

SMD Tuning Fork Crystal Unit

1.2 mm x 1.0 mm / 32.768 kHz

NEW PRODUCT
TFX-05X

FEATURES

- The world's smallest 1210 size tuning fork crystal unit (32.768 kHz)
- Ultra-thin (0.35 mm) / ultra-light (0.8 mg) "Crystal Package" made of quartz crystal:
 - 43 % lighter weight than a ceramic package of the same size
 - Better weather-ability / excellent shock resistance
 - "Metal Diffusion Sealing (MDS)": Robust sealing method using metal diffusion (patent pending)
- Wide operating temperature range of -40 °C to +105 °C available
- Specifications in conformity with AEC-Q200 available on request



(1.2 × 1.0 × 0.35 mm)



APPLICATIONS

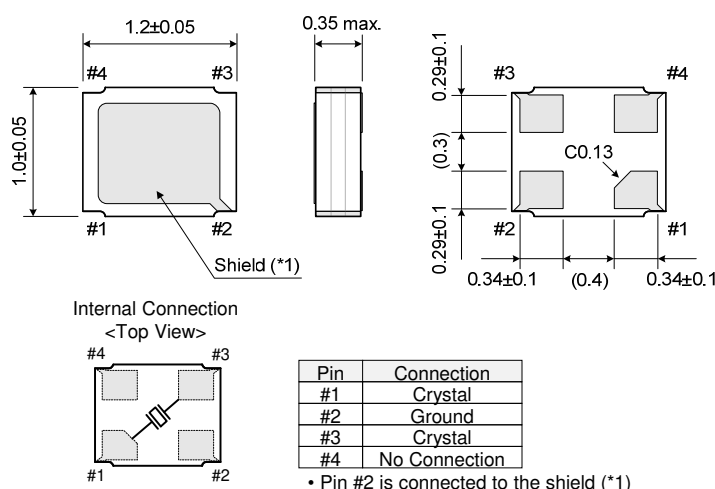
- Small wireless-modules, Wearable devices, Hearable devices, and others
- Smartphones, Medical and Healthcare devices, Automotive electronics, and others

STANDARD SPECIFICATIONS

Item	Specifications	Unit	Conditions (Remarks)
Nominal frequency	32.768	kHz	-
Frequency tolerance	±20	ppm	@25 °C (See below for more options)
Equivalent series resistance (Max.)	90	kΩ	-
Motional capacitance (Typ.)	7.0	fF	-
Shunt capacitance (Typ.)	1.5	pF	-
Storage temperature	-55 to +125	°C	-
Operating temperature	-40 to +85 -40 to +105	°C	(See below for more options)
Temperature coefficient	-0.03 ± 0.01	ppm/°C ²	-
Turnover temperature	25 ± 5	°C	-
Load capacitance	5.0, 7.0, 9.0, 12.5	pF	(Other values available)
Drive level (Max.)	0.5	μW	-
Tape and reel	5000	pcs/reel	Reel diameter : ø180 mm

OUTLINE DIMENSIONS

(Unit: mm)

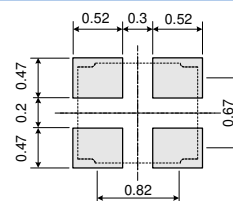


GENERAL NOTES

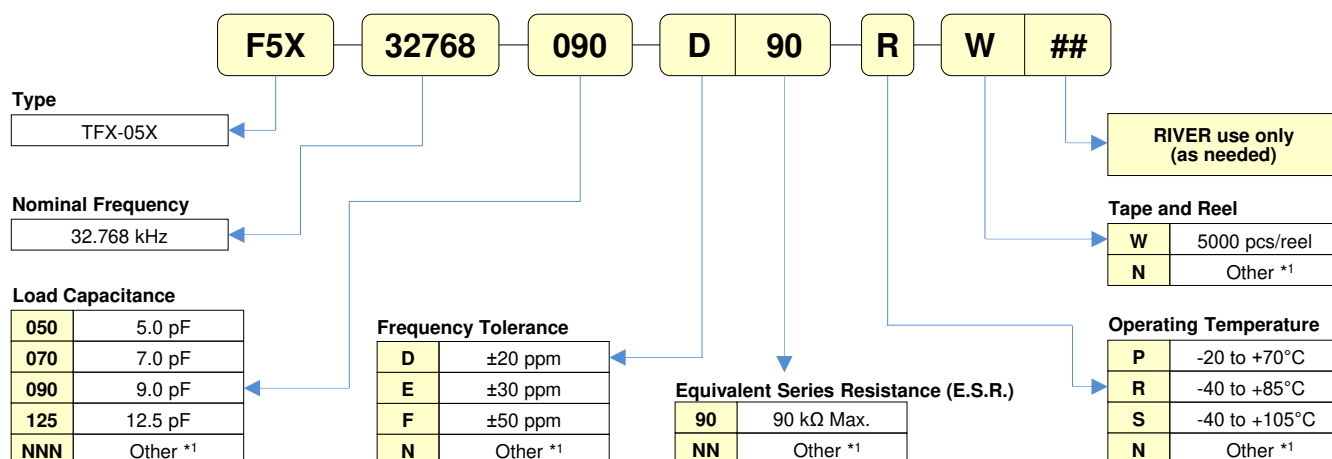
- Certain combinations of standard options may be classified as high-spec models.
- Please consult us for specifications that do not match the standard specifications.
- The information in this document is subject to change without notice.
- In case that the product is used in special installation environment, such as in resin mold, please consult us in advance.

RECOMMENDED LAND PATTERN

(Unit: mm)



ORDERING NUMBER GUIDE



*1. Please consult us for your requirements.