

±5 ppb stability, ±50 ppt/°C ΔF/ΔT

Smallest package, 9 x 7 mm<sup>2</sup>

Unmatched ease-of-use



SiTime's Emerald Platform™ Stratum 3E OXOs are designed to solve the long-standing problems of quartz OXOs, which are sensitive to environmental conditions, require protective components, and are difficult to use. Emerald OXOs provide the best dynamic performance (under airflow, thermal shock, vibration, shock, and EMI), programmability for the shortest lead time, and the smallest size. Also available in standard OXO footprints, these devices can be used as drop-in replacements for quartz OXOs while improving system performance and robustness.

### Benefits

- Enhance system robustness/performance in harsh environments
- Reduce design/manufacturing overhead by eliminating placement constraints and shielding requirements
- Shrink system size with smallest OXO package, fewer supporting components
- Minimize time error in time synchronization applications

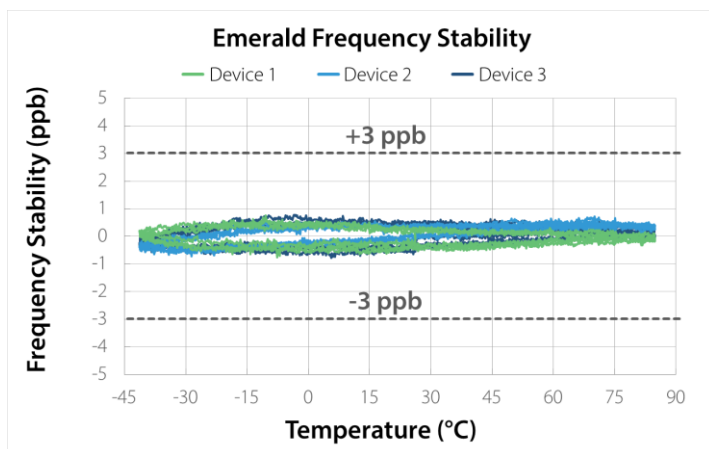
### Applications

- SONET/SDH Stratum 3E
- 4G/5G RRH, DU
- IEEE 1588 Boundary Clocks and Grandmasters
- Macro Base Stations
- Carrier Class Routers
- Optical Transport
- Digital Switching
- Test Instrumentation
- Synchronous Ethernet

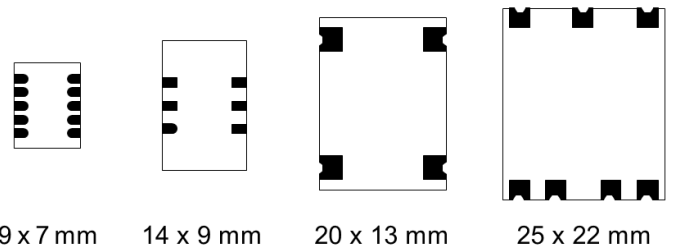
### Features

- Exceptional dynamic stability under airflow, fast temp ramp
  - ±5 to ±50 ppb over-temp stability
  - ±50 ppt/°C frequency slope (ΔF/ΔT)
  - 2e-11 ADEV at 10 seconds averaging time, under airflow
  - 0.1 ppb/g vibration, for outdoor pole mounted equipment
  - Resistant to microphonic and/or board bending effects
- On-chip regulators for power supply noise filtering
- ±0.25 ppb daily aging, ±500 ppb 20 year aging
- Excellent holdover through a wide range of conditions
- Programmable platform, any frequency from 1 to 220 MHz
- LVCMOS or clipped sinewave output
- No activity dips or micro jumps
- GR-1244 Stratum 3E compliant

