



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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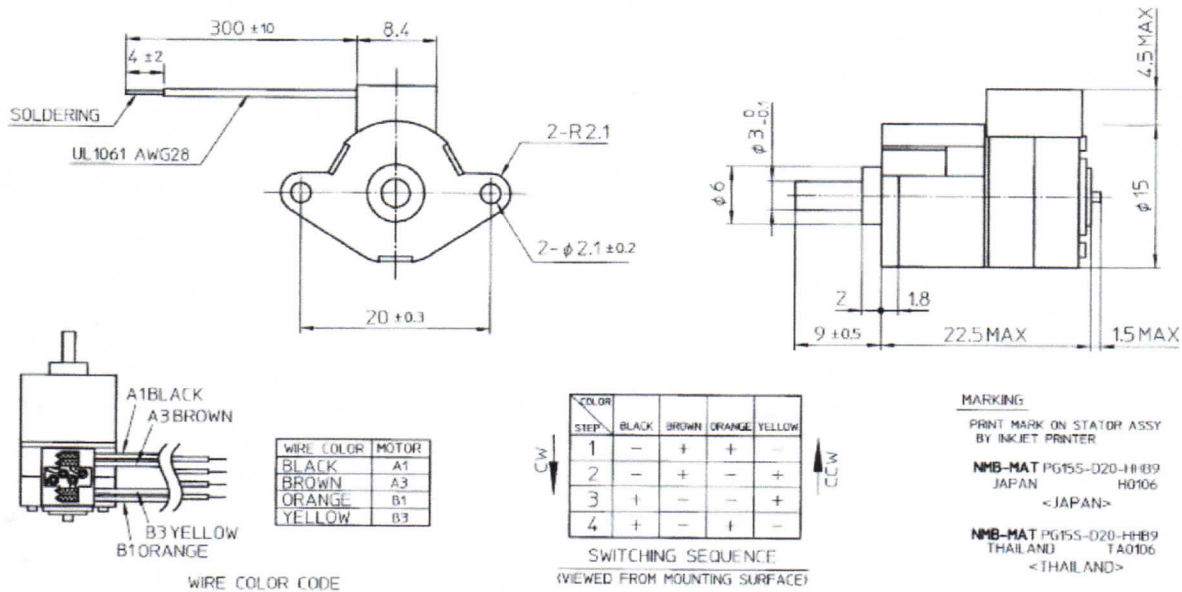


## Standard PG Step Motors

### PG15S-D20-HHB9

#### Model Specifications

Model:	PG15S-D20-HHB9
Step Angle:	0.176 °
Drive Voltage:	DC 15.0 V
Shaft Length:	9mm
Wire Length:	300mm fly leads (no connector)
Wire Holder:	90 deg. Left
Gear Ratio:	1/102.5
Electrical:	15V, 100mA
	Bipolar Constant Current

