

# 2 Phase Hybrid Stepping Motor

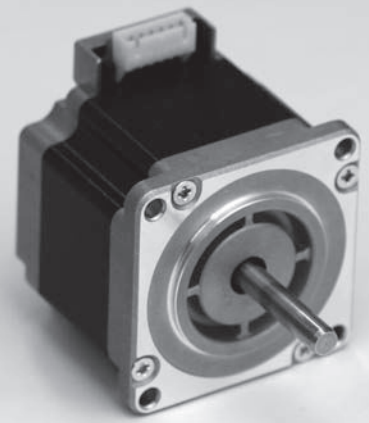
## 56D SERIES (For large quantity orders)



□ 56mm

1.8°

Unipolar

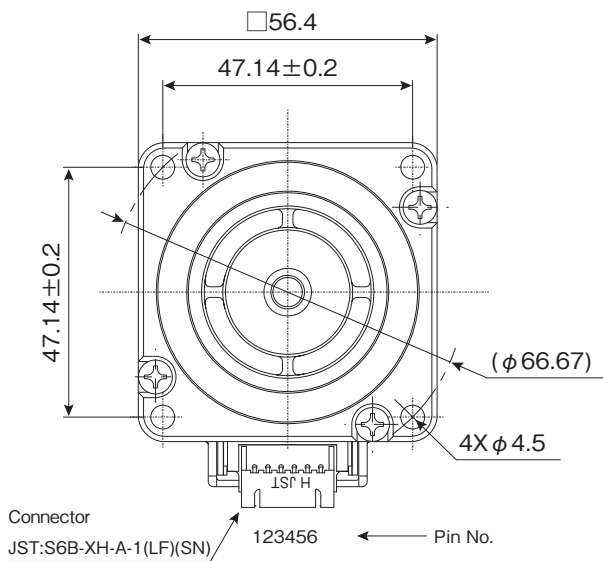


### SPECIFICATIONS

MODEL	STEP ANGLE	VOLTAGE	CURRENT	RESISTANCE	HOLDING TORQUE	ROTOR INERTIA	NUMBER OF PINS	MASS	LENGTH
	Deg.	V	A/φ	Ω/φ	mN·m	g·cm <sup>2</sup>	Pin	kg	mm
STA-56D1001	1.8	1.3	3.0	0.44	560	125	6	0.42	38.5
STA-56D1003	1.8	2.1	2.0	1.07	570	125	6	0.42	38.5
STA-56D1005	1.8	4.4	1.0	4.35	560	125	6	0.42	38.5
STA-56D3001	1.8	1.7	3.0	0.58	1010	225	6	0.57	48.0
STA-56D3003	1.8	2.6	2.0	1.30	1030	225	6	0.57	48.0
STA-56D3005	1.8	5.9	1.0	5.85	1010	225	6	0.57	48.0
STA-56D5001	1.8	2.8	3.0	0.93	1910	460	6	0.99	73.5
STA-56D5003	1.8	4.2	2.0	2.10	1940	460	6	0.99	73.5
STA-56D5005	1.8	9.4	1.0	9.40	1910	460	6	0.99	73.5

↑ Last Digit 1-5 : for Unipolar

### DIMENSIONS [EXAMPLE]



Connector

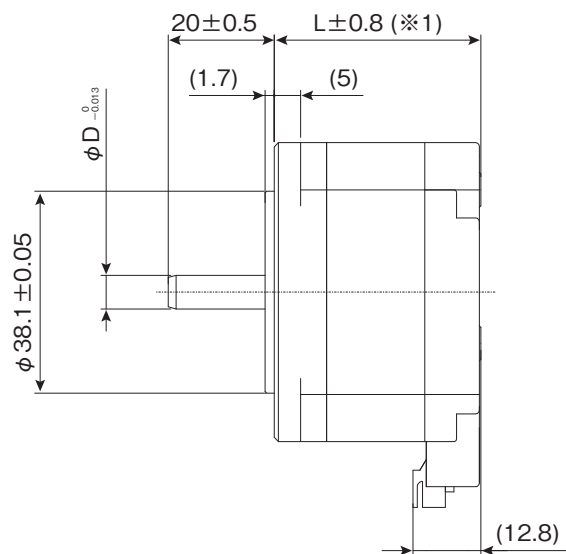
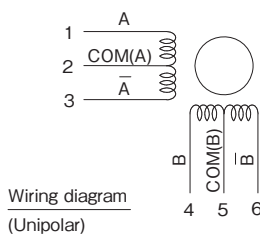
JST:S6B-XH-A-1(LF)(SN)

123456

← Pin No.

