

## HIGH FREQUENCY FUNDAMENTAL & 3rd O/T CRYSTALS IN UM-1 PACKAGE - XHFF Series

#### **FEATURES**

- RoHS Compliant (Pb-Free), Inverted Mesa Technology, AT-cut Quartz Resonator
- Designed for VCXO in Phase Lock Loop (PLL) Applications
- Industry Standard Package, Compact Size
- Optional Metal Jacket for SMT

#### **SPECIFICATIONS**

Frequency Range 50 MHz to 300.00 MHz

Resonance Mode 1 = Fundamental (50 to 180 MHz); 3 = 3rd Overtone (150 to 300 MHz)

Calibration Tolerance @25°C

 $A = \pm 50 \text{ ppm}$ ;  $B = \pm 30 \text{ ppm}$ ;  $C = \pm 20 \text{ ppm}$ ;  $D = \pm 15 \text{ ppm}$ ;  $E = \pm 10 \text{ ppm}$ Frequency Stability Ref @25°C  $100 = \pm 100 \text{ ppm}$ ;  $50 = \pm 50 \text{ ppm}$ ;  $25 = \pm 25 \text{ ppm}$ ;  $10 = \pm 10 \text{ ppm}$ 

Temperature Range  $A = 0^{\circ}C$  to  $70^{\circ}C$ ;  $B = -40^{\circ}C$  to  $85^{\circ}C$ ;  $C = -10^{\circ}C$  to  $60^{\circ}C$ ;  $D = -20^{\circ}C$  to  $70^{\circ}C$ 

**Crystal Aging** ±5 ppm Maximum, 1st year

Storage Temperature -55°C to 125°C

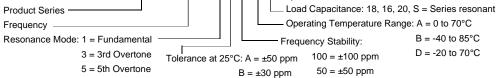
Load Capacitance (CL) CL = 10 pF (Standard), 16 pF, 18 pF, others, or S = Series resonant

**Shunt Capacitance** 7 pF Maximum

0.1 mW Typical, 1 mW Maximum Drive Level

Pullability (option) May be specified in terms of frequency shift over a certain range of CL

#### Creating a Part Number XHFF-155M520-1 B 30 D10 -options

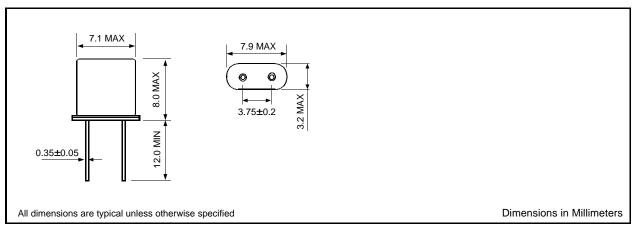


 $30 = \pm 30 \text{ ppm}$ 

## **Typical Crystal Motional Parameters for Oscillator Applications**

Frequency (MHz)	Mode	ESR (Ohms)	C1 (fF)
50 - 80 80 - 120	Fund Fund	20 25	10 6
120 - 180	Fund	25	4
150 - 180	3rd O/T	80	0.8
180 - 220	3rd O/T	100	0.6
220 - 300	3rd O/T	120	0.5

### **OUTLINE DRAWING**



# **Quartz Crystal Resonators**

## **OUTLINE DRAWING (SMT Configuration)**

