



**Distributor of Seiko Instruments: Excellent Integrated System Limited**

Datasheet of SC20S-12.5PF20PPM - Crystal 32.7680kHz 20ppm 12.5pF 90 kOhm -40°C - 85°C Surface Mount 2-SMD, No Lead (DFN, LCC)

Contact us: [sales@integrated-circuit.com](mailto:sales@integrated-circuit.com) Website: [www.integrated-circuit.com](http://www.integrated-circuit.com)

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## Excellent Integrated System Limited

Stocking Distributor

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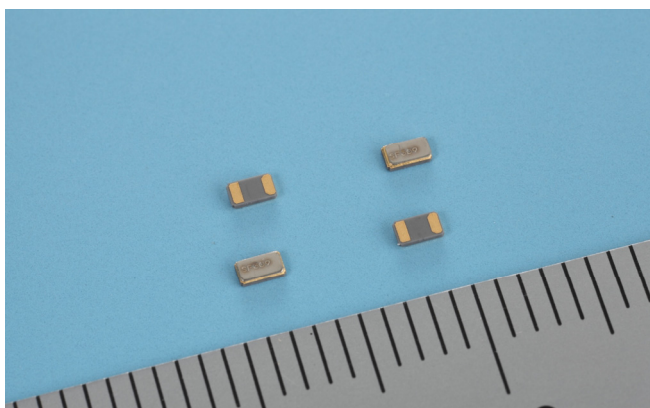
For any questions, you can email us directly:

[sales@integrated-circuit.com](mailto:sales@integrated-circuit.com)



SMD Quartz Crystal Unit

## 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

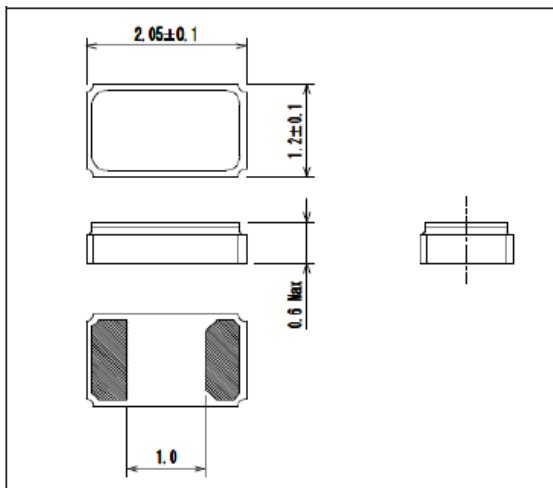
Cellular Phones, PHS, Tablet PC, DSC, Car Audio GPS Module, FM Tuner Module, Mobile Device Sub-clock function for a variety of Micro-Controllers

### Standard Specifications

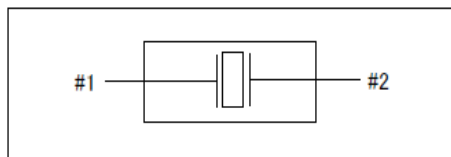
Conditions where not specified (Temperature: 25±2°C, DL:0.1μW)

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	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

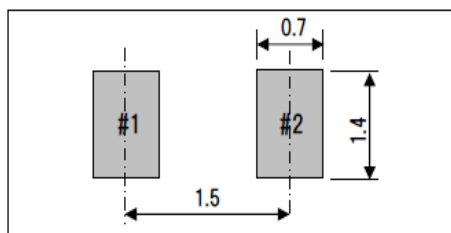
### Dimensions



### Internal Lead Connections



### Recommended Soldering Pattern



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

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