

SMD Tuning Fork Crystal Unit

3.2 mm x 1.5 mm / 32.768 kHz

TFX-02S

FEATURES

- Tuning fork crystal unit (32.768 kHz)
- Frequency tolerance of ± 10 ppm (@25 °C) available
- Wide operating temperature range of -40 °C to +105 °C available
- Robust ceramic package with metal lid sealed by seam welding
- Specifications in conformity with AEC-Q200 available on request



(3.2 × 1.5 × 0.8 mm)



APPLICATIONS

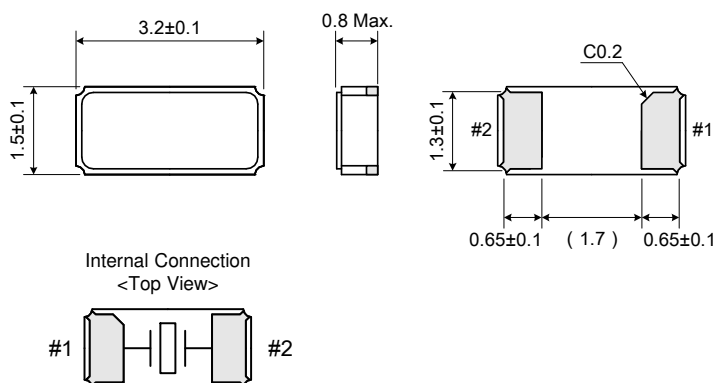
- Car audio systems / car GPS units / remote keyless entry / dash cameras
- Smartphones / wireless-modules

STANDARD SPECIFICATIONS

Item	Specifications	Unit	Conditions (Remarks)
Nominal frequency	32.768	kHz	-
Frequency tolerance	± 10	ppm	@25 °C (See below for more options)
Equivalent series resistance (Max.)	70	k Ω	-
Motional capacitance (Typ.)	6.5	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 $\pm$ 5	°C	-
Load capacitance	7.0, 9.0, 12.5	pF	(Other values available)
Drive level (Max.)	0.5	μ W	-
Tape and reel	3000	pcs/reel	Reel diameter : ϕ 180 mm

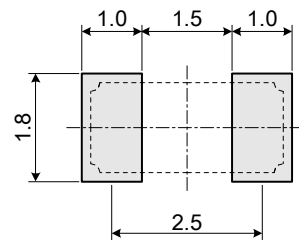
OUTLINE DIMENSIONS

(Unit: mm)



RECOMMENDED LAND PATTERN

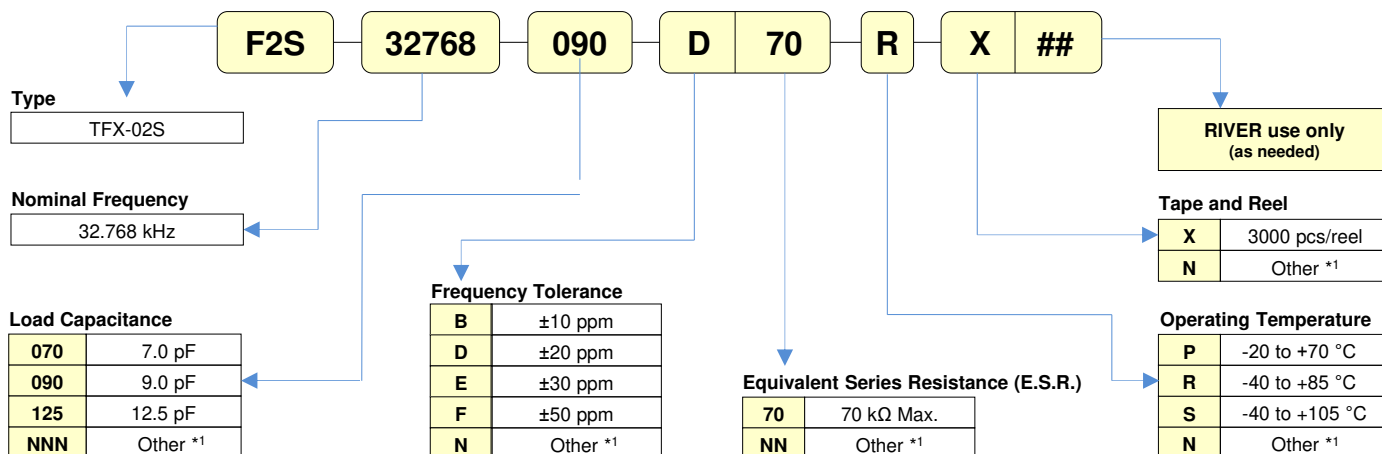
(Unit: mm)



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.

ORDERING NUMBER GUIDE



*1. Please consult us for your requirements.

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