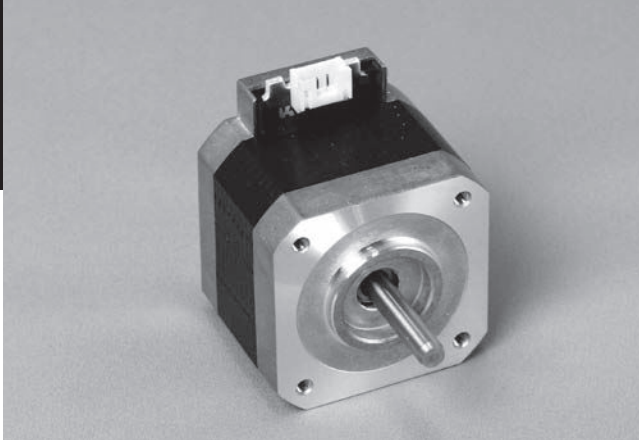


2 Phase Hybrid Stepping Motor

42D SERIES (For large quantity orders)



□42mm



1.8°

Bipolar

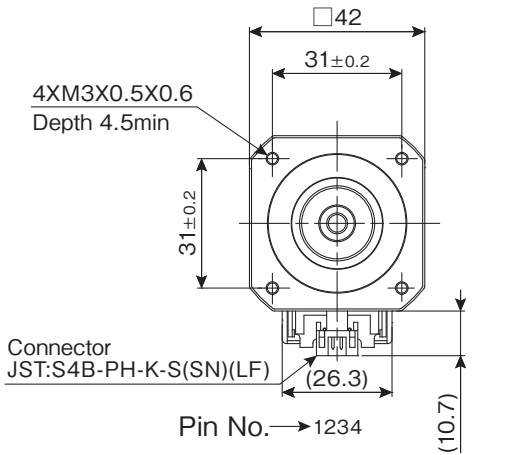
STA-42D series can achieve larger torque than existing motors in same dimension.

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 ² | Pin | kg | mm |
| STA-42D1004 | 1.8 | 4.8 | 0.6 | 8.0 | 200 | 29 | 4 | 0.19 | 30 |
| STA-42D1005 | 1.8 | 3.7 | 0.8 | 4.6 | 200 | 29 | 4 | 0.19 | 30 |
| STA-42D1006 | 1.8 | 3.3 | 1.0 | 3.3 | 210 | 29 | 4 | 0.19 | 30 |
| STA-42D1007 | 1.8 | 2.4 | 1.2 | 2.0 | 200 | 29 | 4 | 0.19 | 30 |
| STA-42D2004 | 1.8 | 3.8 | 0.8 | 4.7 | 280 | 44 | 4 | 0.23 | 34 |
| STA-42D2005 | 1.8 | 3.2 | 1.0 | 3.2 | 290 | 44 | 4 | 0.23 | 34 |
| STA-42D2006 | 1.8 | 2.9 | 1.2 | 2.4 | 300 | 44 | 4 | 0.23 | 34 |
| STA-42D2007 | 1.8 | 2.4 | 1.4 | 1.7 | 290 | 44 | 4 | 0.23 | 34 |
| STA-42D3004 | 1.8 | 3.9 | 1.0 | 3.9 | 410 | 65 | 4 | 0.29 | 40 |
| STA-42D3005 | 1.8 | 3.5 | 1.2 | 2.9 | 430 | 65 | 4 | 0.29 | 40 |
| STA-42D3006 | 1.8 | 2.8 | 1.4 | 2.0 | 410 | 65 | 4 | 0.29 | 40 |
| STA-42D3007 | 1.8 | 2.4 | 1.6 | 1.5 | 380 | 65 | 4 | 0.29 | 40 |

↑ Last Digit 4-7 : for Bipolar

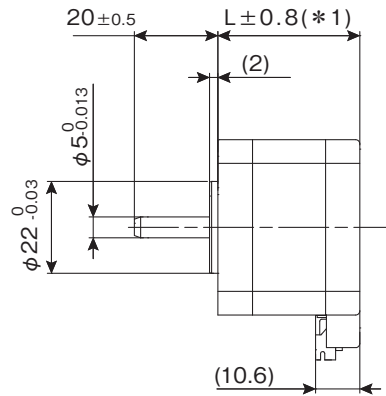
DIMENSIONS [EXAMPLE]



Pin No. → 1234

Mating connector

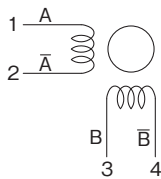
| | |
|---------|--------------------|
| Housing | JST:PHR-4 |
| Contact | JST:SPH-002T-P0.5S |



* Available motor length 27.5~49.5mm.

