

SM3215-2

Features:

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

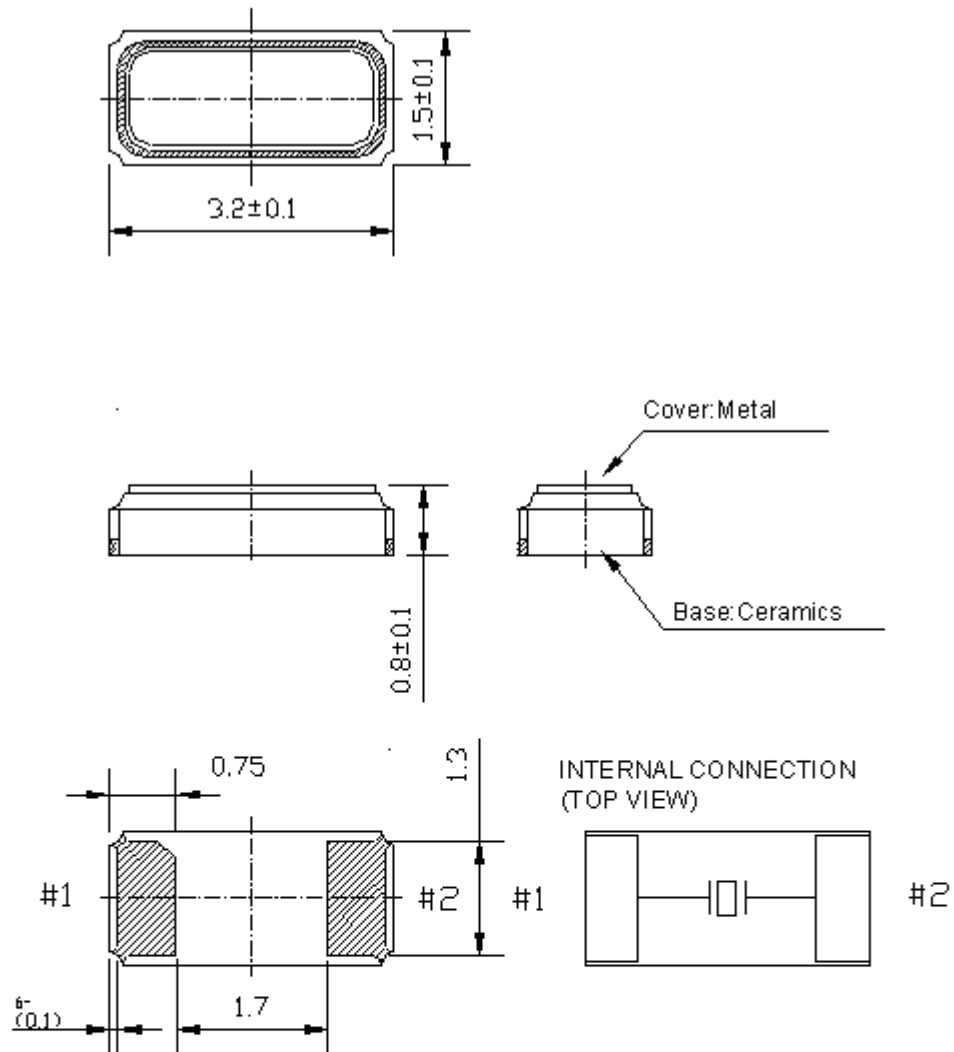
Description and Applications:

Surface mount 3.2mmx1.5mm crystal unit for use in communications devices,.

