

## Low Profile Crystals

FRETECH "AT-Strip" low profile crystals come in a variety of heights and specifications to accommodate all of our customers' requirements.



Series

LPW  
LPW3  
LPW4  
LPW5  
LPW6

### Part Numbering Example: LPWD2C2N- XX.XXXXM

| LPW    | D               | 2            | C2        | N                  | XX.XXXXM      |
|--------|-----------------|--------------|-----------|--------------------|---------------|
| SERIES | OPERATING TEMP. | STABILITY    | TOLERANCE | GRADE              | FREQUENCY     |
|        | D= -40 to 85°C  | 3 = ± 50 ppm | C1 = ±100 | N = Industrial Std | 3.579 ~75.000 |
|        | F= -55 to 105°C | 2 = ± 30 ppm | C2 = ± 50 | M=MIL-STD-883B     | MHz           |
|        | G= -55 to 125°C | 1 = ± 20 ppm | C3 = ± 30 |                    |               |
|        |                 | 0 = ± 10 ppm | C4 = ± 10 |                    |               |

### Specifications:

#### Frequency Range:

|                        |                     |
|------------------------|---------------------|
| 3.579545 ~ 38.000 MHz  | AT Cut Fundamental  |
| 25.000000 ~ 75.000 MHz | AT Cut 3rd Overtone |
| 26.000000 ~ 42.000 MHz | BT Cut Fundamental  |

#### Operating Temperature:

|                |          |
|----------------|----------|
| -40°C ~ +85°C  | Standard |
| -55°C ~ +125°C |          |

#### Frequency Stability:

|          |          |
|----------|----------|
| ±100 ppm |          |
| ± 50 ppm | Standard |
| ± 30 ppm |          |
| ± 15 ppm |          |

#### Frequency Tolerance: (at 25°C)

|          |          |
|----------|----------|
| ±100 ppm |          |
| ± 50 ppm | Standard |
| ± 30 ppm |          |
| ± 10 ppm |          |

#### Load Capacitance:

Standard 18 pF or series.  
Please specify your required load.

#### Resistance:

Maximum resistance corresponds to frequency.  
See chart below.

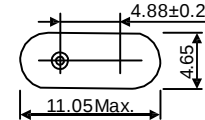
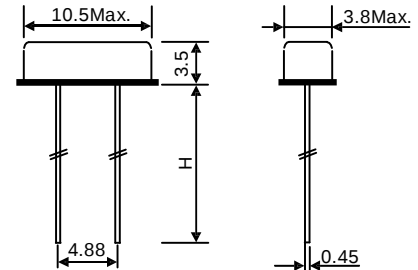
#### Standard:

Mode: Fundamental or 3rd Overtone  
Shunt Capacitance: 7 pF Max  
Aging: ± 5 ppm/year  
Drive Level: 1.0 mW Max

#### Optional Features:

Formed Leads  
Vinyl Sleeves  
Insulator Pads  
Radial Tape and Reel

### LPW



|      |     |
|------|-----|
| LPW  | 3.0 |
| LPW4 | 2.5 |
| LPW5 | 2.0 |
| LPW6 | 3.5 |

Note 1: Not all combinations of the above tolerances, stabilities, and temperature ranges are available. Consult the factory if your requirement is not standard.

### Resistance Chart: All resistances are maximum values.

#### EQUIVALENT SERIES RESISTANCE (ESR), MODE OF OPERATION (MODE), AND CUT

| Frequency MHz  | ESR(&)  | Mode/cut | Frequency MHz | ESR (&) | Mode/cut        |
|----------------|---------|----------|---------------|---------|-----------------|
| 3.579545~4.999 | 200 Max | Fund./AT | 15.000~15.999 | 60 Max  | Fund./AT        |
| 5.000~5.999    | 150 Max | Fund./AT | 16.000~23.999 | 50 Max  | Fund./AT        |
| 6.000~7.999    | 120 Max | Fund./AT | 24.000~30.000 | 40 Max  | Fund./AT        |
| 8.000~8.999    | 90 Max  | Fund./AT | 24.000~48.000 | 40 Max  | Fund./BT        |
| 9.000~9.999    | 80 Max  | Fund./AT | 24.576~29.999 | 150 Max | 3rd Overtone/AT |
| 10.000~14.999  | 70 Max  | Fund./AT | 30.000~75.000 | 100 Max | 3rd Overtone/AT |

| Environmental And Mechanical |                                               |
|------------------------------|-----------------------------------------------|
| Mechanical Shock             | Per MIL-STD-883 ,Method 2002 ,Cond.B          |
| Thermal Shock                | Per MIL-STD-883 ,Method 1011 ,Cond.A          |
| Vibration                    | Per MIL-STD-883 ,Method 2007 ,Cond.A          |
| Seal                         | Per MIL-STD-883, Method 1014, Condition B & C |
| Solderability                | Per MIL-STD-883 ,Method 2003 ,Cond.A          |

### LPW3

