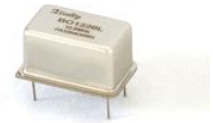


**Features**

- Ultra Stable
- Wide Temperature Range
- Fast Warming-up
- Small Package

**Applications**

- Base Stations
- Instrumentations
- Synthesizer
- SDH/SONET
- Medical Electronics

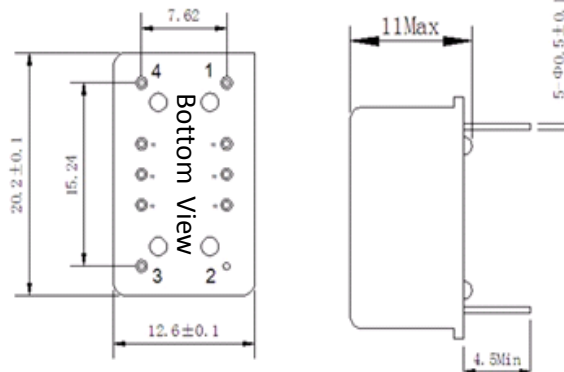

**BO1220L Specifications**

Parameter	Value			Unit	Conditions	
	Min.	Typ.	Max.			
<b>Power Supply</b>						
Supply Voltage	4.75	5.0	5.25	Vdc		
Power Consumption	–	–	2.0	W	During Warming-up	
	–	–	0.6	W	Steady at +25°C & Still air	
<b>RF Output</b>						
Frequency Range	10			MHz		
Sine Wave	Output Level	–	7	–	dBm	
	Harmonious	–	–	-30	dBc	
	Spurious	–	–	-70	dBc	
	Load	–	50	–	Ω	
Square 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	
<b>Frequency Stability</b>						
Initial Frequency Tolerance	±10	–	±100	ppm	At shipment, nominal EFC, +25°C	
Freq. Stability Vs. Temp.	±20, ±50			ppb	-20°C ~ +70°C	
	±50, ±100			ppb	-40°C ~ +70°C	
	±50, ±100			ppb	-40°C ~ +85°C	
	±100			ppb	-55°C ~ +85°C	
Supply Sensitivity	±0.1			ppm	V <sub>CC</sub> ±5%	
Load Sensitivity	±0.2				Load±5%	
Aging per Day	±0.005, ±0.01				Standard	
Aging per Year	±0.5, ±1				Customized	
SSB Phase Noise @10MHz	–	–	-95	dBc/Hz	Offset 10Hz	At +25°C
	–	–	-120		Offset 100Hz	
	–	-145	-140		Offset 1kHz	
	–	–	-150		Offset 10kHz	
	–	–	-155		Offset 100kHz	
<b>Electronic Frequency Control</b>						
Control Voltage Range	0 ~ 5			Vdc		

Frequency Turning Range	±500	ppb
Tuning Slope	positive	

**Outline Dimension & Pin Connections**

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


**Note:**

1. The pin with ‘\*’ are for factory test.
2. Leave pin 1 unconnected if Vcon is not used.

**Environmental Conditions**

Operating Temperature Range	-20°C ~ +70°C
	-40°C ~ +70°C
	-40°C ~ +85°C
	-55°C ~ +85°C

**Maximum Ratings**

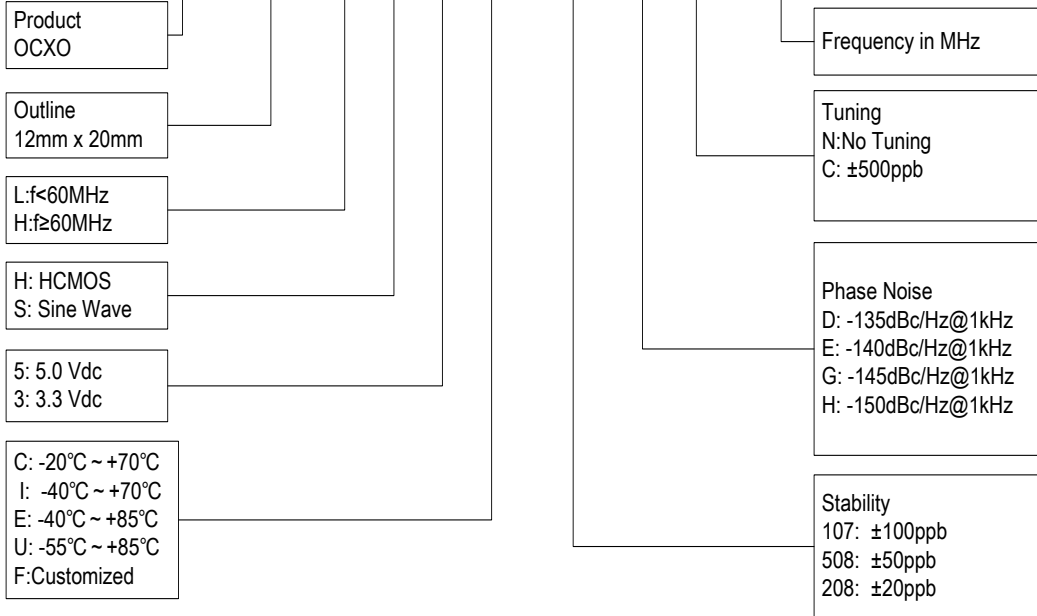
Parameter	Symbol	Rating
Storage Temperature Range	Ts	-55°C ~ +125°C
Supply Voltage	Vdd	-0.5V / 6V
Control Voltage	Vcon	0V / 3V
ESD, HBM/CDM/MM		4KV/ 2KV/ 200V

**Reliability**

Parameter	Condition
Temperature Stress Test	IEC60068, GJB360B
Mechanical Stress Test	IEC60068, GJB360B
EMC Test (ESD)	IEC61000, JESD22
Solder Ability	EIA/JESD22-B102-C
Moisture Sensitivity Level	MSL3
Contact Pads	Gold over Nickel
RoHS	RoHS Directive 2011/65/EU Annex II Recasting 2002/95/EC

**Ordering Guide**

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



**Example:** BO1220LH5C107DN12.8

**Disclaimer**

Xtaltq Technologies Co., Limited reserves the right to make changes to the product(s) and/or information contained herein without notice. No liability is assumed as a result of their use or application. No rights under any patent accompany the sale of any such product(s) or information.