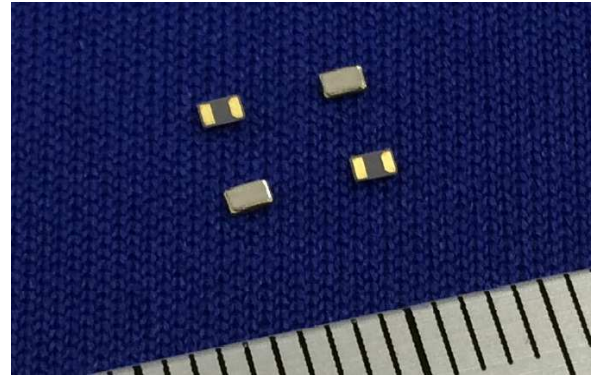


SC-16P (R1=37kΩ Typ.) Low ESR series

Features

- Suitable for microcontrollers with low ESR. requirements (R1=50kΩmax.)
R1 standard for various temperature ranges.
- SMD type suitable for high-density mounting.
- Excellent shock resistance and heat resistance.
- Completely Pb-free.
- Highly reliable photolithography-processed crystal unit.



Applications

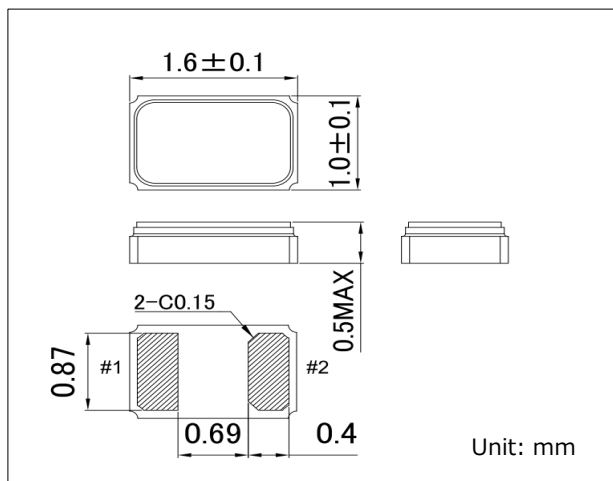
- Smart Rings • PC, Notebooks
- Smart Watches • Various microcomputer sub-clocks
- Various Communication Modules

Standard Specifications

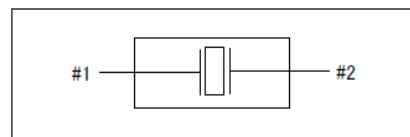
Conditions where not specified (Temperature: 25±2°C, DL;0.1μW)

Item	Symbol	Specifications	Condition Note
Nominal Frequency	f _{nom}	32.768kHz	
Frequency Tolerance	f _{tol}	±10/±20×10 ⁻⁶	
Turnover Temperature	T _i	+25±5°C	
Parabolic Coefficient	B	(-0.035±10%)×10 ⁻⁶ /°C ²	Reference value
Load Capacitance	CL	4pF, 6pF, 7pF, 9pF, 12.5pF	
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	DI _{max}	0.5μW Max.	
Drive Level	DL	0.1μW Typ.	
Shunt Capacitance	C0	1.8pF Typ.	
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	Piece part basis

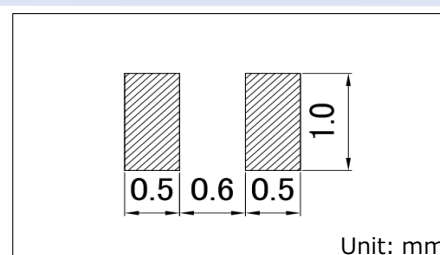
External dimensions



Internal Lead Conditions



Recommended Land Pattern



Note: When designing a circuit board, do not provide a circuit pattern on the crystal mounting area (underside).