Mating connector

Housing	JST:XHP-6
Contact	JST: SXH-001T-P0.6



※1 Available motor length 38.5~73.5 mm.

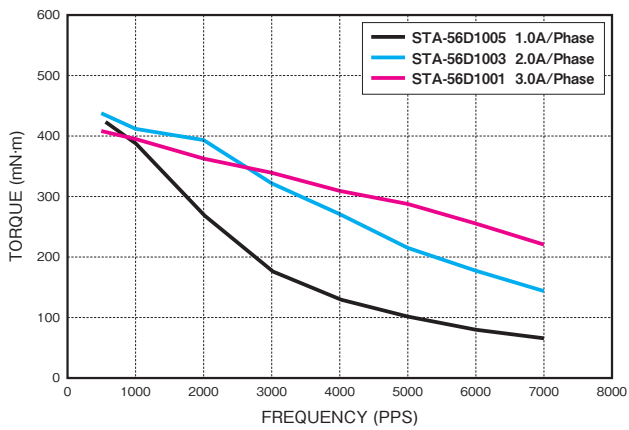
SHAFT Dia. (φ D)	
MODEL	φ D (mm)
STA-56D1XXX	φ 6.35
STA-56D3XXX	φ 6.35
STA-56D5XXX	φ 8

## TORQUE RANGE

STEP ANGLE	SIZE		WINDINGS	MODEL	TORQUE (mN·m) *FREQUENCY at 1,000pps															
					0	50	100	200	300	400	600	800	1000	1500	2000					
1.8°	56mm	NEMA23	Unipolar	56D1	[Torque range bar from 300 to 400 mN·m]															
				56D3	[Torque range bar from 400 to 600 mN·m]															
				56D5	[Torque range bar from 600 to 1000 mN·m]															

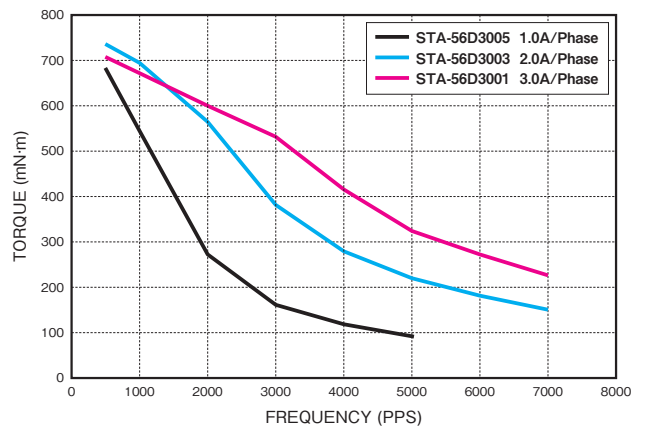
## PULL OUT TORQUE CURVE

STA-56D1XXX



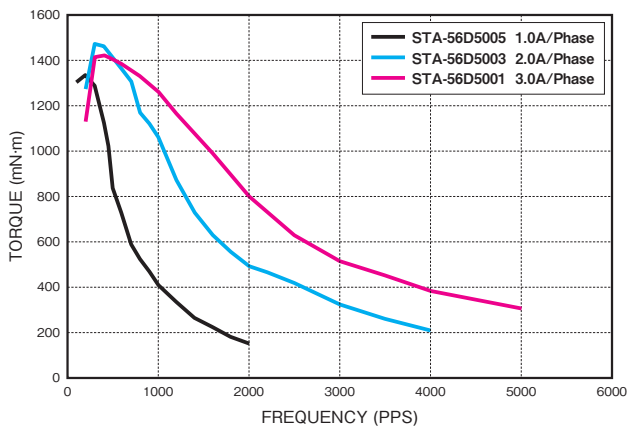
DRIVER : Chopper  
 SUPPLY VOLTAGE : DC24V  
 EXCITING MODE = 2 Phase  
 MOUNTING : With rubber damper