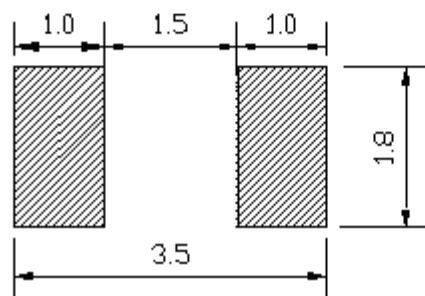
Electrical Specifications:

XTL2000	Specification
Nominal Frequency	32.768000 KHz
Storage Temperature Range	-40°C~+85°C
Operating Temperature Range	-40°C~+85°C
Turnover Temperature	25 +/- 5 °C
Parabolic Curvature Constant	-0.04 ppm /°C ² max.
Frequency Make Tolerance (FL)	+/-20 ppm @ 25°C +/- 3°C
Equivalent Series Resistor (ESR)	70K Ω max ;41K Ω typ
Drive Level	0.8 uW max.
Load Capacitance (CL)	9 pF
Shunt Capacitance (Co)	0.5 pF min ;1.0 pF typ ;1.5 pF max
Motional Capacitance (C1)	2.0 fF min ;4.0 fF typ ;6.0 fF max
Motional Inductance	5125K mH typ
Aging	+/-3.0 ppm/1 st year @25°C
Marking	Laser marking
Insulation Resistance	500M Ω min at DC 100V

Mechanical Dimensions (mm):



Recommended soldering pattern



Marking:



y : The last digit of production year

m : Production month (See Table.1)

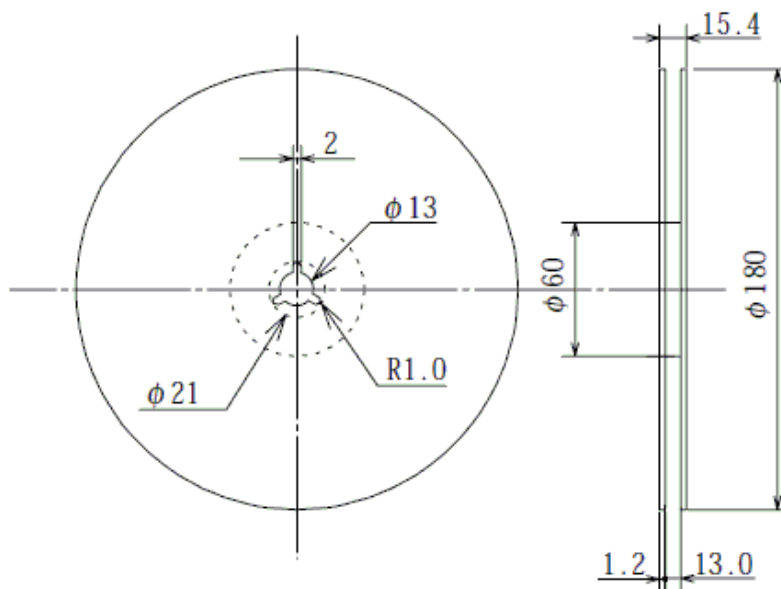
: Production Lot No.

