

GPDP5202

RECTIFIER DIODE



VOLTAGE UP TO 5000 V
AVERAGE CURRENT 2025 A
SURGE CURRENT 18.5 kA

BLOCKING CHARACTERISTICS

Characteristic	Conditions	Value
V _{RRM}	Repetitive peak reverse voltage	5000 V
V _{RSM}	Non-repetitive peak reverse voltage	5100 V
I _{RRM}	Repetitive peak reverse current, max.	V _{RRM} , single phase, half wave, T _{jmax}
		80 mA

FORWARD CHARACTERISTICS

I _{F(AV)}	Average forward current	Sine wave, 180° conduction, Th = 55°C	2025 A
I _{F(RMS)}	R.M.S. forward current	Sine wave, 180° conduction, Th = 55°C	3181 A
I _{FSM}	Surge forward current	Non rep. half sine wave, 50 Hz, V _R = 0 V, T _j = T _{jmax}	18.5 kA
I ² t	I ² t for fusing coordination		1711 kA ² s
V _{F(TO)}	Threshold voltage	T _j = T _{jmax}	0.94 V
r _F	Forward slope resistance	T _j = T _{jmax}	0.284 mΩ
V _{FM}	Peak forward voltage, max	Forward current I _F = 4000 A, T _j = T _{jmax}	2.08 V

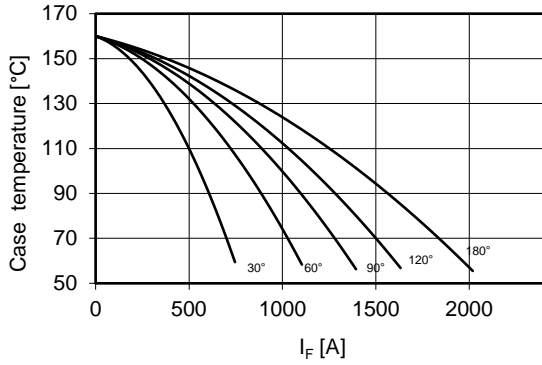
SWITCHING CHARACTERISTICS

Q _{rr}	Reverse recovery charge, typ	T _j = T _{jmax} , I _F = 2000 A, di/dt = -5 A/μs	μC
I _{rr}	Reverse recovery current	V _R = 100 V	A
t _{rr}	Reverse recovery time		μs
V _{FP}	Forward recovery voltage	T _j = T _{jmax} , di/dt = A/μs	V

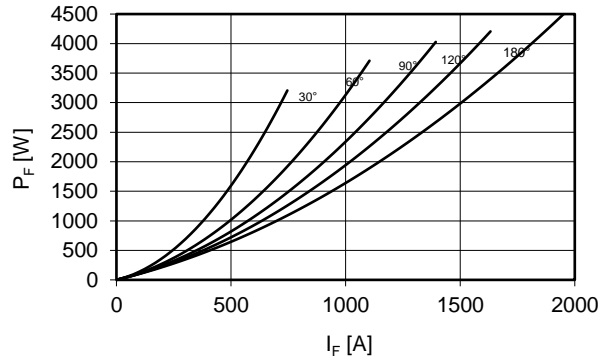
THERMAL AND MECHANICAL CHARACTERISTICS

R _{th(j-c)}	Thermal resistance (junction to case)	Double side cooled	0.020 °C/W
R _{th(c-h)}	Thermal resistance (case to heatsink)	Double side cooled	0.002 °C/W
T _{jmax}	Max operating junction temperature		160 °C
T _{stg}	Storage temperature		-40 / 160 °C
F	Clamping force ± 10%		22 kN
	Mass		500 g

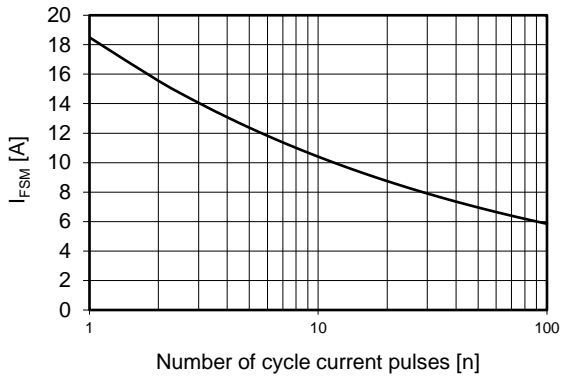
Current rating - sine wave



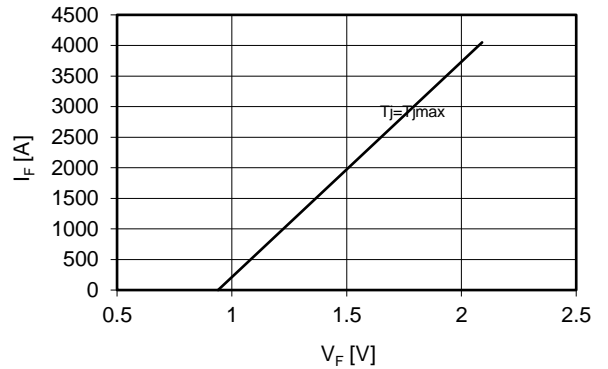
Power loss - sine wave



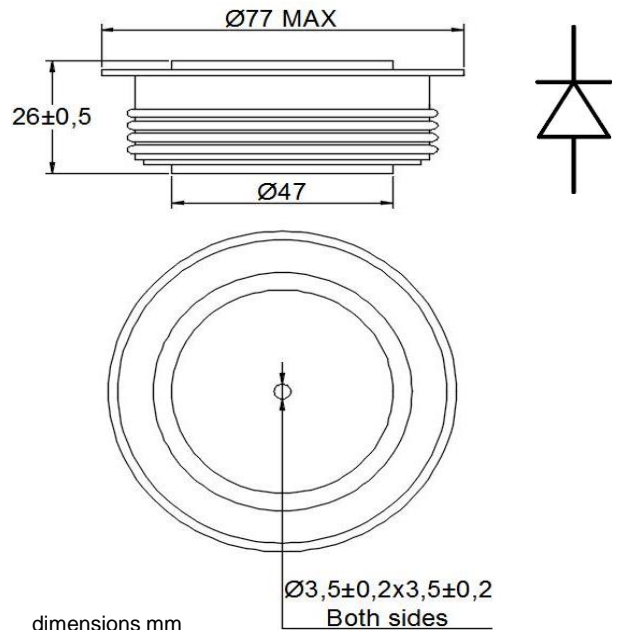
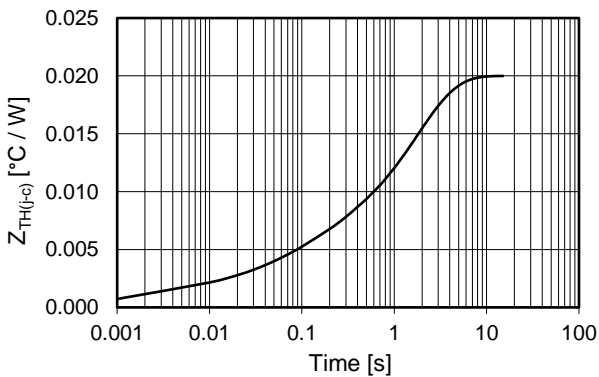
Maximum surge current d.s. cooled



Forward voltage drop



Thermal Impedance (j-c)



Ordering information GPDP5202-VV

VV: blocking voltage / 100 (e.g. 50 for 5000V)

dimensions mm

$\text{Ø}3,5 \pm 0,2 \times 3,5 \pm 0,2$
Both sides

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