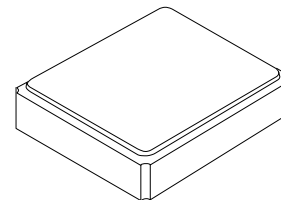


XO9051P

50.000000 MHz
XO



SM3225-4

Features:

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

Application:

- Supply Voltage CMOS Output
- Option-able stand-by functions for output.

Electrical Characteristics:

| LC- \$) %d | Specifications |
|--|--|
| Nominal Frequency, Fo | 50.000000 MHz |
| Storage Temperature Range | -40°C to +85°C |
| Operating Temperature Range | -40°C to +70°C |
| Power Supply Voltage, Vcc | 3.3V +/- 5% |
| Load | 15pF |
| “0” Level “1” Level | Vol: 10%Vcc max Voh:90%Vcc min |
| Power Supply Current, Icc | 5 mA max |
| Frequency Accuracy ¹ | +/-25 ppm max |
| Duty Cycle | 45% ~ 55% |
| Rise Time (10% -> 90% of final RF level in Vp-p) Fall Time (90% -> 10% of final RF level in Vp-p) | 10 nsec (max.) |
| Enable/Disable Function | PIN 1: Vih:70%Vcc min or Open, PIN 3: Output Enable PIN 1: Vil:30%Vcc max, PIN 3:Output Disable |
| SSB Phase Noise (@100Hz Carrier Offset) (@1KHz Carrier Offset) (@10KHz Carrier Offset) (@100KHz Carrier Offset) | -120 dBc/Hz max -143 dBc/Hz max -151 dBc/Hz max -157 dBc/Hz max |

#Note 1: Frequency accuracy includes 25C tolerance, operating temperature range, aging and voltage or load change

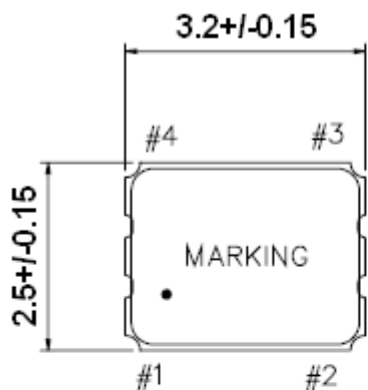


CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.

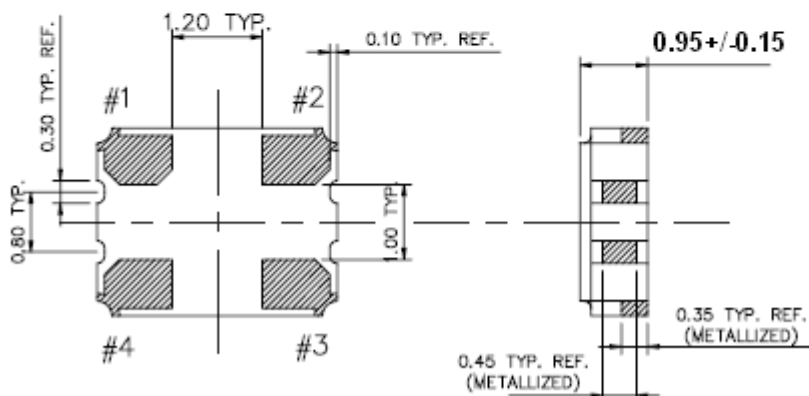
NOTES:

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.

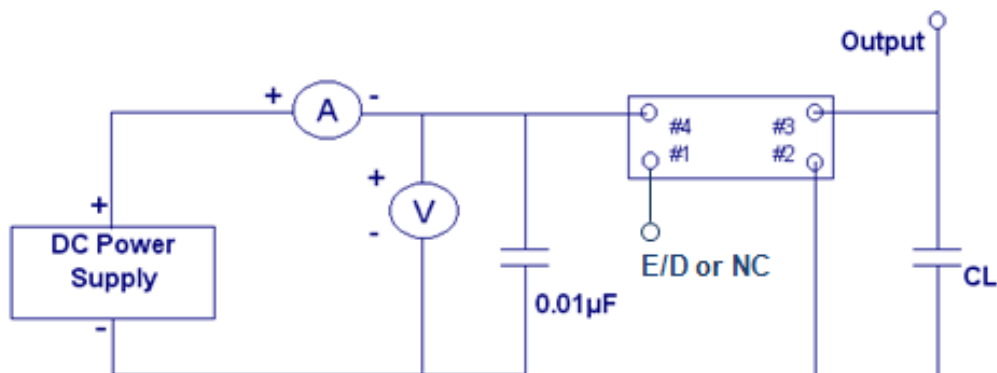
Mechanical Dimensions: (Unit: mm)



