

FREQUENCY CONTROL & TIMING

Crystal Oscillators

Product Selection Guide

General-purpose to specialized timing | SMD and DIP package options



32.768 kHz

Low Power / High Precision

Differential & Low Jitter

Spread Spectrum

One guide. Ten oscillator groups.

Compare the supplied FCom crystal oscillator portfolio by package, frequency, supply voltage, stability, temperature range, output, current and group-specific performance fields.

49

Series entries
in one guide

10

Product groups
for comparison

1500 MHz

Highest listed
frequency

50 fs

Lowest listed
jitter

6 SERIES

32.768 kHz Timing

Standard and low-current CMOS oscillator families.

Core selection · Page 02

12 SERIES

Standard Clock

SMD and DIP clock oscillators covering multiple package sizes.

Core selection · Page 02

6 SERIES

Precision / Power / Temp.

High precision, low power and high-temperature options.

Specialized selection · Page 03

5 SERIES

Programmable

Programmable CMOS oscillators with a listed 0.8 ps jitter value.

Specialized selection · Page 03

14 SERIES

Differential / Low Jitter

Differential-output and low-jitter oscillator families.

High-speed selection · Page 04

6 SERIES

Spread Spectrum

CMOS oscillators with center-spread and down-spread options.

EMI-oriented selection · Page 05

Compare the series. Confirm the configuration.

Click a series name or View PDF to open its datasheet. Confirm the latest controlled specifications before placing an order.

01

Core Clock Oscillators

32.768 kHz timing and standard clock oscillator families.
Each supplied series is listed separately for direct comparison.

18 series across three core groups

32.768 kHz · CMOS / TTL · SMD / DIP

Photo	Series	Package	Frequency range	Supply voltage	Tightest stability	Widest temp. range	Output	Input current	Datasheet PDF
32.768 kHz Oscillator									4 SERIES
	FCO-1K	1612 4-SMD	32.768 kHz	1.8 V, 2.5 V, 3.3 V	±30 ppm	-40 to +125°C	CMOS	32 µA	View PDF ↗
	FCO-6K	2016 4-SMD	32.768 kHz	1.8 V, 2.5 V, 3.3 V	±25 ppm	-40 to +125°C	CMOS	35 µA	View PDF ↗
	FCO-2K	2520 4-SMD	32.768 kHz	1.8 V, 2.5 V, 3.3 V	±25 ppm	-40 to +125°C	CMOS	35 µA	View PDF ↗
	FCO-3K	3225 4-SMD	32.768 kHz	1.8 V, 2.5 V, 3.3 V	±25 ppm	-40 to +125°C	CMOS	35 µA	View PDF ↗
32.768 kHz Low Current Oscillator									2 SERIES
	FCO-6K-UC	2016 4-SMD	32.768 kHz	1.5 V, 1.8 V	±20 ppm	-40 to +105°C	CMOS	1.4 - 1.8 µA	View PDF ↗
	FCO-2K-UC	2520 4-SMD	32.768 kHz	1.5 V, 1.8 V	±20 ppm	-40 to +105°C	CMOS	1.4 - 1.8 µA	View PDF ↗
Standard Clock Oscillator									12 SERIES
	FCO-1C	1612 4-SMD	3 - 60 MHz	1.8 V, 2.5 V, 3.3 V	±20 ppm	-40 to +125°C	CMOS	15 mA	View PDF ↗
	FCO-6C	2016 4-SMD	1.5 - 50 MHz	1.8 V, 2.5 V, 3.3 V	±20 ppm	-40 to +125°C	CMOS	7 - 15 mA	View PDF ↗
	FCO-2C	2520 4-SMD	1.25 - 125 MHz	1.8 V, 2.5 V, 3.3 V	±20 ppm	-40 to +125°C	CMOS	1.2 - 15 mA	View PDF ↗
	FCO-200	2520 4-SMD	1.25 - 125 MHz	1.8 V, 2.5 V, 3.3 V	±20 ppm	-40 to +125°C	CMOS	1.2 - 15 mA	View PDF ↗
	FCO-3C	3225 4-SMD	1.25 - 125 MHz	1.8 V, 2.5 V, 3.3 V	±20 ppm	-40 to +125°C	CMOS	1.2 - 15 mA	View PDF ↗
	FCO-300	3225 4-SMD	1.25 - 125 MHz	1.8 V, 2.5 V, 3.3 V	±20 ppm	-40 to +125°C	CMOS	1.2 - 15 mA	View PDF ↗
	FCO-5C	5032 4-SMD	0.0137 - 160 MHz	1.8 V, 2.5 V, 3.3 V	±20 ppm	-40 to +125°C	CMOS	1 - 45 mA	View PDF ↗
	FCO-500	5032 4-SMD	0.0137 - 160 MHz	1.8 V, 2.5 V, 3.3 V	±20 ppm	-40 to +125°C	CMOS	1 - 45 mA	View PDF ↗
	FCO-7C	7050 4-SMD	0.0137 - 166 MHz	1.8 V, 2.5 V, 3.3 V	±20 ppm	-40 to +125°C	CMOS	1 - 45 mA	View PDF ↗
	FCO-700	7050 4-SMD	0.0137 - 166 MHz	1.8 V, 2.5 V, 3.3 V	±20 ppm	-40 to +125°C	CMOS	1 - 45 mA	View PDF ↗
	FCO-HL	8-DIP	0.25 - 180 MHz	3.3 V, 5.0 V	±25 ppm	-40 to +85°C	CMOS, TTL	10 - 50 mA	View PDF ↗
	FCO-FL	14-DIP	0.25 - 180 MHz	3.3 V, 5.0 V	±25 ppm	-40 to +85°C	CMOS, TTL	10 - 50 mA	View PDF ↗

