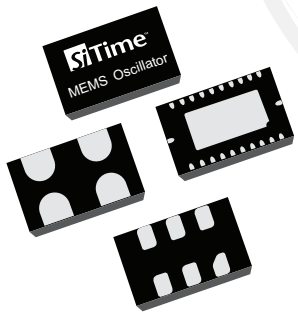
Silicon Timing Solutions
MEMS Oscillators and Clock Generators

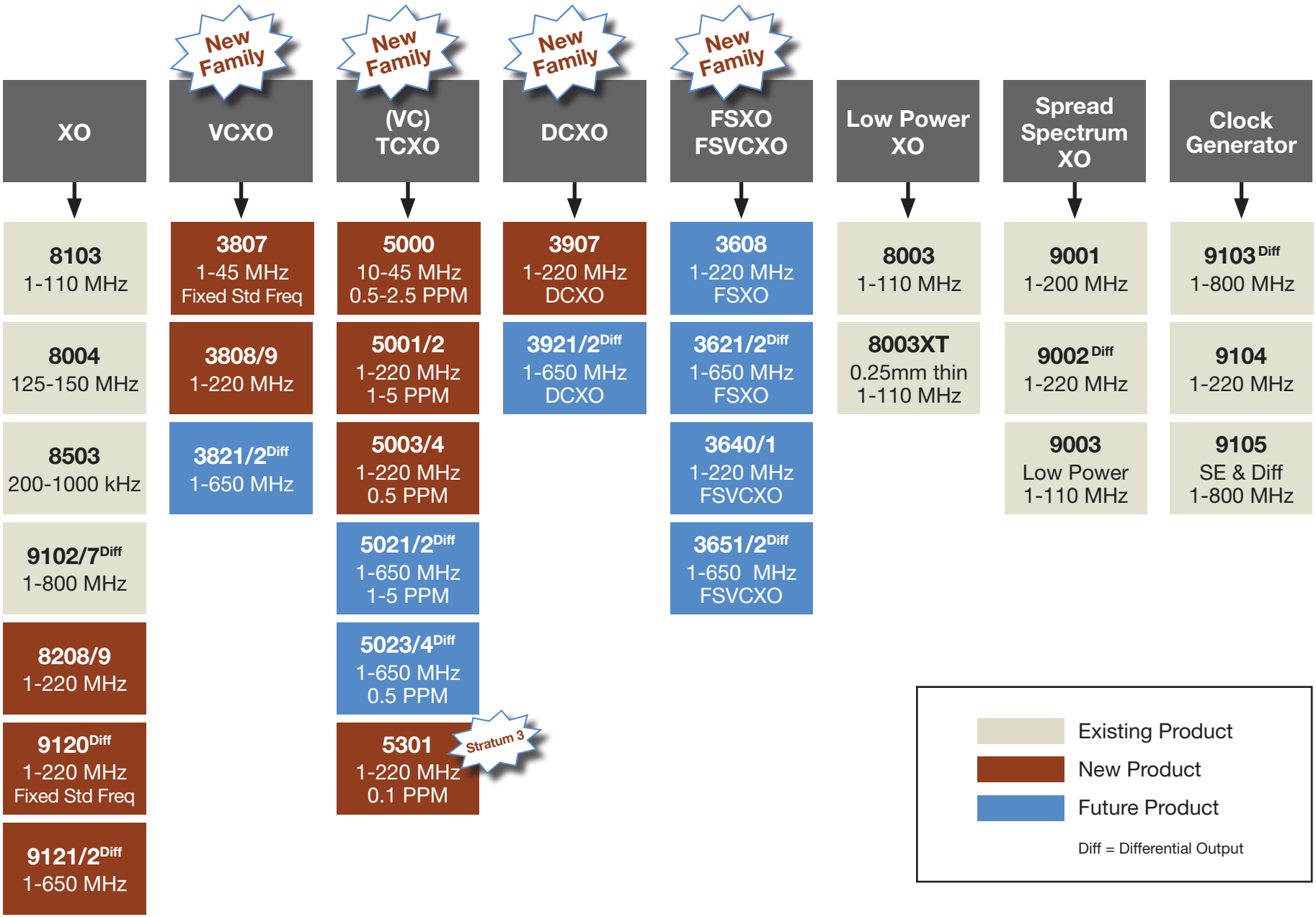
Product Selector Guide

- 100% Drop-in Replacement to XO, VCXO, TCXO
- Ultra-Stable: As low as 0.1 PPM
- TCXO with Stratum 3 Performance
- Ultra-Low Jitter: 0.5ps$_{rms}$ (12kHz-20MHz)
- Widest Frequency Range: 200 kHz to 800 MHz
- Wide Operating Temp Range: Up to -40°C to +105°C
- New Specialty Products: Digitally Controlled XO
- Shortest Lead Times, Any Frequency!
- Samples Shipped Within 48 Hours



