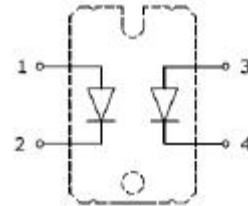


**PRELIMINARY DATASHEET**
**Parallel 1200V 2X56A, Silicon Carbide Schottky Diode in Isolated SOT227 Package**
**APPLICATIONS**

- 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 $T_c = 120\text{ }^\circ\text{C}$	$I_{F(AV)}$	56	A
Surge non-repetitive forward current, half sine wave $T_c = 25\text{ }^\circ\text{C}$ , $t_p = 8.3\text{ms}$	$I_{FSM}$	284	
Operating junction and storage temperature range	$T_j, T_{stg}$	-55 to 175	$^\circ\text{C}$

**Thermal and Isolation Characteristics**

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

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

Parameter	Symbol	Value			Unit
		Min.	Typ.	Max.	
<b>Static Characteristics</b>					
Reverse leakage current $V_R = 1200\text{V}$ $V_R = 1200\text{V}, T_j = 150^\circ\text{C}$	$I_R$	-	-	1 1.5	mA
Forward voltage drop $I_F = 56\text{A}$ $I_F = 56\text{A}, T_j = 175^\circ\text{C}$	$V_F$	-	1.70 2.75	2.0 -	V
<b>Dynamic Characteristics</b>					
Total capacitive charge $V_R=600\text{V}, I_F=56\text{A}, di/dt=100\text{A}/\mu\text{s}$	$Q_C$	-	64	-	nC

Figure 1 – Typical Forward voltage drop vs forward current

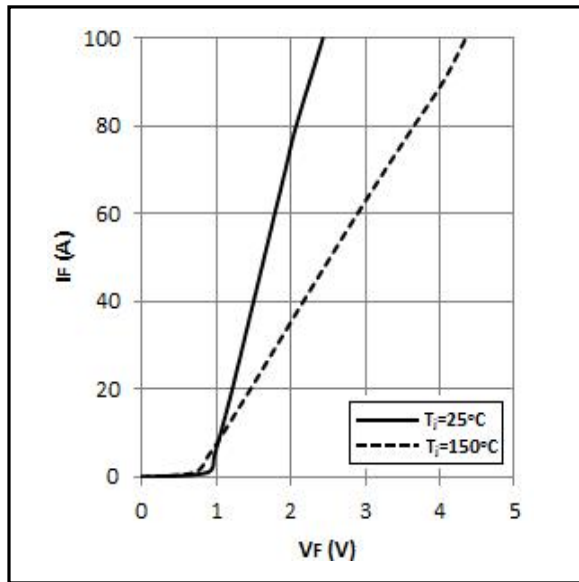
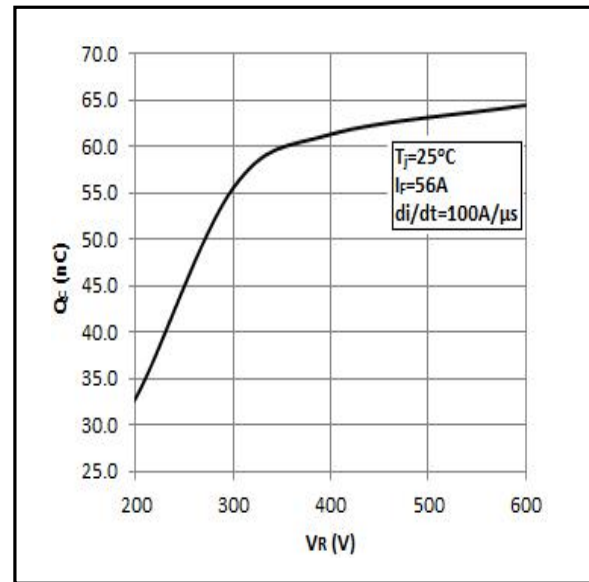
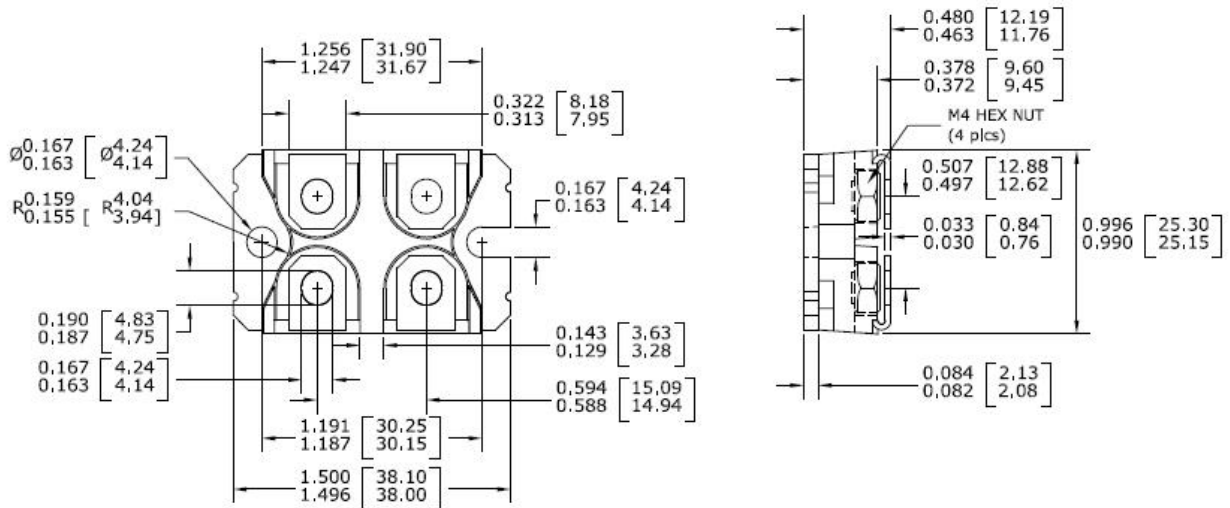


Figure 2 – Capacitive charge vs Reverse voltage



**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.**