

Mitsubishi Electric Semiconductors to Demonstrate a High-Efficiency, Wide-Band Doherty Amplifier for Next Generation LTE Base Stations at RWW2017 in Phoenix January 16-17, 2017

CYPRESS, California – January 12, 2017 – [Mitsubishi Electric US, Inc.](http://www.MitsubishiElectric.com) will present a hands-on mini lab showcasing its high-efficiency, wide-band Doherty Amplifier at their booth at Radio & Wireless Week, Jan. 16-17, 2017 at the Hyatt Regency, Phoenix, AZ. On January 16 at 10:50 a.m., they will also present a technical paper describing this wide-band Doherty power amplifier design technique for next generation LTE base stations using the latest Mitsubishi Electric GaN transistor technology. Mitsubishi Electric will be located at booths #1 and #2.

To break the inherent narrow-band limitation of conventional Doherty design methodology, the paper proposes a frequency dependency compensating circuit and a modified quarter wavelength inverter incorporating the transistor package parasitic elements. With improved bandwidth and efficiency compared to earlier design methodologies, this compact design delivers more than 2.5 watts of average power with efficiencies above 45.9% across the full 3.0-3.6GHz band (20MHz LTE signal). This allows customers the ability to design more competitive LTE amplifiers capable of carrier aggregation scenarios in this band. In conjunction with digital pre-distortion to maintain -50dBc ACLR, the use of the wide-band efficient GaN Doherty design can reduce the complexity and energy consumption of the radio, further reducing the base station total cost of ownership. Attendees are encouraged to stop by the Mitsubishi Electric booth at RWW2017 for more information and to view the latest GaN technology in action.

Mitsubishi Electric's full line-up of GaN devices, with frequencies in L-, S-, C-, and Ku-bands at output powers ranging from 2 to 100 watts, supports a wide variety of end-communications applications, including cellular base station, satellite, ground station and point to point.

Session MO2D-3

3.0-3.6 GHz Wideband, over 46% Average Efficiency GaN Doherty Power Amplifier with Frequency Dependency Compensating Circuits

About Mitsubishi Electric US Semiconductor Division

Mitsubishi Electric US, Inc.'s Semiconductor Division presents a portfolio of semiconductor and electronic devices that helps advance information processing and telecommunications. The division offers next-generation optical devices that support today's rapidly evolving optical telecommunications networks. They include high-frequency gallium nitride, gallium arsenide and silicon RF devices used in a variety of applications from two-way radios to telecommunications satellites. The division also provides leading-edge color TFT-LCD modules designed for high reliability and superior visibility. Mitsubishi Electric's TFT-LCD modules deliver exceptional performance and excellent color quality in a broad range of indoor and outdoor operating environments. They can be used in such industrial applications as medical, factory automation, agriculture, construction, marine, and aviation. Most recently, the division added contact image sensors for machine vision applications to its product line. Additional information is available at <http://us.mitsubishielectric.com/semiconductors/en/index.html>.

In addition to semiconductor devices, [Mitsubishi Electric US group companies'](http://www.MitsubishiElectric.com) principal businesses include factory automation equipment, automotive electrical components, elevators and escalators,

heating and cooling products, solar modules, electric utility products, and large-scale video displays for stadiums and arenas. Mitsubishi Electric US group companies have roughly 50 locations throughout North America with approximately 4,000 employees.

Media Contact:

Tim Mosher/Mitsubishi Electric

Tim.Mosher@meus.mea.com

815.262.0150