STA-56D3XXX



DRIVER : Chopper  
 SUPPLY VOLTAGE : DC24V  
 EXCITING MODE = 2 Phase  
 MOUNTING : With rubber damper

STA-56D5XXX



DRIVER : Chopper  
 SUPPLY VOLTAGE : DC24V  
 EXCITING MODE = 2 Phase  
 MOUNTING : With rubber damper

**i** Available shaft, lead wires, winding, encoder and other customization. Feel free to contact sales office or sales agent. This motor series can not be sold in small lot size. Product specifications are subject to change without notice.

**!** Operate the motor keeping the motor surface temperature at 100 deg. C or lower.

Stepping Motor  
BLDC Motor  
Motor Driver  
Other Motor

# 2 Phase Hybrid Stepping Motor

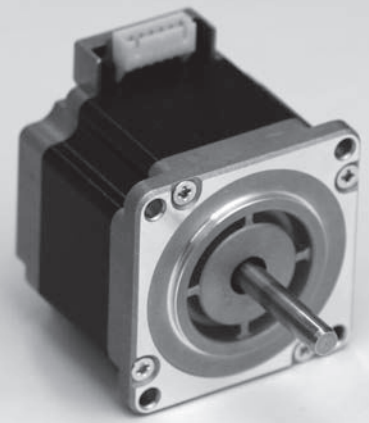
## 56D SERIES (For large quantity orders)



□ 56mm

1.8°

Bipolar

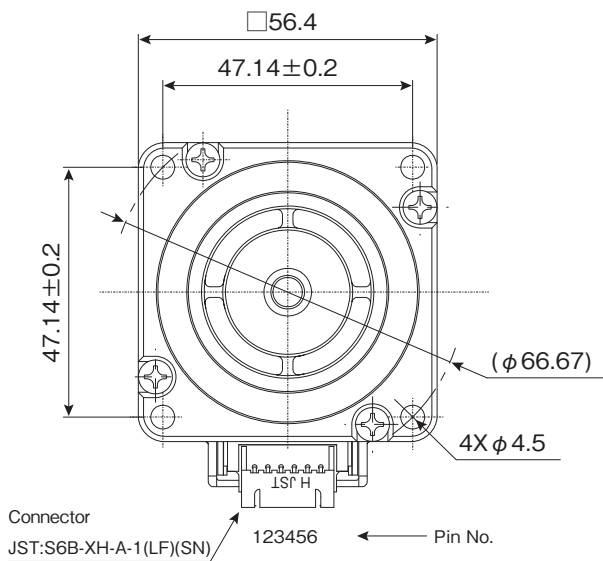


### SPECIFICATIONS

MODEL	STEP ANGLE	VOLTAGE	CURRENT	RESISTANCE	HOLDING TORQUE	ROTOR INERTIA	NUMBER OF PINS	MASS	LENGTH
	Deg.	V	A/φ	Ω/φ	mN·m	g·cm <sup>2</sup>	Pin	kg	mm
STA-56D1006	1.8	1.2	3.0	0.40	560	125	6	0.42	38.5
STA-56D1008	1.8	2.0	2.0	0.98	570	125	6	0.42	38.5
STA-56D1010	1.8	4.0	1.0	4.00	560	125	6	0.42	38.5
STA-56D3006	1.8	1.6	3.0	0.53	1010	225	6	0.57	48.0
STA-56D3008	1.8	2.4	2.0	1.20	1030	225	6	0.57	48.0
STA-56D3010	1.8	5.4	1.0	5.35	1010	225	6	0.57	48.0
STA-56D5006	1.8	2.6	3.0	0.86	1910	460	6	0.99	73.5
STA-56D5008	1.8	3.9	2.0	1.95	1940	460	6	0.99	73.5
STA-56D5010	1.8	8.6	1.0	8.60	1910	460	6	0.99	73.5

↑ Last Digit 6-10 : for Bipolar

### DIMENSIONS [EXAMPLE]



Connector

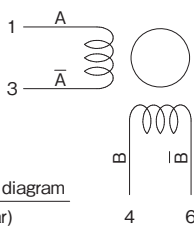
JST:S6B-XH-A-1(LF)(SN)

123456

← Pin No.

