

O-C84-0XSXXXXX-X

Ultra Low Phase Noise, Precision SC-cut HF OCXO in Tiny 13x20x11 mm DIP14 Package

Rev. -

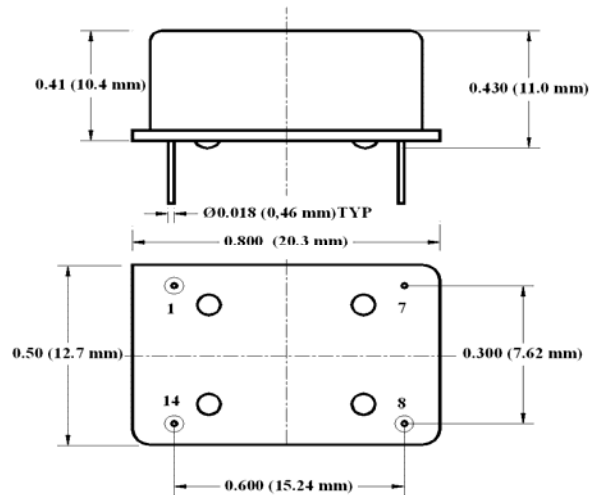
Product Data Sheet

Features

- SC-cut crystal
- Ultra Low Phase Noise
- Sine Wave +15 dBm output
- Extremely Small Hermetic Package

Applications

- Instrumentation
- Radar
- High End Synthesizers
- Telecommunication Systems
- Data Communications



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Parameter	Symb	Condition	Min	Typ	Max	Unit	Note	
Absolute Maximum Ratings								
Input Break Down Voltage	Vcc		-0.5		6.5	V	Vcc option 0	
Storage temper.	Ts		-55		85	°C		
Control Voltage	Vc		-1		10.5	V		
Electrical (1)								
Frequency	F		80		125	MHz		
Frequency stability	ΔF/F	vs. Temp.		±50		ppb	See table below Note 2	
		vs. Supply			2	ppb/5% change		
		Vs. load			2	ppb/5% change		
Aging		per day		5E-9		ppm	After 30 days of continuous operation	
		per first year		5E-7				
		10 years			2.0			
Allan Deviation		.01s to 1s		5E-11				
SSB Phase Noise at 100.000 MHz	£(Δf)	10 Hz		-95		dBc/Hz	Grade "L"	
		100 Hz			-125			
		1 KHz			-158			
		10 KHz			-170			
		100 KHz			-178			
		10 Hz		-100			Grade "P"	
		100 Hz			-130			
		1 KHz			-160			
		10 KHz			-172			
		100 KHz			-178			
		10 Hz		-105			Grade "U", Available with slope option "L"	
		100 Hz			-135			
1 KHz			-162					
10 KHz			-175					
100 KHz			-180					
Retrace		After 30 minutes		±20		ppb		
G-sensitivity		worst direction			±0.5	ppb/G		
Supply Voltage		5V±5%	4.75	5.0	5.25	V	Option "0"	
Power consumption	P	steady state, 25°C		1.0	1.2	W	Still air	
		steady state, -40°C		2.5				
		start-up		3.0	3.5			
Spectral Purity		Output power	12	15		dBm dBc	Non-supply related	
		Subharmonics		none				
		Spurious Harmonics		-35	-80 -30			
Load		50 Ohm (Internally AC-coupled)						
Warm-up time	τ	to 0.1ppm accuracy		3	5	minutes		
Output Waveform		Sine-wave						
Control voltage	Vc		0		10.0	V	Slope option "L" Slope option "P"	
			0		4.5			
Input Impedance	Zin	At Vc Pin	10			KOhm		
Pull range		from nominal F		±3.0		ppm		
Absolute pull range	APR		±0.5			ppm		
Deviation slope		Monotonic, posit		0.7		ppm/V	Slope option "L" Slope option "P"	
					1.3			
Linearity			±10%					
Setability	Vc0	@25°C, Fnom.	4.0	5.0	6.0	V	Slope option "L", no bias Slope option "P"	
			1.75	2.25	2.75			
Modulation Bandwidth	Fm		DC		1	KHz		

