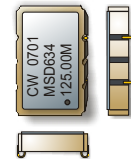


CRYSTAL CONTROLLED OSCILLATORS

SURFACE MOUNT "J" LEADED HCMOS  
CLOCK OSCILLATOR



MSD634

ABSOLUTE MAXIMUM RATINGS

TABLE 1.0

| PARAMETER           | UNITS | MINIMUM | NOMINAL | MAXIMUM | UNITS | NOTE |
|---------------------|-------|---------|---------|---------|-------|------|
| Storage Temperature |       | -55     | -       | 125     | °C    |      |
| Supply Voltage      | (Vcc) | -0.5    | -       | 7       | Vdc   |      |

OPERATING SPECIFICATIONS

TABLE 2.0

| PARAMETER                        |       | MINIMUM | NOMINAL | MAXIMUM | UNITS  | NOTE |
|----------------------------------|-------|---------|---------|---------|--------|------|
| Frequency Range                  | (Fo)  | 1.5     | -       | 156.25  | MHz    |      |
| Total Frequency Tolerance        |       | -100    | -       | 100     | ppm    | 1    |
| Operating Temperature Range      |       | -40     | -       | 85      | °C     |      |
| Supply Voltage                   | (Vcc) | 4.50    | 5.00    | 5.50    | Vdc    |      |
| Supply Current                   | (Icc) | -       | -       | 50      | mA     |      |
| Jitter (BW=10Hz to 20MHz)        |       | -       | -       | 5       | ps rms |      |
| Jitter (BW=12kHz to 20MHz)       |       | -       | -       | 1       | ps rms |      |
| SSB Phase Noise at 10Hz offset   |       | -       | -60     | -       | dBc/Hz |      |
| SSB Phase Noise at 100Hz offset  |       | -       | -90     | -       | dBc/Hz |      |
| SSB Phase Noise at 1KHz offset   |       | -       | -125    | -       | dBc/Hz |      |
| SSB Phase Noise at 10KHz offset  |       | -       | -135    | -       | dBc/Hz |      |
| SSB Phase Noise at 100KHz offset |       | -       | -140    | -       | dBc/Hz |      |

INPUT CHARACTERISTICS

TABLE 3.0

| PARAMETER                 |       | MINIMUM | NOMINAL | MAXIMUM | UNITS | NOTE |
|---------------------------|-------|---------|---------|---------|-------|------|
| Tri-state Enable Voltage  | (Vih) | ≥70%Vcc | -       | -       | Vdc   | 2    |
| Tri-state Disable Voltage | (Vil) | -       | -       | ≤30%Vcc | Vdc   | 2    |

HCMOS OUTPUT CHARACTERISTICS

TABLE 4.0

| PARAMETER                   |       | MINIMUM    | NOMINAL | MAXIMUM    | UNITS | NOTE |
|-----------------------------|-------|------------|---------|------------|-------|------|
| LOAD                        |       | -          | -       | 50         | pF    |      |
| Voltage (High)              | (Voh) | ≥ 0.9(Vcc) | -       | -          | Vdc   |      |
| (Low)                       | (Vol) | -          | -       | ≤ 0.1(Vcc) | Vdc   |      |
| Current (High)              | (Ioh) | -16        | -       | -          | mA    |      |
| (Low)                       | (Iol) | -          | -       | 16         | mA    |      |
| Duty Cycle at 50% of Vcc    |       | 45         | 50      | 55         | %     |      |
| Rise / Fall Time 10% to 90% |       | -          | 1.5     | 3          | nS    |      |

PACKAGE CHARACTERISTICS

TABLE 5.0

|         |  |
|---------|--|
| Package | Hermetically sealed, ceramic package with gold plated J leads. |
|---------|--|

Note:

- Inclusive of calibration, frequency vs. temperature stability, supply voltage change, load change, shock and vibration, 20 years aging.
- Oscillator output is enabled with no connection on pad 1

DESCRIPTION

The Connor-Winfield MSD634 is a hermetically sealed surface mount 5.0V Crystal Controlled Oscillator (XO) HCMOS/TTL Compatible. The MSD634 is designed for applications requiring low jitter and tight stability.

