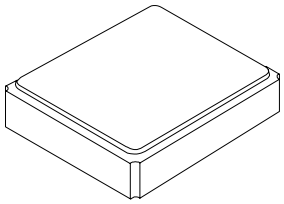
Preliminary

XTL1029

13.52915 MHz Crystal Unit

- ***High Performance Crystal for Wireless Communications Devices***
- ***Excellent Frequency Stability and Reliability***
- ***Ultra-Miniature Surface Mount Seam Weld Package***
- ***Complies with Directive 2002/95/EC (RoHS)***

The XTL1029 is a very high stability 13.52915 MHz crystal suitable for a wide range of communications applications. The XTL1029's excellent frequency stability supports operation from -40 to +85 ℃.

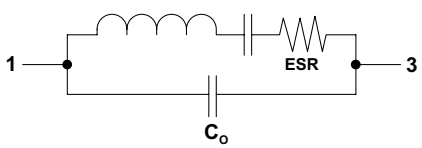


SM3225-4 Case

Electrical Characteristics

Characteristic	Sym	Notes	Minimum	Typical	Maximum	Units
Nominal Frequency	F_O			13.52915		MHz
Mode of Oscillation				Fundamental		
Storage Temperature Range in Tape and Reel			-40		+85	℃
Operating Temperature Range			-40		+85	℃
Frequency Stability over Operating Temperature Range				±100 ppm (referred to the value at 25 ℃)		
Frequency Make Tolerance	F_L			±30 ppm @ 25 ℃ ±3 ℃		
Equivalent Series Resistance	ESR				70	Ω
Shunt Capacitance	C_O				7	pF
Nominal Drive Level					100	µW
Load Capacitance	C_L			16		pF
Aging				±1.0 ppm/year @ 25 ℃		
Insulation Resistance			500			MΩ
Standard Shipping Quantity on 178 mm (7") Reel				3000		units
Lid Symbolization (in addition to Lot and/or Date Codes)	1029 YWWS					

Crystal Equivalent Circuit



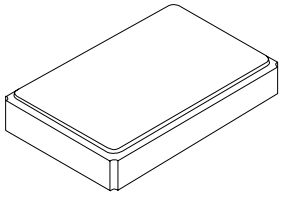
CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.

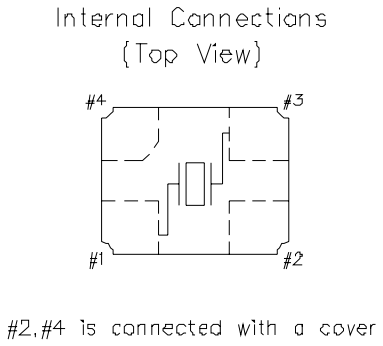
Notes:

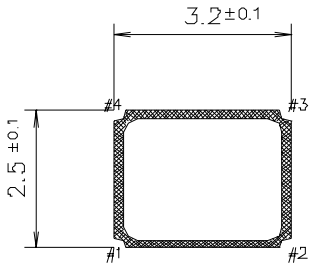
1. US and international patents may apply.
2. The design, manufacturing process, and specifications of this device are subject to change without notice.
3. RFM, stylized RFM logo, and RF Monolithics, Inc. are registered trademarks of RF Monolithics, Inc.

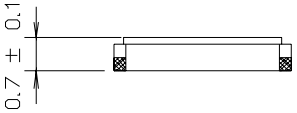
4-Terminal Surface-Mount Seam Weld Case

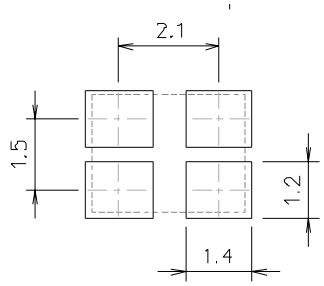
3.2 x 2.5 mm Nominal Footprint



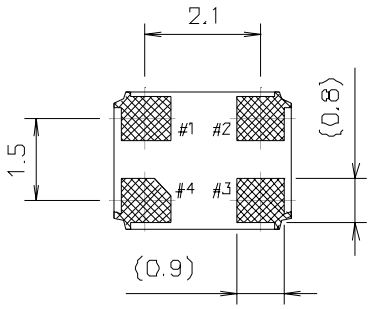




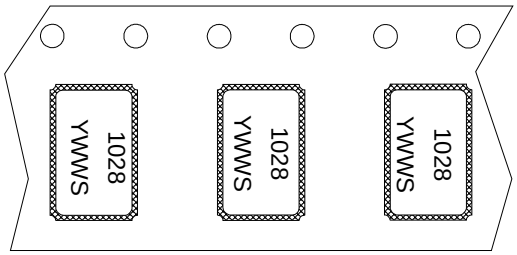




PCB Footprint (mm)

