

GPDP5164

AVALANCHE RECTIFIER DIODE

VRRM	3800 - 4400 - 5000 V
AVERAGE CURRENT	1640 A
SURGE CURRENT	18 kA

BLOCKING CHARACTERISTICS

Characteristic		Conditions	Value
VRRM	Repetitive peak reverse voltage		3800 - 4400 - 5000 V
IRRM	Repetitive peak reverse current, max.	VRRM, single phase, half wave, Tjmax	75 mA
PRSM	Peak reverse power, max	Tjmax, tp = 20µs	50 kW

FORWARD CHARACTERISTICS

IF(AV)	Average forward current	Sine wave, 180° conduction, Th = 55°C	1640 A
IF(RMS)	R.M.S. forward current	Sine wave, 180° conduction, Th = 55°C	2575 A
IFSM	Surge forward current	Non rep. half sine wave, 50 Hz, VR = 0 V, Tj = Tjmax	18 kA
I²t	I² t for fusing coordination		1620 kA²s
VF(TO)	Threshold voltage	Tj = Tjmax	1,13 V
rF	Forward slope resistance	Tj = Tjmax	0,440 mΩ
VFM	Peak forward voltage, max	Forward current IF = 4000 A, Tj = 25°C	2,40 V

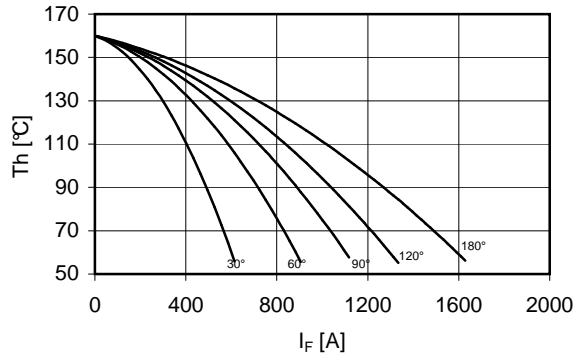
SWITCHING CHARACTERISTICS

Qrr	Reverse recovery charge, typ	Tj = Tjmax, IF = 2000 A, di/dt = -5 A/µs VR = 100 V	4250 µC
Irr	Reverse recovery current		A
trr	Reverse recovery time		µs
			V

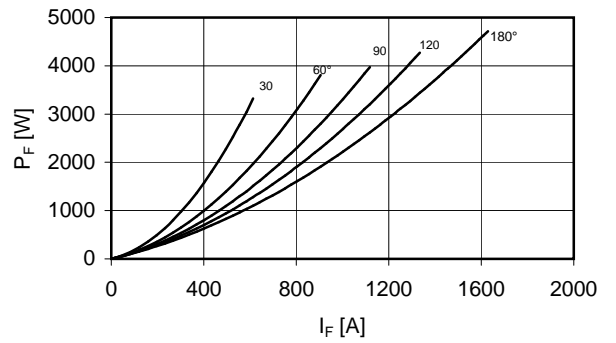
THERMAL AND MECHANICAL CHARACTERISTICS

Rth(j-c)	Thermal resistance (junction to case)	Double side cooled	0,020 °C/W
Rth(c-h)	Thermal resistance (case to heatsink)	Double side cooled	0,002 °C/W
Tjmax	Max operating junction temperature		160 °C
Tstg	Storage temperature		-40 / 160 °C
F	Clamping force ± 10%		22 kN
	Mass		500 g

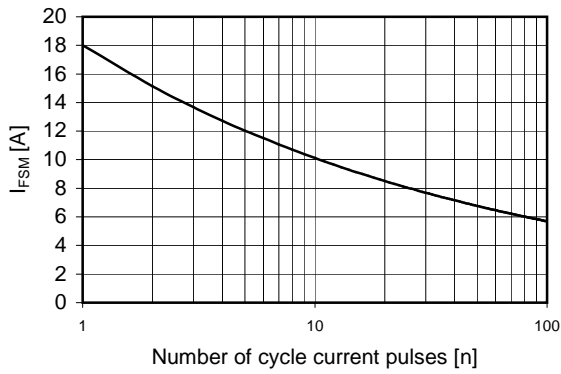
Current rating - sine wave



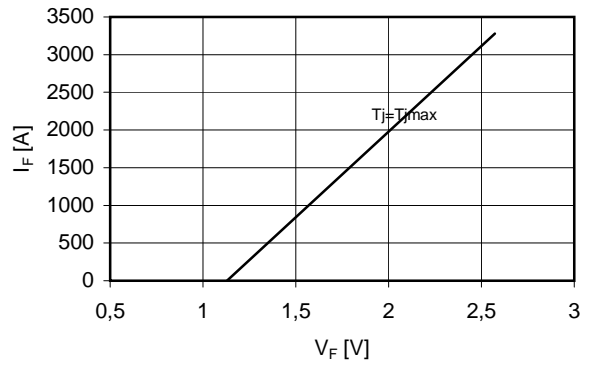
Power loss - sine wave



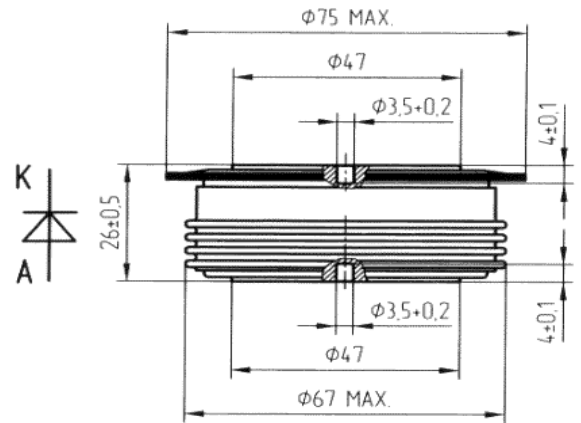
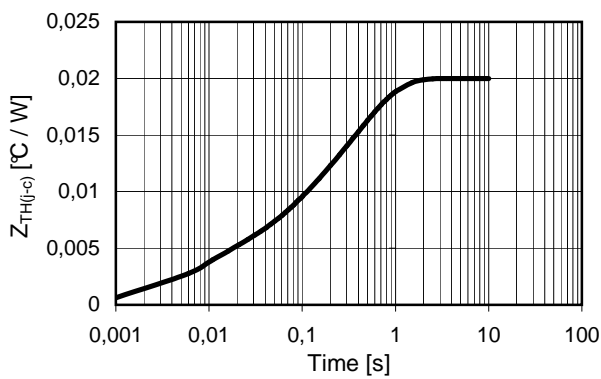
Maximum surge current d.s. cooled



Forward voltage drop



Thermal Impedance (j-c)



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