

MV-OS9542-2525E is a Oven Controlled Crystal Oscillator (OCXO) . This OCXO is a Low Noise, Close in, 12V, 1in Sq, SINE Wave output and comes in a 5pin, Through Hole, Solder Seal 25.8x25.8mm 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		MHz
Operating Temperature		-10/+70 to -40/+85		°C
Package Size		25.8 x 25.8 x 14.5		mm
Frequency Stability				
Stability over Temp		±30 to ±5		ppb
Initial Accuracy (at 25°C, 15min)			±100	ppb
Power Supply Stability (±5% Change)			±1	ppb
Load Stability (±5% Change)			±1	ppb
Aging / day			±0.5	ppb
Aging / year			±50	ppb
Aging - 10 years			±300	ppb
Warm Up (5 Min) - Ref to Stab @ 1hr / 25°C			±50	ppb
Short Term (ADEV), $\tau = 1$ sec			5e-11	
G-Sensitivity			1.0	ppb/g
Supply				
Supply Voltage (Vdd)	11.4	+12	12.6	V
Supply Current (Warm Up)			500	mA
Power Consumption (Steady State @+25°C)			2.3	W
Tuning				
Electrical Frequency Control (EFC)		±500		ppb
Slope		Positive		
Control Voltage to reach Pull Range	0	+5.0	Vref	V
Vref - Reference Voltage	+9.25	+9.5	+9.75	V
Linearity		10		%
Control Voltage Impedance	100			K Ω
Output				
Output Signal		SINE Wave		
Output Power	+8			dBm
Output Load		50		Ω
Harmonics			-30	dBc
Spurious			-80	dBc
Phase Noise & Jitter				
Phase Noise: (10 MHz)				
1 Hz offset		-112	-110	dBc/Hz
10 Hz offset		-142	-140	dBc/Hz
100 Hz offset		-157	-155	dBc/Hz
1kHz offset		-167	-165	dBc/Hz
10kHz offset		-172	-170	dBc/Hz
100kHz offset		-172	-170	dBc/Hz
1MHz offset		-172	-170	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	-45°C to 95°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:

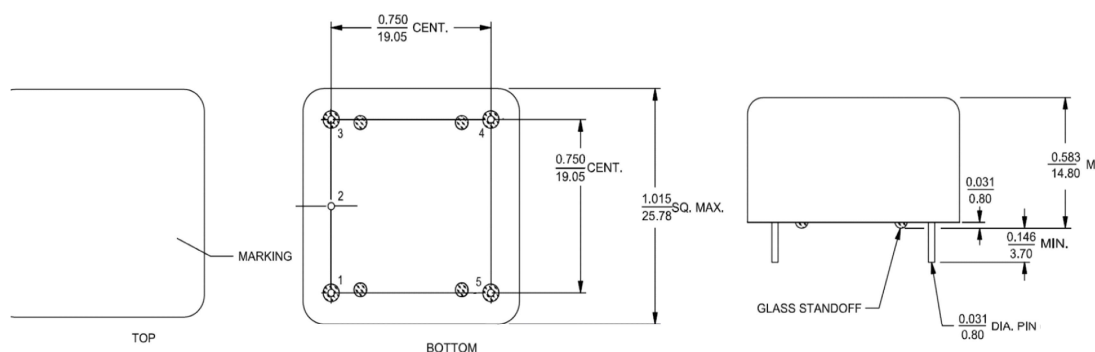
- 1 Stresses in excess of the absolute maximum ratings can permanently damage the device.
- 2 Exposure to absolute maximum ratings for extended periods may adversely affect device reliability.

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

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

Handling and Construction

Package Construction	5pin, Through Hole, Solder Seal
RoHS compliance	100% ROHS 6 compliant
Washable	Non-Washable Device
ESD, Human Body Model	500V
ESD, Charge Device Model	500V

Ordering Information

MV-OS9542-2525E - Z x x Z - 10M00000

OCXO, SINE Wave

25.8 x 25.8 x 14.5mm, 5 Pins

① ② ③ ④

Frequency

① Voltage

Z: 12 V

② Temp Range

J: -10/+70 °C

H: -20/+70 °C

K: -40/+85 °C

③ Temp Stability

D: ±30 ppb

F: ±20 ppb

G: ±15 ppb

J: ±10 ppb

L: ±5 ppb

④ EFC

Z: ±500 ppm