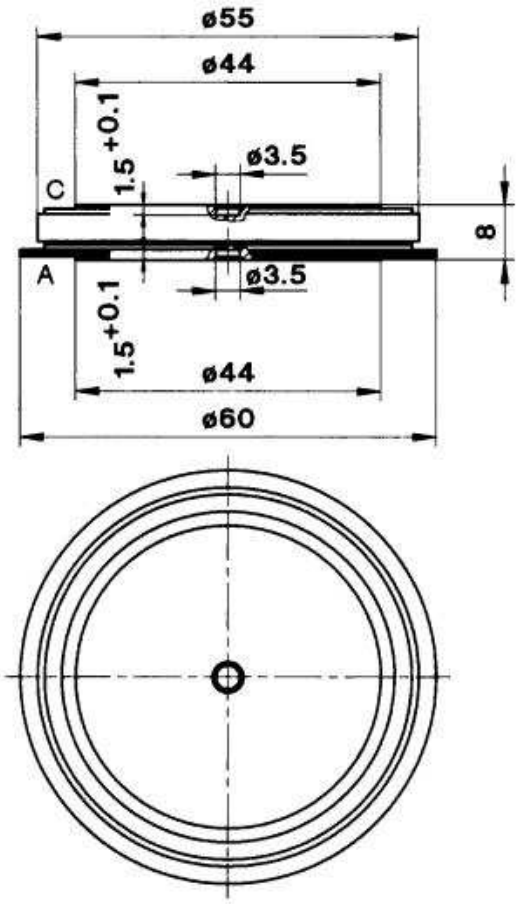


Fig. 11b Direct output current vs. duty cycle (T_c = 100°C)

DIMENSIONS



Dimensions in mm