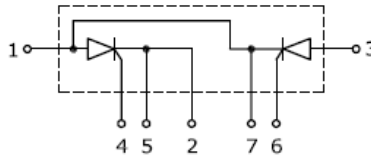


PRELIMINARY DATASHEET
**Phase Control Thyristor, Half-Bridge Configuration
 In iQPak™ Power Module Package**

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


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

Parameter	Symbol	Value	Units
Average on-state current $T_c = 79^\circ\text{C}$, 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_{TSM}	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^2t value for fusing At $t_p = 10$ ms, 100% V_{RRM} , sine half-wave, initial $T_j = T_j$ max.	I^2t	1250	A^2s
Repetitive peak off-state voltage	V_{DRM}	1200	V
Repetitive reverse voltage	V_{RRM}	1200	
Peak gate power At $t_p \leq 5$ ms, $T_j = T_j$ 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}	$-40 \dots +125$	$^\circ\text{C}$

Thermal and Isolation Characteristics (per leg)

Parameter	Symbol	Max. Value	Units
Characteristics			
Thermal resistance, junction to case	R_{thJC}	0.78	K/W
Isolation voltage, RMS (measured between terminals and case)	V_{iso}	2500	V

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

Symbol	Test Conditions	Value			Unit
		Min.	Typ.	Max.	
I_{GT}	Anode supply = 6V, resistive load	-	-	150	mA
V_{GT}		-	-	2.5	
V_{GD}		-	-	0.25	
I_{GD}	$T_J = 125^\circ\text{C}$, rated V_{DRM}	-	-	6.0	mA
I_H	$T_J = 25^\circ\text{C}$	-	-	150	mA
I_L		-	-	300	
dV/dt	$T_J = T_J \text{ max}$, linear to 80% V_{DRM} , $R_{g-k} = \text{Open}$	-	-	1000	V/ μs
dI/dt	$T_J = T_J \text{ max}$	-	-	100	A/ μs
V_{TM}	110A, $T_J = 25^\circ\text{C}$	-	1.85	-	V
$V_{T(FO)1}$	$T_J = T_J \text{ max}$	-	1.02	-	
$V_{T(FO)2}$		-	1.23	-	

Package Outline Drawing
