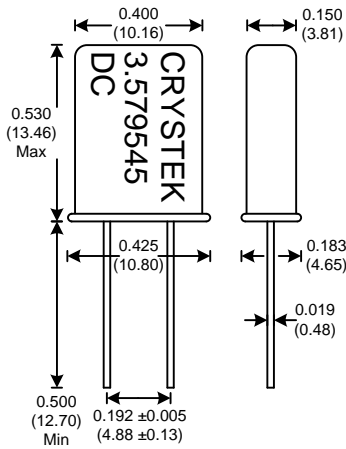




**CYxx Model**  
Leaded HC49 Crystal



| Resistance at series resonance |         |
|--------------------------------|---------|
| Freq. (MHz)                    | Max ESR |
| 1.8432 - 1.999                 | 700     |
| 2.0 - 2.09                     | 500     |
| 2.1 - 2.5                      | 320     |
| 2.501 - 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 - 150.0                  | 120     |

Table 1



| Part number | Freq. (MHz) | CL              | Max ESR   |
|-------------|-------------|-----------------|-----------|
| CY2BM       | 2.457600    | 32pF            | 320       |
| 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      | 3 <sup>rd</sup> | series 40 |
| CY30B       | 32.000      | 3 <sup>rd</sup> | series 40 |
| CY36A       | 36.000      | 3 <sup>rd</sup> | series 40 |
| CY48A       | 48.000      | 3 <sup>rd</sup> | series 40 |
| CY100A      | 100.000     | 3 <sup>rd</sup> | series 90 |

Frequency Range: 1.843200 MHz to 40 MHz (fund)  
40 MHz to 100 MHz (3<sup>rd</sup> O/T)  
100 MHz to 150 MHz (5<sup>th</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

