

MV-OC921-1496G is a Oven Controlled Crystal Oscillator (OCXO) . This OCXO is a Small form factor OCXO, CMOS output and comes in a FR4 SMD with Sealed Oscillator on top 14.7x9.6mm 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	10		40	MHz
Operating Temperature		-10/+70 to -40/+85		°C
Package Size		14.7 x 9.6 x 8.13		mm
Frequency Stability				
Stability over Temp		±20 to ±5		ppb
Power Supply Stability (±5% Change)			±5	ppb
Aging / day			±1.0	ppb
Aging / year			±200	ppb
Aging - 10 years			±1000	ppb
Warm Up (5 Min) - Ref to Stab @ 1hr / 25°C			±10	ppb
Supply				
Supply Voltage (Vdd)		+3.3		V
Supply Current (Warm Up)			300	mA
Power Consumption (Steady State @+25°C)			0.6	W
Tuning				
Electrical Frequency Control (EFC)		±500		ppb
Slope		Positive		
Control Voltage to reach Pull Range	0	+1.65	3.3	V
Control Voltage Impedance	100			KΩ
Output				
Output Signal		CMOS		
Output Level - Logic Low			+0.4	V
Output Level - Logic High	+2.4			V
Output Load		15		pF
Spurious			-60	dBc
Duty Cycle	45	50	55	%
Phase Noise & Jitter				
Phase Noise: (20 MHz)				
10 Hz offset		-125	-120	dBc/Hz
100 Hz offset		-149	-140	dBc/Hz
1kHz offset		-160	-157	dBc/Hz
10kHz offset		-164	-162	dBc/Hz
10kHz offset		-164	-162	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
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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.

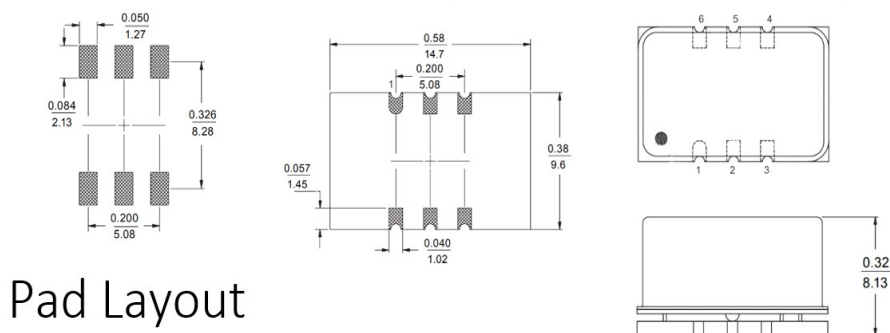
Package Information

Pin #	Function
Pin 1	Vc = Control Voltage or NC
Pin 2	NC = Make No Connection
Pin 3	GND = Ground
Pin 4	OUT = Output
Pin 5	NC = Make No Connection
Pin 6	Vdd = Supply Voltage

Package and Assembly Notes:

- 1 For best signal integrity, do not run traces beneath the part.
- 2 Ensure the next layer under the part is ground plane.
- 3 Must be on the top side of the PCB during reflow.

Package Outline Drawing



Pad Layout

Handling and Construction

Package Construction	FR4 SMD with Sealed Oscillator on top
RoHS compliance	100% ROHS 6 compliant
Washable	yes
ESD, Human Body Model	500V
ESD, Charge Device Model	500V

Ordering Information
MV-OC921-1496G -

OCXO, CMOS

14.7 x 9.6 x 8.13mm, 6 Pins

B x x Z

① ② ③ ④

- xxMxxxxxx

Frequency

① Voltage

B: 3.3 V

② Temp Range

J: -10/+70 °C

H: -20/+70 °C

K: -40/+85 °C

③ Temp Stability

F: ±20 ppb

G: ±15 ppb

J: ±10 ppb

L: ±5 ppb

④ EFC

Z: ±500 ppm

Part Number Configuration Notes:

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