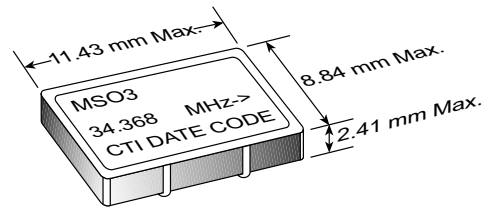


3.3V 9x11mm Surface Mount Crystal Clock Oscillators

- TTL/CMOS Compatible
- Tri-State Feature for Auto Test Systems
- Anti-Static Tube or Tape & Reel Packaging
- 1.5 to 40 MHz Frequency Range
- ± 20 ppm Stability 0°C to 70°C
- ± 32 ppm Stability -40°C to 85°C
- 40/60% Symmetry Standard
- 45/55% Symmetry Available
- Seam Sealed, Resistance Welded Package



ELECTRICAL SPECIFICATIONS

| MODEL | MSO3 |
|---------------------------|---|
| Frequency Range (MHz) | 1.5 to 40 |
| Frequency Stability (ppm) | |
| Overall (Typical) | Inclusive of calibration, temperature, voltage, load, shock, vibration, aging |
| 0°C to 70°C | ± 20 |
| -40°C to +85°C | ± 32 |
| Temperature Range (°C) | |
| Operating | -40°C to +85°C |
| Storage | -55°C to +125°C |
| Supply Voltage (V) | +3.3 $\pm 1\%$ |
| Input Current (mA) | $< 26 @ 4 \text{ MHz}$ |
| Symmetry (%) CMOS | 40/60 |
| T_R and T_F (ns) | < 5 |
| "0" Level (V_{OL}) | 0.5V max. @ $I_{OL} = 8\text{mA}$ |
| "1" Level (V_{OH}) | $V_{CC} - 0.4\text{V}$ min. @ $I_{OH} = -1\text{mA}$ |
| Load | CMOS Compatible |
| Start up Time (ms) | < 5 |

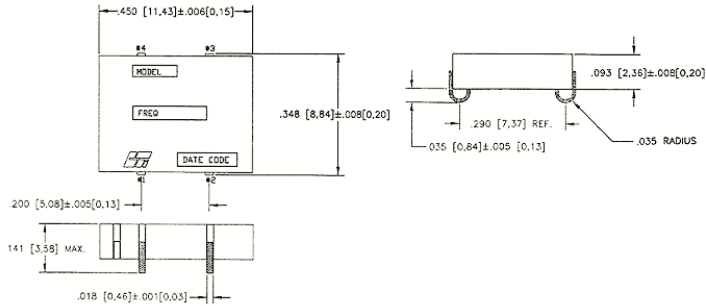
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PART NUMBERING GUIDE

MSO3XX - Specify Frequency

- "Blank" = 0°C to 70°C Operating Temperature
- "M" = -40°C to 85°C Operating Temperature
- "Blank" = 40/60% Symmetry
- "C" = 45/55% Symmetry

5V 9x11mm Surface Mount Crystal Clock Oscillators

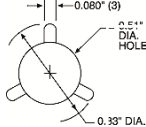


| PIN | FUNCTION |
|-----|-------------------|
| 1 | Enable/Disable |
| 2 | Ground |
| 3 | Output |
| 4 | + V _{CC} |

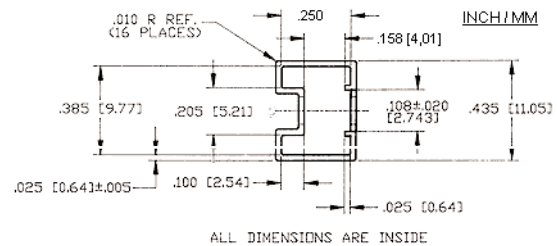
TAPE & REEL SPECIFICATIONS

Tape & Reel
Shipping Tape
 Size: 24mm
 Material: Black PVC,
 Conductive .012" thick
Shipping Reel
 Size: 13" diameter
 Material: Plastic

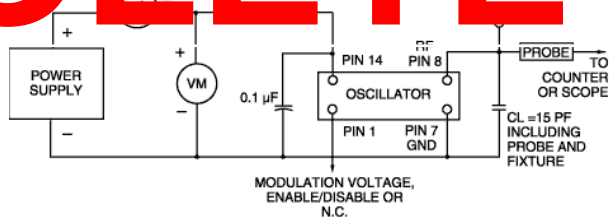
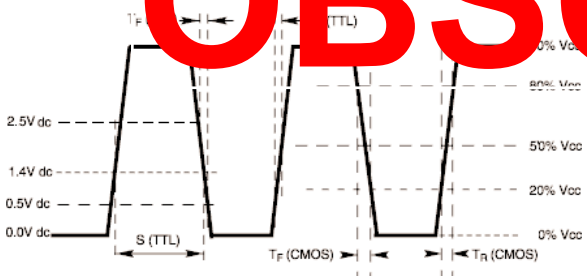
13" Reel
 Tape Length 16.5 yds
 Max. No. of Pockets: 750
 Leader Length: 16" min.
 Trailer Length: 14" min.
 Q.C. Sample Quantity: 10 pcs.
 Product/Reel: 500
 Cover Tape Thickness: .002"
 Cover Peel Strength: 75g
 Note: Minimum Order is 500



SHIPPING TUBE CROSS SECTION



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MECHANICAL AND ENVIRONMENTAL SPECIFICATIONS

| TEST METHODS | REFERENCE PROCEDURES | DESCRIPTION |
|-------------------------|--------------------------------------|--|
| Temperature Cycle | MIL-STD-833, Mtd 1010, Cond. B | -55°C to +125°C; Air-to-Air; 100 cycles; 10 min. dwell |
| Mechanical Shock | MIL-STD-883, Mtd 2002, Cond. B | 1500 g's |
| Vibration | MIL-STD 883, Mtd 2007, Cond. B | 20-2000 Hz; 0.06 inch; 15g's; 3 planes |
| Humidity Steady State | MIL-STD-202, Mtd 103 | 40°C; 90%-95% R.H.; 56 days |
| Thermal Shock | MIL-STD-883, Mtd 1011.7 Cond. B | 100°C to 0°C; Water-to-Water; 15 cycles |
| Electrostatic Discharge | MIL-STD-883, Mtd 3015 Class II | 2 KV to 4 KV Threshold |
| Solderability | MIL-STD-883, Mtd 2022.2 | Solder dip; Meniscograph Criteria |
| Hermeticity | MIL-STD-883, Mtd 1014.8, Cond. A1 | Mass spectro. 2 x 10 ⁻⁸ atmos. CC/sec He |
| Resistance to Soldering | MIL-STD-202, Mtd 210D, Cond. J | 235°C; 30 seconds |
| Lead Integrity | MIL-STD-883, Mtd 2004.5, Cond. A, B1 | Lead tension & bend stress |
| Marking Permanence | MIL-STD-883, Mtd 2015.8 | Resistance to solvents |
| Life Test | MIL-STD-883, Mtd 1005.6 | 125°C, powered, 1000 hours minimum |