# WOLFSPEED CONTINUES SUPPORTING 4G AND ENABLES 5G WITH ITS EXPANDED RF PORTFOLIO

As the wireless industry continues its march toward 5G, system designers are finding that this new generation of wireless networks requires a whole new way of thinking about the technologies they choose to power this revolution. 5G requires ultra-high speeds in addition to an unprecedented level of reliability and responsiveness needed for demanding applications such as fully autonomous cars and trucks, drones and virtual reality.

At Mobile World Congress in Barcelona, Wolfspeed is debuting new GaN on SiC and LDMOS-based additions to its broadband RF power transistor portfolio — products specifically designed not only for the increased data rates 5G delivers, but also the extreme environments in which 5G operates. These new products incorporate all of the key requirements system designers demand as they develop the base stations that power these next-gen wireless networks: efficiency, power, reliability and robustness.

The new solutions showcase Wolfspeed's leadership role in delivering reliable, rugged broadband solutions for cellular base station applications that expand 4G system capability and enable the transition to 5G. Wolfspeed's wide range of portfolio offerings include both a high-performance open cavity ceramic package for GaN on SiC and cost-effective overmold plastic package for LDMOS to fit base station applications across the various frequency ranges that have been allocated to mobile network operators worldwide for 5G.

**New GaN on SiC Solutions for the Transition to 5G**

Central to Wolfspeed's portfolio are semiconductor solutions based on GaN on SiC (gallium nitride on silicon carbide), which — because of its thermal conductivity, materials matching, efficiency and total lifecycle cost — has demonstrated to be the best high-performance, reliable material for 5G.

**GaN's advantages also include:**

- Wider Bandwidth: Supports 10X faster download speeds
- Higher Frequency: Allows compact active antennas that deliver real-time adaptable coverage — no more moving in and out of range
- Higher Efficiency: Enables smaller, more energy-efficient systems

New featured Wolfspeed solutions include the GTRA364002FC (3400 – 3600 MHz), GTRA384802FC (3600 – 3800 MHz) and GTRA374902FC (3600 – 3700 MHz) RF power transistors. These new GaN on SiC broadband solutions offer outstanding design and superior average power output. Because of GaN on SiC's superior thermal characteristics, power per device can be much higher, meaning smaller arrays can be utilized to deliver the same performance. And because GaN on SiC semiconductors are highly efficient, the GaN on SiC chip can be about 20 percent smaller, enabling smaller base station designs and simpler installations.

**New LDMOS Solutions for Extending the Lifecycle of 4G**

While a complete rollout of 5G takes place, telecom operators will need to continue supporting 4G and begin the transition to 5G in the most cost-effective manner. Wolfspeed continues to expand its laterally diffused metal oxide semiconductor (LDMOS) transistor portfolio for applications in lower frequencies where both performance and cost are critical. This spring, Wolfspeed will be introducing its new high-efficiency PTRA097058NB, designed for 746 – 894 MHz broadband operation.

**The Wolfspeed Advantage**

Wolfspeed has been an industry-leading innovator in RF power technologies for more than 30 years, delivering products that meet the performance, efficiency and cost requirements needed to move from one generation to the next. These new additions to Wolfspeed's growing broadband RF power transistor portfolio are a testament to that commitment. As the industry transitions from today's 4G networks to 5G, Wolfspeed will be there, supporting its customers, every step of the way.