

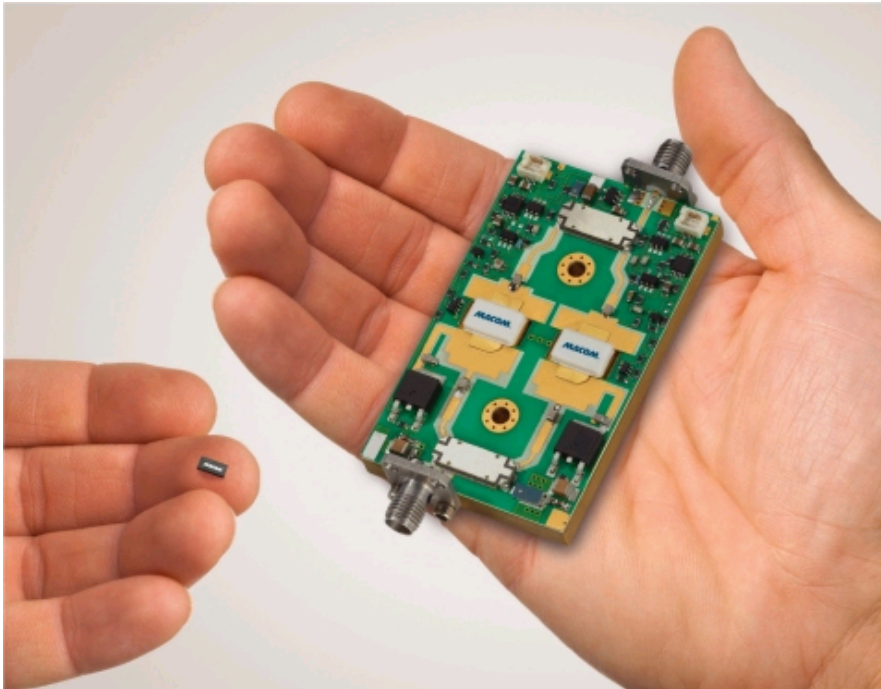


May 15, 2013

MACOM Introduces the Industry's Highest Power GaN in Plastic Transistor

90W, 50W and 15W Transistor Series Equips Radar and Communications System Designers to Achieve Breakthrough Power Density While Reducing System Size and Weight

LOWELL, Mass.--(BUSINESS WIRE)-- M/A-COM Technology Solutions Inc. (MACOM), a leading supplier of high performance analog semiconductor solutions, introduced today its series of [GaN in Plastic](#) packaged power transistors for high-performance civilian and military radar and communications systems. Scaling to peak pulse power levels of 100W — the highest among competing components in this product category — MACOM's GaN in Plastic transistors defy the power, size and weight limitations of competing ceramic-packaged offerings to enable a new generation of high performance, ultra compact military and civilian radar systems. As a result, customers can use these products to provide new capabilities and take advantage of the total system cost reductions associated with size, weight, and cooling requirements.



Packaged in miniature 3 x 6 mm dual-flat no leads (DFN) and standard small outline transistor (SOT-89) packages, MACOM's GaN in Plastic transistors operate at 50V drain bias resulting in outstanding power density and performance, higher efficiency, and smaller impedance matching circuits due to improved device parasitics. The high voltage operation also benefits overall system design with smaller energy storage capacitors and lower current draw. The power transistors leverage sophisticated thermal management techniques to ensure excellent reliability in surface mount applications. The 90W power transistor demonstrates less than 115°C junction temperature (80°C base-plate) for a pulsed power output of 93W, using a 1mS pulse and 10% duty cycle on standard Rogers board material. The devices can operate at even higher temperatures, as the calculated mean-time-to-failure (MTTF) at 200°C is roughly 600 years.

The table below outlines typical performance:

MACOM GaN in Plastic; Power at your Fingertips (Photo: Business Wire)

Parameters	Units	MAGX-000035-	MAGX-000035-	MAGX-000035-	MAGX-000040-
		0900P	05000P	01500P	5000P
Frequency	GHz	DC-3.5	DC-3.5	DC-3.5	DC-4.0
Pout	W	95	50	17	5.3
PAE @ 1GHz	%	65	65	68	65
Duty	%	10	10	10	10
Gain	dB	17.5	18	19.5	14
Size	mm	3 x 6	3 x 6	3 x 6	SOT-89

The first entries in MACOM 's GaN in Plastic power transistor product portfolio include 90W, 50W and 15W transistors, all of which are available in standard 3 x 6 mm DFN packaging. The devices can be mounted on PCBs via ground/thermal arrays. Internal stress buffers allow the devices to be reliably operated at up to 200°C channel temperature. The GaN in Plastic series also includes a 5W device in an even smaller SOT-89 package, measuring 2.5 x 4.5 mm. All of these transistors are capable of operating at frequencies up to at least 3.5 GHz.

"Radar system designers are challenged to reduce the size, weight, and cost of next generation system designs, while meeting new requirements of higher power, efficiency and reliability," said Paul Beasley, MACOM, Product Manager. "MACOM's GaN in Plastic packaging innovation and rich heritage of expert engineer-to-engineer customer support ensure that radar system designers are best equipped to harness the highest power in the smallest possible size."

GaN in Plastic test fixtures are available upon request. Datasheets and additional product information can be obtained from MACOM's GaN microsite at: www.macomtech.com/gan.

ABOUT MACOM

M/A-COM Technology Solutions (www.macomtech.com) is a leading supplier of high performance analog semiconductor solutions for use in radio frequency (RF), microwave, and millimeter wave applications. Recognized for its broad portfolio of products, MACOM serves diverse markets, including CATV, wireless infrastructure, optical communications, aerospace and defense, automotive, industrial, medical, and mobile devices. MACOM builds on more than 60 years of experience designing and manufacturing innovative product solutions for customers worldwide.

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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Photos/Multimedia Gallery Available: <http://www.businesswire.com/multimedia/home/20130515005464/en/>

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