



Thyristor Module

Features

- Half-bridge SCR configuration integrated in a single package
- With high thermal conductivity DBC as the Insulation
- Welding by vacuum welding technology, which provide high reliability

Product Summary

Parameter	Value	Unit
V_{RRM}	1800	V
$I_{T(AV)}$ (@ $T_C = 85^\circ$)	280	A
I_{TSM} (@ $t_p = 10ms$)	9000	A
$V_T(Max)$	1.8	V

Applications

- Temperature control
- Light control system
- DC motor



Absolute Maximum Ratings (@ $T_C = 25^\circ C$ unless otherwise specified)

Parameter	Conditions	Symbol	Values	Unit
Repetitive peak off-state voltage	$T_{vj} = 25^\circ C$	V_{DRM}	1800	V
Repetitive peak reverse voltage	$T_{vj} = 25^\circ C$	V_{RRM}	1800	V

Forward surge current	1/2 cycle, Sine wave, 50Hz $T_{vj} = 25$	I_{TSM}	9000	A
I^2t value for fusing		I^2t	405000	A^2s
Critical rate of rise of on-state current	$I_G=2 \times I_{GT}$	di/dt	150	$A/\mu s$
RMS isolation voltage	A.C 50Hz(1s/1min)	V_{ISO}	3600/3000	V
Junction temperature range		T_J	-40 ~ +125	
Storage temperature range		T_{stg}	-40 ~ +125	

Electrical Characteristics (@ $T_C = 25^\circ\text{C}$ unless otherwise specified)

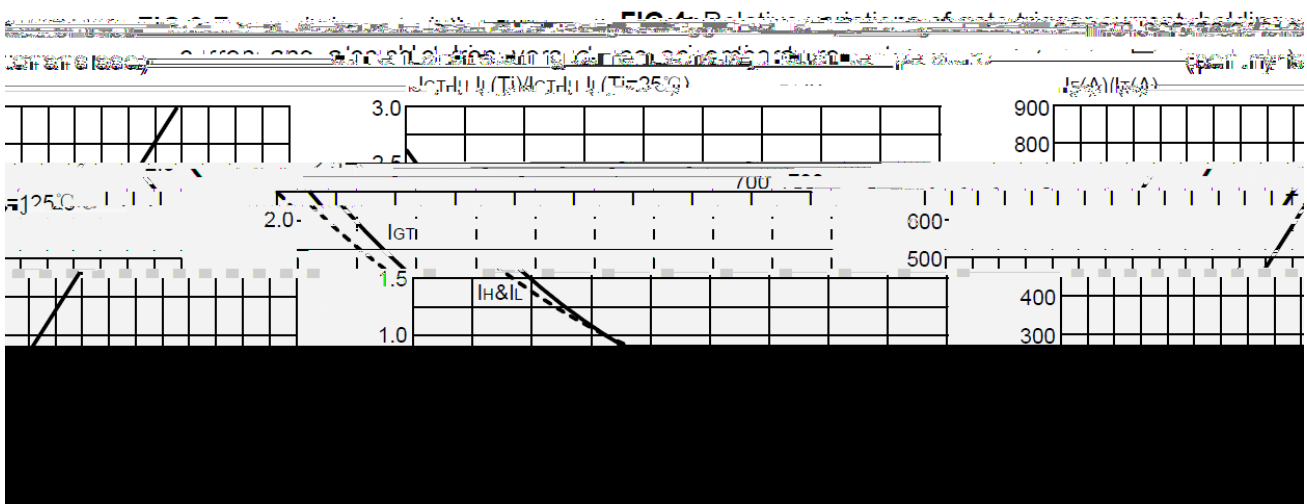
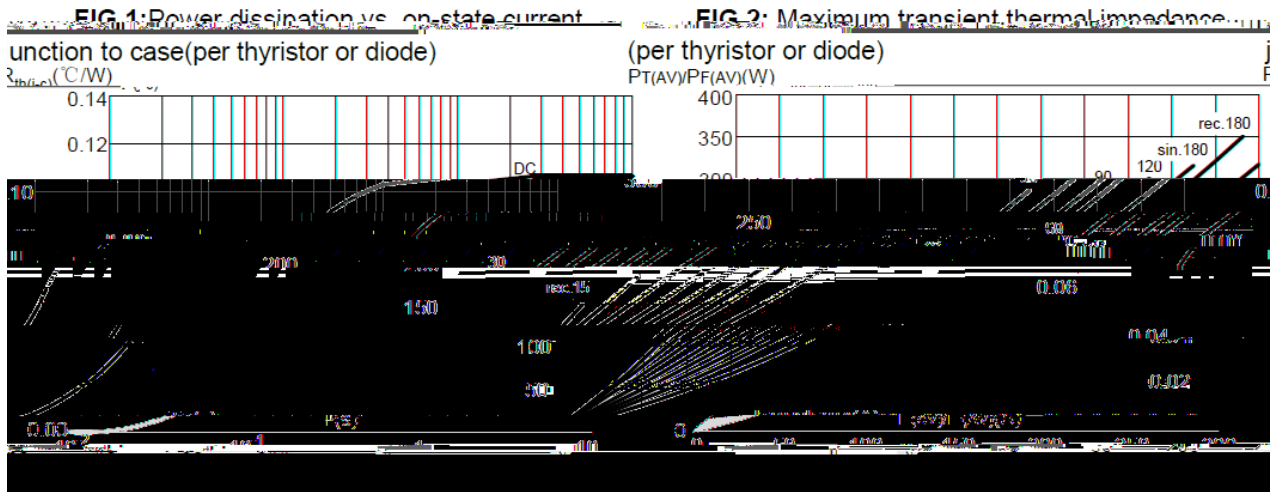
Parameter	Conditions	Symbol	Values			Unit
			Min.	Typ.	Max.	
Peak forward voltage	$I_T=840\text{A}$, $t_P=380\mu\text{s}$	V_T			1.80	V
Repetitive peak off-state current	$V_D = V_{\text{DRM}}$, $T_{\text{vj}} = 25$	I_{DRM}			100	μA
	$V_D = V_{\text{DRM}}$, $T_{\text{vj}} = 125$				100	mA
Reverse leakage current	$V_R = V_{\text{RRM}}$, $T_{\text{vj}} = 25$	I_{RRM}			100	μA
	$V_R = V_{\text{RRM}}$, $T_{\text{vj}} = 125$				100	mA
Threshold voltage	For power loss calculation only $T_{\text{vj}} = 125$	V_{TO}			0.8	V
Dynamic resistance	$T_{\text{vj}} = 125$	r_T			0.8	m
Triggering gate current	$V_D=12\text{V}$ $R_L=30$	I_{GT}	20		150	mA
Holding current	$I_T=1\text{A}$	I_H			300	mA
Latching current	$I_G=1.2 I_{\text{GT}}$	I_L			400	mA
Triggering gate voltage	$V_D=12\text{V}$ $R_L=30$	V_{GT}			1.8	V

