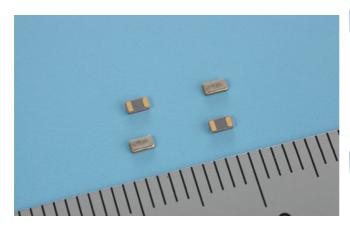


# **SC-20S**



#### **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**

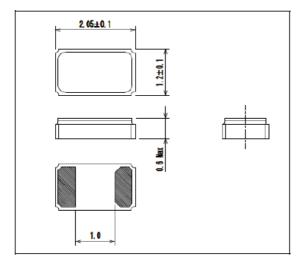
Cellular Phones, PHS, Tablet PC, DSC, Car Audio GPS Module, FM Tuner Module, Mobile Device Sub-clock function for a variety of Micro-Controllers

# Standard Specifications

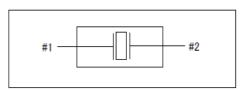
Conditions where not specified (Temperature: 25±2°C, DL;0.1µW)

|                           | Conditions where not specified (Temperature, 2012 O, DE, 0. 1444) |  |                     |
|---------------------------|---|--|---------------------|
| 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     | В   | $(-3.0\pm1.0)\times10^{-8}$ /°C <sup>2</sup> |                     |
| Load Capacitance          | CL  | (7pF,) 9pF, 12.5pF                           |                     |
| Motional Resistance (ESR) | R1  | 90kΩ Max.                                    |                     |
| Absolute Max. Drive Level | Dlmax.  | 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    |

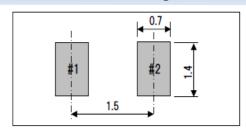
#### **Dimensions**



# **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.

Quartz Crystal Sales Department

1-8, Nakase, Mihamaku, Chiba-shi, Chiba 261-8507, Japan

Tel: +81-43-211-1207 Fax: +81-43-211-8030

# **Mouser Electronics**

**Authorized Distributor** 

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Seiko Instruments:

SC20S-7PF20PPM SC20S-12.5PF20PPM