

OCXO (Oven Controlled Crystal Oscillator)

SMD Type
NOC14096P
[14.5×9.6×6.50 mm]

Waveform
Rectangular

Output
HCMOS

Best Stability
±30 ppb

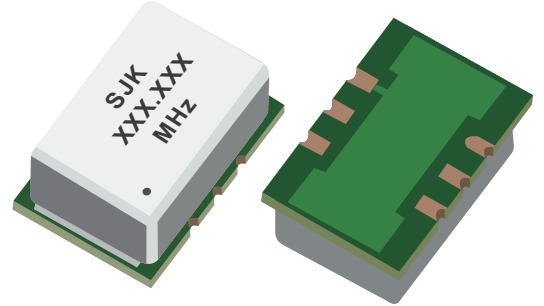
Voltage Control

Supply Voltage
3.3V / 5.0V

Frequency Range
5 MHz~40 MHz

Features

- Oven Controlled Crystal Oscillator (OCXO)
- Dimension 14.5×9.6×6.5 mm typical, with 6-pin SMD package
- Frequency range from 10MHz to 40MHz.
- ±30ppb stability over -40°C to +85°C.
- Stratum 3 (Overall ±4.6ppm including 20 years aging.)
- Voltage control (Electronic frequency tuning) is available.
- RoHS Compliant
- Applications: SDH/SONET, Telecommunication base station, Test and measurement equipment, Digital switch, etc.



Standard Specifications

NOC14096P (SMD 14.5×9.6×6.50 OCXOs)

Parameter		Min.	Typ.	Max.	Unit	Test Condition
Output	Frequency	5	10	40	MHz	Standard frequencies are 10, 12.8, 19.2, 20, 25, and 38.88MHz.
	Waveform	-	Rectangular	-	-	
	Level	-	HCMOS	-	-	
	"1" Level	V _{cc} ×0.9	-	-	V	
	"0" Level	-	-	V _{cc} ×0.1		
	Load	-	15	-	pF	
	Duty Cycle	45	50	55	%	3.3V@1.65V, 5.0V@2.5V
	Spurious	-	-	60	dBc	
Frequency Stability	Tolerance	-30	-	+30	ppb	-40°C to +85°C, referenced to +25°C
	vs. Temperature	±5~±50ppb, or specify				
	vs. Supply voltage	-5	-	+5	ppb	±5% change
	vs. Load	-10	-	+10	ppb	±10% change
	vs. Warm-up	-0.1	-	+0.1	ppm	In 5 minutes @ +25°C, referenced to 1 hour
	vs. Aging	-	-	-		
	Daily	-2.0	-	+2.0	ppb	After 30 days
	Yearly	-0.4	-	+0.4	ppm	
10 years	-2.0	-	+2.0			
Operating Temperature		-40	-	+85	°C	

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Parameter		Min.	Typ.	Max.	Unit	Test Condition	
Phase Noise @20MHz	@10 Hz	-	-98	-92	dBc/Hz		
	@100 Hz	-	-126	-120	dBc/Hz		
	@1 KHz	-	-145	-140	dBc/Hz		
	@10 KHz	-	-152	-150	dBc/Hz		
Electrical Frequency Adjustment	Freq. Adjustment Range	-5.0	-	+5.0	ppm		
	Control Voltage Range	(V _{cc} =+3.3) 0.0 to 3.3 (V _{cc} =+5.0) 0.0 to 5.0			V		
	Slope	-	Positive	-			
	Input Impetance	100	-	-	KΩ		
Input Power	Supply voltage	3.135	3.3	3.465	V		
		4.80	5.0	5.2			
	Current	-	500	600	mA		V _{cc} =3.3V@turn on
	Steady state	-	0.5	0.6	W		V _{cc} =3.3V@+25°C
Storage Temperature		-40	-	+85	°C		
Shock		2000 G's, 0.3ms 1/2 sine					
Vibration		10 to 2000 Hz / 10G's					

Dimensions And Pin-functions (Unit: mm)

Top View

Bottom View

Side View

Top View Suggested Layout

Pin Connections

Pin No.	Connection
1	V _{co} Input /NC
2	OE /NC
3	0 Volts & Case
4	R.F. Output
5	NC
6	V _{dd}