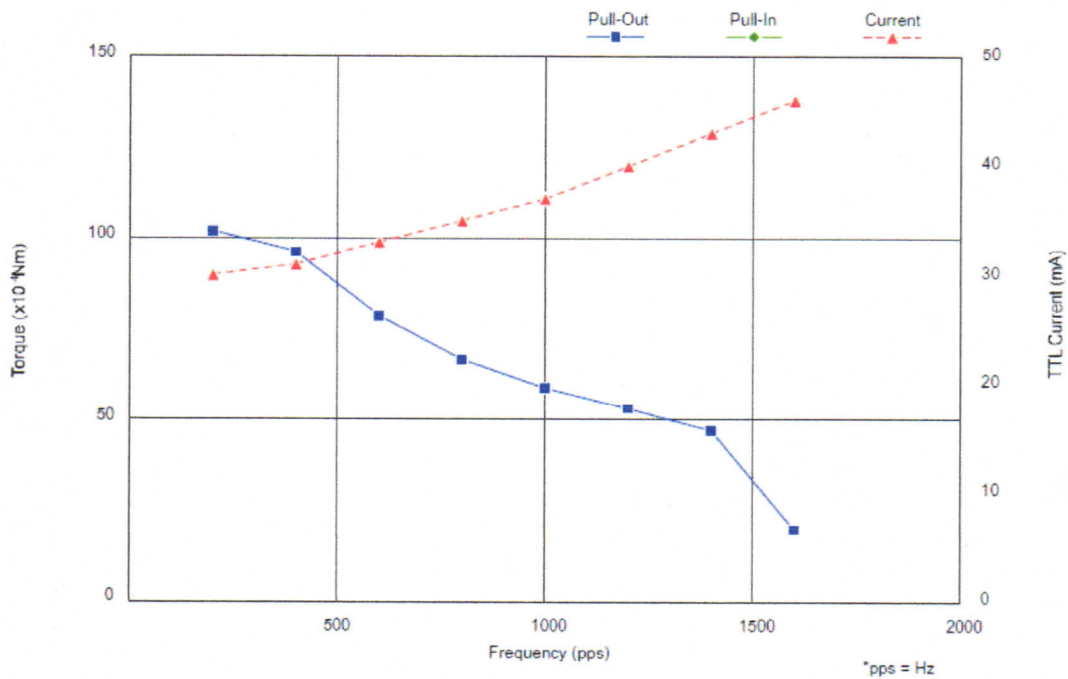


# PG15S-D20-HHB9

## DYNAMIC TORQUE CHARACTERISTICS (No. 63559)

(ALL VALUES ARE GAINED BY MEASUREMENT AND NOT SPECIFICATIONS VALUES)

Model : PG15S-D20-HHB9  
 Drive Mode : BIPOLAR CHOPPER  
 Drive Voltage : 15.0 V  
 Method : 2-2P  
 Drive IC : UDN2916B-V  
 Surge/Current : / 100 mA / Phase (Peak)  
 Coil Resistance : 10.0 Ω  
 Magnet Material : MS70A  
 Stator Material : SECC  
 Note : Current adjust by 0 pps., GEAR RATIO 1/102.5  
 MAES8U4 STA9Z03

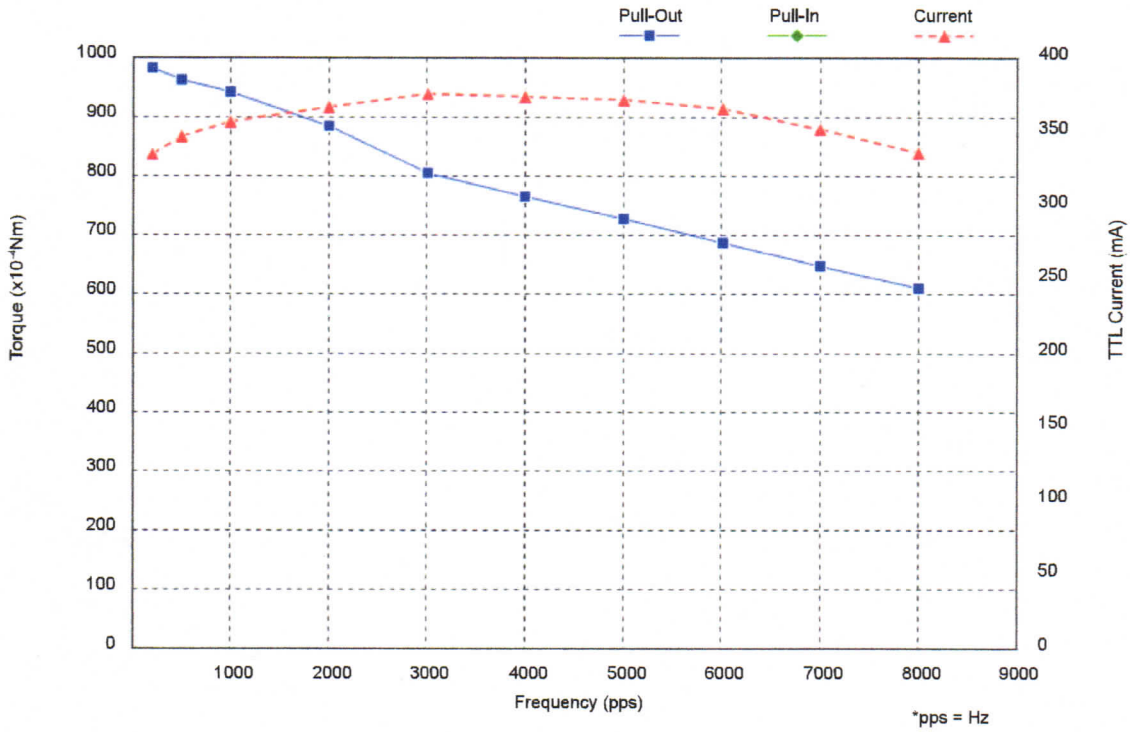


Frequency (pps)	200	400	600	800	1000	1200	1400	1600
■ Pull-Out (x10 <sup>-4</sup> Nm)	102.0	96.1	78.5	66.7	58.8	53.0	47.1	19.6
◆ Pull-In (x10 <sup>-4</sup> Nm)		96.1						
▲ Current (mA)	30	31	33	35	37	40	43	46

## DYNAMIC TORQUE CHARACTERISTICS (No. 77102)

(ALL VALUES ARE GAINED BY MEASUREMENT AND NOT SPECIFICATIONS VALUES)

Model : PG15S-D20-HHB9B  
 Drive Mode : BIPOLAR CHOPPER  
 Drive Voltage : 24.0 V  
 Method : 2-2P  
 Drive IC : LB1847  
 Surge/Current : / 500 mA / Phase (Peak)  
 Coil Resistance : 10.0 Ω  
 Magnet Material : MS70A  
 Stator Material : SECC  
 Note : Current adjust by 0 pps., GEAR RATIO 1/102.5  
 DATA REQ.