SiTime Silicon MEMS • 100% Quartz Free • The Smart Timing Choice™

SiTime™ Timing Solutions



Single-Ended Oscillators - XO, VCXO, (VC)TCXO

Target Markets	Devices	Function	Key Features	Output Frequency (MHz)	Frequency Stability (PPM)	Pull Range (PPM)	Logic	Supply Current (mA Typ)	Temp Range*	Packages	Additional Features and Options[1]			
XO	**Oscillators**										OE	Standby	V-Control	SSC
New! Networking, Telecom, Server and Storage	SiT8208	XO	• Best Stability • Lowest Phase Jitter: 0.5ps$_{rms}$	1-80	10, 20, 25, 50	-	CMOS LVTTL	32 80µA (Stby)	C, I, E	2.5x2.0mm 3.2x2.5mm 5.0x3.2mm 7.0x5.0mm	✓	✓	-	-
	SiT8209			80-220		-					✓	✓	-	-
Computing, Consumer, Industrial	SiT8103	XO	• General Purpose • Cost Effective	1-110	20, 25, 30, 50	-	CMOS LVTTL	6.7 1.2µA (Stby)	C, I	2.5x2.0mm 3.2x2.5mm 5.0x3.2mm 7.0x5.0mm	✓	✓	-	-
	SiT8004		• High Frequency • Low-Power	125-150	20, 25, 50	-		6.2 1.2µA (Stby)			✓	✓	-	-
Portable, Handheld Consumer and Computing	SiT8003[2]	XO	• Low-Power	1-110	20, 25, 30, 50	-	CMOS LVTTL	3.7 1.2µA (Stby)	C, I	2.5x2.0mm 3.2x2.5mm 5.0x3.2mm 7.0x5.0mm	✓	✓	-	-
Low Frequency Computing, Consumer	SiT8503	XO	• High Performance kHz Oscillator	0.20-1	20, 25, 30, 50	-	CMOS LVTTL	5.9 2.4µA (Stby)	C, I	2.5x2.0mm 3.2x2.5mm 5.0x3.2mm 7.0x5.0mm	✓	✓	-	-
SSXO	**Spread-Spectrum Control Oscillators**													
Spread Spectrum for General Computing, Memory, µC, Portable and Handheld	SiT9001	SSXO	• Spread-Spectrum: Center-Spread and Down Spread Options	1-200	50, 100	-	CMOS LVTTL	20 30µA (Stby)	C, I	2.5x2.0mm 3.2x2.5mm 5.0x3.2mm 7.0x5.0mm	✓	✓	-	✓
	SiT9003			1-110		-		3.7 1.2µA (Stby)			✓	✓	-	✓
VCXO	**Voltage-Controlled Oscillators**													
New Family! Networking, Telecom, Medical, ATE, Video, xDSL, and Embedded Systems	SiT3807	VCXO	• Fixed Frequency Options for Lowest Cost • Lowest Phase Jitter: 0.5ps$_{rms}$	1.5-45 (Fixed Options)	25, 50	25-200 (1% Linearity)	CMOS LVTTL	32 80µA (Stby)	C, I, E	2.5x2.0mm 3.2x2.5mm 5.0x3.2mm 7.0x5.0mm	✓	✓	✓	-
	SiT3808	VCXO	• Widest Pull-Range • 1% Pull-Range Linearity • Lowest Phase Jitter: 0.5ps$_{rms}$	1-80	10, 25, 50	25-1600 (1% Linearity)					✓	✓	✓	-
	SiT3809			80-220							✓	✓	✓	-
(VC)TCXO	**Temperature-Compensated Oscillators**													
New Families! Telecom, Core, WAN, MAN, Sonet	SiT5301/2	(VC) TCXO	• <0.37ppm 24-Hr Holdover • <4.6ppm 20-Year Total Stability	1-60, 60-220	0.1	12.5	CMOS LVTTL	32 80µA (Stby)	C, I	2.5x2.0mm 3.2x2.5mm 5.0x3.2mm 7.0x5.0mm	-	-	✓	-
Networking, Telecom, Server and Storage, Wireless, GPS, Satellite, ATE, Broadcast Video, Basestations, Media Gateways, 3G/4G USB Cards	SiT5000	(VC) TCXO	• Fixed Frequency for Lowest Cost (SiT5000) • Widest Pull-Range • Lowest Phase Jitter: 0.5ps$_{rms}$	10-40 (Fixed Options)	0.5, 1.0, 1.5, 2.5	12.5	CMOS LVTTL				✓	✓	✓	-
	SiT5001			1-80	1.0, 1.5, 2.5, 5	12.5-50					✓	✓	✓	-
	SiT5002			80-220							✓	✓	✓	-
	SiT5003	(VC) TCXO	• Best Stability • Widest Pull-Range • Lowest Phase Jitter: 0.5ps$_{rms}$	1-80	0.5	12.5-50	CMOS LVTTL				✓	✓	✓	-
	SiT5004			80-220							✓	✓	✓	-

