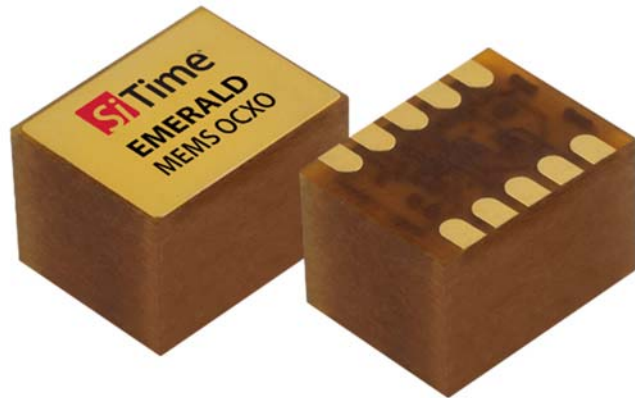




SiT5721

**1 to 60 MHz, Stratum 3E
DCOCXO**



The SiT5721 is the industry's smallest Stratum 3E digitally controlled OCXO with ± 5 ppb frequency stability and 150 ppt/ $^{\circ}$ C frequency slope ($\Delta F/\Delta T$). This device is engineered to provide the best dynamic performance. Leveraging SiTime's unique DualMEMS™ and TurboCompensation™ temperature sensing technology, this DCOCXO delivers the most stable timing in the presence of environmental stressors such as airflow, temperature perturbation, vibration, shock, and electromagnetic interference (EMI).

The environmental robustness of SiT5721 enables unmatched ease-of-use and simplifies system design:

Can be placed anywhere on the PCB

No mechanical cover or shielding needed for thermal isolation

No external regulators required

No additional sealing needed for high humidity environments

The SiT5721 can be factory-programmed to any frequency between 1 and 60 MHz. In addition to industry leading performance, the DCOCXO is offered in a 9 x 7 mm package, the smallest Stratum 3E OCXO available.

Oscillator Type	DCOCXO
Frequency	1 to 60 MHz
Frequency Stability (ppm)	±0.005 (±5 ppb), ±0.008 (±8 ppb)
Operating Temperature Range (°C)	-20 to 70, -40 to +80
Output type	LVCMOS, Clipped sinewave
Package Type (mm²)	9.0 x 7.0
Features	Frequency Slope: ±150 ppt/°C; Contact SiTime for ±3 ppb stability; Contact SiTime for -40° to 105°C;
Voltage Supply (V)	3.3
Pull Range (ppm)	±6.25
Availability	Sampling

10 times better dynamic stability under airflow and fast temp. ramp, ensures best system performance in harsh environments

- ±5 ppb over-temp. stability
- 2e-11 ADEV at 10 sec under airflow
- ±150 ppt/°C frequency slope ($\Delta F/\Delta T$)

Unmatched ease-of-use, simplifying system design

- No restrictions on PCB placement
- No mechanical shielding needed for thermal isolation

- Resistant to humidity
- No external regulator needed

Smallest size, ideal for high density and small form factor systems

- 9 x 7 mm footprint, 75% smaller
- 6.5 mm height, 40% thinner

20 times better vibration resistance, ideal for outdoor pole mounted equipment

Resistant to microphonic and/or board bending effects, ideal for large telecom PCBs

Programmable platform eliminates long lead times and customization cost associated with legacy quartz DCOCXO

- Any frequency from 1 to 60 MHz
- LVCMOS or clipped sine-wave outputs

On-chip regulators, no need for external LDOs or ferrite beads

Semiconductor-level quality and reliability, batch to batch consistency

No activity dips or micro jumps

Applications

- SONET/SDH Stratum 3E
- 4G/5G RRH, DU
- Base Stations
- Core and edge routers

- Carrier class switches
- IEEE 1588 boundary clocks
- IEEE 1588 grandmasters
- GNSS disciplined timing modules
- Instrumentation
- Power & energy
- Defense & aerospace
- Long-range communications