

# SG-8018 P-SPXO

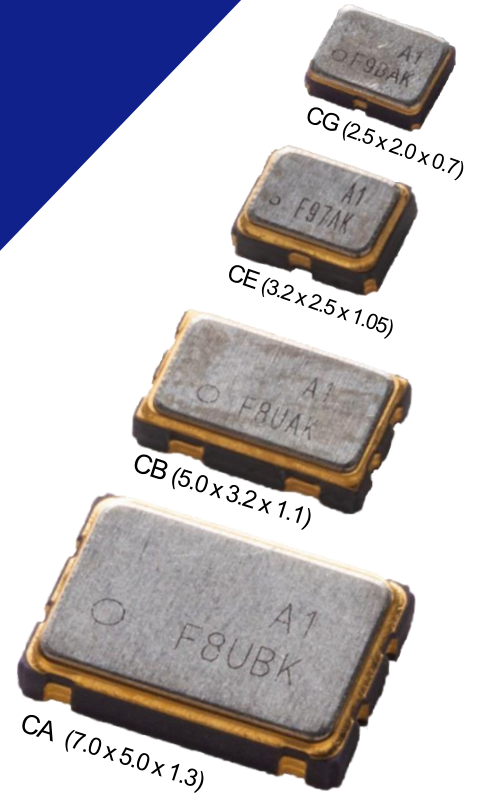
### SG-8018 P-SPXO

- **Frequency Range:** 0.67 MHz - 170 MHz
- **Temperature Range:** -40 °C to +105 °C
- **Tight Stability:** ±50 ppm including aging
- **Supply Voltage:** 1.8V, 2.5V, 3.3V (1.62V - 3.63V)
- **Low Power:** 2.7 mA typ@25 °C 8.1 mA maximum
- **Single-Ended Output:** LVCMOS
- **Programmable Rise/Fall Time**
- **Output Enable (OE) or Standby (ST)**
- **Four Package Sizes:** 7 x 5, 5 x 3.2, 3.2 x 2.5, 2.5 x 2.0

## FAST-TURN PROTOTYPES

To support rapid product development, Epson's programmable oscillators can be ordered quick delivery from distributors or you can program blanks yourself using Epson's SG-Writer II.

Epson's SG-8018 offers extended temperature range and programmable rise/fall time. For production, you can order programmable oscillators in volume or convert to a pin-compatible Epson fixed-frequency oscillator.



# Epson SG-8018 P-SPXO

## ADVANTAGES

- Fast-Turn Prototypes
- Easy conversion to Epson fixed-frequency oscillators for production
- Extended temperature range
- Low power

Epson pioneered programmable oscillators in 1977. By quick delivery of the custom frequencies, Epson programmable oscillators revolutionized the world of frequency control and enabled rapid product development.

Epson's latest cost-effective programmable oscillator, the SG-8018 offers extended Temperature range (to 105 °C), standard SPXO stability ( $\pm 50$  ppm, including aging), and programmable output rise & fall times. These 5<sup>th</sup> generation devices are also lower power than the previous generation.

### Fast-Turn Prototypes

Distributors can program SG-8018 oscillators quick delivery or you can program in your own lab with Epson's SG-Writer II and blanks. Easy-to-use software can be downloaded from Epson's website.

### How It Works

Epson's SG-8018 uses an AT fundamental crystal with a fractional-n PLL to synthesize any frequency between 0.67 and 170 MHz with 1 ppm resolution. Frequencies are set using OTP ROM (one-time programming).

### Ordering Options

Epson's SG-8018 oscillators are available in 4 package sizes from 2.5 x 2.0 to 7.0 x 5.0. The size must be selected at the time of ordering.

### Convert to Epson Fixed-Frequency Oscillators for Production

Programmable oscillators are ideal for prototyping. Programmable oscillators can be used in production or converted to pin-compatible Epson fixed-frequency oscillators.

Size (mm x mm)	Programmable (P-SPXO)	Fixed Frequency (SPXO)
2.5 x 2.0	SG-8018CG	SG-210
3.2 x 2.5	SG-8018CE	SG-310
5.0 x 3.2	SG-8018CB	SG5032C
7.0 x 5.0	SG-8018CA	SG7050C

All other parameters can be programmed either at the time of ordering or with an Epson SG-Writer II.

### Programming Options

Programming options for SG-8018 include:

- pin 1 function (output enable or standby) and
- rise/fall time (fast, normal, slow).

Pin 1 Function	Frequency Range	Rise/Fall Time (20-80%Vcc, C <sub>L</sub> = 15 pF)		
		Slow	Normal	Fast
Output Enable	0.67 – 20 MHz	10 ns Max	6.0 ns Max	3.0 ns Max
Standby	20 – 40 MHz		6.0 ns Max	3.0 ns Max
	40 – 170 MHz		3.0 ns Max	3.0 ns Max