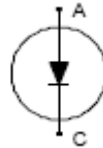


PRELIMINARY DATASHEET
**Fast Recovery, 75A, 600V Diodes
 In Isolated SOT227 Package**

- Fast recovery
- Soft switching
- Low forward voltage
- Easy paralleling
- Pb-free lead finish; RoHS compliant


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 $T_c = 25^\circ\text{C}$ $T_c = 77^\circ\text{C}$	I_F	100 75	A
Surge non-repetitive forward current $T_c = 25^\circ\text{C}$, $t_p = 10$ ms, sine halfwave	I_{FSM}	220	
Maximum repetitive forward current $T_c = 25^\circ\text{C}$, t_p limited by T_{jmax} , $D = 0.5$	I_{FRM}	225	
Soldering temperature Wave soldering, 1.6 mm (0.063 in.) from case for 10s	T_S	260	$^\circ\text{C}$
Operating junction and storage temperature	T_j, T_{stg}	-55... +175	$^\circ\text{C}$

Thermal and Isolation Characteristics

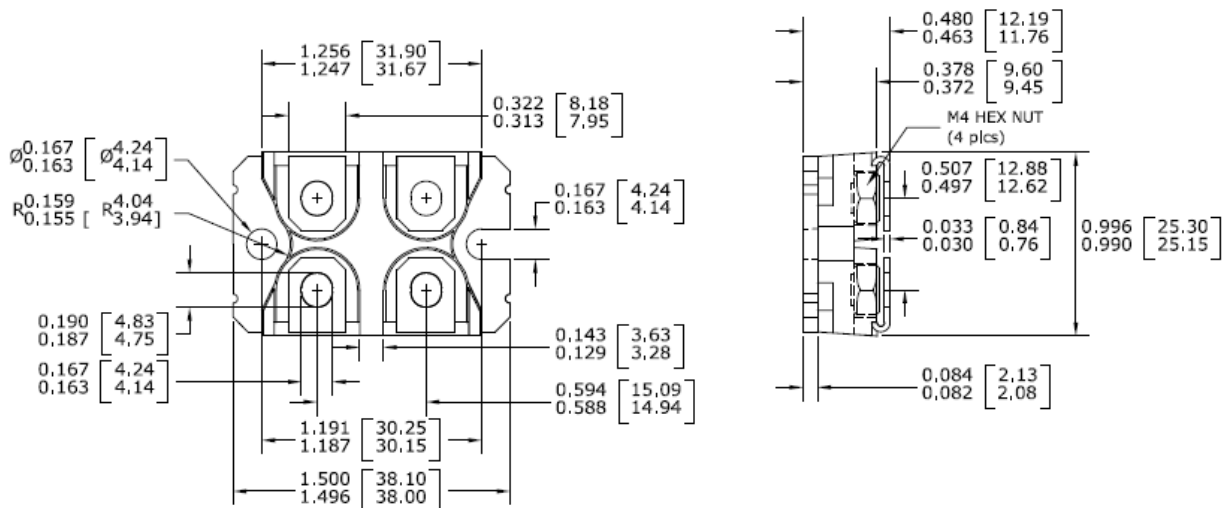
Parameter	Symbol	Max. Value	Units
Characteristics			
Thermal resistance, junction to case	R_{thJC}	0.65	K/W
Thermal resistance, junction to ambient, leaded	R_{thJA}	40	
Isolation voltage, RMS (measured between terminals and mounting base, 50-60 Hz, for 1-3 seconds)	V_{iso}	3000	V

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

Parameter	Symbol	Value			Unit
		Min.	Typ.	Max.	
Static Characteristics					
Reverse leakage current $V_R = 600\text{V}$, $T_j = 25^\circ\text{C}$ $V_R = 600\text{V}$, $T_j = 175^\circ\text{C}$	I_R	- -	- -	40 1000	μA
Forward voltage drop $I_F = 75\text{A}$, $T_j = 25^\circ\text{C}$ $I_F = 75\text{A}$, $T_j = 175^\circ\text{C}$	V_F	- -	1.65 1.65	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 $V_R = 300\text{V}$, $I_F = 75\text{A}$, $di_F/dt = 200\text{A}/\mu\text{s}$, $T_j = 25^\circ\text{C}$ $V_R = 300\text{V}$, $I_F = 75\text{A}$, $di_F/dt = 200\text{A}/\mu\text{s}$, $T_j = 125^\circ\text{C}$	t_{rr}	- -	264 548	- -	ns
Peak reverse current $V_R = 300\text{V}$, $I_F = 75\text{A}$, $di_F/dt = 200\text{A}/\mu\text{s}$, $T_j = 25^\circ\text{C}$ $V_R = 300\text{V}$, $I_F = 75\text{A}$, $di_F/dt = 200\text{A}/\mu\text{s}$, $T_j = 125^\circ\text{C}$	I_{rrm}	- -	8.3 12.9	- -	A
Reverse recovery charge $V_R = 300\text{V}$, $I_F = 75\text{A}$, $di_F/dt = 200\text{A}/\mu\text{s}$, $T_j = 25^\circ\text{C}$ $V_R = 300\text{V}$, $I_F = 75\text{A}$, $di_F/dt = 200\text{A}/\mu\text{s}$, $T_j = 125^\circ\text{C}$	Q_{rr}	- -	908 2941	- -	nC

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.**