Taiyo Yuden Power Inductors: Leading DC Bias Characteristics

Taiyo Yuden has announced details of the commercial release of three new 4mm square wire-wound power inductors, the NRS4010 (4.0x4.0x1.0mm), the NRS4012 (4.0x4.0x1.2mm) and the NRS4018 (4.0x.4.0x1.8mm), each representing a maximum thickness. At an inductance value of 2.2µH, the NRS4018T2R2M achieves a saturation current of 3.0A, boasting one of the industry's highest-ranked DC bias characteristics. Compared with Taiyo Yuden's existing NR4018T2R2M, DC resistance has been lowered by 30% and saturation current improved by approximately 11%.

These products are ideally suited for use in choke coil and filter circuit for DC-DC converters in various kinds of digital equipment including laptop computers, tablet devices, LCD TVs and digital cameras. With the release of these new 4mm square products, Taiyo Yuden has gone one step beyond the conventional 5mm square size to answer customers' needs for more compact power inductors and higher current needs without sacrificing space, thereby broadening available options.

The new products have been mass produced at the one of the Company's overseas production sites, Taiyo Yuden (Philippines) (located in Lapu-lapu City, Cebu Province) at a total production volume of 10 million units per month. The price of samples is $0.30 per unit for each type.

Technology Background
In recent years, the trend toward more compact, slimmer digital devices has steadily progressed. This has in turn triggered calls for advances in the size (more compact) and thickness (thinner) of those components mounted on the aforementioned devices. At the same time, advances in ICs and semiconductors driven by the trend toward more sophisticated and diversified functionality in digital devices require high current capabilities of such mounted components as inductors. In this context, Taiyo Yuden has upgraded its highly acclaimed NR series used as a choke coil, or as a principal component in power supply circuit DC-DC converters in a variety of devices. These efforts and the application of more reliable materials as

well as advanced core design have culminated in the commercial release of the NRS4010, NRS4012 and NRS4018 series which realize low DC resistance and high saturation current capability.
Looking ahead, Taiyo Yuden will endeavor to further upgrade and expand its lineup, focus on the development of products that match market needs and push forward with new wire-wound power inductors.

About Taiyo Yuden:
Now in its 61st year, Tokyo-based Taiyo Yuden is a worldwide manufacturer of surface-mount and leaded passive components, wireless modules and components, energy device, SAW/ FBAR devices. The company's North American affiliate, TAIYO YUDEN (U.S.A.), INC., operates sales and engineering offices in Chicago IL, Boston MA, Raleigh NC, Irving TX, Denver CO and in California at San Jose and San Diego, and Ontario Canada.
For more information, visit www.t-yuden.com [1].

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