Available connector

| Manufacturer | Connector | Housing | Contact |
|------------------|-----------|----------|-------------|
| Tyco electronics | 292250-4 | 179228-4 | 50212-08100 |



Wiring diagram
(Bipolar)

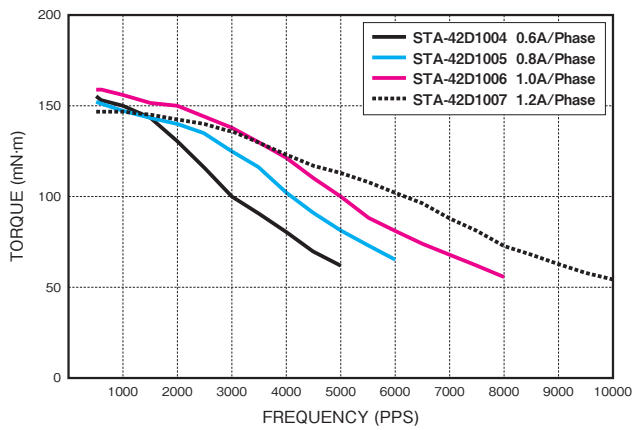
Lead wire type is available.

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° | 42mm | NEMA17 | Biipolar | 42D1 | [Torque range bars for model 42D1] | | | | | | | | | | | | | | | |
| | | | | 42D2 | [Torque range bars for model 42D2] | | | | | | | | | | | | | | | |
| | | | | 42D3 | [Torque range bars for model 42D3] | | | | | | | | | | | | | | | |

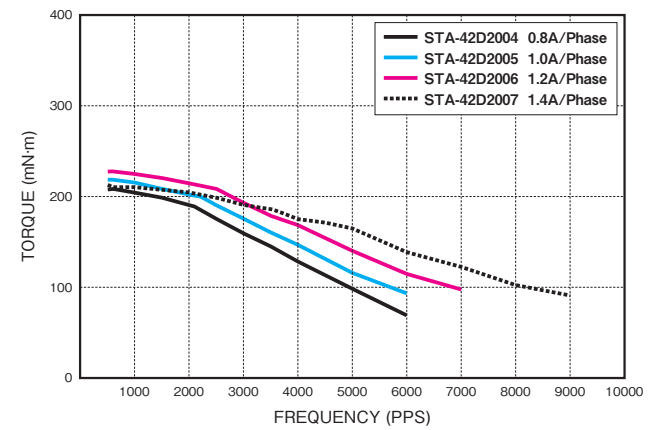
PULL OUT TORQUE CURVE

STA-42D1XXX



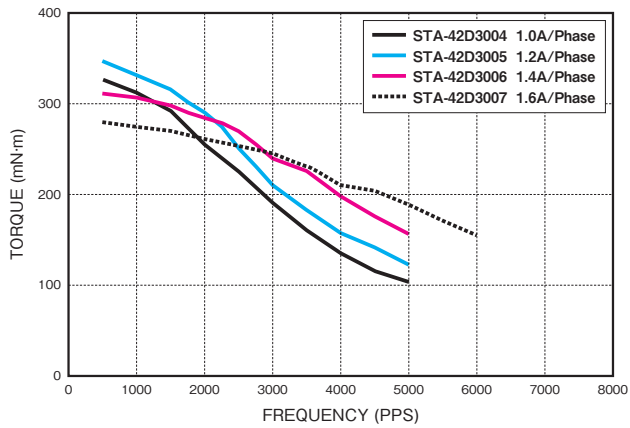
DRIVER : Chopper
 SUPPLY VOLTAGE : DC24V
 EXCITING MODE = 2 Phase
 MOUNTING : With rubber damper

STA-42D2XXX



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

STA-42D3XXX



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.

