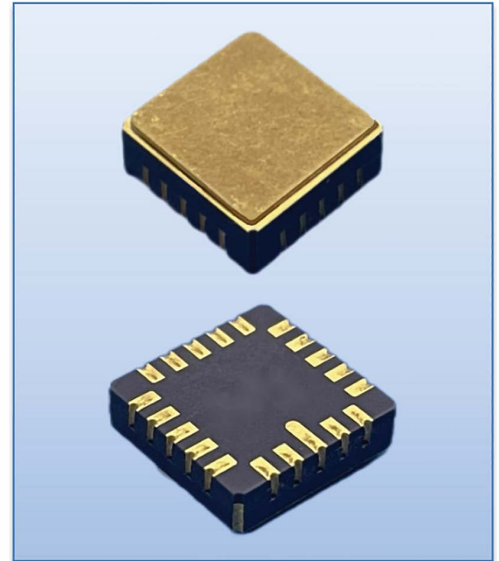


Single axis high-precision MEMS gyroscope

Main features

- Rate range ± 450 °/s
- High bandwidth 500Hz
- Compatible with SPI 4-wire
- Built in temperature sensor
- Power supply range: 2.7 V to 3.6 V
- Small size and light weight
- Temperature compensation range: -40 ° C to $+85$ ° C
- Error calibration for internal bias temperature compensation, linearity, and cross axis



Application field

- Attitude control in the industrial field
- Automated machinery
- Robot control
- Stability and control of the platform
- Automotive instrumentation

The BS-GL18-450-D1CS gyroscope sensor is an angular velocity sensor. As a quartz electronic gyroscope chip, it has the characteristics of good temperature characteristics, low power consumption, low cost, and good stability.

1. Technical parameter indicators

Table 1. Gyro Sensor Characteristics

(V_{DDM} = 2.7 V to 3.6V, V_{DDI} = 1.65 V to 3.6 V, GND = 0 V, T_{OPR} = -40 °C to +85 °C)

Parameter	Condition	Min.	Type.	Max.	Unit
Scale factor	16bit, FS = 1x setting		264	-	LSB/(°/s)
	16bit, FS = 4x setting		66	-	
	24bit, FS = 1x setting		67584		
	24bit, FS = 4x setting		16896		
Scale factor tolerance	Ta = +25 °C	-2	-	+2	%
	Ta = +25 °C The value includes after the shipment.	-4	-	+4	%
Scale factor variation over temperature	VDDM = 3 V, Ta=25 °C reference	-3	-	+3	%
Bias	Ta = +25 °C	-	0	-	LSB
Bias tolerance	Ta = +25 °C	-1	-	+1	°/s
	Ta = +25 °C The value includes after the shipment.	-2	-	+2	°/s
Bias variation over temperature	VDDM = 3 V, Ta = +25 °C reference	-1	-	+1	°/s
Rate range	FS = 1x setting	-115		+115	°/s
	FS = 4x setting	-450		+450	
Non-linearity		-0.25	-	+0.25	%FS
Cross-axis sensitivity	Ta = +25 °C	-5	-	+5	%
Current consumption		-	1150	1400	μA
Sleep current		-	1	30	μA
Noise density		-	0.0015	-	(°/s)/√Hz
Bandwidth			500		Hz

2. Detection Axis and Output Polarity

This product detects an angular rate of a rotational movement. The correlation between a detecting axis of the angular rate and an output polarity is shown in Figure 1

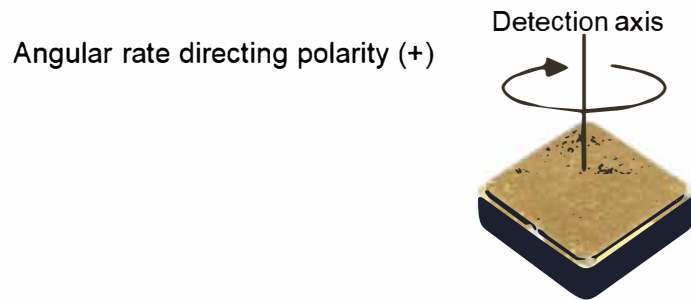


Figure 1 Detection Axis and Detection Polarity

3. Product dimensions

