

GPDR3257

RECTIFIER DIODE

| | |
|------------------------|---------------|
| VOLTAGE UP TO | 3000 V |
| AVERAGE CURRENT | 2570 A |
| SURGE CURRENT | 30 kA |

BLOCKING CHARACTERISTICS

| Characteristic | | Conditions | Value |
|------------------|---------------------------------------|--|--------|
| V _{RRM} | Repetitive peak reverse voltage | | 3000 V |
| V _{RSM} | Non-repetitive peak reverse voltage | | 3100 V |
| I _{RRM} | Repetitive peak reverse current, max. | V _{RRM} , single phase, half wave, T _j = T _{jmax} | 150 mA |

FORWARD CHARACTERISTICS

| | | | |
|---------------------|--|--|------------------------|
| I _{F(AV)} | Average forward current | Sine wave, 180° conduction, Th = 55°C | 2570 A |
| I _{F(RMS)} | R.M.S. forward current | Sine wave, 180° conduction, Th = 55°C | 4037 A |
| I _{FSM} | Surge forward current | Non rep. half sine wave, 50 Hz, V _R = 0 V, T _j = T _{jmax} | 30 kA |
| I ² t | I ² t for fusing coordination | | 4500 kA ² s |
| V _{F(TO)} | Threshold voltage | T _j = T _{jmax} | 0.95 V |
| r _F | Forward slope resistance | T _j = T _{jmax} | 0.23 mΩ |
| V _{FM} | Peak forward voltage, max | Forward current I _F = 5000 A, T _j = 25°C | 1.9 V |

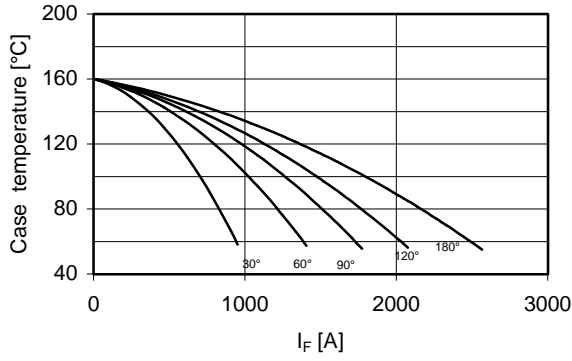
SWITCHING CHARACTERISTICS

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

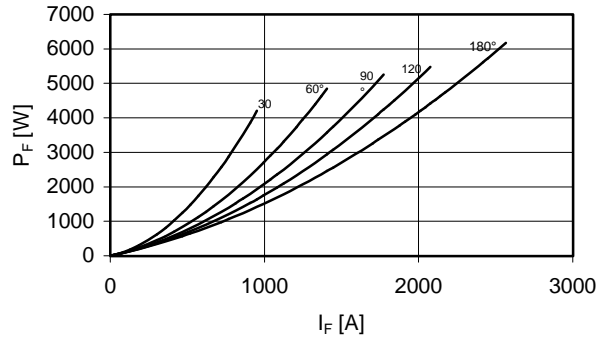
THERMAL AND MECHANICAL CHARACTERISTICS

| | | | |
|----------------------|---------------------------------------|--------------------|--------------|
| R _{th(j-c)} | Thermal resistance (junction to case) | Double side cooled | 0.016 °C/W |
| R _{th(c-h)} | Thermal resistance (case to heatsink) | Double side cooled | 0.001 °C/W |
| T _{jmax} | Max operating junction temperature | | 160 °C |
| T _{stg} | Storage temperature | | -40 / 160 °C |
| F | Clamping force ± 10% | | 30 kN |
| | Mass | | 1400 g |

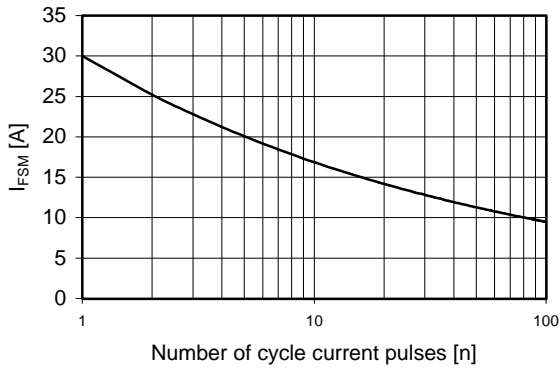
Current rating - sine wave



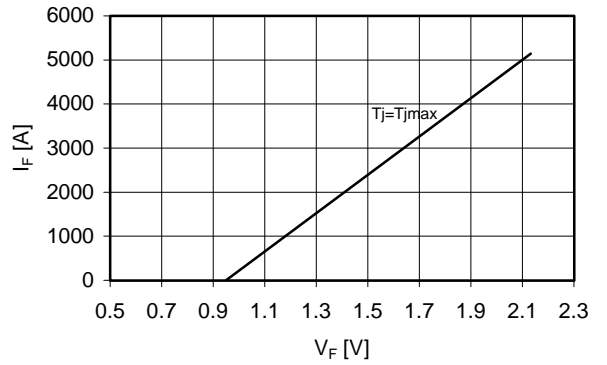
Power loss - sine wave



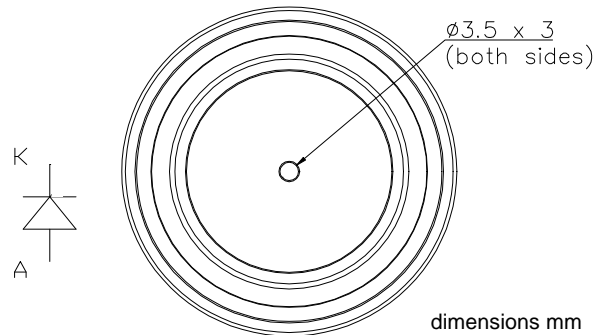
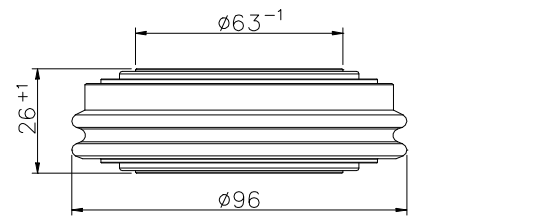
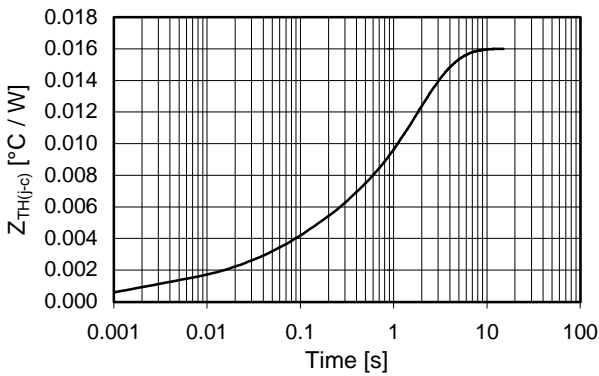
Maximum surge current
d.s. cooled



Forward voltage drop



Thermal Impedance (j-c)



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