



OPTICHRON®

Media Contact

Jeff Muscatine

Lee Communications

(For Optichron, Inc.)

Tel: 650-320-8308

jeff@leecomunications.com

FOR IMMEDIATE RELEASE

Compact Optichron® OP4400 Digital Pre-Distortion ICs Cut Costs of Wireless Infrastructure Applications

Small-Footprint DPDs Linearize Power Amplifiers to Reduce System and Implementation Costs

FREMONT, Calif. – November 5, 2007 – Optichron, Inc., a leader in signal linearization technology, today announced the OP4400-15IBBG and OP4400-20IBBG, compact extensions of the OP4400 family of digital pre-distortion (DPD) integrated circuits (ICs). The new devices implement the key features of the OP4400 DPD family to improve the efficiency of power amplifiers (PAs) in wireless communication systems by correcting nonlinear distortion, giving designers headroom to sharply reduce system cost and operating power requirements. The small-footprint OP4400 DPDs target cost-sensitive applications that require up to 20 MHz of signal bandwidth (BW), including TD-SCDMA, remote radio heads (RRH), two-carrier WiMAX and four-carrier WCDMA implementations. The self-contained devices further enable simpler, less-costly system designs because they do not require an external processor or support circuitry. All OP4400 DPDs have a simple CMOS interface, require no algorithmic programming and are universally applicable to any PA configuration (including class AB and Doherty), modulation scheme or signal chain architecture. The OP4400 family provides a universal pre-distortion platform to further reduce cost and time to market. The compact DPDs are available in a 14 mm x 14 mm, 169-pin BGA package.

“Optichron’s compact OP4400 DPDs offer designers a monolithic DPD at a very attractive

cost:performance point for wireless infrastructure equipment, whether to extend existing designs or advance into new markets that require smaller form factors,” said Perry Constantine, chief executive officer of Optichron. “As Optichron continues to develop linearization solutions across the signal chain, the adaptive, modulation agnostic OP4400 family provides a flexible platform for easier execution of high-efficiency systems.”

Features and Benefits

The compact OP4400-15IBBG and OP4400-20IBBG implement the key features of the OP4400 DPD family in a smaller package to give designers cost-optimized options to drive higher output power or simply to use a smaller and less expensive PA.

- Feature: Compact BGA package
Benefit: Reduces board space requirement, lowering system cost
- Feature: Two speed grade options – OP4400-15IBBG up to 85 MHz, OP4400-20IBBG up to 125 MHz
Benefit: Provides flexibility to optimize cost while compensating for a minimum of 5th order products for applications that need up to 20 MHz of signal BW
- Feature: PA power-added efficiency (PAE) levels of up to 40% enabled
Benefit: Allows designers to use fewer or smaller PAs
- Feature: Adjacent channel power ratio (ACPR) performance improvements of up to 25 dB
Benefit: Allows designers to drive the PA harder while meeting strict ACPR requirements
- Feature: Phase, gain and offset imbalance compensations occur every clock cycle
Benefit: Adaptively corrects the PA in real time with no extra circuitry
- Feature: Support for multiple communication protocols and hardware implementations
Benefit: Provides a flexible platform for several applications, such as zero IF (ZIF), complex IF (SSB) and real Hi/Lo architectures, including hardware with Doherty and Class AB PA configurations

OP4400-15IBBG and OP4400-20IBBG Packaging, Availability and Pricing

The OP4400-15IBBG and OP4400-20IBBG reside in a compact 169-pin, 1.0 mm ball pitch, 14 mm x 14 mm BGA package and operate over the full industrial temperature range of -40° to 85° C. The devices are RoHS compliant and lead-free. Engineering samples are available now. Production volumes will be available in the first quarter of 2008. Unit pricing at the 100-unit volume level is:

OP4400-15IBBG (optimized for linearization up to 85 MHz band): \$63.00

OP4400-20IBBG (optimized for linearization up to 125 MHz band): \$76.00

About the OP4400 DPD Family

Optichron's OP4400 DPD ICs are based on a proprietary linearization engine that provides the industry's most efficient solution for nonlinear distortion, eliminating costly and lossy combiners from the signal chain. The extended BW capability of the OP4400 family is the highest of any commercial DPD product, allowing transmitted signal BW of up to 30 MHz (with the OP4400-30IBAG). All OP4400 DPDs are self-contained, requiring no external processor or peripheral circuitry. Within the family, achievable levels of ACPR improvement are on the order of 30 dB when operating a Doherty class PA processing WCDMA signals, and operating the PA at efficiency levels in excess of 40%.

About Optichron

Optichron, Inc., a leader in nonlinear signal processing technology, designs and manufactures integrated circuits that enable significant improvements in system-level cost:performance for communications applications. Optichron® proprietary linearization technology is the industry's most efficient solution for correcting nonlinear distortion, a problem present in all signal processing systems. Signal linearization gives system designers more headroom to implement faster, more efficient systems that cost less to build and operate. For more information and product details please visit www.optichron.com.

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