

Low Profile Surface Mount Crystals

Series **CSM4**
CSM5

- 3.0 mm Maximum SMD profile
- Very cost competitive
- Fast delivery

Part Numbering Example: CSM4 Z - A1 B2 C2 200 - 3.579545 D18 - 3

| | | | | | | | | |
|---------------|-----------------------|------------------------|------------------|------------------|-------------------|------------------|------------------|-----------------|
| CSM4 | Z | A1* | B2 | C2 | 200 | 3.579545 | D18 | - 3 |
| SERIES | ADDED FEATURES | OPERATING TEMP. | STABILITY | TOLERANCE | RESISTANCE | FREQUENCY | LOAD CAP. | OVERTONE |
| CSM4 | BLANK = BULK PACK | A0 = -10°C ~ +60°C | B1 = ±100 | C1 = ±100 | SEE CHART | | D16,18,20,ETC. | BLANK: FUND. |
| CSM5 | Z = TAPE AND REEL | A1 = -10°C ~ +70°C | B2 = ± 50 | C2 = ± 50 | BELOW | | DS = SERIES | -3: 3rd OT |
| | | A2 = -40°C ~ +85°C | B3 = ± 30 | C3 = ± 30 | | | | -5: 5th OT |
| | | A3 = -55°C ~ +125°C | B4 = ± 10 | C4 = ± 10 | | | | -7: 7th OT |
| | | | | | | | | -BT: BT Cut |

**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 ~ 38.000 MHz | AT Cut Fundamental |
| 25.000000 ~ 75.000 MHz | AT Cut 3rd Overtone |
| 26.000000 ~ 48.000 MHz | BT Cut Fundamental |

Operating Temperature: -10°C ~ +70°C *Standard*
-40°C ~ +85°C

Frequency Stability:

| | |
|----------|-----------------|
| ±100 ppm | |
| ± 50 ppm | <i>Standard</i> |
| ± 30 ppm | |
| ± 15 ppm | |

Frequency Tolerance:

| | |
|-------------------|-----------------|
| ±100 ppm | |
| (at 25°C) ±50 ppm | <i>Standard</i> |
| ±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

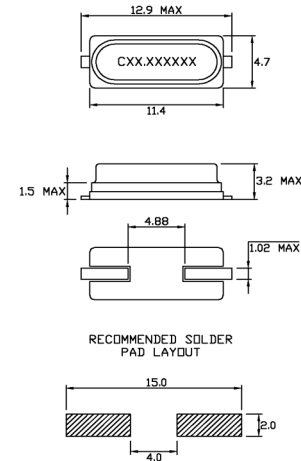
Optional Features: Tape and Reel (1K per Reel)

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

Resistance Chart: All resistances are maximum values.

| EQUIVALENT SERIES RESISTANCE (ESR), MODE OF OPERATION (MODE), AND CUT | | | | | |
|---|---------|----------|---------------|---------|-----------------|
| Frequency MHz | ESR(Ω) | Mode/cut | Frequency MHz | ESR (Ω) | 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 |

CSM4



CSM5

