

MV-TS668-7050A is a Temperature Compensated Oscillator (TCXO) . This TCXO is digital temperature compensated, Clipped Sine Wave output device and comes in a FR4 base 7.0x5.0mm package.

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		52	MHz
Operating Temperature		-10/+70 to -40/+85		°C
Package Size		7.0 x 5.0 x 2.3		mm
Frequency Stability				
Stability Over Temperature		±0.1 to ±0.05		ppm
Initial Accuracy (25°C ±2°C)			±0.25	ppm
Power Supply Stability (±5% Change)			±0.05	ppm
Load Stability (±10% Change)			±0.05	ppm
Aging (1st year)			±0.5	ppm
Aging (20 years)			±2.0	ppm
G-Sensitivity			0	ppb/g
Supply				
Supply Voltage (Vdd)		+2.8 to +3.3		V
Supply Current		50	60	mA
Tuning				
Tuning (Pull) Range		±5		ppm
Control Voltage to reach Pull Range	0.1xVdd		0.9xVdd	V
Control Voltage Impedance	5			MΩ
Output				
Output Signal		Clipped Sine Wave		
Output Level - Logic High	Vdd x 0.9			V
Output Level - Logic Low			Vdd x 0.1	V
Output Load		10KΩ 10pF		
Output Rise and Fall Time			5	ns
Duty Cycle	45		55	%
Phase Noise & Jitter				
Phase Noise: (19.2 MHz)				
1 Hz offset		-75		dBc/Hz
10 Hz offset		-105		dBc/Hz
100 Hz offset		-123		dBc/Hz
1kHz offset		-145		dBc/Hz
10kHz offset		-150		dBc/Hz
100kHz offset		-150		dBc/Hz
Jitter				
RMS Jitter: (12kHz - 20MHz) - 19.2 MHz		0.30		ps

Notes:

- 1 Power Supply pin should be filtered. e.g. 0.1μF in parallel with a 10 μF Capacitor to ground for optimal performance.
- 2 Wider temperature ranges available on request

Maximum Ratings

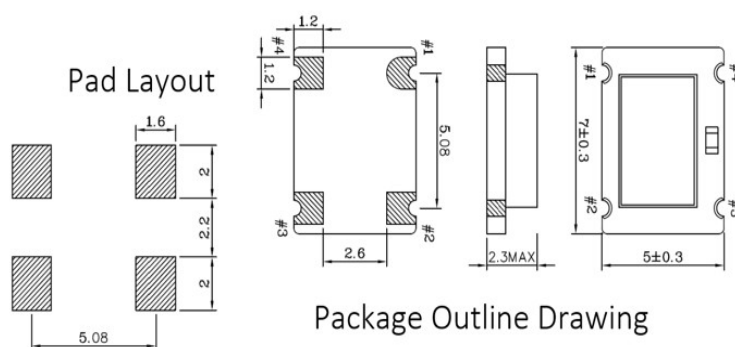
Storage Temp	-55°C to 125°C
Supply Voltage	0V to +4.0V

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	GND = Ground
Pin 3	OUT = Output
Pin 4	Vdd = Supply Voltage


Handling and Construction

Package Construction	FR4 base
Washable	yes
RoHS compliance	100% ROHS 6 compliant
Moisture Sensitivity Level	MSL 1
ESD, Human Body Model	500V
ESD, Charge Device Model	500V

Ordering Information

MV-TS668-7050A -

TCXO, Clipped Sine Wave

7.0 x 5.0 x 2.3mm, 4 Pins

X X X X

① ② ③ ④

- xxMxxxxxx

Frequency

① Voltage

B: 3.3 V

H: 3.0 V

C: 2.8 V

② Temp Range

J: -10/+70 °C

H: -20/+70 °C

K: -40/+85 °C

③ Temp Stability

U: ±0.1 ppm

④ Tuning Range

X: No Tuning

L: ±5 ppm