MEMS Timing Solutions for Mobile and IoT

- Extensive portfolio
- Enables longer battery life
- Ultra-small footprint
- Better performance and higher stability in harsh environments
- Programmable, instant samples, shorter lead time

A small part from SiTime runs a big part of your world
## SiT1532 Oscillators and SiT1566, SiT1572, SiT1576, SiT1580 TCXOs
- Smallest footprint | 1.5 x 0.8 mm chip scale package
- Drives multiple loads | Optimized BOM & smaller form factor
- High integration | Optimized BOM & smaller form factor

### Smartphone & Mobile Accessories

## SiT1532 Oscillators and SiT1552, SiT1580 TCXOs
- Low power | < 1 µa, NanoDrive™ output to optimize swing
- Smallest footprint | 1.5 x 0.8 mm chip scale package
- High robustness | Immune to small molecular gasses

### Smart Watch

## SiT1532, SiT1534 Oscillators and SiT1566, SiT1552 TCXOs
- Low power | < 1 µa, NanoDrive™ output to optimize swing
- Smallest footprint | 1.5 x 0.8 mm chip scale package
- 3 ppm stability | Higher accuracy enables longer sleep mode

### Fitness Tracker

## SiT1569, SiT8021 Oscillators and SiT1566, SiT1580 TCXOs
- 3 ppm stability | Higher accuracy enables longer sleep mode
- Smallest footprint | 1.5 x 0.8 mm chip scale package
- 1 Hz to 2.5 MHz frequency | Wide range of custom frequencies

### Stylus & Tablets

## SiT1532, SiT1579 Oscillators and SiT1576 TCXOs
- Smallest footprint | 1.5 x 0.8 mm chip scale package
- Drives multiple loads | Optimized BOM
- 1 Hz to 2.5 MHz frequency | Wide range of custom frequencies

### Glasses/VR

## SiT1532, SiT1579 Oscillators and SiT1576, SiT1580 TCXOs
- 1 Hz to 2.5 MHz frequency | Wide range of custom frequencies
- Package options | 1.5 x 0.8 mm CSP, QFN, SoT23
- High reliability | Low DPPM

### Remote Sensing
MEMS Timing Outperforms Quartz

Lower Power

Replace a quartz resonator with MEMS oscillator to save up to 20% system power

*All values are measured

<table>
<thead>
<tr>
<th>Resonator</th>
<th>Active Current</th>
<th>Standby Current</th>
</tr>
</thead>
<tbody>
<tr>
<td>XTAL Resonator</td>
<td>5.6 mA</td>
<td>2.6 mA</td>
</tr>
<tr>
<td>MEMS XO</td>
<td>5.2 mA</td>
<td>2.1 mA</td>
</tr>
<tr>
<td>SIT8021 + MCU</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SIT8021 + MCU</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Smallest Size, Lower BOM

Typical Resonator

- 1.6 mm Width
- 2.8 mm Height
- 1.2 mm Load Cap
- 1.0 mm XTAL Footprint
- 1.6 mm XTAL Footprint
- 4.5 mm² Total Footprint

SiTime MEMS Oscillator

- 1.0 mm Width
- 1.7 mm Height
- 1.5 mm Load Cap
- 0.8 mm XTAL Footprint
- 1.0 mm XTAL Footprint
- 1.7 mm² Total Footprint

Best 32 kHz Stability

- SIT153x Industrial Temp Stability Spec
- SIT153x MEMS XO Measured
- SIT153x 25°C Stability Spec

Drive Multiple Loads

- BlueTooth Low-Energy (BLE) SoC
- Sleep Clock
- Audio DAC or Codec

Low Power Feature

NanoDrive™ optimizes output swing and lowers power

- Rail-to-Rail (VCMOS) 400 mV
- 200 mV

Replace a quartz resonator with MEMS oscillator to save up to 20% system power

- Lower Power
- Smallest Size, Lower BOM
- Best 32 kHz Stability
- Drive Multiple Loads
- Low Power Feature
### SiTime Base