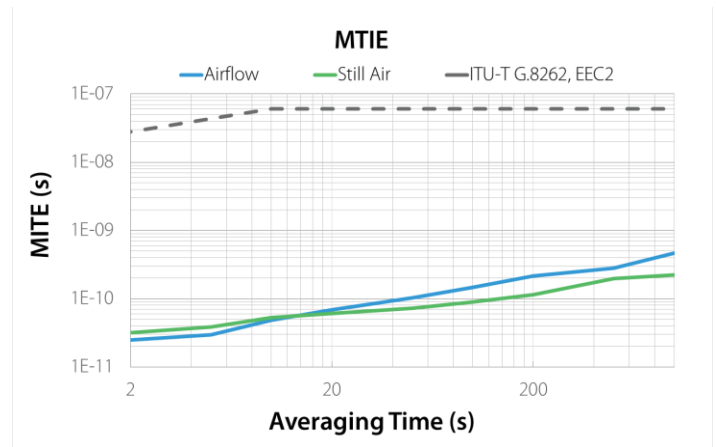
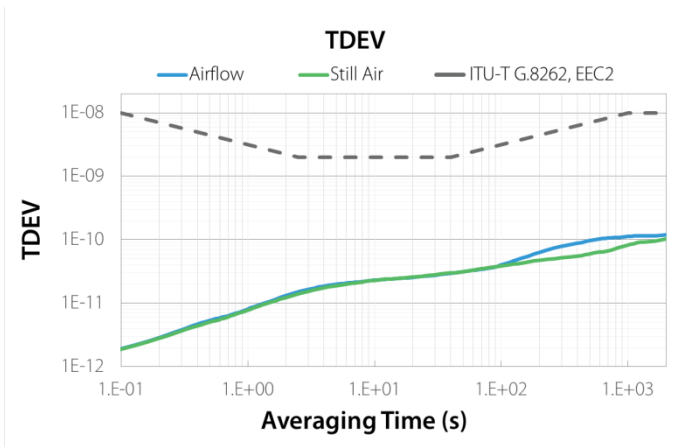
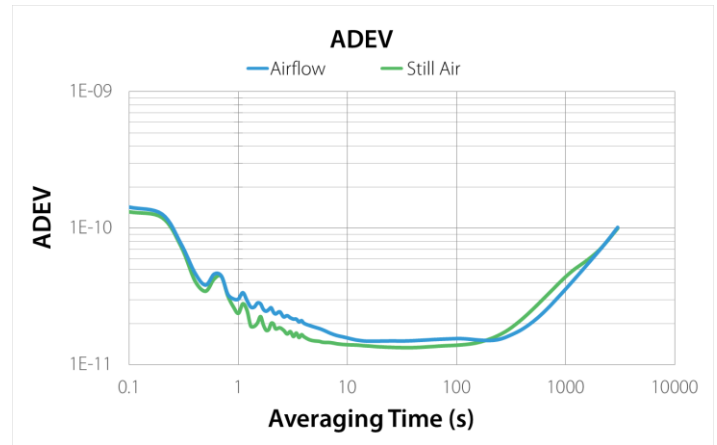
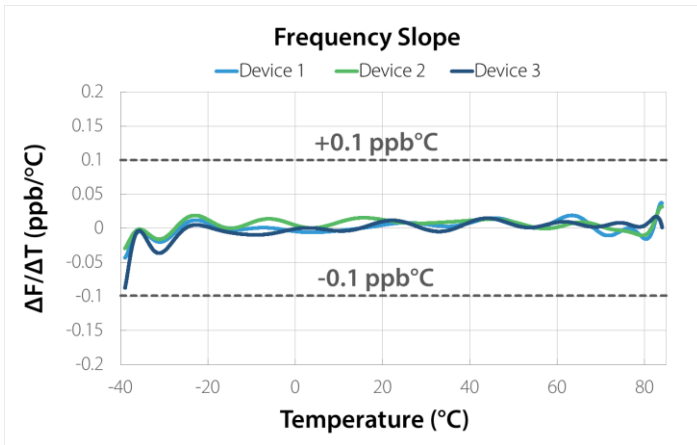
Contact [SiTime](#) for ±3 ppb or better stability options, 105°C operating temperature, and I<sup>2</sup>C frequency tuning



### Four package options (actual size)



Industry's smallest 9.0 x 7.0 x 6.5H mm OXO, plus 3 industry standard packages for drop-in replacement of quartz



Device Type	Device	Frequency (MHz)	Temp. Range (°C)	Stability (ppb)	Output Type	Package Size (mm <sup>2</sup> )
Precision OCXO	<b>SiT5711</b>	1 to 60	-20 to 70 -40 to 85 <sup>[1]</sup>	±5 to ±8 <sup>[2]</sup>	LVCMOS, Clipped Sine Wave	9.0 x 7.0 14.0 x 9.0 20.0 x 13.0 25.0 x 22.0
	<b>SiT5712</b>	60 to 220		±5 to ±8 <sup>[2]</sup>		
	<b>SiT5701</b>	1 to 60		±15 to ±50 <sup>[2]</sup>		
	<b>SiT5702</b>	60 to 220		±15 to ±50 <sup>[2]</sup>		

1. Contact [SiTime](#) for 105°C products. 2. Contact [SiTime](#) for tighter stability options. 3. Contact [SiTime](#) for I<sup>2</sup>C options.

SiTime, a MEMS and analog semiconductor company, is the leader in frequency-control solutions. We combine innovative MEMS and programmable analog technologies with our systems expertise to break through the limitations of legacy quartz products and deliver the industry's best timing solutions. Our configurable products provide the most stable timing that enables customers to differentiate their systems with higher performance, small size and better reliability.