

# Low Profile Surface Mount Crystals

Cardinal "AT-Strip" surface mount crystals are among the most readily available on the market today. Many popular frequencies are kept in stock at our facility.

**Series CSM1**



## Part Numbering Example: CSM1 Z - A1 B2 C2 200 - 3.579545 D18 - 3

CSM1	Z	A1*	B2	C2	200	3.579545	D18	- 3
SERIES	ADDED FEATURES	OPERATING TEMP.	STABILITY	TOLERANCE	RESISTANCE	FREQUENCY	LOAD CAP.	OVERTONE
CSM1	BLANK = BULK PACK Z = TAPE AND REEL	A0 = -10°C ~ +60°C A1 = -10°C ~ +70°C A2 = -40°C ~ +85°C A3 = -55°C ~ +125°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 -5: 5th OT -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 *Standard*  
± 30 ppm  
± 15 ppm

**Frequency Tolerance:**  
(at 25°C) ±100 ppm  
± 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:** 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

## CSM1

