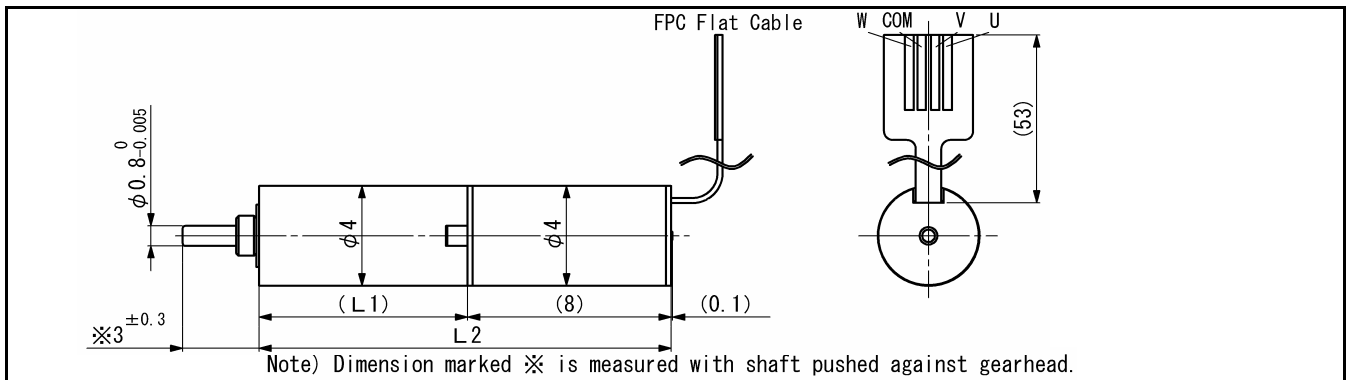


# SBL04-08

Electronically commutated sensorless motor, slotless stator design



## Sensorless drive circuit SSD04

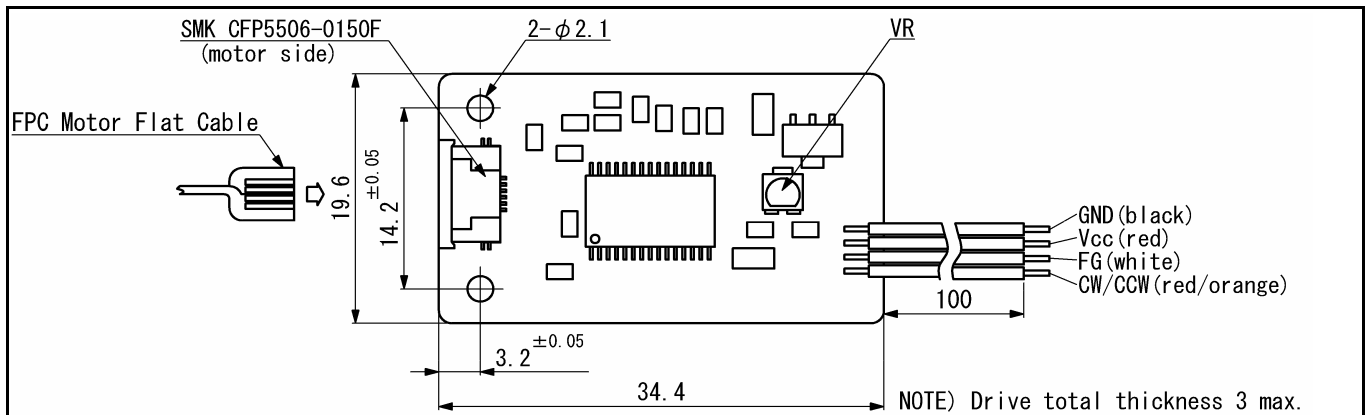
Ordering number	SBL04-0829PG4.3	SBL04-0829PG18	SBL04-0829PG79	SBL04-0829PG337
1 Nominal voltage	3	3	3	3 V
2 Terminal resistance	29	29	29	29 $\Omega$
3 Gearhead reduction ratio	4.3	18	79	337 :1
4 Gearhead number of stage	1	2	3	4
5 Max. output power, gearhead output	0.04	0.03	0.03	0.02 W
6 Max. efficiency	25	25	25	25 %
7 No-load speed, gearhead output	6300	1470	345	80 rpm
8 No-load current	26	26	26	26 mA
9 Stall torque (2-points measurement), gearhead output	0.22	0.8	2.92	10.6 mNm
10 Friction torque	0.075	0.27	0.99	3.6 mNm
11 Back-EMF constant	0.36	1.52	6.5	27.9 mV/rpm
12 Torque constant	2.88	10.5	38.1	138.9 mNm/A
13 Coil inductance	74	74	74	74 $\mu$ H
14 Mechanical time constant, motor only	5	5	5	5 ms
15 Gearhead length, L1	5.8	7	8.2	9.4 mm
16 Total length, L2	13.8	15	16.2	17.4 mm
17 Rotor inertia, motor only	$9 \times 10^{-4}$	$9 \times 10^{-4}$	$9 \times 10^{-4}$	$9 \times 10^{-4}$ gcm <sup>2</sup>
18 Total weight	810	990	1010	1030 mg

## General data

19 Operating temperature range	-20 ... +70	$^{\circ}$ C
20 Max. temperature raise at stall	55	$^{\circ}$ C
21 Bearing type	Sintered sleeves	
22 Max. permissible press fit force, gearhead output	5	N
23 Max. radial play, gearhead output	0.044	mm
24 Max. axial play, gearhead output	0.15	mm

# SSD04

## Sensorless brushless motor drive circuit



For Micro DC brushless motors **SBL02-06** and **SBL04-08**

### Description

SSD04 is a 3-phase sensorless drive circuit designed to operate brushless motor SBL02-06 and SBL04-08 exclusively. The operating voltage can be adjusted by VR trimmer and motor shaft direction can be reversed by connecting CW/CCW input to Vcc, if not connected the SBL02-06 runs CW while SBL04-08 CCW. FG (Frequency Generator) output provides a pulse per motor revolution. Internal thermal protection circuit included.

### Specifications

	SSD04			
	Min.	Typ.	Max.	
Voltage supply	2.7		6.0	V
Output voltage			4.9	V
Output current			0.8	A
Operating temperature range	-20 ... +75			°C
Weight	1.9			g