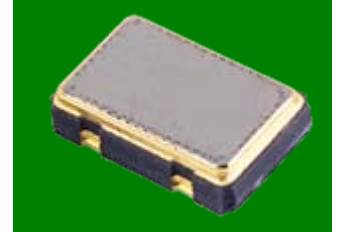


Clock Oscillator Unit

5.0 x 3.2mm SMD Package

Features

- Small Package
- Excellent for high density packaging
- Suitable for reflow soldering
- Rohs Compliant



Electrical Specifications

Frequency Range		1.000 to 156.000				MHz		
Temperature Stability		±100				PPM Max		
		±50						
		±30						
		±20						
Aging Per Year		±5						
Operating Temperature Range		Standard		-10 to +70		°C		
		Extended		-40 to +85				
Storage Temperature Range		-55 to +125						
Supply Voltage		1.8 ±5%	2.5 ±5%	2.8 ±5%	3.3 ±5%	Vdd		
Input Current		1.000 – 32.000MHz		7	10	12	15	mA Max
		32.100 – 50.000MHz		15	12	20	20	
		50.100 – 67.000MHz		-	-	40	25	
		67.100 – 80.000MHz		-	-	40	25	
		80.100 – 156.000MHz		-	-	-	40	
Output Voltage		Logic Low (Voh)		90% (80% at 1.8V)			Vdd Min	
		Logic High (Vol)		10% (20% at 1.8V)			Vdd Max	
Output Symmetry (Duty Cycle)		Standard		40 – 60			%	
		Tight		45 – 55				
Output Current		LoL/Loh		2	4	4	2	mA Min
Output Load		15				pF Max		
Rise and Fall Time		1.000 – 32.000MHz		5	5	5	7	ns Max
		32.100 – 50.000MHz		3.5	5	5	7	
		50.100 – 67.000MHz		-	-	5	7	
		67.100 – 80.000MHz		-	-	5	7	
		80.100 – 156.000MHz		-	-	-	7	
Standby Current		10				uA Max		
Enable-Disable Function		Tri-state				-		
Output Disable Time		300	150			ns Max		
Output Enable Time		10	10			ms Max		
Start Up Time		10				ms Max		

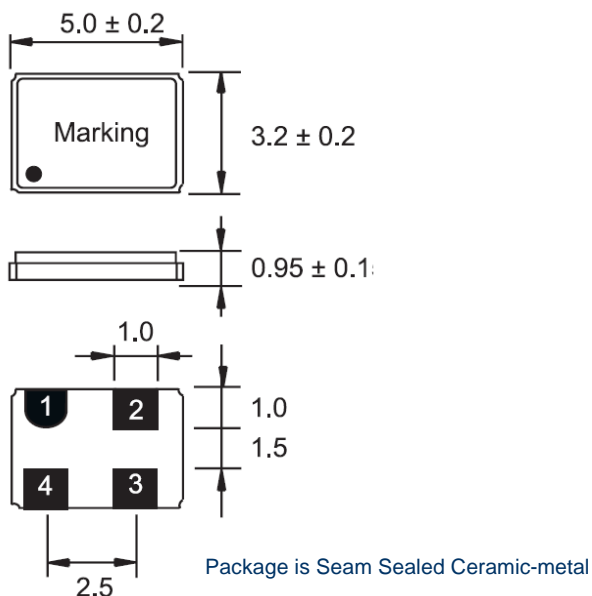
Temperature stability is inclusive of all Conditions : Calibration Tolerance at +25 °C, frequency stability over the operation temperature range , supply voltage, supply voltage change, output load change, shock, vibration, and 1st year aging at +25 °C

Part Numbering System

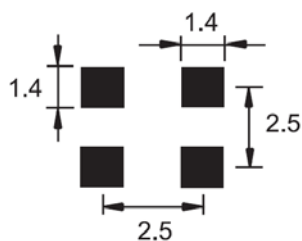
Type	Frequency Stability (PPM)		-	Supply Voltage (V _{dd})		-	Frequency (MHz)	-	Duty Cycle (*1)		-	Extended Temperature (*1)		-	Tape & Reel
	10	± 100		33	+ 3.3 ± 10%				1,000 to 156,000	T		45/55%	EXT		
WSO50	05	± 50	-	28	+ 2.85 ± 5%	-	1,000 to 156,000	-	T	45/55%	-	EXT	-	TR	
	02	± 20	-	25	+ 2.5 ± 5%	-	1,000 to 156,000	-	T	45/55%	-	EXT	-	TR	
			-	18	+ 1.8 ± 5%	-	1,000 to 156,000	-	T	45/55%	-	EXT	-	TR	

Example : WSO5010-33-24.576-TR, WSO5005-33-50.000-EXT-TR, WSO5002-33-32.000-T-EXT-TR

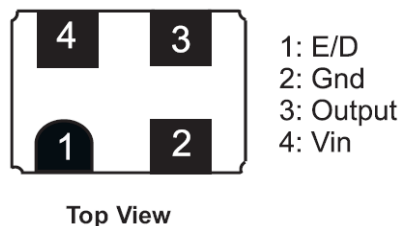
Mechanical Outline



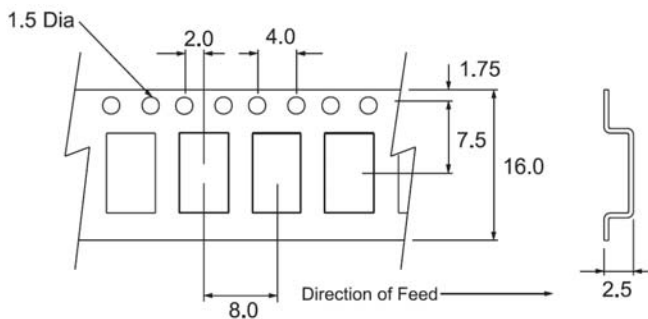
PCB Solder Pad layout



PCB Connection

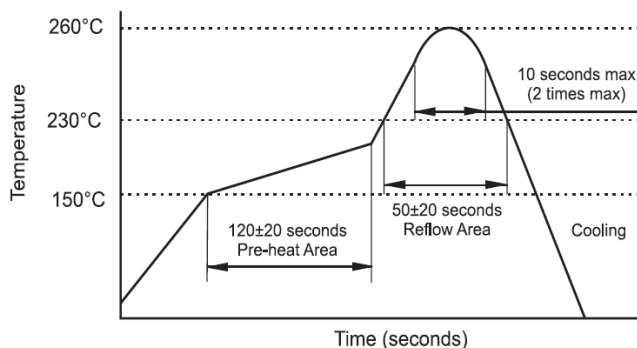


Solder Reflow Characteristics



(Dimensions are millimeters)

Carrier Tape Dimensions



- Notes:
- 1 – Standard Duty Cycle and Temperature Range do 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.