

# UM-1

Thru-Hole Crystal

## Size, mm

7.9 x 3.4 x 8.0

## Frequency Stability

±5 PPM

## Temperature Range

-10°C to 60°C

## Frequency Range

10.0-125.0 MHz

## Features

- Meets NEL requirements for product reliability
- Resistance welded low profile holder
- Frequency range 10.0 MHz to 125.0 MHz
- Special frequencies available

# Thru-Hole Crystal UM-1

Frequency Range: 10.0 MHz to 125.0 MHz

## Creating a Part Number

UM-1 - 10.00 - 20 - E - A - XX

Holder Type

Frequency (MHz)

Load Capacitance

XXpF; S: Series Resonant

Mode of Operation

F: AT-Cut Fundamental

T: 3rd Overtone

V: 5th Overtone

Frequency Tolerance at 25°C

A = ±30 ppm

D = ±20 ppm

B = ±10 ppm

E = ±50 ppm

C = ±15 ppm

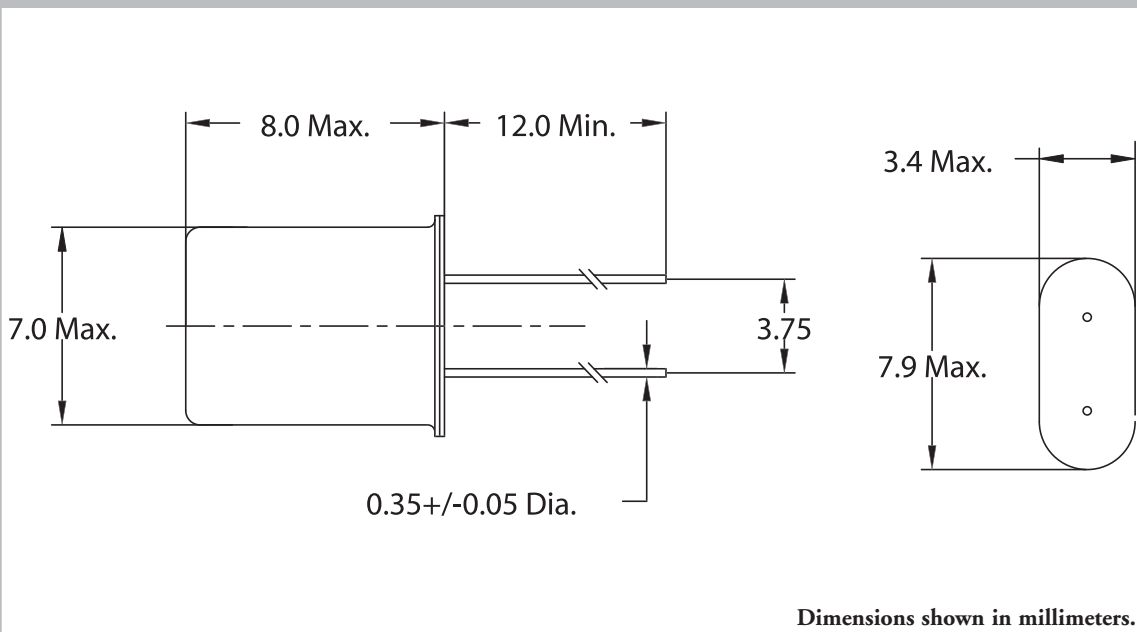
Frequency Stability vs Temperature Range (Ref to 25°C)

Temp Range °C	Frequency Stability (ppm)					
	±5	±10	±15	±20	±30	±50
0 to 50	A	B	C	D	E	F
-10 to 60	G	H	I	J	K	L
-20 to 70		M	N	O	P	Q
-40 to 85				R	S	T

## Electrical Specifications

Frequency Range (F <sub>0</sub> )	10.000 MHz to 125.000 MHz	
Storage Temperature Range (T <sub>STG</sub> )	-55°C to 125°C	
Shunt Capacitance (C <sub>0</sub> )	7 pF Max.	
Load Capacitance (C <sub>L</sub> )	10 to 32 pF or Series Resonant	
Insulation Resistance	500 Megaohms Minimum at 100 V <sub>DC</sub>	
Drive Level	1 mWatts Max.	
Aging (at 25°C)	±3 ppm/year Max.	
Leak	2x10 <sup>-8</sup> cc/sec. Max Helium	
Equivalent Series Resistance	Frequency Range	E.S.R. (Ω) Max
Mode: Fundamental	10.000 to 12.999 MHz	60
Mode: Fundamental	13.000 to 19.999 MHz	40
Mode: Fundamental	20.000 to 29.999 MHz	30
Mode: 3rd Overtone	24.000 to 39.000 MHz	60
Mode: 3rd Overtone	40.000 to 59.999 MHz	50
Mode: 3rd Overtone	60.000 to 79.999 MHz	50
Mode: 3rd Overtone	80.000 to 125.000 MHz	100

## Drawing Specifications



For the most up to date specifications on each NEL product, log on to our website—[www.nelfc.com](http://www.nelfc.com)