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Output Frequency</th>
<th>Frequency Stability (ppm)</th>
<th>Supply Volt. (V)</th>
<th>Supply Current (Typical)</th>
<th>Packages (mm x mm)</th>
<th>Output Logic</th>
<th>Features</th>
</tr>
</thead>
<tbody>
<tr>
<td>µPOWER 32 kHz OSCILLATORS</td>
<td>Replace quartz XTAL/XO</td>
<td>Smallest size</td>
<td>Drive two or more loads</td>
<td>Higher accuracy</td>
<td>Better reliability</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SiT1532</td>
<td>32.768 kHz</td>
<td>75, 100, 250 over temp (10, 20 room temp)</td>
<td>1.2 to 3.63</td>
<td>0.90 µA</td>
<td>1508 2012</td>
<td>NanoDrive, LVCMOS</td>
<td>Smallest XO, Field Programmable</td>
</tr>
<tr>
<td>SiT1533</td>
<td>±50</td>
<td>1.62 to 3.63</td>
<td>4.5 µA</td>
<td>1508</td>
<td>LVCMOS</td>
<td>Smallest XO, Field Programmable</td>
<td></td>
</tr>
<tr>
<td>SiT1572</td>
<td>±100</td>
<td>1.5 to 3.63</td>
<td>1.0 µA</td>
<td>2012, SOT23-5</td>
<td>LVCMOS</td>
<td>-40 to +105°C, Field Programmable</td>
<td></td>
</tr>
<tr>
<td>SiT1630</td>
<td>32.768 kHz, 16.384 kHz</td>
<td>75, 100, 150 over temp (20 room temp)</td>
<td>1.5 to 3.63</td>
<td>1.0 µA</td>
<td>2012, SOT23-5</td>
<td>LVCMOS</td>
<td>Smallest XO, Field Programmable</td>
</tr>
<tr>
<td>µPOWER 32 kHz TCXOs</td>
<td>Replace quartz XTAL/TCXO</td>
<td>Smallest size</td>
<td>Drive two or more loads</td>
<td>Higher accuracy</td>
<td>Better reliability</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SiT1552 TCXO</td>
<td>32.768 kHz</td>
<td>±10, ±13, ±22, all-inclusive</td>
<td>1.5 to 3.63</td>
<td>0.99 µA</td>
<td>1508</td>
<td>NanoDrive, LVCMOS</td>
<td>Smallest TCXO, Field Programmable</td>
</tr>
<tr>
<td>SiT1566 Super-TCXO</td>
<td>32.768 kHz</td>
<td>±3, ±5, all-inclusive</td>
<td>1.62 to 3.63</td>
<td>4.5 µA</td>
<td>1508</td>
<td>LVCMOS</td>
<td>Smallest XO, 2.5 ns RMS phase jitter, Field Programmable</td>
</tr>
<tr>
<td>SiT1568 Super-TCXO</td>
<td>32.768 kHz</td>
<td>±5 all-inclusive (after overmold/underfill)</td>
<td>1.8</td>
<td>4.5 µA</td>
<td>1508</td>
<td>LVCMOS</td>
<td>Smallest XO, 2.5 ns RMS phase jitter, Field Programmable</td>
</tr>
<tr>
<td>SiT1580 TCXO</td>
<td>32.768 kHz</td>
<td>±50, ±100</td>
<td>1.8, 2.5 to 3.3</td>
<td>60 to 280 µA (0.7 µA stby)</td>
<td>1508</td>
<td>LVCMOS</td>
<td>Smallest XO, 2.5 ns RMS phase jitter, Immune to small-molecule gasses</td>
</tr>
</tbody>
</table>

### LOW POWER OSCILLATORS

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Output Range</th>
<th>Frequency Stability (ppm)</th>
<th>Supply Volt. (V)</th>
<th>Supply Current (Typical)</th>
<th>Packages (mm x mm)</th>
<th>Output Logic</th>
<th>Features</th>
</tr>
</thead>
<tbody>
<tr>
<td>SiT1534</td>
<td>1 Hz to 32.768 kHz</td>
<td>75, 100, 250 over temp (20 room temp)</td>
<td>1.2 to 3.63</td>
<td>0.90 µA</td>
<td>1508 2012</td>
<td>NanoDrive, LVCMOS</td>
<td>Smallest XO, Field Programmable</td>
</tr>
<tr>
<td>SiT1569</td>
<td>1 Hz to 462.5 kHz</td>
<td>±50, ±100</td>
<td>1.62 to 3.63</td>
<td>3.3 µA (100 kHz)</td>
<td>1508</td>
<td>LVCMOS</td>
<td>Smallest XO, 2.5 ns RMS phase jitter, Field Programmable</td>
</tr>
<tr>
<td>SiT1579</td>
<td>1 Hz to 2.5 MHz</td>
<td>±50, ±100</td>
<td>1.62 to 3.63</td>
<td>8.0 µA (100 kHz)</td>
<td>1508</td>
<td>LVCMOS</td>
<td>Smallest XO, 2.5 ns RMS phase jitter, Field Programmable</td>
</tr>
<tr>
<td>SiT8021</td>
<td>1 MHz to 26 MHz</td>
<td>±50, ±100</td>
<td>1.8, 2.5 to 3.3</td>
<td>60 to 280 µA (0.7 µA stby)</td>
<td>1508</td>
<td>LVCMOS</td>
<td>Smallest XO, 2.5 ns RMS phase jitter, Field Programmable</td>
</tr>
</tbody>
</table>

### LOW POWER TCXOs

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Output Range</th>
<th>Frequency Stability (ppm)</th>
<th>Supply Volt. (V)</th>
<th>Supply Current (Typical)</th>
<th>Packages (mm x mm)</th>
<th>Output Logic</th>
<th>Features</th>
</tr>
</thead>
<tbody>
<tr>
<td>SiT1576 Super-TCXO</td>
<td>1 Hz to 2.5 MHz</td>
<td>±5, ±20 all inclusive</td>
<td>1.62 to 3.63</td>
<td>8.0 µA (100 kHz)</td>
<td>1508</td>
<td>LVCMOS</td>
<td>Smallest XO, 2.5 ns RMS phase jitter, Field Programmable</td>
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<tr>
<td>SiT1581 TCXO</td>
<td>1 Hz to 2.5 MHz</td>
<td>±50</td>
<td>1.62 to 3.63</td>
<td>6.0 µA (100 kHz)</td>
<td>1508</td>
<td>LVCMOS</td>
<td>Smallest XO, 2.5 ns RMS phase jitter, Field Programmable</td>
</tr>
</tbody>
</table>

### Field Programmable Oscillators – Always Available

**Easy-to-use programming kit**
- Don't waste time searching & waiting for timing devices
- Optimize system performance with custom frequencies
- Instantly reduce EMI with programmable drive strength

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All products are available in -40 to +85°C unless otherwise noted
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