

MACOM IMS 2025 Product Preview – Radar

Lowell, MA, June 12, 2025 -- [MACOM Technology Solutions Inc. \("MACOM"\)](#), a leading supplier of semiconductor products, announced a new suite of high performance RF solutions designed to meet the demanding requirements of advanced radar systems. Many of these solutions will be demonstrated in [MACOM's Booth 943](#) at the upcoming International Microwave Symposium (IMS) on June 17 to 19, 2025 in San Francisco, CA.

S-Band (2 – 4 GHz):

High Power GaN-on-SiC Amplifiers

A new family of 65 V, 50-ohm input and output amplifiers designed for radar applications is now available. Operating over the 2.7 – 3.8 GHz range, these amplifiers can deliver output power up to 800 W. The full portfolio of 65 V S-Band radar products includes the [MAPC-A4029](#), [MAPC-A4030](#), [MAPC-A4031](#) and [MAPC-A4032](#).

C-Band (4 – 8 GHz):

High Power GaN-on-SiC Amplifier

The [MAPC-A4003-AB](#) is a 700 W GaN-on-SiC Power Amplifier (PA). Leveraging MACOM's GaN-on-SiC process technology, the 50-ohm PA is designed to be a compact 700 W solution for 5.2 – 5.9 GHz radar applications.

High Efficiency GaN-on-SiC MMIC Amplifier

The [WSA4501S](#) is a high efficiency GaN MMIC and ideal for large radar arrays. The 50 W GaN-on-SiC MMIC PA features 57% power added efficiency (PAE). It supports radar customers' evolving needs for longer pulse conditions, with capabilities of up to 500 µsec and 20% duty cycle from 5.2 – 5.9 GHz.

X-Band (8 – 12 GHz):

Compact 1 kW Amplifier Pallet

The [MAPC-P1060](#) is a 1 kW Pulsed PA Pallet offering 52 dB of gain and 30% efficiency, making it ideal for high power microwave systems and radar applications in X-Band frequencies. The pallet integrates MACOM's power management ICs (PMICs) for bias sequencing and temperature compensation.

Highly Integrated Front End Module

The [WSM5000S](#) Front End Module (FEM) features a GaN-on-SiC power amplifier, GaN-on-SiC switch, and a GaAs low noise amplifier (LNA) with an integrated limiter. In transmit mode, it provides up to 5 W of saturated output power with 40% PAE and 32 dB of gain. The receive side can provide 16 dB of gain with a 2.5 dB of noise figure and 21 dBm OIP3. The integrated limiter provides receive side protection.

Ku-Band (12 – 18 GHz):

High Power GaN-on-SiC MMIC

The [CMPA1F1H060](#) Ku-Band GaN-on-SiC MMIC offers high output power and efficiency. It can provide can up to 80 W of saturated output power with 25 dB of large signal gain and 35% power added efficiency (PAE) in pulsed operation. It is available in multiple formats, including bare die, surface mount QFN and flange.

RF and Microwave High Power Passives

MACOM is expanding its passives product portfolio to address applications which require power handling of more than 100 W. The first offerings of the family include the [MABA-011164](#) 1:1 RF Transmission Line Transformer and [ENGPD00322A-SM](#) Wideband Power Divider.

Information about these new RF solutions can also be found at www.macom.com.

About MACOM

MACOM designs and manufactures high-performance semiconductor products for the Telecommunications, Industrial and Defense, and Data Center industries. MACOM services over 6,000 customers annually with a broad product portfolio that incorporates RF, Microwave, Analog and Mixed Signal and Optical semiconductor technologies. MACOM has achieved certification to the IATF16949 automotive standard, the AS9100D aerospace standard, the ISO9001 international quality standard and the ISO14001 environmental management standard. MACOM operates facilities across the United States, Europe, Asia and is headquartered in Lowell, Massachusetts. To learn more, visit www.macom.com.

#

Company Contact:

MACOM Technology Solutions Inc.

Stephen Ferranti

Vice President, Corporate Development and Investor Relations

P: 978-656-2977

E: stephen.ferranti@macom.com