

## Thyristor Modules

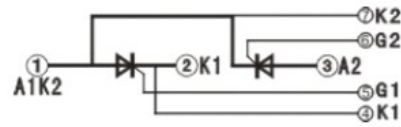
### Features

- Blocking voltage: 1600V
- Industrial standard package
- Thick copper baseplate
- 2500 V<sub>RMS</sub> isolating voltage



### Typical Applications

- Power Converters
- DC motor Control and Drives
- Temperature control
- Lighting control



### Module Type

Type	V <sub>DRM</sub>	V <sub>RSM</sub>
HKT300-16	1600V	1700V

### Maximum Ratings

Parameters	Symbol	Test Conditions	Values	Unit
Average On-State Current	I <sub>TAV</sub>	Sine 180°C; T <sub>C</sub> =85°C	300	A
Surge forward current	I <sub>TSM</sub>	t=10ms T <sub>J</sub> =45°C	9400	A
Maximum I <sup>2</sup> t for fusing	I <sup>2</sup> t	t=10ms T <sub>J</sub> =45°C	451	KA <sup>2</sup> s
Isolation Breakdown Voltage(R.M.S)	Visol	Ac 50Hz; R.M.S.; 1min	2500	V
		Ac.50Hz; R.M.S; 1sec	3500	V
Operating Junction Temperature	T <sub>J</sub>		-40~+125	°C
Storage Temperature	T <sub>stg</sub>		-40~+125	°C
Mounting Torque	Mt	To terminals(M8)	12± 10%	Nm
	Ms	To heatsink(M6)	6± 10%	
Maximum non-repetitive rate of rise of turned on current	di/dt	T <sub>J</sub> =25°C from 0.67V <sub>DRM</sub> , I <sub>TM</sub> = π × I <sub>T(AV)</sub> ,I <sub>g</sub> =500mA tr<0.5us tp>6us	100	A/us
Maximum critical rate of rise of off-state voltage	dv/dt	T <sub>J</sub> =125°C, V <sub>D</sub> =2/3V <sub>DRM</sub>	1000	V/us

<b>Electrical Characteristics</b>						
Parameters	Symbol	Test Conditions	Values			Unit
			Min.	Typ.	Max.	
Maximum Peak On-State Voltage	$V_{TM}$	$I_{TM} = \pi \times I_{T(AV)}$ , $T_J=25^\circ\text{C}$			1.55	V
Maximum Repetitive Peak Reverse Current/ Maximum Repetitive Off-state Current	$I_{RRM}/ I_{DRM}$	$T_J=125^\circ\text{C}$ $V_{RD}=V_{RRM}$			25	mA
Maximum gate voltage required to trigger	$V_{GT}$	$T_J=25^\circ\text{C}$ , $V_D=6\text{V}$			2.0	V
Maximum gate current required to trigger	$I_{GT}$	$T_J=25^\circ\text{C}$ , $V_D=6\text{V}$	40		100	mA
Maximum Latching current	$I_L$	$T_J=25^\circ\text{C}$ , $I_G=1.2I_{GT}$			400	mA
Maximum Holding current	$I_H$	$T_J=25^\circ\text{C}$ , $I_T=1\text{A}$			150	mA

<b>Thermal Characteristics</b>				
Parameters	Symbol	Test Conditions	Values	Unit
Maximum internal thermal resistance, junction to case	$R_{th(J-C)}$	Per module	0.10	$^\circ\text{C}/\text{W}$
Typical thermal resistance, case to heatsink	$R_{th(C-S)}$	Per module	0.05	$^\circ\text{C}/\text{W}$

### Ordering Information Tabel

Device code

H	KT	300	-	16
①	②	③		④

- ① HF L's power module
- ② Circuit configuration
- ③ Maximum average forward current, A
- ④ Voltage code 1600V

Package Outline Information

