

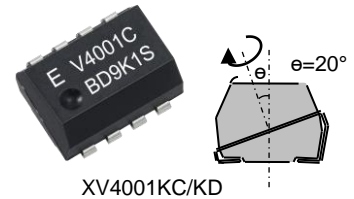
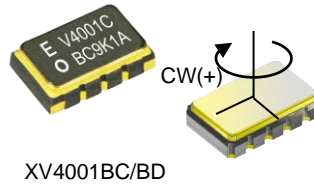
# GYRO SENSOR (Digital Output) FOR AUTOMOTIVE

## XV4001BC / BD XV4001KC / KD



Product number  
**XV4001BC: X2A000201xxx00**  
**XV4001BD: X2A000161xxx00**  
**XV4001KC: X2A000211xxx00**  
**XV4001KD: X2A000171xxx00**

- SPI or I<sup>2</sup>C serial interface
  - Angular rate output (16bit), Temperature output (11bit)
  - Inclined angle: 20 degrees (XV4001KC/KD)  
 XV4001BC ... I<sup>2</sup>C / 5.0 x 3.2 x 1.3 mm  
 XV4001BD ... SPI / 5.0 x 3.2 x 1.3 mm  
 XV4001KC ... I<sup>2</sup>C / 6.0 x 4.8 x 3.3 mm  
 XV4001KD ... SPI / 6.0 x 4.8 x 3.3 mm
  - AEC-Q200 compliant
- Recommended Application**
- Car navigation system, Telematics



### Specifications (characteristics)

Item	Symbol	Specifications	Conditions / Remarks
Supply Voltage	V <sub>DD</sub>	3.3 V ±0.3 V	
Temperature range	Storage Temperature	T <sub>STG</sub>	-50 °C to +105 °C
	Operating Temperature	T <sub>OPR</sub>	-40 °C to +85 °C
Scale factor	S <sub>o</sub>	370 LSB/(°/s) ±1.5 %	T <sub>a</sub> =+25 °C
Bias	V <sub>o</sub>	±2 %/s (0 LSB Typ.)	T <sub>a</sub> =+25 °C
Rate range	I	±70 °/s	
Non linearity	NL	±0.5 % FS	T <sub>a</sub> =+25 °C
Frequency response	BW	10 Hz Typ.	LPF Gain -3dB bandwidth
Cross axes	OS	±5 %	T <sub>a</sub> =+25 °C
Current consumption	I <sub>op</sub>	3.5 mA Typ.	not rotation and not communicating
Noise	r <sub>N</sub>	0.05 °/s RMS Typ.	

Product Name  
(Standard form)

XV4001BC \* \* \*

- ① Model    ② Detection axis (1:Z-axis)    ③ Package type(B: Ceramic 5032size, K: Lead frame K-Type)  
 ④ Output (C: I<sup>2</sup>C, D: SPI)    ⑤ Frequency    ⑥, ⑦ Internal identification code (⑥⑦ are not necessary to specify)

### External Dimensions

(Unit:mm)

**•XV4001BC/BD**

**•XV4001KC/KD**

**Pin map**

Pin	Connection	
	XV4001BC/BD	XV4001KC/KD
1	N.C.	GND
2	SCLK SCL	MOSI
3	SS	MISO SDA
4	V <sub>DD</sub>	N.C.
5	N.C.	N.C.
6	N.C.	SCLK SCL
7	GND	SS
8	MOSI	V <sub>DD</sub>
9	MISO SDA	-
10	N.C.	-

Do not connect "N.C." pins externally.

### Footprint (Recommended)

(Unit:mm)

**•XV4001BC/BD**

**•XV4001KC/KD**

► Explanation of the mark that are using it for the catalog

	<p>► Pb free.</p>
	<p>► Complies with EU RoHS directive.          *About the products without the Pb-free mark.          Contains Pb in products exempted by EU RoHS directive.          (Contains Pb in sealing glass, high melting temperature type solder or other.)</p>
	<p>► Designed for automotive general equipment.</p>
	<p>► Designed for automotive applications related to driving and safety.</p>

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