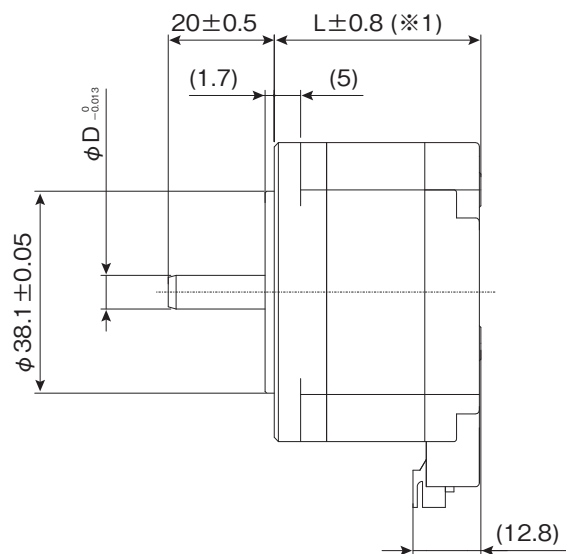
Mating connector

Housing	JST:XHP-6
Contact	JST: SXH-001T-P0.6



Wiring diagram

(Bipolar)



※1 Available motor length 38.5~73.5 mm.

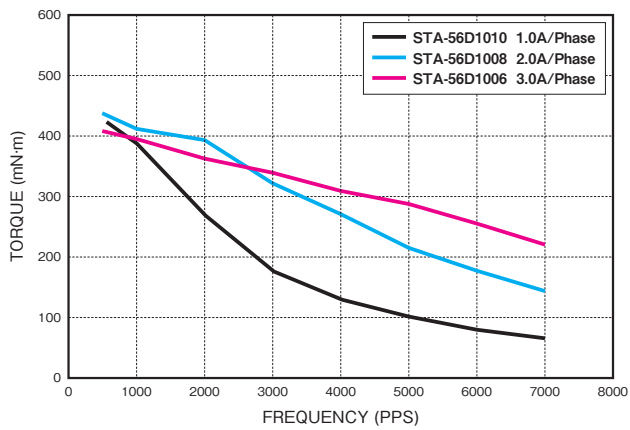
SHAFT Dia. (φ D)	
MODEL	φ D (mm)
STA-56D1XXX	φ 6.35
STA-56D3XXX	φ 6.35
STA-56D5XXX	φ 8

## TORQUE RANGE

STEP ANGLE	SIZE		WINDINGS	MODEL	TORQUE (mN·m) *FREQUENCY at 1,000pps															
					0	50	100	200	300	400	600	800	1000	1500	2000					
1.8°	56mm	NEMA23	Bipolar	56D1	[Torque range bar from 300 to 400 mN·m]															
				56D3	[Torque range bar from 400 to 600 mN·m]															
				56D5	[Torque range bar from 600 to 1000 mN·m]															