Table.1

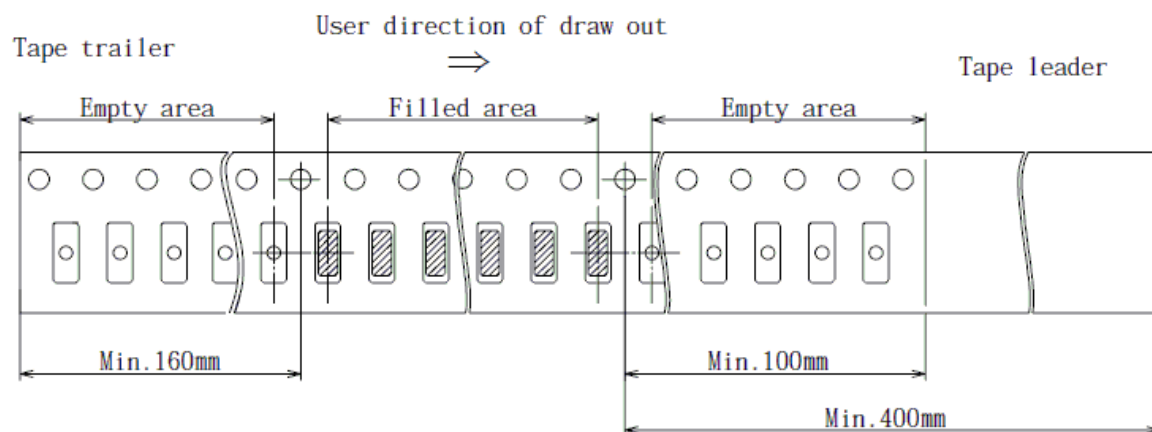
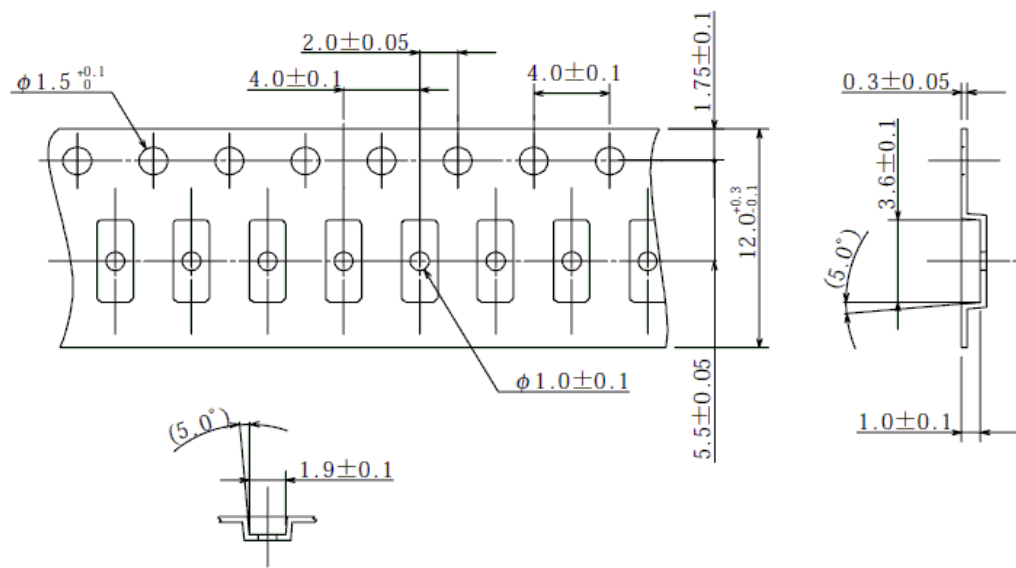
Month	Jan	Feb	...	Sep	Oct	Nov	Dec
Code	1	2	...	9	X	Y	Z

Reel Dimensions (mm):

