

**Features**

- Ultra Stable
- Wide Temperature Range
- DIP(20.2mm\*12.6mm)

**Applications**

- Base Stations
- Instrumentations
- Others

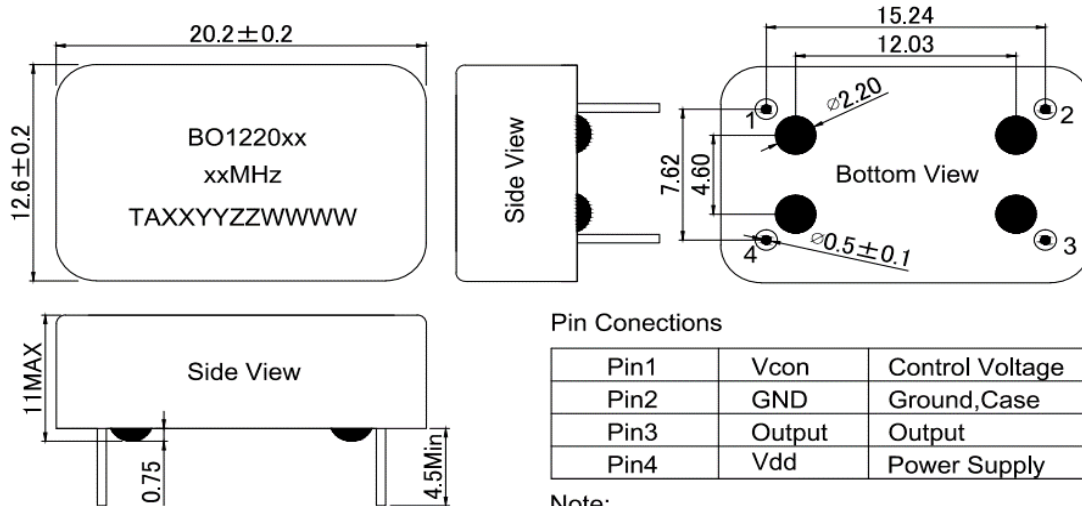

**BO1220L Specifications**

Parameter	Value			Unit	Conditions	
	Min.	Typ.	Max.			
Supply Voltage	–	3.3	–	V	V <sub>CC</sub> ±5%	
	–	5.0	–	V	V <sub>CC</sub> ±5%	
Power Consumption	–	–	3.0	W		
	–	–	1.5	W		
Frequency Range	10 ~ 40			MHz		
Nominal Frequency	10					
Initial Frequency Tolerance	–	–	±100	ppb	At shipment, nominal EFC, +25°C	
Freq. Stability Vs. Temp.	±5	–	±100	ppb	-40°C ~ +70°C	
	±50	–	±100	ppb	-40°C ~ +85°C	
	–	–	±200	ppb	-55°C ~ +85°C	
Sine Wave	Output Level	7	–	dBm		
	Harmonious	–	–	-40	dBc	
	Spurious	–	–	-80	dBc	
	Load	–	50	–	Ω	
HCMOS	V <sub>OH</sub>	2.4	–	V	HCMOS Output, Load=15pf	
	V <sub>OL</sub>	–	–	0.4	V	HCMOS Output, Load=15pf
	Duty Cycle	45	–	55	%	(V <sub>OH</sub> - V <sub>OL</sub> )/2
	Rise/Fall edge	–	–	6	ns	HCMOS Output, Load=15pf
	Load	–	15	–	pf	
Warm-up Time	–	–	3	Min	At +25°C, with accuracy of ±100ppb	
Supply Sensitivity	–	–	±5	ppb	V <sub>CC</sub> ±5%	
Load Sensitivity	–	–	±5		Load±5%	
Aging per Day	–	–	±1		After 30 days of operation	
Aging per Year	–	–	±100		After 30 days of operation	
SSB Phase Noise @10MHz	–	–	-115	dBc/Hz	Offset 10Hz	
	–	–	-130		Offset 100Hz	
	–	–	-150		Offset 1kHz	
	–	–	-155		Offset 10kHz	
	–	–	-160		Offset 100kHz	
Control Voltage Range	0	–	3	V	3.3V	
	0	–	5	V	5V	
Frequency Turning Range	±0.5	–	±2.0	ppm		
Tuning Slope	Positive					
Environmental Conditions						
Operating Temperature Range	-55°C~+85°C					
Storage Temperature Range	-55°C~+125°C					

