



## 2024-25 Semiconductor Product Selection Guide



AMCOM was established in December 1996 by engineers experienced in both microwave circuit design and microwave device fabrication. It did not take long for AMCOM to become a valuable addition to the RF microwave sector. The Company is based in Rockville, Maryland, USA, about 20 miles northwest of Washington, DC. The goal has always to become the most sought-after RF microwave design and manufacturing company in the industry.

We design and manufacture a wide range of power FETs, MMIC power amplifiers, MMIC switches, MMIC attenuators as well as diverse line of connectorized modules that include high-power amplifiers, low noise amplifiers, switches, attenuators, phase shifters, frequency mixers, RF filters, bias tees, splitters, combiners and couplers. We specialize in broadband, high-efficiency power amplifiers and switches.

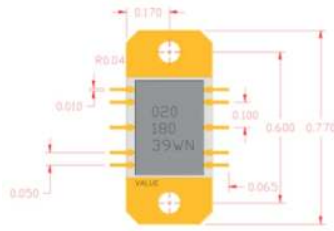
Our most popular products and the largest segment of our business is our specialized integrated circuits that can be tailor packaged to fit customer requirements. We sell our integrated circuits all around the world to companies as large as Toshiba and as small a single sole proprietor for many different applications in the military, industrial, test equipment and medical industries.

We are striving to grow our integrated circuit offering annually with advanced designs and premium quality material. Integrated circuits are the core of our business and ultimately our most valuable product portfolio.

For more information regarding AMCOM Communications' products, get in touch with our team of experts.

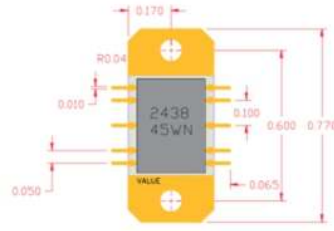
**0330 313 3220** | [rf@apctechcom](mailto:rf@apctechcom)

# New Broadband MMIC PA's & Switches for 2025



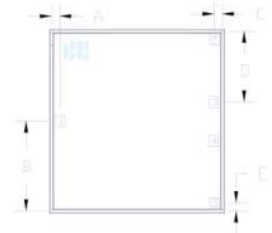
**Gallium Nitride MMIC  
8W 2 –18 GHz Power Amplifier**

AM02018039WN-SN-R is a broadband GaN MMIC power amplifier. It has 20dB gain, and 39 dBm output power over the 3 to 15 GHz band. The



**Gallium Nitride MMIC  
30W 2.5 –3.8 GHz Power Amplifier**

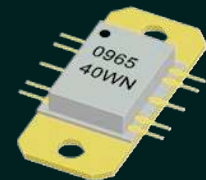
AM253845WN-SN-R is a broadband GaN MMIC power amplifier. It has 22dB gain, and 45 dBm output power over the 2.5 to 3.8GHz band.



**Gallium Nitride SPDT 100W (Pulsed)  
60W (CW) 0.25 – 4 GHz Switch**

AM024050S2WN-00-R is a Single-Pole double Throw (SPDT) reflective switch fabricated using GaN on SiC process. It operates at frequencies from 250 MHz to 4 GHz.

Our New AM096540WN-SN-R is a broadband GaN MMIC power amplifier. It has 20dB gain, and 40.5 dBm output power over the 0.9 to 6.5 GHz band. The AM096540WN-SN-R is in a ceramic package with a flange and straight RF and DC leads for drop-in assembly. Because of high DC power dissipation, good heat sinking is required. The package is RoHS compliant. This MMIC is matched to 50 Ohms.

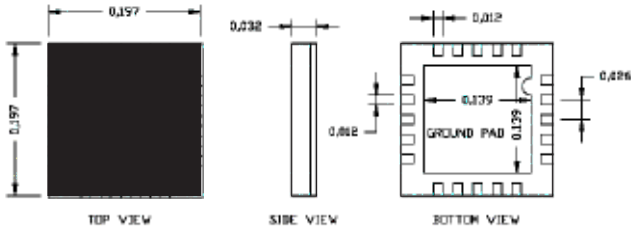


## TABLE OF CONTENTS

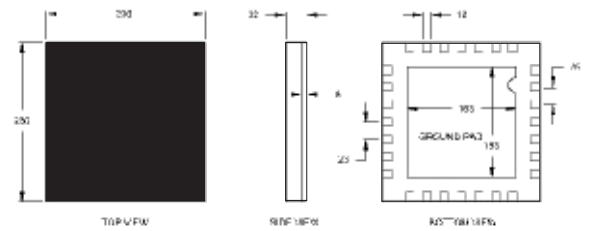
Component Packaging Options	1
GaAs MMIC Power Amplifiers	2-3
GaN MMIC Power Amplifier	3-4
Discrete Power GaN HEMTs	4
Discrete Power GaAs FETs - Attenuators	4-5
Switches - MMIC in a Box	6
Product Summary Charts	7-8

