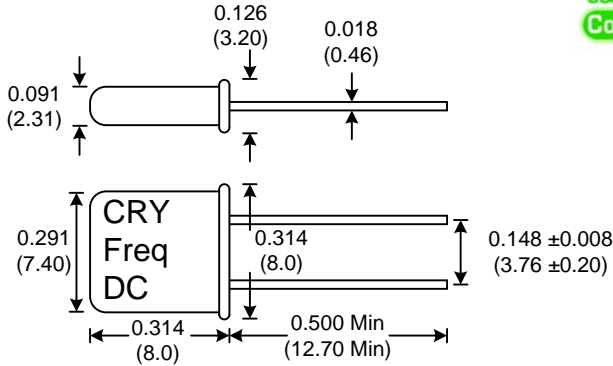


# Quartz Crystal

## CRMxx Model UM-1 Leaded Crystal



Designed to provide traditional crystal design flexibility of the HC49 in a smaller UM-1 package. Custom lead forming available for SMD applications.



Resistance at series resonance	
Freq. (MHz)	Max ESR
10.0 – 18.0	60
18.1 – 50.0	40
20.0 – 100.0	60
50.0 – 135.0	100

Table 1

Dimensions inches (mm)  
All dimensions are maximum unless otherwise specified

- Frequency Range: 10 MHz to 50 MHz (fund)  
20 MHz to 100 MHz (3<sup>rd</sup> O/T)  
50 MHz to 135 MHz (5<sup>th</sup> O/T)
- Calibration Tolerance: ±50ppm (Standard p/n)  
(Option) ±10ppm to ±100ppm
- Frequency Stability: ±100ppm (Standard p/n)  
(Option) ±15ppm to ±100ppm
- Operating Temp. range: 0°C to 70°C (Standard p/n)  
(Option) -20°C to 70°C  
(Option) -40°C to 85°C

- Storage Temp. range: -45°C to 90°C
- Shunt Capacitance: 7.0pF Max
- Drive level: 100uW Typical
- ESR: See table 1
- Aging: <3ppm 1<sup>st</sup> year Max
- Insulation Resistance: 500 Megaohms Min at 100Vdc

### Build Your Own P/N

CRM X X X X - Freq

Frequency Tolerance at 25°C	
1	±10 ppm
2	±15 ppm
3	±20 ppm
4	±25 ppm
5	±30 ppm
6	±50 ppm
7	±100 ppm

Frequency Stability over Temp Range			
B	±15 ppm	(0 to 70°C)	J ±30 ppm (-20 to 70°C)
C	±20 ppm	(0 to 70°C)	K ±50 ppm (-20 to 70°C)
D	±25 ppm	(0 to 70°C)	L ±100 ppm (-20 to 70°C)
E	±30 ppm	(0 to 70°C)	M ±20 ppm (-40 to 85°C)
F	±50 ppm	(0 to 70°C)	N ±25 ppm (-40 to 85°C)
G	±100 ppm	(0 to 70°C)	O ±30 ppm (-40 to 85°C)
H	±15 ppm	(-20 to 70°C)	P ±50 ppm (-40 to 85°C)
I	±20 ppm	(-20 to 70°C)	Q ±100 ppm (-40 to 85°C)

Load Capacitance	
1	Series
2	14 pF
3	16 pF
4	18 pF
5	20 pF
6	22 pF
7	25 pF
8	32 pF

Mode	
1	Fundamental 10 - 50 MHz
3	3 <sup>rd</sup> Overtone 20 - 100 MHz
5	5 <sup>th</sup> Overtone 50 - 135 MHz

#### Example:

CRM4F51-20.000 = ±25ppm at 25°C, ±50ppm 0 to 70°C, 20pF Load Cap, Fundamental, 20.000 MHz

Specifications subject to change without notice.

TD-021014 Rev. E