

## SiTime MEMS timing benefits

### Precision Timing

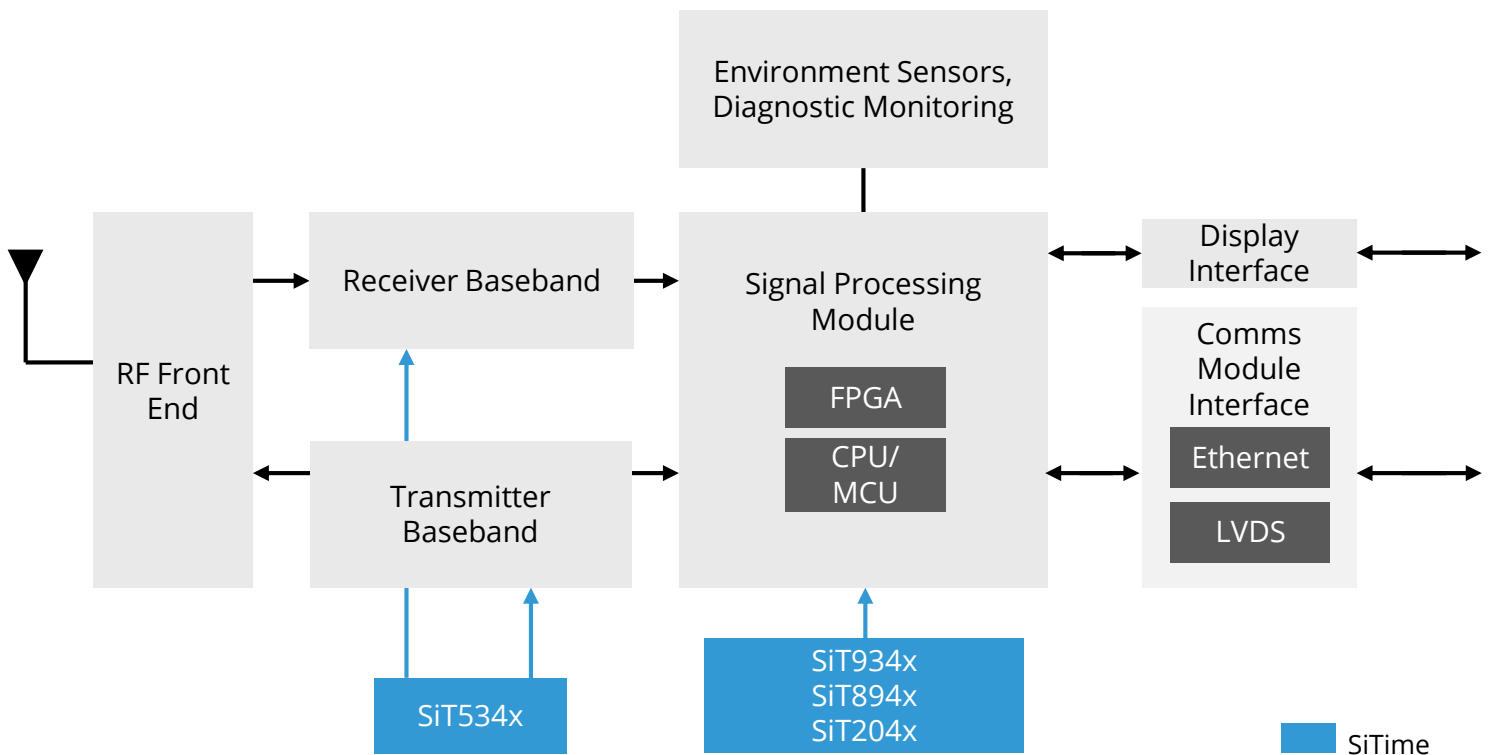
- 20x better mechanical shock survivability
- $\pm 100$  ppb up to 105°C
- Digital tuning to  $\pm 5$  ppt

### Most Robust in Harsh Conditions

- 4x better vibration resistance
- 4x better dF/dT, airflow and heat resistant
- Extended operating temperature range

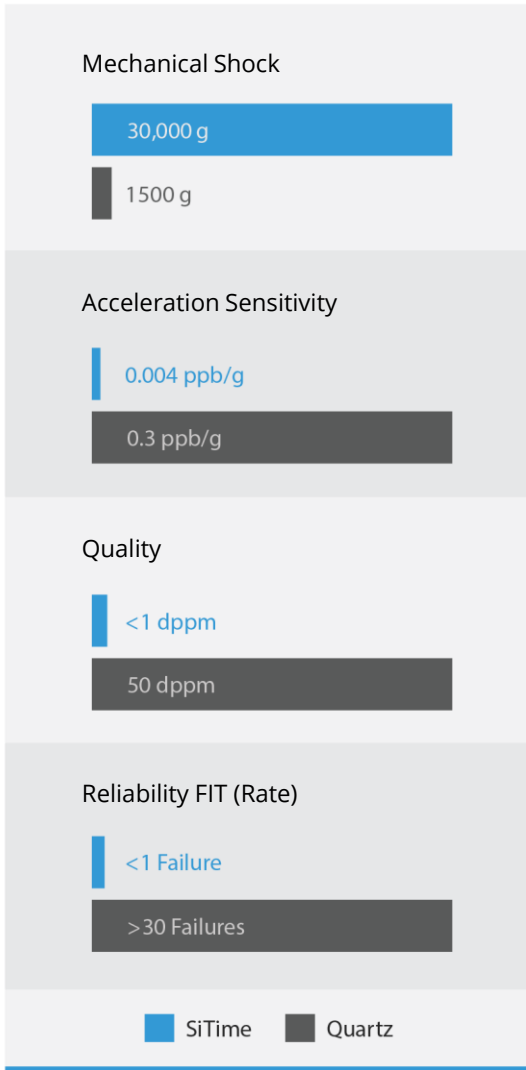
### Higher Reliability

- Conforms to MIL-PRF-55310
- No quartz reliability issues
- No cover or shielding



