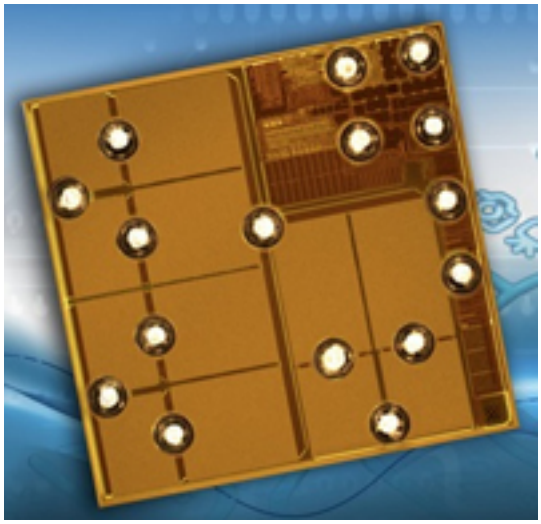
UltraCMOS RFIC Offers Cost-Optimized Solution for any Mode, any Band, any Path



Peregrine Semiconductor Corporation has released the new PE42662 SP6T (single pole, six throw) RF switch. As the industry's first fully symmetric RF switch, the PE42662 delivers unprecedented design flexibility to manufacturers of 3G front-end modules used in multi-band GSM/EDGE/WCDMA handsets.

The switch incorporates six fully symmetric transmit ports that allow designers to freely configure any combination of transmit/receive ports for GSM, EDGE and WCDMA for the first time. The PE42662 is the latest release in Peregrine's UltraCMOS silicon-on-sapphire (SOS) mobile wireless switch portfolio targeted at the high-volume cellular handset market.

The 50-Ohm switch is manufactured on Peregrine's STeP 3 UltraCMOS process and features HaRP technology enhancements to deliver high linearity and exceptional harmonic performance: 2fo/3fo = -40 dBm @ 35 dBm TX (900 MHz) and 33 dBm TX (1900 MHz). The PE42662 switch also features an IIP3 of +68 dBm at 50-Ohm; low transmit insertion loss of 0.5 dB at 900 MHz, 0.6 dB at 1900 MHz; and very high Isolation of 38 dB at 900 MHz and 33 dB at 1900MHz. The switch handles maximum +35 dBm input power with world-class ESD tolerance of 4000V HBM at ANT port, and 2000V HBM on all ports.

Additional features of the PE42662 switch include an on-chip CMOS decode logic that facilitates three-pin low voltage CMOS control and low-power standby state, as well as on-chip SAW filter over-voltage protection devices. As with all SOS-based UltraCMOS RFICs, no blocking capacitors are required.

The PE42662 is available in the highly efficient flip-chip die form in volume today. Pricing is available by contacting Peregrine's worldwide sales and distribution network.

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