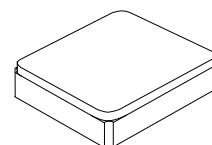


- **High Reliability Quartz Crystal**
- **Excellent Frequency Stability over Temperature**
- **Ultra-Miniature 2.0 x 1.6 mm SMD Package**
- **Complies with Directive 2002/95/EC (RoHS)**
- **Moisture Sensitivity Level: 1**

The XTL1023 is a surface mount 2.0 x 1.6 mm crystal unit for use in wireless telecommunications devices, especially where an ultra-miniature package is needed for mobility.

XTL1023

**26.0000 MHz
Crystal Unit**

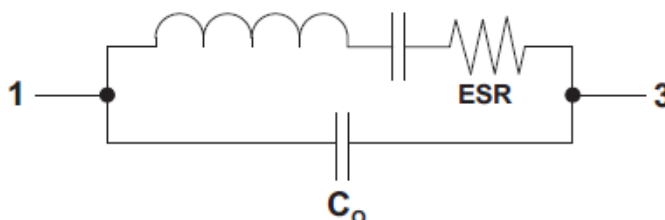


SM2016-4

Electrical Characteristics

Characteristic	Sym	Notes	Minimum	Typical	Maximum	Units
Frequency	f_o			26.0000		MHz
Mode of Oscillation			Fundamental			
Storage Temperature Range in Tape and Reel			-40		+85	°C
Operating Temperature Range			-20		+75	°C
Frequency Manufacturing Tolerance	f_L		± 10 ppm @ 25 °C ± 3 °C			
Frequency Stability over Operating Temperature Range			± 10 ppm (referenced to the value at 25 °C)			
Equivalent Series Resistance	ESR				100	Ω
Drive Level					100	μ W
Shunt Capacitance	C_o				2	pF
Load Capacitance	C_L			9		pF
Insulation Resistance, 100 VDC			500			M Ω
Standard Shipping Quantity on 178 mm (7") Reel				1000		units
Lid Symbolization: Y = Year, W = Week			3B, YW			

Crystal Equivalent Circuit



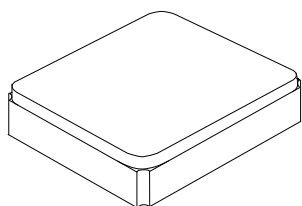
CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.

NOTES:

1. The design, manufacturing process, and specifications of this device are subject to change.
2. US or International patents may apply.
3. RoHS compliant from the first date of manufacture.

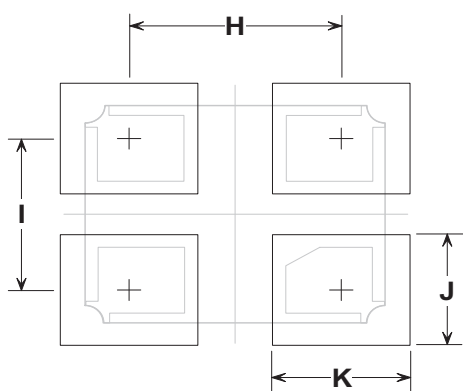
SM2016-4 Case

4-Terminal Ceramic Surface-Mount Case 2.0 X 1.6 mm Nominal Footprint



Electrical Connections

Connection	Terminals
Input / Output	1
No Connection	2
Input / Output	3
Metal Cover	4

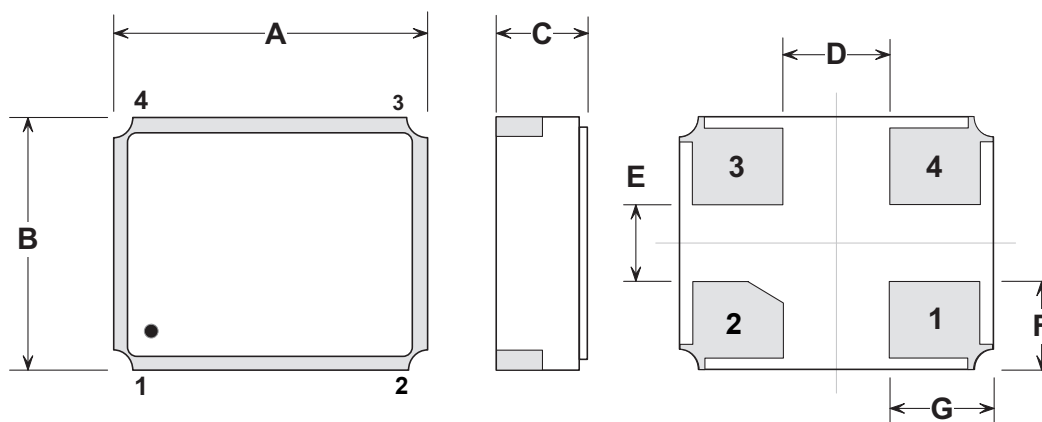


Typical PCB Land Footprint
(Top View)

Case and PCB Land Dimensions

Dimensions	Millimeters			Inches		
	Min	Nom	Max	Min	Nom	Max
A	1.97	2.05	2.13	0.078	0.081	0.084
B	1.57	1.65	1.73	0.062	0.065	0.068
C			0.60			0.024
D		0.70			0.028	
E		0.50			0.020	
F		0.57			0.022	
G		0.67			0.026	
H		1.45			0.057	
I		1.15			0.045	
J		0.85			0.033	
K		0.95			0.037	

