



Wireless Infrastructure

RFHIC PRODUCT CATALOGUE

RFHIC

For any questions [click here](#)

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DOMINATE WITH GALLIUM NITRIDE

At RFHIC, we offer the world's most exceptional product portfolio of GaN transistors, MMICs, connectorized power amplifiers, low noise amplifiers, and variable attenuators suited for multi-mode base station applications.

Whether you need high power, high efficiency or high linearity our wide range of products can offer users with market-leading performance and design. Ongoing research and developments will expand RFHIC's horizon into 4.5G LTE and 5G massive MIMO base stations.

GaN RF Device Market Size



\$2B
by 2024
Source:
Yole and Company Estimates



GaN Power Transistors

Discover a wide range of solutions with RFHIC's leading-edge GaN on SiC transistors. Due to its unbeatable compact size, high-efficiency, power, and wide frequency ranges, RFHIC's GaN on SiC transistors are solving the power challenges of today's most demanding industries. Customized solutions are available upon request.



*All product datasheets can be downloaded here: [GaN Power Transistors](#)

Band	Part Number	Type	Freq. [MHz]		Vds [V]	Peak Power [W]	Avg. Power [W]	Gain @Pavg [dB]	DE@Pavg [%]	ACPR [dBc]	Package	Frequency	
			Lower	Upper								S Single Package	D Dual Package
3600	IE36220W	S	3480	3520	48	220	50	14.7	34.8	29.6	RF12002KR3	3480	3520
	IE36170WD	D	3520	3560	48	170	32	14.6	48.3	24.6	RF12001DKR3	3520	3560
	IE36110W	S	3400	3600	48	110	25	17.1	35.5	27.3	RF12002KR3	3400	3600
	IE36085W	S	3400	3600	48	85	19	17.3	35.4	30.2	RF12002KR3	3400	3600
2600	IE27385D	D	2620	2690	48	385	69	13.8	53.6	23.7	RF24001DKR3	2620	2690
	IE27330D	D	2620	2690	48	330	63	14.2	54.1	22.5	RF24001DKR3	2620	2690
	IE27330P	S	2620	2690	48	330	79	15.4	39.1	29.2	NS-AS01	2620	2690
	IE27275D	D	2575	2635	48	275	50	14.1	59.4	21.5	RF24001DKR3	2575	2635
	IE27220PE	S	2620	2690	48	220	50	17	41.5	27	NS-AS01	2620	2690
	IE26195WD	D	2575	2635	48	195	32	14.4	53.6	26.6	RF12001DKR3	2575	2635
	IE27165PE	S	2620	2690	48	165	40	16.9	43.1	28.9	NS-AS01	2620	2690
	IE26110P	S	2500	2690	48	110	25	19.1	39.6	27.7	NS-AS01	2500	2690
	IE26085P	S	2496	2690	48	85	19	20.2	42	26.2	NS-AS01	2496	2690
2300	IE23195WD	D	2300	2400	48	195	40	15.3	55.8	25.6	RF12001DKR3	2300	2400
2100	IE21385D	D	2110	2170	48	385	63	14.6	55.7	25.5	RF24001DKR3	2110	2170
	IE21330P	S	2110	2170	48	330	79	15.6	39.2	30.2	NS-AS01	2110	2170
	IE21220P	S	2110	2170	48	220	50	17.4	40	30.8	NS-AS01	2110	2170
	IE21165PE	S	2110	2170	48	165	37	17.5	39.6	31.9	NS-AS01	2110	2170
	IE21110P	S	2110	2170	48	110	25	18.4	38.9	32.7	NS-AS01	2110	2170
	IE21085P	S	2110	2170	48	85	19	20.7	43.1	26.6	NS-AS01	2110	2170

2000 2500 3000 3500 4000 [MHz]

GaN Power Transistors

Discover a wide range of solutions with RFHIC's leading-edge GaN on SiC transistors. Due to its unbeatable compact size, high-efficiency, power, and wide frequency ranges, RFHIC's GaN on SiC transistors are solving the power challenges of today's most demanding industries. Customized solutions are available upon request.



