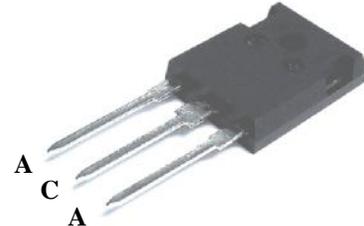
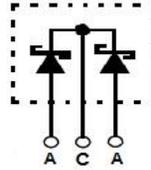


PRELIMINARY DATASHEET
Parallel (Common-cathode) 2X30A, 1200V Silicon Carbide Schottky Diode, in TO247-3L Package
FEATURES

- Silicon Carbide material
- High surge current capability
- No reverse recovery charge
- Temperature independent switching behavior
- Pb-free finished; RoHS compliant

APPLICATIONS

- Switch mode power supplies (SMPS)
- Power factor correction (PFC)
- Motor drives


MAXIMUM RATINGS (per Diode), at $T_j = 25^\circ\text{C}$, unless otherwise specified

| Parameter | Symbol | Value | Units |
|--|----------------|--------------|------------------|
| Repetitive peak reverse voltage | V_{RRM} | 1200 | V |
| Continuous forward current $T_c < 135^\circ\text{C}$ | I_F | 30 | A |
| Surge non-repetitive forward current, half sine wave $T_c = 25^\circ\text{C}$, $t_p = 10\text{ms}$ | I_{FSM} | 146 | |
| Non-repetitive peak forward current | I_{Fmax} | 778 | |
| Diode dv/dt ruggedness $V_R = 0 \dots 240\text{V}$ | dv/dt | 50 | V/ns |
| Operating junction and storage temperature | T_j, T_{stg} | -55 ... +175 | $^\circ\text{C}$ |

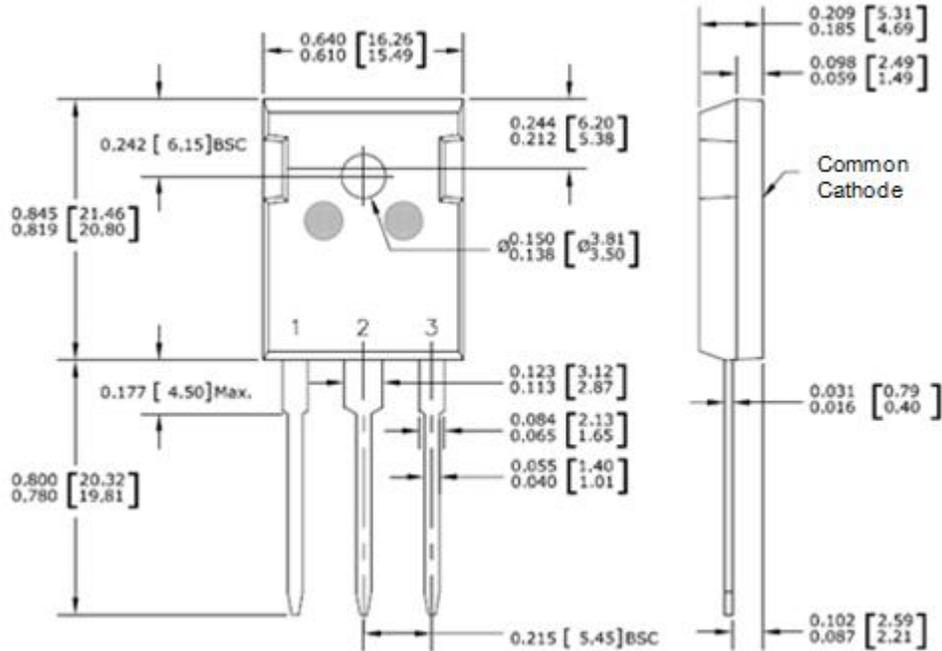
Thermal Characteristics (per Diode)

| Parameter | Symbol | Max. Value | Units |
|---|------------|------------|---------------------------|
| Characteristics | | | |
| Thermal resistance, junction to case | R_{thJC} | 0.5 | $^\circ\text{C}/\text{W}$ |
| Thermal resistance, junction to ambient | R_{thJA} | 62 | |

Electrical Characteristics (per Diode), at $T_j = 25^\circ\text{C}$, unless otherwise specified

| Parameter | Conditions | Symbol | Value | | | Unit |
|---------------------------------|---|----------|-------|------|------|---------------|
| | | | Min. | Typ. | Max. | |
| Static Characteristics | | | | | | |
| Cathode-anode Breakdown voltage | $I_R = 0.60\text{mA}$ | V_{BR} | 1200 | - | - | V |
| Reverse leakage current | $V_R = 1200\text{V}$ | I_R | - | - | 610 | μA |
| Forward voltage drop | $I_F = 30\text{A}$ | V_F | - | 1.5 | 1.8 | V |
| Dynamic Characteristics | | | | | | |
| Total capacitive charge | $V_R = 400\text{V}$, $di/dt = 200\text{A}/\mu\text{s}$, $I_F \leq I_{Fmax}$, $T_j = 150^\circ\text{C}$. | Q_C | - | 110 | - | nC |

Package Outline Drawing



Disclaimer

These specifications may not be considered as a guarantee of components characteristics. Components have to be tested depending on intended application as adjustments may be necessary. The use of **iQXPRZ Power Inc.** components in life support appliances and systems are subject to written approval of **iQXPRZ Power Inc.**