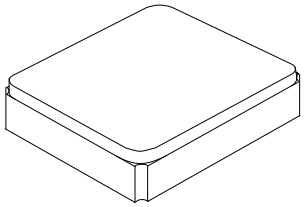
RFMi
A BRAND OF AKOUSTIS

Preliminary

RoHS compliant

XTL2088J

32.000000 MHz Crystal Unit



SM1612-4 Case

Features:

- Surface Mount Hermetic Package
- Excellent Reliability Performance
- Good Frequency Perturbation and Stability over temperature
- Ultra Miniature Package
- Moisture Sensitivity Level (MSL) : Level-1

Description and Applications:

Surface mount 1.6mmx1.2mm crystal unit for use in wireless communications devices, especially for a need of ultra miniature package for mobility.

Electrical Specifications:

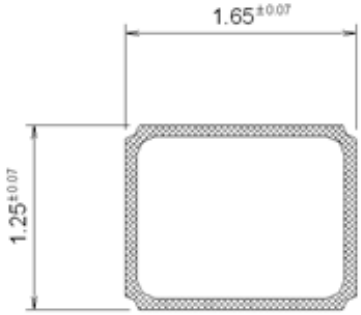
XTL2088J	**Specification**			
Characteristic	Min	Nom	Max	Unit
Nominal Frequency		32.000000		MHz
Mode of Oscillation		Fundamental		°C
Storage Temperature Range	-40		+125	°C
Operating Temperature Range	-30		+85	°C
Initial frequency tolerance(25°C ± 3°C)	-10		+10	ppm
Tolerance over temperature(-30°C to +85°C)	-19		+19	ppm
Aging(1st years)	-1		+1	ppm
Total Budget(ppm)	-30		+30	ppm
Reflow (after 2 times)	-2		+2	ppm
Equivalent Series Resistance (ESR)			100	Ω
Nominal Drive Level		30	100	uW
Load Capacitance (CL)		6		pF
Shunt Capacitance (Co)			3.0	pF
Insulation Resistance(DC 100V)	500			MR

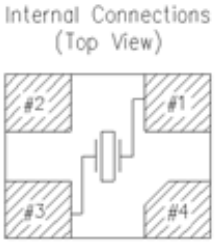
CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.

NOTES:

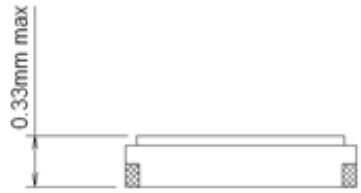
1. The design, manufacturing process, and specifications of this device are subject to change.
2. US or International patents may apply.
3. RoHS compliant from the first date of manufacture.

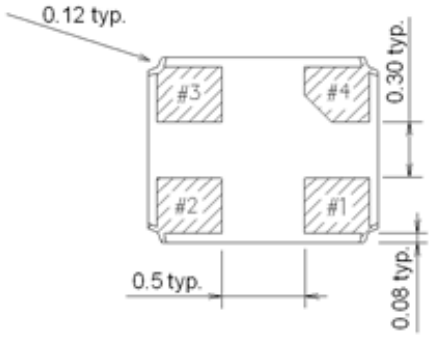
Mechanical Dimensions (mm):





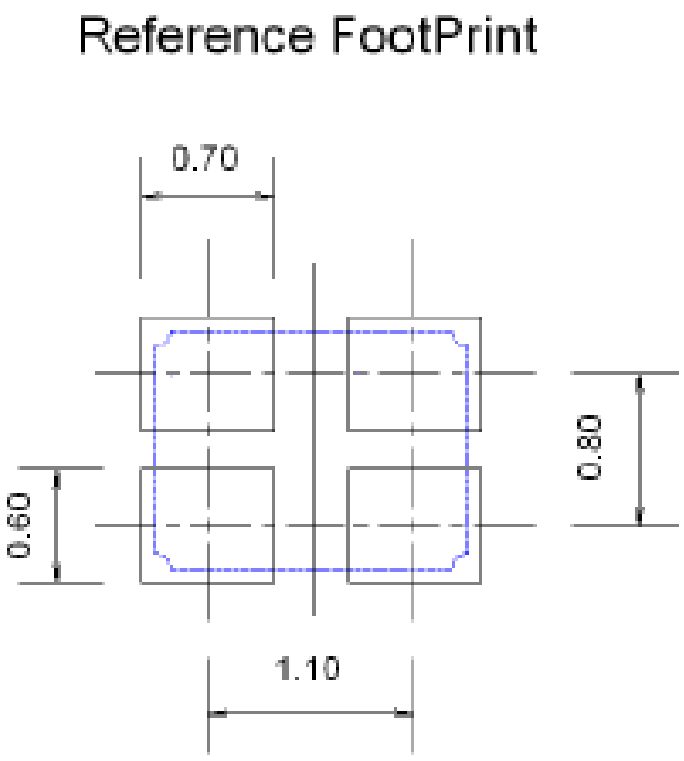
[NOTE] #4=NC, #2 is connected with a metal cover





