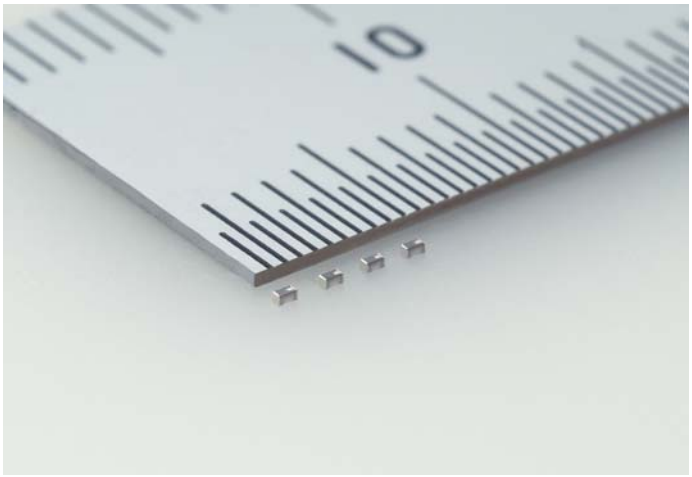
For immediate release

TAIYO YUDEN Announces the Commercial Release of High Frequency Multilayer High Q Chip Inductor with Industry Best Q-Value

A Super High-end Product Contributing to High Functionality of Devices Such as Smartphones



TOKYO, July 18, 2012 — TAIYO YUDEN CO., LTD. today announced the commercial release of a high frequency multilayer high Q chip inductor, the HKQ0603W (0.6 x 0.3 x 0.3mm) series, which achieves the best-in-industry Q-value.

This product is used for impedance matching applications in the high frequency circuits of high performance small mobile devices such as smartphones for which the adoption of LTE next-generation communications standards is progressing and multiband capabilities are increasing. It draws on the strength of state-of-the-art technologies, such as its internal structure and the L-form terminal with its L-form external electrode structure. By using this technology, with a typical Q-value of 48 for the “HKQ0603W 2N7” in the 1.8GHz high frequency range, compared to the company’s conventional product, “HKQ0603U 2N7” (with a typical Q-value of 41), it has been possible to achieve an improvement of 15% or more.

The development at TAIYO YUDEN of the high frequency multilayer high Q inductor for the EIA 01005 size further advances the miniaturization and expansion of our lineup, and contributes to device miniaturization and increasing performance.

Production will commence in July, 2012, on a 300 million units per month basis at our domestic plants and also at “TAIYO YUDEN (PHILIPPINES)” (Lapulapu City, Cebu). The sample price is 15 yen per unit.

Technology Background

The equipping of small mobile devices such as smartphones and tablet PCs with LTE next-generation communications standards is already well underway, and establishing high quality communication will demand a higher performance than ever before. In high frequency circuits, as typified by the RF front end, further noise suppression and increased efficiency is required by means of impedance matching.

The inductors used in these kinds of impedance matching circuits are not only required to preserve their characteristics in the high frequency range, they also need to have a small, low profile geometry due to the increasing miniaturization and reduction in profile of devices. Generally, because the DC resistance of an inductor increases with miniaturization, and its Q-value drops, sufficient improvement in the performance of high frequency circuits could not previously be accomplished.

By optimizing, for example, the internal structure and the external electrode structure, TAIYO YUDEN has here succeeded in the commercial release of the HKQ0603W series which achieves the best Q-value in the industry.

In response to future market needs, we will promote the further miniaturization and expansion of our current lineup, and focus our energies on the development of such super high-end products.

■Applications

Impedance matching etc. in high frequency circuits of small mobile devices such as smartphones and tablet PCs.

The characteristics of the main multilayer chip inductor released this time are as follows.
(Total 48items)

Ordering code	Inductance [nH]	Tolerance	Q(typical) Frequency [Hz]					Self-resonant frequency [MHz]	Resistance DC [Ω]	Rated current [mA]
			500M	800M	1.8G	2.0G	2.4G	min.	max.	max.
HKQ0603W 0N6	0.6	±0.1nH	>30	>40	>75	>80	>88	10000	0.07	850
HKQ0603W 2N7	2.7	±0.2nH	23	31	48	49	54	8500	0.19	510
HKQ0603W 3N9	3.9	±0.3nH	22	28	43	43	47	7000	0.25	440
HKQ0603W 4N3	4.3	±0.2nH ±0.3nH ±3% ±5%	21	29	43	44	47	6000	0.30	400
HKQ0603W 9N1	9.1	±3% ±5%	20	26	36	36	39	4000	0.70	250
HKQ0603W 10N	10		20	26	35	35	37		0.85	220
HKQ0603W 22N	22		18	23	26	26	22	2500	1.60	160