C. Vendor supplied data: Each shipment shall be accompanied by the following data:

4. Test data from special conditioning.

D. Design:

1. Operating life: 2000 hours minimum at maximum current and temperature ratings. The adjustment screw shall be capable of 100 cycles of operation, one cycle equals adjustment all the way in and all the way out.
2. Construction: Plastic case with an aluminum (lead screw) tuning shaft which controls the bonded ferrous slug. The unit shall have an adequate *O* ring seal on the tuning shaft to prevent potting and moisture penetration.
3. Current rating (maximum): 450 milliamperes. Under this condition the temperature rise will be 35°C so the ambient should not exceed 70°C.
4. Lead fatigue: Each lead shall be capable of meeting the pull and bend test, however the same lead shall not be tested for both. No mechanical damage or lack of electrical performance shall be evidenced by the test. Pull test: An axial pull of four (4) pounds minimum. Bend test (discreet tested units): Hold the component in such a manner that a 90° (90°) turn will not displace the tuning axis from the current direction. The bend CT*LE (one (1) cycle required) shall be accomplished by moving the body of the unit, while in the same plane, through 90° in one direction, then back 180° in the opposite direction and back 90° to the original position.

E. Special conditioning: Each lot shall be temperature cycled by the vendor and test data supplied with each shipment.

1. Step 1: Measure and record the inductance and Q at the 85°C range.
2. Step 2: Perform six (6) cycles of 125°C for 30 min, 25°C for 15 min, -55°C for 30 min. After the 6th cycle perform an additional 125°C for 30 min and then within 2 min measure inductance and Q. The Q should be within specified limits and the inductance should be within 10% of the original value. Perform the seventh -55°C cycle and within 1/2 hour the inductance should be within 5% and the Q should be within the specified limit.

F. Mechanical properties:

1. Dimensions: As delineated herein.
2. Lead material: Weldable, gold plated iron-nickel alloy (equivalent to MIL-15305).
3. Torque:
   - Starting: 0.1 inch-lb minimum
   - Prevailing: 2.5 inch-lb maximum
   - Maximum: To withstand 3.5 inch-lb at each step. Utmost care should be used not to exceed this limit.

G. Electrical characteristics:

1. Inductance tuning range: From 0 microhens to 15 microhens at 2.0 megacycles per minute using a 240 volts a-c signal. With the tuning slug at either stop, utmost care should be used not to exceed this limit.
2. Q-factor: 50 min at 5 microhens and 50 min at 15 microhens using the same equipment specified in paragraph 2.B.(1).
3. DC resistance: 1.9 ohms max.
4. Resonant frequency: 15 megacycles minimum.
5. Inductance + Temp Coef. +150 ppm/°C from 0°C to 70°C. Test one (1) sample per lot.
6. Test voltage: 100 volts between windings and the tuning slug when in the maximum inductance position.
7. Distributed capacitance: Two (2) frequency method (two 2.0 microhens with the tuning slug at either stop). 7.5 picofarads ± 5% at 15 microhens.
8. Picofarads ± 5% at 11 microhens.
9. Picofarads ± 5% at 8 microhens.

NOTE: See Note 2(A)(D).