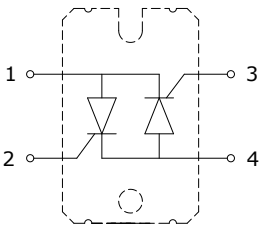
PRELIMINARY DATASHEET

Anti-Parallel Silicon Controlled Rectifiers 1600V, 45A in SOT227 Package

- High voltage & high current
- Low on-state voltage
- Suitable for over voltage control, motor control circuit and heating control system
- Pb-free lead finish; RoHS compliant



MAXIMUM RATINGS, T_C = 25°C unless otherwise noted

Parameter	Symbol	Value	Units
Average on-state current T_j= 125° C	$I_{T(AV)}$	45	A
Continuous RMS on-state current as AC switch	$I_{T(RMS)}$	70	
Non-repetitive surge peak on-state current T_j= 125°C, t_p = 10 ms, applied rated V_{RRM}	I_{TSM}	630	
I^2t value for fusing T_j= 125°C, t_p = 10 ms, applied rated V_{RRM}	I^2t	1980	A^2s
Peak gate current T_j= 125° C	I_{GM}	2.5	A
Maximum repetitive peak off-state voltage I_R = 100uA	V_{DRM}	1600	V
Maximum repetitive reverse voltage I_R = 100uA	V_{RRM}	1600	
Maximum reverse leakage current	I_{RRM}	0.2	mA
Maximum direct leakage current	I_{DRM}	0.2	
Operating junction and storage temperature	T_j, T_{stg}	-40… +125	°C

Thermal Resistance

Parameter	Symbol	Max. Value	Units
Characteristics			
Thermal resistance, junction to case	R_{thJC}	1.0	°C /W
Thermal resistance, junction to ambient	R_{thJA}	40	
Isolation voltage, RMS (measured between terminals and mounting base, 50-60 Hz, for 1-2 seconds)	V_{iso}	3000	V

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

Parameter	Symbol	Test Conditions	Value			Unit
			Min.	Typ.	Max.	
Maximum required DC gate current to trigger	I_{GT}	Anode Supply= 6V, R_L = 33Ω	-	-	100	mA
Maximum required DC gate voltage to trigger	V_{GT}		-	-	1.5	V
Maximum holding current	I_H	T_J = 25 °C, anode supply 6 V, resistive load	-	-	150	
Maximum latching current	I_L		-	-	300	
Maximum rate of rise of off-state voltage	dV/dt	T_j=T_{jmax} linear to 67% V_{DRM}	-	-	1000	V/µs
Maximum peak on-state voltage	V_{TM}	141 A	-	-	1.9	V
Maximum peak gate power	P_{GM}		-	10	-	W

Website: www.iqxprzpower.com
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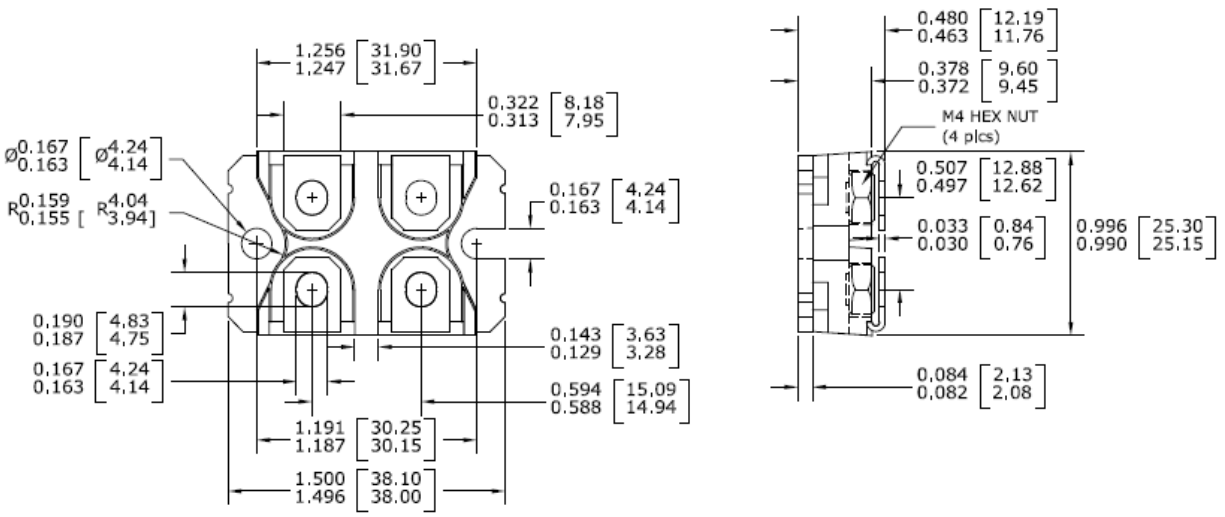
Package Outline Drawing



CAUTION: These devices are ESD sensitive. Use proper handling procedure.

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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