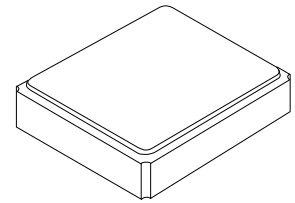


XTL1031

**38.4000 MHz
Crystal Unit**



SM3225-4 Case

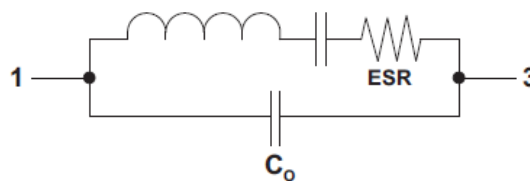
- **High Performance Crystal for Wireless Communications**
- **Excellent Frequency Stability and Reliability**
- **Miniature Seam-welded SMD Package**
- **Complies with Directive 2002/95/EC (RoHS)**
- **Moisture Sensitivity Level: 1**

The XTL1031 is a high performance 38.4000 MHz crystal suitable for a wide variety of RF communication applications.

Electrical Characteristics

Characteristic	Sym	Notes	Minimum	Typical	Maximum	Units
Nominal Frequency	f_o			38.4000		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				50	Ω
Shunt Capacitance	C_o				5.0	pF
Nominal Drive Level					100	μW
Load Capacitance	C_L			10		pF
Aging at 25 °C					±1.0	ppm/yr
Insulation Resistance, 100 VDC			500			MΩ
Standard Shipping Quantity on 178 mm (7") Reel				3000		units
Lid Symbolization (Y = year, WW = week, S = shift)			1031 YWWS			

Crystal Equivalent Circuit

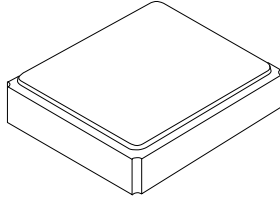


 **CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.**
NOTES:

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.

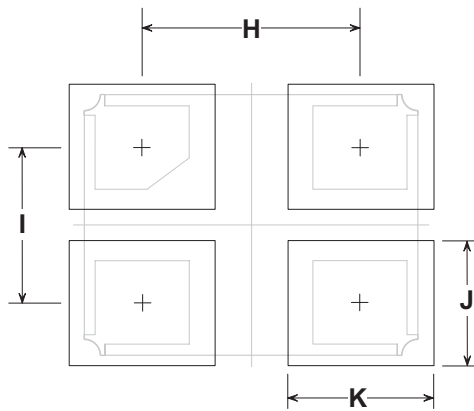
SM3225-4 Case

4 Terminal Surface Mount Seam Weld Case 3.2 x 2.5 mm Nominal Footprint



Electrical Connections

Connection	Terminals
Input / Output	1
Ground	2
Input / Output	3
Ground	4

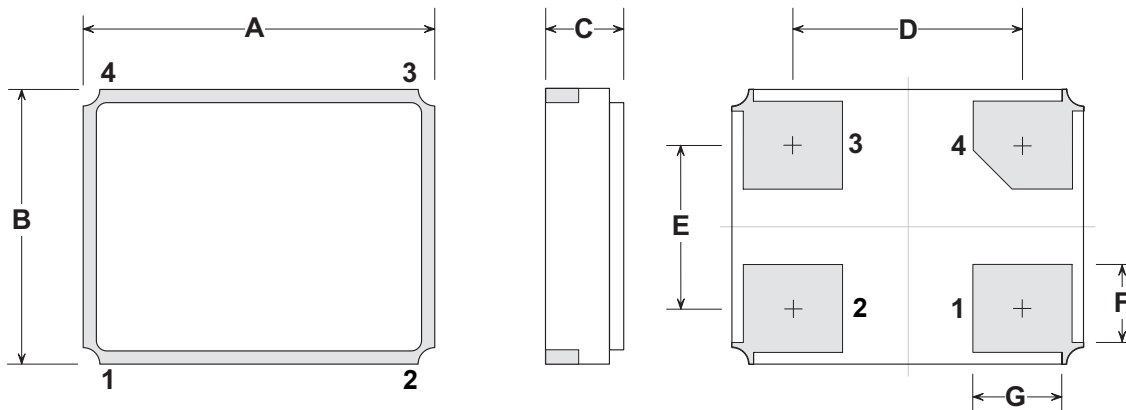


Typical PCB Land Footprint
(Top View)

