

# NEWS RELEASE



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## **Peregrine Semi introduces world's first Flip-Chip SP4T GSM Antenna Switch PE4261 UltraCMOS™ Switch integrates control logic decoder and driver**

**San Diego, California, October 4, 2004** -- Peregrine Semiconductor Corporation, a leading supplier of high-performance RF CMOS and mixed-signal communications ICs, today announced the availability of the PE4261 RF antenna switch – the world's first Flip-Chip SP4T Switch for dual-band GSM handset applications. This new landmark device provides Antenna Switch Module (ASM) manufacturers the lowest total height and smallest footprint solution by implementing flip-chip packaging. The use of advanced packaging technology reduces the PCB area by a factor of nine when compared to conventional wire bonding.

The 50-Ohm PE4261 complements the PE4263 RF switch also announced today with many unprecedented features, including: two-pin CMOS logic control inputs; low TX insertion loss of 0.55 dB at 900 MHz and 0.65 dB at 1.9 GHz; high Isolation of 45 dB at 900 MHz and 40 dB at 1.9 GHz; low harmonics ( $2f_0 = -85$  dBc and  $3f_0 = -72$  dBc at 35 dBm input power); 1500 V HBM ESD tolerance at all ports; an integrated CMOS decoder/driver and RX SAW over voltage protection circuit. The device offers linear operation from 100 – 3000 MHz at 2.6 V with fast switch settling time. Further, the blocking capacitors typically found on pHEMT switches with positive control logic are not required for any UltraCMOS-based device.

Like the PE4263, this high-power device, developed on Peregrine's UltraCMOS™ technology, advances the industry past traditional milestones and enables new roadmaps to be drawn for next generation ASM designs. For the first time ever, CMOS has been directly connected to the antenna of a GSM handset. UltraCMOS-based products provide superior performance, lower insertion loss and higher integration alternatives to pin-diodes or pHEMT switch/CMOS designs.

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## **ADD ONE/PE4261 RF Switch**

The PE4261 is slated for high-volume production in multiple facilities, including those of Peregrine's strategic partner, OKI Electric Industry Co., Ltd. (Tokyo, Japan). The device is priced at \$0.52 ea. (10K units), and is available from Peregrine and its global distribution partner, Richardson Electronics.

Peregrine is known for its high-performance RF CMOS IC products which are ideally suited for a wide range of market segments, including Wireless Infrastructure and Mobile Wireless; Global Positioning (GPS); Optical; Broadband and Military/Space applications. The Company's innovative CMOS process - UltraCMOS™ -- combines the RF, mixed-signal, and digital capabilities of any other CMOS process, yet tolerates incredibly high voltages required for high-performance wireless applications.

### **About UltraCMOS™ Technology**

UltraCMOS™ mixed signal process technology is a proprietary, patented variation of silicon-on-insulator (SOI) technology. It is the first commercially qualified use of Ultra-Thin-Silicon (UTSi®) on sapphire substrates with high yields and competitive costs. Significant performance advantages exist over competing processes such as GaAs, SiGe, BiCMOS and bulk silicon CMOS in applications where RF performance, low power and integration are paramount.

### **About Peregrine Semiconductor**

Peregrine Semiconductor Corporation designs, manufactures, and markets high-performance communications ICs for the wireless, broadband cable communications, satellite and defense markets. The Company, which recently moved its headquarters to a larger San Diego, California facility, maintains established design centers and operations in Chicago, IL; Aix-en-Provence, France; Sydney, Australia; and Tokyo, Japan. Additional information is available on the web at [psemi.com](http://psemi.com). Contact Peregrine's worldwide distribution partner, Richardson Electronics (NASDAQ: RELL), for sales information at 1-800-737-6937.

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微波光电部专业代理经销高频、微波、光纤、光电元器件、组件、部件、模块、整机；电磁兼容元器件、材料、设备；微波 CAD、EDA 软件、开发测试仿真工具；微波、光纤仪器仪表。欢迎国外高科技微波、光纤厂商将优秀产品介绍到中国、共同开拓市场。长期大量现货专业批发高频、微波、卫星、光纤、电视、CATV 器件：晶振、VCO、连接器、PIN 开关、变容二极管、开关二极管、低噪晶体管、功率电阻及电容、放大器、功率管、MMIC、混频器、耦合器、功分器、振荡器、合成器、衰减器、滤波器、隔离器、环行器、移相器、调制解调器；光电子元件和组件：红外发射管、红外接收管、光电开关、光敏管、发光二极管和发光二极管组件、半导体激光二极管和激光器组件、光电探测器和光接收组件、光发射接收模块、光纤激光器和光放大器、光调制器、光开关、DWDM 用光发射和接收器件、用户接入系统光收发器件与模块、光纤连接器、光纤跳线/尾纤、光衰减器、光纤适配器、光隔离器、光耦合器、光环行器、光复用器/转换器；无线收发芯片和模组、蓝牙芯片和模组。

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