

# 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**

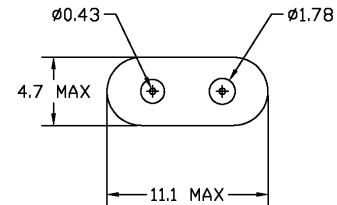
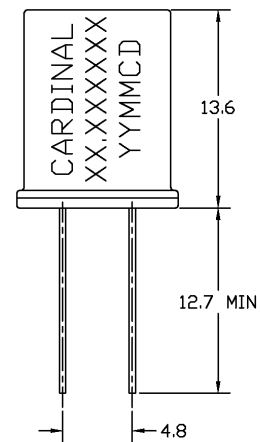
C49	X	A1*	B2	C2	180	3.579545	D18	-3
SERIES	ADDED FEATURES	OPERATING TEMP.	STABILITY	TOLERANCE	RESISTANCE	FREQUENCY	LOAD CAP.	OVERTONE
C49	F = FORMED LEADS W = VINYL SLEEVING X = INSULATOR PAD Y = THIRD LEAD Z = TAPE AND REEL BLANK=BULK PACK	A0 = -10°C ~ +60°C A1 = -10°C ~ +70°C A2 = -40°C ~ +85°C A3 = -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:

<b>Frequency Range:</b>	1.8432 ~ 150.000 MHz	
	Custom crystals available.	
<b>Operating Temperature:</b>	-10°C ~ + 70°C	Standard
	-40°C ~ + 85°C	
	-55°C ~ +125°C	
<b>Frequency Stability:</b>	± 100 ppm	
	± 50 ppm	Standard
	± 30 ppm	
	± 10 ppm	
<b>Frequency Tolerance:</b>	± 100 ppm	
(at 25°C)	± 50 ppm	Standard
	± 30 ppm	
	± 10 ppm	
<b>Load Capacitance:</b>	Standard 18 pF or series.	
	Please specify your required load.	
<b>Resistance:</b>	Maximum resistance corresponds to frequency.	
	See chart below.	
<b>Standard:</b>	Mode: Fundamental, 3rd, 5th, or 7th Overtone	
	Shunt Capacitance: 7 pF Max	
	Aging: ± 5 ppm/year	
	Drive Level: 1.0 mW Max	
<b>Optional Features:</b>	Formed Leads	
	Vinyl Sleeves	
	Insulator Pads	
	Third Lead	
	Radial Tape and Reel (1K per Reel)	

## C49



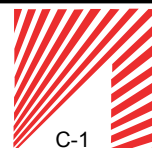
## Resistance Chart: All resistances are maximum values.

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	75.000~119.999	80 Max	5th Overtone/AT
4.100~4.999	80 Max	Fund/AT	120.000~150.000	100 Max	5th Overtone/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.

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