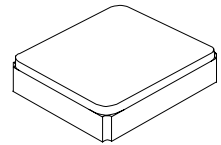




**XTL1019**

**48.53000 MHz  
Crystal Unit**



**SM2016-4**

- **Surface Mount Seam Weld Package**
- **Excellent Frequency Stability over Temperature**
- **Ultra-Miniature Seam Welded Package**
- **Complies with Directive 2002/95/EC (RoHS)**

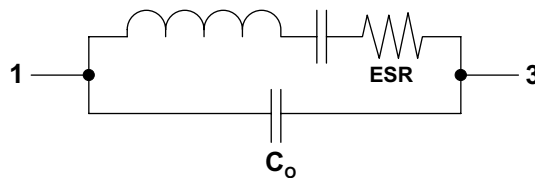


The XTL1019 is a surface mount 2.0 x 1.6 mm crystal unit for use in wireless telecommunications devices, especially where an ultra-miniature package is needed for mobility.

**Electrical Characteristics**

Characteristic	Sym	Notes	Minimum	Typical	Maximum	Units
Nominal Frequency	$F_O$			48.53000		MHz
Mode of Oscillation			Fundamental			
Storage Temperature Range			-40		+85	°C
Operating Temperature Range			-40		+85	°C
Frequency Stability over Operating Temperature Range			±30 ppm			
Equivalent Series Resistance	ESR				50	$\Omega$
Nominal Drive Level			8	10	12	$\mu$ W
Shunt Capacitance	$C_O$				2	pF
Load Capacitance	$C_L$			12		pF
Insulation Resistance			500 M $\Omega$ min @ 100 VDC			
Aging			±1.0 ppm			
Standard Shipping Quantity on 178 mm (7") Reel				1000		units
Lid Symbolization (in addition to Lot and/or Date Codes)			2R // YW			

**Crystal Equivalent Circuit**



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

**Notes:**

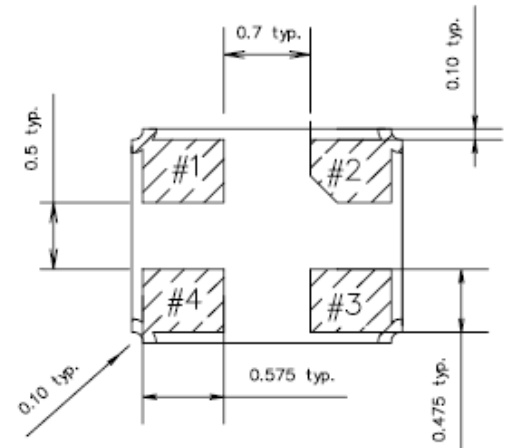
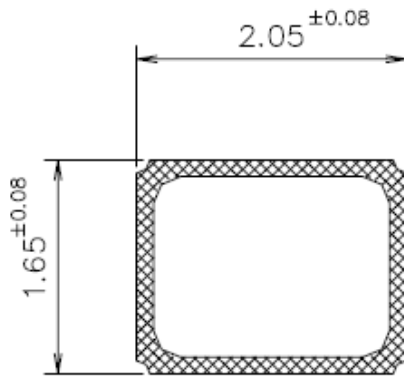
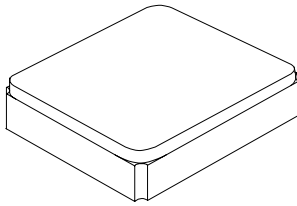
1. The design, manufacturing process, and specifications of this device are subject to change without notice.

# SM2016-4 Case

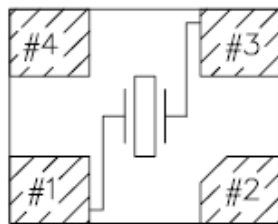
## 4-Terminal Ceramic Surface-Mount Case 2.0 X 1.6 mm Nominal Footprint

### Electrical Connections

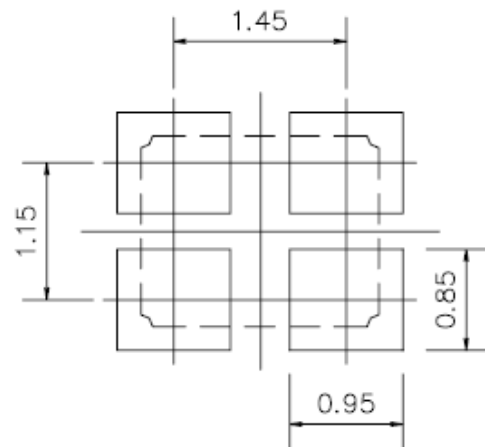
Connection	Terminals
Input / Output	1
Input / Output	3
Ground	2 & 4



