

## Crystal Oscillators

### Surface Mount Type

**NDOLV32**

[ 3.2×2.5×1.00 mm ]

**NDOLV53**

[ 5.0×3.2×1.25 mm ]

**NDOLV57**

[ 7.0×5.0×1.45 mm ]

### Output

**LVDS**

### Supply Voltage

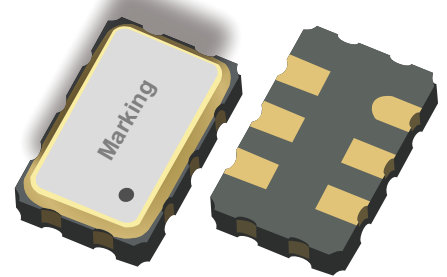
**2.5V / 3.3V**

### Frequency Range

**10 MHz~1500 MHz**

### Features

- Surface mount package size 3.2×2.5 (3225), 5.0×3.2 (5032), 7.0×5.0 (7050), mm×mm
- Differential output Simple Package Crystal Oscillator (SPXO)
- LVDS output, frequency range from 10 MHz to 1500 MHz
- 2.5V / 3.3V operating voltage
- RoHS Compliant
- Very low phase jitter: <1 pS (0.3 pS, Typ.) RMS
- Tri-state available
- Applications: Fiber channel, Storage area network, SONET, Server, Smart grid, Gigabit ethernet, and more



### Standard Specifications

Item / Type	NDOLV32 (SMD 3225 LVDS)	NDOLV53 (SMD 5032 LVDS)	NDOLV58 (SMD 7050 LVDS)
Dimensions	3.2×2.5×1.00 mm	5.0×3.2×1.20 mm	7.0×5.0×1.40 mm
Output	LVDS		
Output load	100Ω		
Output frequency range	10 MHz~250 MHz	10 MHz~1500 MHz	10 MHz~1500 MHz
Supply voltage	2.5 V / 3.3 V		
Frequency tolerance (All condition)	±25 ppm, ±50 ppm, ±100 ppm		
Operating temperature	-20~+70°C, -40~+85°C		
Current consumption	100mA max.		
Symmetry	45 % to 55 %		
Differential output voltage (V <sub>OD</sub> )	250 mV~450 mV		
Change to V <sub>OD</sub>	50 mV max.		
Offset Voltage (V <sub>OS</sub> )	1.15 V~1.35 V		
Offset to V <sub>OS</sub>	50 mV max.		
Input voltage V <sub>IH</sub> (min.)	70% V <sub>CC</sub> min.		
Input voltage V <sub>IL</sub> (max.)	30% V <sub>CC</sub> max.		
Rise time / Fall time	1 ns max.		
Start-up time	10ms max.		
Storage temperature	-55~+125°C		
Phase jitter (12 KHz~20 MHz)	1 pSec Max.		

## Crystal Oscillators

### Surface Mount Type

<b>NDOLP32</b> NDOLV32 NDOHC32 [3.2×2.5×1.00 mm]	<b>NDOLP53</b> NDOLV53 NDOHC53 [5.0×3.2×1.25 mm]	<b>NDOLP57</b> NDOLV57 NDOHC57 [7.0×5.0×1.45 mm]
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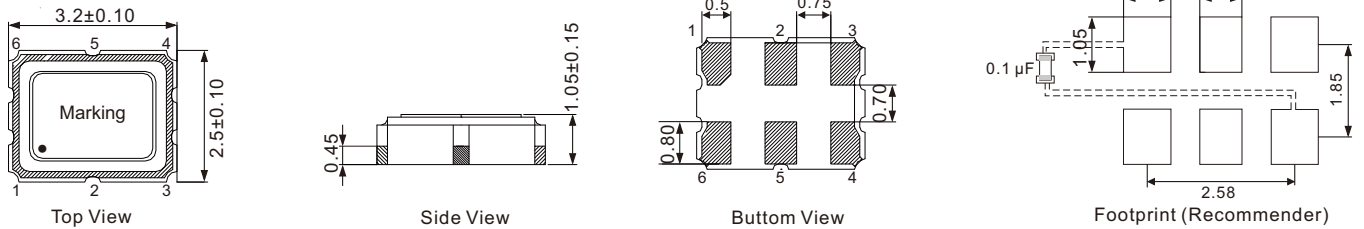
<b>Output</b> LVPECL, LVDS, HCSSL
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<b>Supply Voltage</b> 2.5V / 3.3V
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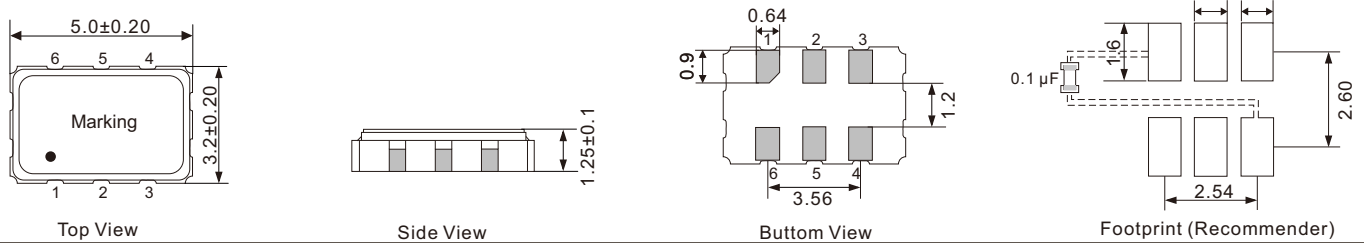
<b>Frequency Range</b> 13.5 kHz~220 MHz
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### Outline Dimensions (Unit: mm)