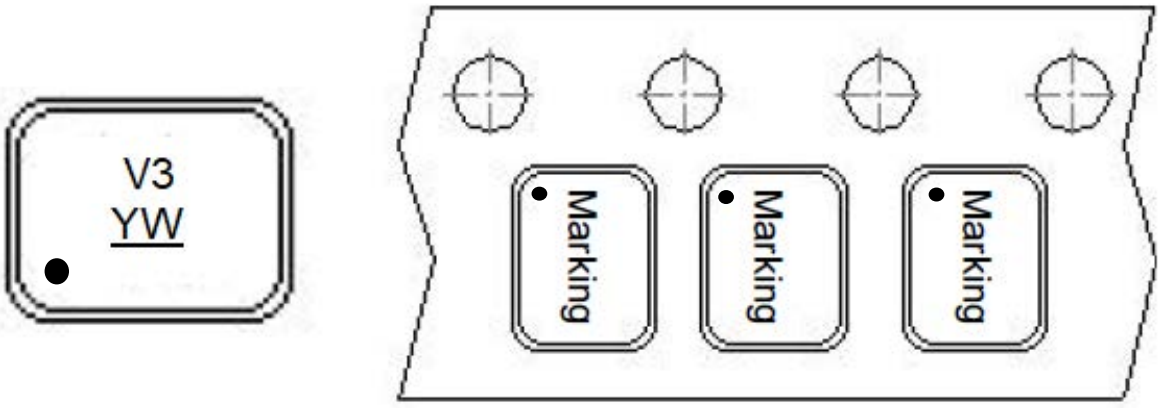
	Pin Connection
#1 pin	IN/OUT
#2 pin	GND
#3 pin	IN/OUT
#4 pin	NC

Recommended Land Pattern: (unit: mm)



Marking:

