



# Super-TCXOs

Elite Platform™ **Super-TCXOs** are tight stability ( $\pm 0.05$  ppm to  $\pm 2.5$  ppm), 1 to 220 MHz precision oscillators with exceptional dynamic performance and rich features. These devices solve deep-rooted timing problems for telecom, networking, and precision GNSS systems. They can be used to replace legacy quartz **OCXOs** in emerging 5G and IEEE 1588 synchronization applications while reducing power and size.

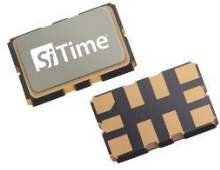
- Better dynamic stability ( $1 \text{ ppb}/^\circ\text{C } \Delta F/\Delta T$ ) than quartz, resistant to airflow and thermal shock
- $-40^\circ\text{C}$  to  $105^\circ\text{C}$  operation uniquely enables fan-less outdoor equipment
- I2C digital frequency tuning eliminates external DAC and sensitivity to board noise
- On-chip power supply noise filtering eliminates dedicated LDO
- No activity dips or micro-jumps

Device	Frequency	Stability(PPM)	Output Type	Supply Voltage(V)	Temp. Range( $^\circ\text{C}$ )	Package Size( $\text{mm}^2$ )
<a href="#">SiT5155</a>	12 standard frequencies	$\pm 0.5$	LVC MOS Clipped sinewave	2.52.833.3	-20 to +70-40 to +85-40 to +105	5.0 x 3.2 10-
<a href="#">SiT5156</a>	1 to 60 MHz	$\pm 0.5 \pm 1 \pm 2.5$	LVC MOS Clipped sinewave	2.52.833.3	-20 to +70-40 to +85-40 to +105	5.0 x 3.2 10-
<a href="#">SiT5157</a>	60 to 220 MHz	$\pm 0.5 \pm 1 \pm 2.5$	LVC MOS	2.52.833.3	-20 to +70-40 to	5.0 x 3.2 10-

Device	Frequency	Stability(PPM)	Output Type	Supply Voltage(V)	Temp. Range(°C)	Package Size(mm <sup>2</sup> )
<a href="#">SiT5356</a>	1 to 60 MHz	±0.1±0.2±0.25	LVC MOS Clipped sinewave	2.52.833.3	+85-40 to +105 -20 to +70-40 to +85-40 to +105	5.0 x 3.2 10-pin
<a href="#">SiT5357</a>	60 to 220 MHz	±0.1±0.2±0.25	LVC MOS	2.52.833.3	-20 to +70-40 to +85-40 to +105	5.0 x 3.2 10-pin
<a href="#">SiT5359</a>	60 to 220 MHz	±0.05	LVC MOS	2.52.83.03.3	0 to +70-20 to +70-40 to +85-40 to +105	5.0 x 3.2 10-pin
<a href="#">SiT5358</a>	1 to 60 MHz	±0.05	LVC MOS Clipped sinewave	2.52.83.03.3	0 to +70-20 to +70-40 to +85-40 to +105	5.0 x 3.2 10-pin

## KEY RESOURCES

[SiT6722EB Evaluation Board User Manual](#)  
[How to Design with SiTime TCXOs and OCXOs](#)  
[Elite Precision Super-TCXOs Solve Networking and Telecom Timing Issues](#)  
[Synchronization System Performance Benefits of Precision MEMS TCXOs under Environmental Stress Conditions](#)



# Automotive TCXOs

SiTime's AEC-Q100 automotive **TCXOs** are based on the Elite Platform™ and are engineered to deliver higher dynamic performance, reliability and robustness, making them ideal for autonomous driving systems. These 1 to 220 MHz precision devices with tight stability ( $\pm 0.1$  ppm to  $\pm 2.5$  ppm) over AEC-Q100 Grade-2 temperature from  $-40^{\circ}\text{C}$  to  $105^{\circ}\text{C}$ , solve deep-rooted timing problems in harsh automotive environments.

- 30x better dynamic stability ( $1 \text{ ppb}/^{\circ}\text{C} \Delta F/\Delta T$ ) than quartz, resistant to airflow and thermal shock
- AEC-Q100 Grade-2  $-40^{\circ}\text{C}$  to  $105^{\circ}\text{C}$  operation for high-temp environments
- Industry best G-sensitivity of  $0.1 \text{ ppb/g}$
- Better shock resistance at  $10,000\text{g}$ , vibration resistance at  $70\text{g}$
- Higher reliability at over 1 billion hours MTBF ( $< 1 \text{ FIT}$ )

Device	Frequency	Stability(PPM)	Output Type	Supply Voltage(V)	Temp. Range( $^{\circ}\text{C}$ )	Package Size( $\text{mm}^2$ )
<a href="#">SiT5186</a>	1 to 60 MHz	$\pm 0.5 \pm 1 \pm 2.5$	LVC MOS Clipped Sinewave	2.52.833.3	-20 to 70 (Grade 4)- 40 to 85 (Grade 3)- 40 to 105 (Grade 2)	5.0 x 3.2 10-pin
<a href="#">SiT5187</a>	60 to 220 MHz	$\pm 0.5 \pm 1 \pm 2.5$	LVC MOS	2.52.833.3	-20 to 70 (Grade 4)- 40 to 85 (Grade 3)-	5.0 x 3.2 10-pin

Device	Frequency	Stability(PPM)	Output Type	Supply Voltage(V)	Temp. Range(°C)	Package Size(mm <sup>2</sup> )
<a href="#">SiT5386</a>	1 to 60 MHz	±0.1±0.2±0.25	LVC MOS Clipped Sinewave	2.52.833.3	40 to 105 (Grade 2) -20 to 70 (Grade 4)- 40 to 85 (Grade 3)- 40 to 105 (Grade 2)	5.0 x 3.2 10-pin
<a href="#">SiT5387</a>	60 to 220 MHz	±0.1±0.2±0.25	LVC MOS	2.52.833.3	-20 to +70 (Grade 4)- 40 to +85 (Grade 3)- 40 to +105 (Grade 2)	5.0 x 3.2 10-pin

## KEY RESOURCES

[DualMEMS and TurboCompensation Temperature Sensing TechnologyAEC-Q100 Automotive OscillatorsTiming Solutions for Automotive Systems](#)



# TCXOs

SiTime's programmable temperature-compensated oscillators (TCXOs) are ultra flexible and reliable solutions for telecom, networking, and industrial applications. They are pin-compatible with **quartz TCXOs**, enabling 100% drop-in replacement without redesign or layout changes.

- Wide frequency range from 1 MHz to 625 MHz
- LVPECL and LVDS support
- Tight frequency stability
- Optional voltage control with a wide pull range (up to  $\pm 1600$  ppm)

Device	Frequency	Stability (PPM)	Output Type	Supply Voltage (V)	Temp. Range (°C)	Package Size (mm <sup>2</sup> )
<a href="#">SiT5021</a>	1 to 220 MHz	$\pm 5$	LVPECL/LVDS	2.5/3.3/3.25 to 3.63	-20 to +70/-40 to +85	3.2x2.55.0x3.27.0x5.0
<a href="#">SiT5022</a>	220 to 625 MHz	$\pm 5$	LVPECL/LVDS	2.5/3.3/3.25 to 3.63	-20 to +70/-40 to +85	3.2x2.55.0x3.27.0x5.0