

XTL2116

32.768000 KHz
Crystal Unit



SM2012-2

Features:

- Ceramic Seam Weld Package
- Excellent Reliability Performance
- Ultra Miniature Package
- Available to Surface Mount Technology and IR Reflow Process
- Moisture Sensitivity Level (MSL) : Level-1

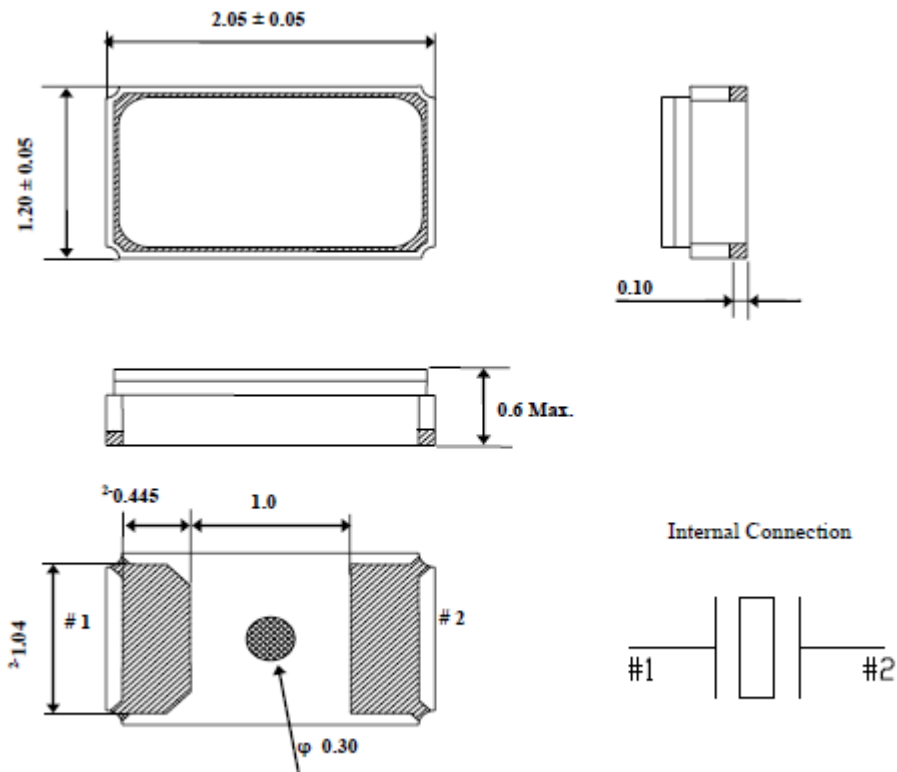
Description and Applications:

Surface mount 2.0mmx1.2mm crystal unit for use in communications devices,.

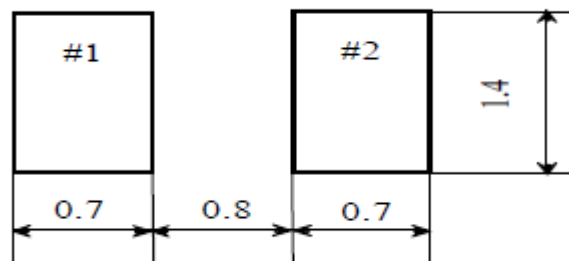
Electrical Specifications:

XTL2116	Specification
Nominal Frequency	32.768000 KHz
Storage Temperature Range	-55°C to +125°C
Operating Temperature Range	-40°C to +85°C
Turnover Temperature	25 +/- 5°C
Parabolic Curvature Constant	-0.04 x10 ⁻⁶ °C ² max.
Frequency Make Tolerance (FL)	+/-20 ppm
Equivalent Series Resistor (ESR)	80 kΩ max.
Drive Level	0.5 uW max.
Motional Capacitance (C1)	6.4 fF typ.
Shunt Capacitance (Co)	1.3 pF typ.
Load Capacitance (CL)	9.0 pF
Insulation Resistance	500M Ω min at DC 100V +/-15
Aging	+/-3.0 ppm / year
Marking	Laser marking

