

# LV5-Series Specifications



**5.00L x 3.20W x 1.20H (mm)**

PDI Model LV5-Series provides precision timing in a hermetically sealed package. These high performance clock oscillators offer very low integrated phase jitter and superior phase noise. PDI provides quick-turn sampling for your proto-typing needs, mass production capability, and competitive pricing.

ex) **LV5-T-5000X-M-C-A-2-R-X\***

**ENABLE**

T = Tri-State  
N = No/Connect

**FREQUENCY**

**40000X-99999X** =  
40.0000 MHz –  
99.999 MHz  
**C10000-C20000** =  
100.00 MHz –  
200.00 MHz

**OUTPUT**

M = LVDS

**FREQUENCY STABILITY**

B = ±25  
C = ±50  
D = ±100  
S = Special

**OPERATING TEMPERATURE**

A = 0 to +70°C  
B = -20 to +70°C  
D = -40 to +85°C  
S = Special

**SUPPLY VOLTAGE**

2 = 2.5  
3 = 3.3

**PACKAGE**

R = Tape & Reel

\* - for standard or assigned for customization.

Parameter		Supply Voltage *1 (±5%)		Units
		3.3	2.5	V
Frequency Range *1		40.000000 to 200.000000		MHz
Frequency Stability *1	All Causes (Maximum) *2	Per Option		ppm
Temperature Range *1	Operating	Per Option		°C
	Storage	-55 to +125		°C
Supply Current (Maximum)		40		mA
Output		Differential LVDS Squarewave		
Load (Typical)	Between Output and Comp Output	100		Ω
Duty Cycle (Maximum)	@ 50% Vcc	45/55		%
Rise/Fall Times (Maximum)	Rise Time (20% to 80% Vcc)	0.4		nS
	Fall Time (80% to 20% Vcc)	0.4		
Start up Time (Maximum)		10.0		mS
Output Voltage Levels	High Voh (RL = 100Ω)	1.43 Typical , 1.60 Maximum		V
	Low Vol (RL = 100Ω)	0.90 Minimum , 1.10 Typical		
Differential Voltage		250 Min , 350 Typ , 450 Max		mV
Pin 1 (Tri-State) (Option)	High (See below) or Open	Enable		
	Low (See below) *3	Disable		
	High Value (Minimum)	70		% Vcc
	Low Value (Maximum) *3	30		% Vcc
	Disable Current (Typical) *3	10		uA
	Enable Delay Time (Maximum)	2.0		mS
	Disable Delay Time (Maximum)	0.2		uS
Integrated Phase Jitter (RMS)	12KHz to 20MHz	0.3 Typical , 1.0 Maximum		pS
Phase Noise (Typical)	@ 10KHz Offset	-138		dBc/Hz
	@ 100KHz Offset	-144		

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

\*2 - Inclusive of Tolerance @25°C, Operating Temperature, Supply Voltage, Load, Aging, Shock and Vibration.

\*3 - Internal crystal oscillation halted.

LV5-Series 5.00 x 3.20 x 1.20 (mm)



### TYPICAL PHASE NOISE PLOT

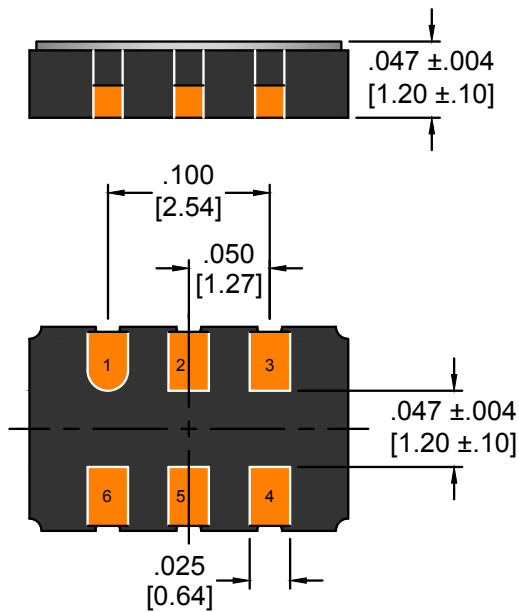
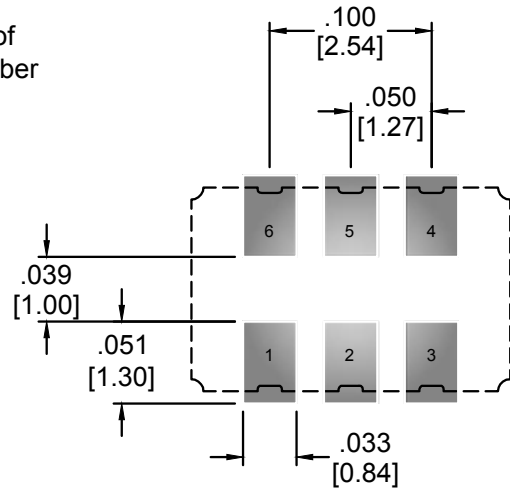
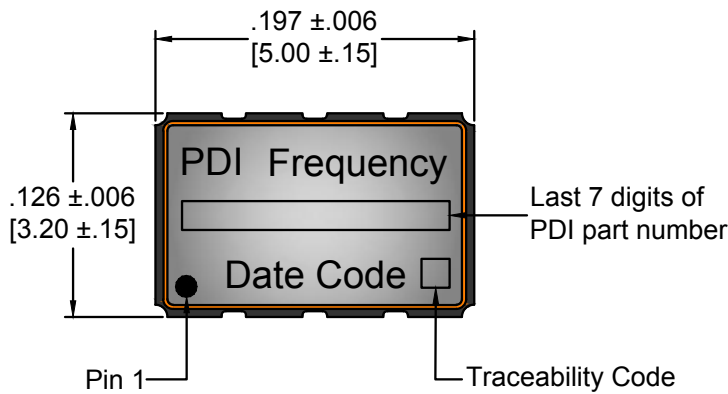


# LV5-Series 5.00 x 3.20 x 1.20 (mm)

## PACKAGE DIMENSIONS

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

PIN	CONNECTION
1	Tri-State or No Connect
2	No Connect
3	Ground/Case
4	Output
5	Complementary Output
6	Supply Voltage



Recommended Land Pattern (Top View)



**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.

## LV5-Series 5.00 x 3.20 x 1.20 (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.