Values shown are reproduced from the supplied Crystal Oscillators selection table. Blank group-specific fields are not inferred.

02

Specialized CMOS Oscillators

High precision, low power, high-temperature and programmable series.
Performance fields follow the structure of the supplied table.

11 series across four specialized groups

PRECISION · POWER · TEMPERATURE · PROGRAMMABLE

Photo	Series	Package	Frequency range	Supply voltage	Tightest stability	Widest temp. range	Output	Input current	Datasheet PDF
High Precision Oscillator									2 SERIES
	FCO-2C-HP	2520 4-SMD	2.5 - 60 MHz	1.8 V, 2.5 V, 3.3 V	±10 ppm	-40 to +95°C	CMOS	4 - 6 mA	View PDF ↗
	FCO-3C-HP	3225 4-SMD	2.5 - 60 MHz	1.8 V, 2.5 V, 3.3 V	±10 ppm	-40 to +95°C	CMOS	4 - 6 mA	View PDF ↗
Low Power Oscillator									2 SERIES
	FCO-2C-UP	2520 4-SMD	1 - 50 MHz	0.9 V, 1.2 V, 1.5 V	±25 ppm	-40 to +85°C	CMOS	0.9 - 3 mA	View PDF ↗
	FCO-3C-UP	3225 4-SMD	1 - 50 MHz	0.9 V, 1.2 V, 1.5 V	±25 ppm	-40 to +85°C	CMOS	0.9 - 3 mA	View PDF ↗
High Temperature Oscillator									2 SERIES
	FCO-2C-WT	2520 4-SMD	1.25 - 100 MHz	1.8 V, 2.5 V, 3.3 V	±30 ppm	-55 to +125°C	CMOS	5 - 15 mA	View PDF ↗
	FCO-3C-WT	3225 4-SMD	1.25 - 100 MHz	1.8 V, 2.5 V, 3.3 V	±30 ppm	-55 to +125°C	CMOS	5 - 15 mA	View PDF ↗