FEATURES

- 5.0V OPERATION
- LOW JITTER <1ps RMS
- FREQUENCY TOLERANCE: ±100ppm
- TEMPERATURE RANGE: -40 to 85°C
- TRI-STATE ENABLE/DISABLE FUNCTION
- TAPE AND REEL PACKAGING

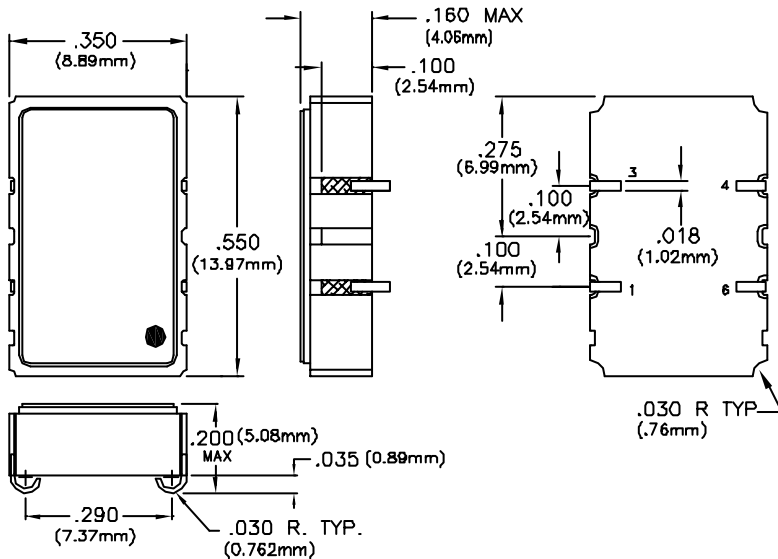
ORDERING INFORMATION

MSD634 - 125.00 MHz

HCMOS  
CLOCK  
SERIES

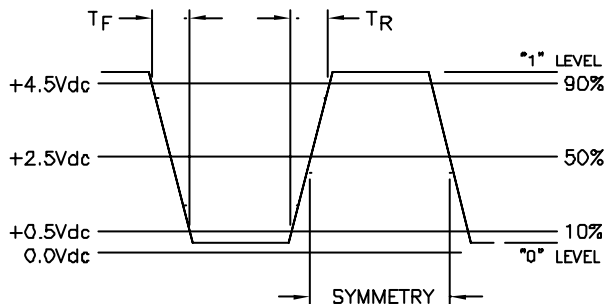
CENTER  
FREQUENCY

CRYSTAL CONTROLLED OSCILLATORS

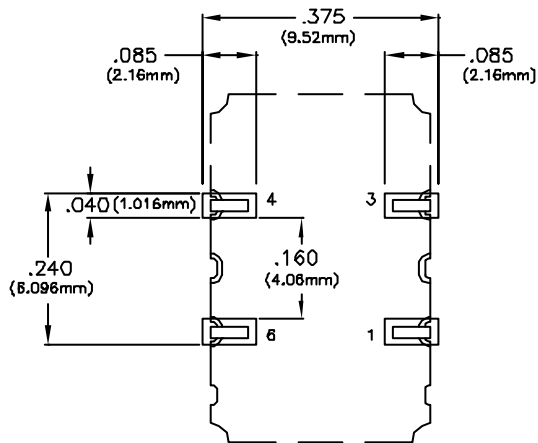


| PAD | CONNECTION    |
|-----|---------------|
| 1   | E/D TRI-STATE |
| 3   | GROUND        |
| 4   | OUTPUT        |
| 6   | Vcc           |

OUTPUT WAVEFORM



SUGGESTED PAD LAYOUT



TEST CIRCUIT

