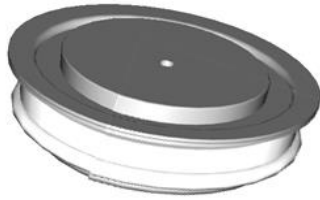


GPDG3083

RECTIFIER DIODE



| | |
|------------------------|---------------|
| VOLTAGE UP TO | 2200 V |
| AVERAGE CURRENT | 835 A |
| SURGE CURRENT | 7 kA |

BLOCKING CHARACTERISTICS

| Characteristic | Conditions | Value |
|------------------|---------------------------------------|---|
| V _{RRM} | Repetitive peak reverse voltage | 2200 V |
| V _{RSM} | Non-repetitive peak reverse voltage | 2300 V |
| I _{RRM} | Repetitive peak reverse current, max. | V _{RRM} , single phase, half wave, T _{jmax} |
| | | 50 mA |

FORWARD CHARACTERISTICS

| | | | |
|---------------------|--|--|-----------------------|
| I _{F(AV)} | Average forward current | Sine wave, 180° conduction, Th = 55°C | 835 A |
| I _{F(RMS)} | R.M.S. forward current | Sine wave, 180° conduction, Th = 55°C | 1312 A |
| I _{FSM} | Surge forward current | Non rep. half sine wave, 50 Hz, V _R = 0 V, T _j = T _{jmax} | 7 kA |
| I ² t | I ² t for fusing coordination | | 245 kA ² s |
| V _{F(TO)} | Threshold voltage | T _j = T _{jmax} | 0.71 V |
| r _F | Forward slope resistance | T _j = T _{jmax} | 0.395 mΩ |
| V _{FM} | Peak forward voltage, max | Forward current I _F = 1500 A, T _j = T _{jmax} | 1.30 V |

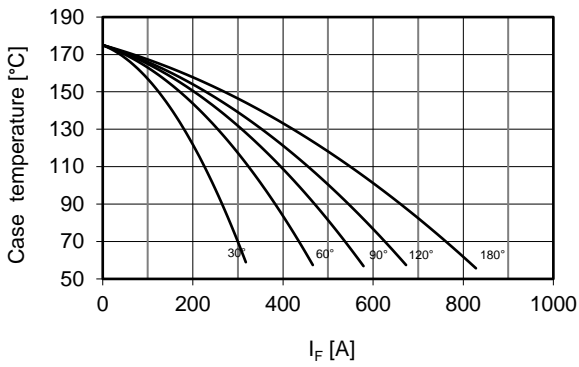
SWITCHING CHARACTERISTICS

| | | | |
|-----------------|-----------------------------|---|----|
| 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 |

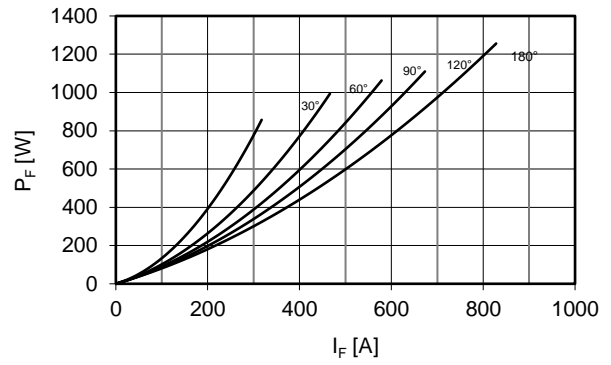
THERMAL AND MECHANICAL CHARACTERISTICS

| | | | |
|----------------------|---------------------------------------|--------------------|--------------|
| R _{th(j-c)} | Thermal resistance (junction to case) | Double side cooled | 0.075 °C/W |
| R _{th(c-h)} | Thermal resistance (case to heatsink) | Double side cooled | 0.020 °C/W |
| T _{jmax} | Max operating junction temperature | | 175 °C |
| T _{stg} | Storage temperature | | -40 / 175 °C |
| F | Clamping force ± 5% | | 5 kN |
| | Mass | | 55 g |

