MV-OS9502-2113D

Oven Controlled Crystal Oscillator (OCXO)
20.7 x 13.1mm - SINE Wave

MV-OS9502-2113D is a Oven Controlled Crystal Oscillator (OCXO) . This OCXO is a Low Noise, Dip package OCXO, SINE Wave output and comes in a 4pin Dip, Through Hole 20.7x13.1mm package. This device contains an internal voltage regulator resulting in excellent power supply rejection ratio.

The device is qualified to meet the JEDEC standard for Pb-Free assembly and compliant to the RoHS directive.

Electrical Performance

Parameter	Min	Typ	Max	Units
General				
Output Frequency		100		MHz
Operating Temperature		-10/+70 to -20/+70		°C
Package Size		20.7 x 13.1 x 11		mm
Frequency Stability				
Stability over Temp		±100 to ±50		ppb
Power Supply Stability (±5% Change)			±20	ppb
Aging / day			±5.0	ppb
Aging / year			±500	ppb
Aging - 10 years			±1700	ppb
Warm Up (5 Min) - Ref to Stab @ 1hr / 25°C			±50	ppb
Short Term (ADEV), τ = 1 sec			5e-11	
G-Sensitivity			1.0	ppb/g
Supply				
Supply Voltage (Vdd)	4.75	+5.0	5.25	V
Supply Current (Warm Up) @ 3.3V			800	mA
Supply Current (Warm Up)			500	mA
Power Consumption (Steady State @+25°C)			1.2	W
Tuning				
Electrical Frequency Control (EFC)		±2000		ppb
Slope		Positive		
Control Voltage to reach Pull Range	0	+2.25	+4.5	V
Linearity		10		%
Output				
Output Signal		SINE Wave		
Output Power	+8			dBm
Output Load		50		Ω
Harmonics			-30	dBc
Spurious			-80	dBc
Phase Noise & Jitter				
Phase Noise: (100 MHz)				
10 Hz offset		-103	-100	dBc/Hz
100 Hz offset		-133	-130	dBc/Hz
1kHz offset		-163	-160	dBc/Hz
10kHz offset		-176	-173	dBc/Hz
10kHz offset		-180	-177	dBc/Hz

Notes:

1 Warm Up: Stability referenced to frequency after 1 hour of operation at 25°C.

Maximum Ratings

Storage Temp	-55°C to 105°C
Shock (MIL-STD-202, Method 213, Test Condition J)	30g, 11ms, half-sine (non-operating)
Vibration (MIL-STD-202, Method 201)	0.06" Total p-p, 10 to 55 Hz (non-operating)
Humidity (MIL-STD-202, Method 103, Test Condition A)	95% RH @ +40°C,non-condensing, 240 hours

Maximum Ratings Notes:

1 Stresses in excess of the absolute maximum ratings can permanently damage the device.

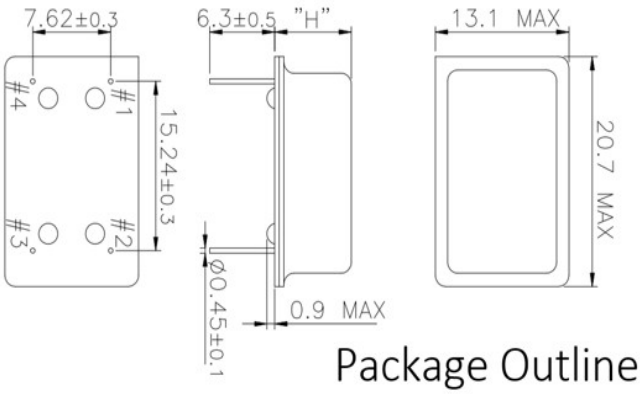
2 Exposure to absolute maximum ratings for extended periods may adversely affect device reliability.

Package Information

Pin #	Function
Pin 1	Vc = Control Voltage or NC
Pin 2	GND = Ground
Pin 3	OUT = Output
Pin 4	Vdd = Supply Voltage

Package and Assembly Notes:

1 H = 9.2 mm



Package Outline Drawing

Handling and Construction

Package Construction	4pin Dip, Through Hole
RoHS compliance	100% ROHS 6 compliant
Washable	yes
Moisture Sensitivity Level	MSL 1
ESD, Human Body Model	500V
ESD, Charge Device Model	500V

Ordering Information

MV-OS9502-2113D - A x x Z - 100M0000

① ② ③ ④

OCXO, SINE Wave

20.7 x 13.1 x 11mm, 4 Pins

Frequency

① Voltage	② Temp Range	③ Temp Stability	④ EFC
A: 5.0 V	J: -10/+70 °C	A: ±100 ppb	Z: ±2000 ppm
	H: -20/+70 °C	C: ±50 ppb	