

SC-20T

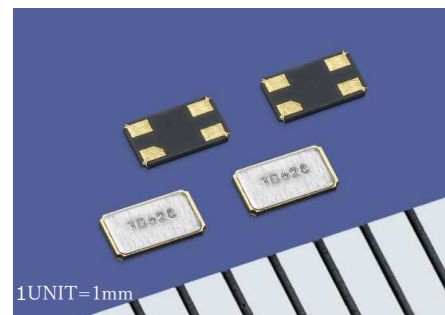
2012-Size 32 kHz Ultra-Thin Tuning Fork Crystal Resonator

•Features

- Ultra-thin 2012 size: 2.1 x 1.0 x 0.35/0.33 mm
- Ideal for thin applications
- Excellent shock and heat resistance.
- Complies with EU RoHS directive (completely Pb-free)
- Available in two thicknesses: 0.35 mm and 0.33 mm Max.

•Applications

- Smart ring
- Smart cards
- Various microcontroller sub-clocks
- Various communication modules
- GPS module
- Reference clock for RTC
- Medical wearable devices

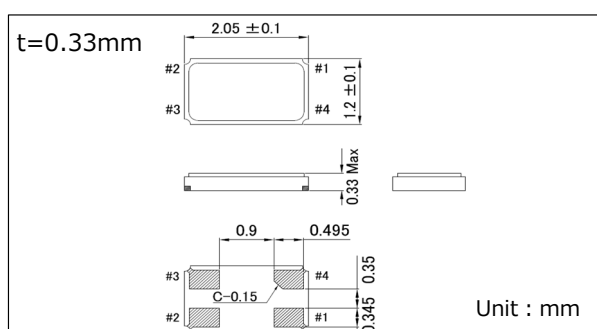
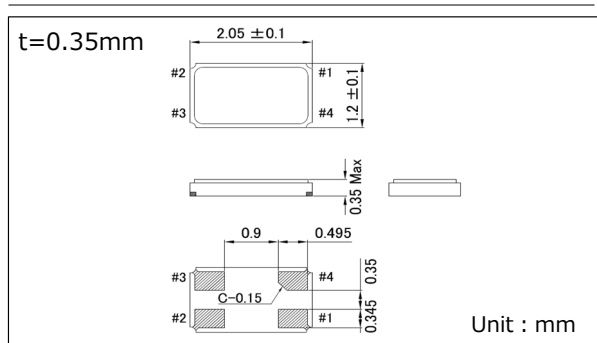


•Specifications

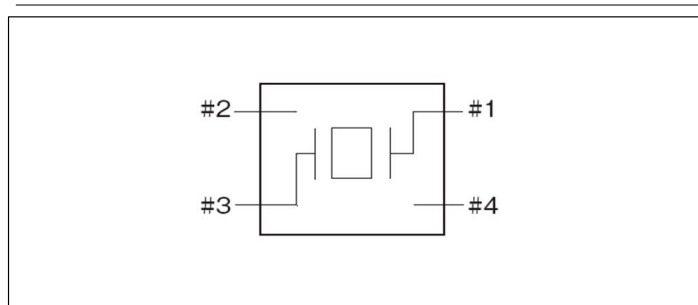
Conditions where not specified (Temperature: 25±2°C, DL;0.1μW)

Item	Symbol	Specifications		Conditions / Note
		0.35mm	0.33mm	
Nominal Frequency	f_nom	32.768kHz		
Frequency Tolerance	f_tol	±20×10 ⁻⁶		
Turnover Temperature	Ti	25±5°C		
Parabolic Coefficient	β	(-0.033±10%)×10 ⁻⁶ /°C ²		
Load Capacitance	CL	6pF, 7pF, 9pF, 12.5pF		For other CLs, please contact us.
Motional Resistance (ESR)	R1	75kΩ Max.	80kΩ Max.	
Absolute Max. Drive Level	DLmax.	1.0μW Max.		
Drive Level	DL	0.1μW Typ.		
Shunt Capacitance	C0	0.8pF Typ.		Reference value
Frequency Ageing	f_age	±3×10 ⁻⁶ /year		First year
Operating Temperature	T_use	-40~+85°C		
Storage Temperature	T_stg	-55~+125°C		Store individually

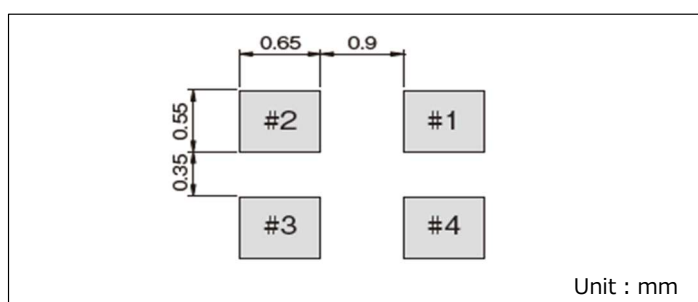
•Dimensions



•Internal Lead Connections



•Recommended Soldering Pattern



Remark: When designing the circuit board, do not place circuit patterns on the crystal resonator mounting area (bottom surface).

Seiko Instruments Inc.

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