### Internal Connections (Top View)

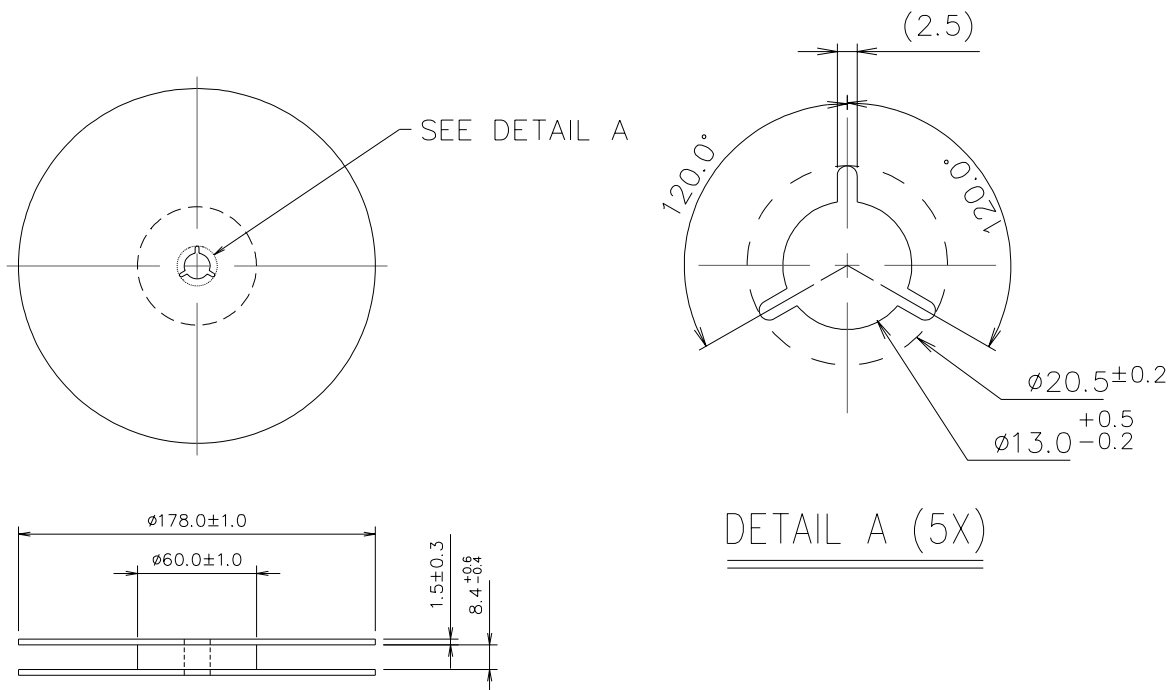


[NOTE] #2=NC, #4 is connected with a metal cover

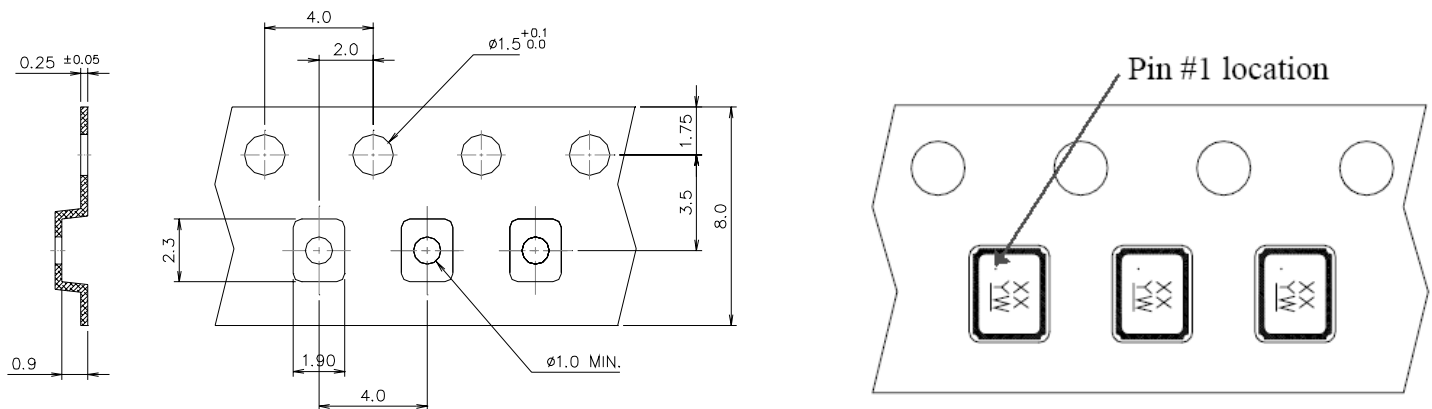


Recommended Land Pattern

## Reel Dimensions (mm):



## Tape Dimensions (mm):



### NOTE:

1. Unless otherwise specified tolerance on dimension +/-0.1 mm.
2. Material: conductive polystyrene with color black.
3. 10 pitch cumulative tolerance +/-0.2 mm.