# Semiconductor Package Options

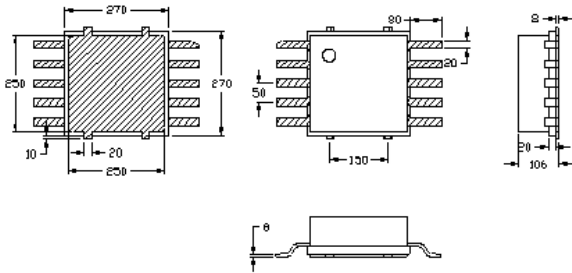
## QFN-5 Package



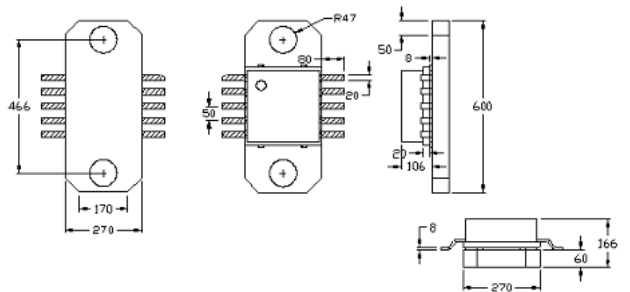
## QFN-6 Package



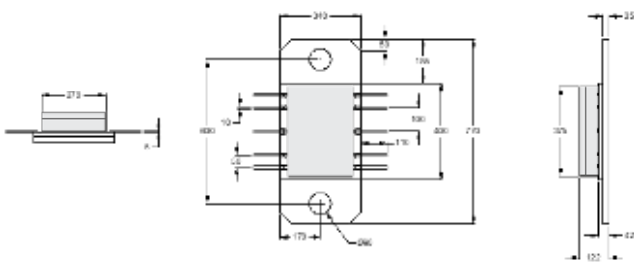
## BM Package



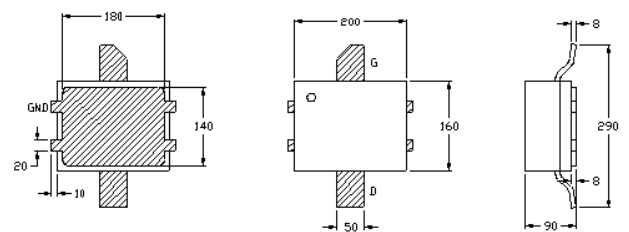
## FM Package



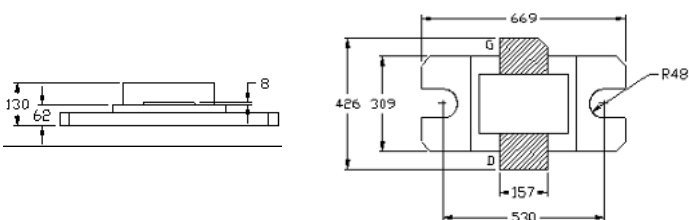
## SN Package



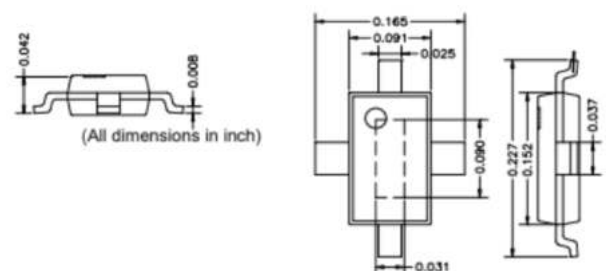
## BI Package

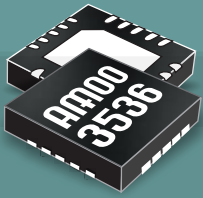


## CU Package

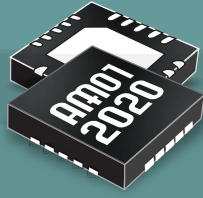


## QG Package

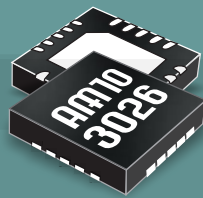




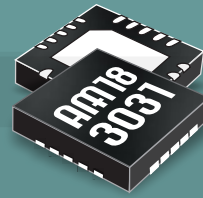
AMCOM's AM003536WM-QN5-R is an ultra-broadband GaAs MMIC power amplifier. It has 22 dB gain and 36dBm output power over the 0.01 to 3.5 GHz band. This MMIC is in a QFN (5x5 mm) package with coplanar RF, ground, and DC connection.



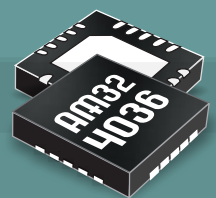
AMCOM's AM012020WM-QN5-R is a broadband low noise power amplifier. It has 2dB Noise Figure, 30dB gain, and 17dBm output P1dB over a broadband of 0.1 to 2GHz. This MMIC is in a QFN (5x5 mm) package with coplanar RF, ground, and DC connection.



AMCOM's AM103026MM-QN5-R is part of the GaAs HiFET MMIC power amplifier series that is biased at 14V. It has 22 dB gain and 26 dBm output power over the 0.8 to 3.6GHz band. This MMIC is in a QFN 5x5mm package with both RF and DC leads.



AMCOM's AM183031WM-QN5-R is part of the GaAs MMIC power amplifier series. It has 30.5dB gain and 31.5dBm output power over the 1.6 to 3.3GHz band. This MMIC is in a QFN 5x5mm package with both RF and DC leads.



AMCOM's AM324036WM-QN5-R is part of the GaAs MMIC power amplifier series. It has 29dB gain and 36dBm output power over the 3.2 to 4.0GHz band. This MMIC is in a QFN 5x5mm package with both RF and DC leads.

