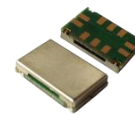


Features

- Ultra Stable
- Wide Temperature Range
- SMD Package (9×14×3.0mm)

Applications

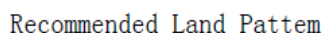
- Base Stations
- Instrumentations
- Synthesizer
- SDH/SONET
- Medical Electronics



BT0914 Specifications

Parameter	Value			Unit	Conditions		
	Min.	Typ.	Max.				
Power Supply							
Supply Voltage	—	3.3	—	Vdc			
	—	5	—	Vdc			
Supply Current	3	—	6	mA			
RF Output							
Frequency Range		10 to 40			MHz		
Clipped Sine Wave	Output Level	0.8	—	—	Vp-p		
	Load	10kΩ//10pF					
Square LVCMOS	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°C	
RMS Jitter(By E5052B)		0.4	—	1.3	ps	12KHz~5MHz	
Freq. Stability Vs. Temp.	±0.02,±0.05, ±0.1, ±0.2, ±0.5				ppm	-20°C~-+70°C	
	±0.02,±0.05, ±0.1, ±0.2, ±0.5				ppm	-40°C~-+85°C	
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°C	
	—	—	-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	%		

Package :



Pin 1-vcon,Control Voltage
Pin 2-Gnd,Ground
Pin 3-Fo,Output
Pin 4-Vdd,Supply voltage

Note:

1. The pins 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 ~ +85°C

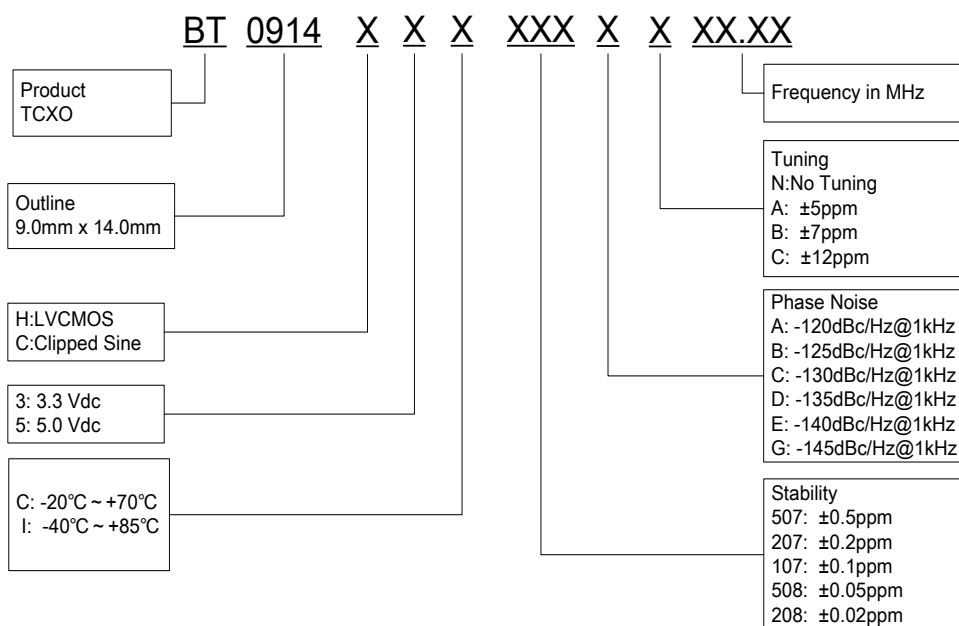
Maximum Ratings

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
Solderability	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



