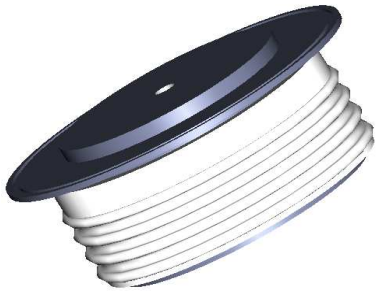
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GPDN4100



AVALANCHE RECTIFIER DIODE

VOLTAGE UP TO	**2900 - 3200**	**V**
AVERAGE CURRENT	**1000**	**A**
SURGE CURRENT	**9,5**	**kA**

BLOCKING CHARACTERISTICS

Characteristic		Conditions	Value	
V_{RRM}	Repetitive peak reverse voltage		2900 - 3200	V
V_{RSM}	Non-repetitive peak reverse voltage			V
I_{RRM}	Repetitive peak reverse current, max.	V_{RRM}, single phase, half wave, Tjmax	50	mA
P_{RSM}	Peak reverse power, max	Tjmax, tp = 20µs	50	kW

FORWARD CHARACTERISTICS

$I_{F(AV)}$	Average forward current	Sine wave,180° conduction, T h = 55℃	1000	A
$I_{F(RMS)}$	R.M.S. forward current	Sine wave,180° conduction, Th = 55℃	1571	A
I_{FSM}	Surge forward current	Non rep. half sine wave, 50 Hz, V_R = 0 V, $T_j = T_{jmax}$	9,5	kA
I^2t	I^2 t for fusing coordination		451	kA^2s
$V_{F(TO)}$	Threshold voltage	$T_j = T_{jmax}$	0,93	V
r_F	Forward slope resistance	$T_j = T_{jmax}$	0,520	mΩ
V_{FM}	Peak forward voltage, max	Forward current I_F = 1200 A, Tj = Tjmax	1,55	V

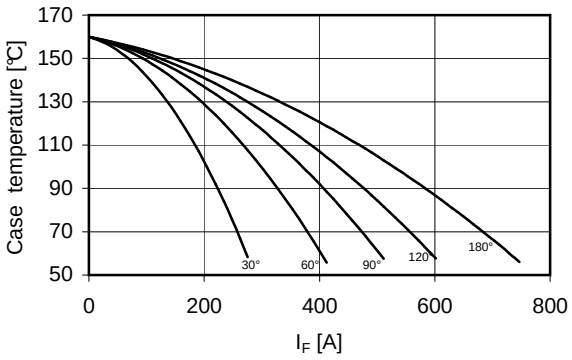
SWITCHING CHARACTERISTICS

Q_{rr}	Rverse recovery charge, typ	$T_j = T_{jmax}$, I_F = 1000 A, di/dt = -5 A/µs		µC
I_{rr}	Reverse recovery current			A

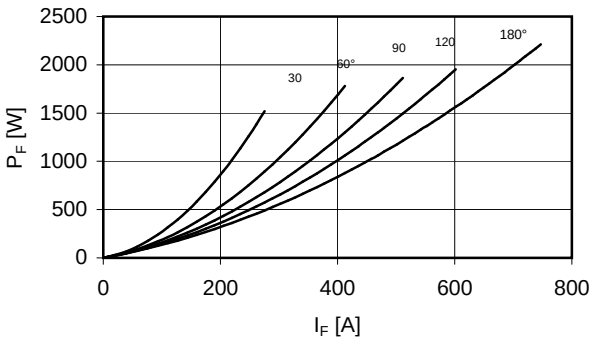
THERMAL AND MECHANICAL CHARACTERISTICS

$R_{th(j-c)}$	Thermal resistance (junction to case)	Double side cooled	0,040	℃/W
$R_{th(c-h)}$	Thermal resistance (case to heatsink)	Double side cooled	0,007	℃/W
T_{jmax}	Max operating junction temperature		160	℃
T_{stg}	Storage temperature		-40 / 160	℃
F	Clamping force ± 10%		11	kN
	Mass		300	g

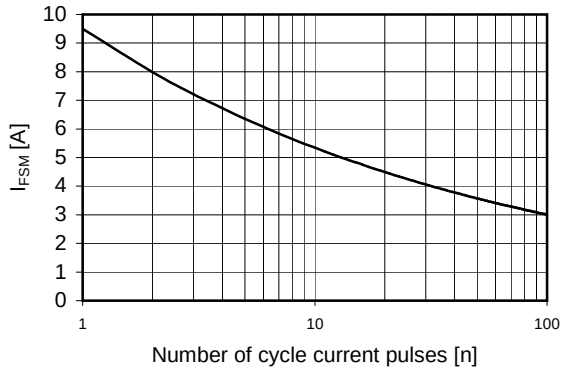
Current rating - sine wave



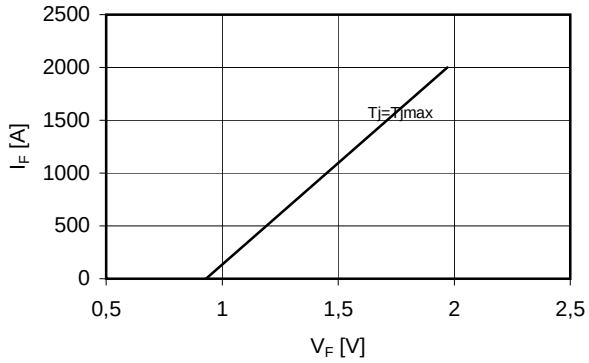
Power loss - sine wave



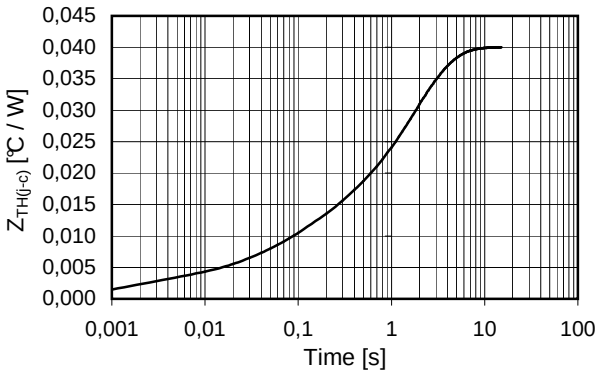
Maximum surge current d.s. cooled

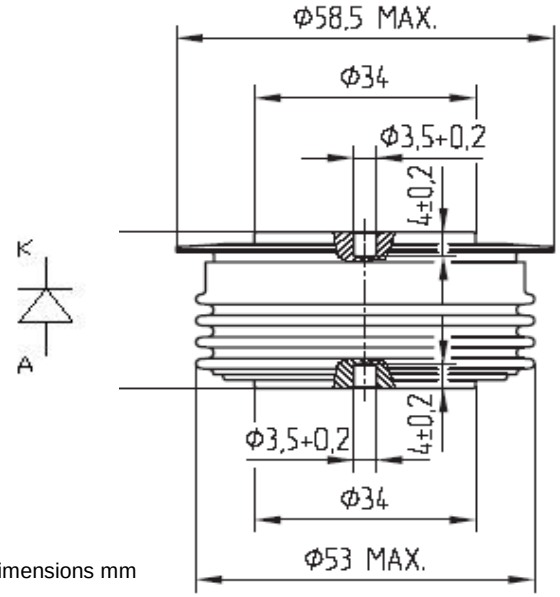


Forward voltage drop



Thermal Impedance (j-c)





dimensions mm

In the interest of product improvement Green Power Solutions reserves the right to change any specification given in this data sheet without notice.