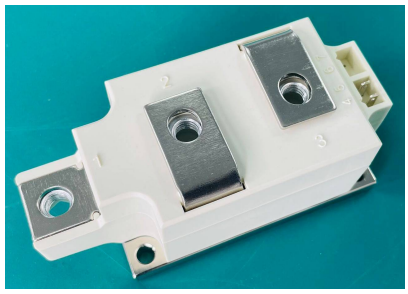
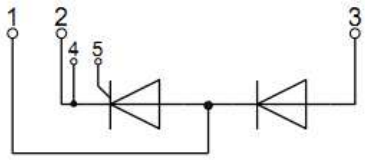
Thyristor/Diode Modules



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^2t for fusing	I^2t	t=10ms T_J=125˚C	451000	A^2s
Isolation Breakdown Voltage(R.M.S)	Visol	A_C 50H_Z; R.M.S.; 1min	3000	V
		Ac.50H_Z； R.M.S； 1sec	3500	V
Operating Juntion Temperature	T_J		-40~+125	˚C
Storage Temperature	Tstg		-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℃, I_{TM}=660A ,Ig=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℃			1.65	V
Maximum Repetitive Peak Reverse Current/ Maximum Repetitive Off-state Current	I_{RRM}/ I_{DRM}	T_J=125℃ V_{RD}=V_{RRM}			25	mA
On state threshold voltage	V_{TO}	For power-loss calculations only T_J=125℃			0.8	V
Maximum Value of on-state slope resistance	r_T	T_J=125℃			0.53	mΩ
Maximum gate voltage required to trigger	V_{GT}	T_J=25℃, V_D=6V			2.5	V
Maximum gate current required to trigger	I_{GT}	T_J=25℃, V_D=6V			100	mA
Maximum gate voltage that will not trigger	V_{GD}	T_J=125℃, V_D=2/3V_{DRM}			0.20	V
Maximum gate current that will not trigger	I_{GD}	T_J=125℃, V_D=2/3V_{DRM}			6	mA
Maximum Latching current	I_L	T_J=25℃, I_G=1.2I_{GT}			400	mA
Maximum Holding current	I_H	T_J=25℃, I_T=1A			150	mA

Thermal Characteristics

Parameters	Symbol	Test Conditions	Values	Unit
Maximum internal thermal resistance, junction to case per leg	$Rth_{(J-C)}$	Per thyristor	0.10	℃/W
Typical thermal resistance, case to heatsink per module	$Rth_{(C-S)}$	Module	0.05	℃/W

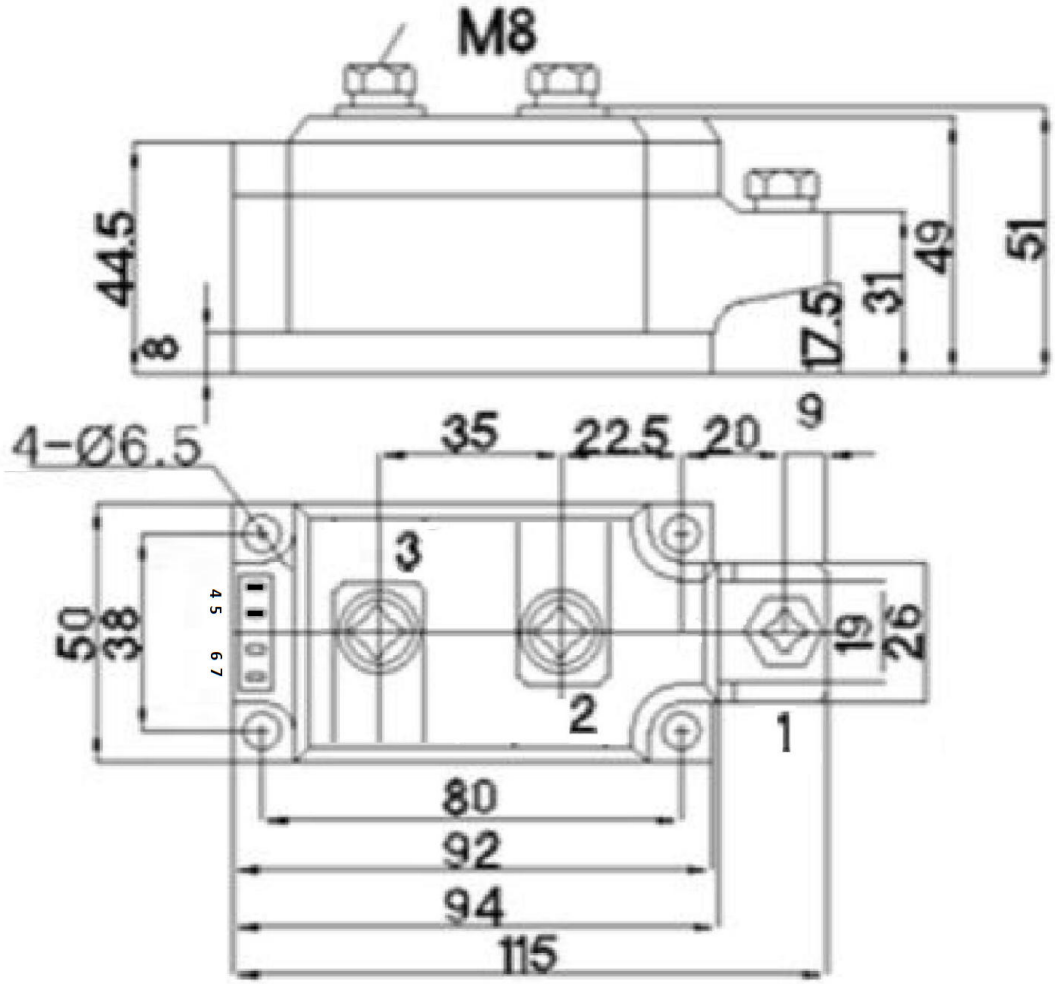
Ordering Information Tabel

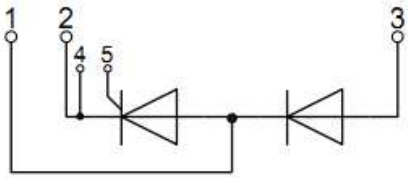
Device code

J	KH	300	-	16
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