Band	Part Number	Type	Freq. [MHz]		Vds [V]	Peak Power [W]	Avg. Power [W]	Gain @Pavg [dB]	DE@Pavg [%]	ACPR [dBc]	Package	Frequency	
			Lower	Upper								S Single Package	D Dual Package
1800	IE19195WD	D	1880	2025	48	195	32	16.9	49.9	27.8	RF12001DKR3		1880 2025
	IE18330D	D	1805	1880	48	330	63	15.5	57.7	25.2	RF24001DKR3		1805 1880
	IE18330PG	S	1805	1880	48	330	74	15.8	40	31.9	NS-AS01		1805 1880
	IE18250D	D	1805	1880	48	250	45	16.7	58.2	26.7	RF24001DKR3		1805 1880
	IE18220PG	S	1805	1880	48	220	50	18.1	40.9	30.3	NS-AS01		1805 1880
	IE18165P	S	1805	1880	48	165	37	18.3	39.2	31	NS-AS01		1805 1880
	IE18085P	S	1805	1880	48	85	19	18.9	36.6	31.5	NS-AS01		1805 1880
800	IE08220P	S	758	858	48	220	50	22	38.9	29.4	NS-AS01		758 858
	IE08165P	S	770	900	48	165	37	20.9	39.8	33.3	NS-AS01		770 900
Driver 0~6000	RT12014P	S	DC	6000	48	14	3.2	17.5@2.6GHz	35.2	37.3	NS-CS01	0	6000
	RT12028P	S	DC	6000	48	28	6.3	17.6@2.6GHz	29.7	37.1	NS-CS01	0	6000
	RT12055P	S	DC	6000	48	55	12.6	15.7@2.6GHz	34.1	36.5	NS-CS01	0	6000
	ETQ2014P	S	DC	6000	48	14	3.2	18.5@2.6GHz	35.2	31.3	DFN66726L-Q2	0	6000
	ETQ2028P	S	DC	6000	48	28	6.3	18.7@2.6GHz	33.8	33	DFN66726L-Q2	0	6000
	DT12060P	S	DC	6000	50	60	14.1	17@2.6GHz	37.5	31.7	NS-CS01	0	6000

GaAs MMICs

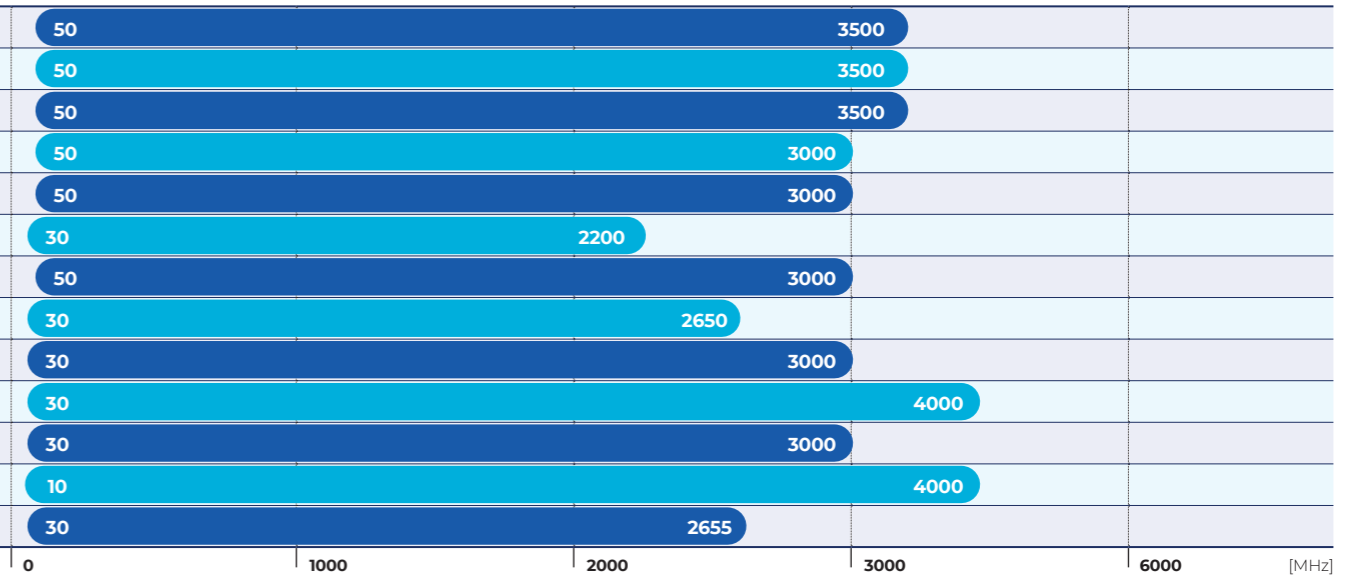
At RFHIC, we offer cost-efficient Gallium Arsenide (GaAs) MMICs designed for 50-ohm and 75-ohm FTTH, Set-Top Box, Telecom, and Smart Meter applications. Our GaAs MMICs are processed on Gallium Arsenide Enhancement Mode pHEMT which ensures minimal noise and low current draw. Users can utilize this device for low noise amplifiers, drivers, gain blocks, and final stage amplifiers. Our GaAs MMICs are designed to be RoHS compliant delivering our customers with high quality and environmentally conscious products.



