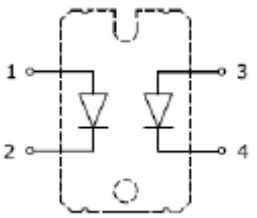
PRELIMINARY DATASHEET

Parallel Fast Recovery, 2X75A, 600V Diodes
In Isolated SOT227 Package

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



Maximum Ratings (per Diode), at T_j = 25°C, unless otherwise specified

Parameter	Symbol	Value	Units
Repetitive peak reverse voltage	V_{RRM}	600	V
Continuous forward current T_C= 25°C T_C= 77°C	I_F	 100 75	A
Surge non-repetitive forward current T_C= 25°C, t_p = 10 ms, sine halfwave	I_{FSM}	220	
Maximum repetitive forward current T_C= 25°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	°C
Operating junction and storage temperature	T_j, T_{stg}	-55… +175	°C

Thermal and Isolation Characteristics

Parameter	Symbol	Max. Value	Units
Characteristics			
Thermal resistance, junction to case, per Diode	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 (per Diode), at T_j = 25°C, unless otherwise specified

Parameter	Symbol	Value			Unit
		Min.	Typ.	Max.	
Static Characteristics					
Reverse leakage current VR = 600V, T_j = 25°C VR = 600V, T_j = 175°C	I_R	- -	- -	40 1000	µA
Forward voltage drop IF = 75A, T_j = 25°C IF = 75A, T_j = 175°C	V_F	- -	1.65 1.65	2.0 -	V

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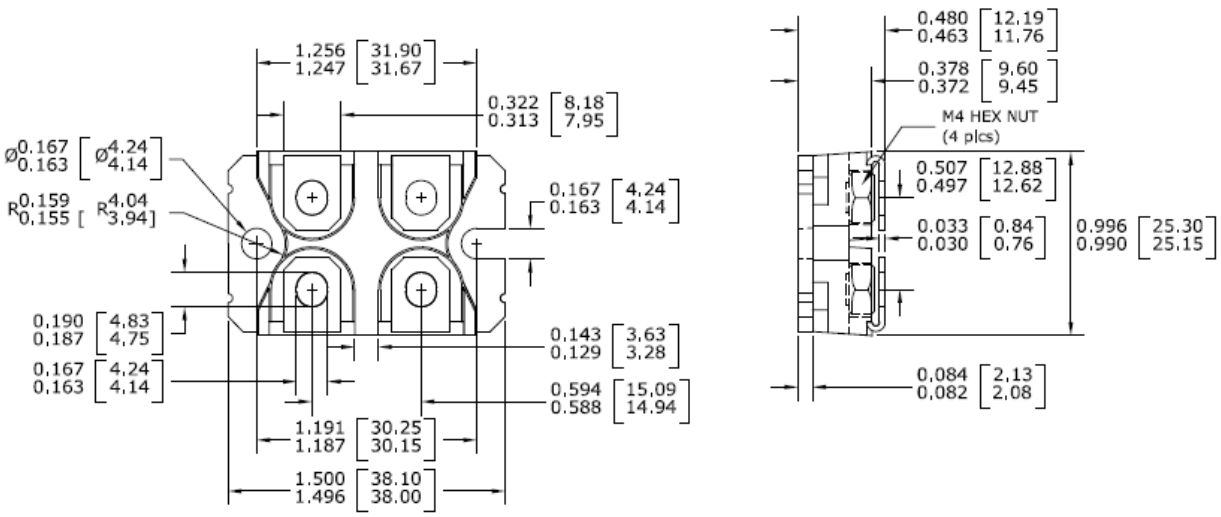
Electrical Characteristics (per Diode), at T_j = 25°C, unless otherwise specified

Parameter	Symbol	Value			Unit
		Min.	Typ.	Max.	
Dynamic Characteristics					
Reverse recovery time V_R = 300V, I_F = 75A, di_F/dt = 200A/µs, T_j = 25°C V_R = 300V, I_F = 75A, di_F/dt = 200A/µs, T_j = 125°C	t_{rr}	- -	264 548	- -	ns
Peak reverse current V_R = 300V, I_F = 75A, di_F/dt = 200A/µs, T_j = 25°C V_R = 300V, I_F = 75A, di_F/dt = 200A/µs, T_j = 125°C	I_{rrm}	- -	8.3 12.9	- -	A
Reverse recovery charge V_R = 300V, I_F = 75A, di_F/dt = 200A/µs, T_j = 25°C V_R = 300V, I_F = 75A, di_F/dt = 200A/µs, T_j = 125°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.**

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