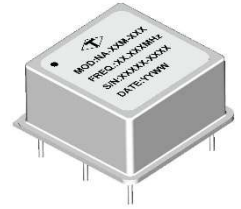


100MHz Low Noise/Low G-Sensitivity OCXO

NA-100M-6600 series

NA-100M-6600 Series in 25.4x25.4mm DIP package

NA-100M-6600 series is a 100.000 MHz high performance (VC)OCXO offering low phase noise(LPN), low G sensitivity(LGS) and tight frequency stability down to ± 100 ppb(-20°C to $+70^{\circ}\text{C}$). The part comes in a small hermetically sealed through hole package which makes it suitable for humid environmental conditions



FEATURES

- **Low Phase Noise & Low G-Sensitivity**
- Small Hermetically Sealed Package
- Tight Frequency Stability
- High RF Output Power
- Fast Warm-up Time
- Electrical Frequency Tuning Input
- Reference Voltage Output
- RoHS-Compliant (lead-free)

APPLICATIONS

- Instrument Reference
- Microwave Communication
- Clock Reference for Microwave Signal Source
- Synthesizer Reference Clock
- Test & Measurement
- Medical Application (MRI...)
- Radar Systems

RoHS Compliant Standard

ELECTRICAL SPECIFICATIONS

Test conditions: VDC = +12 V; VCO = +5 V; at $+25 \pm 3^{\circ}\text{C}$ unless otherwise identified

1. OUTPUT (PIN = "R.F. OUTPUT")

	Parameter	Min.	Typ.	Max.	Unit	Test Condition
1.1.	Frequency (Fo)	100.000000			MHz	
1.2.	Initial Accuracy	-0.3		+0.3	ppm	@ $+25 \pm 1^{\circ}\text{C}$ after turn on power 30 minutes Vco=+5V
1.3.	Waveform	Sine wave				
1.4.	Level	+13	+16		dBm	
1.5.	Load		50		Ω	
1.6.	Harmonics			-25	dBc	
1.7.	Spurious			-100	dBc	

2. FREQUENCY STABILITY

	Parameter	Min.	Typ.	Max.	Unit	Test Condition		
2.1.	Ambient	±100			ppb	referred to 25°C	Refer to Table 1 : Ordering Information	
		-20°C ~ +70°C			°C			
2.2.	Aging							
	Daily	-5		+5	ppb	after 30 days		
	Yearly	-500		+500	ppb			
2.3.	Voltage	-10		+10	ppb	±5% change		
2.4.	Load	-40		+40	ppb	±10% change		
2.5.	Warm-up	-200		+200	ppb	in 2 minutes @ +25 ±1°C	referred to 1 hour	
2.6.	G-Sensitivity (each axis)			1	ppb/g			
2.7.	Phase Noise (Max.)							
		-110			dBc/Hz	@ 10Hz		
		-140			dBc/Hz	@ 100Hz		
		-170			dBc/Hz	@ 1KHz		
		-182			dBc/Hz	@ 10KHz		
		-186			dBc/Hz	@ 100KHz		
		-186			dBc/Hz	@ 1MHz		

3. ELECTRICAL FREQUENCY ADJUSTMENT (PIN = "VCO INPUT")

	Parameter	Min.	Typ.	Max.	Unit	Test Condition	
3.1.	Tuning Range	± 2.5			ppm	Referenced to frequency at nominal Center Voltage.	
3.2.	Control Voltage	0		+10.0	V		
3.3.	Slope	Positive					
3.4.	Center Voltage		+5		V		
3.5.	Linearity	-10		+10	%		

4. INPUT POWER (PIN = "+VDC")

	Parameter	Min.	Typ.	Max.	Unit	Test Condition	
4.1.	Voltage	+11.52	+12	+12.48	V		
4.2.	Current						
	Steady State			150	mA		
	During Warm-Up			350	mA		

