

SC-16S

1610-Size 32 kHz Low-ESR Tuning Fork
Crystal Resonator R1 = 50 kΩ Max.

•Features

- This 32kHz tuning fork crystal achieves low ESR in a compact size of 1.6 x 1.0 x 0.5 mm.
- SMD type suitable for high-density mounting
- Excellent shock and heat resistance.
- Complies with EU RoHS directive (completely Pb-free)
- Built-in highly reliable photolithographic crystal Resonator

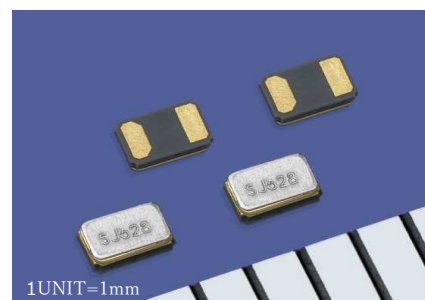
•Applications

- Smart ring
- Smartwatch
- Various microcontroller sub-clocks
- Various communication modules
- GPS module
- Smart hearing aid
- Reference clock for RTC

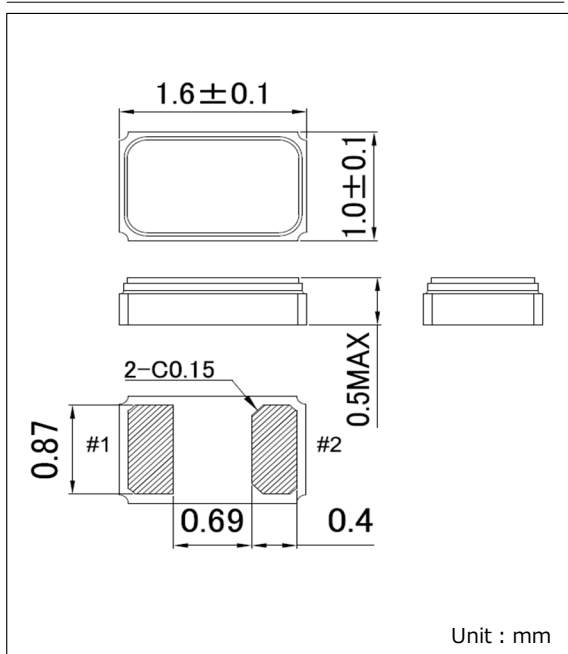
•Specifications

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

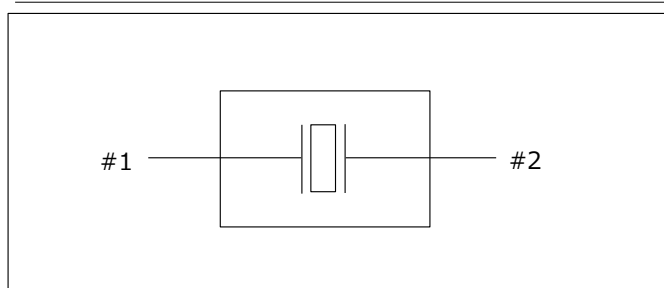
Item	Symbol	Specifications	Conditions / Note
Nominal Frequency	f _{nom}	32.768kHz	
Frequency Tolerance	f _{tol}	±20×10 ⁻⁶	
Turnover Temperature	T _i	25±5°C	
Parabolic Coefficient	β	(-0.035±10%)×10 ⁻⁶ /°C ²	
Load Capacitance	CL	4pF, 6pF, 7pF, 9pF, 12.5pF	For other CLs, please contact us.
Motional Resistance (ESR)	R1	37kΩ Typ./50kΩ Max.	At Room Temp.
		a) 60kΩ Max.	-40°C~+85°C
		b) 70kΩ Max.	-40°C~+105°C
		c) 80kΩ Max.	-55°C~+125°C
Absolute Max. Drive Level	DL _{max.}	0.5μW Max.	
Drive Level	DL	0.1μW Typ.	
Shunt Capacitance	C0	1.8pF Typ.	Reference value
Frequency Ageing	f _{age}	±3×10 ⁻⁶ /year	First year
Operating Temperature	T _{use}	-55°C~+125°C Max.	Each specification
Storage Temperature	T _{stg}	-55~+125°C	Store individually



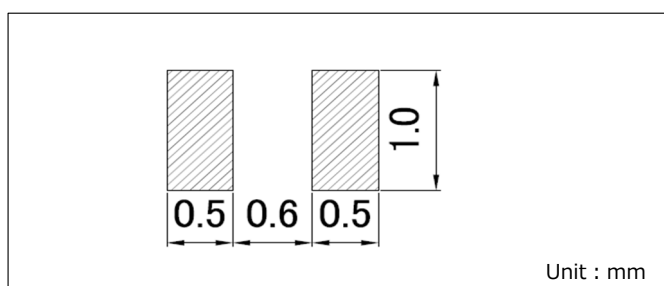
•Dimensions



•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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