

PRELIMINARY DATASHEET
**Fast Recovery 100A, 1200V Epitaxial Diodes,
 In Isolated SOT227 Package**

- Ultrafast recovery time
- Soft recovery characteristics
- Low recovery loss
- Low forward voltage
- High surge current capability
- Pb-free lead finish; RoHS


MAXIMUM RATINGS, 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, at $T_c=90^\circ\text{C}$	I_F	100	A
RMS forward current, $T_c=90^\circ\text{C}$	$I_{F(RMS)}$	141	
Non-repetitive surge forward current $T_j=45^\circ\text{C}$, $t=10\text{ms}$, 50Hz, sine $T_j=45^\circ\text{C}$, $t=10\text{ms}$, 50Hz, sine	I_{FSM}	1450 1600	
Operating junction and storage temperature	T_j, T_{stg}	-40... +150	$^\circ\text{C}$

Thermal and Isolation Characteristics

Parameter	Symbol	Max. Value	Units
Characteristics			
Thermal resistance, junction to case, per Leg	R_{thJC}	0.45	$^\circ\text{C}/\text{W}$
Isolation voltage, RMS (measured between terminals and mounting base, 50-60 Hz, for 1- 3 seconds)	V_{iso}	3000	V

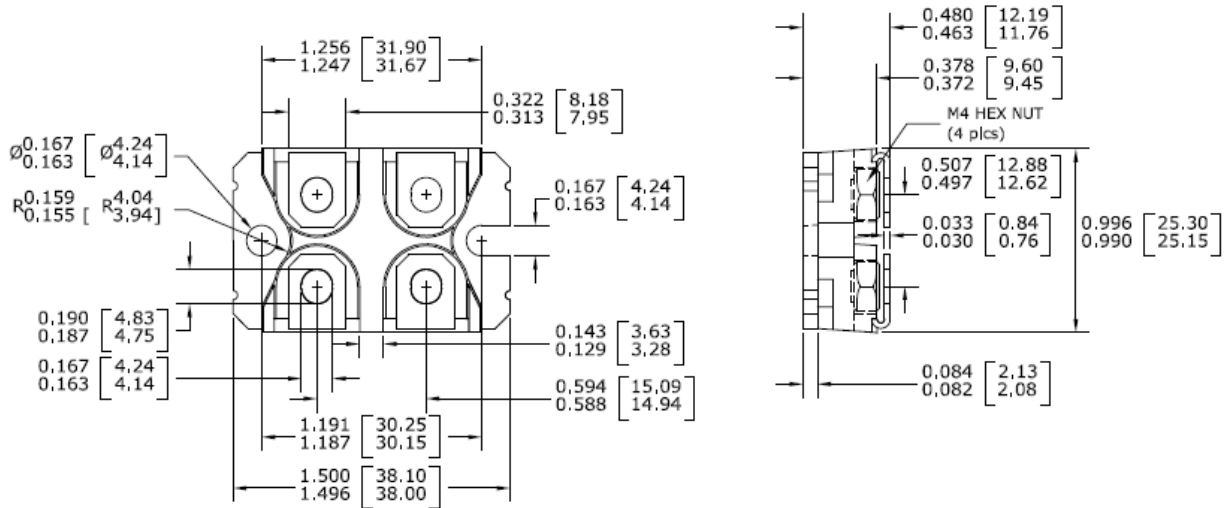
Electrical Characteristics, at $T_j = 25^\circ\text{C}$, unless otherwise specified

Parameter	Symbol	Value			Unit
		Min.	Typ.	Max.	
Static Characteristics					
Reverse leakage current $V_R = 1200\text{V}$	I_{RM}	-	-	50	μA
Forward voltage $I_F = 100\text{A}$	V_F	-	2.2	3.0	V

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

Parameter	Symbol	Value			Unit
		Min.	Typ.	Max.	
Dynamic Characteristics					
Reverse recovery time $V_R = 30\text{V}$, $I_F = 1\text{A}$, $di_F/dt = 200\text{A}/\mu\text{s}$, $T_j = 25^\circ\text{C}$ $V_R = 600\text{V}$, $I_F = 100\text{A}$, $di_F/dt = 200\text{A}/\mu\text{s}$, $T_j = 25^\circ\text{C}$ $V_R = 600\text{V}$, $I_F = 100\text{A}$, $di_F/dt = 200\text{A}/\mu\text{s}$, $T_j = 125^\circ\text{C}$	t_{rr}	-	50 135 380	-	ns
Maximum reverse recovery current $V_R = 600\text{V}$, $I_F = 100\text{A}$, $di_F/dt = 200\text{A}/\mu\text{s}$, $T_j = 25^\circ\text{C}$ $V_R = 600\text{V}$, $I_F = 100\text{A}$, $di_F/dt = 200\text{A}/\mu\text{s}$, $T_j = 125^\circ\text{C}$	I_{rrm}	-	10 21	-	A

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.**