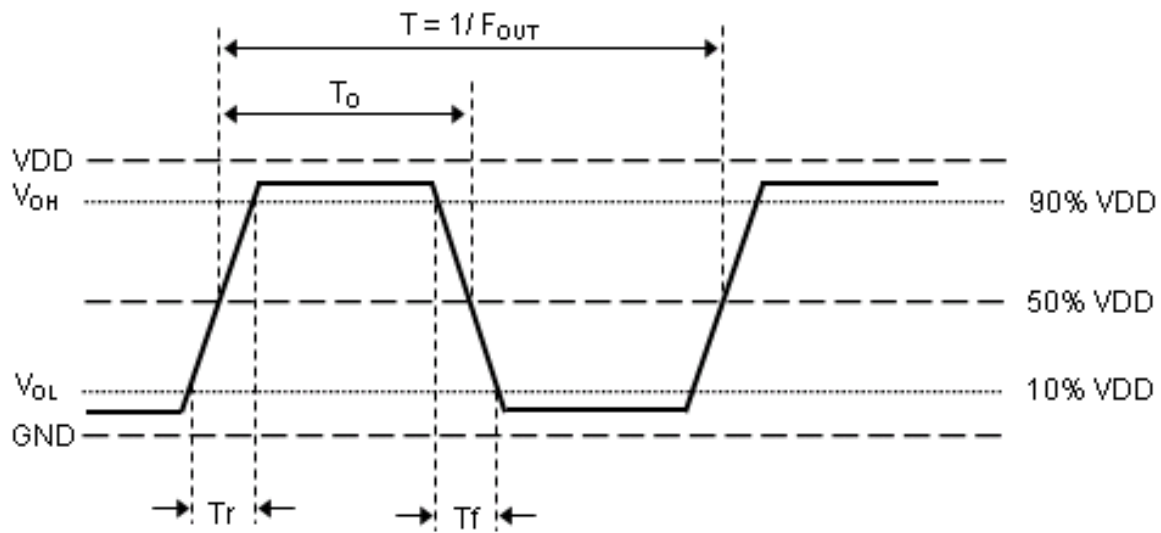
Unit :mm
 Pin Function
 1 : Output Enable
 2 : CIRCUIT AND COVER GROUND
 3 : OUTPUT
 4 : VDD



Test Circuit:

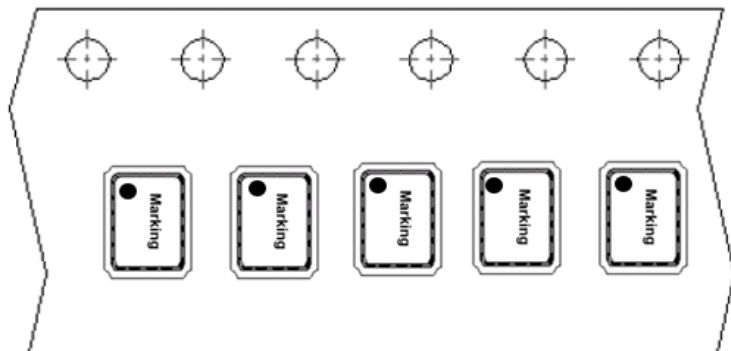


Output Waveform :



Marking:

