

Epson Toyocom Develops 2016 SPXO and World's Smallest 2016 TCXO in Original NPO Structure

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Epson Toyocom Corporation, the leader in crystal devices, has announced the development of the TG-5011BA, a 2016 (2.0 × 1.6mm) TCXO^{*1}, and the SG-150C, a 2016 SPXO^{*2}. These products were developed using a common ultra-compact package platform based on Epson Toyocom's original NPO (New Platform Oscillator)^{*3} structure that combines reliable crystal unit design and manufacturing with ultra-precise mounting technology.

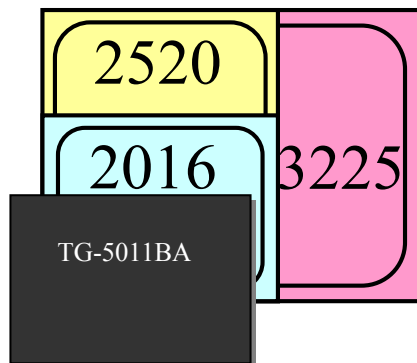
The TG-5011BA uses a unique new package structure to provide the world's smallest 2016 TCXO, covering a wide frequency range from 13 to 52 MHz. The package size has been made even more compact with a 36% smaller surface area and 43% less volume than the earlier 2520 (2.5 × 2.0mm) models. The SG-150C, a 2016 SPXO, uses improved IC properties to achieve a high precision of $\pm 20 \times 10^{-6}$ with a wide temperature range of -40 to 85°C.

In addition, the internal mounting in this new ultra-compact 2016 package uses the same reliable wire bonding found in the existing lineup of NPO structures.

Epson Toyocom will use this new 2016 package structure as a common platform to develop ultra-compact products in response to demand for compact oscillators from the communication device and other markets driven by increasingly compact and dense wireless LAN equipment and mobile handsets.

These products will be on display at CEATEC JAPAN 2006 being held at Makuhari Messe from October 3. Visit the Epson Toyocom booth (No. 5E03) to see these ultra-compact 2016 oscillators up close.

Photographs & Images



**2016-sized TG-5011BA TCXO
and SG-150C SPXO**
36% smaller surface area and 43% less
volume than our earlier 2520 models

Main specifications

TG-5011BA (2016-sized TCXO)

| | |
|--------------------------------|------------------------------|
| Dimensions (mm) | 2.05 × 1.65 × 0.8t |
| Output frequency range | 13MHz to 52MHz |
| Initial frequency deviation | ±2.0 × 10 ⁻⁶ Max. |
| Frequency temperature behavior | ±2.0 × 10 ⁻⁶ Max. |
| Operating temperature range | -30°C to +85°C |
| Operating voltage | 2.8V |

SG-150C (2016-sized SPXO)

| | |
|-----------------------------|-----------------------------|
| Dimensions (mm) | 2.05 × 1.65 × 0.8t |
| Output frequency range | 6MHz to 48MHz |
| Frequency tolerance | ±20 × 10 ⁻⁶ Max. |
| Operating temperature range | -40°C to +85°C |
| Operating voltage | 2.5V, 3.3V |

*¹ TCXO: Temperature Compensated X'tal Oscillator

A high-precision oscillator that minimizes temperature-related frequency veering with an embedded temperature compensation circuit.

*² SPXO: Simple Packaged X'tal Oscillator

A basic oscillator for producing electric signals.

*³ NPO (New Platform Oscillator) structure

An oscillator that combines a ceramic package crystal unit and an oscillator circuit in a plastic mold. Better heat stress absorption and vibration resistance give the NPO structure higher productivity in batch processing than ceramic packages.