! 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

43D SERIES

□42mm



1.8°

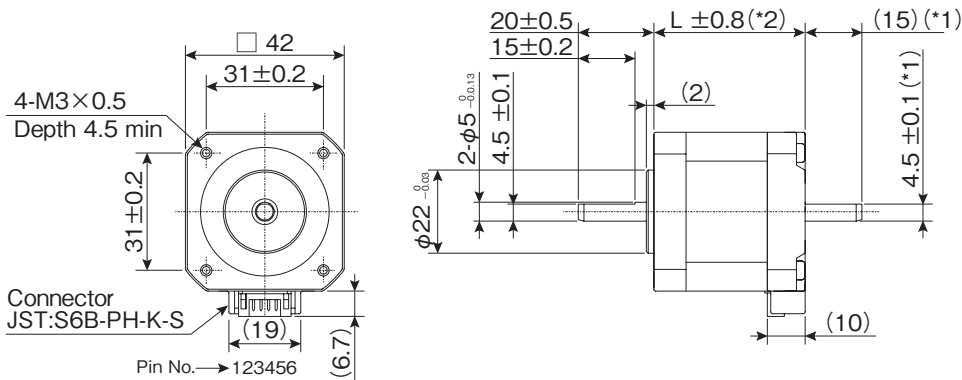
Unipolar

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 ² | Pin | g | mm |
| SST43D104X | 1.8 | 9.6 | 0.4 | 24.0 | 16.0 | 215 | 33 | 6 | 230 | 34 |
| SST43D106X | 1.8 | 6.9 | 0.6 | 11.5 | 8.1 | 226 | 33 | 6 | 230 | 34 |
| SST43D108X | 1.8 | 5.1 | 0.8 | 6.4 | 4.9 | 233 | 33 | 6 | 230 | 34 |
| SST43D110X | 1.8 | 4.2 | 1.0 | 4.2 | 3.3 | 238 | 33 | 6 | 230 | 34 |
| SST43D112X | 1.8 | 3.2 | 1.2 | 2.7 | 2.3 | 237 | 33 | 6 | 230 | 34 |
| SST43D115X | 1.8 | 2.7 | 1.5 | 1.8 | 1.5 | 235 | 33 | 6 | 230 | 34 |
| SST43D204X | 1.8 | 12.0 | 0.4 | 30.0 | 24.0 | 314 | 56 | 6 | 290 | 40 |
| SST43D206X | 1.8 | 7.2 | 0.6 | 12.0 | 11.8 | 322 | 56 | 6 | 290 | 40 |
| SST43D208X | 1.8 | 5.5 | 0.8 | 6.9 | 7.1 | 321 | 56 | 6 | 290 | 40 |
| SST43D210X | 1.8 | 4.8 | 1.0 | 4.8 | 4.8 | 338 | 56 | 6 | 290 | 40 |
| SST43D212X | 1.8 | 4.0 | 1.2 | 3.3 | 3.6 | 341 | 56 | 6 | 290 | 40 |
| SST43D214X | 1.8 | 3.2 | 1.4 | 2.3 | 2.5 | 329 | 56 | 6 | 290 | 40 |
| SST43D216X | 1.8 | 3.0 | 1.6 | 1.9 | 1.8 | 313 | 56 | 6 | 290 | 40 |

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

DIMENSIONS [EXAMPLE]

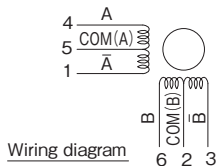


Mating connector

| | |
|---------|--------------------|
| Housing | JST:PHR-6 |
| Contact | JST:SPH-002T-P0.5S |

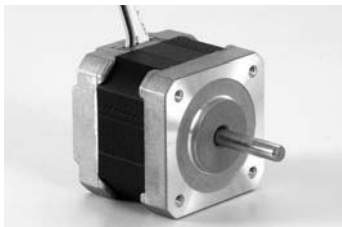
*1 Dimensions apply to double shaft models.

*2 Available motor length 32mm~54.5mm



Available connectors

| Manufacturer | Connector | Housing | Contact |
|--------------|------------|------------|-------------|
| AMP | 292250-6 | 179228-6 | 179227-1 |
| MOLEX | 53325-0660 | 51090-0600 | 50212-08100 |



Lead wire type is available.