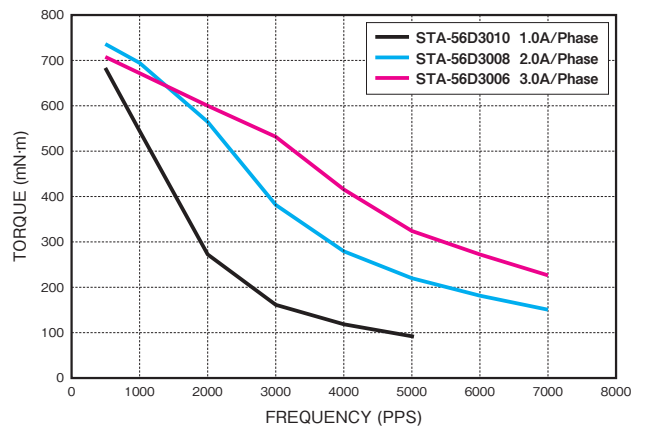
## PULL OUT TORQUE CURVE

STA-56D1XXX



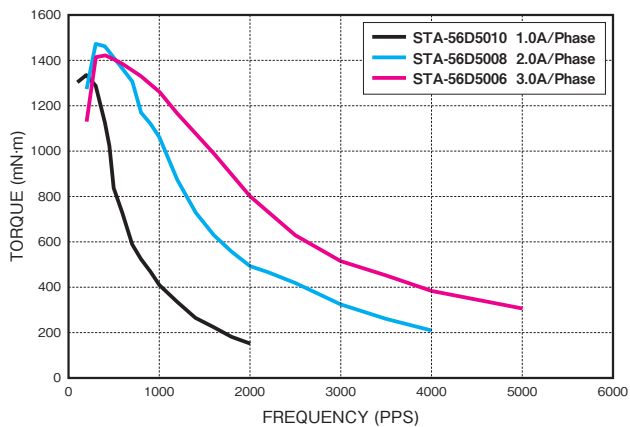
DRIVER : Chopper  
 SUPPLY VOLTAGE : DC24V  
 EXCITING MODE = 2 Phase  
 MOUNTING : With rubber damper

STA-56D3XXX



DRIVER : Chopper  
 SUPPLY VOLTAGE : DC24V  
 EXCITING MODE = 2 Phase  
 MOUNTING : With rubber damper

STA-56D5XXX



DRIVER : Chopper  
 SUPPLY VOLTAGE : DC24V  
 EXCITING MODE = 2 Phase  
 MOUNTING : With rubber damper

**i** Available shaft, lead wires, winding, encoder and other customization. Feel free to contact sales office or sales agent. This motor series can not be sold in small lot size. Product specifications are subject to change without notice.

