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

OCXO9700S_series
9.7x7.5x4.1mm OCXO

Features and Benefits

10-40MHz Frequency Range
3.3V or 5V Supply voltage
Rectangular or Clipped Sinewave Output waveform
±20ppb Stability Vs -40C --+85C
9.7x7.5x4.1mm Size
Standard Frequencies are 10,12.8,19.2,20,25 and 30.72MHz
-140dBc/Hz @1KHz phase noise value

Typical Applications

Small cell, Portable communication device
Test & Measurement
Synthesizer, Digital Switch, Reference Timing Circuit
Packet Timing Protocol (e.g.1588)

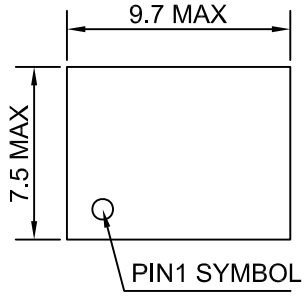
Description

OCXO9700S_series is a 4-pad miniature SMD package, ±20ppb under -40 to +85C, meet Stratum 3 and Low power consumption OCXO.

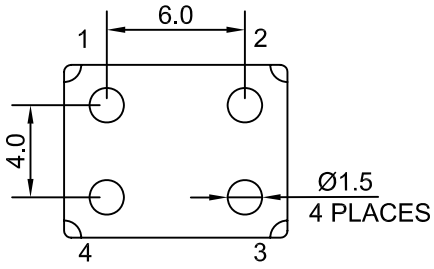
Mechanical Drawing & Pin Connections

Drawing No: MD180010-1

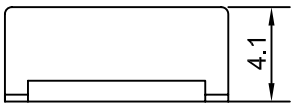
Top View



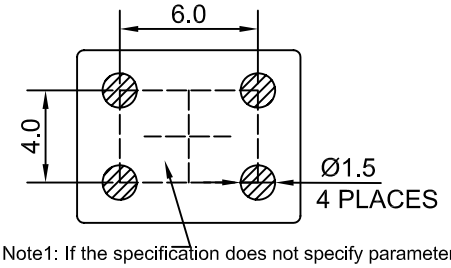
Bottom View



Side View



Recommedned Solder PAD Layout



Pin Connections

Pin	Function
1	Control Voltage/N.C.
2	Ground
3	RF Output
4	Supply Voltage

Unit in mm
1mm = 0.0394 inches

Note1: If the specification does not specify parameters for PIN1, then PIN1 must remain unconnected.

Note2: Copper in this area should be kept to a minimum to reduce heat heat loss from OCXO.

Note3: Bottom side reflow is forbidden unless specified in specification.

Note4: Aqueous cleaning is forbidden.

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Specifications

Oscillator Specification	Sym	Condition	Value			Unit	Note
			Min.	Typ.	Max.		
Operational Frequency	F_{nom}		10		40	MHz	
Standard Frequencies			10,12.8,19.2,20,25 and 30.72			MHz	
RF Output							
Signal Waveform			Rectangular				
Level							
"1" Level			2.4			V	
"0" Level					0.4	V	
Duty Cycle		@+1.65V	45	50	55	%	
Signal Waveform			Clipped sinewave				
Level			0.8			Vp-p	
Load (Rectangular/ Clipped sinewave)			15pF/10kohm//10pF				
Spurious					-60	dBc	
Power Supply							
Supply Voltage	V_S		3.135	3.3	3.465	V	5.0V is avaliable
Warm-up Time	T_{up}	@ +25°C, referenced to 1 hour		5		min	Under ±100ppb
Power Consumption		Steady state @+25°C		0.3	0.4	W	power
		Warm-up			350	mA	current
Frequency Adjustment Range							
Electronic Frequency Control (EFC)		Refer to Frequency at nominal center voltage	-5		+5	ppm	
EFC voltage	V_c		0	1.65	3.3	V	
Input Impedance			100			kohm	
EFC Slope			positive				
Frequency Stability							
Versus Operating Temperature Range		-40°C to +85°C		±20		ppb	See stability table
Versus supply voltage	V_S	±5%change	-5		+5	ppb	
Aging Per Day			-3.0		+3.0	ppb	After 30days
Aging 1st Year			-0.6		+0.6	ppm	
Aging 10th Year			-3.0		+3.0	ppm	
SSB Phase noise(@20MHz)							
		10Hz		-98	-92	dBc	
		100Hz		-126	-120	dBc	
		1kHz		-145	-140	dBc	
		10kHz		-152	-150	dBc	

Stability Table

Temp	±5ppb	±10ppb	±20ppb	±30ppb	±50ppb
-20-+70C	Conditional	Available	Available	Available	Available
-40-+85C	Not Available	Conditional	Available	Available	Available