LTE SMT Antenna Achieves 70% Efficiency

Taoglas Limited (www.taoglas.com [1]) today launched the PA.700.A “Viking” antenna, a LTE, septa-band, surface mount antenna (SMT). It delivers efficiency of over 70% in a design that is significantly smaller than current market wide-band antennas. This multi-band cellular antenna covers all worldwide cellular bands from 700 MHz to 960 MHz and 1710 MHz to 2170 MHz for GSM, CDMA, WCDMA, DCS, PCS, UMTS, HSDPA, GPRS, EDGE and LTE. The PA.700.A Viking is an off-the-shelf LTE antenna that is ideal for any M2M product manufacturer that wants high performance 4G/3G/2G capabilities for small devices.

The PA.700.A Viking has many advantages over existing products in the market: The antenna is delivered on tape and reel and can be surface mounted saving on assembly costs and delivering greater performance consistency. With no customization required, development times are dramatically reduced. Within one week, customers can match the antenna by simply changing the matching circuit.

Signal loss is minimized due to a simple 50 Ohm CPW transmission line on the short end of the device board from the module to the antenna. At a size of 40x6x5 mm, the Viking has one of the highest efficiencies for a small-scale multiband antenna, enabling customers to achieve greater device performance and sensitivity in areas of low signal and deliver the data-speed rates that are critical to 3G and 4G devices such as HSPA and LTE. The PA.700.A Viking builds on Taoglas’ successful PA.25.A Anam antenna, which is one of the best selling M2M antennas.

“Product manufacturers are struggling to find LTE antennas in small enough sizes to fit into tight, challenging spaces and still deliver high performance. The PA.700.A Viking improves on the best features of our PA.25.A which is used by the world’s leading auto and medical device makers in extreme environments,” said Dermot

O'Shea, Director, Taoglas. "A comparative antenna to the Viking, with more traditional materials such as metal or FR4 would have a reduced efficiency in this configuration for the same size. No other SMT antenna can match the PA.700.A Viking for the combination of size, durability, frequency range and efficiencies of over 70% on all bands including LTE."

Made of dense, high-grade ceramic, the PA.700.A Viking is extremely robust and durable for use in extreme environments such as the automotive industry. It has passed vehicle vibration tests of 10G for automotive and 20G for motorcycles. Network certification can be achieved if the Taoglas layout guidelines are adhered to.

The PA.700.A Viking is available directly from Taoglas and will be available with stocking distributors in July 2011. For more information about Taoglas' PA700.A Viking visit: www.taoglas.com/news/ [2]

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