**!** Operate the motor keeping the motor surface temperature at 100 deg. C or lower.

Stepping Motor  
BLDC Motor  
Motor Driver  
Other Motor

# 2 Phase Hybrid Stepping Motor

## 59D SERIES

□ 56mm



1.8°

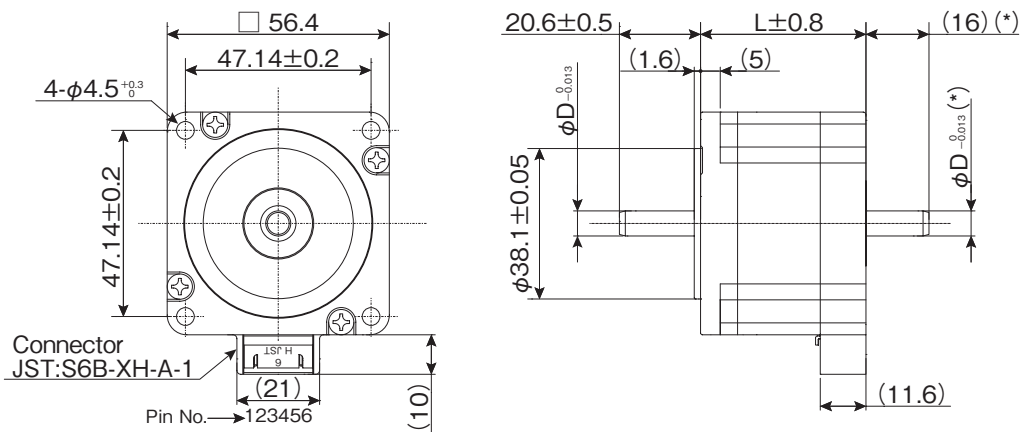
Unipolar

### SPECIFICATIONS

MODEL	STEP ANGLE	VOLTAGE	CURRENT	RESISTANCE	INDUCTANCE	HOLDING TORQUE	ROTOR INERTIA	NUMBER OF PINS	MASS	LENGTH
	Deg.	V	A/φ	Ω/φ	mH/φ	mN·m	g·cm <sup>2</sup>	Pin	kg	mm
SST59D110X	1.8	4.7	1.0	4.70	7.5	667	145	6	0.51	42
SST59D115X	1.8	3.2	1.5	2.10	3.4	667	145	6	0.51	42
SST59D120X	1.8	2.6	2.0	1.30	2.0	680	145	6	0.51	42
SST59D125X	1.8	2.1	2.5	0.85	1.3	692	145	6	0.51	42
SST59D130X	1.8	1.9	3.0	0.62	0.9	667	145	6	0.51	42
SST59D210X	1.8	5.5	1.0	5.50	9.2	925	210	6	0.62	48.5
SST59D215X	1.8	3.6	1.5	2.40	4.1	925	210	6	0.62	48.5
SST59D220X	1.8	2.8	2.0	1.40	2.4	936	210	6	0.62	48.5
SST59D225X	1.8	2.4	2.5	0.95	1.6	947	210	6	0.62	48.5
SST59D230X	1.8	2.0	3.0	0.67	1.1	925	210	6	0.62	48.5
SST59D310X	1.8	6.3	1.0	6.30	11.1	1088	245	6	0.71	54.5
SST59D315X	1.8	4.2	1.5	2.80	5.1	1088	245	6	0.71	54.5
SST59D320X	1.8	3.4	2.0	1.70	3.0	1106	245	6	0.71	54.5
SST59D325X	1.8	2.8	2.5	1.10	2.0	1126	245	6	0.71	54.5
SST59D330X	1.8	2.5	3.0	0.82	1.3	1088	245	6	0.71	54.5
SST59D510X	1.8	9.6	1.0	9.60	19	1847	470	6	1.11	77.5
SST59D515X	1.8	6.3	1.5	4.20	8.4	1847	470	6	1.11	77.5
SST59D520X	1.8	5.0	2.0	2.50	4.9	1876	470	6	1.11	77.5
SST59D525X	1.8	4.3	2.5	1.70	3.3	1906	470	6	1.11	77.5
SST59D530X	1.8	3.6	3.0	1.20	2.2	1847	470	6	1.11	77.5

↑ Last Digit (for Unipolar) 0:Single Shaft 1:Double Shaft

### DIMENSIONS [EXAMPLE]



\* Dimensions apply to double shaft models.

Mating connector

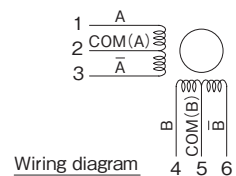
Housing	JST:XHP-6
Contact	JST: SXH-001T-P0.6N

Available connectors

Manufacturer	Connector	Housing	Contact
JST	S06B-XASK-1	XAP-06V-1	SXA-001T-P0.6

SHAFT Dia. (φD)

MODEL	φD (mm)
SST59D1XXX	φ6.35
SST59D2XXX	φ6.35
SST59D3XXX	φ6.35
SST59D5XXX	φ8

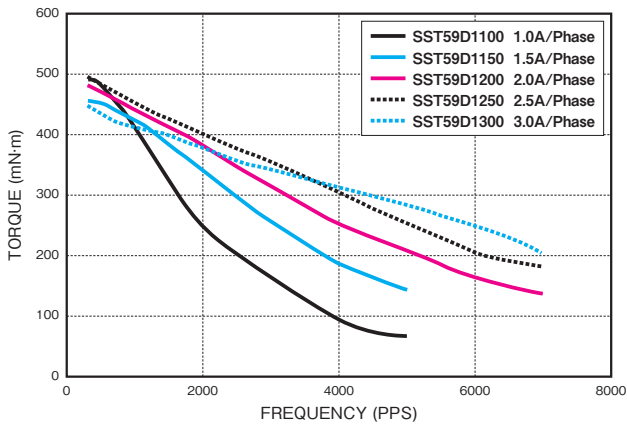


## TORQUE RANGE

STEP ANGLE	SIZE		WINDINGS	MODEL	TORQUE (mN.m) *FREQUENCY at 1,000pps															
					0	50	100	200	300	400	600	800	1000	1500	2000					
1.8°	56mm	NEMA23	Unipolar	59D1	[Torque range bar from 300 to 450 mN.m]															
				59D2	[Torque range bar from 450 to 600 mN.m]															
				59D3	[Torque range bar from 600 to 800 mN.m]															
				59D5	[Torque range bar from 800 to 1500 mN.m]															

