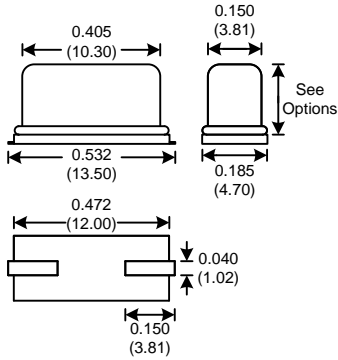




## CYSDxx Model Low Profile HC49S SMD Crystal



Resistance at series resonance	
Freq. (MHz)	Max ESR
3.579545 - 4.0	150
4.1 - 4.9	120
5.0 - 5.9	100
6.0 - 11.9	90
12.0 - 14.9	70
15.0 - 30.0	50
30.1 - 86.0	100

Table 1

Part number	Freq. (MHz)	CL	Max ESR
CY3DMSMD	3.579545	18pF	150
CY3JSMD	3.686400	series	150
CY3JMSMD	3.686400	18pF	150
CY3JNSMD	3.686400	20pF	150
CY3ASMD	4.000	series	150
CY3APSM D	4.000	20pF	150
CY4ESMD	4.194304	12pF	120
CY4DSMD	4.915200	series	120
CY7ASMD	5.000	series	100
CY7APSM D	5.000	20pF	100
CY5BSMD	5.0688	series	100
CY6BSMD	6.000	series	90
CY6BPSMD	6.000	20pF	90
CY8GSMD	8.000	series	90
CY8GPSMD	8.000	20pF	90
CY9BSMD	9.830400	series	90
CY12ASMD	10.000	series	90
CY11BSMD	11.059200	series	90
CY11BPSMD	11.059200	20pF	90
CY12BSMD	12.000	series	70
CY12BPSMD	12.000	20pF	70
CY14ASMD	14.318180	series	70
CY14ACSMD	14.318180	18pF	70
CY14APSM D	14.318180	20pF	70
CY14BSMD	14.745600	series	70
CY14BPSMD	14.745600	20pF	70
CY15ASMD	15.000	series	50
CY16BSMD	16.000	series	50
CY16BPSMD	16.000	20pF	50
CY19ASMD	18.000	series	50
CY19BSMD	18.432	series	50
CY19BPSMD	18.432	20pF	50
CY20ASMD	19.660800	series	50
CY20APSM D	19.660800	20pF	50
CY22ASMD	20.000	series	50
CY22APSM D	20.000	20pF	50
CY24ASMD	24.000	series	50
CY24APSM D	24.000	20pF	50
CY25ASMD	25.000	series	50

Dimensions inches (mm)  
All dimensions are maximum unless otherwise specified



Frequency Range: 3.579545 MHz to 40 MHz (fund)  
27 MHz to 86 MHz (3<sup>rd</sup> O/T)

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

Frequency Stability: ±100ppm (Standard p/n)  
(Option) ±15ppm to ±100ppm

Operating Temp. range: 0 to 70°C (Standard p/n)  
(Option) -20 to 70°C  
(Option) -40°C to 85°C

Storage Temp. range: -45°C to 90°C

Shunt Capacitance: 7.0pF Max

Drive level: 100uW Typical

ESR: See table 1

Aging: <3ppm 1<sup>st</sup> year Max

Insulation Resistance: 500 Megaohms Min at 100Vdc

**\*\*Custom Designs Available\*\***

### Build Your Own P/N

CYSD X X X X X - Freq

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					
B	±15 ppm	(0 to 70°C)	J	±30ppm	(-20 to 70°C)
C	±20 ppm	(0 to 70°C)	K	±50 ppm	(-20 to 70°C)
D	±25 ppm	(0 to 70°C)	L	±100 ppm	(-20 to 70°C)
E	±30 ppm	(0 to 70°C)	M	±20 ppm	(-40 to 85°C)
F	±50 ppm	(0 to 70°C)	N	±25 ppm	(-40 to 85°C)
G	±100 ppm	(0 to 70°C)	O	±30 ppm	(-40 to 85°C)
H	±15 ppm	(-20 to 70°C)	P	±50 ppm	(-40 to 85°C)
I	±20 ppm	(-20 to 70°C)	Q	±100 ppm	(-40 to 85°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	
Can Height (Max)	
A	3.0mm
B	4.0mm
C	5.0mm

### Example:

CYSD4F51C-20.000 = ±25ppm at 25°C, ±50ppm 0 to 70°C, 20pF Load Cap, Fundamental, 5.0mm, 20.000 MHz

Mode	
1	Fundamental 3.579545-40 MHz
3	3rd Overtone 27-86 MHz

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No liability is assumed as a result of its use or application.

**CRYSD Rev. G**