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

OCXO3309-40MHz-A-V
OCXO ø 15.9 x 15.1mm

Features and Benefits

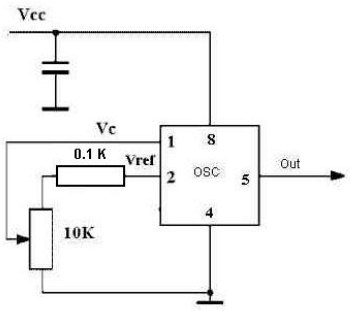
Stability : +/-50 ppb over -40℃ to +85℃
Phase noise :
100Hz offset ; better than -140dBc/Hz
1KHz offset : better than -155dBc/Hz
10KHz offset : better than -163dBc/Hz
5V supply (220mA max turn-on; 50 mA max idle at 25℃)
90 seconds warm-up max

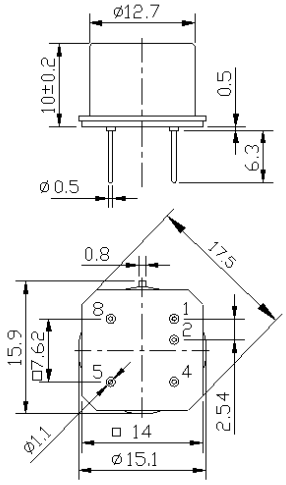
Typical Applications

40MHz OCXO; 5V supply voltage; +/-50ppb over -40℃ to +85℃; CMOS RF output

Mechanical Drawing & Pin Connections

Drawing No: MD140038-1





Pin	Signal
1	Electrical tuning
2	Reference voltage
4	GND
5	RF Out
8	+V Supply

Unit in mm
1mm = 0.0394 inches

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Specifications

Oscillator Specification		Sym	Condition	Value			Unit	Note
				Min.	Typ.	Max.		
Nominal Frequency		F_{nom}			40.000000		MHz	
CMOS	Wave form				CMOS			
	Hi-voltage	V_H		3.8			V	
	Low-voltage	V_L				0.4	V	
	Load	R_L		10			KOhm	
		C_L				10	pF	
	Duty cycle			45	50	55	%	
Power Supply								
Voltage		V_{CC}		4.75	5.0	5.25	V	
Warm-up current			V_{CC} = 5.0V			220	mA	
Continuous current			At +25℃, V_{CC} = 5.0V			50	mA	
Warm-up time		T_{up}	to △f/f = 1e-7 at +25℃,ref. to 15 min			90	s	
Frequency Control*								
Input impedance		R_{in}			11		kOhm	
Voltage range		V_C		0		4.2	V	
Preset control voltage		V_{C0}	Disconnected V_C pin	2.0	2.1	2.2	V	
Slope					positive			
Frequency range		$(f_L-f)/f$	V_C = 0V			-1	ppm	
		$(f-f)/f$	$V_C = V_{C0}$		0		ppm	
		$(f_H-f)/f$	$V_C = V_{ref}$	+1			ppm	
Reference voltage		V_{ref}		4.1	4.2	4.3	V	
Frequency Stability								
Initial tolerance		$(f-f_0)/f_0$	At +25C, Vc=V_{C0}	-0.1		+0.1	ppm	
VS. temperature			Ref +25°C	-50		+50	ppb	
VS. supply voltage			±5%	-2		+2	ppb	
Aging	per day		After 30days of operation	-1.5		+1.5	ppb	
	first year			-0.15		+0.15	ppm	
SSB Phase noise			10 Hz		-110		dBc/Hz	
			100 Hz		-140			
			1 KHz		-155			
			10 KHz		-163			
			100 KHz		-163			
Allan variance			0.1 sec. 100KHz BW		20		e-12	

Maximum rating, environmental, mechanical Conditions.	
Power voltage	-0.5 to 6.0 V
Control voltage	-1.0 to 9.0 V
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, 5G to 2000Hz
Soldering Conditions	Hand solder only - not reflow compatible 260°C 10s(on pins)