

# L1-Series Specifications



**11.40L x 4.70W x 3.20H (mm)**

PDI *L1-Series* is a hermetically sealed quartz crystal in resistance-welded SMD and through hole packages. This crystal, designed to meet your most demanding specification, is available in standard or custom frequencies and/or with customized parameters. PDI provides quick-turn sampling for your proto-typing needs, mass production capability, and competitive pricing.

ex) **L1-25000X-F-B-C-B-18-R-X\*** \*(X) for standard or assigned for customization.

<p><b>FREQUENCY</b>  <b>04000X – 99999X</b> =          4.0000MHz -          99.999MHz -  <b>C10000</b> =          100.00MHz</p>	<p><b>MODE</b>  <b>F</b> = Fundamental  <b>3</b> = 3rd Overtone</p>	<p><b>TOLERANCE @ 25°C</b>  <b>A</b> = ±10  <b>B</b> = ±25  <b>C</b> = ±50  <b>S</b> = Special</p>	<p><b>FREQUENCY STABILITY</b>  <b>B</b> = ±25  <b>C</b> = ±50  <b>E</b> = ±100  <b>S</b> = Special</p>	<p><b>OPERATING TEMPERATURE</b>  <b>A</b> = 0 to +70°C  <b>B</b> = -20 to +70°C  <b>D</b> = -40 to +85°C  <b>S</b> = Special</p>	<p><b>LOAD</b>  <b>08-99</b> = pF  <b>SE</b> = Series</p>	<p><b>PACKAGE</b>  <b>B</b> = Surface Mount (Tape &amp; Reel)  <b>X</b> = Through Hole</p>
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See below for legacy part numbering configuration for parts designed prior to 02-01-2014, which are still available

Parameter	Mode		Units
	Fundamental	3rd Overtone	
Frequency Range* <sup>1</sup>	4.000000 to 50.000000	35.000000 to 100.000000	MHz
Frequency Tolerance	@ +25°C Per Option		ppm
Temperature Range* <sup>1</sup>	Operating Per Option		°C
	Storage - 55 to +125		°C
Frequency Stability* <sup>1</sup>	Over Operating Temperature Per Option		ppm
Equivalent Series Resistance (Maximum)	4.000000 to 5.000000 MHz	120	N/A
	5.000000 to 6.000000 MHz	100	N/A
	6.000000 to 7.000000 MHz	80	N/A
	7.000000 to 10.000000 MHz	60	N/A
	10.000000 to 14.000000 MHz	50	N/A
	14.000000 to 20.000000 MHz	40	N/A
	≥ 20.000000 MHz	30	N/A
	24.000000 to 35.000000 MHz	N/A	100
≥ 35.000000 MHz	N/A	80	
Drive Level (Typical)	100		uW
Shunt Capacitance (Maximum)	5.0		pF
Load Capacitance (Typical)	Per Option		pF
Aging (Maximum)	Per Year	±5.0	ppm
Seal Method	Resistance Weld		
Insulation Resistance	500MΩ Minimum @100Vdc ±15V		

\*1 - Not all Frequency/Stability/Temperature combinations are available.

