



Black Sand Technologies, Inc.  
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## **BLACK SAND ADDS 3G BANDS TO BST34 CMOS POWER AMPLIFIER FAMILY TO ENABLE GLOBAL TAKE UP OF DEVICES**

***DROP-IN REPLACEMENT FOR GAAS CHIPS IMPROVES COST AND SUPPLY CHAIN FOR SMARTPHONE HANDSETS SOLD TO ALL REGIONS***

AUSTIN, Texas — February 23<sup>rd</sup>, 2012 — [Black Sand Technologies, Inc.](#), a fabless semiconductor company specializing in advanced power amplifier technology for wireless applications, has extended its established BST34 series of CMOS power amplifiers (PAs) with two devices that complete its range of products for use in every common global cellular frequency band. The new BST3405 and BST3408, for use in Band-5 (824-849MHz) and Band-8 (880-915MHz) respectively, are drop-in replacements for the gallium-arsenide ([GaAs](#)) components traditionally found in every 3G mobile phone, tablet and datacard.

Black Sand manufactures the BST34 series using an industry-standard CMOS semiconductor process – the same technology that is used to produce the majority of silicon chips in the world today. By replacing specialized ‘boutique’ GaAs process technology, Black Sand’s customers can benefit from lower costs, enhanced product robustness and reliability, and an improved supply chain.

“The BST34 series is already shipping into multiple design wins with multiple customers,” said John Diehl, CEO of Black Sand. “Our technology has reached maturity and gained acceptance – this is the right time to extend our reach by leveraging our ability to offer customers solutions for all the major 3G frequency bands.”

Chris Taylor, who earlier this month published [data on the cellular PA market](#) for analyst firm Strategy Analytics, said: "Last year the cellular PA market grew 19 per cent to \$3.3 billion and, as the non-handset market grows, we predict it will increase to \$4 billion by 2016."

Jim Nohrden, VP marketing at Black Sand said: “Mobile device manufacturers are looking for an alternative to GaAs PA technology, which has a known history of supply shortages and higher cost-structure. We can now offer customers a complete range of silicon PAs which, at 28dBm output power, meet or exceed the performance of older GaAs devices, with none of their disadvantages. This high output power, offered across every major frequency band, can be used by our customers in all their mobile products – from low-end to high-end and from datacards to smartphones to tablets.

“We have a strategic supply base larger than all existing GaAs PA vendors combined and this has proved critical as the market continues to adopt 3G mobile devices, which have two to three times as

many PAs as 2G phones. Our products offer handset manufacturers better performance and a more reliable source of supply.”

The new BST3405 for “Cellular” Band-5 (824-849 MHz) and BST3408 for “GSM” Band-8 (880-915 MHz) products join the existing BST3401 for “2100” Band-1 (1920-1980 MHz); BST3402 for “PCS” Band-2 (1850-1910 MHz); and BST3404 for “AWS” Band-4 (1710-1755MHz). The devices are fully function and pin-compatible drop-in replacements for existing 3G [GaAs](#) RF PAs.

**Technical specifications:**

The BST34 series devices deliver up to 28dBm of linear power and are packaged in a 3 x 3mm 10-pin form factor. The products include an integrated directional coupler with daisy-chain support, integrated overvoltage and over-temperature protection circuitry. Black Sand also offers the BST35 series, premium range products that include the company’s TrueDelivered™ power detection technology, which allows mobile phones to produce up to 2dB higher Total Radiated Power than is possible using GaAs power amplifiers.

The BST3401/2/4 are available and shipping now. The BST3405/8 will ship in Q2 2012.

**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](http://www.blacksand.com).

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