Case and PCB Land Dimensions

Dimensions	Millimeters			Inches		
	Min	Nom	Max	Min	Nom	Max
A	3.10	3.20	3.30	0.122	0.126	0.130
B	2.40	2.50	2.60	0.094	0.098	0.102
C			0.70			0.028
D		2.10			0.083	
E		1.50			0.059	
F		0.80			0.031	
G		0.90			0.035	
H		2.10			0.083	
I		1.50			0.059	
J		1.20			0.047	
K		1.40			0.055	

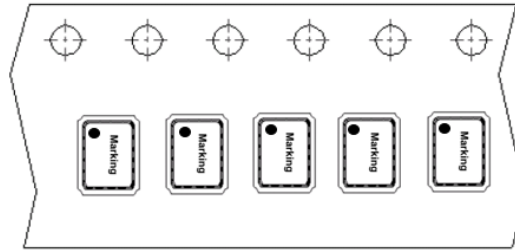
Case Outline Drawing



Marking:

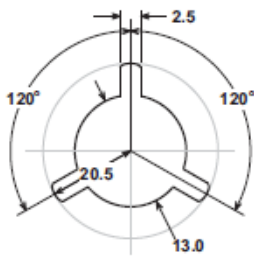


Y = Year, WW = Week, S = Shift



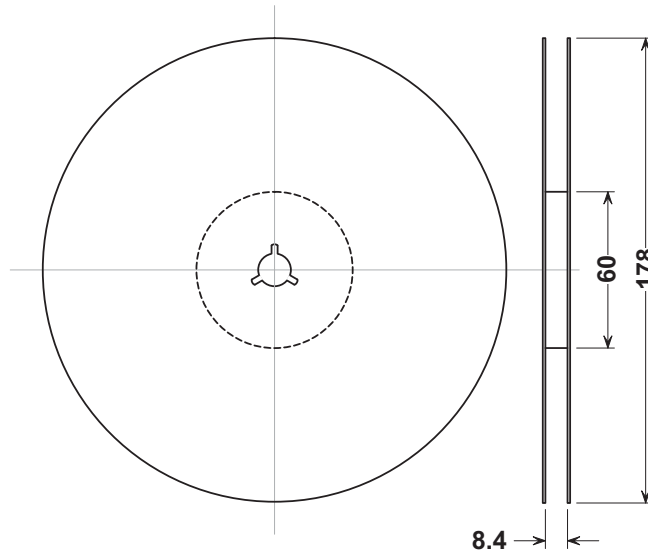
Reel Dimensions

Tape and Reel Standard per ANSI/EIA-481

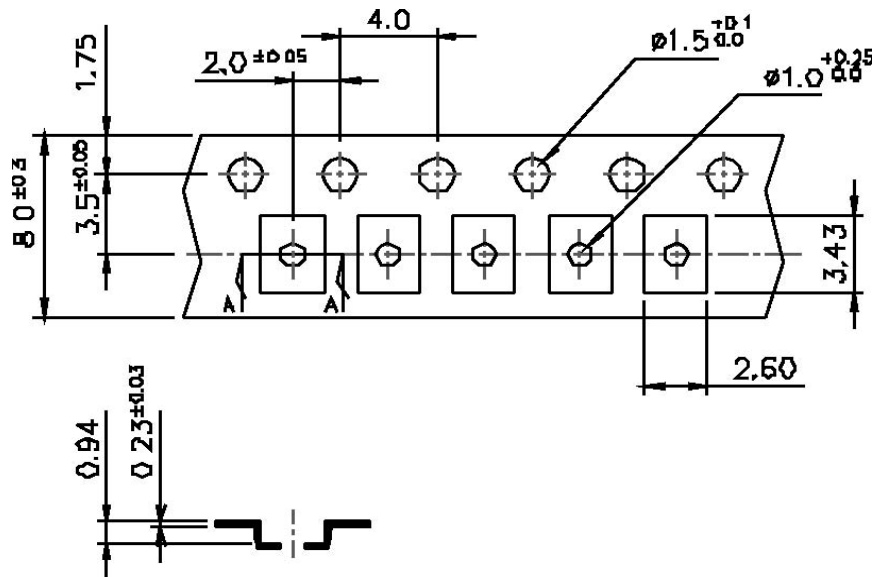


Reel Hub Detail

Dimensions in mm



Tape Dimensions



SECTION "A-A"

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.