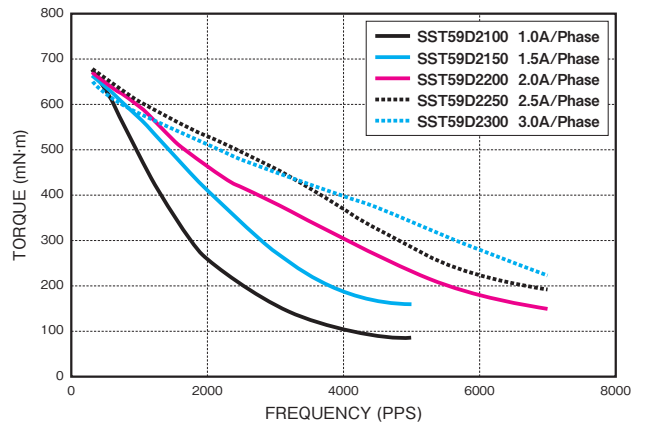
## PULL OUT TORQUE CURVE

SST59D1XXX



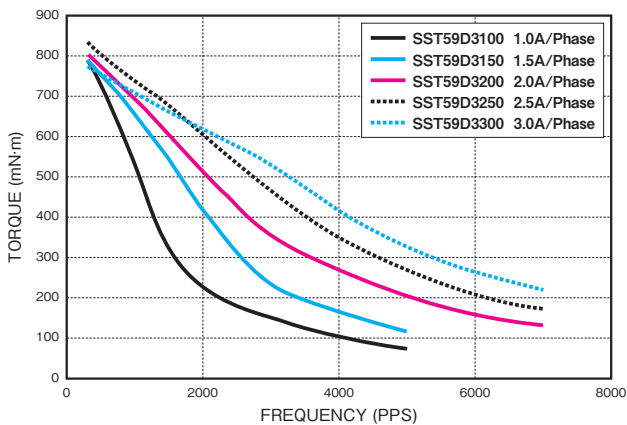
DRIVER : Chopper  
 SUPPLY VOLTAGE : DC24V  
 EXCITING MODE = 2 Phase  
 MOUNTING : With rubber damper

SST59D2XXX



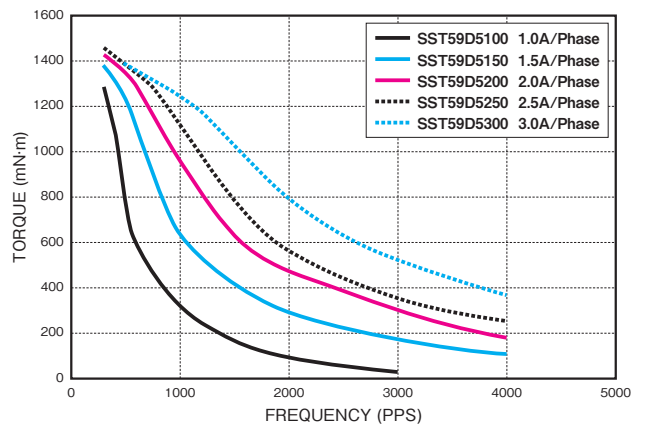
DRIVER : Chopper  
 SUPPLY VOLTAGE : DC24V  
 EXCITING MODE = 2 Phase  
 MOUNTING : With rubber damper

SST59D3XXX



DRIVER : Chopper  
 SUPPLY VOLTAGE : DC24V  
 EXCITING MODE = 2 Phase  
 MOUNTING : With rubber damper

SST59D5XXX



DRIVER : Chopper  
 SUPPLY VOLTAGE : DC24V  
 EXCITING MODE = 2 Phase  
 MOUNTING : With rubber damper

**i** Available shaft, lead wires, winding, encoder and other customization. Feel free to contact sales office or sales agent.

