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

OCXO3307C-73.728MHz-A-V
Very Low Power High Stability Miniature OCXO

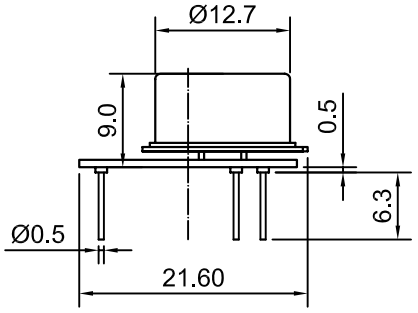
Features and Benefits
Low power consumption (to 40mA at +25℃)
High frequency stability (up to ±100ppb over -40℃ to +85℃)
Fast warm-up 60s typical

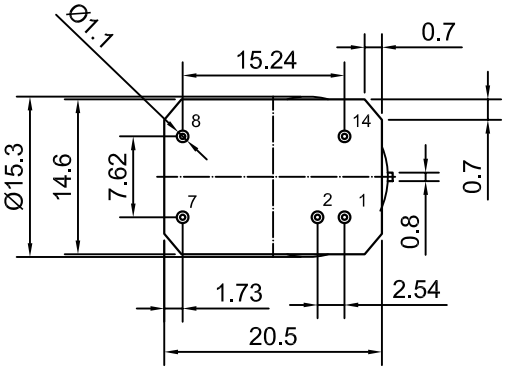
Typical Applications
UHF Synthesizers
SATCOM System
Portable Microwave Applications

Description
OCXO3307C series offers wide temperature operation from -40℃ to +85℃ with outstanding frequency stability and low phase noise performance all with very fast warm-up and less than 40mA power dissipation at 25℃.

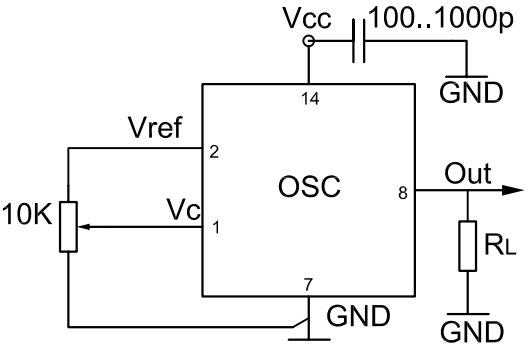
Mechanical Drawing & Pin Connections

Drawing No: MD140076-4





Schematic connections



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

Unit in mm
1mm = 0.0394 inches

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Specifications

Oscillator Specification	Sym	Condition	Value Min.	Value Typ.	Value Max.	Unit	Note
Nominal Frequency	F_0			73.728000		MHz	
RF Output							
Wave Form				Sinewave			
Level	L_S		+3	+5		dBm	
Harmonics Level	L_H				-25	dBc	
Load	R_L		45	50	55	Ohm	
Power Supply							
Input Voltage	V_{CC}		3.15	3.30	3.45	V	
Warm-up Current	I_{ST}	V_{CC} = 3.3V	140		220	mA	
Continuous Current	I_{CC}	At +25°C, V_{CC} = 3.3V		40	50	mA	
Frequency Warm-up Time	T_F	To ±f/f=1e^{-7}, at +25°C		60	90	sec	
Frequency Control							
Input Impedance	R_{in}			11 5		kOhm pF	
Input BW		-3dB level		160		Hz	
Voltage Range	V_C		0		2.8	V	
Preset Control Voltage	V_{C0}	Disconnect V_C pin	1.3	1.4	1.5	V	
Frequency Tuning Range	(fL-f)/f	V_C = 0V			-0.8	ppm	
	(f-f)/f	V_C = V_{C0}		0		ppm	
	(f_H-f)/f	V_C = V_{ref}	0.8			ppm	
Reference Voltage	V_{ref}		2.7	2.8	2.9	V	
Frequency Stability							
Versus Temperature	df/dT	ref +25°C			±100	ppb	
Initial Tolerance		At +25°C V_C = V_{C0}	-0.2		+0.2	ppm	
Versus Supply Voltage	df/dV	Ref V_{CC} typ.			±5	ppb	
Versus Load	df/dZ	5% change			±5	ppb	
Aging – Per day	df/day	After 30 days of operation			±2	ppb	
Aging – First year	df/year				±0.2	ppm	
SSB Phase Noise (Static. Values are for reference only and are subject to change)	L_{PH}	10 Hz	-108		-94	dBc/Hz	
		100 Hz	-128		-124		
		1 KHz	-148		-144		
		10 KHz	-168		-164		
		100 KHz			-165		

Environmental Conditions	
Power Voltage	-0.5 to +4.0V
Control Voltage	-1.0 to +4.0V
Operating temperature range	-40°C to +85°C
Storage temperature range	-60°C to +85°C
Humidity	Non-condensing 95%
Mechanical Shock	Per MIL-STD-202, 30G. 11ms
Vibration	Per MIL-STD-202, 10G to 10-2000Hz
Soldering Condition	Hand solder only – not reflow compatible 260°C 10s (on pins)
Washing Conditions	Washing with water or alcohol based detergent allowed only with final enough drying stage