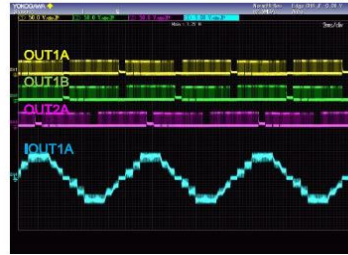


Specifications of Bipolar Driver Board BD202411-Q

- For Ring Pump RP-Q II / III B/C/F & RP-HX series -

1. Power supply voltage DC24V
2. Drive system Limited to quarter (1/4) steps.



Quarter Step Drive Waveform (CLK: 2400Hz)

3. Output current 0.24A

BD202411-Q 0.24A

Applicable Stepper Motor : GSM10-077 (RP-Q II / III B-Type)
 GSM10-076 (RP-Q II / III C-Type)
 GSM10-159 (RP-Q II / III F-Type)
 PG15S-J20-JAY6 (RP-HX)

4. CW/CCW switching High = CW Low = CCW
 Select High when the voltage is higher than 2.0V and lower than 5.0V.
 Select Low when the voltage is lower than 0.8V.
5. Start/Stop switching High = Start Low = Stop
 Select High when the voltage is higher than 2.0V and lower than 5.0V.
 Select Low when the voltage is lower than 0.8V.

6. Driver IC BD63725BEFV (ROHm)

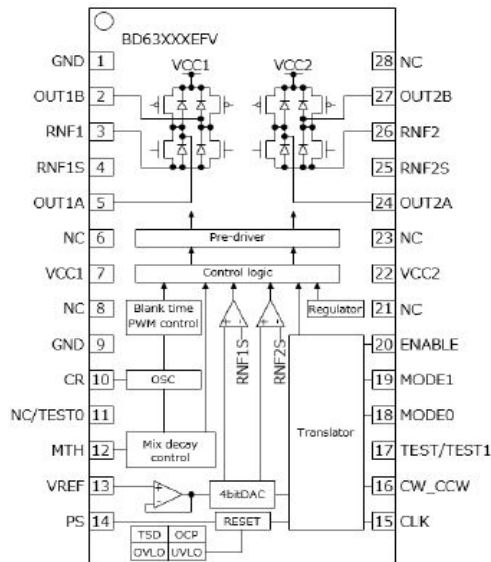


Figure 2 Driver Block

Terminal Number	Name	Function	Terminal Number	Name	Function
1	GND	Ground Terminal	15	CLK	Phase-Forward Clock Input Terminal
2	OUT1B	H-bridge output terminal	16	CW_CCW	Motor rotation direction setting terminal
3	RNFI	Resistor connection terminal for current sensing	17*	TEST	Test terminal (used by connecting to GND)
4	RNFIS	Current-sense comparator input terminal		TEST1	Test terminal
5	OUT1A	H-bridge output terminal	18	MODE0	Motor excitation mode setting terminal
6	NC	Non-connection	19	MODE1	Motor excitation mode setting terminal
7	VCC1	Power Terminal	20	ENABLE	Output Enable Terminal
8	NC	Non-connection	21	NC	Non-connection
9	GND	Ground Terminal	22	VCC2	Power Terminal
10	CR	Chopping frequency setting terminal	23	NC	Non-connection
11*	NC	Non-connection	24	OUT2A	H-bridge output terminal
	TEST0	Test terminal	25	RNF2S	Current-sense comparator input terminal
12	MTH	Current attenuation method setting terminal	26	RNF2	Resistor connection terminal for current sensing
13	VREF	Output current value setting terminal	27	OUT2B	H-bridge output terminal
14	PS	Power Save Terminal	28	NC	Non-connection

* 1 : Upper row BD63715AEFV, BD63725BEFV, BD63525AEFV

7. Clock terminal

Duty : 50%

Select High when the voltage is higher than 2.8V and lower than 5.0V.

Select Low when the voltage is lower than 0.6V.

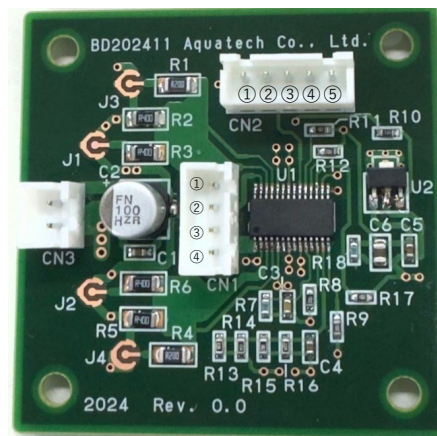
RP-Q II / III B/C/F

RP-HX : 4000Hz (1000PPS) Max

Frequency (Hz)	40	400	2000	3200	4000	5600	Step数
PPS	10	100	500	800	1000	1400	
RP-Q-B_Rotation (rpm)	0.2	2.0	9.9	15.9	19.9	27.8	3019Step
RP-Q-C_Rotation (rpm)	0.6	5.8	29.2	46.6	58.3	81.6	1029Step
RP-Q-F_Rotation (rpm)	1.4	14.3	71.3	114.0	142.5	199.5	421Step
RP-HX_Rotation(rpm)	0.6	6.0	30.0	48.0	60.0	—	1000Step

9. Explanation of Bi-polar Driver Board **BD202411-Q** 50 x 50 □

CN3
24V In - ①
24V In + ②



Board-side male connector
B*B-XH-A Series/JST

Connection-side female connector
XHP* Series/JST
Contact Pin
BXH-001T-P0.6

CN1 Stepper motor connection

- | | | |
|---|-----|--------|
| ① | B + | Black |
| ② | B - | Brown |
| ③ | A + | Yellow |
| ④ | A - | Orange |

CN2 Control circuit connection

- | | |
|---|------------|
| ① | GND |
| ② | CLK |
| ③ | START/STOP |
| ④ | CW/CCW |
| ⑤ | DC5V-out |

CN3 Power input

- | | |
|---|------------|
| ① | DC24V In - |
| ② | DC24V In + |

[An example of control board connection circuit]

