## **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 CLP3
CLP4
CLP5
CLP5
CLP6

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

| CĻP    | X                  | A <sub>1</sub> *                       | B <sub>2</sub> | C <sub>2</sub> | 200        | 3.579545         | D <sub>1</sub> 18 | - 3          |
|--------|--------------------|--|----------------|----------------|------------|------------------|-------------------|--------------|
| SERIES | ADDED FEATURES     | OPERATING TEMP.                        | STABILITY      | TOLERANCE      | RESISTANCE | <b>FREQUENCY</b> | LOAD CAP.         | OVERTONE     |
| CLP    | F = FORMED LEADS   | $A0 = -10^{\circ}C \sim +60^{\circ}C$  | $B1 = \pm 100$ | $C1 = \pm 100$ | SEE CHART  |                  | D16,18,20,ETC.    | BLANK: FUND. |
| CLP3   | W = VINYL SLEEVING | $A1 = -10^{\circ}C \sim +70^{\circ}C$  | $B2 = \pm 50$  | $C2 = \pm 50$  | BELOW      |                  | DS = SERIES       | -3: 3rd OT   |
| CLP4   | X = INSULATOR PAD  | $A2 = -40^{\circ}C \sim +85^{\circ}C$  | $B3 = \pm 30$  | $C3 = \pm 30$  |            |                  |                   | -5: 5th OT   |
| CLP5   | Y = THIRD LEAD     | $A3 = -55^{\circ}C \sim +125^{\circ}C$ | $B4 = \pm 10$  | $C4 = \pm 10$  |            |                  |                   | -7: 7th OT   |
| CLP6   | Z = TAPE AND REEL  |  |                |                |            |                  |                   | -BT: BT Cut  |
|        | BLANK = BULK PACK  |  |                |                |            |                  |                   |              |

<sup>\*</sup>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:

| 3.579                | AT Cut Fundamental        |                    |  |
|----------------------|---------------------------|--------------------|--|
| 25.000               | AT Cut 3rd Overtone       |                    |  |
| 26.000               | 0000 ~ 42.000 MHz         | BT Cut Fundamental |  |
| Operating Temperatur | e: -10°C ~ +70°C          | Standard           |  |
|                      | -40°C ~ +85°C             |                    |  |
| Frequency Stability: | ±100 ppm                  |                    |  |
|                      | ± 50 ppm                  | Standard           |  |
|                      | ± 30 ppm                  |                    |  |
|                      | ± 15 ppm                  |                    |  |
| Frequency Tolerance: | ±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.

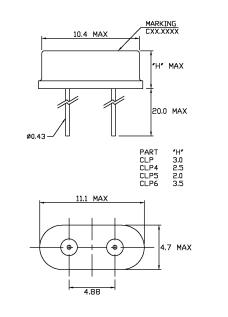
Note 2: Heights of 3.5 mm (0.138) and 2.5 mm (0.098) are also available. Please consult factory if required.

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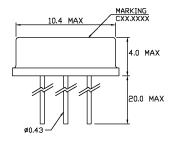
#### **Resistance Chart:** All resistances are maximum values.

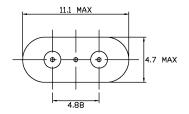
| EQUIVALENT SERIES RESISTANCE (ESR), MODE OF OPERATION (MODE), AND CUT |               |          |               |                  |                 |  |  |  |
|---|---------------|----------|---------------|------------------|-----------------|--|--|--|
| Frequency MHz   | $ESR(\Omega)$ | Mode/cut | Frequency MHz | ESR ( $\Omega$ ) | Mode/cut        |  |  |  |
| 3.579545~4.999  | 200 Max       | Fund./AT | 15.000~15.999 | 60 Max           | Fund./AT        |  |  |  |
| 5.000~5.999   | 150 Max       | Fund./AT | 16.000~23.999 | 50 Max           | Fund./AT        |  |  |  |
| 6.000~7.999   | 120 Max       | Fund./AT | 24.000~30.000 | 40 Max           | Fund./AT        |  |  |  |
| 8.000~8.999   | 90 Max        | Fund./AT | 24.000~48.000 | 40 Max           | Fund./BT        |  |  |  |
| 9.000~9.999   | 80 Max        | Fund./AT | 24.576~29.999 | 150 Max          | 3rd Overtone/AT |  |  |  |
| 10.000~14.999   | 70 Max        | Fund./AT | 30.000~75.000 | 100 Max          | 3rd Overtone/AT |  |  |  |

## CLP



### CLP3





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