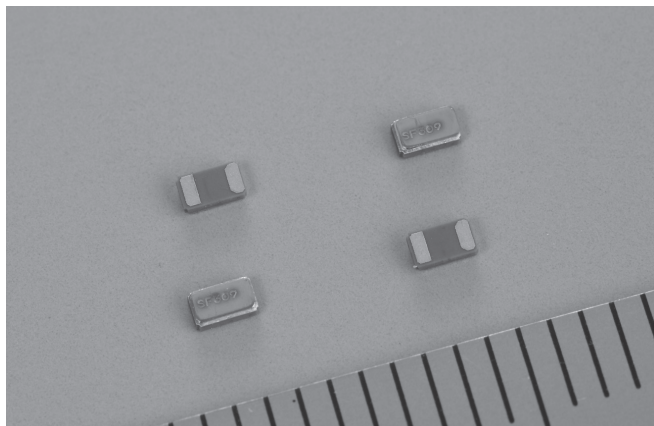


# SC-20S **NEW**



## FEATURES

- Ultra thin type with height 0.6mm max.
- SMD type suitable for automatic & high density surface mounting.
- Ceramic package containing highly reliable photolithographic processed quartz crystal.
- Excellent shock and heat resistance.
- Complete Pb-free.

## APPLICATIONS

Smartphones, Cellular Phones, PHS, Tablet PC, DVC, Radio Communication Equipment, Portable Applications etc.

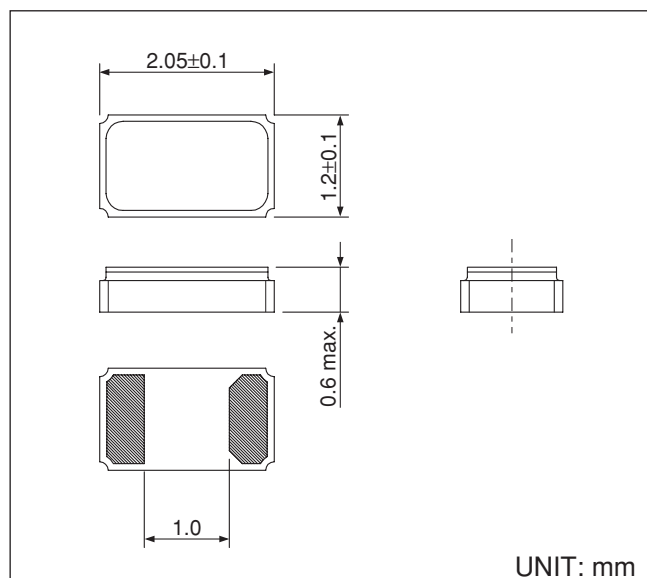
## STANDARD SPECIFICATIONS

Conditions without notice (Temperature: +25±2°C, DL: 0.1μW)

Item	Symbol	Specifications	Conditions / Notes
Nominal Frequency	f_nom	32.768kHz	
Frequency Tolerance	f_tol	±20 x 10 <sup>-6</sup>	
Turnover Temperature	Ti	+25±5°C	
Parabolic Coefficient	B	(-3.0±1.0) x 10 <sup>-8</sup> /°C <sup>2</sup>	
Load Capacitance	CL	(7.0pF) / 9.0pF / 12.5pF	
Motional Resistance (ESR)	R <sub>1</sub>	90kΩ max.	
Absolute Maximum Drive Level	DLmax	0.5μW	"0.1μW max." is also available.
Level of Drive	DL	0.1μW	
Shunt Capacitance	C <sub>0</sub>	1.3pF typ.	
Frequency Ageing	f_age	±3 x 10 <sup>-6</sup>	+25±3°C, First Year
Operating Temperature	T_use	-40°C to +85°C	
Storage Temperature	T_stg	-55°C to +125°C	Piece part basis

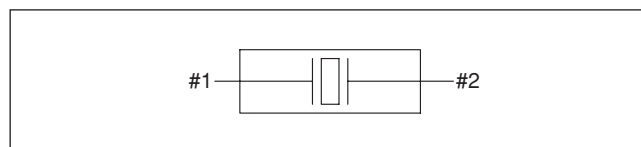
## DIMENSIONS

SC-20S



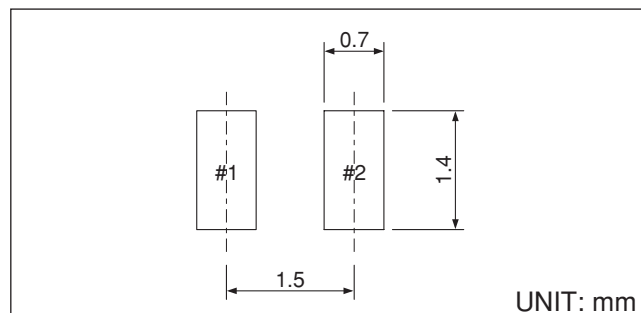
## INTERNAL LEAD CONNECTION

SC-20S



## RECOMMENDED SOLDERING PATTERN

SC-20S



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