Mechanical Dimensions (mm):



Recommended Land Pattern: (unit: mm)



Marking:

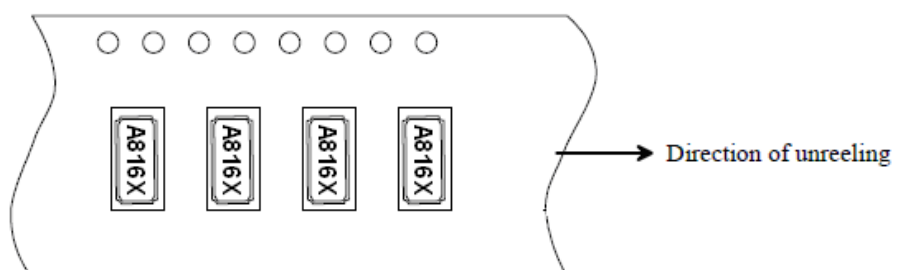
A816X

A : Nominal Frequency 32.768KHz

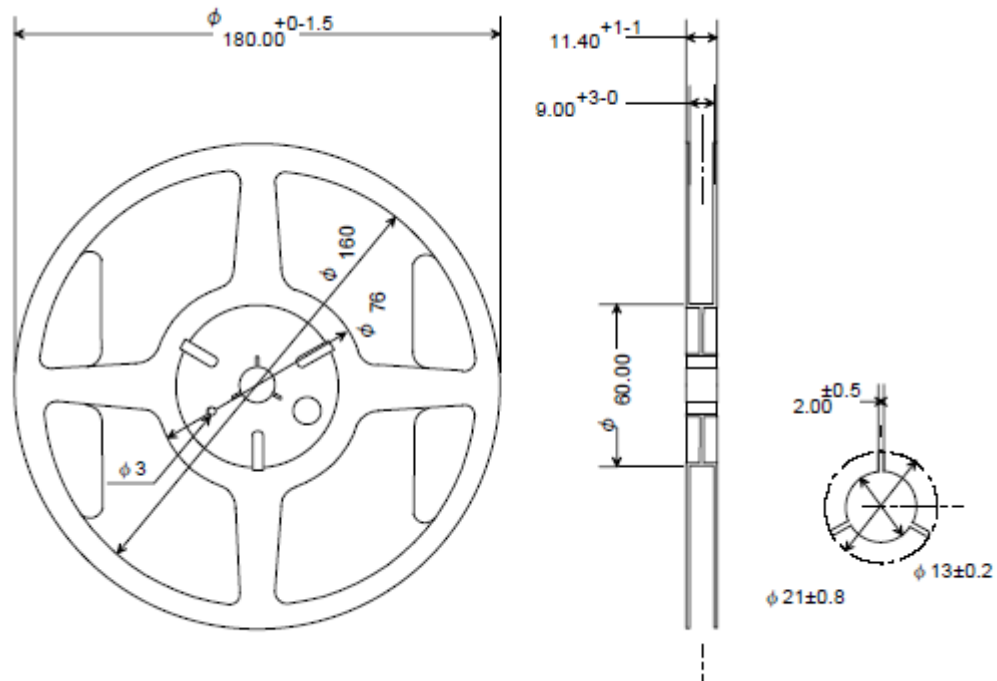
