



## kHz RANGE CRYSTAL UNIT

## FC3215BN

Product Number  
FC3215BN: X1A000211xxxx16

- Frequency range : 32.768 kHz
- External dimensions : 3.2 x 1.5 x 0.9 mm
- Overtone order : Fundamental
- Applications : IoT Devices, Modules, etc.



## Specifications (characteristics)

Item	Symbol	Specifications	Conditions / Remarks
Nominal frequency range	f_nom	32.768 kHz	
Storage temperature range	T_stg	-55 °C to +125 °C	Storage as single product.
Operating temperature range	T_use	-40 °C to +105 °C	
Level of drive	DL	0.5 µW	
Frequency tolerance (standard)	f_tol	±20 x 10 <sup>-6</sup>	+25 °C, DL = 0.1 µW
Turnover temperature	Ti	+25 °C ± 5 °C	
Parabolic coefficient	B	-0.04 x 10 <sup>-6</sup> / °C <sup>2</sup> Max.	
Load capacitance	CL	6 pF, 7 pF, 9 pF, 12.5 pF	Contact us for other CL values
Motional resistance (ESR)	R1	35 kΩ Typ.	+25 °C
		50 kΩ Max.	-40 °C to +85 °C
		60 kΩ Max.	-40 °C to +105 °C
Motional capacitance	C1	3.4 fF Typ.	
Shunt capacitance	C0	1.0 pF Typ.	
Frequency aging	f_age	±3 x 10 <sup>-6</sup> / year Max.	+25 °C, First year

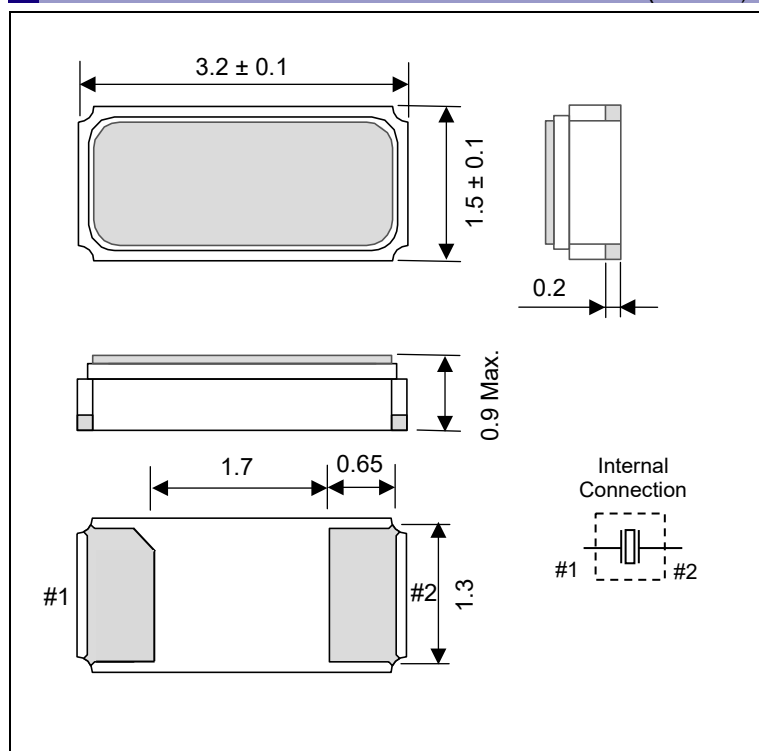
## Product name

Product name      FC3215BN    32.768000kHz    12.5    +20.0-20.0  
(Standard form)        a                                  b                                  c                                  d

a. Model   b. Frequency   c. Load capacitance (pF)   d. Frequency tolerance (× 10<sup>-6</sup>, +25 °C)

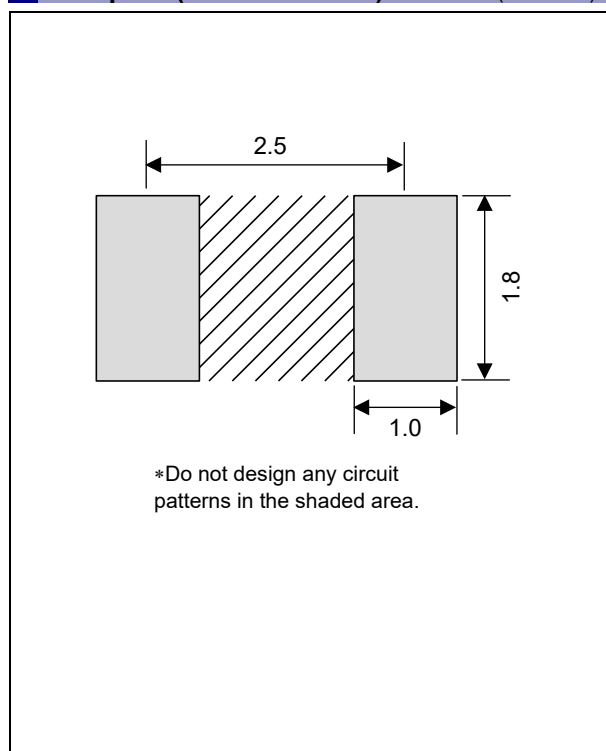
## External dimensions

(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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