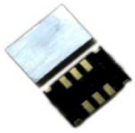
Features

- Ultra Stable
- Low Phase Noise
- Small Packaging(9.2×14.2mm)

Applications

- Base Stations
- Instrumentations
- Synthesizer
- SDH/SONET



BT0914A Series Specifications

Parameter		Value			Unit	Conditions	
		Min.	Typ.	Max.			
Supply Voltage		3.135	3.3	3.465	V		
		4.75	5	5.25	V		
Current with Output		–	30	50	mA		
Initial Frequency Tolerance		-1	–	+1	ppm	At shipment, nominal EFC, +25℃	
Frequency Range		1.2 to 800			MHz		
Nominal Frequency		10, 50,100			MHz		
Freq. Stability Vs. Temp.		±0.28	–	±2	ppm	-40℃～+85℃	
Output LVCMOS	V_{OH}	2.4	–	–	V	LVCMOS Output, Load=15pf	
	V_{OL}	–	–	0.4	V	LVCMOS Output, Load=15pf	
	Duty Cycle	45	50	55	%		
	Rise/Fall Edge	–	–	6	ns	90%~10% Vdd	
	Load	–	–	15	pf		
Clipped Sine Wave	Output Level	0.8	–	–	Vp-p		
	Load	10KΩ//10pF					
Supply Sensitivity		–	–	+0.2	ppm	Supply voltage varied ±5% at 25℃	
Load Sensitivity		–	–	+0.2		±5% load change	
Aging/ Day		–	–	±0.02			
Aging/ First Year		–	–	±1.0			
SSB Phase Noise @100MHz		–	-80	–	dBc/Hz	Offset 10Hz	at 25℃
		–	-110	–		Offset 100Hz	
		–	-145	–		Offset 1kHz	
		–	-150	–		Offset 10kHz	
		–	-155	–		Offset 100kHz	
Control Center Voltage		2.5			V	VCC 5V	
		1.65			V	VCC 3.3V	
Control Voltage Range		0	–	VCC	V		
Frequency Turning Range		±5	–	–	ppm		
VC Input Impedance		100	–	–	KΩ		
Tuning Slope		Positive					
Linearity		–	–	10	%		

Environmental Conditions

Operating Temperature Range	-40℃ ~ +85℃
Storage Temperature Range	-55℃ ~ +105℃

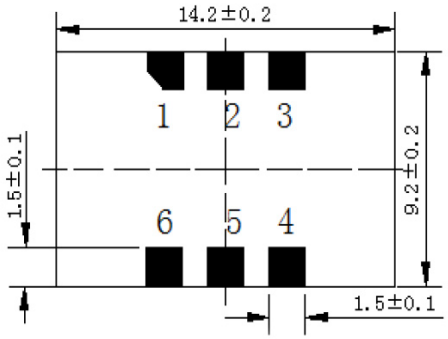
Maximum Ratings

Parameter	Symbol	Rating
Supply Voltage	Vdd	-0.5V / 6V
Control Voltage	Vcon	0V / 3V
ESD, HBM/CDM/MM		4KV/ 2KV/ 200V

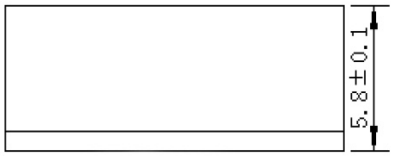
Reliability

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

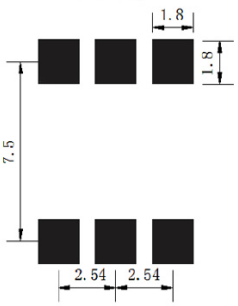
Outline Dimension & Pin Connections



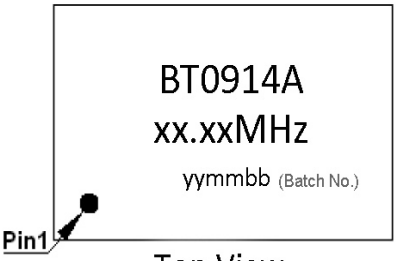
Bottom View



Side View



Land Patter
(Reference)



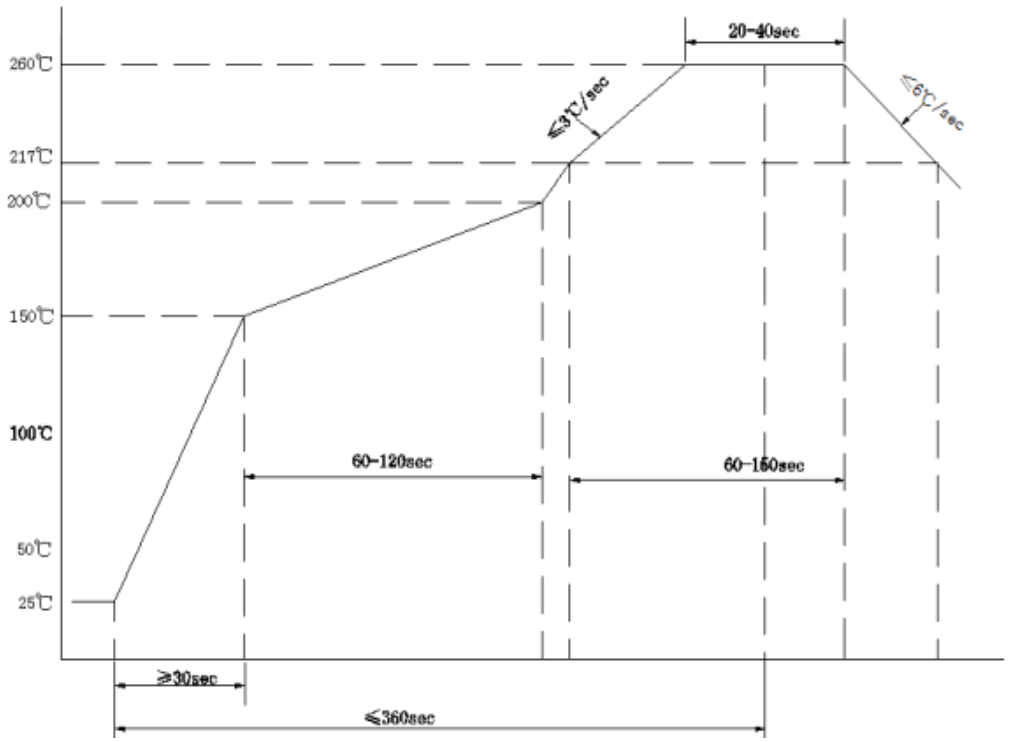
Top View

Pin Connections

Pin 1	Vcon	Pin 4	Output
Pin 2	NC	Pin 5	NC
Pin 3	GND	Pin 6	VCC

*Leave Pin1 unconnected for TCXO

IR Reflow Profile



Ordering Guide

BT 0914A X X X XXX X X XX.XX

- Product: TCXO
- Outline: 9.0mm x 14.0mm
- Output Wave: H:LVCMOS, C:Clipped Sine
- Supply Voltage: 3: 3.3 Vdc, 5: 5.0 Vdc
- Temp. Range: C: -20℃ ~ +70℃, I: -40℃ ~ +85℃
- Frequency in MHz
- Tuning: N:No Tuning, A: ±5ppm
- Phase Noise: C: -130dBc/Hz@1kHz, D: -135dBc/Hz@1kHz, E: -140dBc/Hz@1kHz, G: -145dBc/Hz@1kHz
- Stability: 206: ±2.0ppm, 106: ±1.0ppm, 507: ±0.5ppm, 287: ±0.28ppm

Example: BT0914AS5I287AA100

Disclaimer