2 Phase Hybrid Stepping Motor

43D SERIES

□42mm



1.8°

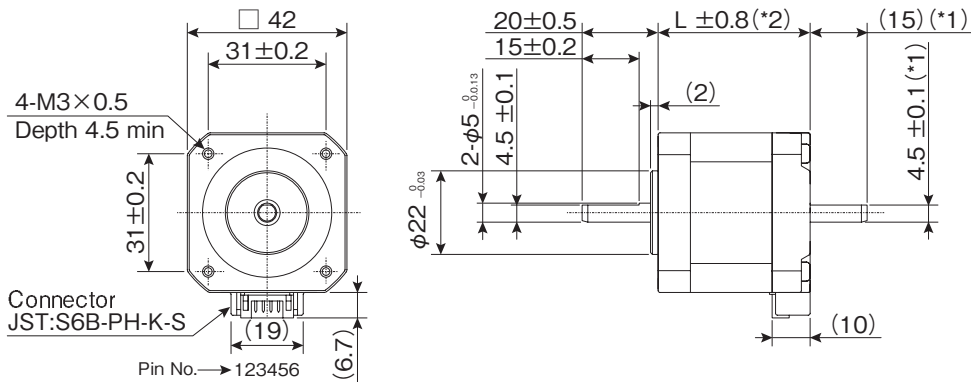
Bipolar

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 ² | Pin | g | mm |
| SST43D104X | 1.8 | 6.8 | 0.57 | 12.00 | 16.0 | 294 | 33 | 4 | 230 | 34 |
| SST43D106X | 1.8 | 4.9 | 0.85 | 5.75 | 8.1 | 304 | 33 | 4 | 230 | 34 |
| SST43D108X | 1.8 | 3.6 | 1.13 | 3.20 | 4.9 | 312 | 33 | 4 | 230 | 34 |
| SST43D110X | 1.8 | 3.0 | 1.41 | 2.10 | 3.3 | 319 | 33 | 4 | 230 | 34 |
| SST43D112X | 1.8 | 2.3 | 1.70 | 1.35 | 2.3 | 322 | 33 | 4 | 230 | 34 |
| SST43D115X | 1.8 | 1.9 | 2.12 | 0.90 | 1.5 | 309 | 33 | 4 | 230 | 34 |
| SST43D204X | 1.8 | 8.6 | 0.57 | 15.00 | 24.0 | 420 | 56 | 4 | 290 | 40 |
| SST43D206X | 1.8 | 5.1 | 0.85 | 6.00 | 11.8 | 432 | 56 | 4 | 290 | 40 |
| SST43D208X | 1.8 | 3.9 | 1.13 | 3.45 | 7.1 | 422 | 56 | 4 | 290 | 40 |
| SST43D210X | 1.8 | 3.4 | 1.41 | 2.40 | 4.8 | 441 | 56 | 4 | 290 | 40 |
| SST43D212X | 1.8 | 2.8 | 1.70 | 1.65 | 3.6 | 456 | 56 | 4 | 290 | 40 |
| SST43D214X | 1.8 | 2.3 | 1.98 | 1.15 | 2.5 | 441 | 56 | 4 | 290 | 40 |
| SST43D216X | 1.8 | 2.1 | 2.26 | 0.95 | 1.8 | 424 | 56 | 4 | 290 | 40 |

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

DIMENSIONS [EXAMPLE]

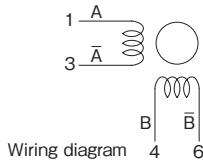


Mating connector

| | |
|---------|--------------------|
| Housing | JST:PHR-6 |
| Contact | JST:SPH-002T-P0.5S |

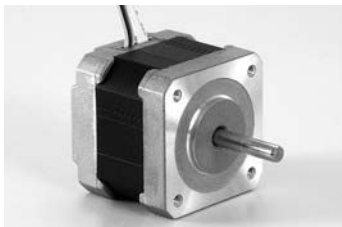
*1 Dimensions apply to double shaft models.

*2 Available motor length 32mm~54.5mm



Available connectors

| Manufacturer | Connector | Housing | Contact |
|--------------|------------|------------|-------------|
| AMP | 292250-6 | 179228-6 | 179227-1 |
| MOLEX | 53325-0660 | 51090-0600 | 50212-08100 |



Lead wire type is available.

