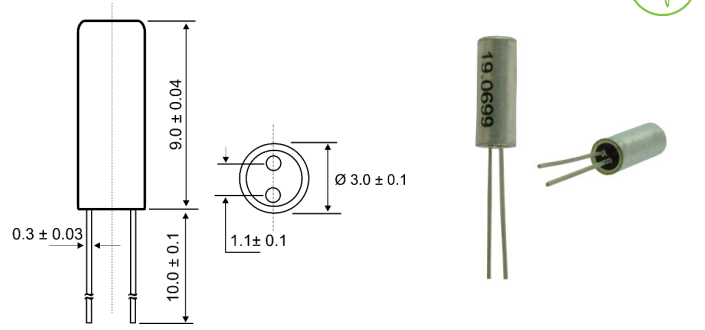


DESCRIPTION

The 3x9 Dip type crystal is a miniature cylindric high frequency AT cut crystal.

MECHANICAL DIMENSIONS (all in mm)



ELECTRICAL SPECIFICATION

| | |
|------------------------------------|---------------------------------------|
| Frequency Range | 3.579545 to 60.000 MHz |
| Load Capacitance | 10pF to Series |
| Frequency Tolerance (at 25°C) | ±30ppM Maximum |
| Frequency Stability in Temperature | ±30ppM Maximum |
| Operating Temperature Range | -10°C to +60°C Standard (or Optional) |
| Storage Temperature Range | -40°C to +85°C |
| Equivalent Series Resistance (ESR) | See ESR Table |
| Drive Level | 1.0mW Maximum |
| Shunt Capacitance | 7pF Maximum |
| Aging (at 25°C) | ±3ppM per year |
| Insulation Resistance | 500 MOhm Minimum |

ESR TABLE (Ohms)

| | |
|----------------|----------|
| 3.5 to 4.0 MHz | 150 |
| 4.0 to 8.0 MHz | 100 |
| 8.0 to 14 MHz | 60 |
| 14 to 24 MHz | 40 |
| >24 MHz | 40 (F) |
| | 80 (30T) |

FREQUENCY RANGE AND OSCILLATION MODE

| | |
|-----------------------|----------------------|
| Fundamental (F) | Third Overtone (30T) |
| 3.579545 to 30.000MHz | 24.000 to 60.000MHz |

MECHANICAL SPECIFICATION

| Conditions | | Results |
|-----------------------------------|---|--|
| 1. Terminal Strength | | |
| Lead pulling test | Load | 907.2 grams |
| | Direction | to the downward |
| | Duration of applied force | 5 seconds |
| Lead bending test | Load | 453.6 grams |
| | Bending angle | 90° to normal position |
| | Rate of bending | 3 seconds in each cycle |
| | Number of bending | 3 |
| 2. Lead solderability test | | |
| | Dipping in solder (+230°C ±5°C) for 5 seconds | More than 95% of surface being tested should be coated uniformly with solder |
| 3. Vibration test | | |
| | Frequency | 10 - 55Hz |
| | Amplitude | 0.762mm |
| | Sweep | 1.0 minute |
| | Duration | 2 hours |
| 4. Drop test | | |
| | Method of drop | Natural drop |
| | Dropping floor | Hard wood board |
| | Height | 75 cm |
| | Number of drops | 3 times |

ENVIRONMENTAL SPECIFICATION

| Conditions | | Results |
|--|-------------------|-------------------------|
| 1. Temperature test | | |
| Temperature cycling test | Steps of cycle | 1) at -55°C, 30 minutes |
| | | 2) at +25°C, 10-15 min. |
| | | 3) at +85°C, 30 minutes |
| | | 4) at +25°C, 10-15 min. |
| | Number of cycles | 3 times |
| Frequency and wave form of tested products must remain within specifications | | |
| 2. Aging test | | |
| | Temperature | +85°C ±20°C |
| | Length of test | 96 hours |
| Deviation of frequency must be less than ±3ppM | | |
| 3. Salt spray test | | |
| | Temperature | +35°C ±2°C |
| | Length of test | 48 hours |
| | NaCl % | 5% |
| There should be no stain on surface of products | | |
| 4. Humidity test | | |
| | Temperature | +40°C ±2°C |
| | Relative humidity | 90 - 95% |
| | Length of test | 96 hours |
| a) Insulation resistance must be 500 MOhms/100 Vac minimum. b) Resistance and wave form must remain within specifications | | |

PART NUMBERING SYSTEM (Example)