## Legacy Part Numbering Configuration

ex) **L1-25000X-F-C-B-18-B-X\***

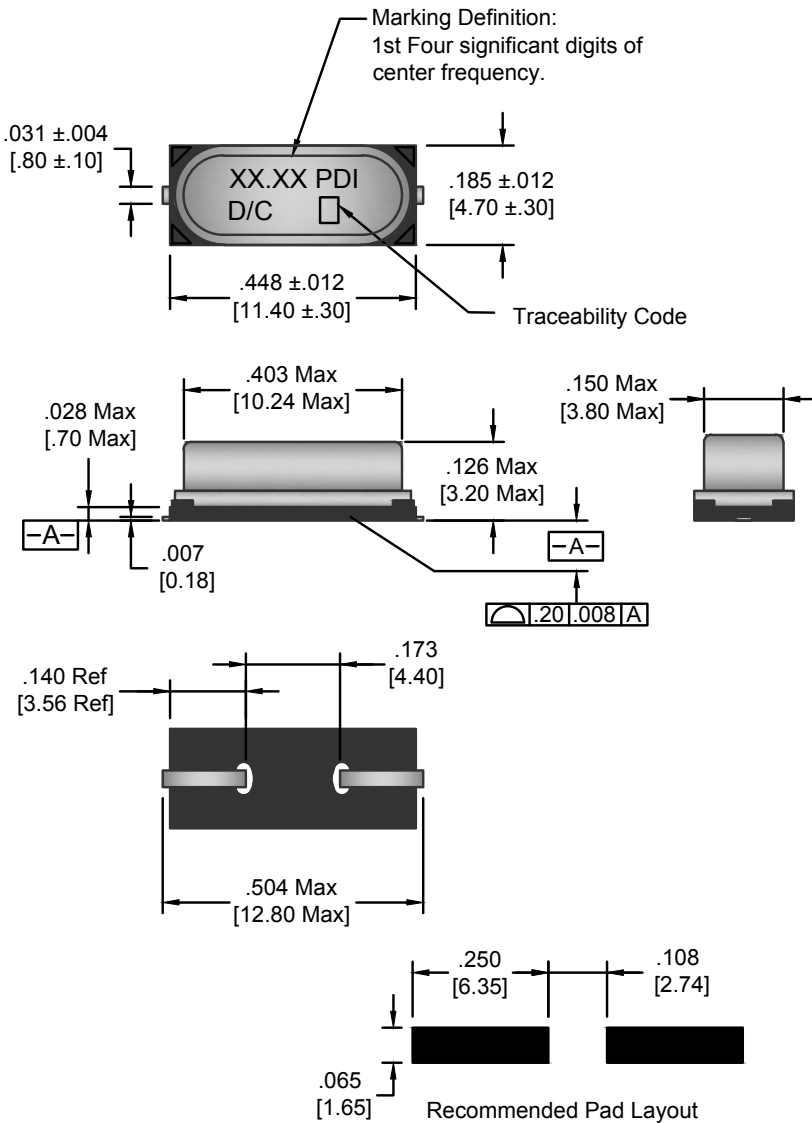
<p><b>FREQUENCY</b>  <b>04000X – 67000X</b> =          4.0000MHz -          67.000MHz -</p>	<p><b>MODE</b>  <b>F</b> = Fundamental  <b>3</b> = 3rd Overtone</p>	<p><b>FREQUENCY STABILITY</b>  <b>B</b> = ±25  <b>C</b> = ±50  <b>D</b> = ±100  <b>S</b> = Special</p>	<p><b>OPERATING TEMPERATURE</b>  <b>A</b> = 0 to +70°C  <b>B</b> = -20 to +70°C  <b>D</b> = -40 to +85°C  <b>S</b> = Special</p>	<p><b>LOAD</b>  <b>08-99</b> = pF  <b>SE</b> = Series</p>	<p><b>PACKAGE</b>  <b>B</b> = Surface Mount (Tape &amp; Reel)  <b>X</b> = Through Hole</p>
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# L1-Series 11.40 x 4.70 x 3.20 (mm)

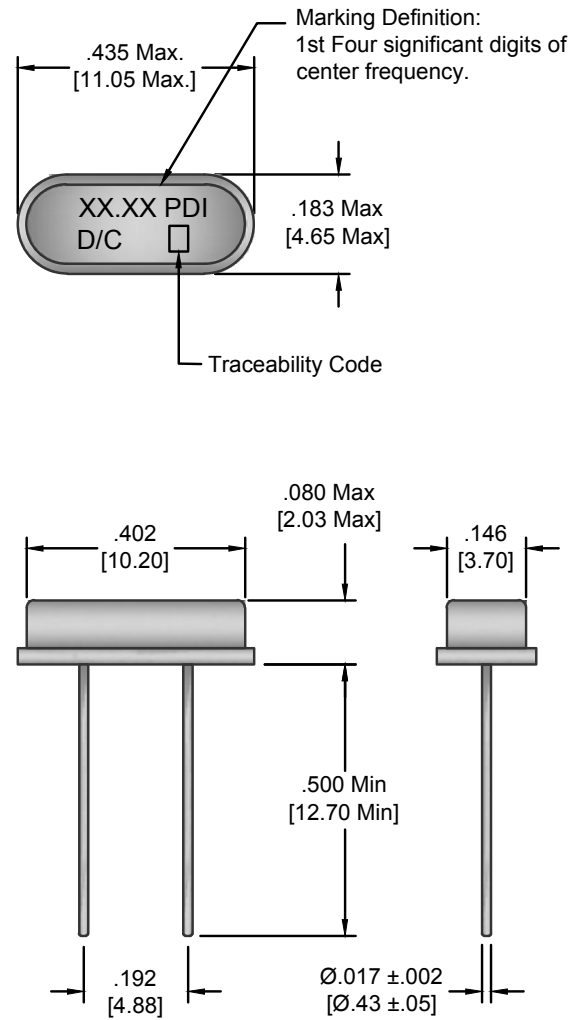
## PACKAGE DIMENSIONS

Decimal XXX = ± .008, XX = ± .02 Metric [XXX = ± .20], [XX = ± .50]

### Surface Mount Option



### Thru Hole Option



**NOTES:**

Terminals are Au.  
Other options are available, please consult factory.  
All product is supplied RoHS and REACH compliant.  
Product can be supplied on Tape and Reel, on reels of 1,000 units.  
Specifications subject to change without notice, last updated 4/1/13.

# L1-Series 11.40 x 4.70 x 3.20 (mm)

1. Material: Black Conductive Polystyrene or equivalent.
2. 10 Sprocket Hole pitch cumulative tolerance of  $\pm 0.008$
3. Camber in compliance with EIA 481
4. Empty pockets: Trailing end (Minimum) 200 mm. and Leading end (Minimum) 400 mm.
5. Pocket position relative to sprocket hole measured as true position of pocket, not pocket hole.

