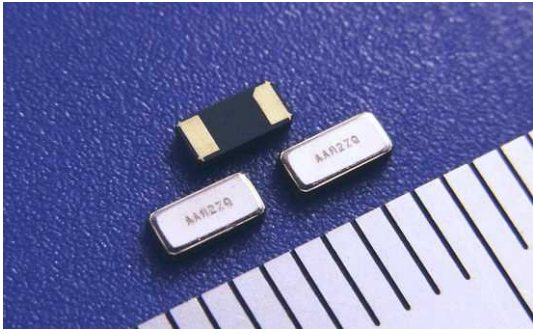
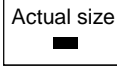


# TFX-02S



## ◆ FEATURES

- Tuning fork crystal unit / 32.768 kHz.
- 3.2 × 1.5 × 0.8 mm Max. / 10.6 mg.
- Frequency tolerance ±10 ppm available.
- Operating temperature range -40 ~ +105°C available.
- Ceramic with metal lid sealed by seam welding.
- One of the best-selling models of our products.
- Produced in Xian factory in China.



## ◆ APPLICATIONS

- Smartphones, wireless-modules, in-vehicle devices.

## ◆ ORDERING INFORMATION & SPECIFICATIONS

Ordering Number (Sample): **F2S** — **32768** — **090** — **D 70** — **R** — **H X ##**  
 (1) (2) (3) (4) (5) (6) (7) (8) (9)

(1) Type
F2S

(2) Nominal Frequency
32.768 kHz
32768

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

(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)	
70 kΩ Max. (6.5 fF Typ./1.5 pF Typ.)	70
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

(8) Tape & Reel (φ180 mm)	
3000 pcs/reel	X
Other	N

(9) RIVER Use Only (As needed)
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\*2 Not applicable to packing materials

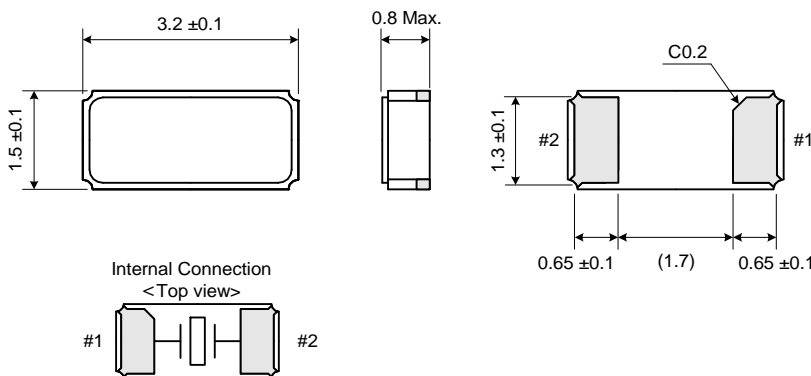
Temperature Coefficient
-0.03 ±0.01ppm/°C <sup>2</sup>

Turnover Temperature
25 ±5°C

Drive Level
0.5 μW Max.

- The codes for the Ordering Number are indicated in blue, and the specifications are described in black.
- Not all combinations of options are available as standard.
- AEC-Q200 complaint spec available upon request.
- For specifications other than those above, please contact our sales / website and let us know your specific requirements.

## ◆ OUTLINE DEMENSIONS



## ◆ LAND PATTERN

Unit: mm

