



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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# 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**

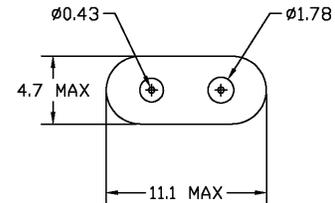
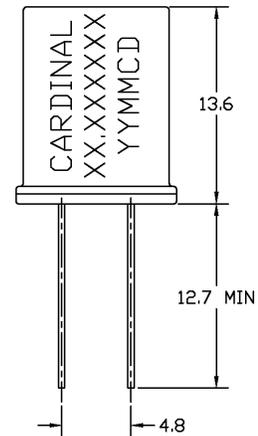
C49	X	A1*	B2	C2	180	3.579545	D18	-3
SERIES	ADDED FEATURES	OPERATING TEMP.	STABILITY	TOLERANCE	RESISTANCE	FREQUENCY	LOAD CAP.	OVERTONE
C49	F = FORMED LEADS W = VINYL SLEEVING X = INSULATOR PAD Y = THIRD LEAD Z = TAPE AND REEL BLANK=BULK PACK	A0 = -10°C ~ +60°C A1 = -10°C ~ +70°C A2 = -40°C ~ +85°C	B1 = ±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:

<b>Frequency Range:</b>	1.8432 ~ 100.000 MHz	
	Custom crystals available.	
<b>Operating Temperature:</b>	-10°C ~ + 70°C	Standard
	-40°C ~ + 85°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			
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.