| Application                         | Devices  | Type             | Function                     | Key Features   |
|-------------------------------------|--|------------------|------------------------------|--|
| Land Defense Vehicle Communications | <a href="#">SiT5346</a><br><a href="#">SiT5347</a><br><a href="#">SiT5348</a><br><a href="#">SiT5349</a> | Super-TCXOs      | Reference clock for baseband | 1 to 220 MHz, 0.004 ppb/g, $\pm 100$ ppb, $\pm 1$ ppb/°C |
|                                     | <a href="#">SiT9346</a><br><a href="#">SiT9347</a>   | Differential XOs | FPGA & processor clocking    | 1 to 725 MHz, $\pm 10$ ppm, 0.1 ps RMS phase jitter      |
|                                     | <a href="#">SiT8944</a><br><a href="#">SiT8945</a><br><a href="#">SiT2044</a><br><a href="#">SiT2045</a> | Single ended XOs |                              | 1 to 137 MHz, $\pm 20$ ppm, -55°C to 125°C               |

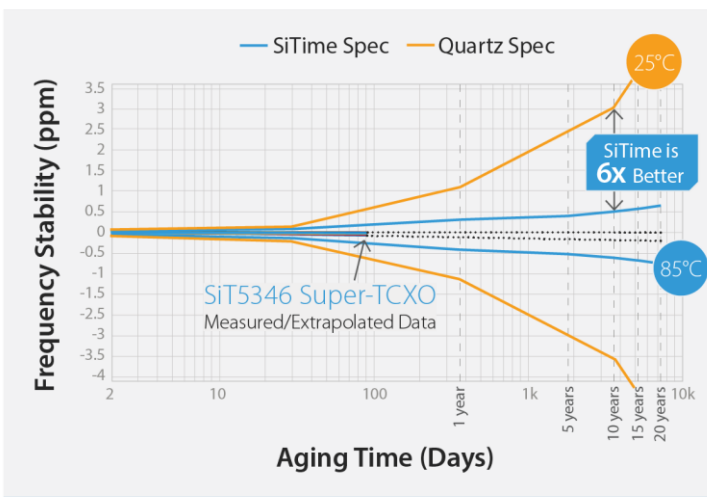
## Outperform Quartz



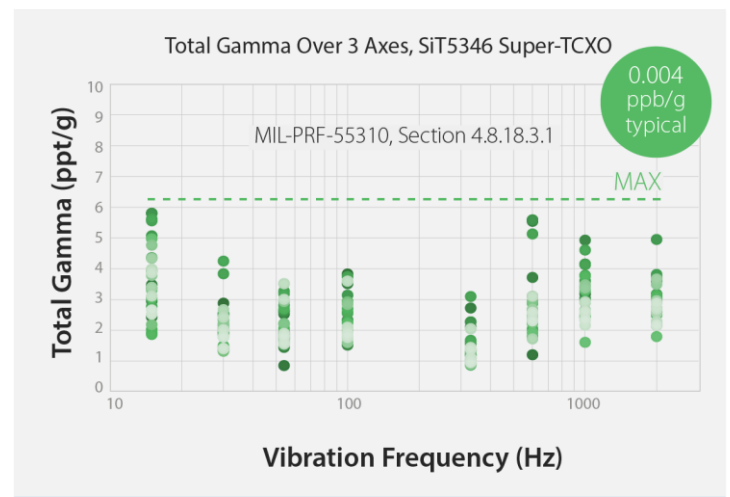
## Conforms to MIL Specifications

| MIL-PRF-55310 | Test  | Single-ended XO | Differential XO/<br>VCXO/DCXO | TCXO |
|---------------|---|-----------------|-------------------------------|------|
| 3.6.40.1      | Shock   | ●               | ●                             | ●    |
| 4.8.18.3.1    | g-Sensitivity   | ●               | ●                             | ●    |
| 3.6.34.1      | Frequency aging   | ●               | ●                             | ●    |
| 3.6.17.1      | g-sensitivity, constant acceleration                            | ●               | ●                             | ●    |
| 3.6.38.3      | Phase noise under vibration                                     | ●               | ●                             | ●    |
| 3.6.10.2      | Frequency-temperature stability with hysteresis                 | ●               | ●                             | ●    |
| 3.6.45.2      | Ambient pressure  | ●               | ●                             | ●    |
| 3.6.16.5      | Allan deviation   | n/a             | n/a                           | ●    |
| 3.6.10.4      | Frequency-temperature stability with hysteresis and trim effect | n/a             | ●                             | ●    |
| 3.6.15        | Retrace   | n/a             | n/a                           | ●    |
| 3.6.30.7      | Modulation frequency response                                   | n/a             | ●                             | ●    |
| 3.6.41.1      | Acceleration survivability                                      | ●               | ●                             | ●    |
| 3.6.7         | Frequency warm up   | n/a             | n/a                           | ●    |

## Best-In-Class-Aging



## Lower Acceleration (g) Sensitivity



[Learn more](#) about SiTime Aerospace-Defense Timing Solutions



[salesupport@sitime.com](mailto:salesupport@sitime.com)



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