*All product datasheets can be downloaded here: [GaAs MMIC](#)

Part Number	Frequency		Gain [dB]	NF [dB]	P1dB [dBm]	Eff.@ P1dB [%]	OIP3 [dBm]	WCD-MA [dBm]	Voltage [V]	Current [mA]	Package	Process Type
	Lower	Upper										
AE379	50	3500	11.5	2.3	33	60	45	23	5	390	SOIC-8	GaAs E-pHEMT
AE368	50	3500	13.7	2.9	30.4	54	48	21.2	5	300	SOIC-8	GaAs E-pHEMT
AE367	50	3500	15.5	3.5	27	50	39	18.5	5	140	SOT-89	GaAs E-pHEMT
AP209	50	3000	13.7	2.5	24	-	44	-	9	120	SOT-89	GaAs MESFET
AP211	50	3000	13	2.5	24	-	42	-	5	240	SOIC-8	GaAs MESFET
AE366	30	2200	22.5	1.6	22	-	37.5	-	5	90	SOT-89	GaAs E-pHEMT
AP205A	50	3000	14	2.3	22	-	43	-	5	115	SOT-89	GaAs MESFET
AE305	30	2650	14.5	2.5	22	-	38	-	5	110	SOT-89	GaAs E-pHEMT
AE314	30	3000	23	2.8	20	-	35	-	5	100	SOT-89	GaAs E-pHEMT
AE362	30	4000	15.2	1.2	20	-	32	8.5	4.5	45	SOT-89	GaAs E-pHEMT
AE410	30	3000	20	2.1	20	-	36	-	5	100	SOT-89	GaAs E-pHEMT
AE608	10	4000	14	0.7	14	-	32	-	3	45	SOT-143	GaAs E-pHEMT
AE312	30	2655	20	1	19	-	32	-	5	50	SOT-89	GaAs E-pHEMT

Frequency



Low Noise Amplifiers

At RFHIC, we design, manufacture and support a range of low noise amplifiers for RF and microwave applications. Our low noise amplifiers for base station applications cover a wide frequency range of 800 to 3800 MHz. Each low noise amplifier is built using our GaAs p-HEMT die, which is attached on a ceramic film substrate. Customized solutions are available upon customer request. All our low noise amplifiers are designed to be RoHS compliant delivering customers with high quality and environmentally conscious products.



* All product datasheets can be downloaded here: [Low Noise Amplifier](#)

Part Number	Frequency [MHz]		Gain [dB]	NF [dB]	P1dB [dBm]	OIP3 [dBm]	Vdd [v]	IDD [mA]	Package
	Lower	Upper							
LCL3322-L	2700	3800	21	1.4	27	39	5	190~250	CP-16B
CL2102-L	1750	2600	14.5	0.7	20	33	5	100	CP-16A

