

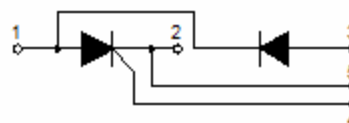
Thyristor/Diode Modules

Features

- Blocking voltage: 1200 to 1800V
- Industrial standard package
- Thick copper baseplate
- 3000 V_{RMS} isolating voltage

Typical Applications

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



Module Type		
Type	V _{DRM}	V _{RSM}
JKH300-12	1200V	1300V
JKH300-16	1600V	1700V
JKH300-18	1800V	1900V

Maximum Ratings				
Parameters	Symbol	Test Conditions	Values	Unit
Average On-State Current	I _{TAV}	Sine 180°C; T _C =85°C	300	A
Surge forward current	I _{TSM}	t=10ms T _J =125°C	9400	A
Maximum I ² t for fusing	I ² t	t=10ms T _J =125°C	451000	A ² s
Isolation Breakdown Voltage(R.M.S)	Visol	A _C 50Hz; R.M.S.; 1min	3000	V
		Ac.50Hz; R.M.S; 1sec	3500	V
Operating Junction Temperature	T _J		-40~+125	°C
Storage Temperature	T _{stg}		-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 _J =125°C, I _{TM} =660A, I _g =1.5A tr<0.5us	100	A/us
Maximum critical rate of rise of off-state voltage	dv/dt	T _J =125°C, V _D =2/3V _{DRM}	1000	V/us

Electrical Characteristics						
Parameters	Symbol	Test Conditions	Values			Unit
			Min.	Typ.	Max.	
Maximum Peak On-State Voltage	V_{TM}	$I_{TM} = 950A, T_J = 25^\circ C$			1.65	V
Maximum Repetitive Peak Reverse Current/ Maximum Repetitive Off-state Current	I_{RRM} / I_{DRM}	$T_J = 125^\circ C, V_{RD} = V_{RRM}$			25	mA
On state threshold voltage	V_{TO}	For power-loss calculations only $T_J = 125^\circ C$			0.8	V
Maximum Value of on-state slope resistance	r_T	$T_J = 125^\circ C$			0.53	m Ω
Maximum gate voltage required to trigger	V_{GT}	$T_J = 25^\circ C, V_D = 6V$			2.5	V
Maximum gate current required to trigger	I_{GT}	$T_J = 25^\circ C, V_D = 6V$			100	mA
Maximum gate voltage that will not trigger	V_{GD}	$T_J = 125^\circ C, V_D = 2/3V_{DRM}$			0.20	V
Maximum gate current that will not trigger	I_{GD}	$T_J = 125^\circ C, V_D = 2/3V_{DRM}$			6	mA
Maximum Latching current	I_L	$T_J = 25^\circ C, I_G = 1.2I_{GT}$			400	mA
Maximum Holding current	I_H	$T_J = 25^\circ C, I_T = 1A$			150	mA

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

Ordering Information Tabel

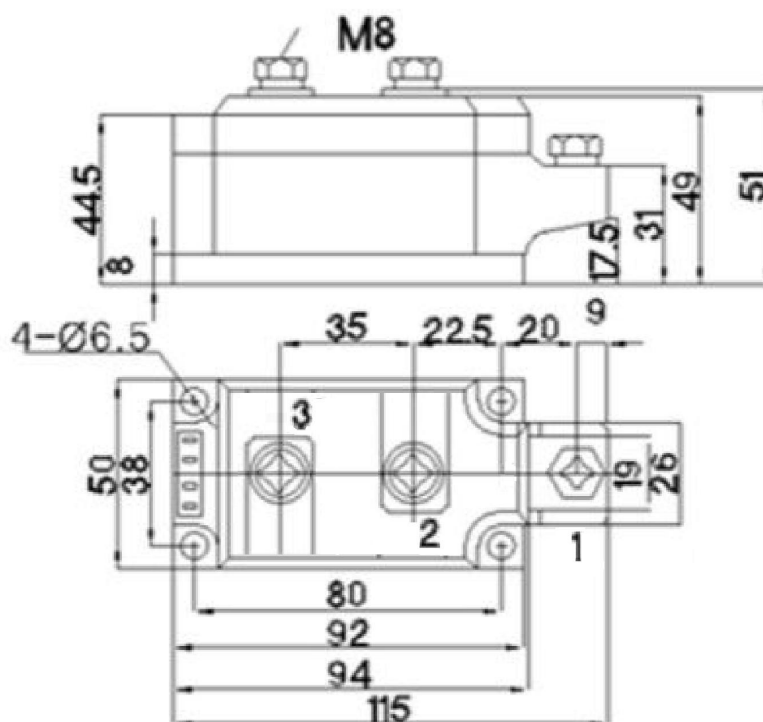
Device code

J	KH	300	-	16
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① ② ③ ④

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

Package Outline Information



dimensions in mm