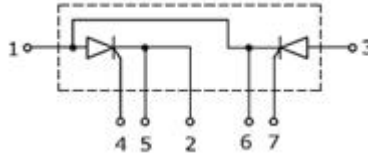


PRELIMINARY DATASHEET
**Phase Control Thyristor, Half-Bridge Configuration
 In iQPak® Power Module Package**

- Electrically isolated baseplate
- High surge capability
- General purpose thyristors
- Pb-free lead finish; **RoHS compliant**


MAXIMUM RATINGS (per Thyristor)

Parameter	Symbol	Value	Units
Average on-state current T _c = 79°C, 180°C conduction, half sine wave	I _{T(AV)}	35	A
RMS on-state current	I _{T(RMS)}	55	
Non-repetitive surge peak on-state current At t _p =10 ms, 100% V _{RRM} , sine half-wave, initial T _j = T _j max.	I _{ISM}	500	
Peak gate current	I _{GM}	2.5	
Peak reverse and off-state leakage current At T _j = T _j max.	I _{RRM} / I _{DRM}	10	mA
I ² t value for fusing At t _p =10 ms, 100% V _{RRM} , sine half-wave, initial T _j = T _j max.	I ² t	1250	A ² s
Repetitive peak off-state voltage	V _{DRM}	1200	V
Repetitive reverse voltage	V _{RRM}	1200	
Peak gate power At t _p ≤5ms, T _j = T _j max.	P _{GM}	10	W
Average gate power At f=50 Hz, T _j = T _j max.	P _{G(AV)}	2.5	
Operating junction and storage temperature	T _j , T _{stg}	-40... +125	°C

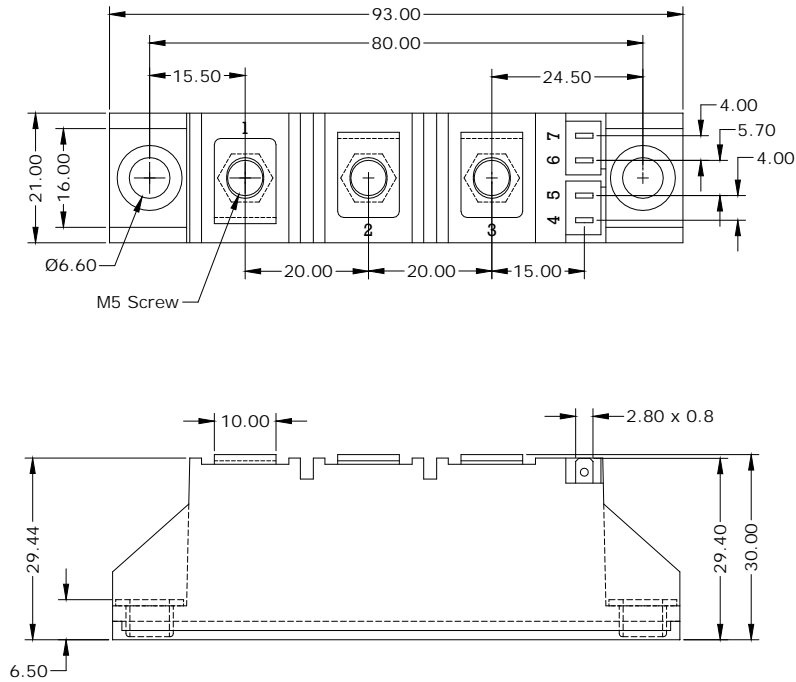
Thermal and Isolation Characteristics

Parameter	Symbol	Max. Value	Units
Characteristics			
Thermal resistance, junction to case, per Thyristor	R _{thJC}	0.78	K/W
Isolation voltage, RMS (measured between terminals and mounting base, 50-60 Hz, for 1-3 seconds)	V _{iso}	3000	V

Electrical Characteristics (per Thyristor), 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, resistive load	-	-	150	mA
Maximum required DC gate voltage to trigger	V _{GT}		-	-	2.5	V
Maximum holding current	I _H	T _j = 25 °C, anode supply 6 V, resistive load	-	-	150	mA
Maximum latching current	I _L		-	-	300	
Maximum rate of rise of off-state voltage	dV/dt	T _j =T _j max linear to 67% V _{DRM}	-	-	1000	V/μs
Maximum peak on-state voltage	V _{TM}	I _{TM} = 110A, T _j = 25 °C	-	1.85	-	V

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.**