8 : Year code : 8 for 2018

16 : Week code

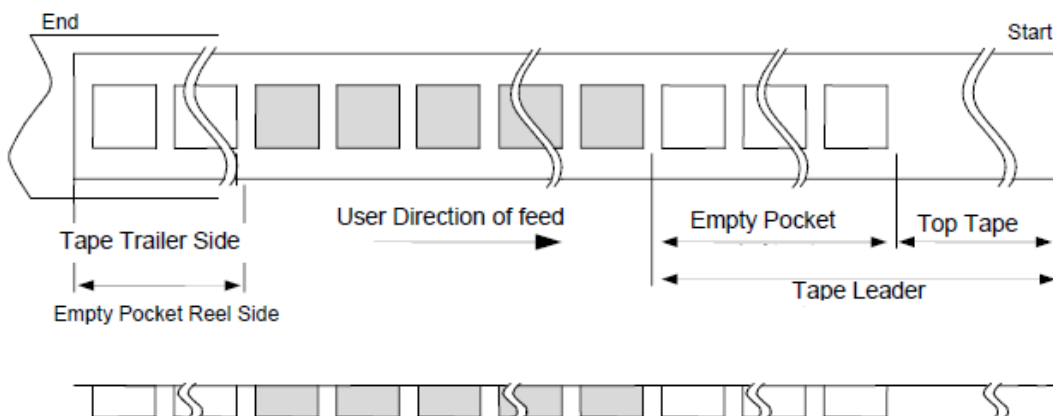
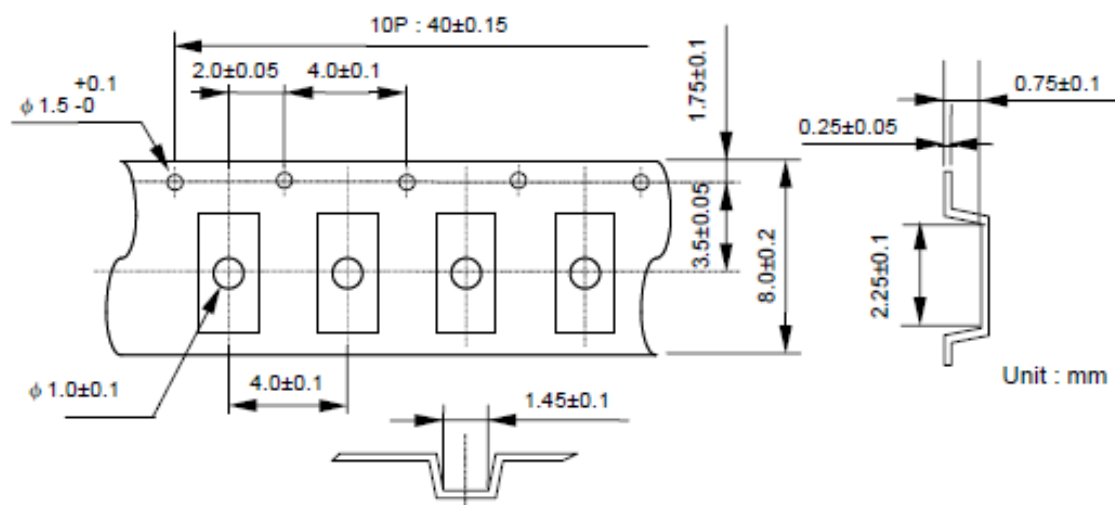
X : Traceability code



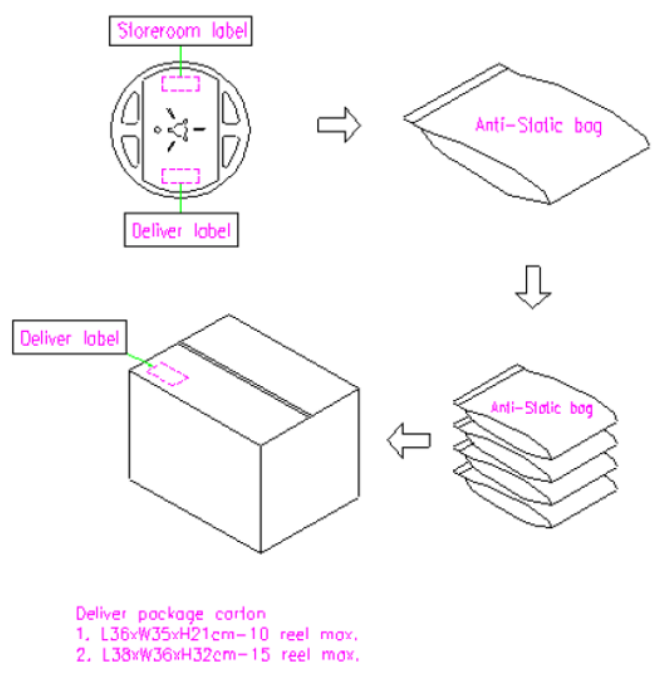
Reel Dimensions (mm):



