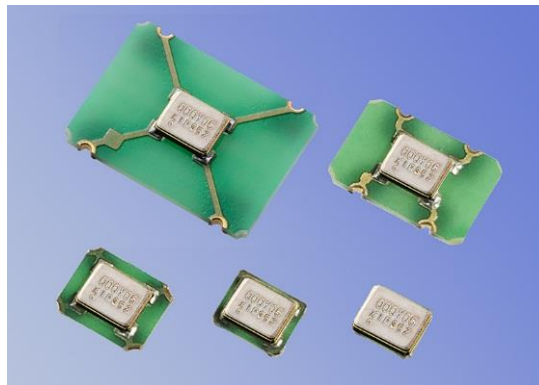


## Press Information

### KYOCERA Introduces New Z-series Clock Oscillators

**Unique platform structure shortens lead times, allowing samples to be shipped as early as next day**

**Kyoto/London – February 22<sup>nd</sup>, 2018.** Kyocera Corporation (President: Hideo Tanimoto) today introduced a new series of clock oscillators specially designed to support multi size and frequencies for quick-turnaround delivery requirements. Also qualified to Automotive Electronics Council (AEC) reliability standards. Samples of Kyocera's new Z-Series clock oscillators for electronic equipment and automotive electronics are now available worldwide.



**Z-Series Clock Oscillator**

#### Product Details

Product name	Z-Series Clock Oscillator	
	Standard Frequency Stability	High Frequency Stability
Application	Electronic equipment	Automotive electronics, in-vehicle systems
Shipment	As soon as next day <sup>1</sup>	As soon as one week <sup>1</sup>
Size	2.0 × 1.6mm to 7.0 × 5.0mm	
Frequency	0.5MHz to 170MHz	
Operating temperature range	-40 to +125°C	

<sup>1</sup> Depends on specification



Frequency tolerance	+/- 20ppm (-40 to +85°C) +/- 30ppm (-40 to +125°C)	+/- 2ppm (-40 to +85°C) +/- 5ppm (-40 to +105°C) +/- 10ppm (-40 to +125°C)
Reliability standard	AEC-Q100/200	
Production location	Japan (Nagano Okaya Plant, Yamagata Higashine Plant)	

## Background

Clock oscillators have become essential to digital equipment by providing the precisely timed reference signal that controls an electronic circuit. As electronic equipment development cycles grow continually shorter, demand for quick-delivery component samples continues to rise. Additionally, the trend toward smaller, more functional, better-performing electronic devices is also fueling demand for clock oscillators that offer tighter frequency tolerance over a wider operating temperature range.

Kyocera developed the Z-Series clock oscillators to meet these demands while providing unprecedented flexibility in a standardized, quick-fulfillment solution. The Z-Series is based on a unique, platform structure that enables Kyocera to offer the widest range of clock oscillator specifications using a single, standardized crystal blank, driver IC and ceramic package combination. This platform structure is based on a miniature footprint for compactness, but is adaptable to fit a wide range of other standard clock oscillator dimensions through the use of Kyocera's unique platform structure. Kyocera created this platform structure to make the Z-Series suitable for any design requirements, from the smallest IoT devices to large-scale network equipment. This modular structure also allows Kyocera to ship samples on a very quick-turnaround basis.

## Main Features

### 1. Unique platform structure reduces lead times

Z-Series clock oscillators use Kyocera's unique platform structure, which combines a fixed size head unit (consisting of a quartz crystal, ceramic package and driver IC) mounted to a glass epoxy substrate in a variety of standard dimensions. The use of a common head unit reduces lead times by eliminating the need to design the IC, package and crystal elements individually for each standard dimensions.

### 2. Available in "Standard Frequency Stability" and "High Frequency Stability"

The new Z-Series is available in two types: "Standard Frequency Stability," for emphasizing quick delivery; and "High Frequency Stability," for applications requiring tighter frequency tolerance over a wide temperature range. Both types are qualified to the Automotive Electronics Council's reliability standards AEC-Q100 (for ICs) and AEC-Q200 (for passive components).



For more information on KYOCERA: [www.kyocera.co.uk](http://www.kyocera.co.uk)

## About KYOCERA

Headquartered in Kyoto, Japan, Kyocera Corporation is one of the world's leading manufacturers of fine ceramic components for the technology industry. The strategically important divisions in the Kyocera Group, which is comprised of 231 subsidiaries (as of March 31, 2017), are information and communications technologies, products which increase quality of life, and environmentally friendly products. The technology group is also one of the oldest producers of solar energy systems worldwide, with more than 40 years of experience in the industry.

The company is ranked #522 on Forbes magazine's 2017 "Global 2000" listing of the world's largest publicly traded companies. With a global workforce of over 70,000 employees, Kyocera posted net sales of approximately €11.86 billion in fiscal year 2016/2017. The products marketed by the company in Europe include printers, digital copying systems, microelectronic components, and fine ceramic products. The Kyocera Group has two independent companies in the United Kingdom: Kyocera Fineceramics Ltd. and Kyocera Document Solutions.

The company also takes an active interest in cultural affairs. The Kyoto Prize, a prominent international award, is presented each year by the Inamori Foundation — established by Kyocera founder Dr. Kazuo Inamori — to individuals and groups worldwide who have contributed significantly to the scientific, cultural, and spiritual betterment of humankind (converted at approximately €400,000 per prize category).

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