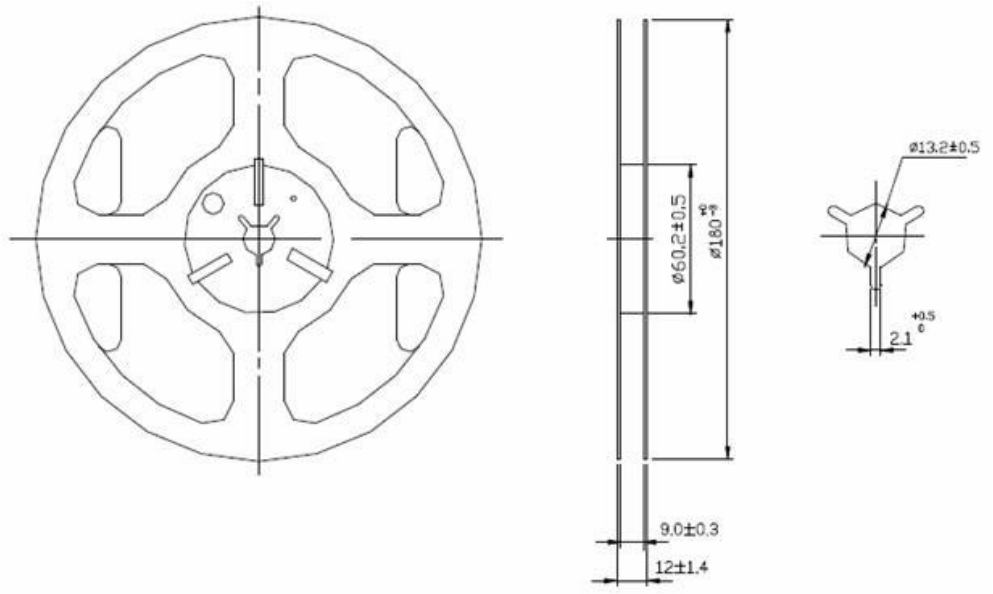
Y = Year, W = Week



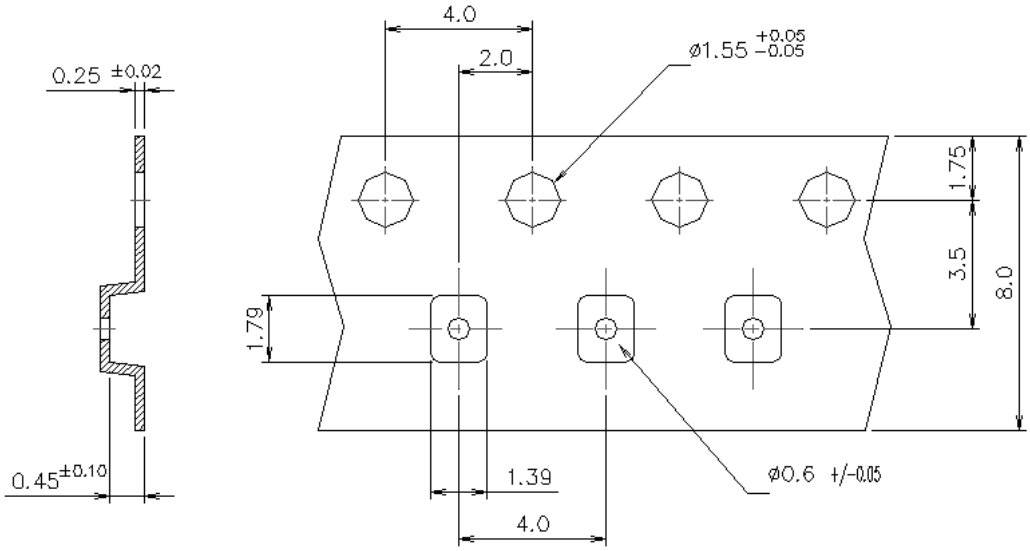
Reel Dimensions (mm):

Reel Count: 7" = 3000

Tape and Reel Standard per ANSI/EIA-481



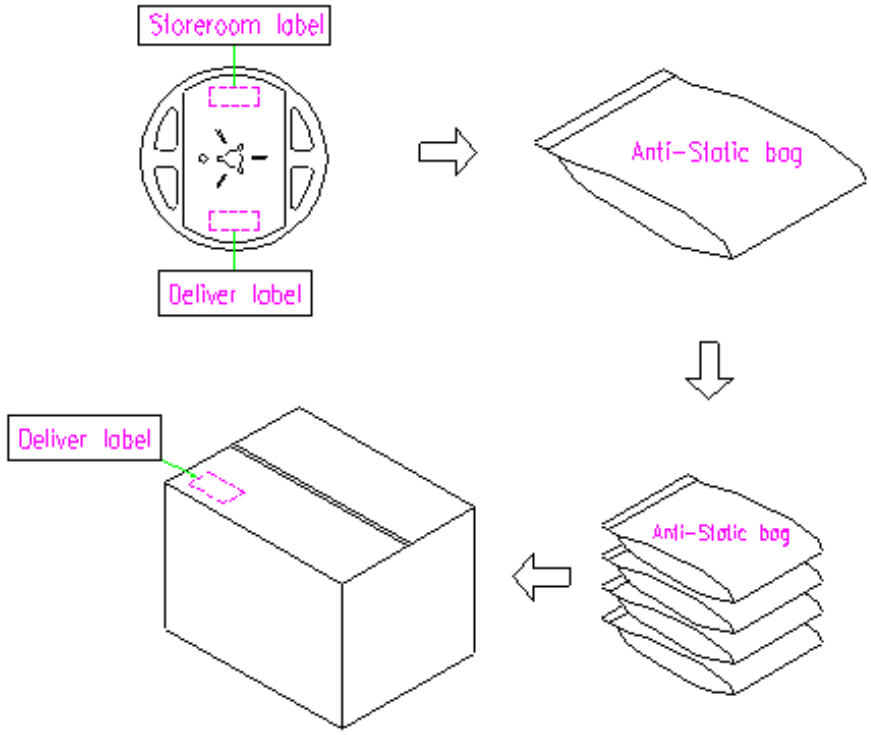
Tape Dimensions (mm):



