

Features

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

Applications

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

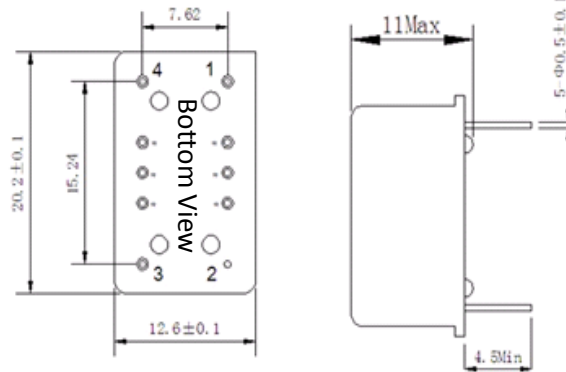


BT1220L Series Specifications

Parameter		Value			Unit	Conditions	
		Min.	Typ.	Max.			
Power Supply							
Supply Voltage		—	3.3	—	Vdc		
		—	5	—			
Supply Current		—	—	30	mA		
RF Output							
Frequency Range		10 to 40			MHz		
Nominal Frequency		10, 12.8, 13, 15.36, 16.32, 18.432, 19.2, 19.44, 20, 20.48, 25, 26, 30.72, 32.768, 38.4, 40			MHz		
Sine Wave	Output Level	7	—	—	dBm		
	Harmonious	—	—	-30	dBc		
	Spurious	—	—	-70	dBc		
	Load	—	50	—	Ω		
Square LVC MOS	V _{OH}	2.4	—	—	V	LVCMOS Output, Load=15pf	
	V _{OL}	—	—	0.4	V	LVCMOS Output, Load=15pf	
	Duty Cycle	45	—	55	%	(V _{OH} - V _{OL})/2	
	Rise/Fall Edge	—	—	6	ns	LVCMOS Output, Load=15pf	
	Load	—	—	15	pf		
Frequency Stability							
Initial Frequency Tolerance		±0.05	—	±0.5	ppm	At shipment, nominal EFC, +25℃	
RMS Jitter(By E5052B)		0.4	—	1.3	ps	12KHz~5MHz	
Freq. Stability Vs. Temp.		±0.05, ±0.1, ±0.2, ±0.5			ppm	-20℃~+70℃	
		±0.1, ±0.2, ±0.5			ppm	-40℃~+85℃	
Supply Sensitivity		±0.1			ppm	Vcc±5%	
Load Sensitivity		±0.2				Load±5%	
Aging/ First Year		±1.0				Standard	
		±0.3	—	±0.8		Customized	
SSB Phase Noise @10MHz		—	—	-95	dBc/Hz	Offset 10Hz	At +25℃
		—	—	-120		Offset 100Hz	
		—	—	-140		Offset 1kHz	
		—	—	-145		Offset 10kHz	
		—	—	-150		Offset 100kHz	
Electronic Frequency Control							
Control Voltage Range		1.5 ± 1.0			Vdc		
Frequency Turning Range		±5	—	±12	ppm		
Tuning Slope		positive					
Non-linearity		—	—	1	%		

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

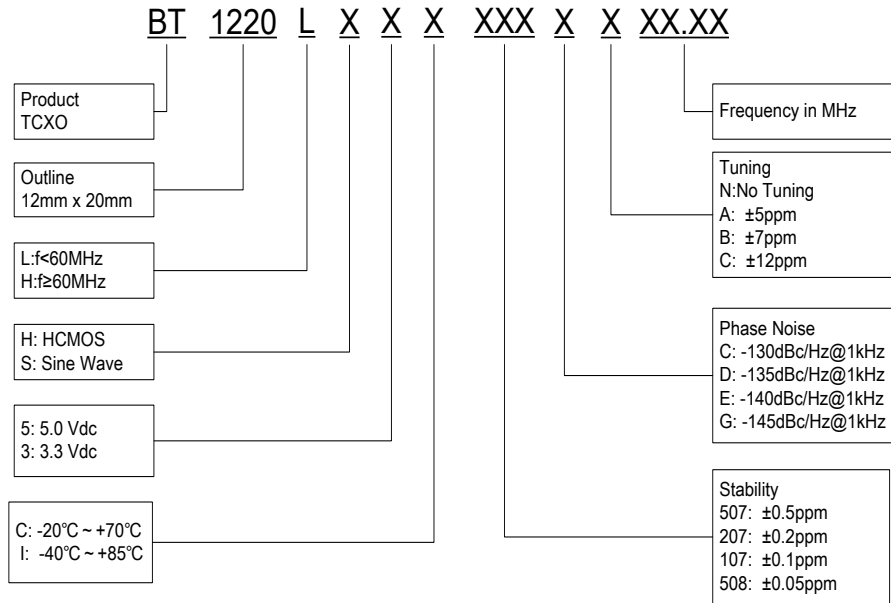
Operating Temperature	-20°C ~ +70°C
Range	-40°C ~ +85°C

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	RHOS Directive 2011/65/EU Annex II Recasting 2002/95/EC

Ordering Guide


Example: BT1220LS5C107DN12.8

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