
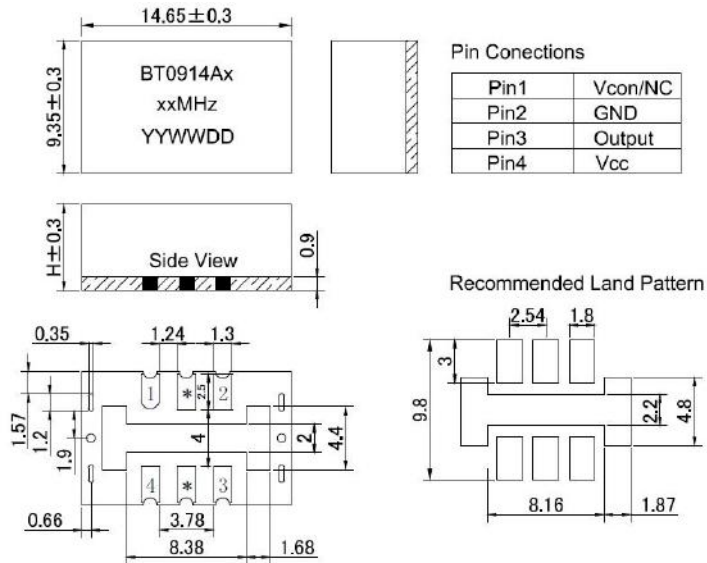


Features		Applications				
<ul style="list-style-type: none"> • Ultra Stable • Low Phase Noise • Freq. Range 50~156.25MHz • High Precision • SMD 9.2×14.2mm 		<ul style="list-style-type: none"> • Satellite navigation • wireless communication system • High definition television system • Low phase noise signal source • Low jitter radio frequency communication circuit 				
						
BT0914A Vibration Insensitive Specifications						
Parameter	Value			Unit	Conditions	
	Min.	Typ.	Max.			
Supply Voltage	-	3.3	-	V	Vcc±5%	
Supply Current	-	5	-	V		
Frequency Range	50~156.25			MHz		
Nominal Frequency	50,80,100,122.88			MHz		
Initial Frequency Tolerance	±0.5	-	±1.5	ppm	At shipment, nominal EFC, +25°C	
Freq.Stability Vs.Temp.	±0.28	±0.28	±2	ppm	-20°C~+70°C@Height above 6mm	
	±0.28	±0.5	±2	ppm	-40°C~+85°C@Height above 6mm	
	±0.5	±1.0	±2	ppm	-50°C~+85°C@Height above 6mm	
Sine Wave	Output	7	-	-	dBm	
	Harmonic Suppression	-	-	-30	dBc	
	Spur Suppression	-	-	-70	dBc	
	Load	-	50	-	Ω	
HCMOS	Voh	2.4	-	-	V	HCMOS Output, Load=15pf
	Vol	-	-	0.4	V	HCMOS Output, Load=15pf
	Duty Cycle	45	-	55	%	(V _{OH} - V _{OL})/2
	Rise/Fall Edge	-	-	6	ns	HCMOS Output, Load=15pf
	Load	-	-	15	pf	
RMS Jitter(E5052B)	-	-	1000	fs	12KHz~20MHz	
Supply Sensitive	-	-	±0.2	ppm	Vcc±5%	
Load Sensitive	-	-	±0.2		Load±5%	
Aging/First Year	-	-	±1.0		Standard	
SSB Phase Noise @100MHz	-	-80	-75	dBc/Hz	Offset 10Hz	Static phase noise at +25°C
	-	-112	-110		Offset 100Hz	
	-	-142	-140		Offset 1kHz	
	-	-158	-155		Offset 10kHz	
	-	-161	-158		Offset 100kHz	
	-	-161	-160		Offset 1000kHz	
SSB Phase Noise @100MHz	-	-75	-70	dBc/Hz	Offset 10Hz	X-axis dynamic phase noise at +25°C
	-	-102	-95		Offset 100Hz	
	-	-110	-100		Offset 1kHz	
	-	-150	-145		Offset 10kHz	
	-	-158	-155		Offset 100kHz	
	-	-160	-158		Offset 1000kHz	
SSB Phase Noise @100MHz	-	-72	-70	dBc/Hz	Offset 10Hz	Y-axis dynamic phase noise at +25°C
	-	-96	-95		Offset 100Hz	
	-	-110	-100		Offset 1kHz	
	-	-150	-145		Offset 10kHz	
	-	-158	-155		Offset 100kHz	
	-	-160	-158		Offset 1000kHz	
SSB Phase Noise @100MHz	-	-74	-70	dBc/Hz	Offset 10Hz	Z-axis dynamic phase noise at +25°Cse)
	-	-96	-95		Offset 100Hz	
	-	-102	-100		Offset 1kHz	
	-	-147	-145		Offset 10kHz	
	-	-158	-155		Offset 100kHz	
	-	-160	-158		Offset 1000kHz	
Control Voltage Range	1.5 ± 1.0			V		
Frequency Tuning Range	±3	±5	±10	ppm		
Tuning Slope	Positive					
Non-Linearity	-	-	10	%		

