

DESCRIPTION

A single phase stepper mini-motor has been developed. Its structure characteristic includes axial tuneable air gap, flat magnet. It allows tests for several magnet thickness and is to be applied for test of thick film magnet realised with micro-technologies.

TECHNICAL CHARACTERISTICS

REFERENCES	UNIT	SPSM-1
> Notes		
Number of step per revolution	/	4
Step angle	Degrees	90
Nominal supply voltage	V	5.5
Nominal pulse current	A	0.45
Pulse width	ms	100
Voil resistance (100Hz)	ohm	12.1
Detent torque	μ N.M	500
Usefull torque at nominal voltage (20°C)	μ N.M	1300
Temperature range	°C	TBD
Direction of rotation	μ N.M	C.C.W
Moving weight	g	1.2
Total weight	g	7.1
Moving part inertia	gmm ²	15.7
Air gap	μ m	400
Coil inductance (100Hz)	mH	3.9
Back fem coefficient	mVs	11.6 (TBC)
Torque coefficient	μ Nm/A	2880
Usefull torque / weigth	μ Nm/g	180
Usefull torque / weigth / current	μ Nm/g/A	407

Table 1: Characteristics of SPSM-1

APPLICATIONS

Functional prototype - Demonstrator of know how of CEDRAT TECHNOLOGIES - Example of design engineering capabilities.

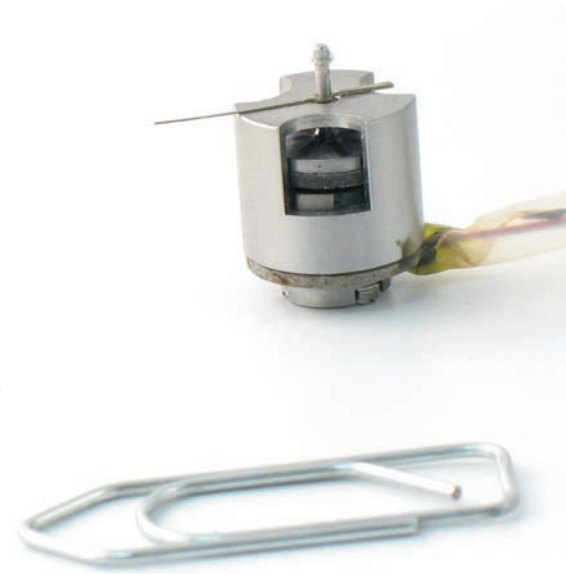


Fig. 1: Single phase stepper minimotor