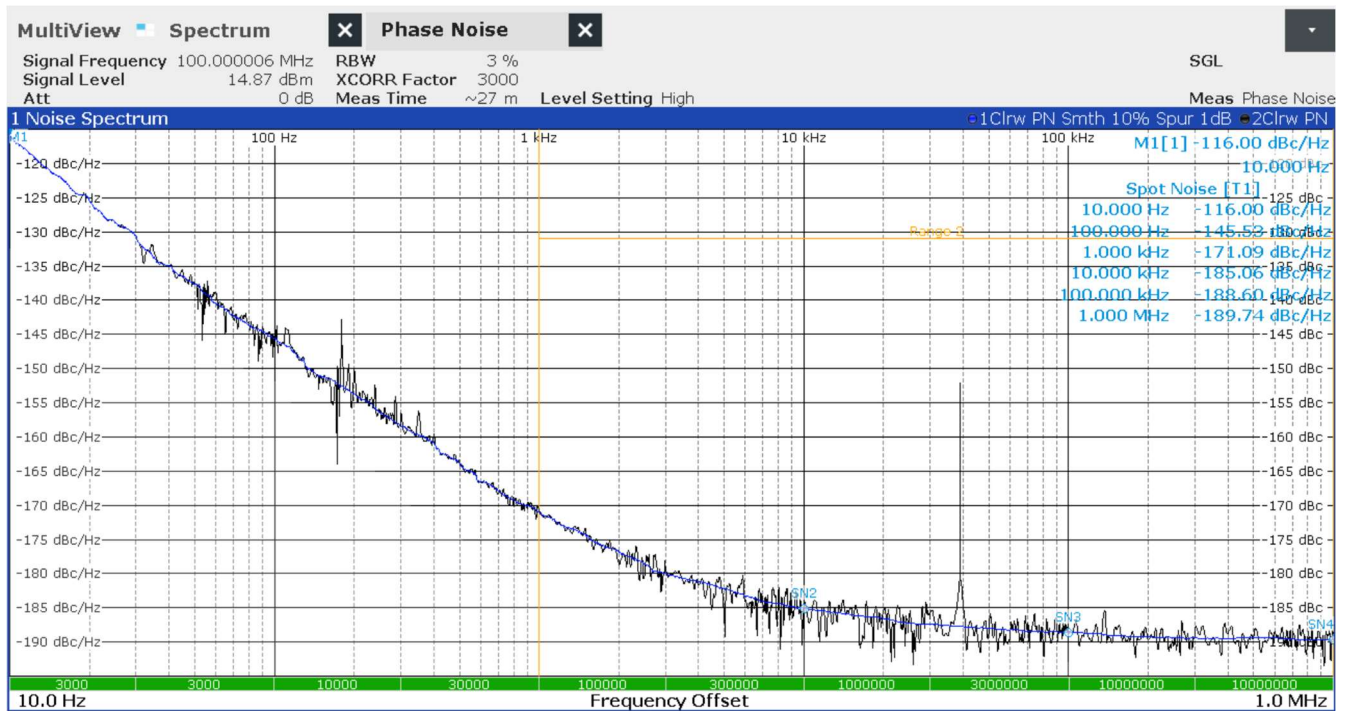
5. REFERENCE VOLTAGE (PIN = "REFERENCE VOLTAGE")

	Parameter	Min.	Typ.	Max.	Units	Test Condition	
5.1.	Voltage	+10.45	+11	+11.55	V		

6. ENVIRONMENTAL

	Parameter	Reference Std.	Test Condition
6.1.	Operable Temperature	-20°C to +70°C	
6.2.	Storage Temperature	-40°C to +85°C	
6.3.	Humidity	MIL-STD-202, Method 103 Test Condition A	95% RH @ +40°C, non-condensing, 240 hours
6.4.	Vibration (non-operating)	MIL-STD-202, Method 201	0.06" Total p-p, 10 to 55 Hz
6.5.	Shock (non-operating)	MIL-STD-202, Method 213, Test Condition J	30g, 11ms, half-sine

Phase Noise Test Data



ORDERING INFORMATION

NA-100M-6600

