



Features and Benefits

- Compact SMD package design
- Low current consumption at 160 mA typical
- Up to 60 seconds fast warm-up time
- Less than ± 100 ppb at +25°C
- Less than ± 2 ppb per day aging
- Less than -165 dBc/Hz @ 10 KHz

Typical Applications

- Portable and mobile devices
- Microwave communication systems
- Instrument and clock reference
- Radar systems

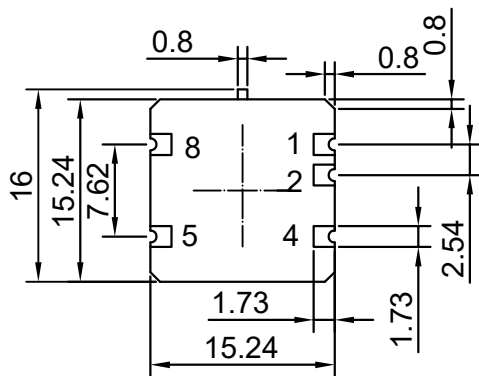
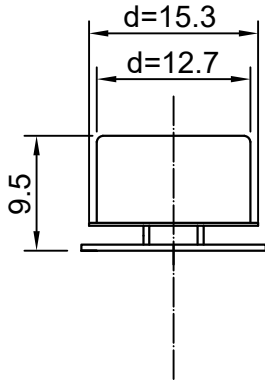
Description

OCXO1615C-73.728MHz-A-V offers low power consumption and fast warm-up time in a compact SMD package which makes this device ideal for portable and mobile devices applications.

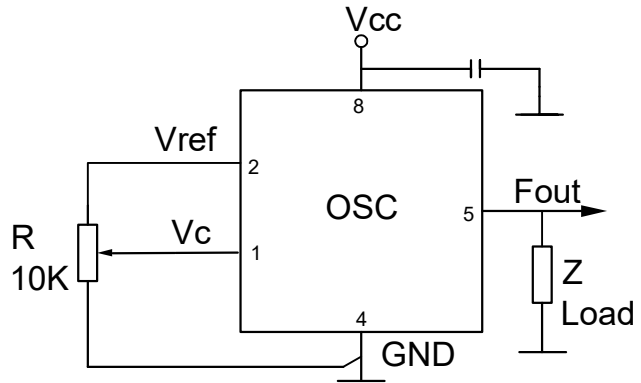
Mechanical Drawing & Pin Connections

Drawing No: MD170017-1

Physical dimensions



Schematic connections



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

Unit : mm
1mm=0.0394inch



Specifications

Oscillator Specification	Sym	Condition	Value			Unit	Note
			Min.	Typ.	Max.		
Nominal Frequency	F ₀		73.728000			MHz	
RF Output							
Output Waveform			Sine Wave				
Output Level	L _S		+7			dBm	
Load	R _L		45	50	55	Ohm	
Harmonics Level	L _H				-25	dBc	
Power Supply							
Input Voltage	V _{CC}		4.75	5.00	5.25	V	
Warm-up Current	I _{ST}	V _{CC} = 5.0V	120	160	220	mA	
Continuous Current	I _{CC}	At +25°C, V _{CC} = 5.0V		35	50	mA	
Frequency Warm-up Time	t _{up}	To Δf / f = 1e ⁻⁷ , at +25°C		60	90	sec	
Frequency Control							
Input Impedance	R _{in}			11 5		kΩ pF	
Control Voltage Range	V _C		0		4.2	V	
Preset Control Voltage	V _{C0}	Disconnected V _C pin	1.9	2.1	2.3	V	
Frequency Tuning 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	
Output Resistance of V _{ref}				91		Ohm	
Frequency Stability							
Initial Tolerance	(f-f ₀) / f ₀	At +25°C, V _C = V _{C0}	-0.15		+0.15	ppm	
Vs. Temperature	df / dT	Ref +25°C			±100	ppb	
Vs. Supply Voltage	df / dV	Ref V _{CC} typ.			±5	ppb	
Vs. Load	df / dZ	5% change			±5	ppb	
Aging per day	df / day	After 30 days of continuous operation			±2.0	ppb	
Aging per year	df / year				±0.2	ppm	
SSB Phase Noise (static)	L _{PH}	@ 10 Hz	-108	-105		dBc/Hz	
		@ 100 Hz	-128	-125			
		@ 1 KHz	-148	-145			
		@ 10 KHz	-168	-165			
		@ 100 KHz		-168			
Environmental Conditions							
Operating temperature range	-40°C to +85°C						
Storage temperature range	-60°C to +85°C						
Power Voltage	-0.5 to +6.0V						
Control Voltage	-1.0 to +9.0V						
Humidity	Non-condensing 95%						
Mechanical Shock	Per MIL-STD-202, 30G, half sine, 11ms						
Vibration	Per MIL-STD-202, 10G swept sine to 2000Hz						
Soldering Conditions	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						