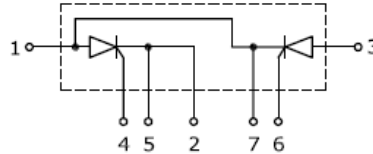


**PRELIMINARY DATASHEET**
**Phase Control Thyristor, Half-Bridge Configuration  
 In iQPak™ Power Module Package**

- High voltage
- Low on-state voltage
- Suitable for over voltage control, motor control circuit and heating control system
- Industrial standard package


**MAXIMUM RATINGS (per leg),  $T_c = 25^\circ\text{C}$  unless otherwise noted**

Parameter	Symbol	Value	Units
Average on-state current $T_j = 125^\circ\text{C}$	$I_{T(AV)}$	45	A
Continuous RMS on-state current as AC switch	$I_{T(RMS)}$	70	
Non-repetitive surge peak on-state current $T_j = 125^\circ\text{C}$ , $t_p = 10\text{ ms}$ , applied rated $V_{RRM}$	$I_{TSM}$	630	
It value for fusing $T_j = 125^\circ\text{C}$ , $t_p = 10\text{ ms}$ , applied rated $V_{RRM}$	$I^2t$	1980	$\text{A}^2\text{s}$
Peak gate current $T_j = 125^\circ\text{C}$	$I_{GM}$	2.5	A
Maximum repetitive peak off-state voltage $I_r = 100\mu\text{A}$	$V_{DRM}$	1600	V
Maximum repetitive reverse voltage $I_r = 100\mu\text{A}$	$V_{RRM}$	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	$^\circ\text{C}$

**Thermal Resistance (per leg)**

Parameter	Symbol	Max. Value	Units
<b>Characteristics</b>			
Thermal resistance, junction to case	$R_{thJC}$	1.0	$^\circ\text{C} / \text{W}$
Isolation voltage, RMS (measured between terminals and mounting base, 50-60 Hz, for 1-3 seconds)	$V_{iso}$	3000	V

**Electrical Characteristics (per leg), at  $T_j = 25^\circ\text{C}$ , unless otherwise specified**

Parameter	Symbol	Test Conditions	Value			Unit
			Min.	Typ.	Max.	
Maximum required DC gate current to trigger	$I_{GT}$	Anode Supply = 6V, $R_L = 33\Omega$	-	-	100	mA
Maximum required DC gate voltage to trigger	$V_{GT}$		-	-	1.5	V
Maximum holding current	$I_H$	$T_j = 25^\circ\text{C}$ , anode supply 6 V, resistive load	-	-	150	mA
Maximum latching current	$I_L$		-	-	300	
Maximum rate of rise of off-state voltage	$dV/dt$	$T_j = T_{jmax}$ linear to 67% $V_{DRM}$	-	-	1000	$\text{V}/\mu\text{s}$
Maximum peak on-state voltage	$V_{TM}$	141 A	-	-	1.65	V
Maximum peak gate power	$P_{GM}$		-	10	-	W

Package Outline Drawing