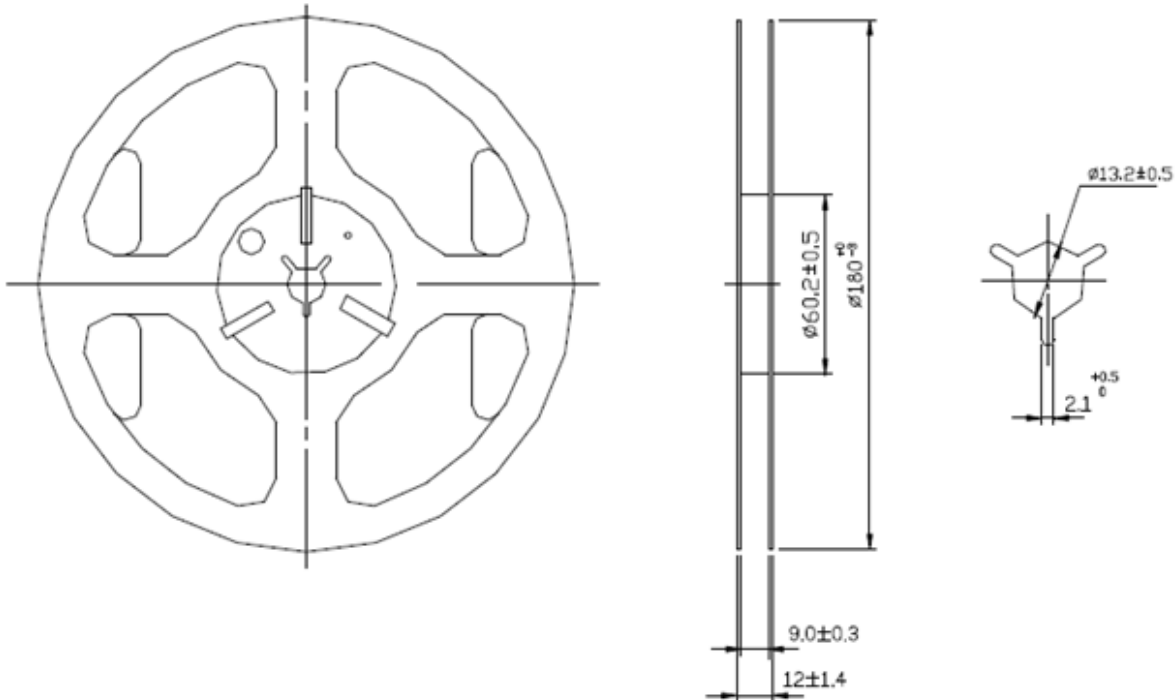
Y = Year
WW = Week
S = Shift



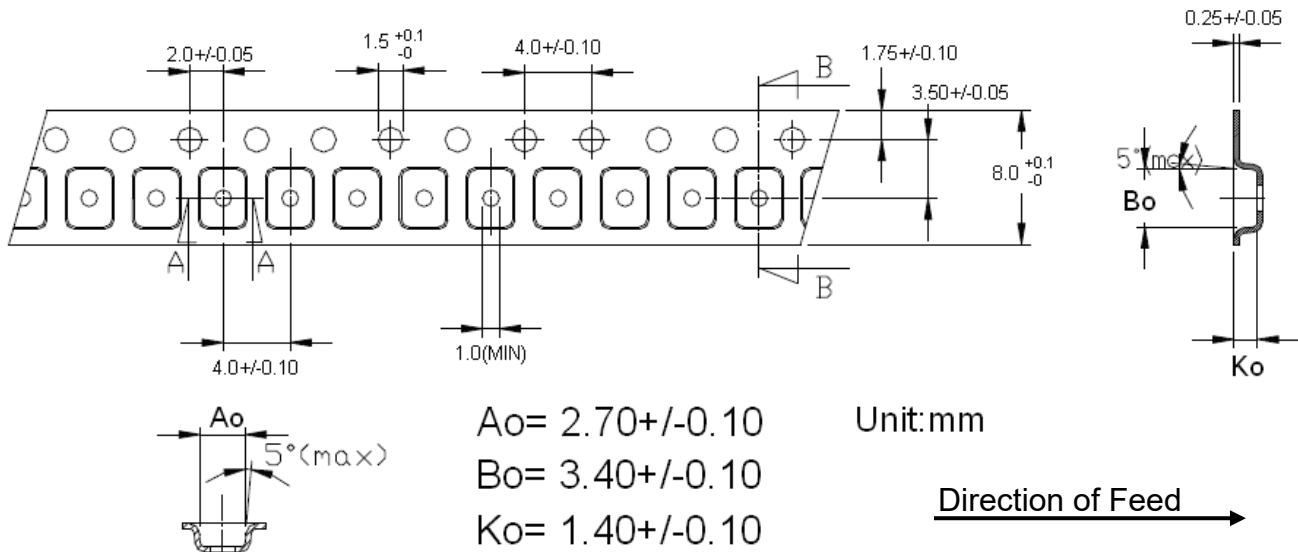
Reel Dimensions (mm):

Reel Count: 7" = 3000

Tape and Reel Standard per ANSI/EIA-481



Tape Dimensions (mm):