## GaAs MMIC Power Amplifiers

Model	Fmin (GHz)	Fmax (GHz)	Gain (dB)	P1dB (dBm)	Eff (%)	Bias (V)	Package
AM011037WM-XX-R	0.2	1	31	37.5	40	+8 / -0.66	SMT/Flange
AM143438WM-XX-R	1.5	1.8	20.5	38	30	+12 / -0.9	SMT/Flange
AM143440WM-XX-R	1.5	1.8	20.5	39	35	+12 / -0.9	SMT/Flange
AM142540MM-XX-R	1.4	1.8	25	40	35	+14 / -0.86	SMT/Flange
AM012020WM-XX-R	0.1	2	30	17	8	+8 / -1.3	SMT/Flange
AM012020WM-QN5-R	0.1	2	30	17	8	+8 / -1.3	QFN
AM072239WM-SN-R	0.7	2.2	30	39	25	+28 / -0.9	SMT/Flange
AM012535MM-XX-R	0.03	2.5	20	33.5	20	+20 / -2.8 / -0.9	SMT/Flange
AM002535MM-XX-R	0.03	2.5	24	35	25	+20 / -0.9	SMT/Flange
AM142540MM-XX-R	2.1	2.5	23	37	35	+14 / -0.7	SMT/Flange
AM132740MM-XX-R	1.3	2.7	26	39	30	+14 / -0.63	SMT/Flange
AM143438WM-XX-R	2	3	20	38	30	+12 / -0.9	SMT/Flange
AM143440WM-XX-R	2	3	20	39	35	+12 / -0.9	SMT/Flange
AM103026MM-XX-R	0.9	3.2	22	26	10	+14 / -2 / -0.56	SMT/Flange
AM103026MM-QN5-R	0.9	3.2	22	26	10	+14 / -2 / -0.56	QFN
AM183030WM-XX-R	1.6	3.3	30.5	31.5	20	+8 / -0.9	SMT/Flange
AM183031WM-XX-R	1.6	3.3	31.5	32.5	25	+8 / -0.9	SMT/Flange
AM153040WM-XX-R	1.4	3.4	18	38	30	+12 / -0.9	SMT/Flange
AM003536WM-XX-R	0.01	3.5	23	36	20	+20 / -1.2 / -0.8	SMT/Flange
AM003536WM-QN5-R	0.01	3.5	22	36	25	+20 / -1.2 / -0.8	QFN
AM153040WM-QN6-R	1.25	3.5	19	37	30	+8 / -0.9	QFN
AM153540WM-XX-R	1.5	3.5	18	39.5	35	+14 / -0.95	SMT/Flange
AM183031WM-QN5-R	1.7	3.5	30.5	31.5	20	+8 / -0.6	QFN
AM254038WM-XX-R	2.5	4	18	39	30	+12 / -0.92	SMT/Flange
AM284233MM-XX-R	2.8	4.2	34	34	25	+8 / -0.7	SMT/Flange
AM324036WM-XX-R	3	4.2	29	36.5	25	+8 / -0.66	SMT/Flange
AM244236WM-XX-R	2.4	4.2	31	36.5	30	+8 / -0.76	SMT/Flange
AM264240WM-XX-R	2.6	4.2	20	40	35	+14 / -0.95	SMT/Flange
AM324036WM-QN5-R	2.8	4.2	26	36	27	+8 / -0.66	QFN
AM204437WM-XX-R	2	4.4	30	37	25	+8 / -0.8	SMT/Flange
AM204437WM-QN6-R	2	4.4	31	34	25	+6 / -0.87	QFN

## GaAs MMIC Power Amplifiers

Model	Fmin (GHz)	Fmax (GHz)	Gain (dB)	P1dB (dBm)	Eff (%)	Bias (V)	Package
AM254540WM-XX-R	2.5	4.5	17	39	35	+12 / -0.97	SMT/Flange
AM304031WM-XX-R	2.6	4.6	31	32.5	25	+8 / -0.5	SMT/Flange
AM184635WM-XX-R	1.8	4.6	30	37	25	+7 / -0.75	SMT/Flange
AM355739WM-EM-R	3.5	5.7	19	39	30	+8 / -0.73	Flange
AM357037WM-SN-R	3.5	7	26	37	24	+8 / -0.85	Flange
AM357037WM-QN6-R	3.5	7	26	35	24	+5 / -0.85	QFN
AM357039WM-SN-R	3.5	7	21	38.5	24	+14 / -0.85	Flange
AM009024WM-QN5-R	0.05	9	22	25	-	+12 / -0.7	QFN
AM009023WM-XX-R	0.05	9	21	23	-	+12 / -0.7	SMT/Flange
AM409533WM-XX-R	4	9.5	21	33	30	+8 / -0.8	SMT/Flange
AM409533WM-QN5-R	4	9.5	21.5	33.5	33	+8 / -0.8	QFN
AM559538WM-QN6-R	4.75	9.5	25	35	25	+5 / -0.66	QFN
AM559538WM-SN-R	5.5	9.5	24	38	25	+8 / -0.89	Flange
AM008030WM-XX-R	0.05	9.5	18	31	20	+12 / -0.7	SMT/Flange
AM009530WM-QN5-R	0.05	9.5	20	30.5	-	+12 / -0.7	QFN
AM08011039WM-SN-R	8	11	25	40	20	+8 / -1.8	Flange
AM08011041WM-SN-R	8	11	28	41	25	+8 / -1.8	Flange
AM07511542WM-SN-R	8	11	25	42	35	+8 / -1	Flange
AM09012541WM-B-SN-R	9	12.5	28	41	30	+8 / -0.9	Flange
AM09012541WM-SN-R	9	12.5	28	41	30	+8 / -2.8	Flange
AM06013033WM-00-R	6	13	28	33	30	+8 / -0.75	Bare Die
AM06013033WM-EM-R	6	13	27	33	25	+8 / -0.75	Flange
AM06013033WM-QN5-R	6	13	28	33	25	+8 / -0.75	QFN
AM13714530WM-SM-R	13.75	14.5	30	31	15	+8 / -0.8	Flange
AM13516042WM-S0-R	13.5	16	23	41	32	+8 / -1	Flange
AM02018026WM-00-R	2	18	23.5	26	-	+15 / -0.85	Bare Die
AM02018026WM-QN5-R	2	18	23	26	-	+15 / -0.85	QFN
AM00020026WM-00-R	DC	20	13.5	26	-	+15 / +4 / -0.8	Bare Die
AM00020026WM-QN5-R	DC	20	13	26	-	+15 / +4 / -0.8	QFN