2 Phase Hybrid Stepping Motor

45D SERIES

□42mm

High Holding Torque Model



1.8°

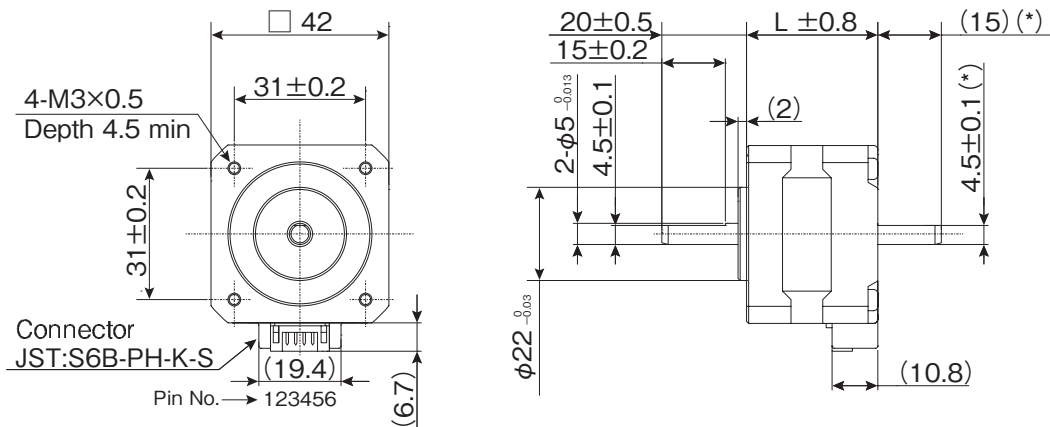
Unipolar

SPECIFICATIONS

| MODEL | STEP ANGLE | VOLTAGE | CURRENT | RESISTANCE | INDUCTANCE | HOLDING TORQUE | ROTOR INERTIA | NUMBER OF PINS | MASS | LENGTH |
|------------|------------|---------|---------|------------|------------|----------------|---------------|----------------|------|--------|
| | Deg. | | | | | | | | | |
| SST45D003X | 1.8 | 13.2 | 0.3 | 44 | 23.6 | 221 | 45 | 6 | 200 | 32 |
| SST45D005X | 1.8 | 7.3 | 0.5 | 14.5 | 8.6 | 221 | 45 | 6 | 200 | 32 |
| SST45D007X | 1.8 | 4.8 | 0.7 | 6.8 | 4.6 | 221 | 45 | 6 | 200 | 32 |
| SST45D010X | 1.8 | 3.3 | 1.0 | 3.3 | 2.3 | 226 | 45 | 6 | 200 | 32 |
| SST45D012X | 1.8 | 3.1 | 1.2 | 2.6 | 1.8 | 237 | 45 | 6 | 200 | 32 |
| SST45D015X | 1.8 | 2.1 | 1.5 | 1.4 | 1.0 | 226 | 45 | 6 | 200 | 32 |
| SST45D103X | 1.8 | 14.7 | 0.3 | 49 | 28 | 265 | 56 | 6 | 230 | 35 |
| SST45D105X | 1.8 | 8.3 | 0.5 | 16.6 | 10.5 | 265 | 56 | 6 | 230 | 35 |
| SST45D107X | 1.8 | 5.5 | 0.7 | 7.8 | 5.5 | 268 | 56 | 6 | 230 | 35 |
| SST45D110X | 1.8 | 3.6 | 1.0 | 3.6 | 2.7 | 265 | 56 | 6 | 230 | 35 |
| SST45D112X | 1.8 | 3.3 | 1.2 | 2.8 | 2.1 | 284 | 56 | 6 | 230 | 35 |
| SST45D115X | 1.8 | 2.4 | 1.5 | 1.6 | 1.2 | 265 | 56 | 6 | 230 | 35 |
| SST45D203X | 1.8 | 18.9 | 0.3 | 63 | 41.5 | 361 | 82 | 6 | 310 | 42.5 |
| SST45D205X | 1.8 | 10.8 | 0.5 | 21.5 | 15.5 | 361 | 82 | 6 | 310 | 42.5 |
| SST45D207X | 1.8 | 7.1 | 0.7 | 10.2 | 8.0 | 361 | 82 | 6 | 310 | 42.5 |
| SST45D210X | 1.8 | 4.6 | 1.0 | 4.6 | 4.0 | 378 | 82 | 6 | 310 | 42.5 |
| SST45D212X | 1.8 | 4.2 | 1.2 | 3.5 | 3.2 | 392 | 82 | 6 | 310 | 42.5 |
| SST45D215X | 1.8 | 3 | 1.5 | 2.0 | 1.8 | 382 | 82 | 6 | 310 | 42.5 |

