

Microprocessor Crystals

Cardinal provides the most comprehensive range of crystal components available. From standard microprocessors to custom-made crystals, Cardinal engineers and salespeople are dedicated to providing the best technical support and services possible.

Series **C49**



Part Numbering Example: **C49 X - A1 B2 C2 180 - 3.579545 D18 - 3**

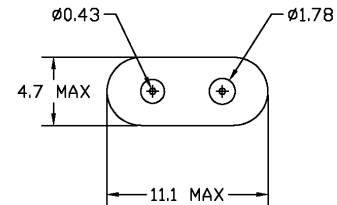
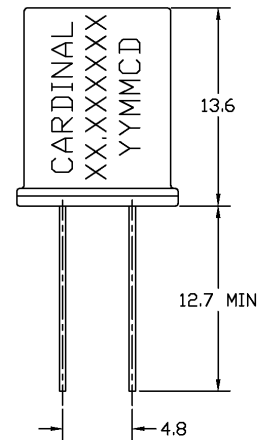
| C49 | X | A1* | B2 | C2 | 180 | 3.579545 | D18 | -3 |
|--------|---|--|--|--|--------------------|-----------|-------------------------------|----------------------------|
| SERIES | ADDED FEATURES | OPERATING TEMP. | STABILITY | TOLERANCE | RESISTANCE | FREQUENCY | LOAD CAP. | OVERTONE |
| C49 | F = 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: | 1.8432 ~ 100.000 MHz | |
| | Custom crystals available. | |
| Operating Temperature: | -10°C ~ + 70°C | Standard |
| | -40°C ~ + 85°C | |
| Frequency Stability: | ± 100 ppm | |
| | ± 50 ppm | Standard |
| | ± 30 ppm | |
| | ± 10 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, 3rd, 5th, or 7th Overtone | |
| | Shunt Capacitance: 7 pF Max | |
| | Aging: ± 5 ppm/year | |
| | Drive Level: 1.0 mW Max | |
| Optional Features: | Formed Leads | |
| | Vinyl Sleeves | |
| | Insulator Pads | |
| | Third Lead | |
| | Radial Tape and Reel (1K per Reel) | |

C49



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 |
| 1.8432~1.999 | 650 Max | Fund./AT | 5.000~5.999 | 75 Max | Fund./AT |
| 2.000~2.399 | 550 Max | Fund./AT | 6.000~6.999 | 50 Max | Fund./AT |
| 2.400~2.999 | 350 Max | Fund./AT | 7.000~7.999 | 40 Max | Fund./AT |
| 3.000~3.199 | 250 Max | Fund./AT | 8.000~9.999 | 35 Max | Fund./AT |
| 3.200~3.499 | 200 Max | Fund./AT | 10.000~12.999 | 30 Max | Fund./AT |
| 3.500~3.599 | 180 Max | Fund./AT | 13.000~32.768 | 25 Max | Fund./AT |
| 3.600~3.899 | 150 Max | Fund./AT | 24.000~29.999 | 60 Max | 3rd Overtone/AT |
| 3.900~3.999 | 120 Max | Fund./AT | 30.000~74.999 | 40 Max | 3rd Overtone/AT |
| 4.000~4.099 | 100 Max | Fund./AT | | | |
| 4.100~4.999 | 80 Max | Fund/AT | | | |

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