## GaN MMIC Power Amplifiers

Model	Fmin (GHz)	Fmax (GHz)	Gain (dB)	P1dB (dBm)	Eff (%)	Bias (V)	Package
AM003042WN-XX-R	0.05	3	23	42	33	40 / -2	Flange / SMT
AM003042WN-00-R	0.05	3	24	42	35	40 / -2	Bare Die
AM206041WN-SN-R	1.8	6.5	30	41	23	+28 / -1.8	Flange
AM206041WN-00-R	1.8	6.5	32	42	27	+28 / -1.8	Bare Die
AM408041WN-SN-R	3.75	8.25	31	41	23	+28 / -1.8	Flange
AM408041WN-00-R	3.75	8.25	33	42	27	+28 / -1.8	Bare Die
AM00010037WN-SN-R	DC	10	13	37	23	+28 / -1.8	Flange
AM00010037WN-00-R	DC	10	13	37	25	+28 / -1.8	Bare Die
AM00010037WN-QN6-R	DC	10	13	36	25	+28 / -2.0	QFN
AM08012041WN-SN-R	7.5	12	21	41	20	+28 / -1.9	Flange

## GaN MMIC Power Amplifiers

Model	Fmin (GHz)	Fmax (GHz)	Gain (dB)	P1dB (dBm)	Eff (%)	Bias (V)	Package
AM08012041WN-00-R	7.5	12	22	42	20	+28 / -1.9	Bare Die
AM07512041WN-SN-R	7.75	12.25	27	41	22	+28 / -1.8	Flange
AM07512041WN-00-R	7.75	12.25	28	42	27	+28 / -1.8	Bare Die

## Discrete Power GaN HEMTs

Model	Fmin (GHz)	Fmax (GHz)	Gain (dB)	P1dB (dBm)	Eff (%)	Bias (V)	Package
AM050WN-CU-R	DC	6	16.5	41.7	43	+ 28 / -2	Flange
AM100WN-CU-R	DC	6	14	44.5	46	+ 28 / -2	Flange
AM025WN-BI-R	DC	8	16	38.9	40	+ 28 / -2	SMT
AM012WN-BI-R	DC	10	17	36.1	37	+ 28 / -2	SMT
AM005WN-BI-R	DC	12	15	32	33.5	+ 28 / -2	SMT
AM012WN-00-R	DC	15	22	36.1	37.7	+ 28 / -2	Die
AM025WN-00-R	DC	15	21	38.9	40.5	+ 28 / -2	Die
AM050WN-00-R	DC	15	20	41.7	43.3	+ 28 / -2	Die
AM100WN-00-R	DC	15	19	44.5	46.1	+ 28 / -2	Die
AM005WN-00-R	DC	18	23	32	33.4	+ 28 / -2	Die



AMCOM's AM030MH4-BI-R is part of the BI series of GaAs HiFETs. The HiFET is a partially matched patented device configuration for high voltage, high power, high linearity, and broadband applications. This part has a total device periphery of 12mm. The AM030MH4-BI-R is designed for high power microwave applications, operating up to 3GHz. The flange at the bottom of the package serves simultaneously as DC ground, RF ground and thermal path. This HiFET is RoHS compliant.

AMCOM's AM005MH2-BI-R is a part of the BI series of GaAs HiFETs. The HiFET is a partially matched patented device configuration for high voltage, high power and broadband applications. This part has a total device periphery of 1mm. The AM005MH2-BI-R is designed for high power microwave applications, operating up to 6 GHz. It is also an ideal driver for larger power devices. The flange at the bottom of the package serves simultaneously as DC ground, RF ground, and thermal path. This part is RoHS compliant.

AMCOM's AM032MH4-BI-R is part of the BI series of GaAs HiFETs. The HiFET is a partially matched patented device configuration for high voltage, high power and broadband applications. This part has a total device periphery of 12.8mm. The AM032MH4-BI-R is designed for high power microwave applications, operating up to 6GHz. The flange at the bottom of the package serves simultaneously as DC ground, RF ground and thermal path. This HiFET is RoHS compliant.

AMCOM's AM030WX-BI-R is a discrete GaAs pHEMT that has a total gate width of 3.0mm. It is in a ceramic BI package for operating up to 10 GHz. The BI package uses a specially designed ceramic package with bent (BI-G) or straight (BI) leads in a drop-in mounting style. The flange at the bottom of the package serves simultaneously as DC ground, RF ground, and thermal path. This part is RoHS compliant. For more information on this product or any other AMCOM product visit our website at [www.amcomusa.com](http://www.amcomusa.com).

AMCOM's AM020WH2-BI-R is a part of the BI series of GaAs HiFETs. The HiFET is a partially matched patented device configuration for high voltage, high power and broadband applications. This part has a total device periphery of 4mm (Two 2mm FETs in series). The AM020WH2-BI-R is designed for high power microwave applications, operating up to 12 GHz. It is also an ideal driver for larger power devices. The flange at the bottom of the package serves simultaneously as DC ground, RF ground, and thermal path. This part is RoHS compliant.