* Temperature Range Options: C: -20°C to 70°C I: -40°C to 85°C E: -40°C to 105°C Note 1: All Products Have SoftEdge™ Drive Strength Option Note 2: Contact Factory for 0.25mm Ultra-Low Package Height Option

Differential Oscillators - XO, VCXO, (VC)TCXO

Target Markets	Devices	Function	Key Features	Output Frequency (MHz)	Frequency Stability (PPM)	Pull Range (PPM)	Logic	Supply Current (mA Typ)	Temp Range*	Packages	Additional Features and Options[1]			
XO	**Oscillators**										OE	Standby	V-Control	SSC
Networking, Telecom, Server and Storage	SiT9120	XO	• Fixed Frequency Options for Lowest Cost (SiT9120) • Best Stability • Lowest Phase Jitter: 0.5ps$_{rms}$	1-220 (Fixed Options)	25, 50	-	LVPECL LVDS	42-55 100µA (Stby)	C, I	5.0x3.2mm 7.0x5.0mm	✓	✓	-	-
	SiT9121			1-220	10, 20, 25, 50									
	SiT9122			220-650										
Networking, Storage, 10G, Fibre Channel, GigE	SiT9102	XO	• General Purpose Differential XO • High-Frequency to 800MHz (SiT9107)	1-220	10, 15, 20, 25, 50	-	LVPECL LVDS HCSL CML	48-75	N, C, I	5.0x3.2mm 7.0x5.0mm	✓	✓	-	-
	SiT9107			220-650		-					✓	✓	-	-
SSXO	**Spread-Spectrum Control Oscillators**													
Computing, Servers with Low EMI Requirements	SiT9002	SSXO	• Spread-Spectrum: Center-Spread and Down Spread Options	1-220	25, 50	-	LVPECL LVDS HCSL CML	48-75	C, I	5.0x3.2mm 7.0x5.0mm	✓	✓	-	✓
VCXO	**Voltage-Controlled Oscillators**													
Networking, Telecom, Medical, ATE, Video, xDSL, Embedded Systems	SiT3821	VCXO	• Best Stability • 1% Pull-Range Linearity • Lowest Phase Jitter: 0.5ps$_{rms}$	1-220	10, 25, 50	25-1600 (1% Linearity)	LVPECL LVDS	43-56 100µA (Stby)	C, I	5.0x3.2mm 7.0x5.0mm	✓	✓	✓	-
	SiT3822			220-650							✓	✓	✓	-
(VC)TCXO	**Temperature-Compensated Oscillators**													
Networking, Telecom, Server and Storage, Wireless, GPS, Satellite, ATE, Broadcast Video, Basestations, Media Gateways, 3G/4G USB Cards	SiT5021	(VC) TCXO	• Widest Pull-Range • Lowest Phase Jitter: 0.5ps$_{rms}$	1-220	1-5	12.5-50	LVPECL LVDS	43-56 100µA (Stby)	C, I	5.0x3.2mm 7.0x5.0mm	✓	✓	✓	-
	SiT5022			220-650							✓	✓	✓	-
	SiT5023	(VC) TCXO	• Best Stability • Widest Pull-Range • Lowest Phase Jitter: 0.5ps$_{rms}$	1-220	0.5	12.5-50	LVPECL LVDS	43-56 100µA (Stby)	C, I	5.0x3.2mm 7.0x5.0mm	✓	✓	✓	-
	SiT5024			220-650							✓	✓	✓	-

