



EMK13 Series Oscillator
MEMS Clock Oscillators LVC MOS (CMOS) 3.3Vdc 4 Pad 5.0mm x 7.0mm Plastic Surface Mount (SMD)

Electrical Specifications

Nominal Frequency	1.000MHz to 125.000MHz <i>Some frequencies within this range may not be available.</i>
Frequency Tolerance/Stability	Inclusive of all conditions: Calibration Tolerance at 25°C, Frequency Stability over the Operating Temperature Range, Supply Voltage Change, Output Load Change, First Year Aging at 25°C, 260°C Reflow, Shock, and Vibration ±100ppm Maximum ±50ppm Maximum ±25ppm Maximum ±20ppm Maximum
Operating Temperature Range	0°C to +70°C -20°C to +70°C -40°C to +85°C
Aging at 25°C	±1ppm Maximum First Year
Supply Voltage	3.3V _{DC} ±10%
Input Current	20mA Maximum over Nominal Frequency of 1MHz to 25MHz 25mA Maximum over Nominal Frequency of 25.000001MHz to 125MHz
Output Voltage Logic	I _{OH} =-8mA

High (V_{OH})	90% of V_{DD} Minimum
Output Voltage Logic Low (V_{OL})	$I_{OL}=+8mA$ 10% of V_{DD} Maximum
Duty Cycle	Measured at 50% of Waveform $50 \pm 5(\%)$ $50 \pm 10(\%)$
Rise Time/Fall Time	Measured at 20% to 80% of Waveform 2nSec Maximum
Load Drive Capability	15pF Maximum
Output Logic Type	CMOS
Output Control Function	Tri-State (Disabled Output: High Impedance) Power Down (Disabled Output: Logic Low)
Output Control Input Voltage	$+0.7V_{DD}$ Minimum or No Connect to Enable Output $+0.3V_{DD}$ Maximum to Disable Output
Standby Current	50 μ A Maximum (Disabled Output: Logic Low) at Output Control Function of Power Down
Peak to Peak Jitter	500pSec Maximum, 200pSec Typical over Nominal Frequency of 1MHz to 12.287999MHz 250pSec Maximum, 100pSec Typical over Nominal Frequency of 12.288MHz to 125MHz

Start Up Time 50mSec Maximum

Storage Temperature -55°C to +125°C