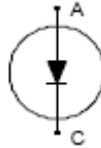


PRELIMINARY DATASHEET
**Fast Recovery, 100A, 600V Diodes
 In Isolated SOT227 Package**

- Fast recovery
- Soft switching
- Low forward voltage
- RoHS compliant
- Easy paralleling


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

Parameter	Symbol	Value	Units
Repetitive peak reverse voltage	V_{RRM}	600	V
Continuous forward current $T_c = 80^\circ\text{C}$	I_F	100	A
Maximum repetitive forward current $T_c = 25^\circ\text{C}$, t_p limited by T_{jmax} , $D = 0.5$	I_{FRM}	200	
Operating junction and storage temperature	T_j, T_{stg}	-55... +175	$^\circ\text{C}$

Thermal and Isolation Characteristics

Parameter	Symbol	Max. Value	Units
Characteristics			
Thermal resistance, junction to case, per Diode	R_{thJC}	0.80	$^\circ\text{C}/\text{W}$
Thermal resistance, junction to ambient	R_{thJA}	40	
Isolation voltage, RMS (measured between terminals and mounting base, 50-60 Hz, for 1-3 seconds)	V_{iso}	3000	V

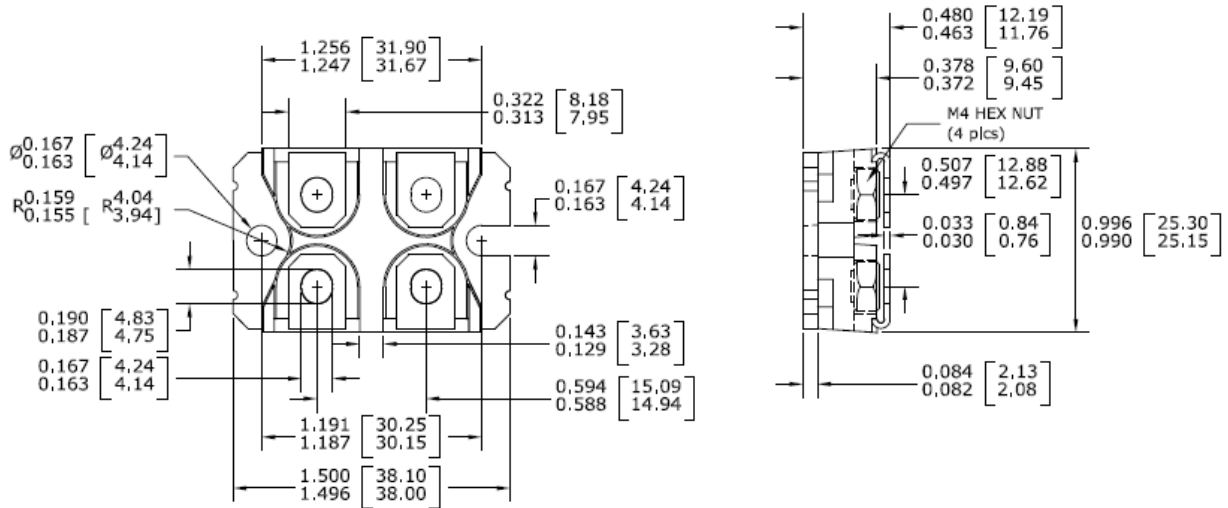
Electrical Characteristics, at $T_j = 25^\circ\text{C}$, unless otherwise specified

Parameter	Symbol	Value			Unit
		Min.	Typ.	Max.	
Static Characteristics					
Reverse leakage current $V_R = 600\text{V}$, $T_j = 25^\circ\text{C}$	I_R	-	-	27	μA
Forward voltage drop $I_F = 100\text{A}$, $T_j = 25^\circ\text{C}$ $I_F = 100\text{A}$, $T_j = 150^\circ\text{C}$	V_F	-	1.6 1.5	2.0 -	V

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

Parameter	Symbol	Value			Unit
		Min.	Typ.	Max.	
Dynamic Characteristics					
Reverse recovery time $V_R = 400\text{V}$, $I_F = 100\text{A}$, $di_F/dt = 1300\text{A}/\mu\text{s}$, $V_{GE} = -15\text{V}$ $T_j = 25^\circ\text{C}$	t_{rr}	-	70	-	ns
Peak reverse recovery current $V_R = 400\text{V}$, $I_F = 100\text{A}$, $di_F/dt = 1300\text{A}/\mu\text{s}$, $V_{GE} = -15\text{V}$ $T_j = 25^\circ\text{C}$ $V_R = 400\text{V}$, $I_F = 100\text{A}$, $di_F/dt = 1300\text{A}/\mu\text{s}$, $V_{GE} = -15\text{V}$ $T_j = 125^\circ\text{C}$	I_{rrm}	-	50 60	-	A
Recovered charge $V_R = 400\text{V}$, $I_F = 100\text{A}$, $di_F/dt = 1300\text{A}/\mu\text{s}$, $V_{GE} = -15\text{V}$ $T_j = 25^\circ\text{C}$ $V_R = 400\text{V}$, $I_F = 100\text{A}$, $di_F/dt = 1300\text{A}/\mu\text{s}$, $V_{GE} = -15\text{V}$ $T_j = 125^\circ\text{C}$	Q_r	-	3.0 6.3	-	μC
Reverse recovery energy $V_R = 400\text{V}$, $I_F = 100\text{A}$, $di_F/dt = 1300\text{A}/\mu\text{s}$, $V_{GE} = -15\text{V}$ $T_j = 25^\circ\text{C}$ $V_R = 400\text{V}$, $I_F = 100\text{A}$, $di_F/dt = 1300\text{A}/\mu\text{s}$, $V_{GE} = -15\text{V}$ $T_j = 125^\circ\text{C}$	E_{rec}	-	0.5 1.05	-	mJ

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.**