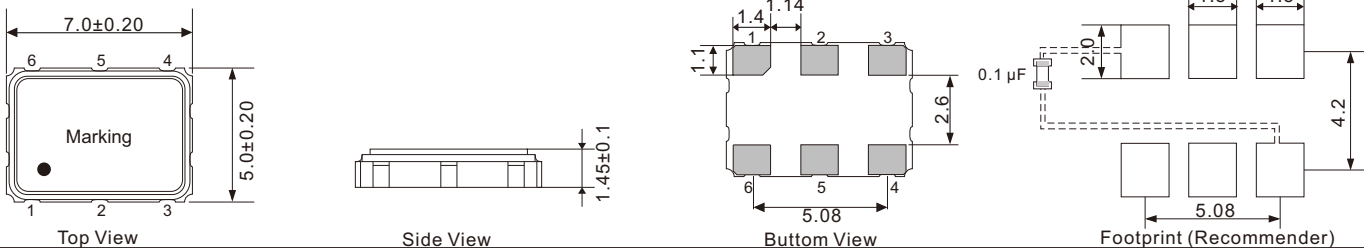
#### NDOLP32,NDOLV32,NDOHC32 (3.2×2.5×1.00 mm)



#### NDOLP53,NDOLV53,NDOHC53 (5.0×3.2×1.25 mm)

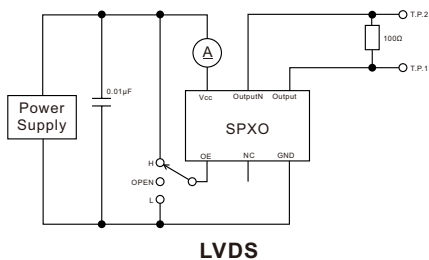


#### NDOLP57,NDOLV57,NDOHC57 (7.0×5.0×1.45 mm)

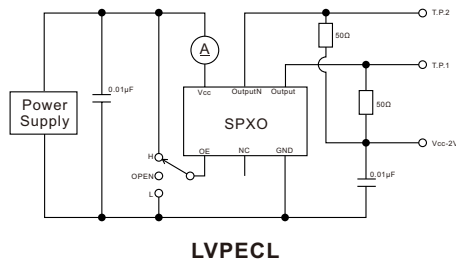


### Measurement Circuit

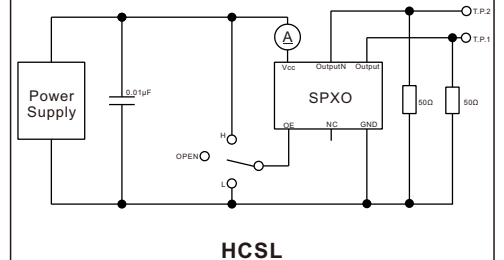
#### NDOLV32,NDOLV53,NDOLV57



#### NDOLP32,NDOLP53,NDOLP57



#### NDOHC32,NDOHC53,NDOHC57



### Pin Map

Pin	Connection	Function
1	OE / Tri-State	“H” or “OPEN”: specified frequency output; “L”: output is high impedance
2	N.C.	No connect (Open or Vcc)
3	GND	Vcc power supply ground
4	OUT	Oscillator output
5	OutputN	Complementary oscillator output
6	Vcc	Power supply voltage