Frequency



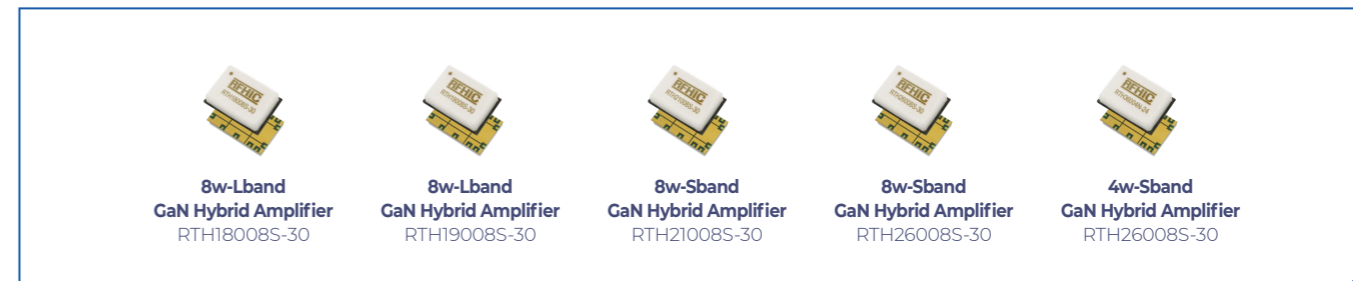
SMALL CELLS

At RFHIC, we offer a wide range of GaN SMD modules in a variety of powers and frequency ranges to best suite your needs. See how our products can help you achieve faster speed, capacity and low latency for small cell applications.



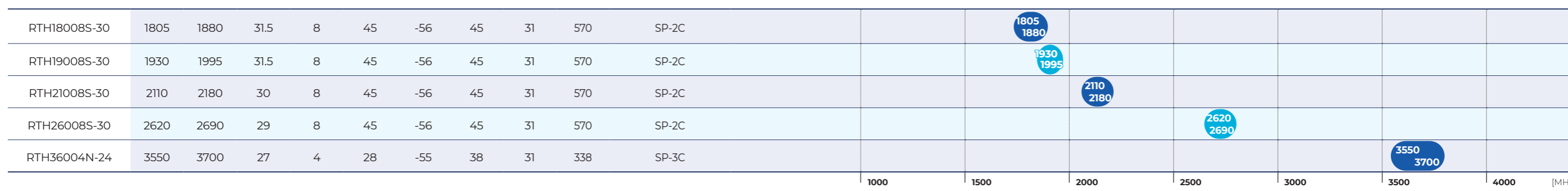
GaN Hybrid Modules

RFHIC's line of GaN SMD modules covers a wide frequency range starting from 1805 MHz to 3.7 GHz. Each of our GaN SMD modules is designed utilizing our state-of-the-art GaN HEMT technology allowing them to achieve high power with excellent thermal stability. Customized solutions are available upon request.



*All product datasheets can be downloaded here: [GaN Hybrid Modules](#)

Part Number	Frequency [MHz]		Gain	Pavg	Ppeak	ACLR with DPD	Eff	Vdd	Idd	Package
	Min	Max	[dB]	[W]	[W]	[dBc]	[%]	[v]	[mA]	



Communication

RFHIC is a global leader in designing and manufacturing GaAs MMICs, Active Dividers, Wideband Amplifiers, and GaN MMICs suited for communications and broadband applications.

GaN Hybrid Amplifier

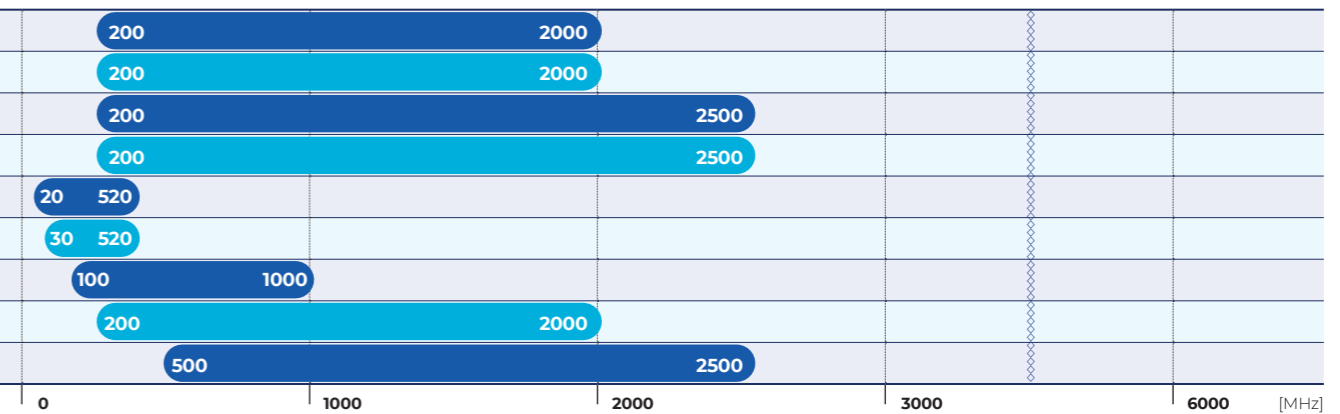
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*All product datasheets can be downloaded here: [GaN Hybrid Amplifier](#)