Programmable Oscillator

5 SERIES · 0.8 ps LISTED JITTER

Photo	Series	Package	Frequency range	Supply voltage	Tightest stability	Widest temp. range	Output	Input current	Jitter	Datasheet PDF
Programmable Oscillator										5 SERIES
	FCO-6P-PJ	2016 4-SMD	1 - 200 MHz	1.8 V, 2.5 V, 3.3 V	±15 ppm	-40 to +125°C	CMOS	25 - 40 mA	0.8 ps	View PDF ↗
	FCO-2P-PJ	2520 4-SMD	1 - 200 MHz	1.8 V, 2.5 V, 3.3 V	±15 ppm	-40 to +125°C	CMOS	25 - 40 mA	0.8 ps	View PDF ↗
	FCO-3P-PJ	3225 4-SMD	1 - 200 MHz	1.8 V, 2.5 V, 3.3 V	±15 ppm	-40 to +125°C	CMOS	25 - 40 mA	0.8 ps	View PDF ↗
	FCO-5P-PJ	5032 4-SMD	1 - 200 MHz	1.8 V, 2.5 V, 3.3 V	±15 ppm	-40 to +125°C	CMOS	25 - 40 mA	0.8 ps	View PDF ↗
	FCO-7P-PJ	7050 4-SMD	1 - 200 MHz	1.8 V, 2.5 V, 3.3 V	±15 ppm	-40 to +125°C	CMOS	25 - 40 mA	0.8 ps	View PDF ↗

±10 ppm

High Precision group
tightest listed stability

0.9 V

Low Power group
lowest listed supply

-55 to +125°C

High Temperature group
widest listed range

1–200 MHz

Programmable group
listed frequency range

03

Differential & Low Jitter

Differential-output and low-jitter families with group-specific jitter values.
Output terminology is retained as provided in the source table.

14 series across two high-speed groups

DIFFERENTIAL OUTPUT · LOW JITTER

Photo	Series	Package	Frequency range	Supply voltage	Tightest stability	Widest temp. range	Output	Input current	Jitter	Datasheet PDF
Differential Oscillator										7 SERIES
	FCO-2L	2520 6-SMD	13.5 - 220 MHz	1.8 V, 2.5 V, 3.3 V	±25 ppm	-40 to +125°C	LVPECL, LVDS, HCSL	20 - 55 mA	0.15 ps	View PDF ↗
	FCO-3L	3225 6-SMD	13.5 - 220 MHz	1.8 V, 2.5 V, 3.3 V	±25 ppm	-40 to +125°C	LVPECL, LVDS, HCSL	20 - 55 mA	0.15 ps	View PDF ↗
	FCO-5L	5032 6-SMD	13.5 - 220 MHz	1.8 V, 2.5 V, 3.3 V	±25 ppm	-40 to +125°C	LVPECL, LVDS, HCSL	20 - 55 mA	0.15 ps	View PDF ↗
	FCO-7L	7050 6-SMD	13.5 - 220 MHz	1.8 V, 2.5 V, 3.3 V	±25 ppm	-40 to +125°C	LVPECL, LVDS, HCSL	20 - 55 mA	0.15 ps	View PDF ↗
	FCO-3L-PG	3225 6-SMD	10 - 1500 MHz	2.5 V, 3.3 V	±25 ppm	-40 to +105°C	LVPECL, LVDS	35 - 50 mA	0.6 ps	View PDF ↗
	FCO-5L-PG	5032 6-SMD	10 - 1500 MHz	2.5 V, 3.3 V	±25 ppm	-40 to +85°C	LVPECL, LVDS	50 mA	0.6 ps	View PDF ↗
	FCO-7L-PG	7050 6-SMD	10 - 1500 MHz	2.5 V, 3.3 V	±25 ppm	-40 to +85°C	LVPECL, LVDS	50 mA	0.6 ps	View PDF ↗
Low Jitter Oscillator										7 SERIES
	FCO-2L-UJ	2520 6-SMD	100 - 220 MHz	1.8 V, 2.5 V, 3.3 V	±20 ppm	-40 to +125°C	LVPECL, LVDS, HCSL	25 - 65 mA	50 fs	View PDF ↗
	FCO-3L-UJ	3225 6-SMD	100 - 220 MHz	1.8 V, 2.5 V, 3.3 V	±20 ppm	-40 to +125°C	LVPECL, LVDS, HCSL	25 - 65 mA	50 fs	View PDF ↗
	FCO-5L-UJ	5032 6-SMD	100 - 220 MHz	1.8 V, 2.5 V, 3.3 V	±20 ppm	-40 to +125°C	LVPECL, LVDS, HCSL	25 - 65 mA	50 fs	View PDF ↗
	FCO-7L-UJ	7050 6-SMD	70 - 170 MHz	2.5 V, 3.3 V	±25 ppm	-40 to +85°C	LVPECL	75 mA	100 fs	View PDF ↗
	FCO-3P-UJ	3225 6-SMD	10 - 250 MHz	2.5 V, 3.3 V	±25 ppm	-40 to +105°C	CMOS	45 - 50 mA	0.8 ps	View PDF ↗
	FCO-5P-UJ	5032 6-SMD	10 - 250 MHz	2.5 V, 3.3 V	±25 ppm	-40 to +85°C	CMOS	30 mA	0.6 ps	View PDF ↗
	FCO-7P-UJ	7050 6-SMD	10 - 250 MHz	2.5 V, 3.3 V	±25 ppm	-40 to +105°C	CMOS	30 mA	0.6 ps	View PDF ↗

