



Black Sand Technologies, Inc.
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MURATA SELECTS BLACK SAND CMOS PAs FOR USE IN INTEGRATED RF FRONT END PRODUCTS FOR 3G HANDSETS

NEW MODULES WILL COMBINE MARKET'S LEADING RF PASSIVES WITH BEST-PERFORMING SILICON PA TECHNOLOGY

AUSTIN, Texas — May 8th, 2012 — [Black Sand Technologies, Inc.](http://www.black-sand.com), a fabless semiconductor company specializing in advanced power amplifier (PA) technology for wireless applications, today announced that it has been selected to provide silicon PA technology for integrated RF front end products by Murata Manufacturing Co, Ltd (TOKYO:6981) (ISIN:JP3914400001). The products will be used to increase integration and improve the performance of 3G smartphones, tablets and datacards.

This new agreement combines the best in passive components from Murata, a proven leader in the cellular RF front-end, with Black Sand's innovative CMOS power amplifier technology, delivering the industry's best combination of performance and cost. Integrating the PA together with other RF front-end components into a single module allows for better optimization of performance, battery current, size, and cost. Black Sand was chosen to work with Murata due to its ability to cost-effectively implement demanding 3G PA specifications using standard silicon CMOS manufacturing technology.

"Black Sand's silicon PA technology stands out against the competition," said Norio Nakajima, Vice President of the Module Business Unit at Murata. "Tier 1 cellular manufacturers are demanding increasing levels of sophistication and integration throughout the handset, and RF is no exception. At Murata we are excited about leveraging Black Sand's technology to produce world-leading RF front-end products in terms of performance, size, and cost."

"Black Sand is proud to have been selected for this development by a company of the caliber of Murata," said John Diehl, CEO of Black Sand. "This agreement represents a major opportunity for both companies: industry estimates tell us that the market for RF front end components is growing at a CAGR of around 15%, and will reach in excess of \$5.5bn by 2014¹. A year after we entered production with the BST34 Series devices, entering this relationship is a powerful endorsement of our technology and our ability to deliver."

¹ Mobile device RF front end TAM analysis and forecast, Needham & Co.
<http://www.csmantech.org/Digests/2011/papers/3.3.pdf>

Black Sand's PAs significantly improve the reliability and data throughput of 3G smartphones, tablets and datacards, while benefiting from the reliability and economies of scale derived from pure CMOS manufacturing. Mobile device manufacturers have long sought a viable CMOS alternative to GaAs that will enable them to benefit from an improved supply chain, higher reliability, and lower cost.

About Black Sand Technologies:

Founded in 2005, Black Sand Technologies, Inc. is a fabless semiconductor company dedicated to building solutions for the wireless industry by combining sensitive analog and powerful digital circuits in silicon. Black Sand's unique combination of patented mixed-signal technology and industry experience will lead the way to new levels of cost and performance in wireless products of the future. Black Sand is based in Austin, Texas, and is funded by Austin Ventures and Northbridge Venture Partners. For more information, please visit www.blacksand.com.

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