

Silicon MEMS Timing Solutions



## **COMMUNICATIONS & ENTERPRISE**

4x better frequency slope ( $\Delta F/\Delta T$ )

10x higher reliability and environmental resilience Clock-System-on-a-Chip—smaller, simpler design



#### **MOBILE & IOT**

35% smaller footprint Maintains stability under 10°C/s temperature ramp 30x better quality and reliability



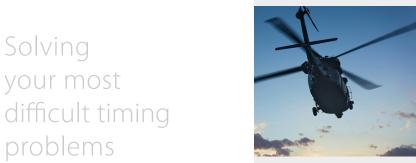
**AUTOMOTIVE** 

Best stability over -55 to +125°C 50x to 500x better quality, 50x better reliability 20x better shock and g-sensitivity performance



**INDUSTRIAL** 

Programmable, qualify once—multiple parts 30x better quality and reliability 20x better shock survivability, 4x better vibration



#### **AEROSPACE & DEFENSE**

20x better shock survivability, 4x better vibration 50x better g-sensitivity Wide operating temperature range -55 to +125°C



### **CONSUMER**

Immediate availability Virtually unlimited capacity Programmable 1 Hz to 725 MHz



# MEMS Timing Solutions Portfolio



Automotive Aerospace & Defense Mobile & IoT Industrial & Consumer Communications & Enterprise Network **uPower** TCXO/ uPower Low Spread TCXO/ **High Temp** High Temp Low litter Synch / **High Temp** 32 kHZ VCTCXO/ ocxo VCTCXO/ **Power** Spectrum **TCXO** Oscillators **Oscillators Oscillators** litter **Oscillators TCXO** Oscillators **DCTCXO DCTCXO** Oscillators 1.2 mm<sup>2</sup> Cleaner 1.2 mm<sup>2</sup> SiT9025\* SiT5348/9\* SiT9501\* SiT1576\* SiT5358/9\* SiT5711\* SiT95145 SiT1602 SiT1618 SiT8924/5\* SiT8944/5\* 1-150 MHz 1-220 MHz SiT1552 1-220 MHz 4 inputs ±5 ppm 25-644.5313MHz 1-60 MHz 7.3728-48 MHz 1-137 MHz 1-137 MHz 3.75-77.76 MHz -55 to +125°C ±0.05-0.1 ppm ±5, 10, 20 ppm 1 Hz-2.5 MHz 70 fs Jitter\*\* ±0.05-0.1 ppm ±5, ±8 ppb 10 outputs -40 to +125°C -55 to +125°C 3.1-4.9 mA 30 dB -40 to +105°C -55 to +125°C 2.5 ns Jitter\* -40 to +105°C -40 to +85°C **FlexSwing** 1 clk domain Reduction 0.004 ppb/g SiT5346/7\* SiT2024/5<sup>3</sup> SiT5356/7\* SiT95147 SiT2044/5\* SiT1566/8 SiT8008/9\* SiT8918/9\* SiT9365 1-220 MHz 1-137 MHz 4 inputs **uPower** 1-220 MHz 1-137 MHz 25-325 MHz ±3, 5 ppm 2.5 ns Jitter\*\* 1-137 MHz 1-137 MHz Low Jitter ±0.1-0.25 ppm -55 to +125°C 8 outputs -55 to +125°C ±0.1-0.25 ppm **Oscillators DCOCXO** 3.1-5.9 mA -40 to +125°C 0.21 ps Jitter\* -40 to +105°C **Oscillators** SOT23-5 4 clk domains SOT23-5 -40 to +105°C 1.2 mm<sup>2</sup> 0.004 ppb/g SiT5146/7\* SiT5155/6/79 SiT95148 SiT9346/7\* SiT9366/7\* SiT1580\* SiT2001/2\* SiT8920/1\* SiT5721\* 1-220 MHz 4 inputs TCXO/ 1-220 MHz SiT1569\* SiT9386/79 1-725 MHz +0.5-2.5 ppm 1-137 MHz 1-137 MHz ±5 ppm 1-60 MHz 1-725 MHz 11 outputs ±0.5-2.5 ppm 1-725 MHz VCTCXO/ 2.5 ns litter\* Hz-462.5 kH 0.21 ps Jitter SOT23-5 -55 to +125°C ±5, ±8 ppb 40 to +105°C -40 to +105°C -40 to +105°C 4 clk domains 0.004 ppb/g -40 to +105°C **DCTCXO** ±50 ppm -40 to +85°C Program via I<sup>2</sup>( SiT2018/9\* SiT9375 SiT5021/2\* SiT5186/7 Spread μPower 1-137 MHz Spread SiT1579\* 25-644.5313MHz **DCXO** 1-625 MHz Clock 1-220 MHz 40 to +125°C 200 fs Jitter\* 32 kHz Spectrum **DCXO** Spectrum 1 Hz-2.5 MHz ±5 ppm In-System SOT23-5 ±0.5-2.5 ppm FlexSwing Generator Programmable Oscillators ±50 ppm Oscillators Oscillators In-System -40 to +105°C Programmable SiT2020/19 SiT9120 SiT3541/2\* SiT1581\* SiT5386/7<sup>9</sup> SiT95141 1-137 MHz SiT9005\* SiT9045\* 25-212.5 MHz SiT1532/3 1 Hz-2.5 MHz 1-220 MHz 4 inputs I<sup>2</sup>C/SPI -55 to +125°C **VCXO** 1-141 MHz 0.6 ps Jitter\* 1-150 MHz SiT3907\* 10 outputs 1508 & 2012 ±0.1-0.25 ppm ±30, 50 ppm SOT23-5 1-725 MHz 30dB Reduction 30 dB Reduction 2.5 ns Jitter\* -40 to +105°C 1-220 MHz 1 clk domain 0.21 ps Jitter\* SiT9121/2\* SiT1572 SiT95143 SiT1534 SiT9003\* uPower 1-625 MHz SiT3807/8/99 SiT3521/2\* 4 inputs ±50 ppm 1 Hz-32 kHz 1-110 MHz 0.6 ps Jitter\* Oscillators 11 outputs 1-220 MHz I2C/SPI **VCXO** 2012 Option Low Power 2.5 ns Jitter\* 1-725 MHz 4 clk domains 0.21 ps Jitter\* SiT1630 SiT8208/9<sup>3</sup> SiT3372/3\* SiT1573 SiT8021\* SiT3342/3\* 16.384 kHz & 1-220 MHz SiT9002\* 1-725 MHz 1-26 MHz ±100 ppm 32.768 kHz 0.5 ps Jitter\* 1-725 MHz 1-220 MHz ±10-50 ppm 1508 60-280 μΑ -40 to +105°C ±10 to 50 ppm 0.21 ps Jitter\* 2012, SOT23 0.21 ps Jitter\*

<sup>\*</sup>Any frequency, programmable within range out to 6 decimals

<sup>\*\*</sup>Integrated RMS phase jitter; See datasheet for integration range

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NanoDrive<sup>™</sup> programmable ultra-low-power output

LVPECL, LVDS, HCSL output

LVPECL, CML, HCSL, LVDS or LVCMOS output

LVCMOS output

Pin compatible with guartz devices

Available as field programmable with Time Machine II