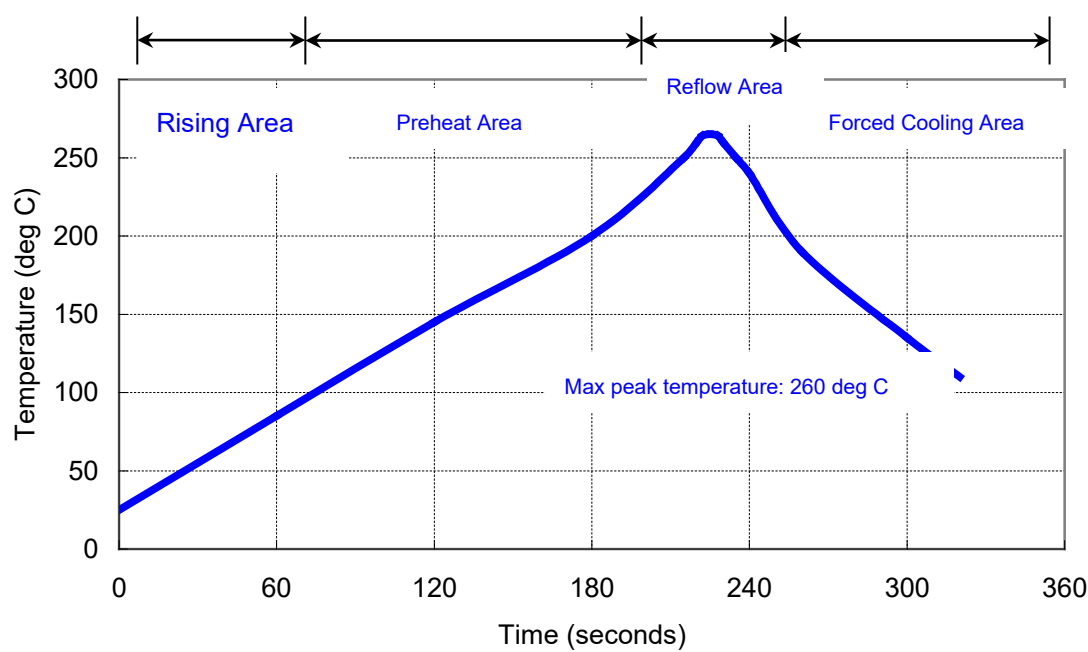
Tape Dimensions (mm):



Packing Quantity/Packing:
3K pcs maximum per reel



Reflow Profile:



Reliability Specifications

Test name	Test process / method	Reference standard
Mechanical characteristics		
resistance to Soldering heat (IR reflow)	Temp./ Duration : 265°C /10sec ×2 times Total time : 4min.(IR-reflow)	EIAJED-4701 -300(301)M(II)
Vibration	Total peak amplitude : 1.5mm Vibration frequency : 10 to 2000 Hz Sweep period : 20 minute Vibration directions : 3 mutually perpendicular Duration : 2 hr / direc.	MIL-STD 202G method 204
Mechanical Shock	directions : 3 impacts per axis Acceleration : 3000g's, +20/-0 % Duration : 0.3 ms (total 18 shocks) Waveform : Half-sine	MIL-STD 202G method 213
Solderability	Solder Temperature:265±5°C Duration time: 5±0.5 seconds.	J-STD-002
Environmental characteristics		
Thermal Shock	Heat cycle conditions -40 °C (30min) ↔ 85 °C (30min) * cycle time : 10 times	MIL-STD 883G method 1010.8
Humidity test	Temperature : 85 ± 2 °C Relative humidity : 85% Duration : 96 hours	MIL-STD 202G method 103
Dry heat (Aging test)	Temperature : 125 ± 2 °C Duration : 168 hours	MIL-STD 202G method 108A
Cold resistance (Low Temp Storage)	Temperature : -40 ± 2 °C Duration : 96 hours	IEC 60068-2-1



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. This component was always RoHS compliant from the first date of manufacture.