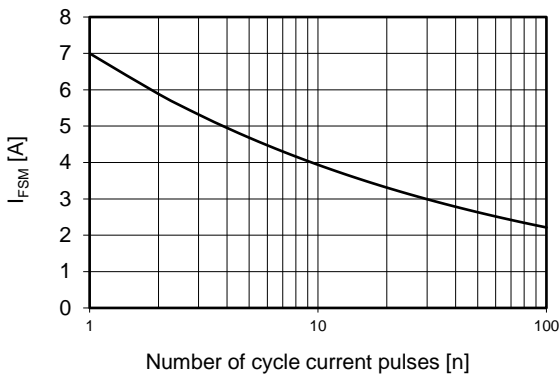
Current rating - sine wave



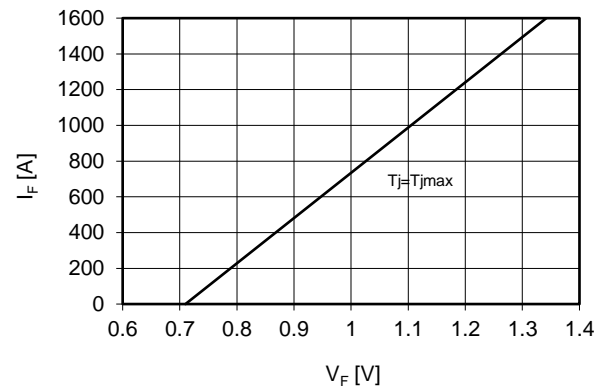
Power loss - sine wave



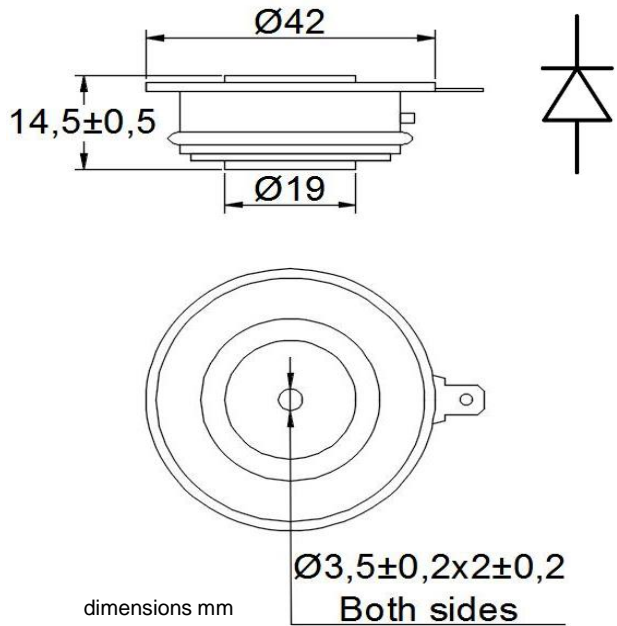
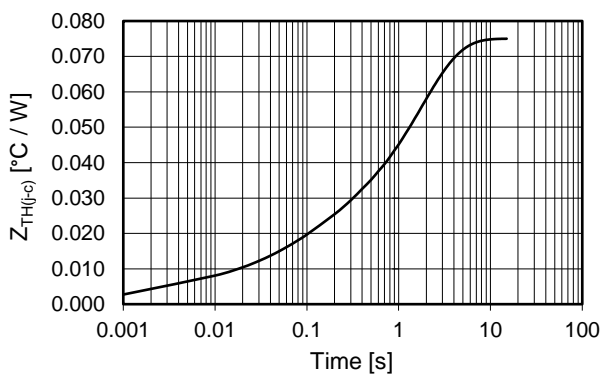
Maximum surge current d.s. cooled



Forward voltage drop



Thermal Impedance (j-c)



Ordering information GPDG3083-VV

VV: blocking voltage / 100 (e.g. 22 for 2200V)

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