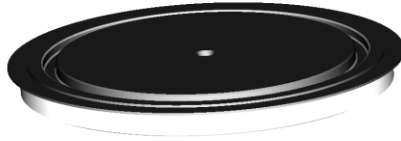


GPDD013K

RECTIFIER DIODE



Low profile ceramic package
 Spot welding applications
 Electroplating applications



VOLTAGE UP TO 400 V
AVERAGE CURRENT 13600 A
SURGE CURRENT 85 kA

BLOCKING CHARACTERISTICS

Characteristic		Conditions	Value
V _{RRM}	Repetitive peak reverse voltage		400 V
V _{RSM}	Non-repetitive peak reverse voltage		500 V
I _{RRM}	Repetitive peak reverse current, max.	V _{RRM} , single phase, half wave, T _j = T _{jmax}	50 mA

FORWARD CHARACTERISTICS

I _{F(AV)}	Average forward current	Sine wave, 180° conduction, T _c = 70°C	13600 A
I _{F(RMS)}	R.M.S. forward current	Sine wave, 180° conduction, T _c = 70°C	21363 A
I _{FSM}	Surge forward current	Non rep. half sine wave, 50 Hz, V _R = 0 V, T _j = T _{jmax}	85 kA
I ² t	I ² t for fusing coordination		36125 kA ² s
V _{F(TO)}	Threshold voltage	T _j = T _{jmax}	0.74 V
r _F	Forward slope resistance	T _j = T _{jmax}	0.018 mΩ
V _{FM}	Peak forward voltage, max	Forward current I _F = 8000 A, T _j = T _{jmax}	0.9 V

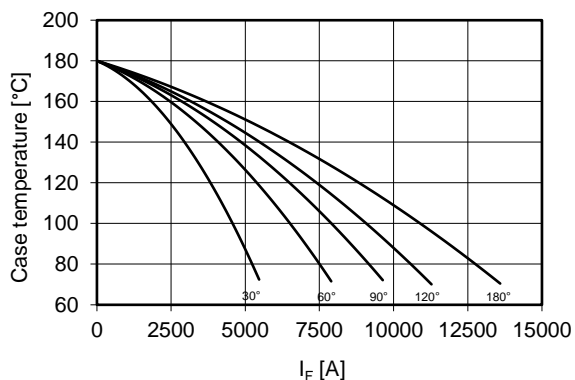
SWITCHING CHARACTERISTICS

Q _{rr}	Reverse recovery charge, typ	T _j = T _{jmax} , I _F = 1000 A, di/dt = -30 A/μs V _R = 50 V	μC
I _{rr}	Reverse recovery current		A
t _{rr}	Reverse recovery time		μs
V _{FP}	Forward recovery voltage	T _j = T _{jmax} , di/dt = 100 A/μs	V

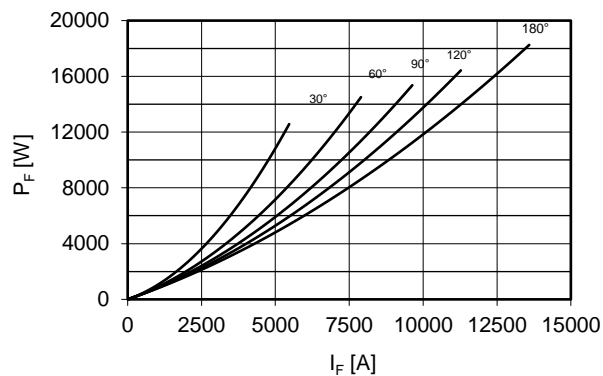
THERMAL AND MECHANICAL CHARACTERISTICS

R _{th(j-c)}	Thermal resistance (junction to case)	Double side cooled	0.006 °C/W
R _{th(c-h)}	Thermal resistance (case to heatsink)	Double side cooled	0.003 °C/W
T _{jmax}	Max operating junction temperature		180 °C
T _{stg}	Storage temperature		-40 / 180 °C
F	Clamping force ± 10%		35 kN
	Mass		220 g