* Temperature Range Options: N: 0°C to 70°C C: -20°C to 70°C I: -40°C to 85°C Note 1: All Products Have SoftEdge™ Drive Strength Option

Special Function - FSXO, DCXO, and FSVCXO

Target Markets	Devices	Function	Key Features	Output Frequency (MHz)	Frequency Stability (PPM)	Pull Range (PPM)	Output Logic	Number of Selectable Frequencies	Supply Current (mA Typ)	Temp Range*	Packages	Additional Features and Options[1]			
FSXO	**Pin-Selectable Frequency Oscillators**											OE	Standby	V-Control	D-Control
Samples in January! All Networking, Telecom and Storage	SiT3608	FSXO	• Pin-Selectable Frequency Control • Lowest Phase Jitter: 0.5ps$_{rms}$	1-220	10-50	-	CMOS LVTTL	9	32 80µA (Stby)	C, I	5.0x3.2mm 7.0x5.0mm	✓	✓	-	-
	SiT3621			1-220			LVPECL LVDS	3	43-56 100µA (Stby)			✓	✓	-	-
	SiT3622			220-650			LVPECL LVDS	3	43-56 100µA (Stby)			✓	✓	-	-
DCXO	**Digitally-Controlled Oscillators**														
New Family! All Networking, Telecom and Storage	SiT3907	DCXO	• Single-Pin, Serial Programmable • 0.01% Pull-Range Linearity • Lowest Phase Jitter: 0.5ps$_{rms}$	1-220	10-50	25-1600	CMOS LVTTL	Any Frequency	32 80µA (Stby)	C, I	3.2x2.5mm 5.0x3.2mm 7.0x5.0mm	✓	-	-	✓
	SiT3921†			1-220			LVPECL LVDS		43-56 100µA (Stby)			✓	-	-	✓
	SiT3922†			220-650			LVPECL LVDS		43-56 100µA (Stby)			✓	-	-	✓
FSVCXO	**Pin-Selectable Frequency + VCXO**														
Samples in Q1 2012 Network-ing, Telecom and Storage, Broadband Access, µP, DSP, FPGA	SiT3640	FSVCXO	• Pin-Selectable Frequency Control • Widest Voltage-Control Pull-Range • Lowest Phase Jitter: 0.5ps$_{rms}$	1-220	10-50	25-1600	CMOS LVTTL	3	32 80µA (Stby)	C, I	5.0x3.2mm 7.0x5.0mm	✓	-	✓	-
	SiT3641							9				✓	-	✓	-
	SiT3651			10-650			LVPECL LVDS	3	43-56 100µA (Stby)			✓	-	✓	-
	SiT3652											✓	-	✓	-

Clock Generators

Target Markets	Devices	Function	Key Features	Output Frequency (MHz)	Frequency Stability (PPM)	Output Logic	Number of PLLs	Number of Output Channels	Supply Current (mA Typ)	Temp Range*	Packages	Additional Features and Options[1]			
												OE	Standby	V-Control	SSC
Networking, Storage, Computing, Servers	SiT9103	Clock Gen	• 3 PLL, 3 Output Programmable Clock Generator	1-800	25-50	LVPECL LVDS HCSL CML	3	3 Differential	40-70 per Channel	C, I	7.0x5.0mm 20-pin	✓	✓	-	✓
	SiT9104		• 3 PLL, 3 Output Programmable Clock Generator	1-220		CMOS LVTTL		6 Single Ended	<26 per Channel 30µA (Stby)		7.0x5.0mm 22-pin	✓	✓	-	✓
	SiT9105		• Clock Generator with SE and Differential Outputs	1-220 (SE) 1-220 (Diff)		CMOS LVTTL LVPECL LVDS HCSL CML		2 Single Ended 1 Differential	31mA per SE Channel, 65mA Diff		7.0x5.0mm 22-pin	✓	✓	-	✓

* Temperature Range Options: C: -20°C to 70°C I: -40°C to 85°C † Samples Available Q2 2012 Note 1: All Products Have SoftEdge™ Drive Strength Option

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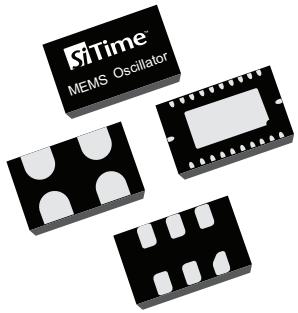

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