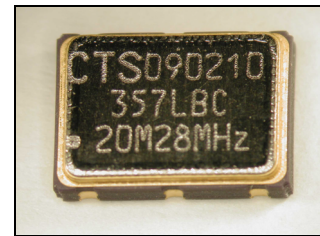


- ◆ Frequency Stability to ± 20 PPM
- ◆ +3.3Vdc or +5.0Vdc Operation
- ◆ HCMOS Output
- ◆ Operating Temperature to -40°C to $+85^{\circ}\text{C}$
- ◆ Output Enable Standard
- ◆ Tape & Reel Packaging
- ◆ Pb Free



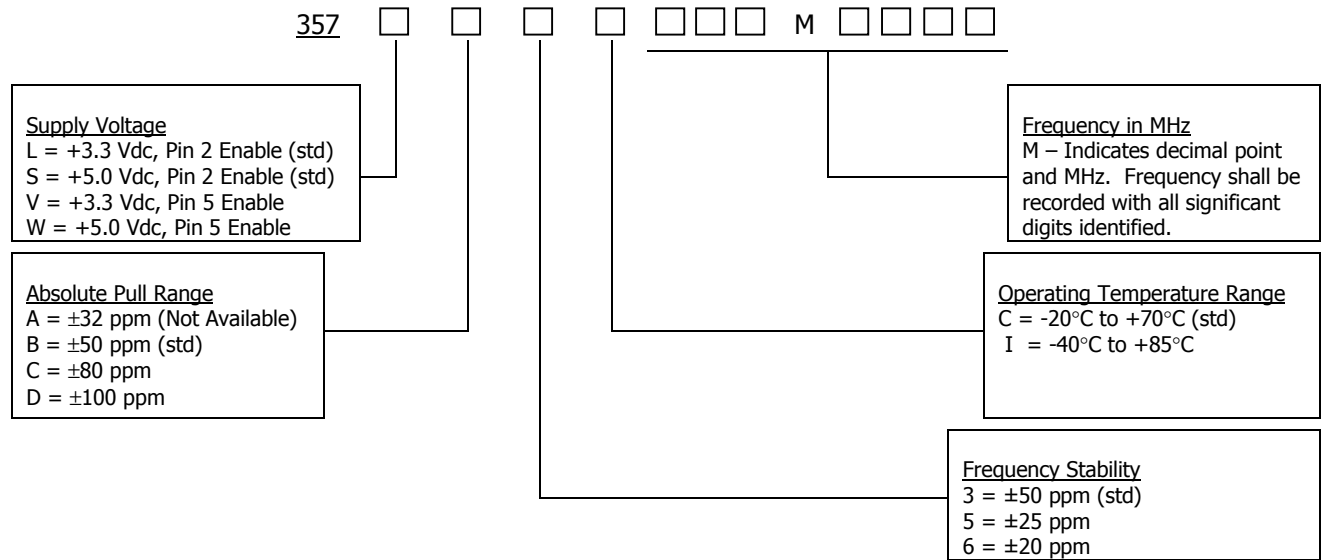
ELECTRICAL CHARACTERISTICS

| PARAMETER | SYMBOL | MIN | TYPICAL | MAX | UNIT |
|---|-----------------------------------|-----------------|-------------|-----------------|--------------|
| Output Frequency Range Model 357S, 357W Model 357L, 357V | f_o | 1.5 1.5 | - - | 80 80 | MHz MHz |
| Frequency Stability (Note 1) (See Ordering Information) | - | - | - | 20, 25, 50 | \pm ppm |
| Absolute Pull Range (Note 2) (See Ordering Information) | - | 32, 50, 80, 100 | - | - | \pm ppm |
| Supply Voltage Model 357S, 357W Model 357L, 357V | V_{CC} | 4.5 2.97 | 5.0 3.3 | 5.5 3.63 | V V |
| Operating Supply Current $C_L = 15\text{pf}$ Model 357S, 357W Model 357L, 357V | I_{CC} | - - | - - | 40 50 | mA mA |
| Output load | C_L | - | - | 15 | pf |
| Control Voltage Model 357S, 357W Model 357L, 357V | V_C | 0.5 0.3 | 2.5 1.65 | 4.5 3.0 | V V |
| Output Voltage Levels | | | | | |
| Logic '1' Level $I_{OH} = 14\text{ mA}$ | V_{OH} | $0.9 * V_{CC}$ | - | - | V |
| Logic '0' Level $I_{OL} = -14\text{ mA}$ | V_{OL} | - | - | $0.1 * V_{CC}$ | V |
| Output Transition Times (10% to 90%) | | | | | |
| Rise & Fall Time $C_L = 15\text{pf}$ | T_R, T_F | - | - | 5.0 | ns |
| Output Duty Cycle (@ 50% Level) | SYM | 45 | - | 55 | % |
| Start Up Time | - | - | - | 10.0 | ms |
