

CYxx Model Leaded HC49 Crystal

Lead Free
RoHS
Compliant

Quartz Crystal

Frequency Range: 1MHz to 40MHz (fund)
40MHz to 100MHz (3rd O/T)
100MHz to 150MHz (5th O/T)
150MHz to 180MHz (7th O/T)

Calibration Tolerance: ±50ppm (Standard p/n)
(Option) ±10ppm to ±100ppm

Frequency Stability: ±100ppm (Standard p/n)
(Option) ±10ppm to ±100ppm

Temperature Range: 0°C to 70°C (Standard p/n)
(Option) -20°C to 70°C
(Option) -40°C to 85°C

Storage: -55°C to 120°C

Shunt Capacitance: 7.0pF Max

Drive Level: 100uW Typical

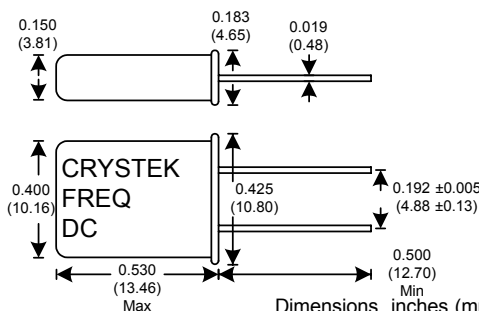
ESR: see table 1

Standard part numbers

Part number	Freq. (MHz)	CL	Max ESR
CY1AM	1.000	series	3000
CD1AM	1.843200	13pF	700
CY2AM	2.000	series	500
CY2AP	2.000	20pF	500
CY2BM	2.457600	32pF	320
CY3GM	3.000	series	175
CY3DM	3.579545	18pF	175
CY3J	3.686400	series	175
CY3JM	3.686400	18pF	175
CY3JN	3.686400	20pF	175
CY3A	4.000	series	100
CY3AP	4.000	20pF	100
CY4F	4.096	20pF	100
CY4E	4.194304	12pF	75
CY4D	4.915200	series	75
CY7A	5.000	series	50
CY7AP	5.000	20pF	50
CY5B	5.068800	series	50
CY6B	6.000	series	40
CY6BP	6.000	20pF	40
CY6C	6.144	30pF	40
CY6CP	6.144	20pF	40
CY6G	6.400	20pF	40
CY7B	7.372800	series	30
CY7BP	7.372800	20pF	30
CY8G	8.000	series	30
CY8GP	8.000	20pF	30
CY8J	8.192	series	30
CY8JP	8.192	20pF	30
CY9B	9.830400	series	30
CY12A	10.000	series	30
CY11B	11.059200	series	30
CY11BP	11.059200	20pF	30
CY12B	12.000	series	30
CY12BP	12.000	20pF	30
CY14A	14.318180	series	30
CY14AC	14.318180	18pF	30
CY14AP	14.318180	20pF	30
CY14B	14.745600	series	30
CY14BP	14.745600	20pF	30
CY15A	15.000	series	30
CY16B	16.000	series	30
CY16BP	16.000	20pF	30
CY19A	18.000	series	30
CY19B	18.432	series	30
CY19BP	18.432	20pF	30
CY20A	19.660800	series	30
CY20AP	19.660800	20pF	30
CY22A	20.000	series	30
CY22AP	20.000	20pF	30
CY22B	22.118400	series	30
CY22BP	22.118400	20pF	30
CY24A	24.000	series	40
CY24AP	24.000	20pF	40
CY25A	25.000	series	40
CY27A	27.000	3RD series	40
CY30B	32.000	3RD series	40
CY36A	36.000	3RD series	40
CY48A	48.000	3RD series	40
CY100A	100.000	3RD series	90

Options: Vinyl Sleeve, Spacer, Top Lead, Clipped Leads

Aging: <3ppm 1st/yr Max



Resistance at series resonance	
Freq. (MHz)	Max ESR
3.5 - 4.0	175
4.1 - 4.9	100
5.0 - 5.9	50
6.0 - 11.9	40
12.0 - 22.9	30
30.0 - 50.0	40
50.1 - 100.0	90
100.1 - 180.0	120

Table 1

Build Your Own P/N

CY X X X X - Freq

**Custom Designs Available

Frequency Tolerance at 25°C	
1	±10 ppm
2	±15 ppm
3	±20 ppm
4	±25 ppm
5	±30 ppm
6	±50 ppm
7	±100 ppm

Frequency Stability over Temp Range			
A	±10 ppm (0 to 70°C)	J	±30ppm (-20 to 70°C)
B	±15 ppm (0 to 70°C)	K	±50 ppm (-20 to 70°C)
C	±20 ppm (0 to 70°C)	L	±100 ppm (-20 to 70°C)
D	±25 ppm (0 to 70°C)	M	±20 ppm (-40 to 85°C)
E	±30 ppm (0 to 70°C)	N	±25 ppm (-40 to 85°C)
F	±50 ppm (0 to 70°C)	O	±30 ppm (-40 to 85°C)
G	±100 ppm (0 to 70°C)	P	±50 ppm (-40 to 85°C)
H	±15 ppm (-20 to 70°C)	Q	±100 ppm (-40 to 85°C)
I	±20 ppm (-20 to 70°C)		

Load Capacitance	
1	Series
2	14 pF
3	16 pF
4	18 pF
5	20 pF
6	22 pF
7	25 pF
8	32 pF

Options	
S	Spacer
T	Top Lead
	(0.5 inch)
V	Vinyl Sleeve

Example:

CY4F51S-20.000 = ±25ppm at 25°C, ±50ppm 0 to 70°C, 20pF Load Cap, Fundamental, with Spacer, 20.000MHz

Mode

1	Fundamental 1-40 MHz
3	3rd Overtone 40-100 MHz
5	5th Overtone 100-150MHz
7	7th Overtone 150-180MHz

Specifications subject to change without notice.

TD-021008 Rev. D