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

OCXO3306AW-10MHz-A-V
Low Power High Stability Miniature OCXO

Features and Benefits

Frequency range: 10MHz
Supply voltage: 5.0V
Steady power consumption: 180mW
Output waveform: HCMOS
Frequency stability vs. operating temperature: ±10ppb
Aging: ±0.05ppm per year
Phase noise@100KHz: -165dBc/Hz
Operating temperature: 0°C to +70°C
Size: 21.6x15.3x7.5mm

Typical Applications

Portable Wireless Communications Mobile
Test equipment
Synthesizers
Battery Powered Application

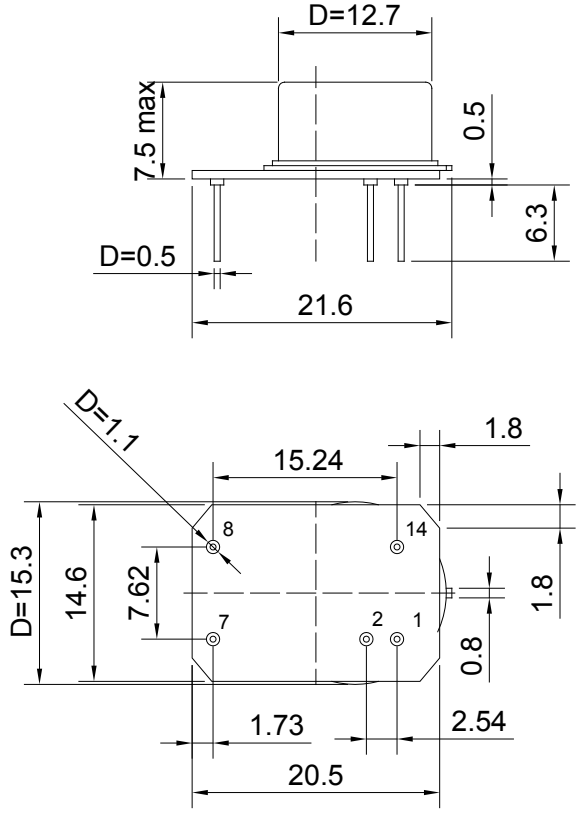
Description

OCXO3306AW-10MHz-A-V 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: MD140075-3

Physical dimensions



Pin	Signal
1	Electrical tuning
2	Reference voltage
7	GND
8	RF Out
14	+V Supply

Unit in mm
1mm = 0.039 inches

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Specifications

Oscillator Specification	Sym	Condition	Value Min.	Value Typ.	Value Max.	Unit	Note
Operational Frequency	F_{nom}			10		MHz	
RF Output							
Signal Waveform				HCMOS			
Level	H level		3.7			V	
	L level				0.4	V	
Load				10Kohm// 15pF			
Duty Cycle			45		55	%	
Rise/Fall time					10	nS	
Power Supply							
Reference Voltage VREF Output			4.1	4.2	4.3	V	
Supply Voltage	V_S		4.75	5.0	5.25	V	
Warm-up Time	T_{up}	At +25°C to ∆f/f=1e-7	30	60		s	ref to freq after 15 min of operation
		At +25°C to ∆f/f=1e-8		120		s	
Power Consumption		Steady state, +25°C		180		mW	
		Warm-up			1200	mW	
Frequency Adjustment Range							
Electronic Frequency Control (EFC)		Compliance with 10 years aging	±0.3	±1		ppm	
EFC voltage	V_c		0		4.2	V	
EFC Slope				positive			
Frequency Stability							
Versus Operating Temperature Range		0°C to +70°C		±10		ppb	ref. 25ºC, air flow 0.5 m/s max.
Initial Tolerance @+25°C		V_C@ VREF / 2		±0.1		ppm	
Versus supply voltage	V_S	Ref Vcc typ		±2		ppb	
Aging Per Day		After 30 days of operation		±0.5		ppb	
Aging 1st Year				±0.05		ppm	
Phase Noise		10Hz		-120		dBc	
		100Hz		-145		dBc	
		1kHz		-155		dBc	
		10kHz		-165		dBc	
		100kHz		-165		dBc	
Environmental,Mechanical Conditions							
Operating temperature range	0°C to +70°C						
Storage temperature range	-60°C to +85°C						
Airflow velocity	0.5 m/s maximum						
Humidity	Non-condensing 95%						
Mechanical shock	Per MIL-STD-202, 30G half sine pulse, 11ms						
Vibration	Per MIL-STD-202, 10G swept sine 0 to 2000Hz						
Soldering conditions	Hand solder only – not reflow compatible. 260ºC 10s (on pins)						
Washing conditions	Washing with water or alcohol-based detergent allowed only with final enough drying stage						