Part Number	Frequency [MHz]		P3dB	Eff. @ P3dB	Power Gain	Vdd	Idd	Package
	Min	Max	[W]	[%]	[dB]	[v]	[mA]	
HM0220-03A	200	2000	3	39	34	18	450	NP-1A
HM0220-05A	200	2000	5	40	35	24	525	NP-1A
HM0225-05A	200	2500	5	35	35	24	525	NP-1A
HM0225-05B	200	2500	5	31	34	24	670	NP-1A
HM0005-10A	20	520	10	45	30	28	900	NP-1E
TG520-10	30	520	10	60	16	28	600	NP-1B
TG1000-10	100	1000	10	50	15	28	700	NP-1B
TG2000-10	200	2000	10	50	12	28	600	NP-1B
HM0525-10A	500	2500	10	30	20	28	1300	NP-1E

Frequency



Low Noise Amplifiers

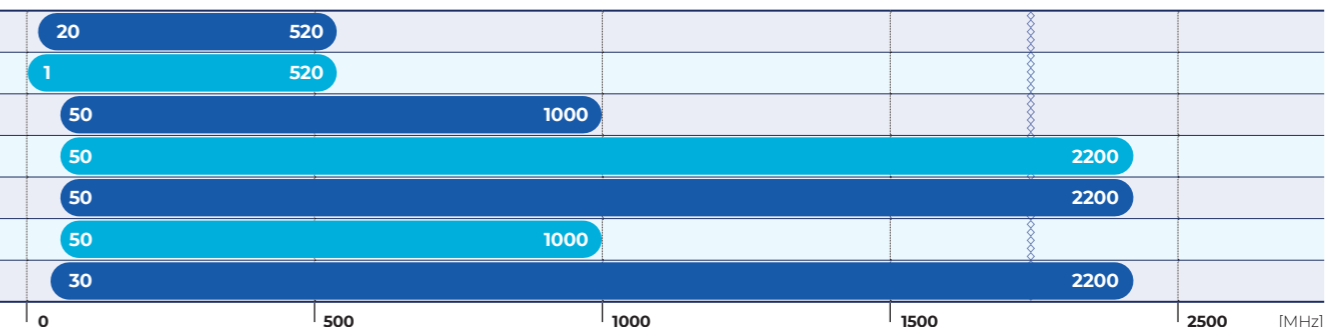
At RFHIC, we design, manufacture and support a range of low noise amplifiers for RF and microwave applications. Our low noise amplifiers for base station applications cover a wide frequency range of 800 to 3800 MHz. Each low noise amplifier is built using our GaAs p-HEMT die, which is attached on a ceramic film substrate. Customized solutions are available upon customer request. All our low noise amplifiers are designed to be RoHS compliant delivering customers with high quality and environmentally conscious products.



*All product datasheets can be downloaded here: [Low Noise Amplifiers](#)

Part Number	Frequency [MHz]		Gain	Flatness	NF	P1dB	OIP3	Vdd	IDD	Package
	Lower	Upper	[dB]	[dB]	[dB]	[dBm]	[dBm]	[v]	[mA]	
WLP0640	20	520	19.5	0.8	2.5~2.9	31	43	12	360	CP-6C
WL0510	1	520	23	1.2	1.4~2.0	22	33	5	100	CP-16
WL1015-L	50	1000	16	2	1.7	21	35	5	160	CP-16A
WL2215-L	50	2200	15	4	1.7	21	35	5	160	CP-16A
WL2208-L	50	2200	15	4	1.5	20	31	5	100	CP-16A
WL1008-L	50	1000	16	2	1.5	19	31	5	100	CP-16A
WL2205-L	30	2200	15.5	1.2	1.4~1.7	15	26	5	50	CP-16A

Frequency



Wideband Amplifiers

In the air, on land, and at sea. Our GaN on SiC wideband amplifiers offer excellent harmonics and exceptional wideband performance for EW defense applications. See and experience how we can meet today's most challenging defense problems with both our standard and custom solutions.

