

**H06-XX00**  
**HIGH FREQUENCY**  
**INVERTER THYRISTOR**

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	T <sub>j</sub> (°C)	VALUE			UNIT
				Min	Type	Max	
I <sub>T(AV)</sub>	Mean on-state current	180° half sine wave 50Hz Double side cooled, T <sub>HS</sub> =55°C	115			783	A
I <sub>T(AV)</sub>	Mean on-state current	180° half sine wave 50Hz Double side cooled, T <sub>HS</sub> =80°C	115			526	A
V <sub>DRM</sub> V <sub>RRM</sub>	Repetitive peak off-state voltage Repetitive peak reverse voltage	V <sub>DRM</sub> &V <sub>RRM</sub> tp=10ms V <sub>DSM</sub> &V <sub>RSM</sub> = V <sub>DRM</sub> &V <sub>RRM</sub> +100V respectively	115	800		1200	V
I <sub>DRM</sub> I <sub>RRM</sub>	Repetitive peak current	at V <sub>DRM</sub> at V <sub>RRM</sub>	115			50	mA
I <sub>TSM</sub>	Surge on-state current	10ms half sine wave	115			7.2	KA
I <sup>2</sup> T	I <sup>2</sup> T for fusing coordination	V <sub>R</sub> =0.6V <sub>RRM</sub>				259	A <sup>2</sup> s*10 <sup>3</sup>
V <sub>TO</sub>	Threshold voltage		115			1.43	V
r <sub>T</sub>	On-state slop resistance					0.50	mΩ
V <sub>TM</sub>	Peak on-state voltage	I <sub>TM</sub> =1800A, F=18KN	115			2.33	V
dv/dt	Critical rate of rise of off-state voltage	V <sub>DM</sub> =0.67V <sub>DRM</sub>	115			500	V/μs
di/dt	Critical rate of rise of on-state current	From 67%V <sub>DRM</sub> to 1500A, Gate source 1.5A t <sub>r</sub> ≤0.5μs Repetitive	115			600	A/μs
I <sub>rm</sub>	Reverse recovery current	I <sub>TM</sub> =800A, tp=1000μs, di/dt=-40A/μs, V <sub>R</sub> =50V	115		40		A
t <sub>rr</sub>	Reverse recovery time				2.5		μs
Q <sub>rr</sub>	Recovery charge				50	70	μC
t <sub>q</sub>	Circuit commutated turn-off time	I <sub>TM</sub> =800A, tp=1000μs, V <sub>R</sub> =50V dv/dt=30V/μs ,di/dt=-40A/μs	115	6		10	μs
I <sub>GT</sub>	Gate trigger current	V <sub>A</sub> =12V, I <sub>A</sub> =1A	25	30		250	mA
V <sub>GT</sub>	Gate trigger voltage			0.8		3.0	V
I <sub>H</sub>	Holding current			20		400	mA
V <sub>GD</sub>	Non-trigger gate voltage	At 67%V <sub>DRM</sub>	115			0.3	V
R <sub>th(j-h)</sub>	Thermal resistance Junction to heatsink	At 180° sine double side cooled Clamping force 18KN				0.030	°C /W
F <sub>m</sub>	Mounting force			18		25	KN
T <sub>stg</sub>	Stored temperature			-40		140	°C
W <sub>t</sub>	Weight				360		g
Outline	KT39cT40						

**Outline**