| Phase Jitter (Bandwidth 12K – 20M Hz) | - | - | < 1 | - | ps RMS |
| Linearity < 52 MHz > 52 MHz | L | - - | - - | 10 15 | % |
| Transfer Function | - | - | Positive | - | - |
| Input Impedance | Z_C | 50 | - | - | K Ohms |
| Modulation Roll-off (@ -3dB) | - | 10 | - | - | KHz |
| Tri-state – Oscillator Run Enable Input Voltage Disable Input Voltage Enable/ Disable Time | V_{IH} V_{IL} t_{PLZ} | 2.5 - - | - - - | - 0.5 100 | V V ns |

Notes

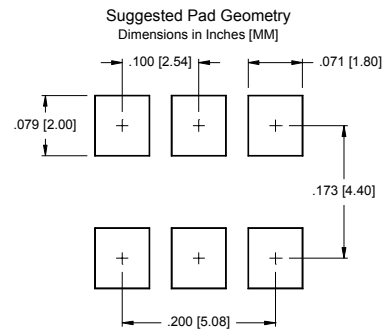
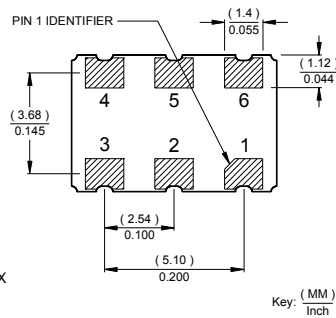
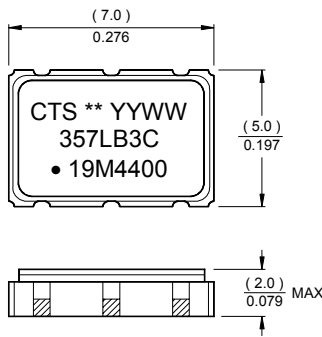
1. Inclusive of initial tolerance at the time of shipment, changes in supply voltage, load and operating temperature.
2. Minimum guaranteed frequency shift from f_o over variations in temperature, aging, power supply and load at an average operating temperature of $+40^{\circ}\text{C}$ for 10 years.

ORDERING INFORMATION



Example P/N: 357LB3C019M4400

MECHANICAL SPECIFICATIONS



Marking Notes:
 1. ** Manufacturing Site Code.
 2. YY – year, WW – week.
 3. Frequency shall be marked with 4 significant digits to the right of the “M”.

Terminations plated with 0.3 – 1.0 um gold (Au).

| Pin | Symbol | Functional Description |
|-----|--------|----------------------------|
| 1 | VC | Control Voltage |
| 2 | EOH | Enable |
| 3 | GND | Circuit and Package Ground |
| 4 | Output | RF Output |
| 5 | N.C. | Not Connected Internally |
| 6 | Vcc | Supply Voltage |

Enable Truth Table

| Pin 2 | Pin 4 |
|-------|-----------|
| “1” | Output |
| “0” | High Imp. |
| Open | Output |

