

MV-XS294-1487X is a Crystal Oscillator (XO) . This XO provides low jitter performance, SINE output and comes in a FR4 base with metal cover 14.3x8.7mm 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	1		200	MHz
Operating Temperature		-10/+70 to -40/+85		°C
Frequency Stability				
Stability Over Temperature		±50 to ±10		ppm
Aging / year			±3	ppm
Start Up Time			5	ms
Package Size		14.3 x 8.7 x 5.5		mm
Supply				
Supply Voltage (Vdd)		+3.3 to +5.0		V
Supply Current				
1 MHz		15	20	mA
200 MHz		45	70	mA
Output				
Output Signal		SINE		
Output Logic Level				
Output Level (@+5V)		+5		dBm
Output Level (@+3.3V)	+0			dBm
Output Load		50 Ω		
Output Rise and Fall Time				
Duty Cycle				%
Enable / Disable				
Output Enable / Disable				
Output Enabled	Vdd x 0.7			V
Output Disabled			Vdd x 0.3	V
Phase Noise & Jitter				
Phase Noise: (50 MHz)				
10 Hz offset		-96		dBc/Hz
100 Hz offset		-132		dBc/Hz
1kHz offset		-152		dBc/Hz
10kHz offset		-165		dBc/Hz
100kHz offset		-168		dBc/Hz
1MHz offset		-170		dBc/Hz
Jitter				
RMS Jitter: (12kHz - 20MHz) - 50 MHz		0.045		ps

Maximum Ratings

Storage Temp	-55°C to 125°C
Supply Voltage	0V to +5.5V
Enable/Disable Voltage	-0.5 to Vdd +0.5
Junction Temperature	+125 °C

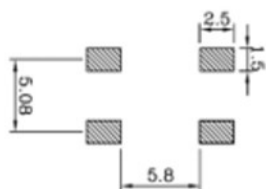
Maximum Ratings Notes:

- 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 (Tri-State)
Pin 2	GND = Ground
Pin 3	OUT = Output
Pin 4	Vdd = Supply Voltage

Pad Layout



Package Outline Drawing

Handling and Construction

Package Construction	FR4 base with metal cover
Moisture Sensitivity Level	MSL 1
ESD, Human Body Model	500V
ESD, Charge Device Model	500V

Ordering Information
MV-XS294-1487X -

XO, SINE

14.3 x 8.7 x 5.5mm, 4 Pins

x x x 1

① ② ③ ④

- xxxMxxxx

Frequency

① Voltage

A: 5.0 V

B: 3.3 V

② Temp Range

J: -10/+70 °C

H: -20/+70 °C

K: -40/+85 °C

③ Temp Stability

C: ±50 ppm

E: ±25 ppm

F: ±20 ppm

G: ±15 ppm

J: ±10 ppm

④ Enable

1: Enable on Pin 1