



Features and Benefits

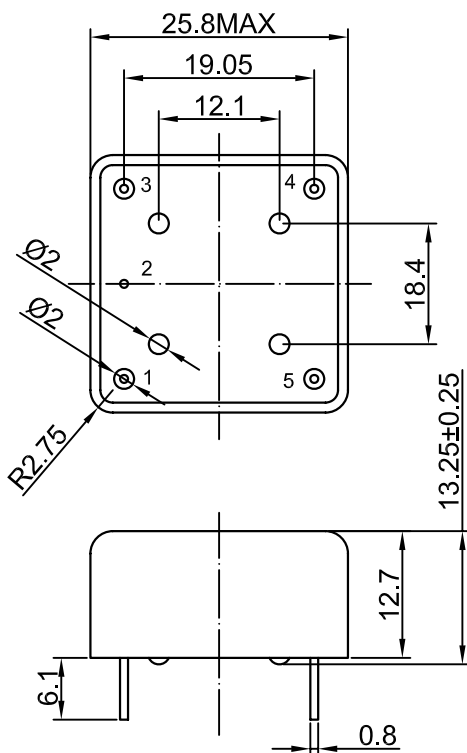
Frequency range: 100MHz
Supply voltage: 5V
Steady current:240mA
Output waveform: Sinewave
Frequency stability vs. operating temperature: ± 10 PPB
Aging: ± 200 PPB per year
Operating temperature: -40°C to +85°C
Size: 25.8x25.8x12.7

Typical Applications

Test instrument reference
Ref. for microwave communication system
signal analyzer reference for internal synthesizers
SATCOM systems

Mechanical Drawing & Pin Connections

Drawing No: MD140078-1



Pin connections:

Pin No.	Pin Function
1	Output
2	GND
3	Control Voltage
4	Reference Voltage
5	Supply Voltage

Unit in mm
1mm = 0.0394 inches



Specifications

Oscillator Specification	Sym	Condition	Value			Unit	Note
			Min.	Typ.	Max.		
Frequency Range	f ₀			100		MHz	
RF Output							
Sine-wave	Level	L		+7		dBm	
	Load	R _L	±5%		50	Ohm	
	Harmonics Level				-30	dBc	
Power Supply							
Voltage	V _{cc}		4.75	5	5.25	V	
Power Consumption		Warm-up			3500	mW	
		Steady-state, +25°C			1200		
Warm-up Time:	T _{up}	@+25°C to Δf/ f=1e-7,			180	s	Ref. to freq. after 15 min. of operation
Frequency Control							
Control Voltage Range	V _c		0		4.3	V	
Tuning Range			±0.3			ppm	Positive slope
Reference Voltage Output	V _{ref}		4.0		4.3	V	
Frequency Stability							
Initial Tolerance		@+25°C, V _c =0.5*V _{ref}	±0.01	±0.1		ppm	
Versus Temperature		ref 25°C -40°C to +85°C			±10	ppb	air flow 0.5 m/s max.
Versus Supply Voltage		Ref. V _{cc} typ.		±0.2		ppb	
Aging	Per day	After 30 days of operation			±2	ppb	
	First Year				±200	ppb	
G-sensitivity		worst direction, 0 – 1kHz vibration BW	±0.2	±1		ppb/g	
Phase Noise		1Hz	---		---	dBc/Hz	
		10Hz	-100		-85		
		100Hz	-130		-115		
		1KHz	-155		-150		
		10KHz	-170		-160		
		100KHz	-175		-165		
Environmental Conditions							
Operating Temperature Range	-40°C to +85°C						
Storage Temperature Range	-60°C to +85 °C						
Humidity	Hermetically sealed						
Mechanical Shock	Per MIL-STD-202, 30G half sine pulse, 11ms						
Vibration	Per MIL-STD-202, 10G swept sine 0 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						