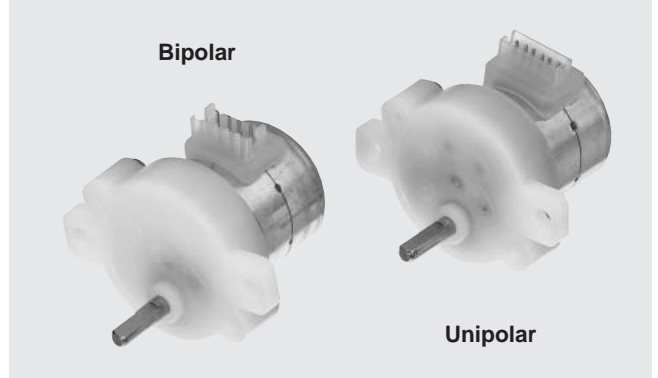


SPG20

STEPPING MOTORS

FEATURES

- Compact stepping motor with gear head
- Small lots production is possible
- Provided with connector terminals for easy connection
- RoHS compliant



APPLICATIONS

- Game machines
- Others

PART NUMBER DESIGNATION

SPG20 - 253

Series name

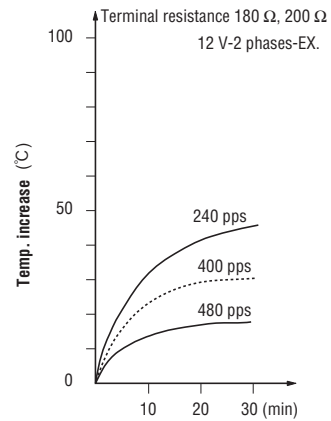
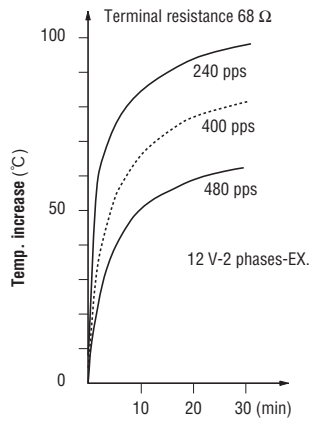
Dash number

LIST OF PART NUMBERS

Gear ratio	Winding resistance	Winding resistance			
		63 Ω	68 Ω	180 Ω	200 Ω
1/6	Bipolar	SPG20-345	SPG20-253	/	SPG20-256
	Unipolar	/	SPG20-298	SPG20-311	/
1/24	Bipolar	/	/	/	SPG20-335
	Unipolar	/	SPG20-332	SPG20-333	/
1/36	Bipolar	/	SPG20-254	/	SPG20-322
	Unipolar	/	SPG20-308	SPG20-290	/
1/72	Bipolar	/	SPG20-255	/	SPG20-257
	Unipolar	/	SPG20-309	SPG20-310	/
1/18	Unipolar	/	/	SPG20-361	/

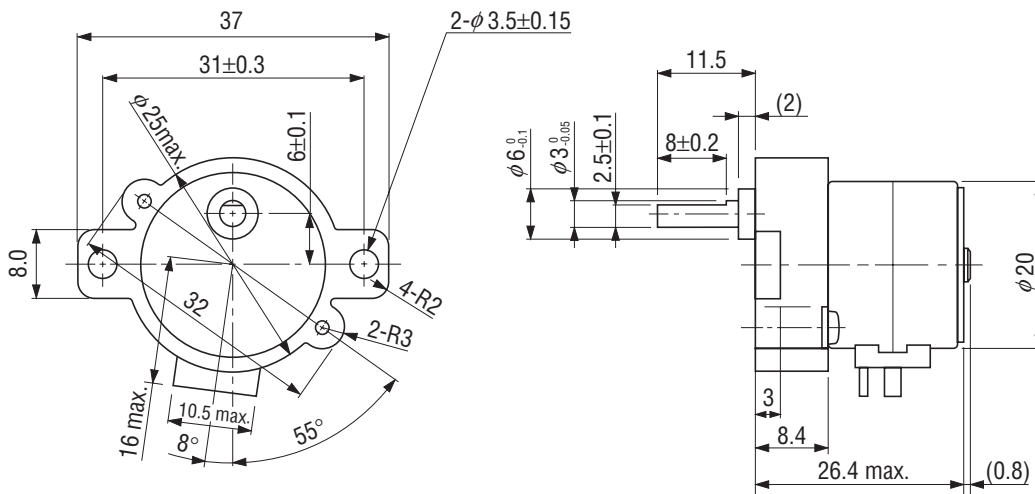
※ When ordering, please specify the part number and dash number.

