



Features and Benefits

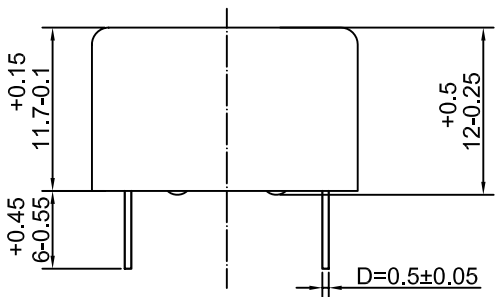
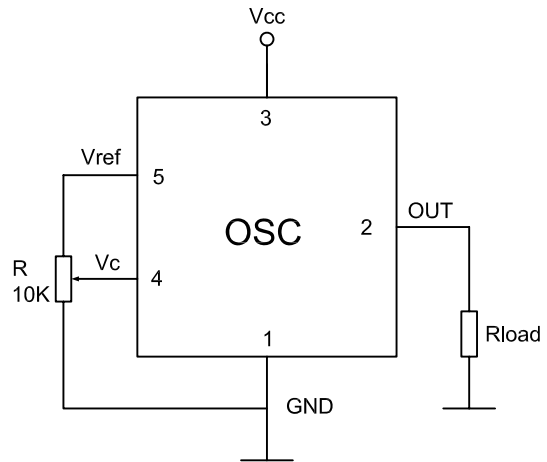
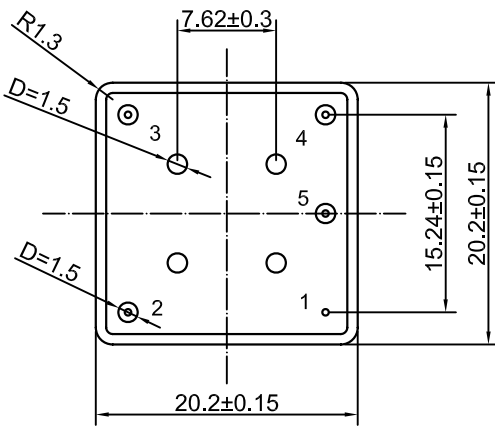
Better than ± 100 ppb from -40°C to $+85^{\circ}\text{C}$
 12.0V supply; 100mA maximum
 Less than -150dBc/Hz @ 1KHz offset

Typical Applications

Mobile Base Station
 SATCOM Equipment

Mechanical Drawing & Pin Connections

Drawing No: MD160093-2



Pin Connections

Pin	Description
1	GND
2	Output
3	Vcc
4	Control Voltage
5	Vref

Unit : mm
 1mm=0.0394inch



Specifications

Oscillator Specification	Sym	Condition	Value			Unit	Note
			Min.	Typ.	Max.		
Nominal Frequency	F_0			120		MHz	
RF Output							
Output Wave Form			Sine wave				
Load	R_L		45	50	55	ohm	
Level	L		+7			dBm	
Harmonics					-30	dBc	
Power Supply							
Voltage	V_{cc}		11.4	12.0	12.6	V	
Warm-up Current		$V_{cc} = 12V$	220		300	mA	
Continuous Current		@+25°C, $V_{cc} = 12V$, still air			100	mA	
Warm-up time	t_{up}	To $\Delta f/f = 1e^{-7}$ @+25°C, ref. to 30 min.			180	sec	
Frequency Control							
Input Resistance	R_{in}			11		kOhm	
Voltage Range	V_c		0		4.3	V	
Slope			Positive				
Preset Control Voltage	V_{C0}	Disconnect V_c pin	1.6	2.1	2.6	V	
Pull Range	$(f_L - f)/f$	$V_c = 0V$			-1.0	ppm	
	$(f - f)/f$	$V_c = V_{C0}$	0			ppm	
	$(f_H - f)/f$	$V_c = V_{ref}$	1.0			ppm	
Reference Voltage	V_{ref}		4.1	4.2	4.3	V	
Out. Resistance of V_{ref}				91		Ohm	
Frequency Stability							
VS. Tolerance	$(f - f_0)/f_0$	@+25°C, $V_c = V_{C0}$	-0.2		0.2	ppm	
VS. Temperature		Ref +25°C			±100	ppb	
VS change in supply voltage		Ref V_{cc} typ			±5	ppb	
Aging - per day - per year		After 30 days of operation			±3	ppb	
					±0.3	ppm	
Phase Noise							
SSB Phase noise			10Hz			-90	dBc/Hz
			100 Hz			-120	
			1 kHz			-150	
			10 kHz			-163	
			100 kHz			-165	
Environmental Conditions							
Parameter	Reference Std.						
Operating temperature range	-40°C to +85°C						
Storage temperature range	-60°C to +90°C						
Power Voltage	-0.5 to 14.4V						
Control Voltage	-1.0 to 6.0V						
Humidity	Hermetically sealed						
Mechanical Shock	Per MIL-STD-202, 30G, 11ms						
Vibration	Per MIL-STD-202, 10G to 500Hz						
Washing Conditions	Washing with water or alcohol based detergent allowed only with final enough drying stage						