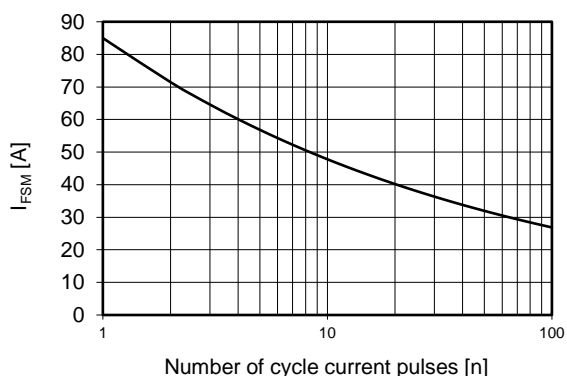
Current rating - sine wave



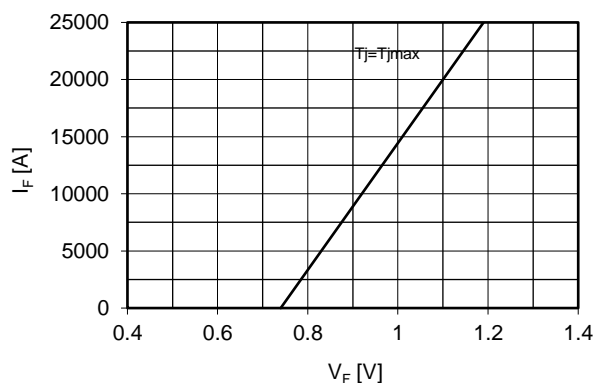
Power loss - sine wave



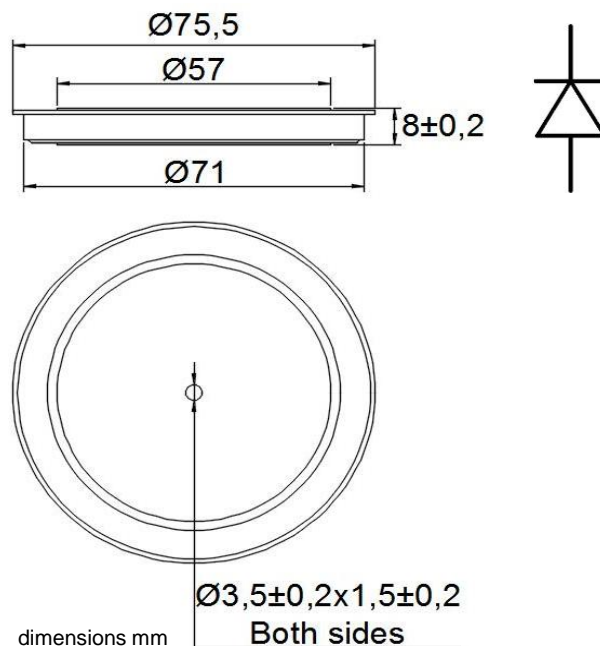
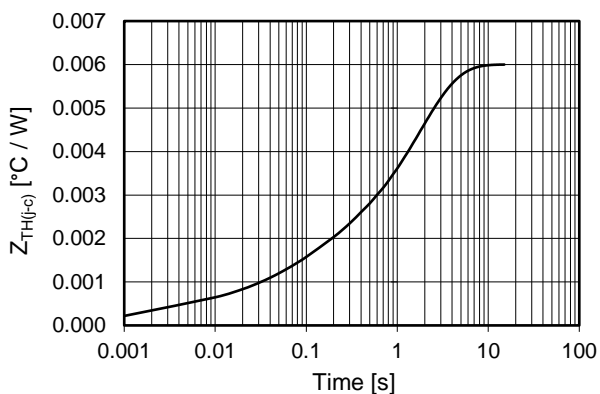
Maximum surge current
d.s. cooled



Forward voltage drop



Thermal Impedance (j-c)



Ordering information GPDD013K-VV

VV: blocking voltage / 100 (e.g. 04 for 400V)

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