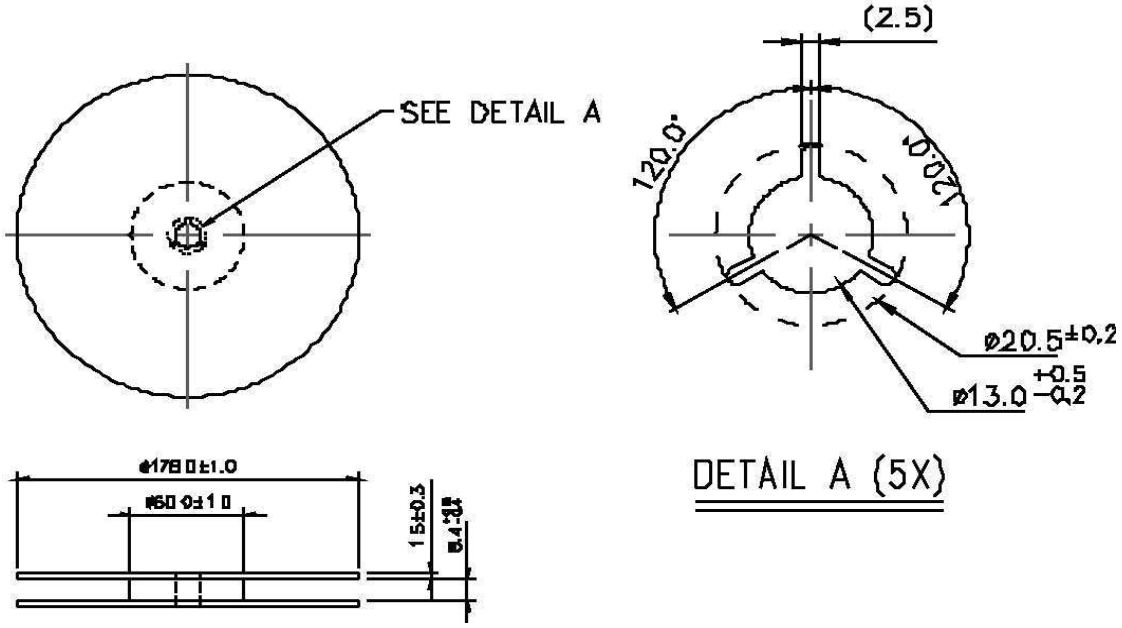


Package Dimensions

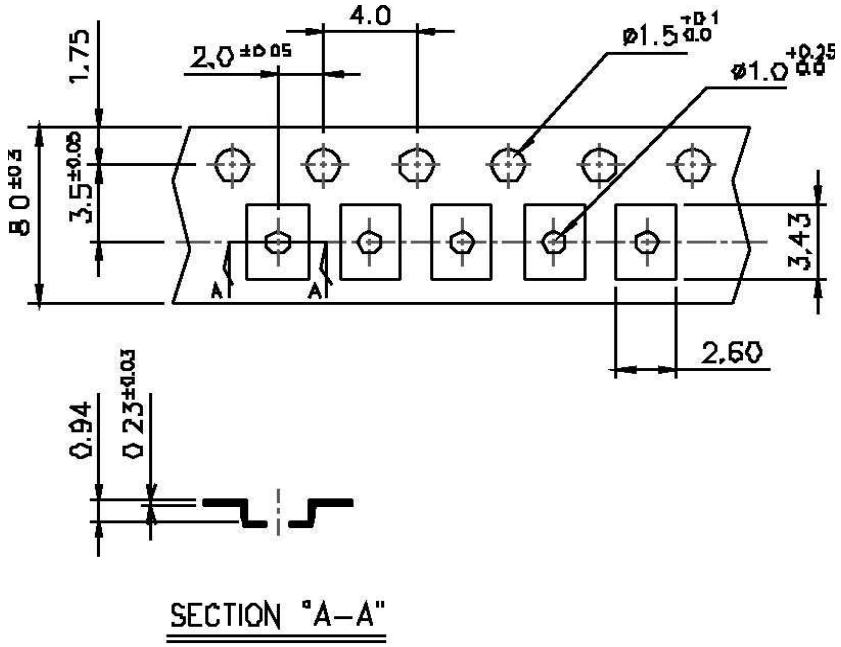


Package Orientation in Carrier Tape

Reel Dimensions

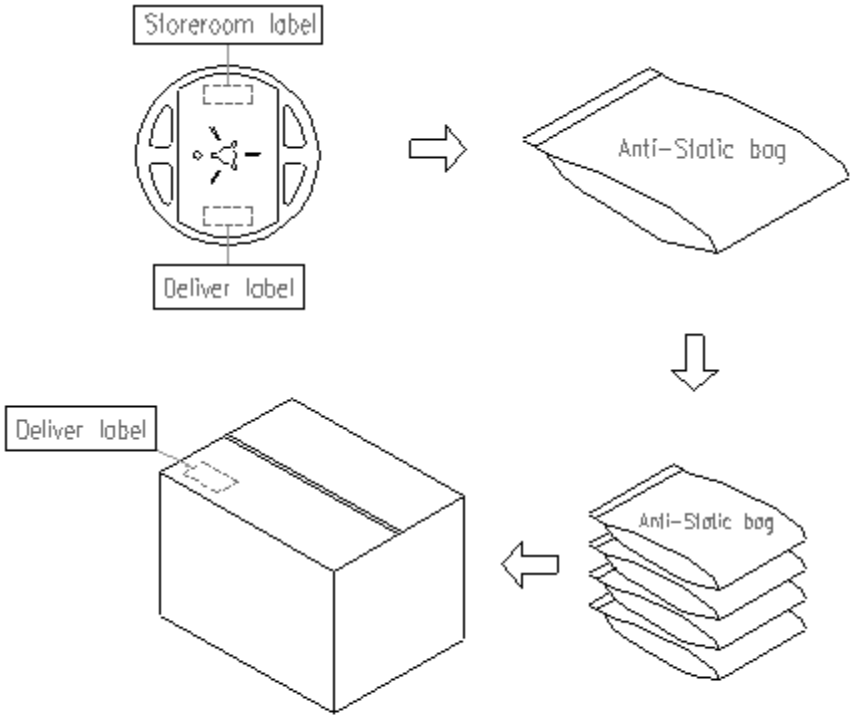


Tape Dimensions

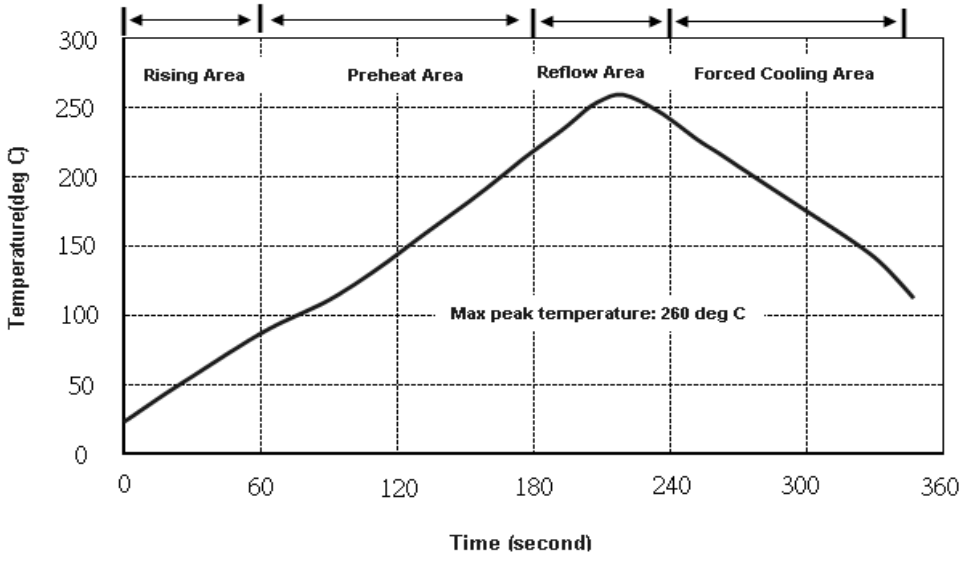


Packing Details

3K pcs maximum per reel



Typical Solder Reflow Profile



Reliability Specifications

Test name	Test process / method	Reference standard
Mechanical characteristics		
resistance to Soldering heat (IR reflow)	Temp./ Duration : 260℃ /10sec ×2 times Total time : 4min.(IR-reflow)	EIAJED-4701 -300(301)M(II)
Vibration	Total peak amplitude : 1.5mm Vibration frequency : 10 to 55 Hz Sweep period : 1.0 minute Vibration directions : 3 mutually perpendicular Duration : 2 hr / direc.	MIL-STD 202F method 201A
Mechanical Shock	directions : 3 impacts per axis Acceleration : 3000g's, +20/-0 % Duration : 0.3 ms (total 18 shocks) Waveform : Half-sine	MIL-STD 202F method 213C
Solderability	Solder Temperature:265±5℃ Duration time: 5±0.5 seconds.	MIL-STD 883G method 2003
Environmental characteristics		
Thermal Shock	Heat cycle conditions -55 (30min) 125 (30min) * cycle time : 10 times	MIL-STD 883G method 1010.7
Humidity test	Temperature : 70 ± 2 ℃ Relative humidity : 90~95% Duration : 96 hours	MIL-STD 202F method 103B
Dry heat (Aging test)	Temperature : 125 ± 2 ℃ Duration : 168 hours	MIL-STD 883G method 1008.2 condition C
PCT test	Pressure: 2.06kg/cm^2 (2.03*10^5 pa) Temperature : 121 ± 2 ℃ Relative humidity : 100% Duration : 24 hours	EIAJED-4701-3 B-123A