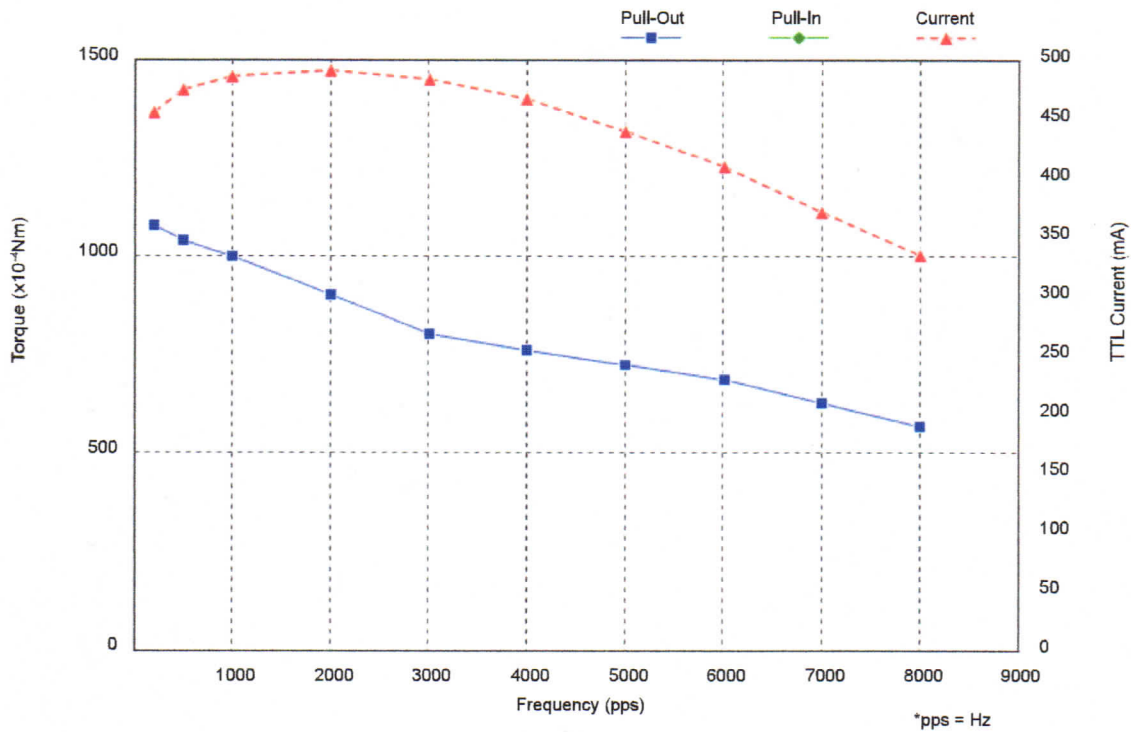


Frequency (pps)	200	500	1000	2000	3000	4000	5000	6000	7000	8000
■ Pull-Out (x10 <sup>-4</sup> Nm)	980.7	961.1	941.5	882.6	804.2	764.9	725.7	686.5	647.3	608.0
◆ Pull-In (x10 <sup>-4</sup> Nm)										
▲ Current (mA)	335	347	357	367	376	374	372	366	352	336

## DYNAMIC TORQUE CHARACTERISTICS (No. 77103)

(ALL VALUES ARE GAINED BY MEASUREMENT AND NOT SPECIFICATIONS VALUES)

Model : PG15S-D20-HHB9B  
 Drive Mode : BIPOLAR CHOPPER  
 Drive Voltage : 24.0 V  
 Method : 2-2P  
 Drive IC : LB1847  
 Surge/Current : / 600 mA / Phase (Peak)  
 Coil Resistance : 10.0 Ω  
 Magnet Material : MS70A  
 Stator Material : SECC  
 Note : Current adjust by 0 pps., GEAR RATIO 1/102.5  
 DATA REQ.



Frequency (pps)	200	500	1000	2000	3000	4000	5000	6000	7000	8000
■ Pull-Out (x10 <sup>-4</sup> Nm)	1078.8	1039.5	1000.3	902.2	804.2	764.9	725.7	686.5	627.6	568.8
◆ Pull-In (x10 <sup>-4</sup> Nm)										
▲ Current (mA)	456	475	486	491	483	467	439	409	371	335