



## GYRO SENSOR (Digital Output)

## XV7001BB

- SPI or I<sup>2</sup>C serial interface
- Angular rate output (16bit)
- Built-in temperature sensor
- Built-in selectable digital filter
- Low power consumption

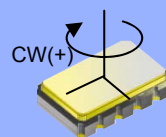
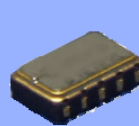
## Recommended Application

- Anti vibration and attitude control for industrial applications etc.
- Motion detection for man machine interface

\*The I2C-Bus is a trademark of NXP Semiconductors



Product number (please contact us)  
XV7001BB: X2A000261xxx00



Actual size

XV7001BB



## Specifications (characteristics)

| Item                         | Symbol                | Specifications      | Conditions / Remarks       |
|------------------------------|-----------------------|---------------------|----------------------------|
| Supply Voltage               | VDDM                  | 2.7 to 3.6 V        |                            |
| Supply Voltage for interface | VDDI                  | 1.65 V to 3.60 V    |                            |
| Temperature range            | Storage Temperature   | T <sub>STG</sub>    | -40 °C to +85 °C           |
|                              | Operating Temperature | T <sub>OPR</sub>    | -20 °C to +80 °C           |
| Scale factor                 | So                    | 280 LSB/(°/s) ±5 %  | 16bit, Ta=+25 °C           |
| Bias                         | ZRL                   | ±1 °/s (0 LSB Typ.) | Ta=+25 °C                  |
| Bias over temperature        | ZRL <sub>t</sub>      | ±5 °/s              | Variation from Ta = +25 °C |
| Rate range                   | I                     | ±100 °/s            |                            |
| Non linearity                | NI                    | ±0.5 %FS            | Ta=+25 °C                  |
| Cross axes                   | CS                    | ±5 %                | Ta=+25 °C                  |
| Current consumption          | Iop1                  | 0.9 mA Typ.         | Not communicating          |
| Stand-by current             | Iop2                  | 160 µA Typ.         |                            |
| Sleep current                | Iop3                  | 3 µA Typ.           |                            |
| Noise                        | Nd                    | 0.003 (°/s)/√Hz     | at 10Hz                    |

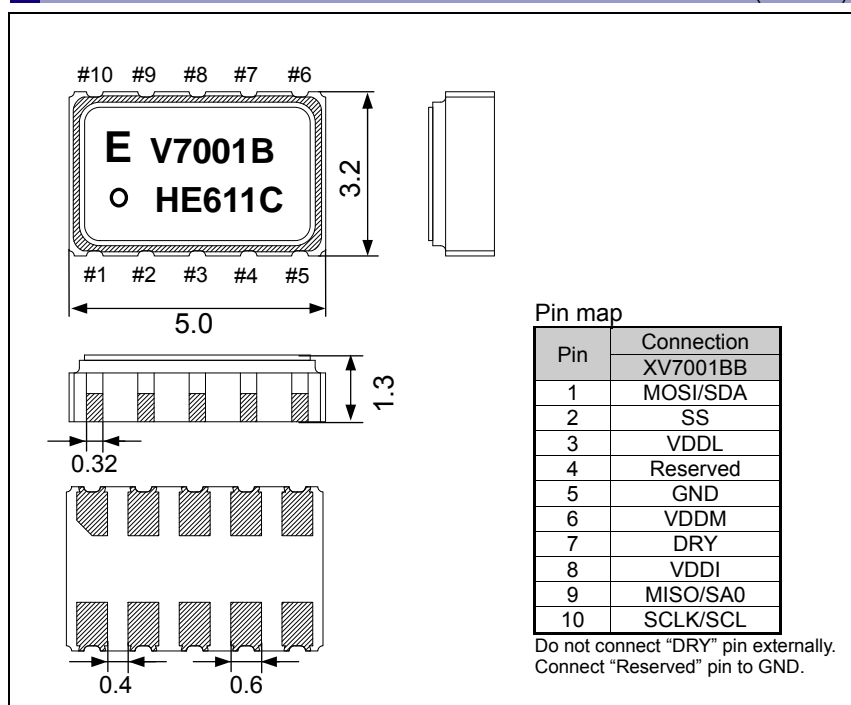
Product Name  
(Standard form)

XV700 1 B B \* \* \*

①Model ②Detection axis (1:Z-axis) ③Package type(B: Ceramic 5032size)  
④Output (B: SPI/I<sup>2</sup>C) ⑤Frequency ⑥,⑦Internal identification code (⑤⑥⑦ are not necessary to specify)

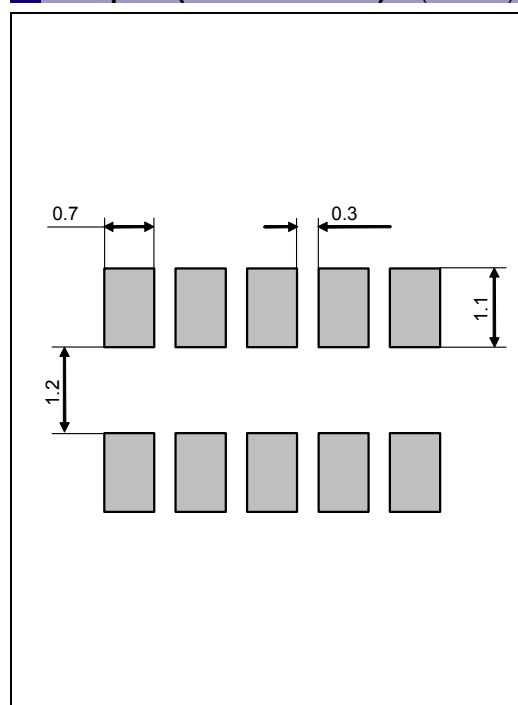
## External Dimensions

(Unit:mm)



## Footprint (Recommended)

(Unit:mm)



## PROMOTION OF ENVIRONMENTAL MANAGEMENT SYSTEM CONFORMING TO INTERNATIONAL STANDARDS

At Seiko Epson, all environmental initiatives operate under the Plan-Do-Check-Action (PDCA) cycle designed to achieve continuous improvements. The environmental management system (EMS) operates under the ISO 14001 environmental management standard.

All of our major manufacturing and non-manufacturing sites, in Japan and overseas, completed the acquisition of ISO 14001 certification.

ISO 14000 is an international standard for environmental management that was established by the International Standards Organization in 1996 against the background of growing concern regarding global warming, destruction of the ozone layer, and global deforestation.





## WORKING FOR HIGH QUALITY

In order provide high quality and reliable products and services than meet customer needs,

Seiko Epson made early efforts towards obtaining ISO9000 series certification and has acquired ISO9001 for all business establishments in Japan and abroad. We have also acquired ISO/TS 16949 certification that is requested strongly by major automotive manufacturers as standard.

ISO/TS16949 is the international standard that added the sector-specific supplemental requirements for automotive industry based on ISO9001.

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

|   |   |
|---|---|
|  | ► Pb free.  |
|  | ► Complies with EU RoHS directive.<br>*About the products without the Pb-free mark.<br>Contains Pb in products exempted by EU RoHS directive.<br>(Contains Pb in sealing glass, high melting temperature type solder or other.) |
|  | ► Designed for automotive applications such as Car Multimedia, Body Electronics, Remote Keyless Entry etc.  |
|  | ► Designed for automotive applications related to driving safety (Engine Control Unit, Air Bag, ESC etc ).  |

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