



Partners from RF to Light

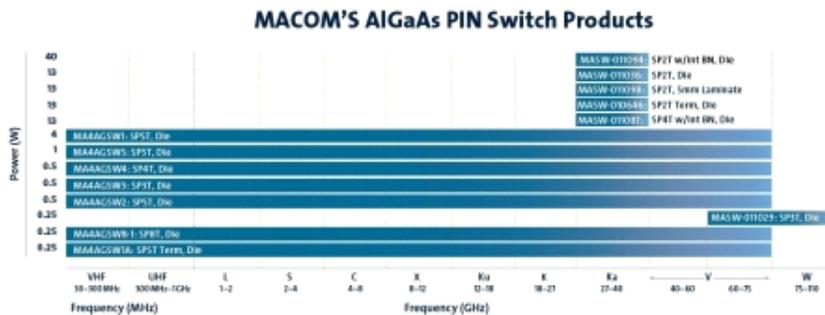
April 5, 2017

MACOM Extends Diode Leadership with the Addition of Three Industry Leading Integrated AlGaAs PIN Diode Switches

- | *Designed for High Frequency Applications*
- | *AlGaAs Technology Offers Power Handling and Low Loss Advantages*
- | *Integrated Bias Current Reduces Piece Part Counts and Manufacturing Costs While Improving Performance*

LOWELL, Mass.--(BUSINESS WIRE)-- [MACOM Technology Solutions Inc.](#) ("MACOM") has added three PIN diode switches to its AlGaAs family. Today's multi-market customers are demanding more bandwidth, making high frequency operation more of a necessity. At the E & W bands, transmission loss and signal integrity are critical for efficient systems. Due to the nature of AlGaAs technology for RF/uW applications the advent of PIN-based AlGaAs switches allow for signal losses to be minimal at these very high frequencies. Utilizing its AlGaAs technology to meet these demanding challenges, MACOM has designed the [MASW-011094](#), a Ka-Band high power terminated SPDT PIN diode switch, [MASW-011029](#), a wideband SP3T PIN diode switch and the [MASW-011087](#), a Ka-Band SP4T PIN diode switch.

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- | MASW-011094 Datasheet: [Click here](#)
- | MASW-011029 Datasheet: [Click here](#)
- | MASW-011087 Datasheet: [Click here](#)

The low loss translates to less noise generated, while maintaining transmit and receive signal integrity. In addition, the lower power loss allows for less compensation needed further down the RF/uW signal chain. While other technologies are available, AlGaAs-based switches have a clear advantage due to their power handling and low loss characteristics. A discrete heterojunction AlGaAs PIN diode switch demonstrates a factor of two reduction in high frequency insertion loss compared to other switches in its class which equates to reliable system performance at higher frequency bands.

Leveraging unparalleled design and application expertise, MACOM is the preeminent supplier of High-Performance Diodes spanning the industry's largest portfolio from PIN Limiter to Varactor and Schottky Diodes. Featuring MACOM's AlGaAs technology, this family of AlGaAs products operate up to 110GHz and boast high isolation, low insertion loss and are available as reflective and terminated devices that enable the customer a broad offering of high-performance components. (Photo: Business Wire)

Bandgap Engineering has been used to produce novel semiconductor structures in the microwave industry for over two decades. Utilizing the properties of multiple quantum wells, superlattices and heterojunctions, a new class of semiconductors grown by molecular beam epitaxy and metalorganic vapor phase epitaxy has been created. These band gap principles have been applied to the development of MACOM's [patented AlGaAs technology](#) resulting in a significant advancement in the RF performance of PIN diodes.

- | To learn more about MACOM's patented diode technologies, product portfolio and support services, [click here](#).

"These parts complement our existing series of broadband AlGaAs switches," said Jack Kennedy, Senior Vice President and General Manager, Aerospace & Defense Solutions, at MACOM. "We've also designed bias network chips, the MABT-011000, MA4BN1840-1 and MA4BN1840-2 for the existing MA4AGSW broadband series, altogether providing a breadth of AlGaAs offerings for a wide array of broadband applications."

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The table below outlines typical performance for the three switches:

Part Number	Frequency	Insertion Loss	Isolation
Units	GHz	dB	dB
MASW-011094	24-37	0.6 @ 28-34GHz	> 26 @ 26-37 GHz
MASW-011029	60-110	1.3 @ 75-100GHz	33 @ 75-100GHz
MASW-011087	14-38	0.9 @ 16-35GHz	32 dB @ 16-35 GHz

Samples are now available. Final datasheets and additional product information can be obtained from the MACOM website at: www.macom.com.

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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