

MV-OC913-2525B is a Oven Controlled Crystal Oscillator (OCXO) . This OCXO is a Standard OCXO, 1.0 in sq, @ 5.0V, CMOS output and comes in a Through Hole 25.4x25.4mm 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	5		40	MHz
Operating Temperature		-10/+70 to -40/+85		°C
Package Size		25.4 x 25.4 x 13.0		mm
Frequency Stability				
Stability over Temp		±10 to ±2.5		ppb
Initial Accuracy (at 25°C, 15min)			±100	ppb
Power Supply Stability (±5% Change)			±0.5	ppb
Load Stability (±5% Change)			±0.5	ppb
Aging / day			±0.5	ppb
Aging / year			±50	ppb
Aging - 10 years			±300	ppb
Warm Up (180 sec) - Ref to Stab @ 1hr / 25°C			±50	ppb
Warm Up (10 Min) - Ref to Stab @ 1hr / 25°C			±10	ppb
Short Term (ADEV), τ = 1 sec @ 10MHz			5e-11	
G-Sensitivity			0.5	ppb/g
Supply				
Supply Voltage (Vdd)		+5.0		V
Supply Current (Warm Up)			800	mA
Power Consumption (Steady State @+25°C)			1.3	W
Tuning				
Electrical Frequency Control (EFC)		±500		ppb
Slope		Positive		
Control Voltage to reach Pull Range	0	+2.0	Vref	V
Vref - Reference Voltage	3.8	4.0	4.2	V
Linearity		10		%
Control Voltage Impedance	100			KΩ
Output				
Output Signal		CMOS		
Output Level - Logic Low			+0.4	V
Output Level - Logic High	+2.6			V
Output Load		15		pF
Output Rise and Fall Time			6	nS
Spurious			-60	dBc
Duty Cycle	45	50	55	%
Phase Noise & Jitter				
Phase Noise: (10 MHz)				
1 Hz offset		-95	-90	dBc/Hz
10 Hz offset		-125	-120	dBc/Hz
100 Hz offset		-146	-143	dBc/Hz
1kHz offset		-155	-152	dBc/Hz
10kHz offset		-158	-155	dBc/Hz
100kHz offset		-158	-155	dBc/Hz

Notes:

- 1 Warm Up: Stability referenced to frequency after 1 hour of operation at 25°C.
- 2 Initial tolerance specified at time of shipment and at nominal EFC

Maximum Ratings

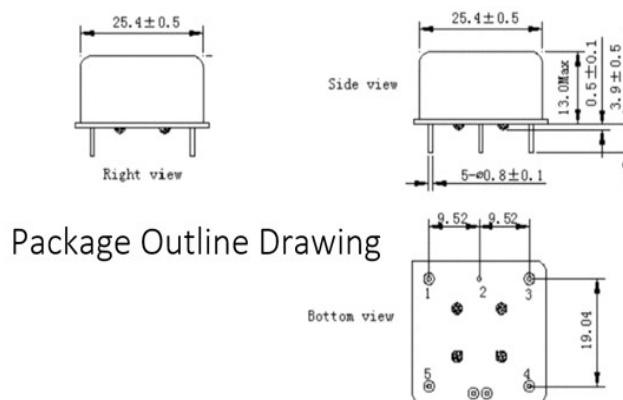
Storage Temp	-55°C to 105°C
Shock (MIL-STD-202, Method 213, Test Condition J)	30g, 11ms, half-sine (non-operating)
Vibration (MIL-STD-202, Method 201)	0.06" Total p-p, 10 to 55 Hz (non-operating)
Humidity (MIL-STD-202, Method 103, Test Condition A)	95% RH @ +40°C, non-condensing, 240 hours

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	OUT = Output
Pin 2	GND = Ground
Pin 3	Vc = Control Voltage or NC
Pin 4	Reference Voltage (Vref) or NC
Pin 5	Vdd = Supply Voltage


Handling and Construction

Package Construction	Through Hole
RoHS compliance	100% ROHS 6 compliant
ESD, Human Body Model	500V
ESD, Charge Device Model	500V

Ordering Information
MV-OC913-2525B -

OCXO, CMOS

25.4 x 25.4 x 13.0mm, 5 Pins

A x x Z

① ② ③ ④

- xxMxxxxxx

Frequency

① Voltage

A: 5.0 V

② Temp Range

J: -10/+70 °C

H: -20/+70 °C

K: -40/+85 °C

③ Temp Stability

J: ±10 ppb

L: ±5 ppb

M: ±2.5 ppb

④ EFC

Z: ±500 ppm

Part Number Configuration Notes:

- 1 Tightest temperature stability options available as at -10 to +70 °C. For tightest stability at wide temp ranges - please contact us.
- 2 Standard Frequencies: 10MHz, 12.8MHz, 13MHz, 19.2MHz, 20MHz, 25MHz, 38.88MHz. Others available but may require longer