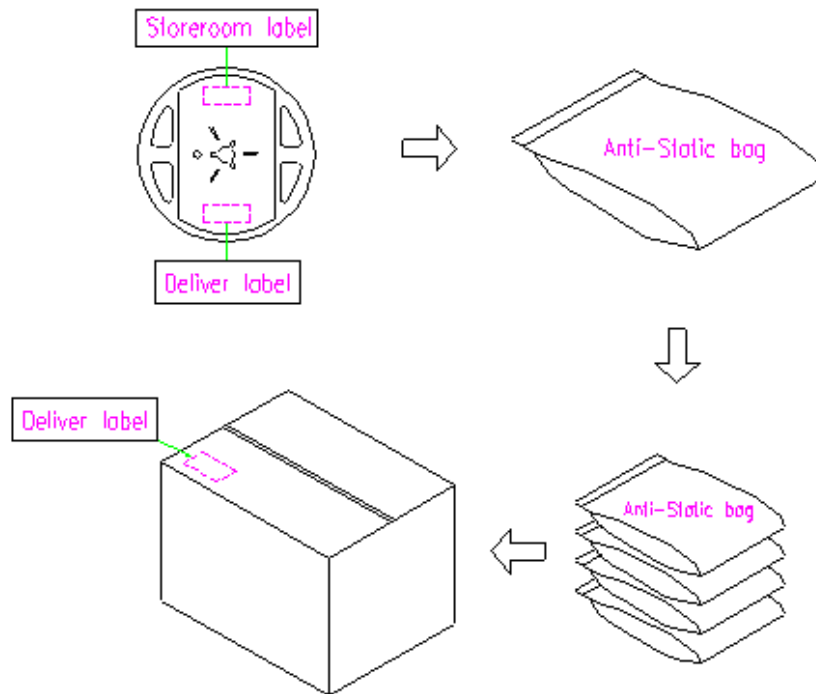


[NOTE]:

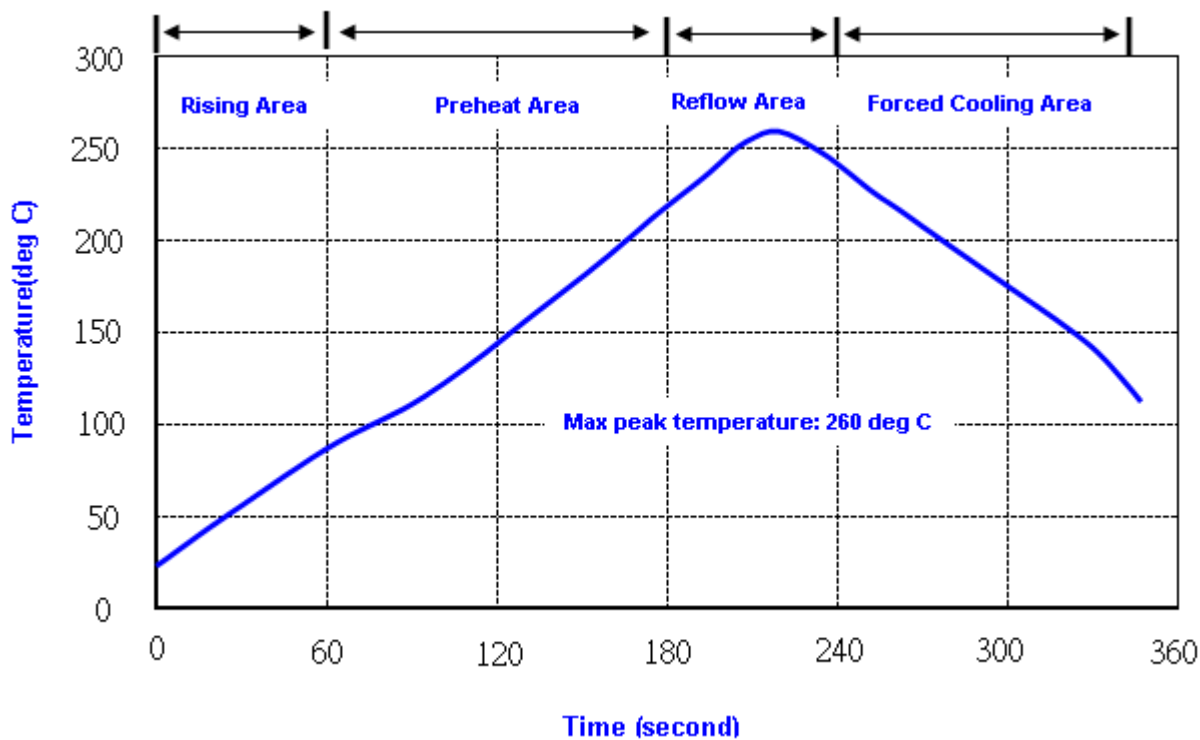
1. Unless otherwise specified tolerance on dimension ± 0.1 mm.
2. Material: conductive polystyrene with color black.
3. 10 pitch cumulative tolerance ± 0.2 mm.

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 : 260°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 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°C Duration time: 5±0.5 seconds. | MIL-STD 883G method 2003 |
| Environmental characteristics | | |
| Thermal Shock | Heat cycle conditions -55 °C (30min) ↔ 125 °C (30min) * cycle time : 10 times | MIL-STD 883G method 1010.7 |
| Humidity test | Temperature : 70 ± 2 °C Relative humidity : 90~95% Duration : 96 hours | MIL-STD 202F method 103B |
| Dry heat (Aging test) | Temperature 125 ± 2 °C Duration 168 hours | MIL-STD 883G method 1008.2 condition C |
| Cold resistance (Low Temp Storage) | Temperature -40 ± 3 °C Duration 1000 hours | IEC 60068-2-1 |