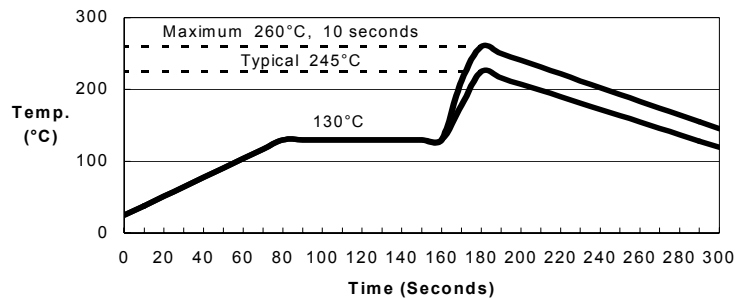
QUALITY AND RELIABILITY

Quality Systems meet or exceed the requirements of ISO 9000: 2000 standards.
 Reliability Audits are performed on this or similar products with results available upon request.

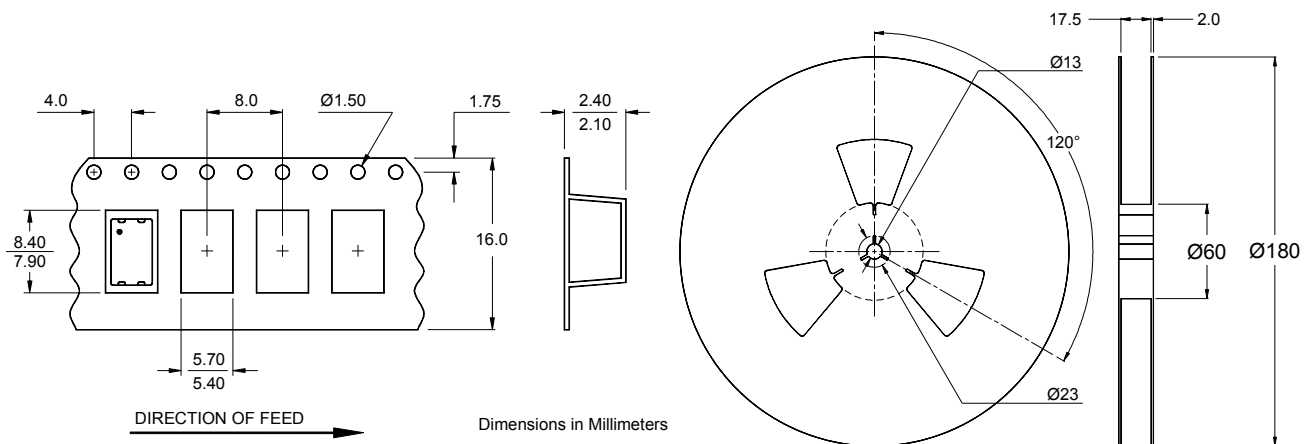
ENVIRONMENTAL SPECIFICATIONS

- Storage Temperature: -55°C to +125°C.
- Temperature Cycle: 400 cycles, -55°C to +125°C, 10 min dwell, 1 min transfer.
- Mechanical Shock: 1,500g's, 0.5mS, ½ sinewave, 3 shocks each direction, in 3 planes.
- Sinusoidal Vibration: 0.06" D.A., 10 to 55 Hz and 20g's, 55 to 2,000 Hz, 3 cycles per plane.
- Gross Leak: No leak shall appear while immersed in an FC40 or equivalent liquid at 125°C for 20 seconds.
- Fine Leak: Mass spectrometer leak rates less than 2×10^{-8} ATM cc/sec air equivalent.
- Resistance to Soldering Heat: Product must survive 3 reflows of 260°C peak, 10 seconds maximum.
- High Temperature Operating Bias: 2,000 hours at 125°C, disregarding frequency shift.
- Frequency Aging: < 5 ppm shift in 1,000 hours at 85°C.

Suggested Reflow Profile



TAPE AND REEL INFORMATION



Device quantity shall be 1,000 pieces on a 180mm reel.