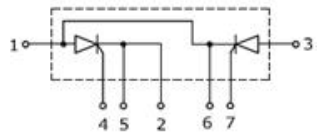
**PRELIMINARY DATASHEET**

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




## FEATURES

- Electrically isolated baseplate
- High surge capability
- General purpose thyristor and diode
- High voltage/ high current
- Pb free finished; **RoHS compliant**

## MAXIMUM RATINGS (per Leg)

| Parameter | Symbol | Value | Units |
|---|---|---|---|
| Average on-state current<br>$T_C$= 85°C, 180°C conduction, half sine wave | $I_{T(AV)}$ | 95 | A |
| Non-repetitive surge peak on-state current<br>At tp=10 ms, 100% $V_{RRM}$, sine pulse, initial Tj = Tj max. | $I_{TSM}$ | 1785 | |
| Peak reverse and off-state leakage current<br>At 100% $V_{RRM}$/$V_{DRM}$ Tj = Tj max. | $I_{RRM}$ /$I_{DRM}$ | 20 | mA |
| $I^2t$ value for fusing<br>At tp=10 ms, 100% $V_{RRM}$, sine half-wave, initial Tj = Tj max. | $I^2t$ | 15900 | $A^2s$ |
| Repetitive peak off-state voltage | $V_{DRM}$ | 1200 | V |
| Repetitive reverse voltage | $V_{RRM}$ | 1200 | |
| Maximum critical rate of rise of off-state voltage<br>$T_j$=125°C, linear to 67% $V_{DRM}$ | dV/dt | 1000 | V/µs |
| Peak gate current | $I_{GM}$ | 3.0 | A |
| Peak gate power | $P_{GM}$ | 12 | W |
| Operating junction and storage temperature | $T_j$, $T_{stg}$ | -40… +125 | °C |

## Thermal and Isolation Characteristics

| Parameter | Symbol | Max. Value | Units |
|---|---|---|---|
| **Characteristics** | | | |
| Thyristor Thermal resistance, junction to case, per Leg | $R_{thJC}$ | 0.28 | K/W |
| Isolation voltage, RMS (measured between terminals and case, 50-60Hz for 1-3 seconds) | $V_{iso}$ | 3000 | V |

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

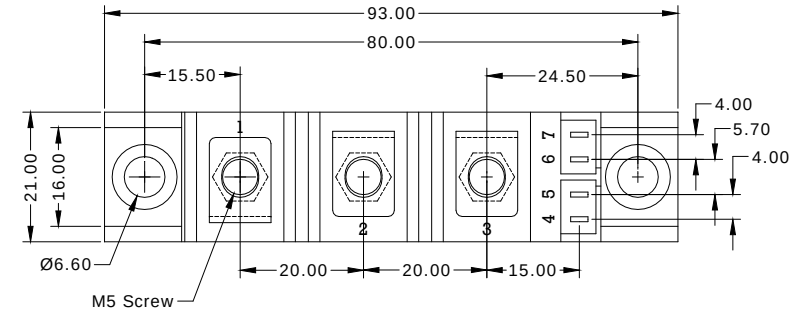
| Parameter | Symbol | Value | | | Unit |
|---|---|---|---|---|---|
| | | Min. | Typ. | Max. | |
| Gate trigger voltage<br>$V_{AK}$=6V, resistive load | $V_{GT}$ | - | - | 1.5 | V |
| Gate trigger current<br>$V_{AK}$=6V, resistive load | $I_{GT}$ | 30 | - | 150 | mA |
| Holding Current<br>$V_{AK}$=6V, $I_T$=1A, resistive load | $I_H$ | - | - | 270 | mA |
| Latching current<br>$V_{AK}$=6V, $I_T$=1A, resistive load | $I_L$ | - | - | 400 | mA |
| On-state or forward voltage<br>$I_T$ = 300A<br>$I_T$ = 200A | $V_{TM}$ | -<br>- | 1.65<br>1.25 | -<br>- | V |

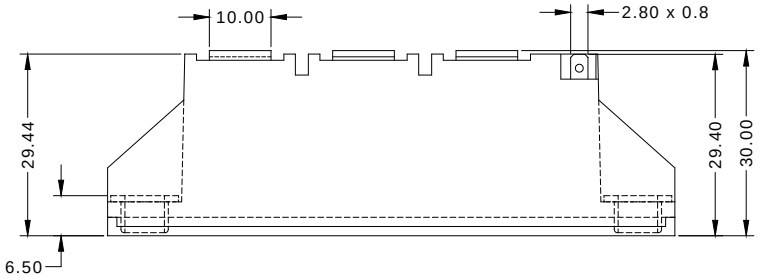

Team Pacific Corporation Building
Electronics Avenue, FTI-SEZ, Taguig City
Philippines



Website: www.iqxprzpower.com
Telefax +632 837 1538

## 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.**



Website: www.iqxprzpower.com
Telefax +632 837 1538