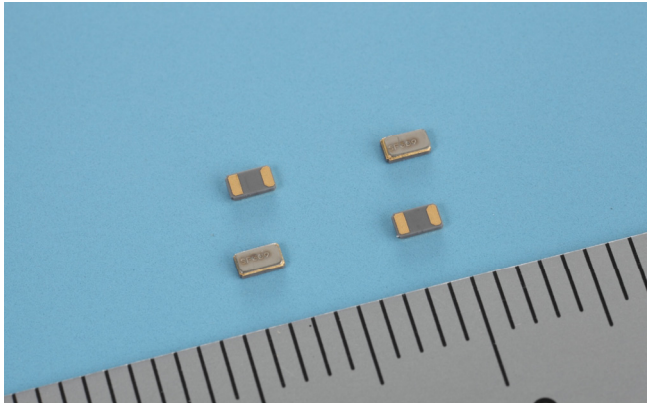


## SC-20S



### Features

- Ultra thin type (0.6mm)
- Suitable for high density surface mounting
- Excellent shock and heat resistance
- Complete Pb-free
- A crystal resonator processed by high reliable photolithographic technology inside.

### Applications

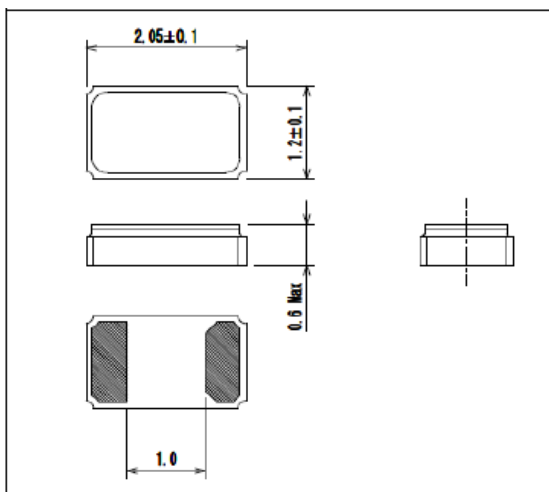
Cellular Phones, PHS, Tablet PC, DSC, Car Audio  
GPS Module, FM Tuner Module, Mobile Device  
Sub-clock function for a variety of Micro-  
Controllers

### Standard Specifications

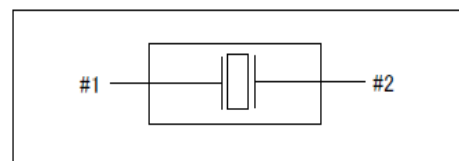
Conditions where not specified (Temperature: 25±2°C, DL:0.1μW)

Item	Symbol	Specifications	Conditions Note
Nominal Frequency	f_nom	32.768kHz	
Frequency Tolerance	f_tol	±20×10 <sup>-6</sup>	
Turnover Temperature	Ti	+25±5°C	
Parabolic Coefficient	B	(-3.0±1.0)×10 <sup>-8</sup> /°C <sup>2</sup>	
Load Capacitance	CL	(7pF,) 9pF, 12.5pF	
Motional Resistance (ESR)	R1	90kΩ Max.	
Absolute Max. Drive Level	DI <sub>max.</sub>	0.5μW Max.	
Drive Level	DL	0.1μW typ.	
Shunt Capacitance	C0	1.3pF typ.	
Frequency Ageing	f_age	±3×10 <sup>-6</sup> /year	+25±3°C, First Year
Operating Temperature	T_use	-40~+85°C	
Storage Temperature	T_stg	-55~+125°C	Piece part basis

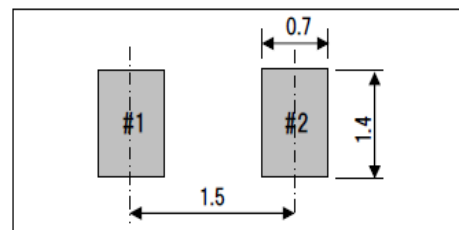
### Dimensions



### Internal Lead Connections



### Recommended Soldering Pattern



Remark: Please make sure that there is no pattern under SC-20S on the circuit board.

#### Seiko Instruments Inc.

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