TEMPERATURE CHARACTERISTICS



OUTLINE DIMENSIONS

Unless otherwise specified tolerance: ± 0.5 (Unit: mm)



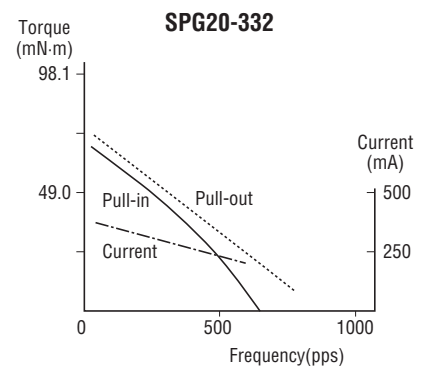
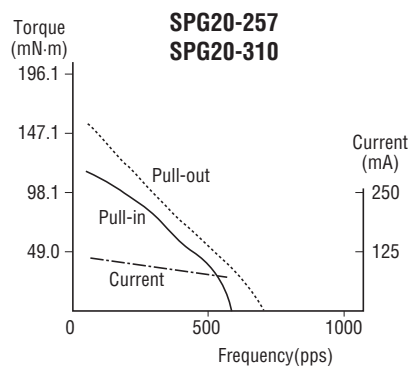
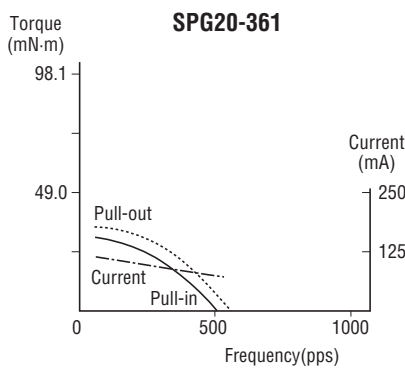
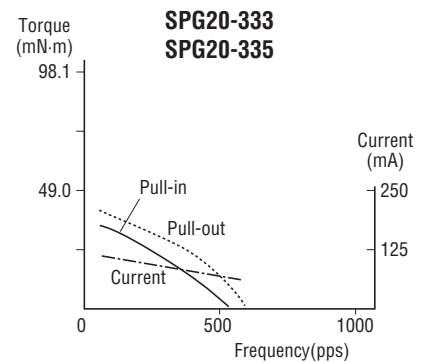
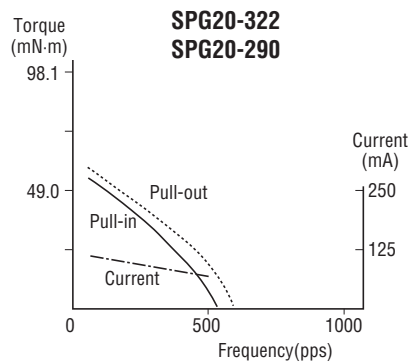
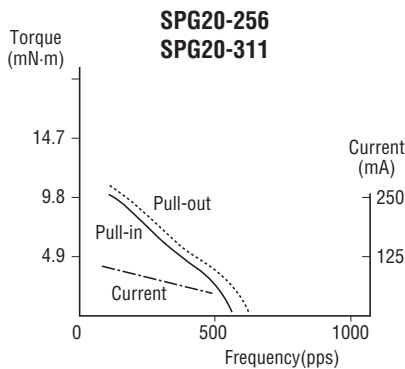
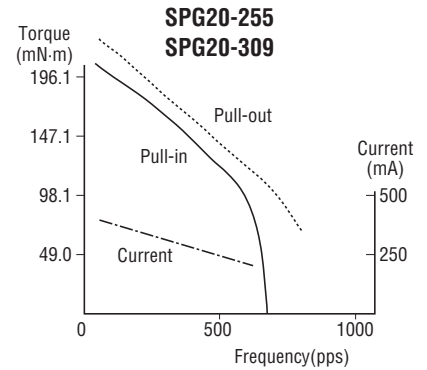
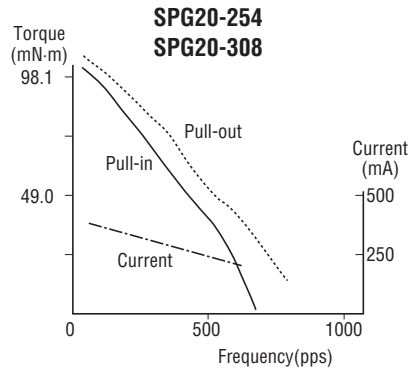
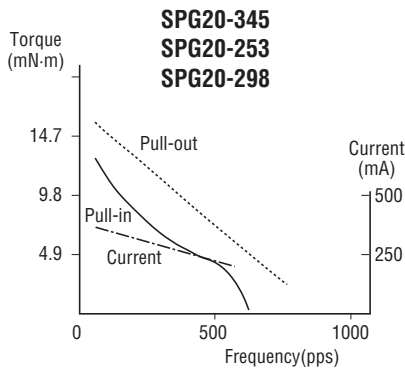
STANDARD SPECIFICATIONS