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

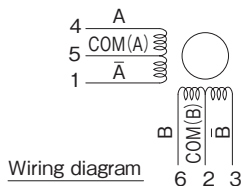
DIMENSIONS [EXAMPLE]



Mating connector

| | |
|---------|--------------------|
| Housing | JST:PHR-6 |
| Contact | JST:SPH-002T-P0.5S |

* Dimensions apply to double shaft models.

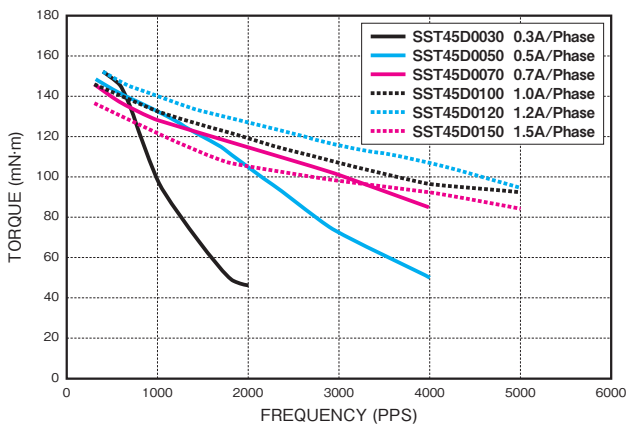


TORQUE RANGE

| 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° | 42mm | NEMA17 | Unipolar | 45D0 | [Torque range bar] | | | | | | | | | | | | | | | |
| | | | | 45D1 | [Torque range bar] | | | | | | | | | | | | | | | |
| | | | | 45D2 | [Torque range bar] | | | | | | | | | | | | | | | |

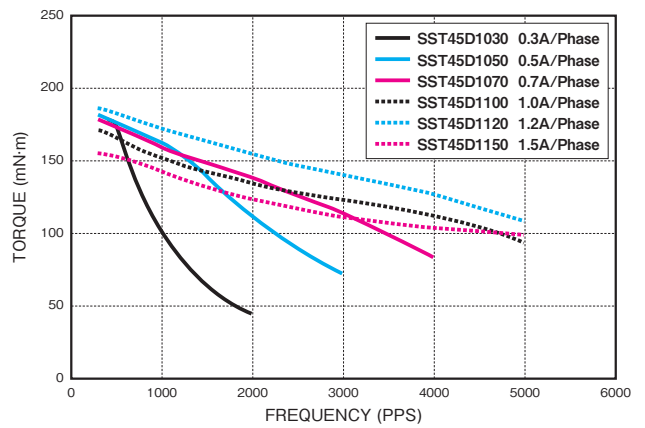
PULL OUT TORQUE CURVE

SST45D0XXX



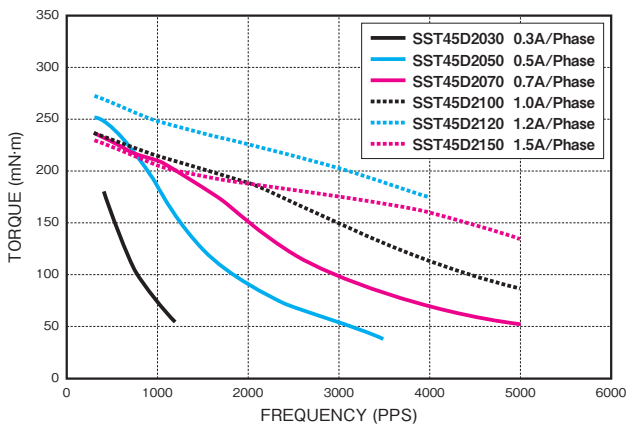
DRIVER : Chopper
 SUPPLY VOLTAGE : DC24V
 EXCITING MODE = 2 Phase
 MOUNTING : With rubber damper

SST45D1XXX



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

SST45D2XXX



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