Non triggering gate voltage

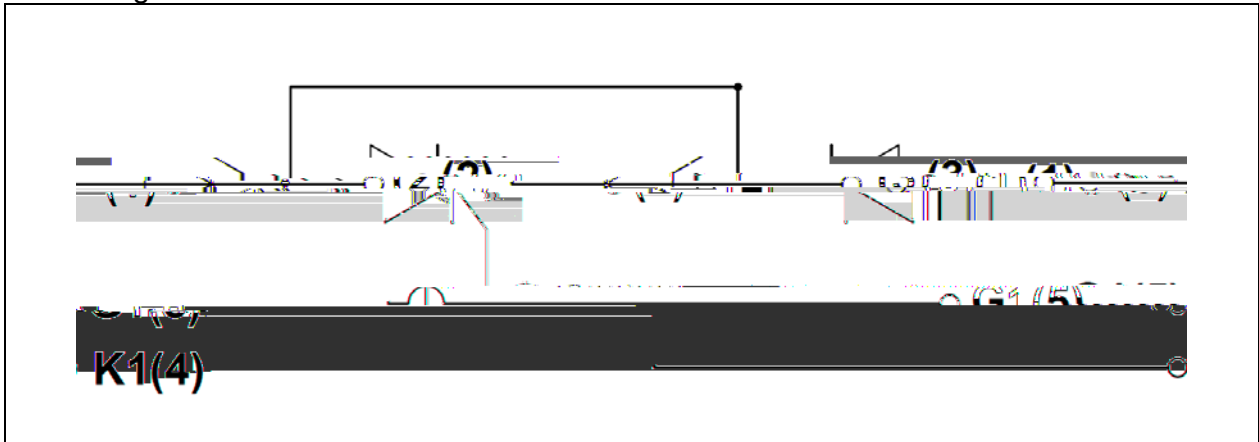
Ordering Information

Device	Marking	Package	Weight	Inner Box	Pre Carton
JMT280KH18T3	JMT280KH18T3	T3	355±10g/PCS	3 PCS	27 PCS

Typical Electrical & Thermal Characteristics



Circuit Diagram



Package Outlines (mm)



Package Outlines (mm)

