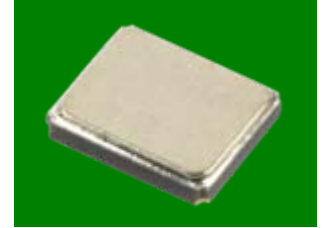


Microprocessor Crystal Unit 2.0 x 1.6mm Surface Mount Package



Features

- Seam Seal
- Excellent Solderability
- High Frequency Stability
- Excellent Thermal Hysteresis
- Excellent Vibration Resistance & Shock Resistance
- RoHS Compliant



Electrical Specifications

Frequency Range		20.000 to 66.000	MH
Frequency Tolerance at 25°C	Standard	±30	PPM Max (Note 1)
	Optional	± 25 to ±10	
Frequency Stability over Temperature Range	Standard	±50	
	Optional	±30 to ±10	
Operating Temperature Range	Standard	-10 to +70	°C
	Extended	-40 to +85	
Storage Temperature Range		-55 to +125	
Aging		±5	PPM Max/Year
Load Capacitance		7 to 32 or Series Resonance	pF
Shunt Capacitance		7.0	
Equivalent Ser Resistance (ESR)		See ESR Table	Ohms
Drive Level		100	uW Typ
Insul		500 at 100Vdc ± 15Vdc	M Ohm

Frequency Range vs. ESR Values

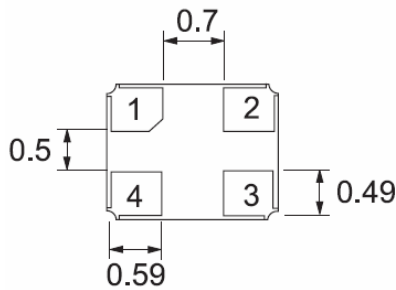
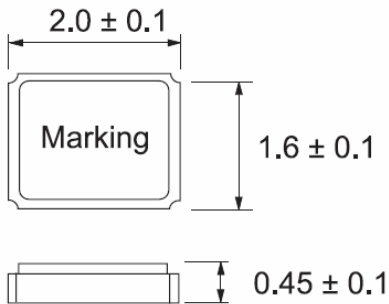
Frequency Range in MHz	ESR Ohms Max	Mode of Operation
20.000 to 25.000	200	Fundamental
25.100 to 40.000	100	Fundamental
40.000 to 66.000	60	Fundamental

Part Numbering System

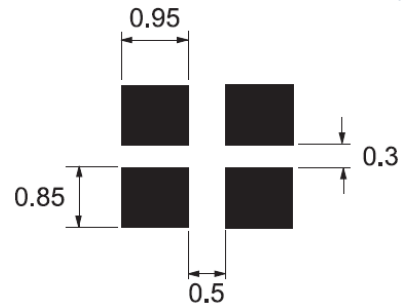
Type	Frequency	Load Capacitance	Tolerance/ Stability(*1)	Extended Temperature(*1)	Tape & Reel
WSC20	in MHz	7 to 32 for Parallel or S for Series	(PPM/PPM) e.g. 1020, 1010	EXT	TR

Examples : WSC20-22.000-18-TR or WSC20-50.000-S-1010-EXT-TR

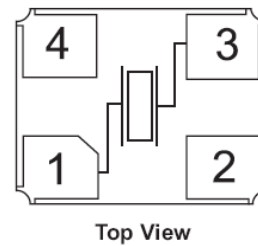
Mechanical Outline



PCB Solder Pad Layout

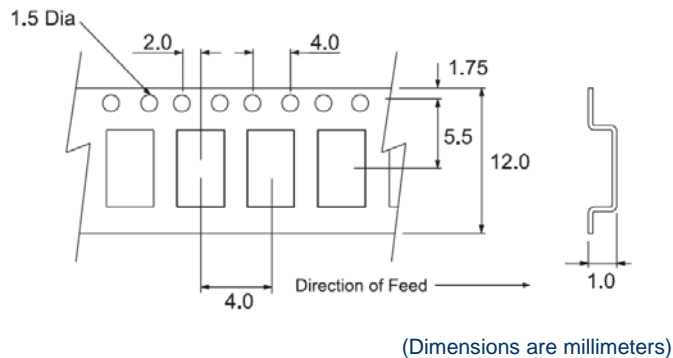


Pad Connection

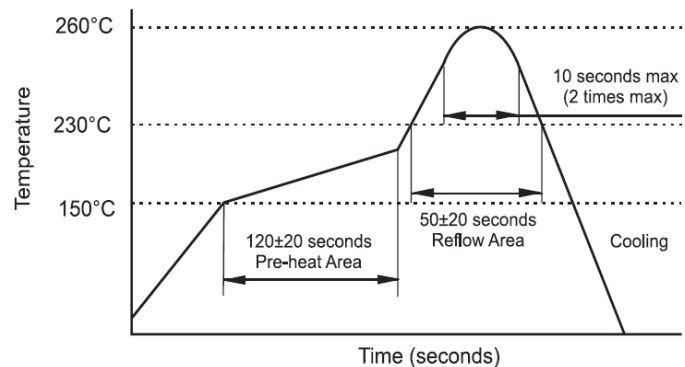


Package is Seam Sealed Ceramic-metal

Carrier Tape Dimensions



Solder Reflow Characteristics



Notes:

- 1 - Frequency Tolerance and the stability options are limited due to the physical size
- 2 - Standard Standard Temperature Range does not need to be included in Part Number description.
- 2 - Product is shipped in Tape and Reel configuration. Each reel contains 1000 pieces.
- 3 - Specification subject to change without notice.