



GYRO SENSOR (Digital Output)

XV4311BD

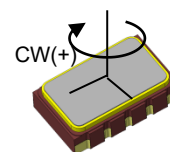


Product number (please contact us)
XV4311BD: X2A000371xxxxxx

- SafeSPI serial interface
- Angular rate output (16-bit / 24-bit)
- Excellent bias stability over temperature
- Operating temperature range -40 °C to +105 °C
- Built-in temperature sensor
- Bias instability 0.9°/h (Typ.)
- Comply with AEC-Q100 / Support evaluation of hardware elements in ISO26262

Recommended Application

- Anti-vibration and attitude control for industrial applications etc.
- Localization system for ADAS/autonomous vehicle applications (Yaw axis enhancement)



Specifications (characteristics)

Item	Symbol	Specifications	Conditions / Remarks
Supply voltage	V _{DDM}	2.7 to 3.6 V	
Supply voltage for interface	V _{DDI}	1.65 V to 3.60 V	
Temperature range	Storage temperature	T _{STG}	-40 °C to +105 °C
	Operating temperature	T _a	-40 °C to +105 °C
Scale factor	S _o	264 LSB/(°/s), 66 LSB/(°/s) ±2.0 %	16-bit, T _a = +25 °C, FS = 1, FS = 1/4
		67584 LSB/(°/s), 16896 LSB/(°/s) ±2.0 %	24-bit, T _a = +25 °C, FS = 1, FS = 1/4
Bias	ZRL	±1.0 °/s (0 LSB Typ.)	T _a = +25 °C
Bias over temperature	ZRL _t	±0.25 °/s	T _a = +25 °C reference
Rate range	I	±115 °/s, ±460 °/s	FS=1, FS=1/4
Non-linearity	NI	±0.05 %FS	T _a = +25 °C
Cross axes	CS	±5 %	T _a = +25 °C
Current consumption	I _{op1}	2.5 mA Max.	Not communicating
Sleep current	I _{op3}	3 µA Typ.	
Noise density	N _d	0.0015 (°/s)/√Hz Typ.	@10Hz
Angle random walk	ARW	0.065 °/√h Typ.	
Bias instability	Bs	0.9 °/h Typ.	Bottom value of Allan deviation

Product Name
(Standard form)

XV4311BD * * *

① ②③④ ⑤ ⑥ ⑦

① Model ② Detection axis (1: Z axis) ③ Package type (B: Ceramics 5032 size)

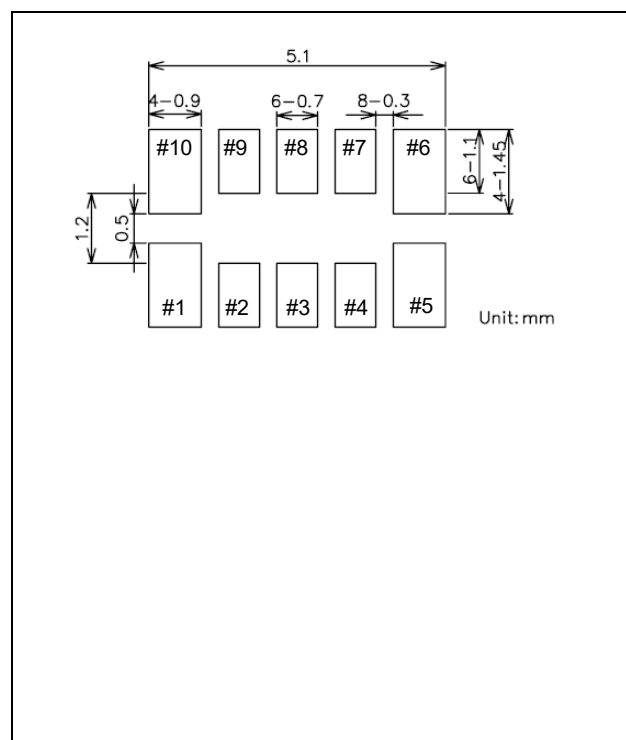
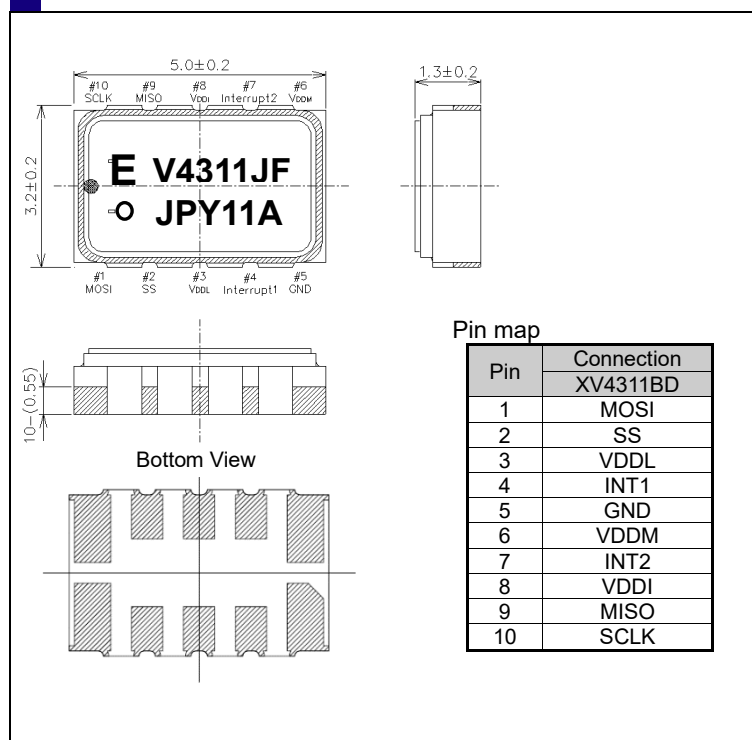
④ Output (D: SafeSPI) ⑤ Frequency ⑥, ⑦ Custom recognition (⑤⑥⑦ are necessary to specify)

External Dimensions





(Unit:mm)

Footprint (Recommended)

(Unit:mm)



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

	► Pb free.
	► 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.)
	► Designed for automotive general equipment.
	► Designed for automotive applications related to driving and safety.

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