## GaAs FETs & pHEMTs

Model	Fmin (GHz)	Fmax (GHz)	Gain (dB)	P1dB (dBm)	Eff (%)	Bias (V)	Package
AM010MH4-BI-R	DC	3	19	31	46	+ 28 / -1	SMT
AM030MH4-BI-R	DC	3	19	36	49	+ 28 / -1	SMT
AM006MX-QG-R	DC	6	13	22	34	+ 5 / -1	SMT
AM012MX-QG-R	DC	6	13.5	25	37	+ 5 / -1	SMT
AM024MX-QG-R	DC	6	13	28	39	+ 5 / -1	SMT
AM036MX-QG-R	DC	6	12	29.5	42	+ 5 / -1	SMT

## GaAs FETs & pHEMTs

Model	Fmin (GHz)	Fmax (GHz)	Gain (dB)	P1dB (dBm)	Eff (%)	Bias (V)	Package
AM048MX-QG-R	DC	6	11	31	43	+ 5 / -1	SMT
AM072MX-CU-R	DC	6	11	34	46	+ 7 / -1	Flange
AM100MX-CU-R	DC	6	10	35	48	+ 7 / -1	Flange
AM150MX-CU-R	DC	6	10	36.5	50	+ 7 / -1	Flange
AM200MX-CU-R	DC	6	10	38	48	+ 7 / -1	Flange
AM300MX-CU-R	DC	6	9	39.5	51	+ 7 / -1	Flange
AM005MH2-BI-R	DC	6	15	25	40	+ 14 / -1	SMT
AM010MH2-BI-R	DC	6	15	28	43	+ 14 / -1	SMT
AM032MH4-BI-R	DC	6	19	36	49	+ 28 / -1	SMT
AM090WX-CU-R	DC	6	12	37	45	+ 8 / -0.7	Flange
AM120WX-CU-R	DC	6	11.5	38	46	+ 8 / -0.7	Flange
AM030WH4-BI-R	DC	6	21	37	37	+ 28 / -0.7	SMT
AM030WX-BI-R	DC	10	14	33	34	+ 8 / -0.7	SMT
AM060WX-BI-R	DC	10	13.5	35.5	36.5	+ 8 / -0.7	SMT
AM005WX-BI-R	DC	12	17	24.5	25.5	+ 8 / -0.7	SMT
AM010WX-BI-R	DC	12	16	28.5	30	+ 8 / -0.7	SMT
AM005WH2-BI-R	DC	12	20	26	27	+ 14 / -0.7	SMT
AM010WH2-BI-R	DC	12	18	30	31	+ 14 / -0.7	SMT
AM020WH2-BI-R	DC	12	18	33	34	+ 14 / -0.7	SMT
AM030WH2-BI-R	DC	12	18	34.5	36	+ 14 / -0.7	SMT
AM060WH2-CU-R	DC	12	17	38	38.5	+ 14 / -0.7	Flange
AM120WH2-CU-R	DC	12	16	39	39.5	+ 14 / -0.7	Flange

## GaAs FETs & pHEMTs

Model	Fmin (GHz)	Fmax (GHz)	Gain (dB)	P1dB (dBm)	Eff (%)	Bias (V)	Package
AM012MX-QF-R	DC	6	13.5	26.5	42	+ 7	SMT
AM024MX-QF-R	DC	6	13	29.5	42	+ 7	SMT
AM036MX-QF-R	DC	6	12	31	42	+ 7	SMT
AM048MX-QF-R	DC	6	11	32.5	42	+ 7	SMT
AM072MX-QF-R	DC	6	11	34	42	+ 7	SMT

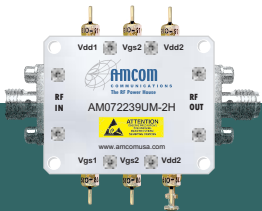
## GaAs Attenuators

Model	Fmin (GHz)	Fmax (GHz)	Insertion Loss (dB)	Power Handling	Switch Timing (ns)	Type
AM000110D230WM-QN-3R	DC	11	2.7	25	<100	2-Bit Digital
AM000120VA20WM-QN3-R	DC	12	4	10	<100	VVA
AM000110D230WM-QN-3R	DC	10	3	25	<100	5-Bit Digital



## New MMIC GaN Switches for 2025

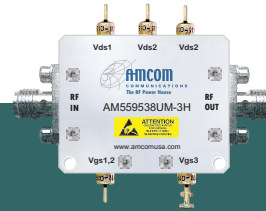
Model	Fmin (GHz)	Fmax (GHz)	Insertion Loss (dB)	Max RF PWR (dBm)	Switch Timing (ns)	Type
AM024050S2WN-00-R	.25	4	1.1	50	<100	SPDT
AM00010024TSWM-QN4-R	DC	10	2.9	24	<100	DPDT
AM003044WM-BM-R	DC	3	1.0	43	<100	SPDT
AM00010025S2WM-QN3-R	DC	10	2.0	25	<100	SPDT
AM00014025S1WM-QN3-R	DC	14	1.7	25	<100	SPST
AM008035S2WM-QN3-R	DC	8	1.2	35	<100	SPDT
AM008038S2WM-QN3-R	DC	8	0.8	38	<100	SPDT
AM008435S1WM-QN3-R	DC	8.4	0.8	35	<100	SPST
AM005038S1WM-QN4-R	DC	5	2.0	38	<100	SPST
AM004038S2WM-QN4-R	DC	4	1.0	38	<100	SPDT



AMCOM's AM072239UM-2H is a broad-band GaAs Power Amplifier module. AM072240UM-2H is a wideband power amplifier designed for Wireless Internet Access, Wireless Local Loop, and Two Way Radio.



AMCOM's AM206541UM-3H is a broad-band power amplifier. It operates from 2.0 GHz to 6.5 GHz and typically delivers more than 12 watts (41 dBm) output power with 26 dB small signal gain.