10–1500 MHz

Listed range for FCO-3L/5L/7L-PG

0.15 ps

Listed jitter for FCO-2L/3L/5L/7L

50 fs

Lowest listed jitter in the Low Jitter group

6-SMD

Package lead format throughout this page

04

Spread Spectrum Oscillators

CMOS oscillator families with center-spread and down-spread options.
Spread ranges are shown exactly from the supplied selection table.

6 series · 4-SMD packages

CENTER SPREAD · DOWN SPREAD

Photo	Series	Package	Frequency range	Supply voltage	Tightest stability	Widest temp. range	Output	Input current	Spread options	Datasheet PDF
	FCO-2C-LE	2520 4-SMD	16 - 40 MHz	1.8 V, 2.5 V, 3.3 V	±25 ppm	-40 to +125°C	CMOS	1.5 - 6 mA	Center 0.4 - 1% Down 0.8 - 2%	View PDF ↗
	FCO-3C-LE	3225 4-SMD	16 - 40 MHz	1.8 V, 2.5 V, 3.3 V	±25 ppm	-40 to +125°C	CMOS	1.5 - 6 mA	Center 0.4 - 1% Down 0.8 - 2%	View PDF ↗
	FCO-5C-LE	5032 4-SMD	16 - 40 MHz	1.8 V, 2.5 V, 3.3 V	±25 ppm	-40 to +125°C	CMOS	1.5 - 6 mA	Center 0.5 - 1% Down 1 - 2%	View PDF ↗
	FCO-7C-LE	7050 4-SMD	16 - 40 MHz	1.8 V, 2.5 V, 3.3 V	±25 ppm	-40 to +125°C	CMOS	1.5 - 6 mA	Center 0.5 - 1% Down 1 - 2%	View PDF ↗
	FCO-5P-LE	5032 4-SMD	3 - 200 MHz	2.5 V, 3.3 V	±25 ppm	-40 to +125°C	CMOS	20 - 30 mA	Center 0.125 - 2% Down 0.25 - 4%	View PDF ↗
	FCO-7P-LE	7050 4-SMD	3 - 200 MHz	2.5 V, 3.3 V	±25 ppm	-40 to +125°C	CMOS	20 - 30 mA	Center 0.125 - 2% Down 0.25 - 4%	View PDF ↗

1 · Start with frequency

Match the required frequency to the listed **Frequency Range**. The supplied portfolio spans 32.768 kHz timing through MHz-range clock families.

2 · Check supply voltage

Confirm the listed supply options for the candidate group, especially low-voltage Low Power series and 2.5 V / 3.3 V high-speed families.

3 · Check stability & temperature

Use **Tightest Stability** and **Widest Temp. Range** together; the best listed value differs by product group.

4 · Confirm output & spectral needs

Then compare **Output**, **Jitter** or **Spread Options** where those fields are provided for the group.

Before selecting an ordering code

1. This guide summarizes the user-supplied selection table and does not add unlisted electrical conditions or ordering-code details.

2. Confirm the latest controlled series datasheet for the exact frequency, voltage, temperature, output and performance configuration required.

Need help selecting an oscillator?

Share your target frequency, supply voltage, output logic, stability, temperature range and jitter or spread-spectrum requirement with FCom for specification review.

Technical support ↗

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