

# Low Profile Crystals

Cardinal "AT-Strip" low profile crystals come in a variety of heights and specifications to accommodate all of our customers' requirements.

**Series CLP**



**Part Numbering Example: CLP X - A1 B2 C2 200 - 3.579545 D18 - 3**

CLP	X	A1*	B2	C2	200	3.579545	D18	-3
SERIES	ADDED FEATURES	OPERATING TEMP.	STABILITY	TOLERANCE	RESISTANCE	FREQUENCY	LOAD CAP.	OVERTONE
CLP	F = FORMED LEADS W = VINYL SLEEVING X = INSULATOR PAD Y = THIRD LEAD Z = TAPE AND REEL BLANK = BULK PACK	A0 = -10°C ~ +60°C A1 = -10°C ~ +70°C A2 = -40°C ~ +85°C	B1 = ±100 B2 = ± 50 B3 = ± 30 B4 = ± 10	C1 = ±100 C2 = ± 50 C3 = ± 30 C4 = ± 10	SEE CHART BELOW		D16, 18, 20, ETC. DS = SERIES	BLANK: FUND. -3: 3rd OT

\*NOTE: The above ABC combinations cover basic specification options. We tailor our crystal specifications to meet customer requirements. Please contact our sales department if you don't see exactly what you need.

## Specifications:

### Frequency Range:

3.579545 ~ 36.000 MHz	AT Cut Fundamental
36.000000 ~ 80.000 MHz	AT Cut 3rd Overtone

<b>Operating Temperature:</b>	-10°C ~ +70°C	Standard
	-40°C ~ +85°C	

<b>Frequency Stability:</b>	±100 ppm	
	± 50 ppm	Standard
	± 30 ppm	
	± 15 ppm	

<b>Frequency Tolerance:</b>	±100 ppm	
(at 25°C)	± 50 ppm	Standard
	± 30 ppm	
	± 10 ppm	

**Load Capacitance:** Standard 18 pF or series.  
Please specify your required load.

**Resistance:** Maximum resistance corresponds to frequency.  
See chart below.

**Standard:** Mode: Fundamental or 3rd Overtone  
Shunt Capacitance: 7 pF Max  
Aging: ± 5 ppm/year  
Drive Level: 1.0 mW Max

**Optional Features:** Formed Leads  
Vinyl Sleeves  
Insulator Pads  
Radial Tape and Reel

Note 1: Not all combinations of the above tolerances, stabilities, and temperature ranges are available. Consult the factory if your requirement is not standard.

Note 2: Heights of 3.5 mm (0.138) and 2.5 mm (0.098) are also available. Please consult factory if required.

### Resistance Chart: All resistances are maximum values.

Frequency Range	MODE	E.S.R
Fo ≤ 3.58 MHz	A1	<140 Ω
4 MHz < Fo < 5 MHz	A1	<120 Ω
5 MHz ≤ Fo < 7 MHz	A1	<80 Ω
7 MHz ≤ Fo < 9 MHz	A1	<45 Ω
9 MHz ≤ Fo < 13 MHz	A1	<40 Ω
13 MHz ≤ Fo < 16 MHz	A1	<35 Ω
16 MHz ≤ Fo < 20 MHz	A1	<30 Ω
20 MHz ≤ Fo < 30 MHz	A1	<25 Ω
30 MHz ≤ Fo < 36 MHz	A1	<25 Ω
30 MHz ≤ Fo < 36 MHz	A3	<80 Ω
36 MHz ≤ Fo ≤ 80 MHz	A3	<80 Ω

## CLP