AMCOM's AM559538UM-3H is a broad-band GaAs MMIC Power Amplifier. It has a nominal CW performance of 24 dB small signal gain, and 38 dBm (6W) saturated output power over the 5.5 to 9.5 GHz band.

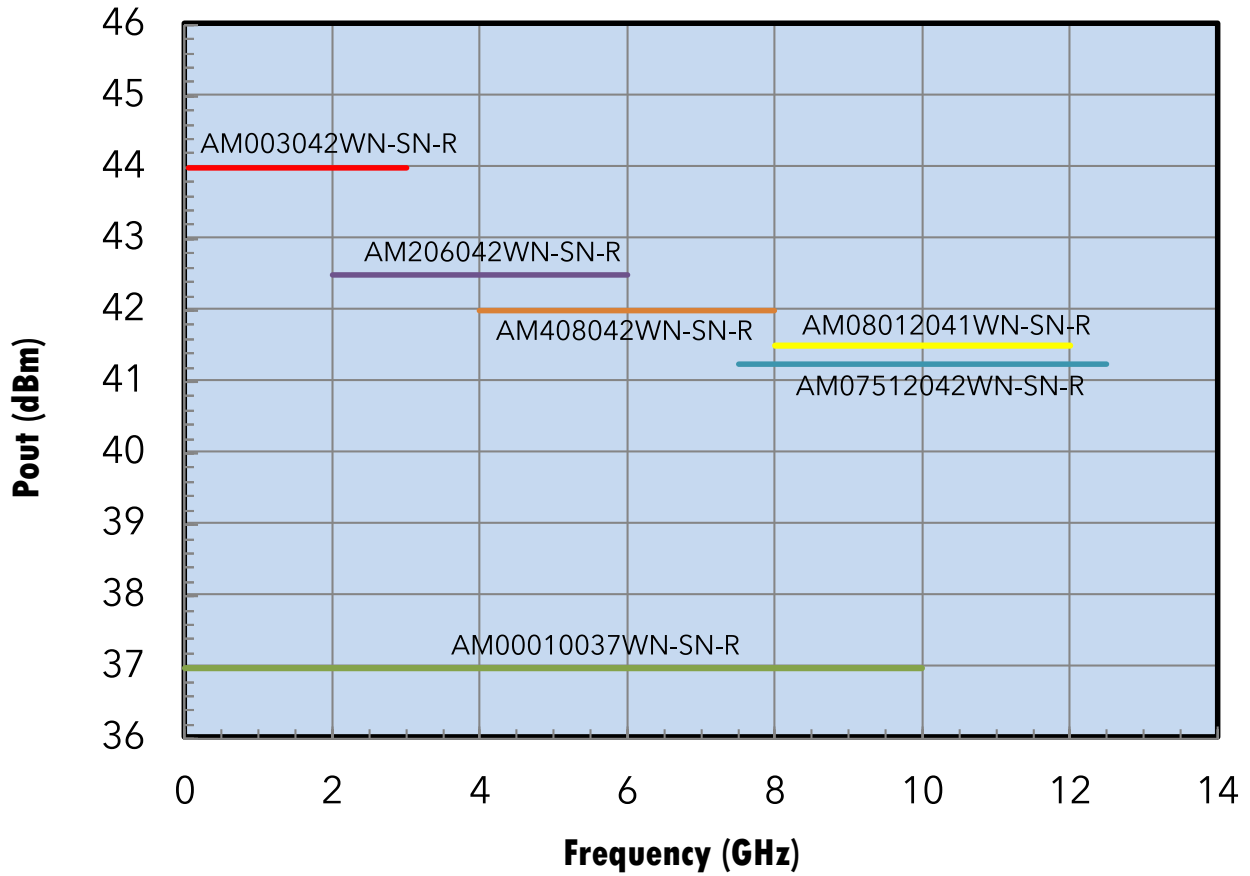


AMCOM's AM07511037UM-3H is a broadband GaAs power module. It has 25dB small signal gain, and 37dBm output power over the 7.5 to 11.0GHz band at 5V bias.

