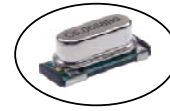


CMD4A Model

Replacement for Plastic SMD Crystal

Quartz Crystal



Designed as a drop in replacement for older style plastic crystal packages.

Lead Free
RoHS
Compliant

Frequency Range: 3.5MHz to 32MHz (fund)
27MHz to 86MHz (3rd O/T)

Calibration Tolerance: ±10ppm to ±100ppm

Frequency Stability: ±10ppm to ±100ppm

Temperature Range: 0°C to 70°C
(Option) -20°C to 70°C
(Option) -40°C to 85°C

Storage: -55°C to 120°C

Shunt Capacitance: 7.0pF Max

Drive Level: 100uW Typical

ESR: see table 1

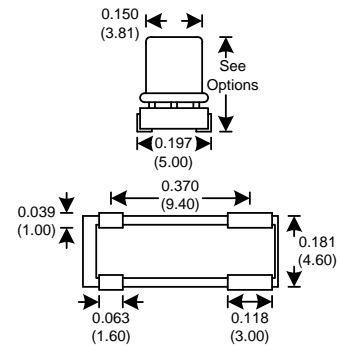
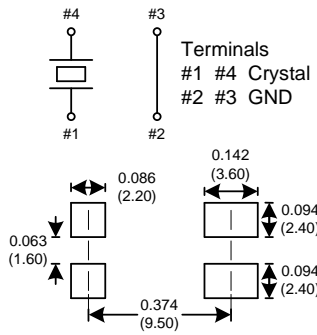
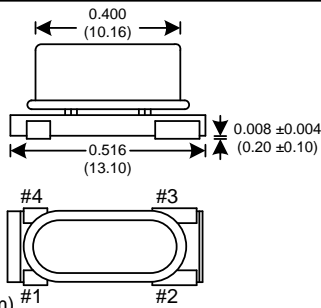
Packaging: 1K Tape and Reel

Aging: <3ppm 1st/yr Max

****Not recommended for new designs**

Resistance at series resonance	
Freq. (MHz)	Max ESR
3.5 - 4.0	150
4.1 - 4.9	120
5.0 - 5.9	100
6.0 - 11.9	90
12.0 - 14.9	70
15.0 - 30.0	50
30.1 - 86.0	100

Table 1



Dimensions inches (mm)
All dimensions are Max unless otherwise specified.

CMD4X 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					
A	±10 ppm	(0 to 70°C)	J	±30ppm	(-20 to 70°C)
B	±15 ppm	(0 to 70°C)	K	±50 ppm	(-20 to 70°C)
C	±20 ppm	(0 to 70°C)	L	±100 ppm	(-20 to 70°C)
D	±25 ppm	(0 to 70°C)	M	±20 ppm	(-40 to 85°C)
E	±30 ppm	(0 to 70°C)	N	±25 ppm	(-40 to 85°C)
F	±50 ppm	(0 to 70°C)	O	±30 ppm	(-40 to 85°C)
G	±100 ppm	(0 to 70°C)	P	±50 ppm	(-40 to 85°C)
H	±15 ppm	(-20 to 70°C)	Q	±100 ppm	(-40 to 85°C)
I	±20 ppm	(-20 to 70°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

Options	
Can Height	
A	4.0mm
B	4.5mm
C	5.5mm

Example:

CMD44F51B-20.000 = ±25ppm at 25°C, ±50ppm 0 to 70°C, 20pF Load Cap, Fundamental, 4.5mm, 20.000MHz

Mode	
1	Fundamental 3.5-32MHz
3	3rd Overtone 27-86MHz

Specifications subject to change without notice.

TD-02075 Rev.D