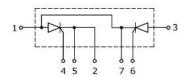


PRELIMINARY DATASHEET

1600V 55A, Phase Control Thyristor, Half-Bridge Configuration in iQPak® Power Module Package



FEATURES

- High voltage
- Low on-state voltage
- Suitable for over voltage control, motor control circuit and heating control system
- Industrial standard package
- Pb-free finished; RoHS Compliant



MAXIMUM RATINGS (per Leg), T_C = 25°C unless otherwise noted

Parameter	Symbol	Value	Units	
Average on-state current $T_c = 75 ^{\circ}\text{C}$, 180° conduction half sine wave	It(AV)	55		
Continuous RMS on-state current as AC switch	It(rms)	86	Α	
Non-repetitive surge peak on-state current $T_{j=125}$ °C, $t_p=10$ ms, applied rated V_{RRM}	Ітѕм	1000		
It value for fusing $T_{J}=125^{\circ}\text{C}$, $t_{p}=10\text{ms}$, applied rated V_{RRM}	2	5000	A ² S	
Peak gate current T _j = 125° C	Ідм	2.5	Α	
Maximum repetitive peak off-state voltage $I_R = 100$ uA	VDRM	1600	V	
Maximum repetitive reverse voltage $I_R = 100$ uA	Vrrm	1600	٧	
Maximum reverse leakage current	Irrm	0.2	mA	
Maximum direct leakage current	Idrm	0.2		
Operating junction and storage temperature	Tj, Tstg	-40 +125	°C	

Thermal Characteristics

Parameter	Symbol	Max. Value	Units
Characteristics			
Thermal resistance, junction to case	R_{thJC}	0.44	°C /W
Isolation voltage, RMS (measured between terminals and mounting base, 50-60 Hz, for 1-3 seconds)	V _{iso}	3000	٧

Website: <u>www.iqxprzpower.com</u> Telefax +632 837 1538

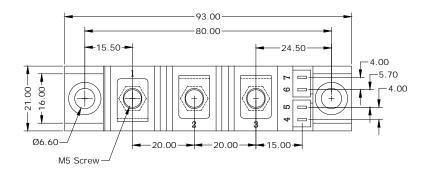
Revision 3: 19-Sep-12

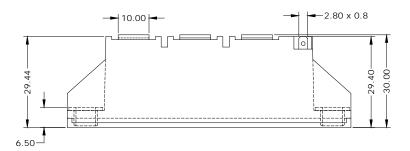


Electrical Characteristics (per Leg), at T_j = 25°C, unless otherwise specified

Parameter	Symbo	Test Conditions	Value			11!1
			Min.	Тур.	Max.	Unit
Maximum required DC gate current to trigger	Іст		-	-	100	mA
Maximum required DC gate voltage to trigger	Vgт	Resistive load	-	-	1.5	٧
Maximum holding current	Ін	T_j = 25 °C, anode supply 6 V, resistive load, I_T = 1A	-	-	220	
Maximum latching current	lι	T _j = 25 °C, anode supply 6 V, resistive load	-	-	400	mA
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	Vтм	172 A	-	-	1.85	V
Maximum gate power	Рсм		-	10	-	W

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.**

Revision 3: 19-Sep-12

Website: www.iqxprzpower.com

Telefax +632 837 1538