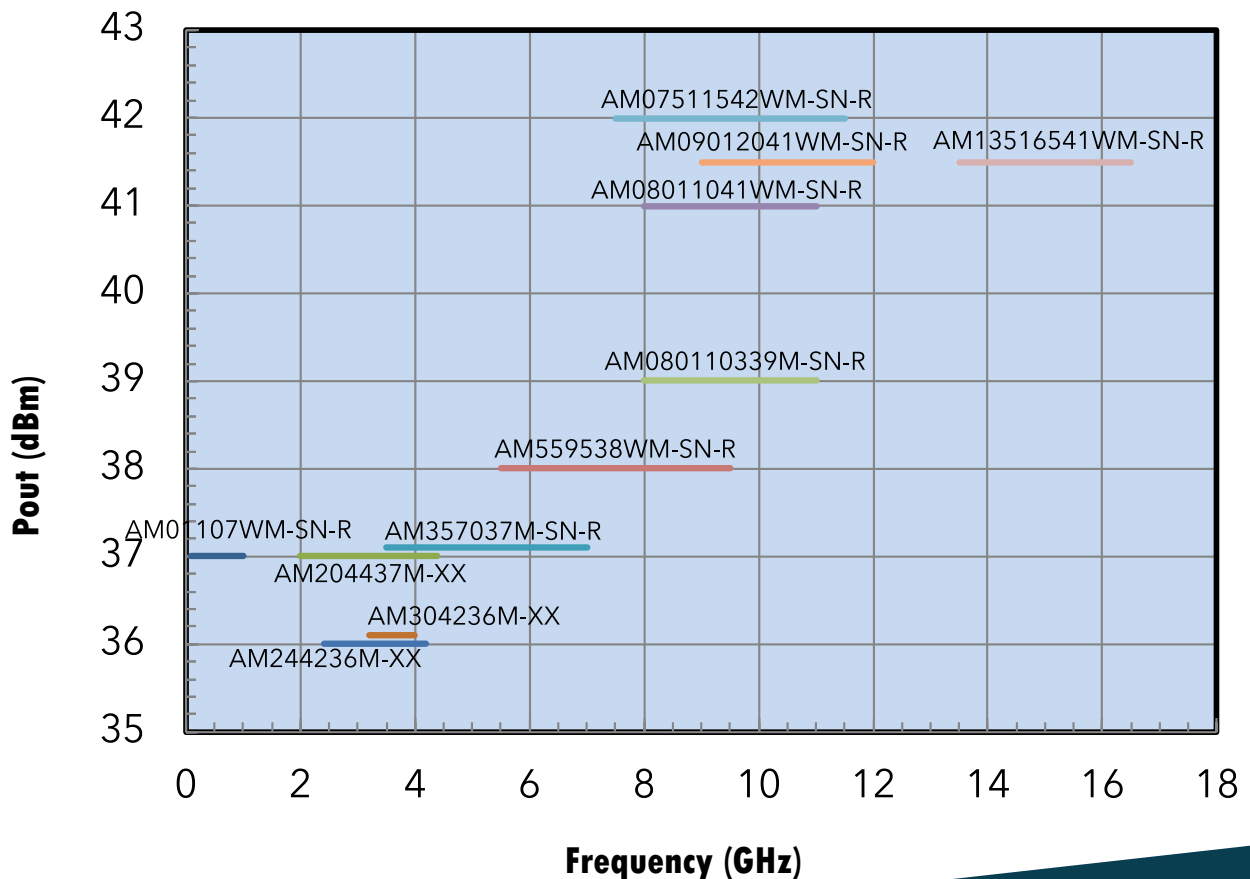
## MMIC in a BOX

Model	Fmin (GHz)	Fmax (GHz)	Gain (dB)	Pout (dBm)	Bias (V)	RF In & Out	Size (in)
AM072239UM-2H	0.7	2.2	30	39	+28 / -0.94	SMA	1.5 x 1.2 x 0.58
AM153540UM-2H	1.5	3.5	21	39.5	+14 / -0.97	SMA	1.5 x 1.2 x 0.58
AM254038UM-2H	2.5	4	18	39	+12 / -0.82	SMA	1.5 x 1.2 x 0.58
AM264240UM-2H	2.6	4.2	20	40	+14 / -0.95	SMA	1.5 x 1.2 x 0.58
AM204437UM-3H	2	4.4	32	37	+8 / -0.8	SMA	1.5 x 1.2 x 0.58
AM206541UM-3H	2	6.5	26	41	+28 / -2.3	SMA	1.5 x 1.2 x 0.58
AM357037UM-3H	3.5	7	27	37	+8 / -0.89	SMA	1.5 x 1.2 x 0.58
AM357039UM-2H	3.5	7	21	38.5	+14 / -0.89	SMA	1.5 x 1.2 x 0.58
AM018033UM-2H	0.1	8	17	33	+28 / -2.5	SMA	1.5 x 1.2 x 0.58
AM559538UM-3H	5.5	9	24	38	+8 / -0.87	SMA	1.5 x 1.2 x 0.58
AM08011034UM-3H	8	11	25	34	+5 / -2.4	SMA	1.5 x 1.2 x 0.58
AM08011036UM-3H	8	11	28	36	+5 / -2.6	SMA	1.5 x 1.2 x 0.58
AM07511037UM-3H	7.5	11	25	37	+5 / -0.98	SMA	1.5 x 1.2 x 0.58
AM07512041UM-2H	7.5	12	24	42	+28 / -2.3	SMA	1.5 x 1.2 x 0.58

