Switch provides linearity of 115 dBm IIP2

Peregrine Semiconductor Corporation announced the expansion of its high-linearity, low insertion loss RF switch family with the availability of the HaRP technology-enhanced SPDT PE42422 RF switch. The new switch provides linearity of 115 dBm IIP2, and 70 dBm IIP3; low insertion loss of 0.4 dB @ 3 GHz, and high isolation of 28 dB @ 3 GHz, enabling better overall system performance. The switch covers a wide frequency range of 100 MHz – 6 GHz and, using a nominal +3V power-supply voltage, a typical input 0.1 dB compression point of +36 dBm can be achieved. The PE42422 switch is available in a space-saving 2 x 2 mm QFN package, making it well suited for general-purpose RF switching applications, such as filter-bank switching in test equipment and base stations.

The 50 Ohm, reflective PE42422 switch features on-chip, low-voltage CMOS control logic and a wide operating voltage range of 2.3 – 5.5V, enabling it to be used it in a variety of ways. ESD performance of 4 kV HBM for RF pin to ground simplifies manufacturing and improves product reliability. Additionally, with low power consumption of 120 microamperes (typical), the PE42422 switch helps to extend battery life in portable devices.

“As data rates continue to increase, RF designs are becoming more complex, and RF designers require high-linearity, low-loss switches in small packages,” said Mark Schrepferman, director of marketing for Peregrine Semiconductor’s High-Performance Solutions business unit. “By supporting frequencies up to 6 GHz, with high linearity, low insertion loss, and availability in the small, 2 x 2 mm QFN package, the PE42422 switch meets these requirements.”

Development tool support
For engineers wanting to evaluate the PE42422 switch, Peregrine Semiconductor also announced the PE42422 Evaluation Kit (part # EK42422-01, $95.00), today. The kit can be ordered now, from Peregrine's global direct sales representatives and worldwide distribution partners.

Packaging, pricing, & availability
The PE42422 switch is available in a 12-lead, 2 mm x 2 mm QFN package for $0.83 each, in 10,000-unit quantities. Samples and volume-production quantities can be ordered today, through Peregrine's global direct sales representatives and worldwide distribution partners. For more information, visit http://www.psemi.com.

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