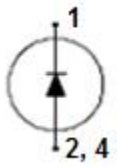
Fast Recovery, 100A, 600V Diodes
In Isolated SOT227 Package



APPLICATIONS

- Switch mode power supplies (SMPS) rectifiers
- Resonant applications
- Industrial drives

FEATURES

- Fast recovery
- Soft switching
- Low reverse recovery charge
- Low forward voltage drop
- Low leakage current
- Pb-free finished; **RoHS compliant**

MAXIMUM RATINGS

Parameter	Symbol	Value	Units
Repetitive peak reverse voltage	V_{RRM}	600	V
Continuous forward current T_c = 80 °C	I_F	100	A
Maximum repetitive forward current T_C= 25°C, t_p limited by T_{jmax}, D = 0.5	I_{FRM}	200	
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}	0.80	°C/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°C, unless otherwise specified

Parameter	Symbol	Value			Unit
		Min.	Typ.	Max.	
Static Characteristics					
Reverse leakage current VR = 600V, T_j = 25°C	I_R	-	-	27	µA
Forward voltage drop IF = 100A, T_j = 25°C IF = 100A, T_j = 150°C	V_F	- -	1.6 1.5	2.0 -	V

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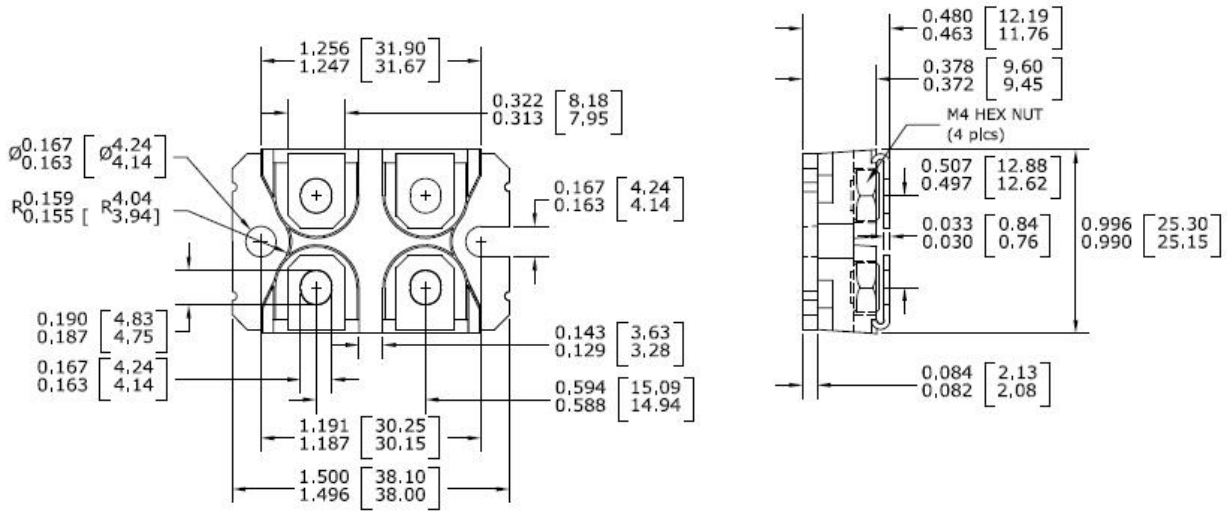
Electrical Characteristics, at T_j = 25°C, unless otherwise specified

Parameter	Symbol	Value			Unit
		Min.	Typ.	Max.	
Dynamic Characteristics					
Reverse recovery time V_R = 400V, I_F = 100A, di_F/dt = 1300A/µs, V_{GE} = -15V T_j = 25°C	t_{rr}	-	70	-	ns
Peak reverse recovery current V_R = 400V, I_F = 100A, di_F/dt = 1300A/µs, V_{GE} = -15V T_j = 25°C V_R = 400V, I_F = 100A, di_F/dt = 1300A/µs, V_{GE} = -15V T_j = 125°C	I_{rrm}	- -	50 60	- -	A
Recovered charge V_R = 400V, I_F = 100A, di_F/dt = 1300A/µs, V_{GE} = -15V T_j = 25°C V_R = 400V, I_F = 100A, di_F/dt = 1300A/µs, V_{GE} = -15V T_j = 125°C	Q_r	- -	3.0 6.3	- -	µC
Reverse recovery energy V_R = 400V, I_F = 100A, di_F/dt = 1300A/µs, V_{GE} = -15V T_j = 25°C V_R = 400V, I_F = 100A, di_F/dt = 1300A/µs, V_{GE} = -15V T_j = 125°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.**

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