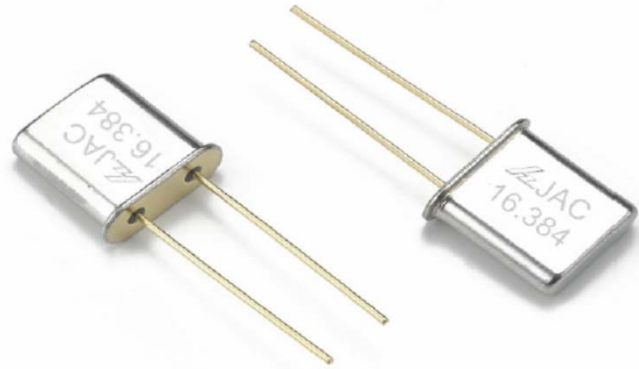


# CRYSTAL UM-1 Type



## Application of Crystal

- ▶ Best choice for mother board
- ▶ USB
- ▶ LAN card
- ▶ Router
- ▶ Switch



## Features

- ▶ Low cost
- ▶ Industry standard package
- ▶ High reliability and stability crystal
- ▶ Wide frequency range and calibration tolerances available
- ▶ available
- ▶ Rohs compliant / Pb free



## Electrical Specification

| NO | Model                                    | CRYSTAL UM-1 Type                                  |
|----|--|--|
| 1  | Frequency Range                          | 3.500 ~ 160.000 MHz                                |
| 2  | Frequency Tolerance at 25°C±2°C          | ±5 ~ ±50 ppm (TYP.)                                |
| 3  | Frequency Stability Over Oper Temp Range | ±5 ~ ±50 ppm (TYP.)                                |
| 4  | Operating Temp Range                     | -10°C~ +60°C, -20°C~ +70°C or customer requirement |
| 5  | Load Capacitance                         | 6 pF ~ 32 pF, series or special                    |
| 6  | Shunt Capacitance                        | 7 pF Max.  |
| 7  | Drive Level                              | 0.1uW ~ 1000uW(TYP: 100uW)                         |
| 8  | Insulation Resistance                    | 500MΩ min / DC 100V±15V                            |
| 9  | Oscillation Mode                         | Fundamental, 3rd & 5th overtone                    |
| 10 | Measure Instrument                       | S&A 250B   |
| 11 | Aging Rate                               | ±3ppm/year   |

## Equivalent Series Resistance(ESR) VS Frequency

| NO | Frequency (MHz) | Fundamental  | CRYSTAL UM-1 Type |
|----|-----------------|--------------|-------------------|
| 1  | 3.5 ~ 3.98      | Fundamental  | 200Ω MAX          |
| 2  | 4.0 ~ 4.99      | Fundamental  | 150Ω MAX          |
| 3  | 5.0 ~ 9.99      | Fundamental  | 60Ω MAX           |
| 4  | 10.0 ~14.99     | Fundamental  | 40Ω MAX           |
| 5  | 15.0 ~ 50.0     | Fundamental  | 30Ω MAX           |
| 6  | 30.0 ~ 49.99    | 3rd overtone | 45Ω MAX           |
| 7  | 50.0 ~ 100.0    | 3rd overtone | 60Ω MAX           |
| 8  | 75.0 ~ 160.0    | 5rd overtone | 80Ω MAX           |

Dimensions (mm):