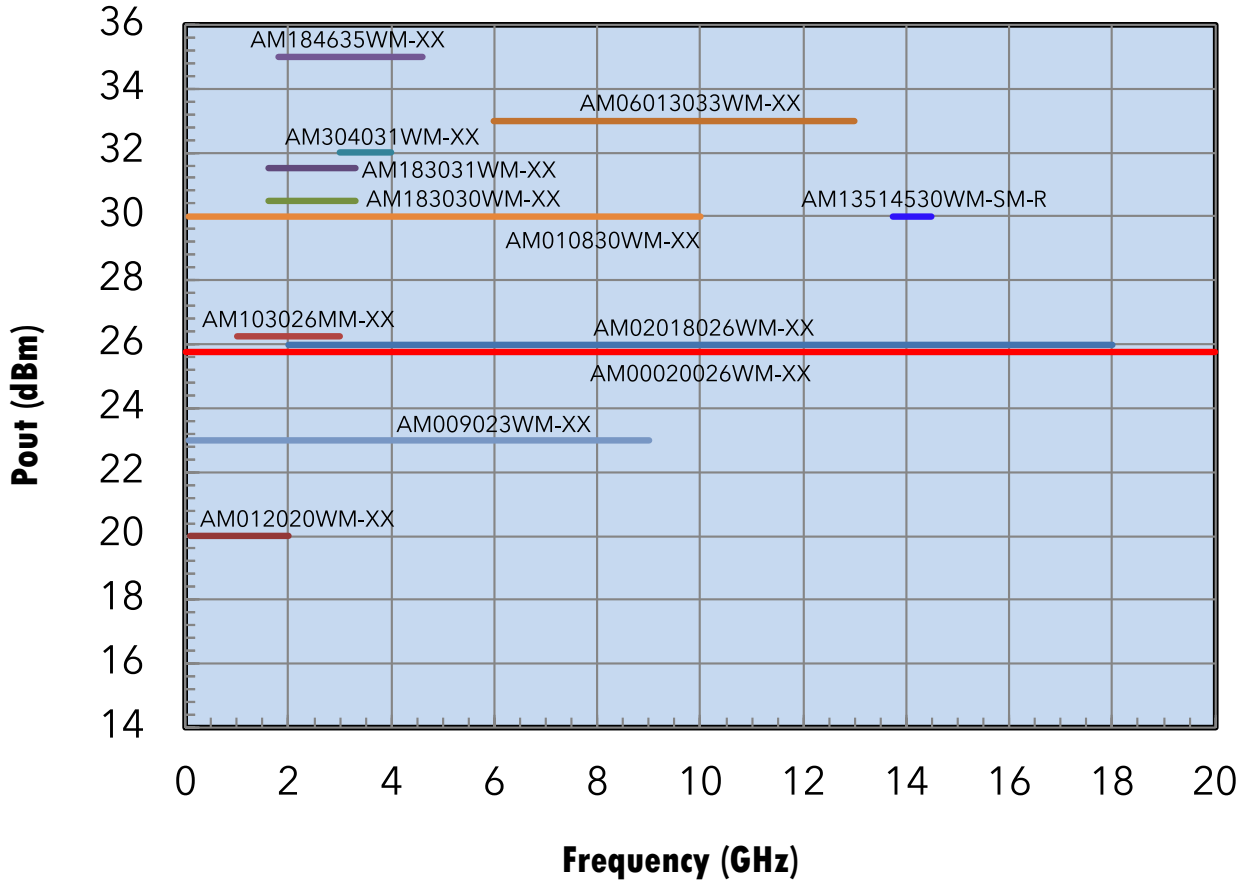
### High-Power GaN MMIC Summary



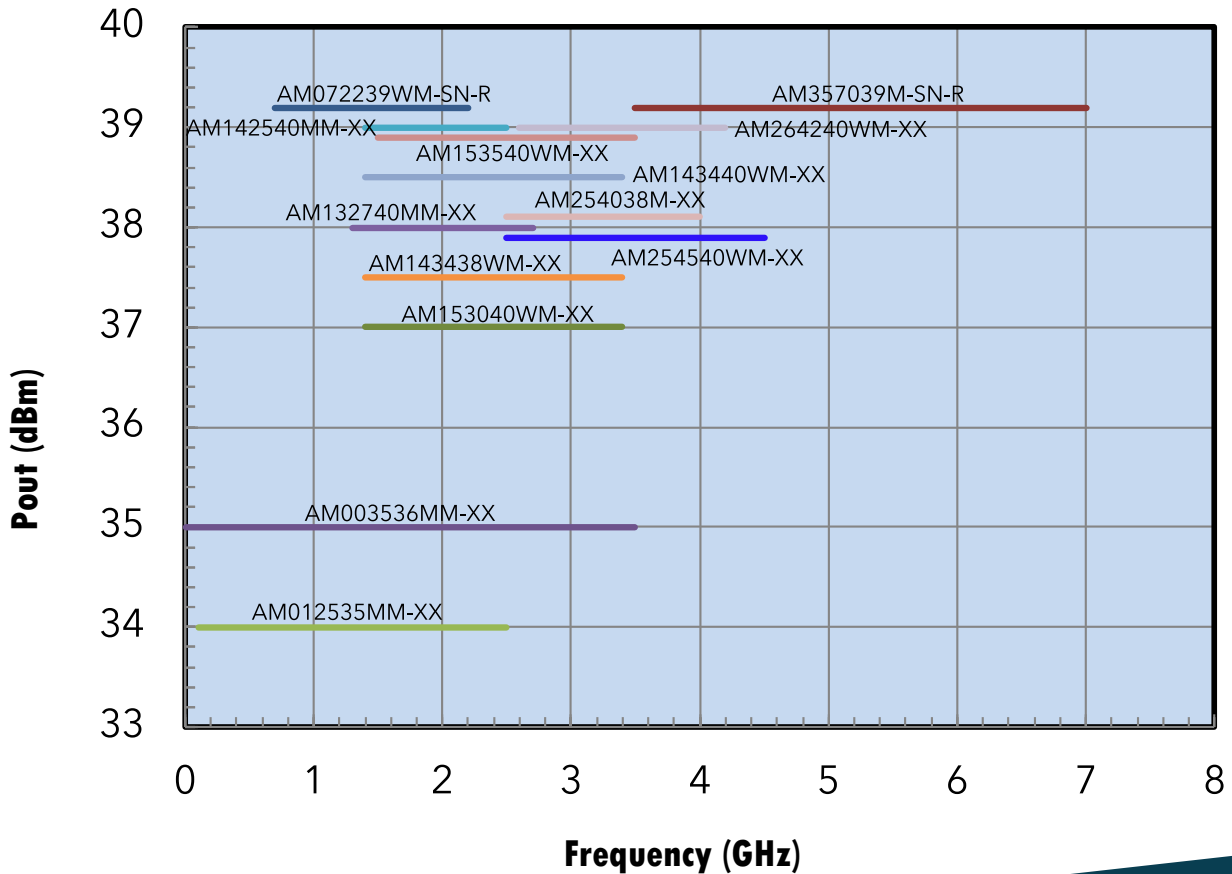
### High Power GaAs MMIC Summary



### Low Power GaAs MMIC Summary



### High-Voltage GaAs MMIC Summary





Contact our RF and Microwave team for dedicated technical support and guidance.

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