

Dynamic Engineers Inc.

2550 Gray Falls Dr., Suite#128, Houston, TX, 77077 USA TEL: 1-281-870-8822 EMAIL: Sales@DynamicEng.com

OCXO3321AW02-100MHz-657221

Low power high stability low phase-noise miniature OCXO

Features and Benefits

Frequency range: 100MHz Supply voltage: 5.0V Steady current: 45mA Max Output waveform: Sinewave

Frequency stability vs. operating temperature: ±10ppb

Aging: ±0.2ppm per year

Operating temperature: -40°C to +85°C

Size: 20.9x15.3x11.6mm

Typical Applications

Portable Wireless Communications Mobile Test equipment Synthesizers Battery Powered Application

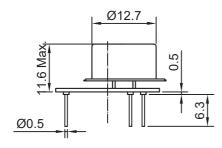
Description

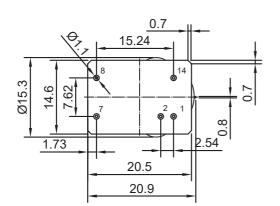
OCXO3321AW02-100MHz-657221 offers high frequency stability, low long term aging and low phase noise, all in a compact package to suit the different communication needs.

Mechanical Drawing & Pin Connections

Drawing No:

MD220024-2





Pin	Signal
1	Control voltage
2	Reference voltage
7	GND
8	Output
14	Supply voltage

Unit in mm 1mm = 0.0394 inches

We reserves the right to reduce the external dimensions without changing of connecting dimensions.



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Specifications

Oscillator	Sym	Condition	Value				N	
Specification			Min.	Тур.	Max.	Unit	Note	
Operational Frequency	f ₀			100		MHz		
RF Output	,	•						
Signal Waveform			Sinewave					
Level			+5.0	+7.0		dBm		
Load			45	50	55	ohm		
Harmonics level					-25	dBc		
Power Supply		,						
Reference Voltage	Vref		4.0	4.2	4.3	V		
Output resistance of Vref				91		ohm		
Supply Voltage	Vcc		4.75	5.0	5.25	V		
Warm-up current		V _{CC} =5.0V	140		220	mA		
Continuous current		at +25°C, V _{CC} =5.0V		35	45	mA		
		to df/f=1e-7 at						
Frequency warm-up time		+25°C ref at 1h		90	120	sec		
Frequency Adjustment Range		120 0 101 dt 111			<u> </u>			
Troquency Aujustinent Range	(f _L -f)/f	Vc=0 V			-1	ppm		
Electronic Frequency Control (EFC)	(f-f)/f	Vc=Vc0		0	-1	ppm		
	(f _H -f)/f	Vc=Vref	+1	U		ppm		
EFC voltage	Vc	VC-VI61	0		4.2	V		
Li C voltage	VC		0	11kohm//5p	4.2	v		
Input impedance				F .				
Input BW		-3dB level		160		Hz		
Preset control voltage	V _{C0}	disconnected Vc pin	1.9	2.1	2.3	V		
Frequency Stability								
Versus Operating Temperature Range		ref +25°C			±10	ppb		
Initial Tolerance @+25°C	$(f-f_0)/f_0$	$V_C = V_{C0}$	-0.2		+0.2	ppm		
Versus supply voltage		ref V _{CC} typ.			±2	ppb		
Versus load		5% change			±2	ppb		
Allan deviation		1s, 100KHz BW		20		e-12		
		10Hz		-95				
CCD Dhana maine (atatia walvan ara far		100Hz		-125				
SSB Phase noise (static values are for		1KHz		-153		dBc/Hz		
reference only and are subject to change.)		10KHz		-165		dBC/HZ		
change.)		100KHz		-168				
Aging Per Day								
		After 30 days of			±2.0	ppb		
Aging 1st Year		operation			±0.2	ppm		
Maximum ratings, environmental, mech	anical condi	tions						
Operating temperature range	-40°C to +							
Storage temperature range	-60°C to +							
Power voltage	-0.5 to 6.0							
Control voltage	-1.0 to 6.0 V							
Air flow velocity	0.5 m/s maximum							
Humidity	Non-condensing 95%							
Mechanical shock	Per MIL-STD-202, 30G, 11ms							
Vibration	Per MIL-STD-202, 5G to 2000Hz							
Soldering conditions	Hand solder only – not reflow compatible 260°C 10s (on pins)							
Washing conditions	Washing	with water or alcohol bas	ed detern	ent allowed only	with find	al enquah d	rving stage	
vvasning conditions	ı vvasıllığ l	with water of alcohol bas	cu uciely	CITE AHOWED OFF	vviul IIII	ar enough u	rynng stage	