### Reliability

Parameter	Condition
Temperature Stress Test	IEC60068, GJB360B
Mechanical Stress Test	IEC60068, GJB360B
EMC Test (ESD)	IEC61000, JESD22
Solder Ability	EIA/JESD22-B102-C
RoHS	RoHS Directive 2011/65/EU Annex II Recasting 2002/95/EC

### Outline Dimension & Pin Connections



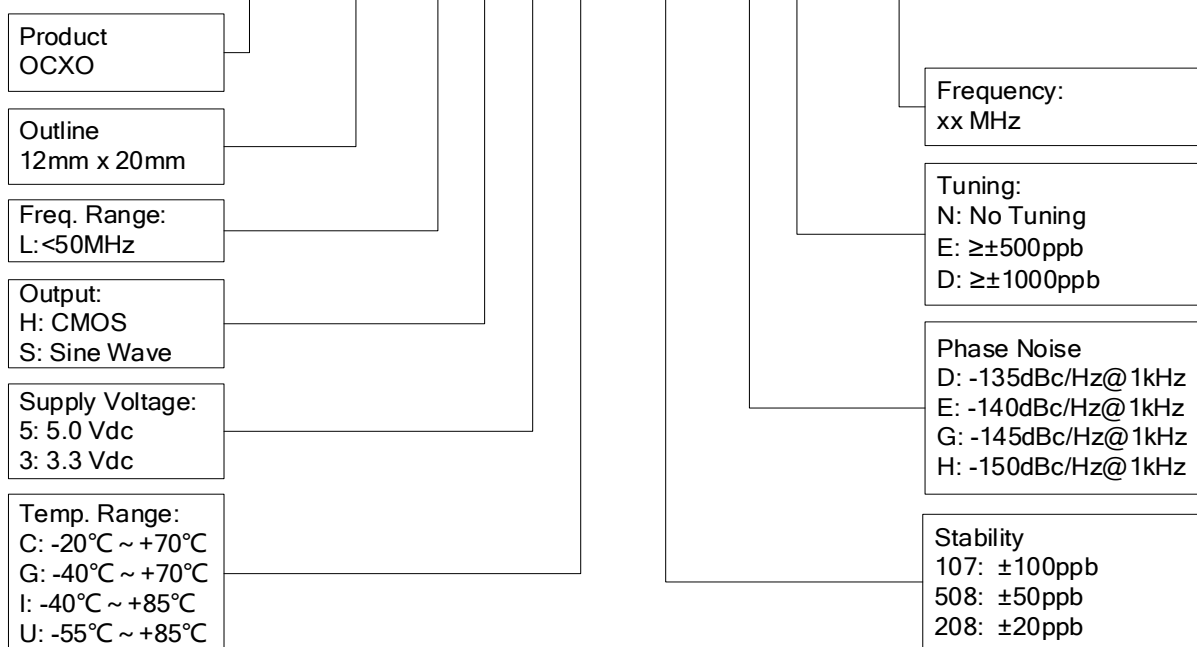
Pin Connections

Pin1	Vcon	Control Voltage
Pin2	GND	Ground, Case
Pin3	Output	Output
Pin4	Vdd	Power Supply

Note:  
Leave Pin 1 unconnected if Vcon is not used.

### Ordering Guide

**BO 1220 L X X X XXX X X XX.XX**



**Example:** BO1220LH5C107DN10

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