PRELIMINARY DATASHEET

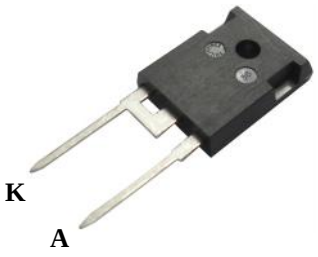
600V 48A, Silicon Carbide Schottky Diode in TO247
B1 version

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
- High speed rectifiers
- Uninterruptible power supplies (UPS)
- Induction heating
- Solar inverters



MAXIMUM RATINGS, at T_j = 25°C, unless otherwise specified

Parameter	Symbol	Value	Units
Repetitive peak reverse voltage	V_{RRM}	600	V
Continuous forward current T_c < 140 °C	I_F	48	A
Surge non-repetitive forward current, half sine wave T_C = 25 °C, t_p = 10ms	I_{FSM}	354	
Operating junction and storage temperature	T_j, T_{stg}	-55 …+175	°C

Thermal Characteristics

Parameter	Symbol	Max. Value	Units
Characteristics			
Thermal resistance, junction to case	R_{thJC}	0.33	°C/W
Thermal resistance, junction to ambient	R_{thJA}	62	

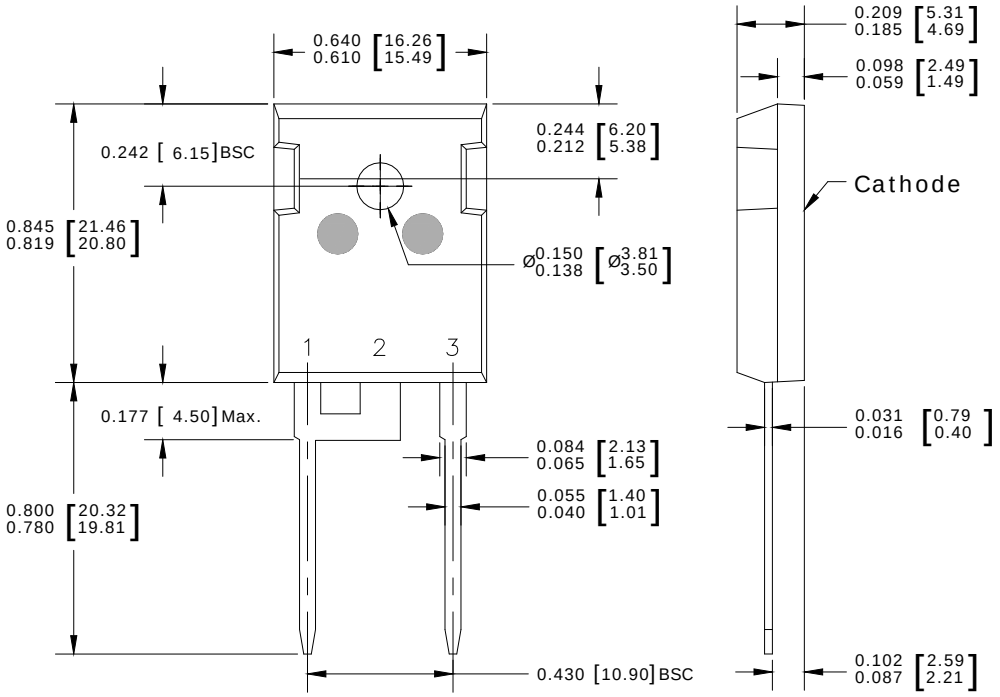
Electrical Characteristics, at T_j = 25°C, unless otherwise specified

Parameter	Conditions	Symbol	Value			Unit
			Min.	Typ.	Max.	
Static Characteristics						
Cathode-anode Breakdown voltage	I_R = 0.6mA	V_{BR}	600	-	-	V
Reverse leakage current	V_R = 600 V	I_R	-	-	0.6	mA
Forward voltage drop	I_F = 48A	V_F	-	1.65	1.7	V
Dynamic Characteristics						
Total capacitive charge	V_R=400 V, di/dt=200A/µs, $I_F \leq I_{F,max}$, Tj=150°C.	Q_c	-	114	-	nC

Team Pacific Building, Electronics Avenue
FTI Complex, Special Economic Zone
Taguig City, Philippines

Website: www.iqxprzpower.com
Telefax +632 837 1538

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.**

Team Pacific Building, Electronics Avenue
FTI Complex, Special Economic Zone
Taguig City, Philippines

Website: www.iqxprzpower.com
Telefax +632 837 1538