



Partners from RF to Light

February 26, 2018

MACOM Announces GaN-on-Si MMIC Power Amplifiers for Massive MIMO 5G

- | *High-performance MAGM Series combines MACOM's established industry leadership in GaN-on-Si and MMIC technologies*
- | *New MAGM-103436-040AOP delivers wideband performance and superior efficiency compared to LDMOS-based offerings, at comparable cost structures*
- | *MWC 2018 attendees are invited to visit Hall 8.1, Room #CC 8.15 to learn more about MACOM's MAGM Series*

LOWELL, Mass.--(BUSINESS WIRE)-- [MACOM Technology Solutions Inc.](#) ("MACOM") today announced its new [MAGM series](#) of GaN-on-Si-based MMIC power amplifiers ("PAs") optimized for massive MIMO antenna systems targeted for 5G wireless basestation infrastructure. Providing wideband performance simultaneously covering bands 42 and 43 with flat power and superior power efficiency compared to legacy LDMOS technology, MACOM's new MAGM PA Series delivers GaN performance at LDMOS-like cost structures at scaled volume production levels in fully integrated MMIC packaging for simplified, cost-effective 5G basestation manufacturing.

MAGM Series MMIC PAs are specifically tailored for mainstream 5G basestation architectures, meeting and surpassing the power density and thermal requirements of 64-element massive MIMO antenna arrays, with a pathway to exceeding the performance of LDMOS technology, at scaled volume level production cost structures and supply capacities that can't be achieved with competing GaN-on-SiC technology. Designed with MACOM proprietary wideband circuit topology, the PAs meet the stringent 5G TDD linearity requirement using off the shelf digital-pre-distortion ("DPD") systems. Compared to earlier generation multichip-format GaN-on-Si modules, costs are further lowered through a reduction in packaging and design complexity. Leveraging this ideal performance and cost with the capacity scale manufacturing afforded by MACOM's partnership with ST Microelectronics, MACOM's GaN-on-Si solutions are expected to be able to significantly improve customers' time to market.

ADDITIONAL READING

- | *For more information about MACOM GaN-on-Si Reliability for wireless basestation infrastructure, [click here](#).*
- | *For more information about MACOM's recently-announced GaN-on-Si licensing and fabrication agreement with STMicroelectronics, [click here](#).*

"MACOM's new MAGM Series PAs combine the unique performance and cost benefits inherent to GaN-on-Si technology with the MMIC packaging efficiencies needed for commercial volume-scale 5G basestation manufacturing and deployment," said Amer Droubi, Director Product Marketing, MACOM. "Our continuous innovation in this domain sets a strong foundation for next-generation multifunction GaN-on-Si MMICs targeted to enable fully-integrated front-end modules for massive MIMO 5G basestation architectures."

Mobile World Congress (MWC 2018) attendees are invited to visit MACOM at Hall 8.1, Room #CC 8.15 from February 26 - March 1, in Barcelona, Spain, to speak with our wireless infrastructure experts about MACOM's enabling technologies for 5G. MACOM's MAGM-103436-040AOP - the first product entry in the MAGM Series - is sampling to qualified customers today, with production availability scheduled for 2H 2018. For more information about MACOM's solutions for 5G wireless infrastructure, visit: www.macom.com/applications/wireless-networking-and-communic/5g

ABOUT MACOM:

MACOM is a new breed of analog semiconductor company — one that delivers a unique combination of high growth, diversification and high profitability. We are enabling a better-connected and safer world by delivering breakthrough semiconductor technologies for optical, wireless and satellite networks that satisfy society's insatiable demand for information.

Today, MACOM powers the infrastructure that millions of lives and livelihoods depend on every minute to communicate, transact business, travel, stay informed and be entertained. Our technology increases the speed and coverage of the

mobile Internet and enables fiber optic networks to carry previously unimaginable volumes of traffic to businesses, homes and data centers.

Keeping us all safe, MACOM technology enables next-generation radars for air traffic control and weather forecasting, as well as mission success on the modern networked battlefield.

MACOM is the partner of choice to the world's leading communications infrastructure and aerospace and defense companies, helping solve their most complex challenges in areas including network capacity, signal coverage, energy efficiency, and field reliability, through its best-in-class team and broad portfolio of RF, microwave, millimeterwave and lightwave semiconductor products.

MACOM is a pillar of the semiconductor industry, thriving for more than 60 years of daring to change the world for the better through bold technological strokes that deliver true competitive advantage to customers and superior value to investors.

Headquartered in Lowell, Massachusetts, MACOM is certified to the ISO9001 international quality standard and ISO14001 environmental management standard. MACOM has design centers and sales offices throughout North America, Europe, Asia and Australia.

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