**!** Operate the motor keeping the motor surface temperature at 100 deg. C or lower.

Stepping Motor  
BLDC Motor  
Motor Driver  
Other Motor

# 2 Phase Hybrid Stepping Motor

## 59D SERIES

□ 56mm



1.8°

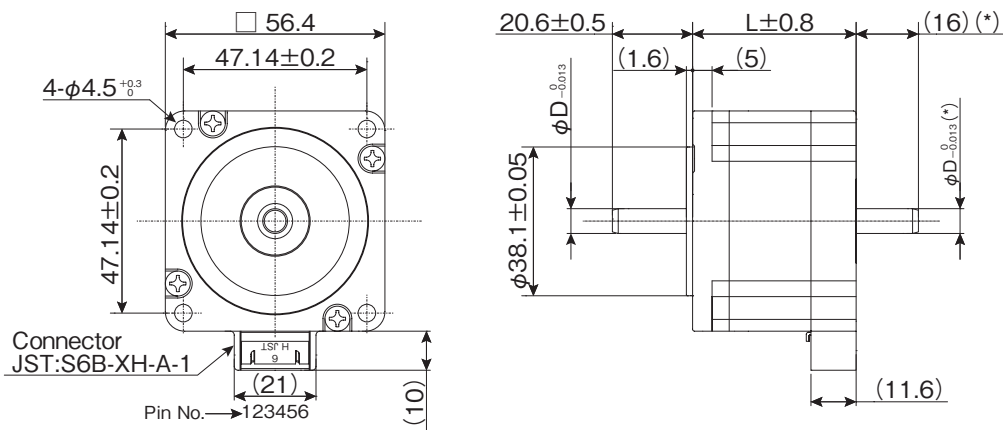
Bipolar

### SPECIFICATIONS

MODEL	STEP ANGLE	VOLTAGE	CURRENT	RESISTANCE	INDUCTANCE	HOLDING TORQUE	ROTOR INERTIA	NUMBER OF PINS	MASS	LENGTH
	Deg.	V	A/φ	Ω/φ	mH/φ	mN·m	g·cm <sup>2</sup>	Pin	kg	mm
SST59D110X	1.8	3.3	1.4	2.35	7.5	870	145	4	0.51	42
SST59D115X	1.8	2.2	2.1	1.05	3.4	870	145	4	0.51	42
SST59D120X	1.8	1.8	2.8	0.65	2.0	880	145	4	0.51	42
SST59D125X	1.8	1.5	3.5	0.43	1.3	890	145	4	0.51	42
SST59D130X	1.8	1.3	4.2	0.31	0.9	870	145	4	0.51	42
SST59D210X	1.8	3.9	1.4	2.75	9.2	1200	210	4	0.62	48.5
SST59D215X	1.8	2.5	2.1	1.20	4.1	1200	210	4	0.62	48.5
SST59D220X	1.8	2.0	2.8	0.70	2.4	1220	210	4	0.62	48.5
SST59D225X	1.8	1.7	3.5	0.48	1.6	1240	210	4	0.62	48.5
SST59D230X	1.8	1.4	4.2	0.34	1.1	1200	210	4	0.62	48.5
SST59D310X	1.8	4.4	1.4	3.15	11.1	1410	245	4	0.71	54.5
SST59D315X	1.8	2.9	2.1	1.40	5.1	1410	245	4	0.71	54.5
SST59D320X	1.8	2.4	2.8	0.85	3.0	1440	245	4	0.71	54.5
SST59D325X	1.8	1.9	3.5	0.55	2.0	1460	245	4	0.71	54.5
SST59D330X	1.8	1.7	4.2	0.41	1.3	1410	245	4	0.71	54.5
SST59D510X	1.8	6.7	1.4	4.80	19	2400	470	4	1.11	77.5
SST59D515X	1.8	4.4	2.1	2.10	8.4	2400	470	4	1.11	77.5
SST59D520X	1.8	3.5	2.8	1.25	4.9	2440	470	4	1.11	77.5
SST59D525X	1.8	3.0	3.5	0.85	3.3	2480	470	4	1.11	77.5
SST59D530X	1.8	2.5	4.2	0.60	2.2	2400	470	4	1.11	77.5

↖ Last Digit (for Bipolar) 5:Single Shaft 6:Double Shaft

### DIMENSIONS [EXAMPLE]



\* Dimensions apply to double shaft models.

Mating connector	
Housing	JST:XHP-6
Contact	JST: SXH-001T-P0.6N

#### Available connectors

Manufacturer	Connector	Housing	Contact
JST	S06B-XASK-1	XAP-06V-1	SXA-001T-P0.6

SHAFT Dia. (φD)	
MODEL	φD (mm)
SST59D1XXX	φ6.35
SST59D2XXX	φ6.35
SST59D3XXX	φ6.35
SST59D5XXX	φ8