Reel Count:
7" = 3000

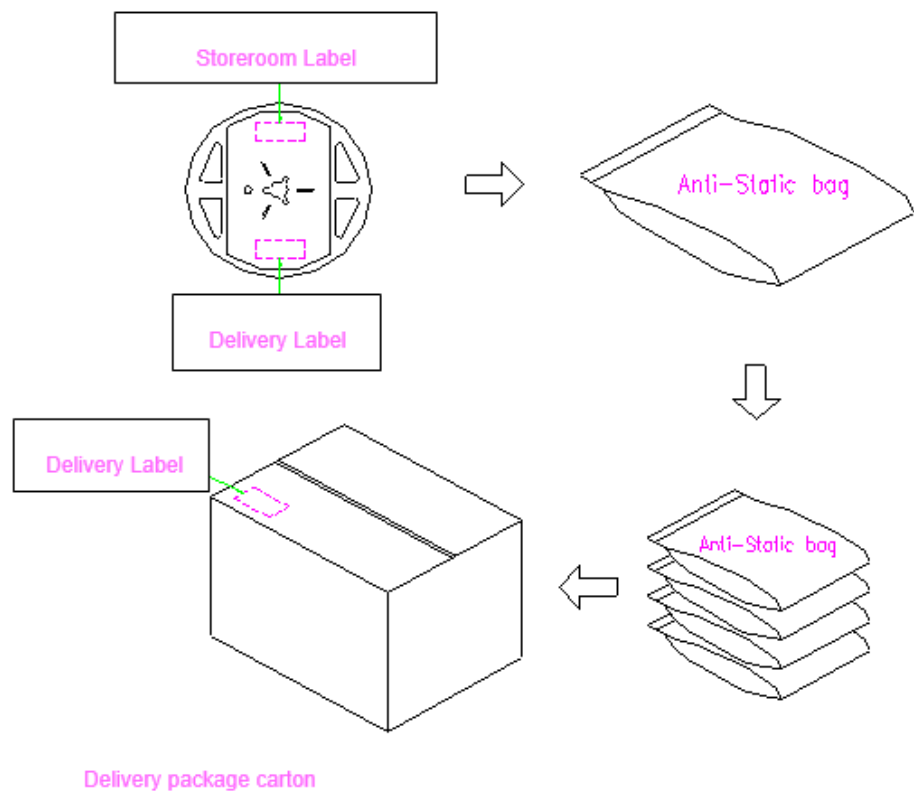


Tape Dimensions (mm):



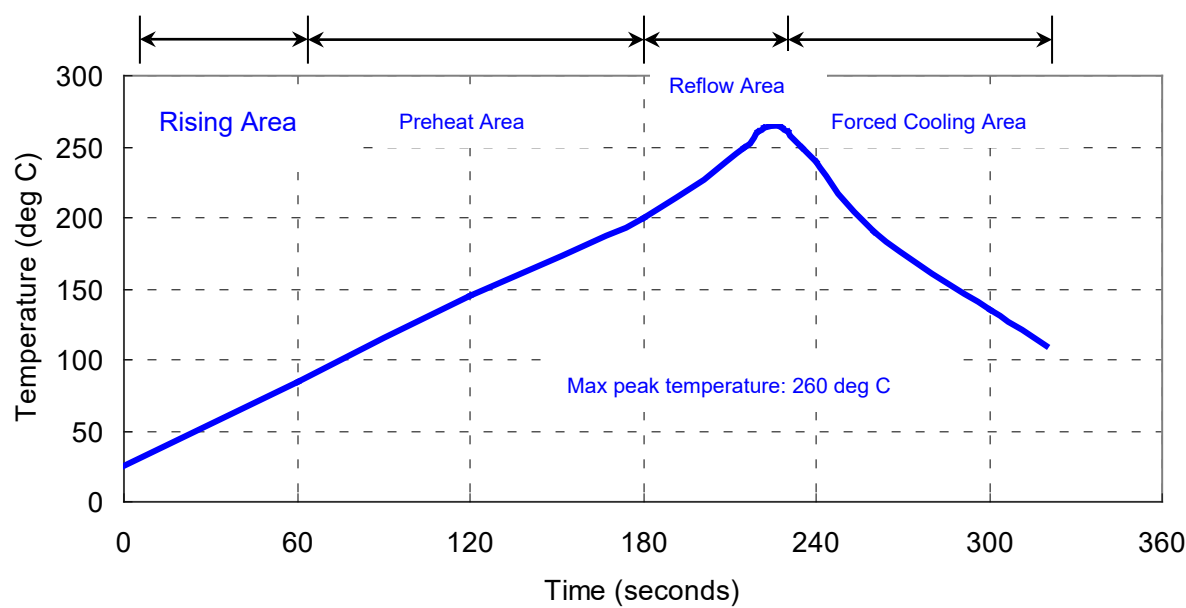
Packing Quantity/Packing:

3K pcs maximum per reel



- 1. L36xW35xH21 cm-10 reel max.
- 2. L38xW36xH32 cm-15 reel max.

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.