Phase Noise @1kHz					
Frequency Range	<-130dBc	<-135dBc	<-140dBc	<-145dBc	
50~100MHz	○	○	○	○	○= Availavle X= Not Available
102.4~122.88MHz	○	○	○	X	
125~156.25MHz	○	○	X	X	

Environmental Conditions	
Operating Temp. Range	-50°C ~ +85°C
Storage Temp. Range	-55°C ~ +125°C
Note: The minimum to maximum value indicates the range of indicators	

Outline Dimension & Pin Connections



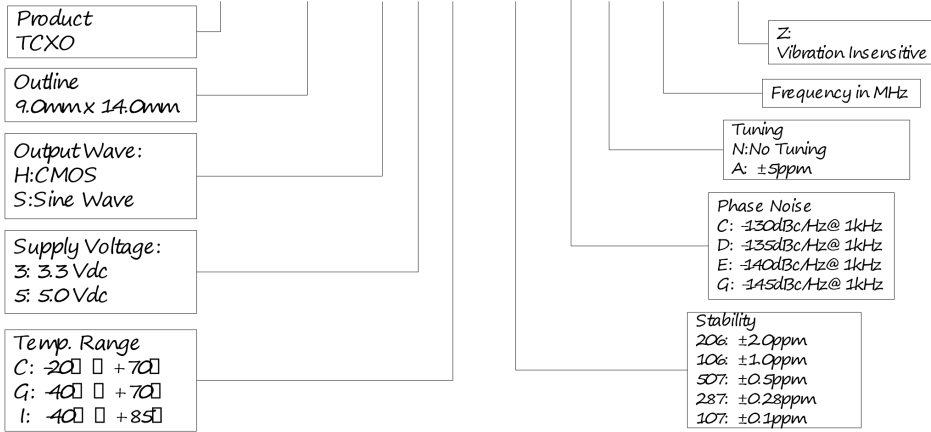
备注:
 1. TI
 2. Leave pin 1 unconnected if Vcon is not used.

Maximun Ratings		
Parameter	Symbol	Rating
Supply Voltage	Vcc	3.3V/5V
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
Contact Pads	Gold over Nickel
RoHS	RoHS Directive 2011/65/EU Annex II Recasting 2002/95/EC

Ordering Guide

BT0914A X X X XXX X XXX.XX Z



Example: BT0914AS5106DA100ZE

Random Vibration Condition

The crystal oscillator is subjected to the random vibration tests specified in Table 1 and Figure 1
 Table 1. Flight vibration requirements

Direction of Vibration	Time of Vibration
X, Y, Z	1 minute per axis

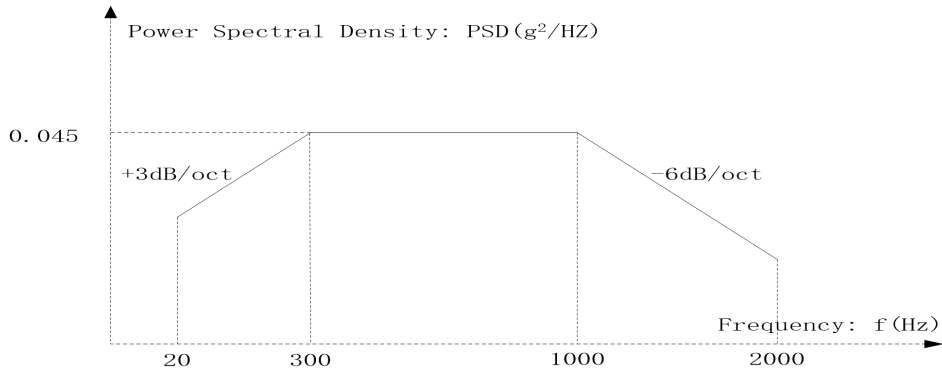


Figure 1. Random vibration test curve

Temperature Curve of Reflow Welding

