

VCXO (Voltage-Controlled Crystal Oscillator)

Surface Mount Type

NVCLV32

[3.2×2.5×0.90 mm]

NVCLV53

[5.0×3.2×1.25 mm]

NVCLV57

[7.0×5.0×1.45 mm]

VCXO

Output

LVDS

Supply Voltage

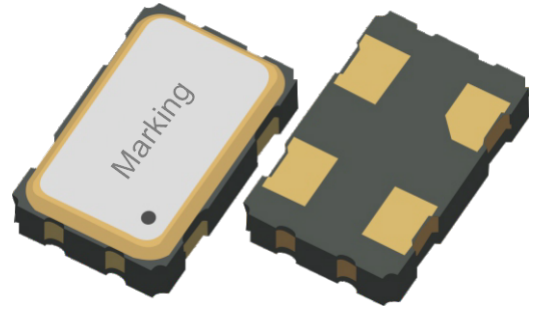
2.5V / 3.3V

Frequency Range

10 MHz~1500 MHz

Features

- Small size SMD VCXOs with 3.2×2.5 (3225), 5.0×3.2 (5032), 7.0×5.0 (7050), mm×mm
- Voltage Controlled Crystal Oscillator (VCXO)
- LVDS output, frequency range from 10 MHz to 1500 MHz
- Low power voltage: 3.3V, 2.5V options
- RoHS Compliant
- Low phase jitter typical: 1pS RMS from 12KHz to 20MHz
- Tri-state available
- Applications: High-speed ethernet, Jitter attenuator, HDTV, ATM, Cable modem, VoIP, Server, SAS, SATA, and more



Standard Specifications

Item / Type	NVCLV32 (SMD 3225 LVDS)	NVCLV53 (SMD 5032 LVDS)	NVCLV57 (SMD 7050 LVDS)
Dimensions	3.2×2.5×0.90 mm	5.0×3.2×1.25 mm	7.0×5.0×1.45 mm
Output	LVDS		
Output load	100Ω		
Output frequency range	10 MHz~1500 MHz		
Supply voltage	2.5 V / 3.3 V		
Frequency tolerance	±25 ppm, ±50 ppm		
Operating temperature	-20~+70°C, -40~+85°C		
Supply current	45 mA max.	75 mA max.	75 mA max.
Symmetry	45 % to 55 %		
Output voltage Voh (min.) / Vol (max.)	0.9V min. / 1.6V max.		
Rise time /Fall time	1ns max.		
Start-up time	10ms max.		
RMS phase jitter (12kHz~20MHz)	1 pS max.		
Phase noise (@1kHz)	-107dBc/Hz@250MHz	-95dBc/Hz@614.4MHz	-95dBc/Hz@614.4MHz
Storage temperature	-55~+125°C		
Absolute pulling range (APR)	±50ppm min., or specify		
Control voltage range	0.3V~3.0V@3.3V, 0.25V~2.25V@2.5V		
Linearity	10% max.		
Input impedance	1 MΩ min.		
Modulation bandwidth (BW)	10 kHz min.		

VCXO (Voltage-Controlled Crystal Oscillator)

Surface Mount Type

NVCLV32
NVCLP32

[3.2×2.5×1.00 mm]

NVCLV53
NVCLP53
NVCHC53

[5.0×3.2×1.25 mm]

NVCLV57
NVCLP57
NVCHC57

[7.0×5.0×1.45 mm]

Output

LVPECL, LVDS, HCSL

Supply Voltage

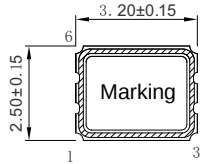
2.5V / 3.3V

Frequency Range

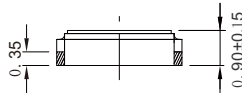
10 MHz~1500 MHz

Outline Dimensions (Unit: mm)

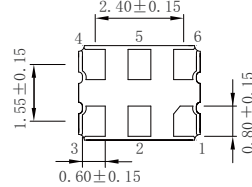
NVCLV32,NVCLP32 (3.2×2.5×1.00 mm)