Item	SPG20																	
	345	253	256	335	254	322	255	257	298	311	361	332	333	308	290	309	310	
Number of phases	2																	
Number of poles	10																	
Excitation	2 phases bipolar								2 phases unipolar									
Gear ratio	1/6		1/24		1/36		1/72		1/6		1/18		1/24		1/36		1/72	
Basic step angle	3°		0.75°		0.5°		0.25°		3°		1°		0.75°		0.5°		0.25°	
Steps	120		480		720		1440		120		360		480		720		1440	
Winding resistance	63 Ω	68 Ω	200 Ω		68 Ω	200 Ω	68 Ω	200 Ω	68 Ω	180 Ω		68 Ω	180 Ω	68 Ω	180 Ω	68 Ω	180 Ω	
Power	Average power consumption 2 W maximum																	
Current	Refer to PERFORMANCE CURVES																	
Pull-in torque																		
Pull-out torque																		
Pull-in pulse rate																		
Maximum continuous response frequency																		
Temperature rise	Refer to TEMPERATURE CHARACTERISTICS																	
Insulation resistance	30 MΩ minimum at DC500 V																	
Dielectric strength	500 Vrms at AC50 Hz, 1 min																	
Operating temperature range	0 ~ 50 °C																	
Net weight	Approx. 30 g																	
Axial maximum load	Continuous	19.6 mN·m								Reference value								
	Momentary	98.1 mN·m								Reference value								
Standard connector terminal	Male connector 04DR-N-E8E or 04DR-N-E6S Made by J.S.T. 4 3 2 1 φ1 φ1 φ2 φ2								Male connector 06ZR-8M or ZHR-6 Made by J.S.T. 6 5 4 3 2 1 φ1 φ2 φ1C φ2C φ1 φ2									

※ The characteristics were measured using DM-212X and DX-412X.

PERFORMANCE CURVES

12V-2phases-EX.



※ These performance curves show actual value, not guaranteed value.