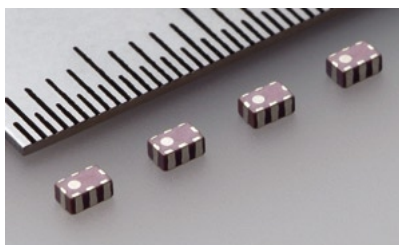


September 20, 2005

## Industry's Smallest 2.4GHz Balance Filter with Matching Circuit — Used in Bluetooth® and Wireless LAN Systems That Are Rapidly Gaining Popularity Around the World —



Taiyo Yuden has announced a new balance filter in the EIA0805 size ( $2.0 \times 1.25 \times 0.85\text{mm}$ ), the smallest in the industry, for use in the 2.4GHz wireless circuits that are rapidly gaining popularity around the world. The filter is a unified type that combines the functions of a balun and bandpass filter with the functions of impedance matching for most ICs.

In recent years, demand has been rising for more compact, cost-efficient products incorporating Bluetooth®, wireless LAN, or other wireless communication functions. As a result, a balance filter uniting the baluns and bandpass filters, which are the main components of wireless circuits, was introduced. However, the balance filter needs a matching circuit to assure impedance matching between components used in high frequency circuits. In response, Taiyo Yuden successfully incorporated a matching circuit designed to handle impedance for most Bluetooth® ICs into a balance filter in the EIA0805 size, thus enabling a more compact circuit while also reducing the time and cost required for impedance matching. Production for this balance filter will begin in October 2005 at the company's Tamamura Plant (Tamamura Town, Sawa County, Gunma Prefecture), with a monthly production of 2 million units per month. The sample price is 100 yen per unit.

Taiyo Yuden has been involved in the Bluetooth® market since its inception, offering total solutions that extend beyond Bluetooth® products to include measurement and certification services. Furthermore, manufacture of balance filters applies multilayer technology for high-frequency multilayer chip inductors. Experiences in mass production of high-frequency multilayer chip inductors also enable the company to ensure stable supplies of balance filters during mass production.

This product will be on display at the Taiyo Yuden booth for CEATEC Japan, to be held starting October 4, 2005 at Makuhari Messe.

The typical specifications for the new Balance Filter applications are as follows.  
Please ask, if you want to know about the item corresponding to each IC.

	Balanced Impedance Z ( $\Omega$ )	Unbalanced Impedance Z ( $\Omega$ )	Passband frequency (MHz)	Insertion Loss (max)	Attenuation (min at 960MHz)	Amplitude Balance (max)	V.S.W.R (max)
FI 212C2450X012	100	50	2400-2500	3.5dB	35dB	2.0dB	2.0