All parameters for 100.000 MHz

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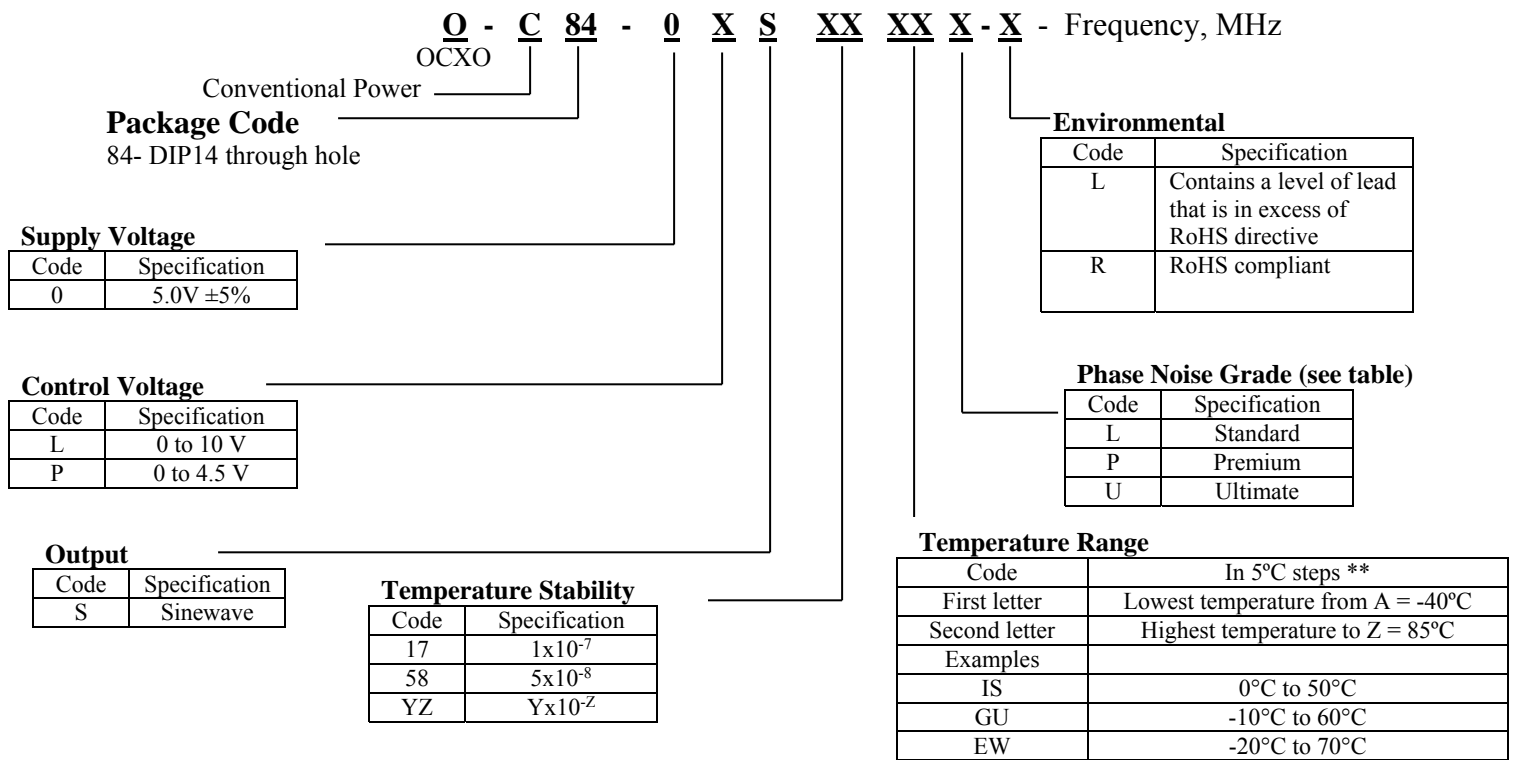
Environmental and Mechanical

Operating temp. range	0 to 70°C Standard, Other options – see Chart below
Mechanical Shock	Per MIL-STD-202, 30G, 11ms
Thermal Shock	Per MIL-STD-883, Method 1011, Condition A
Vibration	Per MIL-STD-202, 5G to 2000 Hz
Operational vibration	Phase noise under vibration to be verified by the customer
Seal	Hermetically sealed
Soldering Conditions	260°C for 10 seconds MAX, leads only

Electrical Connections

Pin Out	Pin #1-- Vc; Pin#7 – Case, GND; Pin #8 – OUTPUT; Pin #14 - Vcc
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Creating a Part Number



****Temperature Code Table**

Letter	Temp °C	Letter	Temp °C	Letter	Temp °C	Letter	Temp °C	Letter	Temp °C	Letter	Temp °C
A	-40	F	-15	K	10	P	35	U	60	Z	85
B	-35	G	-10	L	15	Q	40	V	65		
C	-30	H	-5	M	20	R	45	W	70		
D	-25	I	0	N	25	S	50	X	75		
E	-20	J	5	O	30	T	55	Y	80		



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Notes:

- 1. Not all combinations are available – consult factory
- 2. It's not recommended to over-specify stability over temperature performance: it significantly affects the cost.
- 3. Unless absolutely necessary do not specify highest operating temperature above 70°C
- 4. All parameters, unless otherwise specified, are at nominal conditions, ie: T=25°C, Nominal Vcc & Nominal Load.

