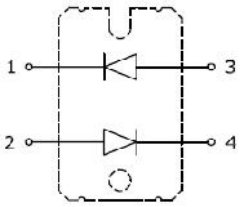
PRELIMINARY DATASHEET

Anti-Parallel 1200V 2X56A, Silicon Carbide Schottky Diode in Isolated SOT227 Package



APPLICATIONS

- Switch mode power supplies (SMPS)
- Uninterruptible power supplies (UPS)
- Induction heating
- Motor drives
- High speed rectifiers

FEATURES

- 175 °C maximum junction temperature
- Extremely fast switching independent with temperature
- Positive temperature coefficient for safe operation
- No reverse recovery
- Pb-free finished; **RoHS compliant**

MAXIMUM RATINGS (per Diode)

Parameter	Symbol	Value	Units
Repetitive peak reverse voltage	V_{RRM}	1200	V
DC forward current T_c = 120 °C	$I_{F(AV)}$	56	A
Surge non-repetitive forward current, half sine wave T_C = 25 °C, t_p = 8.3ms	I_{FSM}	284	
Operating junction and storage temperature range	T_j, T_{stg}	-55 to 175	°C

Thermal and Isolation Characteristics

Parameter	Symbol	Max. Value	Units
Characteristics			
Thermal resistance, junction to case, per Diode	R_{thJC}	0.36	°C/W
Isolation voltage, RMS (measured between terminals and mounting base, 50-60 Hz, for 1-3 seconds)	V_{iso}	3000	V

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

Parameter	Symbol	Value			Unit
		Min.	Typ.	Max.	
Static Characteristics					
Reverse leakage current V_R = 1200V V_R = 1200V, T_j = 150°C	I_R	- -	- -	1 1.5	mA
Forward voltage drop I_F = 56A I_F = 56A, T_j = 175 °C	V_F	- -	1.70 2.75	2.0 -	V
Dynamic Characteristics					
Total capacitive charge V_R=600V, I_F=56A, di/dt=100A/µs	Q_C	-	64	-	nC

Figure 1 – Typical Forward voltage drop vs forward current

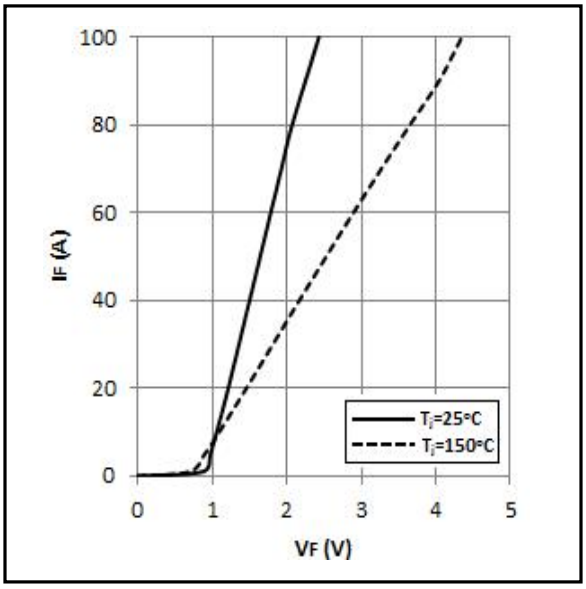
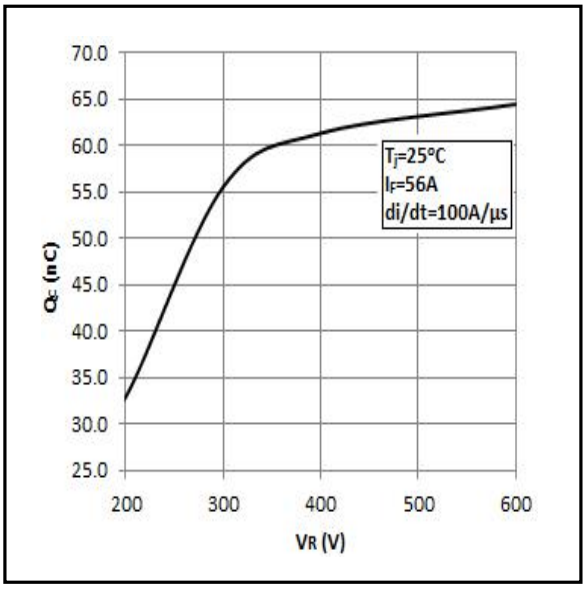
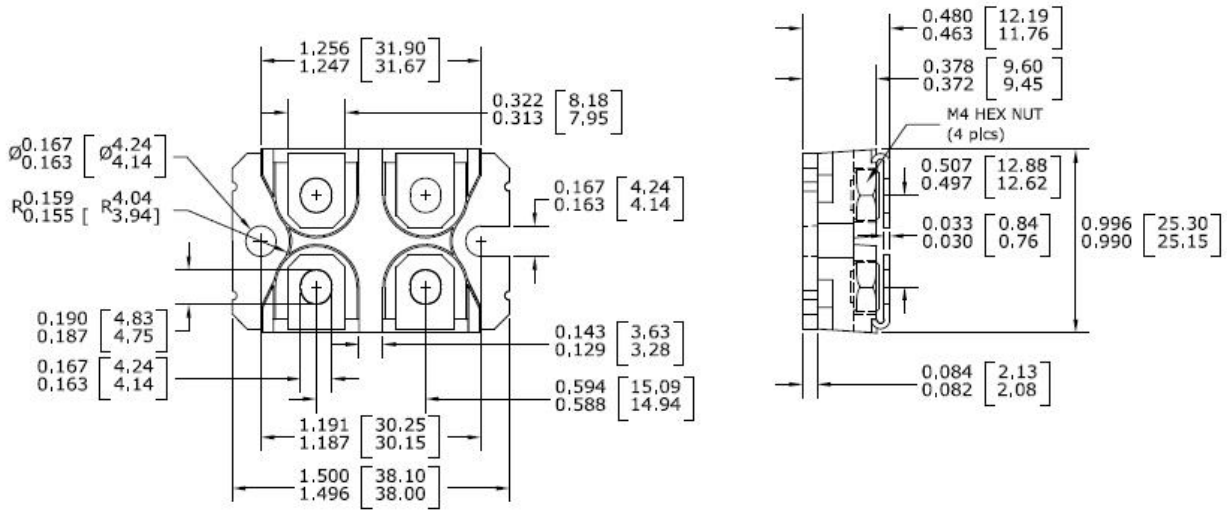


Figure 2 – Capacitive charge vs Reverse voltage



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.**

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