Optional spacer available

**Build Your Own P/N**

CY X X X X X - Freq

|   |   |                       |                             |                                       |  |                       |                          |                       |                         |                       |                         |                        |                         |                         |                         |                         |                          |   |          |         |         |         |         |         |         |         |                                       |
|---|---|-----------------------|-----------------------------|---------------------------------------|--|-----------------------|--------------------------|-----------------------|-------------------------|-----------------------|-------------------------|------------------------|-------------------------|-------------------------|-------------------------|-------------------------|--------------------------|---|----------|---------|---------|---------|---------|---------|---------|---------|---------------------------------------|
| <p><b>Frequency Tolerance at 25°C</b></p> <p>1 ±10 ppm<br/>2 ±15 ppm<br/>3 ±20 ppm<br/>4 ±25 ppm<br/>5 ±30 ppm<br/>6 ±50 ppm<br/>7 ±100 ppm</p>   | <p><b>Frequency Stability over Temp Range</b></p> <table border="1"> <tr><td>B ±15 ppm (0 to 70°C)</td><td>J ±30ppm (-20 to 70°C)</td></tr> <tr><td>C ±20 ppm (0 to 70°C)</td><td>K ±50 ppm (-20 to 70°C)</td></tr> <tr><td>D ±25 ppm (0 to 70°C)</td><td>L ±100 ppm (-20 to 70°C)</td></tr> <tr><td>E ±30 ppm (0 to 70°C)</td><td>M ±20 ppm (-40 to 85°C)</td></tr> <tr><td>F ±50 ppm (0 to 70°C)</td><td>N ±25 ppm (-40 to 85°C)</td></tr> <tr><td>G ±100 ppm (0 to 70°C)</td><td>O ±30 ppm (-40 to 85°C)</td></tr> <tr><td>H ±15 ppm (-20 to 70°C)</td><td>P ±50 ppm (-40 to 85°C)</td></tr> <tr><td>I ±20 ppm (-20 to 70°C)</td><td>Q ±100 ppm (-40 to 85°C)</td></tr> </table> | 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) | <p><b>Load Capacitance</b></p> <table border="1"> <tr><td>1 Series</td></tr> <tr><td>2 14 pF</td></tr> <tr><td>3 16 pF</td></tr> <tr><td>4 18 pF</td></tr> <tr><td>5 20 pF</td></tr> <tr><td>6 22 pF</td></tr> <tr><td>7 25 pF</td></tr> <tr><td>8 32 pF</td></tr> </table> | 1 Series | 2 14 pF | 3 16 pF | 4 18 pF | 5 20 pF | 6 22 pF | 7 25 pF | 8 32 pF | <p><b>Options</b></p> <p>S Spacer</p> |
| 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)  |                       |                             |                                       |  |                       |                          |                       |                         |                       |                         |                        |                         |                         |                         |                         |                          |   |          |         |         |         |         |         |         |         |                                       |
| 1 Series  |   |                       |                             |                                       |  |                       |                          |                       |                         |                       |                         |                        |                         |                         |                         |                         |                          |   |          |         |         |         |         |         |         |         |                                       |
| 2 14 pF   |   |                       |                             |                                       |  |                       |                          |                       |                         |                       |                         |                        |                         |                         |                         |                         |                          |   |          |         |         |         |         |         |         |         |                                       |
| 3 16 pF   |   |                       |                             |                                       |  |                       |                          |                       |                         |                       |                         |                        |                         |                         |                         |                         |                          |   |          |         |         |         |         |         |         |         |                                       |
| 4 18 pF   |   |                       |                             |                                       |  |                       |                          |                       |                         |                       |                         |                        |                         |                         |                         |                         |                          |   |          |         |         |         |         |         |         |         |                                       |
| 5 20 pF   |   |                       |                             |                                       |  |                       |                          |                       |                         |                       |                         |                        |                         |                         |                         |                         |                          |   |          |         |         |         |         |         |         |         |                                       |
| 6 22 pF   |   |                       |                             |                                       |  |                       |                          |                       |                         |                       |                         |                        |                         |                         |                         |                         |                          |   |          |         |         |         |         |         |         |         |                                       |
| 7 25 pF   |   |                       |                             |                                       |  |                       |                          |                       |                         |                       |                         |                        |                         |                         |                         |                         |                          |   |          |         |         |         |         |         |         |         |                                       |
| 8 32 pF   |   |                       |                             |                                       |  |                       |                          |                       |                         |                       |                         |                        |                         |                         |                         |                         |                          |   |          |         |         |         |         |         |         |         |                                       |
| <p><b>Mode</b></p> <table border="1"> <tr><td>1 Fundamental 1.8432-40 MHz</td></tr> <tr><td>3 3<sup>rd</sup> Overtone 40-100 MHz</td></tr> <tr><td>5 5<sup>th</sup> Overtone 100-150 MHz</td></tr> </table> |   |                       | 1 Fundamental 1.8432-40 MHz | 3 3 <sup>rd</sup> Overtone 40-100 MHz | 5 5 <sup>th</sup> Overtone 100-150 MHz |                       |                          |                       |                         |                       |                         |                        |                         |                         |                         |                         |                          |   |          |         |         |         |         |         |         |         |                                       |
| 1 Fundamental 1.8432-40 MHz   |   |                       |                             |                                       |  |                       |                          |                       |                         |                       |                         |                        |                         |                         |                         |                         |                          |   |          |         |         |         |         |         |         |         |                                       |
| 3 3 <sup>rd</sup> Overtone 40-100 MHz   |   |                       |                             |                                       |  |                       |                          |                       |                         |                       |                         |                        |                         |                         |                         |                         |                          |   |          |         |         |         |         |         |         |         |                                       |
| 5 5 <sup>th</sup> Overtone 100-150 MHz  |   |                       |                             |                                       |  |                       |                          |                       |                         |                       |                         |                        |                         |                         |                         |                         |                          |   |          |         |         |         |         |         |         |         |                                       |

Example:

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

Specifications subject to change without notice.

TD-021008 Rev. L



Компания «ЭлектроПласт» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Оперативные поставки широкого спектра электронных компонентов отечественного и импортного производства напрямую от производителей и с крупнейших мировых складов;
- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Помимо этого, одним из направлений компании «ЭлектроПласт» является направление «Источники питания». Мы предлагаем Вам помощь Конструкторского отдела:

- Подбор оптимального решения, техническое обоснование при выборе компонента;
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



#### Как с нами связаться

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