# imall

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!



# Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832 Email & Skype: info@chipsmall.com Web: www.chipsmall.com Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China





Minebea Motor Manufacturing Corporation eMINEBEA.COM

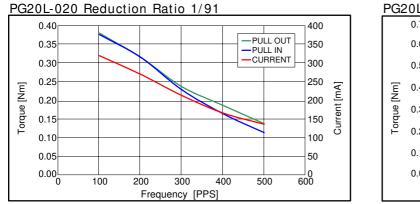
#### Applications

Home electric appliances : Air-conditioners OA Equipment : Printers / Photocopiers Power Tools : Drills / Drivers

### Reference Characteristics

Motor Size	PG20L-020			
Reduction Ratio	1/34.3	1/91	1/185.4	
Drive Characteristics	BIPOLAR CONST. VOLT.			
Drive Voltage	12[V]			
Drive Method	2-2 PHASE			
Step Angle (2phase drive)	0.524°	0.197°	0.097°	
DC Resistance	80[Ω]			
Insulation Resistance	100Μ[Ω] MIN			
Dielectric Strength	AC 500[V] 1[min]			
Class of Insulation	CLASS B			
Operating Temp.	-10[°C] ~ 50[°C]			
Storage Temp.	-30[°C] ~ 80[°C]			
Operating Hum.	20[%] RH ~ 90[%] RH			
	1			

## Torque Characteristics



400 0.16 CURRENT 0.14 350 0.12 300 [Nm] 250 0.10 Torque | 0.08 200 0.06 150 100 0.04 0.02 50 0.00 0 0 100 200 300 400 500 600 Frequency [PPS] PG20L-020 Reduction Ratio 1/185.4 0.70 350 0.60 PULL OUT 300 PULL IN CURRENT

PG20L-020 Reduction Ratio 1/34.3

0.20

0.18

PG20L-<mark>02</mark>

**PM Motor** 

PULL OUT

PULL IN

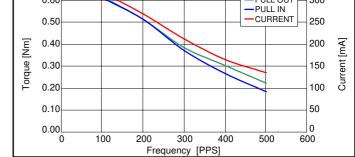
PG Type

500

450

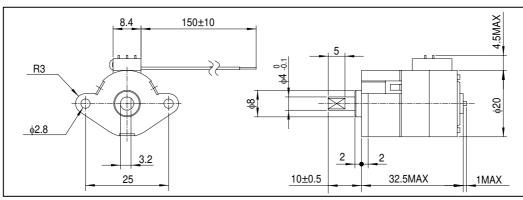
[mA]

Current



These torque values are reference only. Heat radiation conditions and temperature rise effect by duty are different on each equipment, therefore please select motors after considering the heat conditions in the actual equipment.

#### Dimensions



The dimensions shown are for reference purpose and can be modified to your requirements. Contact our Engineering Department for details.

#### \_\_\_\_\_