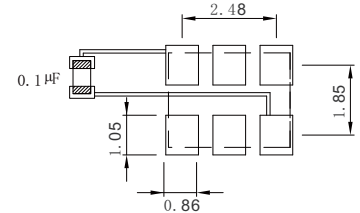
Top View



Side View

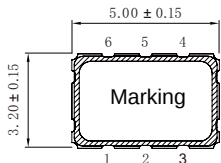


Bottom View

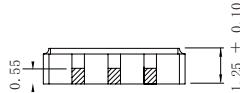


Footprint (Recommender)

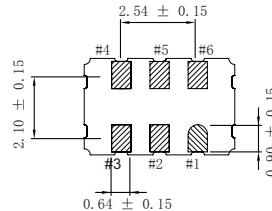
NVCLV53,NVCLP53,NVCHC53 (5.0×3.2×1.25 mm)



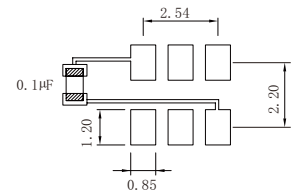
Top View



Side View

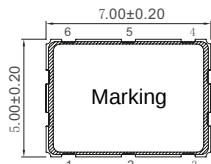


Bottom View

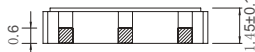


Footprint (Recommender)

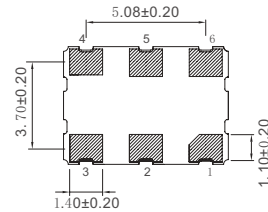
NVCLC57,NVCLP57,NVCHC57 (7.0×5.0×1.45 mm)



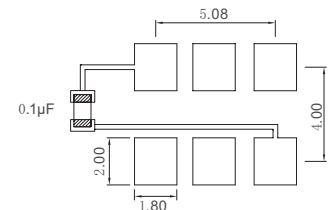
Top View



Side View



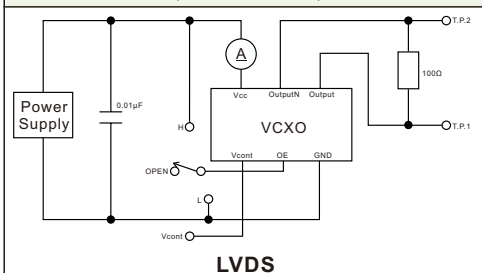
Bottom View



Footprint (Recommender)

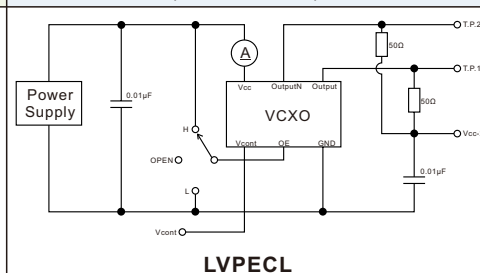
Measurement Circuit

NVCLV32,NVCLV53,NVCLV57



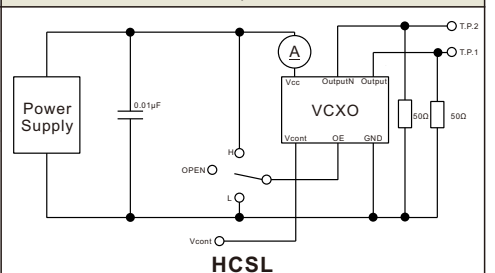
LVDS

NVCLP32,NVCLP53,NVCLP57



LVPECL

NVCHC53,NVCHC57



HCSL

Pin Map

Pin	Connection	Function
1	Vcont	Control voltage
2	OE / Tri-State	“H” or “OPEN”: specified frequency output; “L”: output is high impedance
3	GND	Vcc power supply ground
4	OUT	Oscillator output
5	OutputN	Complementary oscillator output
6	Vcc	Power supply voltage