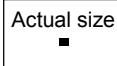


◆ FEATURES

- 1210 size tuning fork crystal unit (32.768 kHz)
- World's smallest package: 1.2 × 1.0 × 0.35 mm Max. / 0.8 mg
- 47% smaller volume & 25% narrower projected area than TFX-04
- Innovative "Crystal Package" created with "Metal Diffusion Sealing":
 - weighs only 0.8 mg, which is 71% lighter than TFX-04
 - provides better electrical characteristics than previous larger models
- Low ESR & high precision frequency with superior shock-resistance
- Wide operating temperature range (-40 ~ +105°C)
- Specifications in conformity with AEC-Q200 available on request



◆ APPLICATIONS

- Smartphones / wireless-modules / wearable devices

◆ ORDERING INFORMATION & SPECIFICATIONS

Ordering Number (Sample): **F5X** - **32768** - **090** - **D 80** - **R** - **H W ##**
 (1) (2) (3) (4) (5) (6) (7) (8) (9)

(1) Type
F5X

(2) Nominal Frequency	
32.768 kHz	32768

(3) Load Capacitance	
5.0, 7.0, 9.0, 12.5 pF*1	e.g. 9.0 pF = 090

*1 Other values available on request

(4) Frequency Tolerance @ 25°C	
±10 ppm	B
±20 ppm	D
±30 ppm	E
±50 ppm	F
Other	N

(5) Equivalent Series Resistance (Motional/Shunt Capacitance)	
80kΩ Max. (7.0 fF Typ./1.5 pF Typ.)	80
Other	NN

(6) Operating Temperature	
-20 ~ +70°C	P
-40 ~ +85°C	R
-40 ~ +105°C	S
Other	N

(7) Storage Temperature*2	
-40 ~ +85°C	G
-40 ~ +105°C	H
-55 ~ +125°C	J
Other	N

*2 Not applicable to packing materials

(8) Tape & Reel (φ180 mm)	
5000 pcs/reel	W
Other	N

(9) RIVER Use Only (As needed)

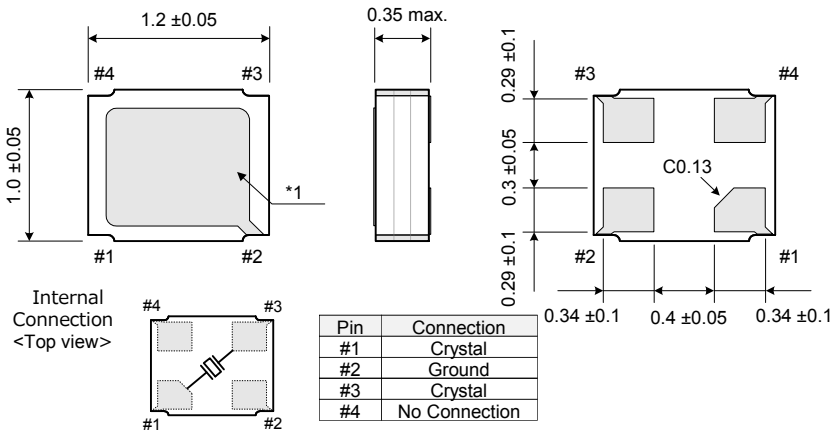
Temperature Coefficient
-0.03 ±0.01ppm/°C ²

Turnover Temperature
25 ±5°C

Drive Level
1.0 μW Max.

- "Ordering Number" codes are indicated in blue, and the corresponding specifications are described in black.
- Not all combinations of options are available as a standard specification.
- For specifications other than those above, please consult our sales or contact us via our website with your requirement.

◆ OUTLINE DIMENSIONS



◆ LAND PATTERN

Unit: mm