Example: BT0914H3I107CN10

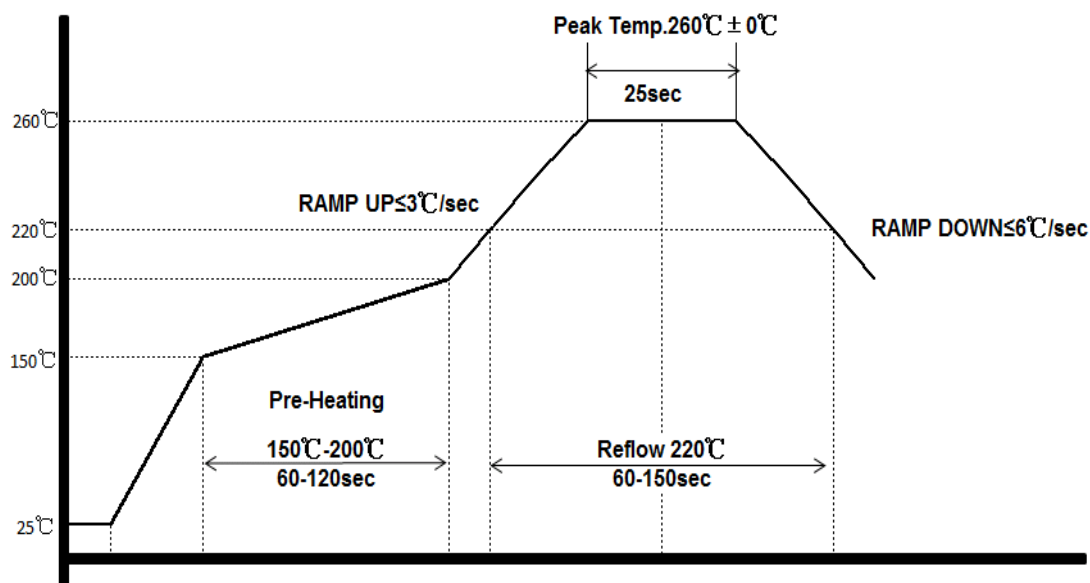
Phase Noise @1KHz

Frequency Range	<-125dBc	<-130dBc	<-135dBc	<-140dBc	<-145dBc	
10MHz				●	●	● = Available
12.8~20MHz			●	●	●	● = Unavailable
20.48~38.4MHz		●	●	●	●	
40MHz	●	●	●	●	●	

IR Reflow Profile

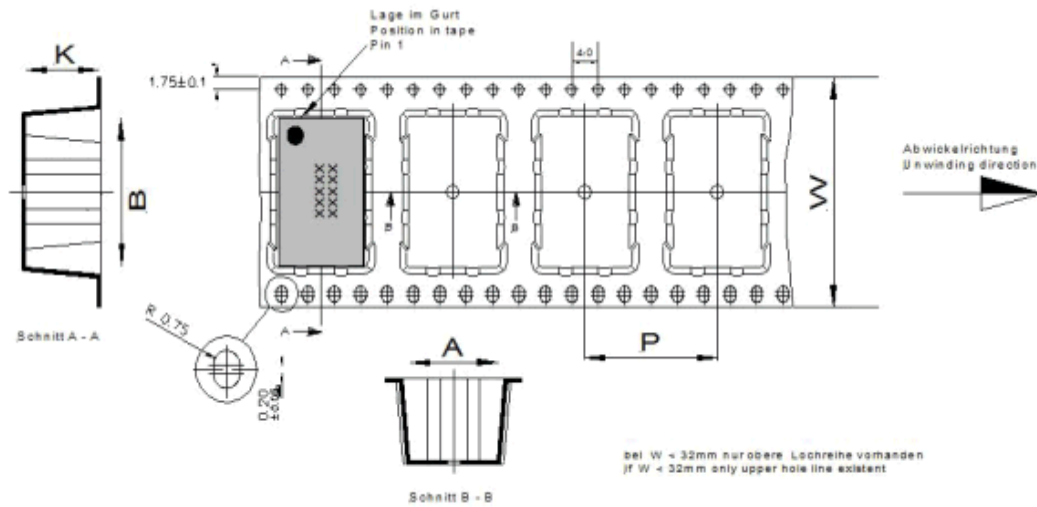
Suggested IR Reflow

Devices are built using lead-free epoxy and can be subjected to standard lead free IR reflow conditions shown in the figure.



Tape & Reel

Tape & Reel Information



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