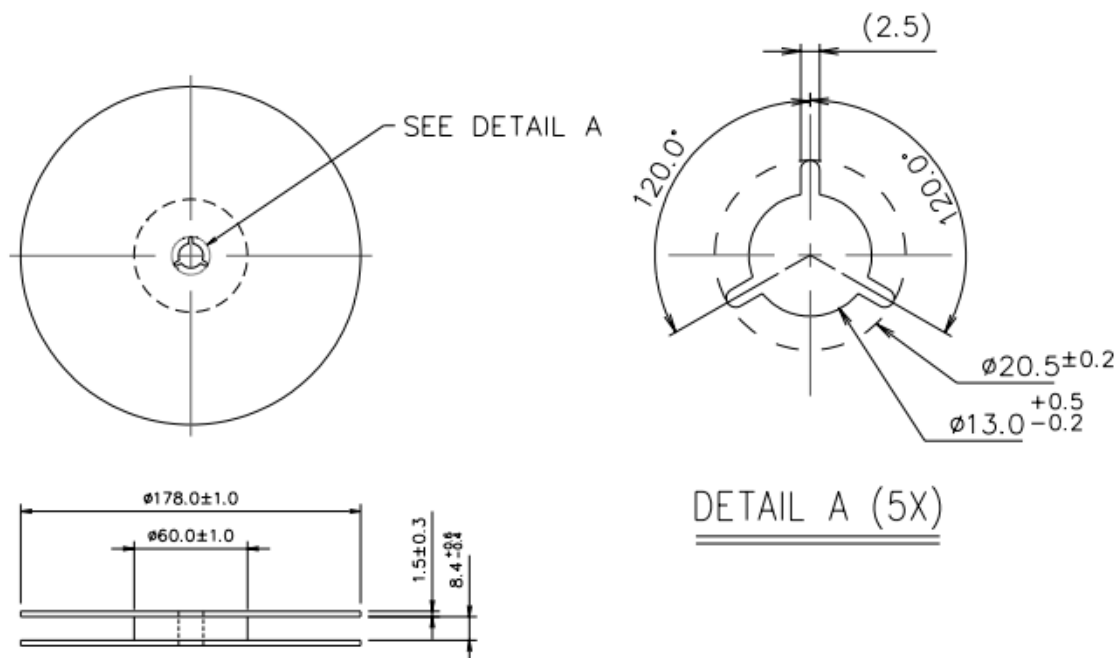
Case Outline Drawing



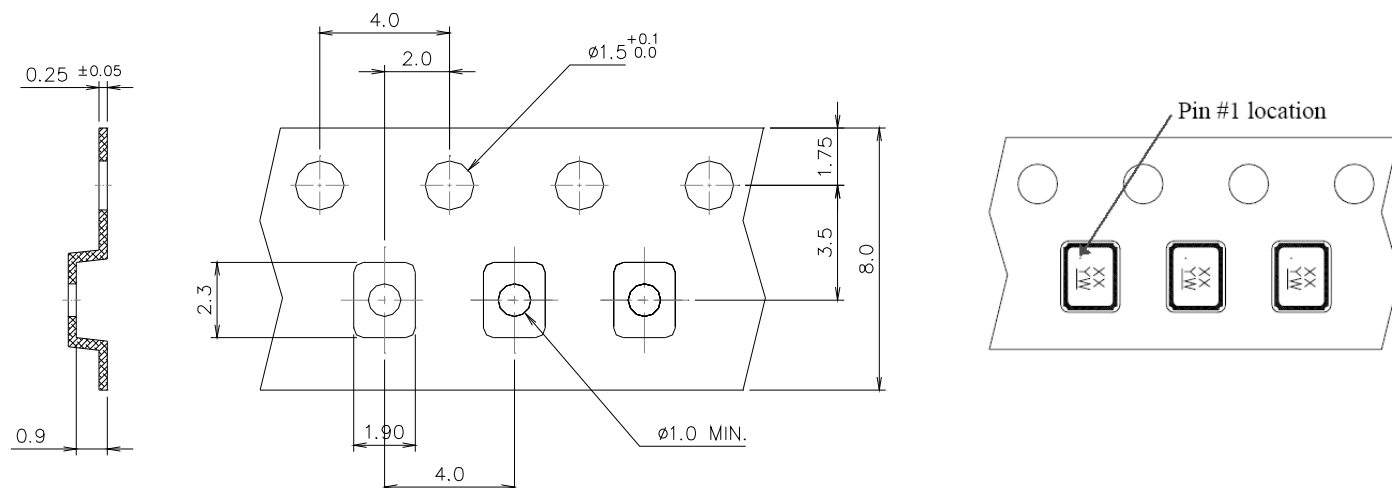
Reel Dimensions

Reel Count:
7" = 2000
13" = 10,000

Tape and Reel Standard per ANSI/EIA-481



Tape Dimensions and Case Orientation



NOTE:

1. Unless otherwise specified tolerance on dimension $\pm 0.1 \text{ mm}$.
2. Material: conductive polystyrene with color black.
3. 10 pitch cumulative tolerance $\pm 0.2 \text{ mm}$.

Recommended Reflow Profile

1. Preheating shall be fixed at 150~180°C for 60~90 seconds.
2. Ascending time to preheating temperature 150°C shall be 30 seconds min.
3. Heating shall be fixed at 220°C for 50~80 seconds and at 260°C +0/-5°C peak (10 seconds).
4. Time: 5 times maximum.

