

VCXO (Voltage-Controlled Crystal Oscillator)

Surface Mount Type

NVCHC53

[5.0×3.2×1.25 mm]

NVCHC57

[7.0×5.0×1.45 mm]

VCXO

Output

HCSL

Supply Voltage

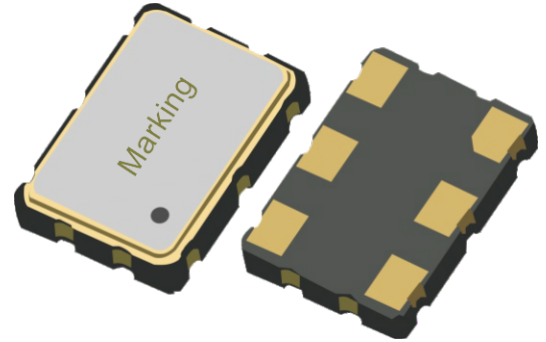
1.8V ~ 3.3V

Frequency Range

15 MHz~700 MHz

Features

- Small size SMD VCXOs with 5.0×3.2 (5032), 7.0×5.0 (7050), mm×mm
- Voltage Controlled Crystal Oscillator (VCXO)
- HCSL output, frequency range from 15 MHz to 700 MHz
- Low power voltage: 1.8V to 3.3V options
- RoHS Compliant
- Low phase jitter typical: 300 fS RMS from 12KHz to 20MHz
- Tri-state available
- Applications: High-speed ethernet, Jitter attenuator, HDTV, ATM, Cable modem, VoIP, Server, NAS, Base station, and more



Standard Specifications

Item / Type	NVCHC53 (SMD 5032 HCSL VCXO)	NVCHC57 (SMD 7050 HCSL VCXO)
Dimensions	5.0×3.2×1.25 mm	7.0×5.0×1.45 mm
Output	HCSL	
Output load	50Ω to GND	
Output frequency range	15 MHz~700 MHz	
Supply voltage	1.8V~3.3 V	
Frequency tolerance	±25 ppm, ±50 ppm	
Operating temperature	-20~+70°C, -40~+85°C	
Supply current	115 mA max.	115 mA max.
Symmetry	45 % to 55 %	
Output voltage Voh (min.) / Vol (max.)	0.66V~1.15V / 0V~0.15V	
Rise time /Fall time	0.4ns max.	
Start-up time	8ms max.	
RMS phase jitter (12kHz~20MHz)	330 fS max.	
Phase noise (@1kHz)	-87dBc/Hz@644.5MHz	
Storage temperature	-55~+125°C	
Absolute pulling range (APR)	±50ppm~±250ppm, or specify	
Control voltage range	0.3V~3.0V@3.3V, 0.25V~2.25V@2.5V, 0.18V~1.62V@1.8V	
Linearity	±10% max.	
Input impedance	5 MΩ min.	
Modulation bandwidth (BW)	20 kHz max.	

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

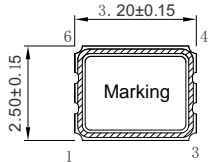
2.5V / 3.3V

Frequency Range

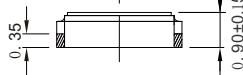
10 MHz~1500 MHz

Outline Dimensions (Unit: mm)

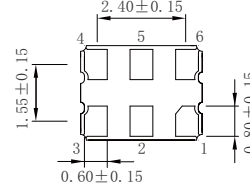
NVCLV32,NVCLP32 (3.2×2.5×1.00 mm)



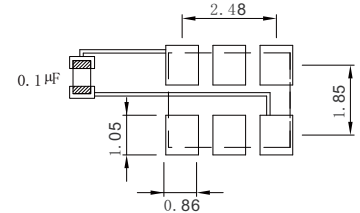
Top View



Side View

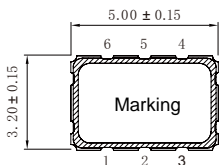


Bottom View

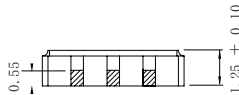


Footprint (Recommender)

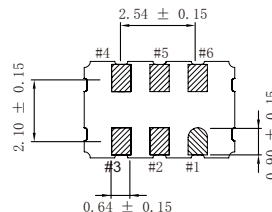
NVCLV53,NVCLP53,NVCHC53 (5.0×3.2×1.25 mm)



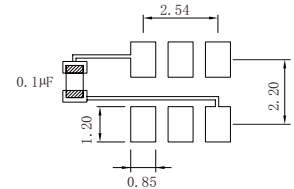
Top View



Side View

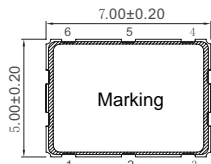


Bottom View

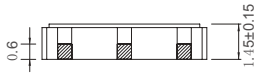


Footprint (Recommender)

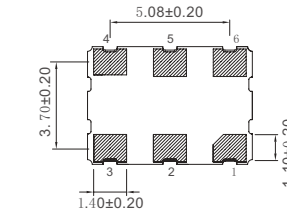
NVCLV57,NVCLP57,NVCHC57 (7.0×5.0×1.45 mm)



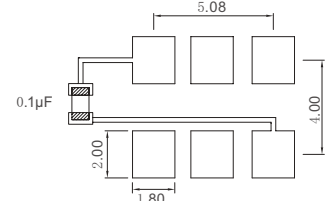
Top View



Side View



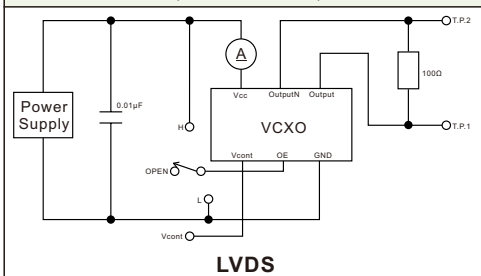
Bottom View



Footprint (Recommender)

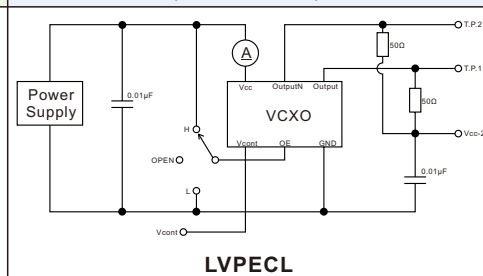
Measurement Circuit

NVCLV32,NVCLV53,NVCLV57



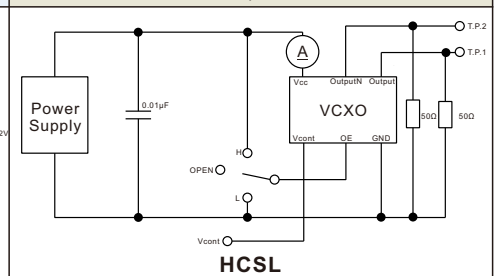
LVDS

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