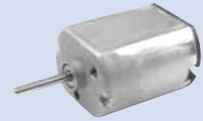


# PPN7 (φ 15.6 x 12 x 18.6mm)

Metal Brush



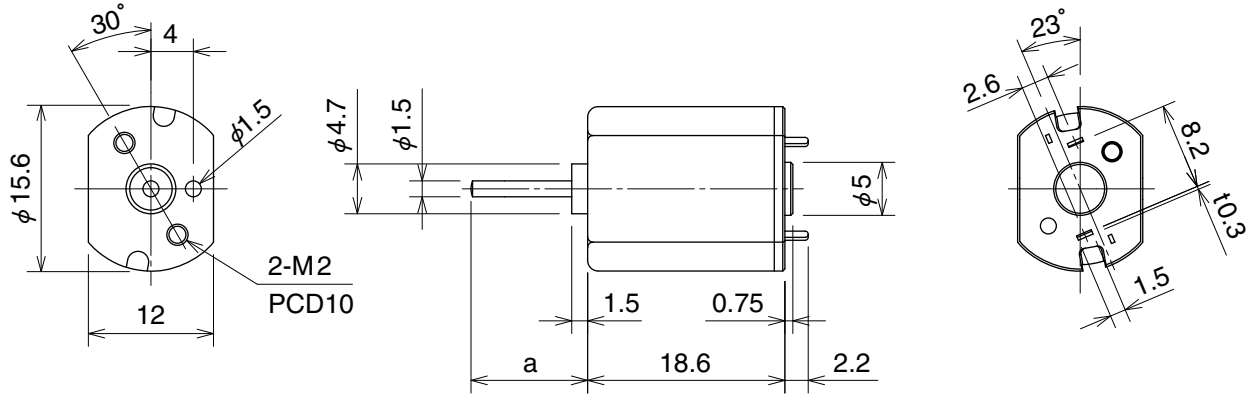
Weight:10.0g

## Applications

Audio, Robot, Door Lock

## External Dimensions

MinebeaMitsumi  
Passion to Create Value through Difference



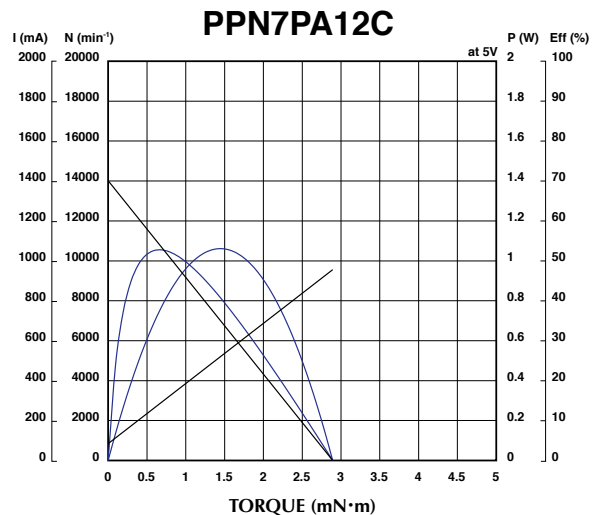
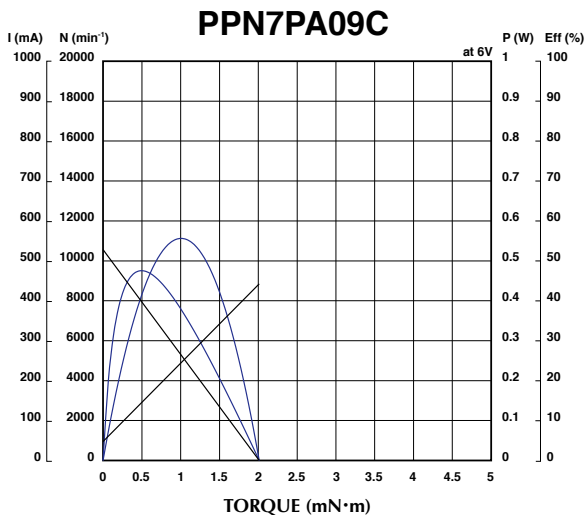
a=7mm、11mm

