

MV-XC510-7050G is a Crystal Oscillator (XO) . This XO provides low jitter performance, CMOS output and comes in a Hermetic Ceramic 7.0x5.0mm 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
<b>General</b>				
Output Frequency	10		250	MHz
Operating Temperature		-10/+70 -40/+85		°C
Stability Over Temperature		±100 ±50 ±25 ±20		ppm
Start Up Time			10	ms
Package Size		7.0 x 5.0 x 1.7		mm
<b>Supply</b>				
Supply Voltage (Vdd)		3.3 2.5		V
Supply Current		24		mA
Current, Output Disabled		16		mA
<b>Output</b>				
Output Signal		CMOS		
Output Logic Level				
Output Level - Logic High	Vdd x 0.9			V
Output Level - Logic Low			Vdd x 0.1	V
Output Load		15 pF		
Output Rise and Fall Time	0.300		0.600	ns
Duty Cycle	48		52	%
<b>Enable / Disable</b>				
Output Enable / Disable				
Output Enabled	Vdd x 0.7			V
Output Disabled			Vdd x 0.3	V
<b>Phase Noise &amp; Jitter</b>				
Phase Noise: (125 MHz)				
10 Hz offset		-62		dBc/Hz
100 Hz offset		-96		dBc/Hz
1kHz offset		-111		dBc/Hz
10kHz offset		-123		dBc/Hz
100kHz offset		-127		dBc/Hz
1MHz offset		-138		dBc/Hz
10MHz offset		-155		dBc/Hz
Jitter				
RMS Jitter: (12kHz - 20MHz) - 125 MHz		0.6 ps		ps

### Notes:

- 1 Stability includes initial accuracy, operating temperature, supply voltage, shock and vibration (not under operation) and aging
- 2 Rise and Fall times measured from 20% to 80% of a full output swing
- 3 Power Supply pin should be filtered. e.g. 0.1µF or 0.01 µF Capacitor for optimal performance.
- 4 The Output is Enabled if the Enable/Disable is left open.

**Maximum Ratings**

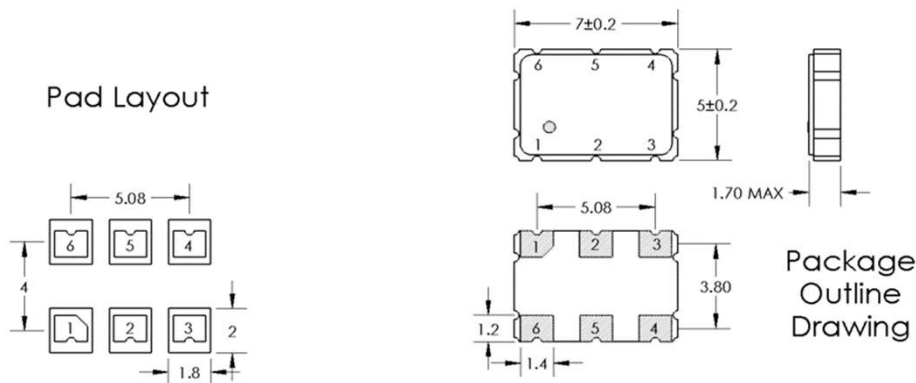
Storage Temp	-55°C to 125°C
Supply Voltage	4.2
Enable/Disable Voltage	-0.5 to Vdd +0.5
Junction Temperature	+125 °C

**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	E/D = Enable / Disable or NC
Pin 2	E/D = Enable / Disable or NC
Pin 3	GND = Ground
Pin 4	OUT = Output
Pin 5	C-OUT = Complimentary Output
Pin 6	Vdd = Supply Voltage


**Handling and Construction**

Package Construction	Hermetic Ceramic
Contact Pads	Gold over Nickle
Moisture Sensitivity Level	MSL 1
ESD, Human Body Model	500V
ESD, Charge Device Model	500V

**Ordering Information**
**MV-XC510-7050G -**

XO, CMOS

7.0 x 5.0 x 1.7mm, 6 Pins

**X X X X**

① ② ③ ④

**- xxMxxxxx**

Frequency

① Voltage

B: 3.3 V

D: 2.5 V

② Temp Range

J: -10/+70 °C

K: -40/+85 °C

③ Temp Stability

A: ±100 ppm

C: ±50 ppm

E: ±25 ppm

F: ±20 ppm

④ Enable

1: Enable on Pin 1

2: Enable on Pin 2