



Features and Benefits

- Frequency range: 10MHz
- Supply voltage: 5.0V
- Steady current: 1.5W Max
- Output waveform: HCMOS
- Frequency stability vs. operating temperature: ±20ppb
- Aging: ±50ppb per year
- Phase noise@1KHz: -145dBc/Hz
- Operating temperature: -40°C to +85°C
- Size: 25.4x25.4x12.2mm

Typical Applications

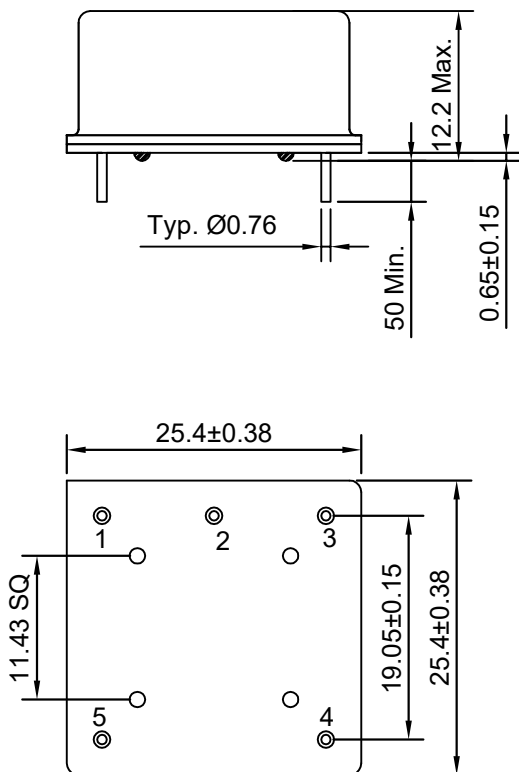
- SATCOM System
- Cellular Base Stations
- Radar Applications

Description

OCXO2525CP-10MHz-A-V is designed for applications where exceptional frequency stability and timing is required. It has both excellent temperature performance and short-term stability. These characteristics make it an excellent choice for timing applications.

Mechanical Drawing & Pin Connections

Drawing No: MD23000+-1



PIN Function

Pin	Function
1	R.F. OUTPUT
2	GND
3	Control Votage
4	Reference Voltage
5	Supply Voltage

Unit in mm
1mm = 0.039 inches



Specifications

Oscillator Specification	Sym	Condition	Value			Unit	Note
			Min.	Typ.	Max.		
Operational Frequency	F ₀			10		MHz	
RF Output							
Signal Waveform			HCMOS				
Load	R _L			15		pF	
H-Level Voltage	V _H		2.4			V	
L- Level Voltage	V _L				0.4	V	
Rise/Fall Time		10%-90%			5.0	nS	
Duty Cycle@50% output level		±5%		50		%	
Spurious					-70	dBc	
Sub Harmonics					-35	dBc	
Power Supply							
Reference Voltage			3.8	4.1	4.4	V	
Supply Voltage	V _{CC}	±5%		5.0		V	
Power Consumption		Steady state @+25°C			1.5	W	
		Warm-up			3.5	W	
Frequency Adjustment Range							
Frequency setting @ shipment and +25°C		0V control voltage			F ₀ -4E-7		
		2V control voltage	F ₀ ±1E-7				
		Reference control voltage	F ₀ +4E-7				
EFC Slope		From 0V to reference voltage	Positive and monotonic				
Frequency Stability							
Versus Operating Temperature Range		-40°C to +85°C With air flow<=2m/s			20	ppb	peak to peak
Hysteresis Versus Operating Temperature Range		With temperature gradient of 10°C/hour			2	ppb	peak to peak
Initial Tolerance at shipment @+25°C		With 2.0V control voltage	-0.1		+0.1	ppm	
Versus supply voltage		±5% change			±1.0	ppb	
Versus Load		±10% change			±1.0	ppb	
Warm-up Time		@+25 to within ±2e-8(resp. ±1e-8)			5/10	mS	With reference to frequency reached by the device after 24h on
Aging Per Day					±0.3	ppb	
Aging 1 st Year					±50	ppb	
Aging 10 st Year					±0.3	ppm	
Short Term		1s,100 samples			5	e-12	
SSB Phase noise		1Hz		-90		dBc	
		10Hz		-125		dBc	
		100Hz		-140		dBc	
		1kHz		-145		dBc	
Environmental,Mechanical Conditions (Not operating-qualification)							
Storage temperature range	-50°C to +90°C						
Shock	50g-11mS-1/2sine, IEC 68-2-27 test Ea severity 50A						
Vibration	10g,10-500Hz,IEC 68-2-6 test Fc severity 500/10						