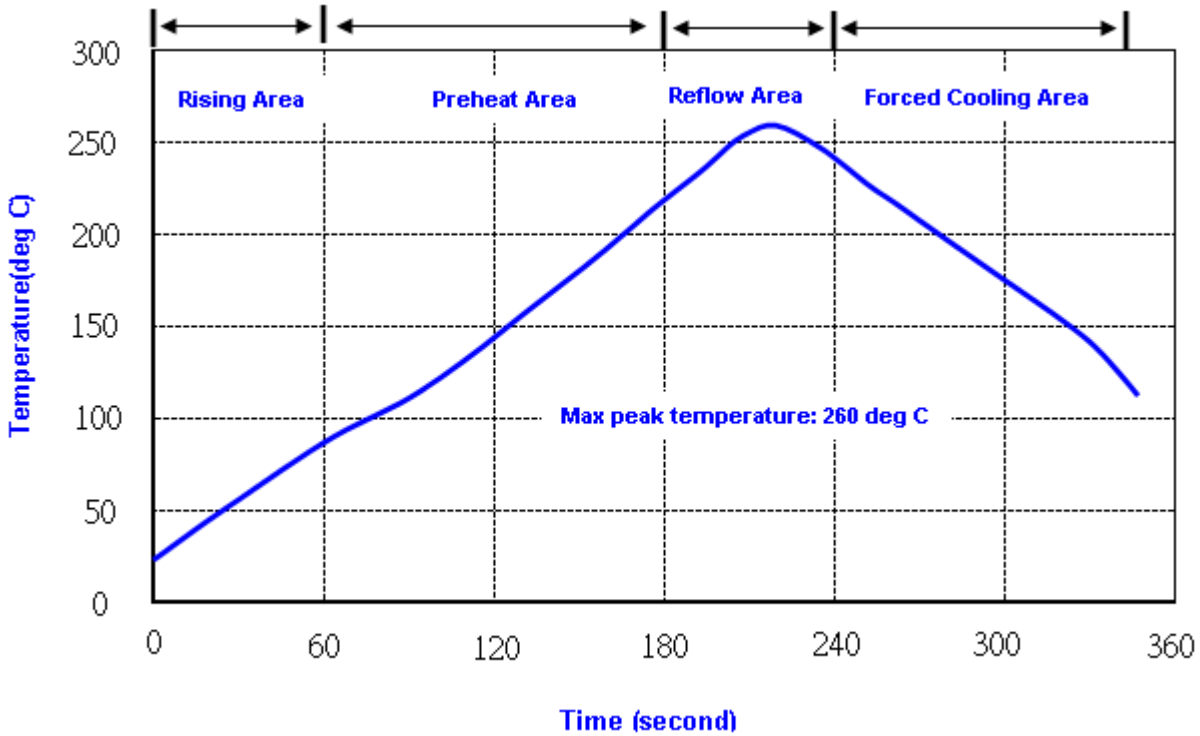
1. Unless otherwise specified tolerance on dimension +/-0.1 mm.
2. Material: conductive polystyrene with color black.
3. 10 pitch cumulative tolerance +/-0.2 mm.

Packing Quantity/Packing:

3K pcs maximum per reel



Reflow Profile:



Note: 1.Max peak temperature: 260+/-5 deg C; Time: 10+/-2 sec

2. Temperature: 217+/-5 deg C; Time: 90~100 sec

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 ℃ (30min) ⟷ 85 ℃ (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