

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

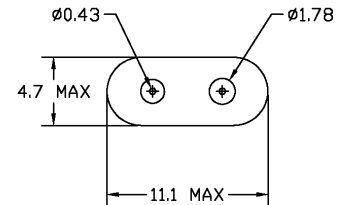
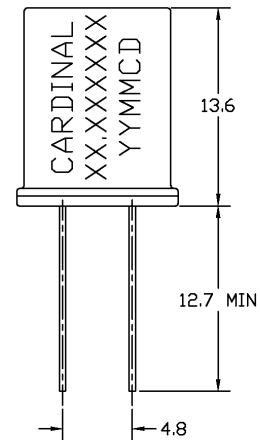
| C49 | X | A1* | B2 | C2 | 180 | 3.579545 | D18 | -3 |
|--------|---|--|--|--|--------------------|-----------|-------------------------------|----------------------------|
| SERIES | ADDED FEATURES | OPERATING TEMP. | STABILITY | TOLERANCE | RESISTANCE | FREQUENCY | LOAD CAP. | OVERTONE |
| C49 | F = 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.