Unit:mm

## Reference Characteristics

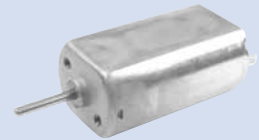
Model	Voltage		No Load		Rated Load		Rated Load		Starting Torque		Starting Current	Shaft Length
	Operating	Rated	Speed	Current			Speed	Current				
	(V)	(V)	(min <sup>-1</sup> )	(mA)	(gf·cm)	(mN·m)	(min <sup>-1</sup> )	(mA)	(gf·cm)	(mN·m)	(mA)	(mm)
PPN7PA08B	2 to 7	2.5	3050	21	1	0.10	2600	35	6.9	0.68	118	7
PPN7PA09C	2 to 7	6	10520	47	5	0.49	8000	144	20.5	2.01	443	11
PPN7PA10C	2 to 7	6	12000	47	5	0.49	9500	157	23.6	2.31	567	11
PPN7PA11B	2 to 7	5	12000	57	5	0.49	9400	191	22.7	2.22	673	7
PPN7PA12C	2 to 7	5	14000	84	5	0.49	11600	235	29.5	2.89	957	11

## Characteristics



# PPN13 ( $\phi$ 16.1 x 12 x 26.5mm)

Metal Brush

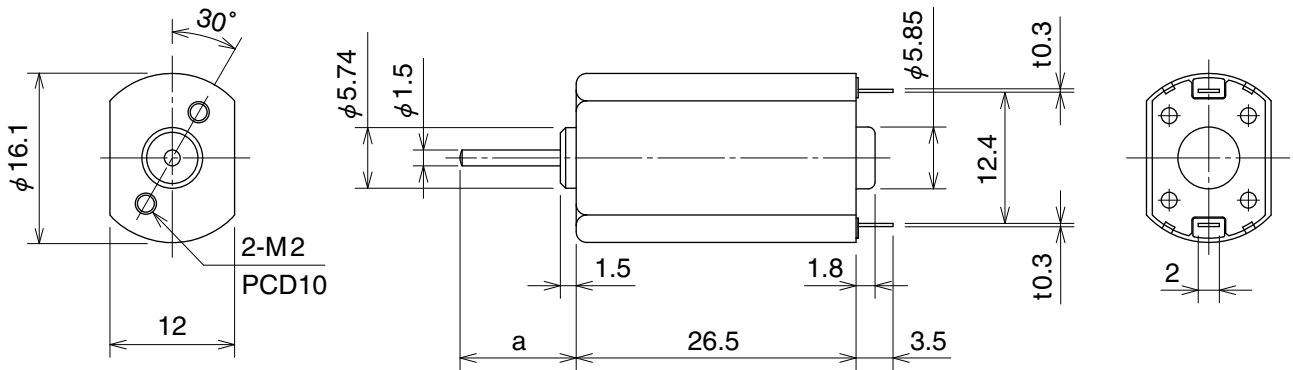


Weight:17.0g

## Applications

Audio

## External Dimensions



a=6mm、8mm、11mm

Unit:mm

## Reference Characteristics

Model	Voltage		No Load		Rated Load		Rated Load		Starting Torque		Starting Current (mA)	Shaft Length (mm)
	Operating (V)	Rated (V)	Speed (min <sup>-1</sup> )	Current (mA)			Speed (min <sup>-1</sup> )	Current (mA)				
	(V)	(V)	(min <sup>-1</sup> )	(mA)	(gf·cm)	(mN·m)	(min <sup>-1</sup> )	(mA)	(gf·cm)	(mN·m)		
PPN13PB10A	2 to 9	7.4	7000	29	7.5	0.74	5650	108	39.6	3.88	442	6
PPN13PB11B	2 to 9	7.4	9100	34	7.5	0.74	7450	137	41.7	4.09	601	8
PPN13PB12C	2 to 9	5	7100	34	5	0.49	6100	114	36.6	3.59	618	11

## Characteristics

