

Features

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

Applications

- Base Stations
- Instrumentations
- Medical Electronics
- Others

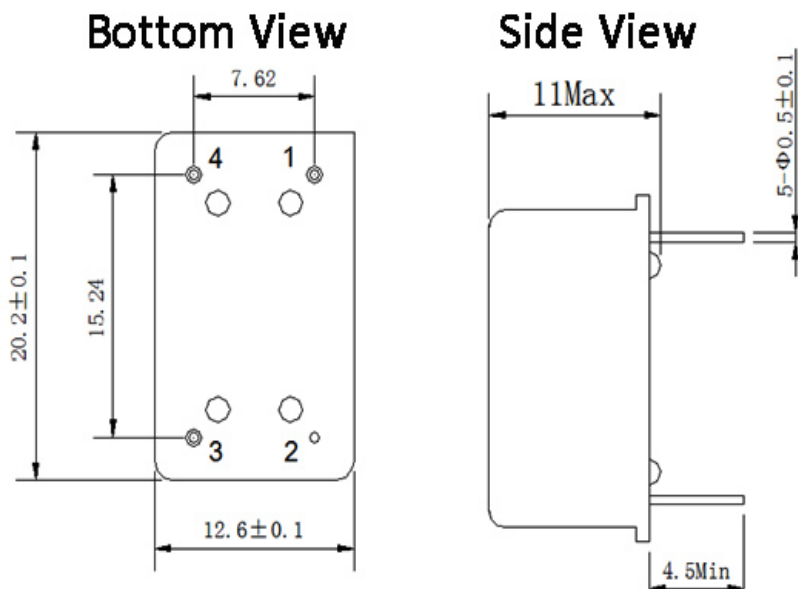

BO1220L Specifications

Parameter		Value			Unit	Conditions	
		Min.	Typ.	Max.			
Supply Voltage		—	3.3	—	V		
		—	5.0	—	V		
Power Consumption		—	—	3.0	W	During Warming-up	
		—	—	1.5	W	Steady at +25℃ & Still air	
Frequency Range		10 ~ 40			MHz		
Nominal Frequency		10					
Initial Frequency Tolerance		—	—	±100	ppb	At shipment, nominal EFC, +25℃	
Freq. Stability Vs. Temp.		±20	—	±50	ppb	-20℃ ~ +70℃	
		±50	—	±100	ppb	-40℃ ~ +70℃	
		±50	—	±100	ppb	-40℃ ~ +85℃	
		—	—	±200	ppb	-55℃ ~ +85℃	
Sine Wave	Output Level	7	—	—	dBm		
	Harmonious	—	—	-30	dBc		
	Spurious	—	—	-70	dBc		
	Load	—	50	—	Ω		
LVTTL	V _{OH}	2.4	—	—	V	LVTTL Output, Load=15pf	
	V _{OL}	—	—	0.4	V	LVTTL Output, Load=15pf	
	Duty Cycle	45	—	55	%	(V _{OH} - V _{OL})/2	
	Rise/Fall edge	—	—	6	ns	LVTTL Output, Load=15pf	
	Load	—	15	—	pf		
Supply Sensitivity		—	—	±5	ppb	Vcc±5%	
Load Sensitivity		—	—	±5		Load±5%	
Aging per Day		—	—	±2		After 30 days of operation	
Aging per Year		—	—	±200		After 30 days of operation	
SSB Phase Noise @10MHz		-95	—	—	dBc/Hz	Offset 10Hz	At +25℃
		-120	—	—		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℃~+85℃					
Storage Temperature Range		-55℃~+125℃					

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	Fout	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

Product
OCXO

Outline
12mm x 20mm

Freq. Range:
L: <50MHz

Output:
H: LVTTTL
S: Sine Wave

Supply Voltage:
5: 5.0 Vdc
3: 3.3 Vdc

Temp. Range:
C: -20°C ~ +70°C
G: -40°C ~ +70°C
I: -40°C ~ +85°C
U: -55°C ~ +85°C

Frequency:
xx MHz

Tuning:
N: No Tuning
E: ±500ppb

Phase Noise
D: -135dBc/Hz@1kHz
E: -140dBc/Hz@1kHz
G: -145dBc/Hz@1kHz
H: -150dBc/Hz@1kHz

Stability
107: ±100ppb
508: ±50ppb
208: ±20ppb

Example: BO1220LH5C107DN10

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