*All product datasheets can be downloaded here: [Wideband Amplifiers](#)

Part Number	Freq. [MHz]		P3dB (peak) [dBm]	Gain [dB]	OIP3 [dBm]	Vdd [V]	Idd [mA]	Dimension	Package	Frequency	
	Min	Max									
RWP03040-50	20	500	46	39	-	28	4	70x50.8x17.1	DP-75	20	500
RWP03160-10	20	500	52	43	54	28	11	120x65x16.7	-	20	500
RWS02520-10	20	512	43	41	52	28	2.1	63x38x14.4	-	20	512
RWS02540-10	20	512	46	44	53	28	3.5	63x38x14.4	-	20	512
RWP03060-10	20	512	-49	38	-	32	6	72x50.8x16.8	-	20	512
RWP03040-10	20	520	46	42	54	28	3.8	70x50.8x17.1	DP-75	20	520
RWM03060-10	20	520	49	55	-	28	7	162.6x86.4x27	-	20	520
RWM03125-10	20	520	51	55	-	28	9	162.6x86.4x27	-	20	520
RWP05020-10	20	1000	43	40	50	28	2.3	70x50.8x17.1	DP-75	20	1000
RWP05040-10	20	1000	46	38	48	28	3.5	70x50.8x17.1	DP-75	20	1000
RFW2500H10-28	20	2500	36	17	43	28	0.7	38x50.8x12.5	DP-34	20	2500
RWM03125-20	50	520	51	55	-	28	9	162.6x86.4x27	-	50	520
RWP06040-10	450	880	45	40	51	28	3	70x50.8x17.1	DP-75	450	880
RWP06040-60	500	1000	46	42	48	28	5	70x50.8x17.1	DP-75	500	1000
RWP15040-10	500	2500	-47	38	-	32	5	72x50.8x16.8	-	500	2500
RWP17050-10	700	2700	-47	37	-	32	4.5	72x50.8x16.8	-	700	2700
RWP15080-10	700	2700	-50	53	-	32	10	134x105x30	-	700	2700
RWP15020-50	1000	2000	43	29	50	28	3.6	70x50.8x17.1	DP-75	1000	2000
RWP20050-10	1000	3000	-47	38	-	32	5	72x50.8x16.8	-	1000	3000
RWP25020-50	2000	3000	44	25	-	28	2.8	70x50.8x17.1	DP-75	2000	3000
RUM43020-10	2000	6000	-43	35	-	28	4	170x64x21.5	-	2000	6000
RNP21040-50	2100	2170	47.5	33	-	28	3.9	70x50.8x17.1	DP-75	2100	2170
RUM43010-10	2500	6000	-40	29	-	28	2.2	130x64x21.5	-	2500	6000
RWP2060050-48	2000	6000	47	48	-	28	9.5	175x90x23	-	2000	6000
RWP2060080-50	2000	6000	49	50	-	28	11	175x90x23	-	2000	6000

0 1000 2000 3000 6000 [MHz]

GaAs MMICs

At RFHIC we offer cost-efficient Gallium Arsenide (GaAs) MMICs designed for 50-ohm and 75-ohm FTTH, Set-Top Box, Telecom, and Smart Meter applications. Our GaAs MMICs are processed on Gallium Arsenide Enhancement Mode pHEMT which ensures minimal noise and low current draw. Users can utilize this device for low noise amplifiers, drivers, gain blocks, and final stage amplifiers. Our GaAs MMICs are designed to be RoHS compliant delivering our customers with high quality and environmentally conscious products.



* All product datasheets can be downloaded here at: [GaAs MMIC](#)

Part Number	Freq. [MHz]		Gain	NF	OIP3	PIdB	CH@Vo	CTB	CSO	Voltage	Current	PKG	Process Type	Frequency
	Min	Max	[dB]	[dB]	[dBm]	[dBm]	[dBmV]	[dBc]	[dBc]	[V]	[mA]			
AE618	5	1000	20	2.5	44	32	79@43	-64	-69	12	360	SOIC-8	GaAs E-pHEMT	5 1000
AP209	50	3000	13.7	2.5	44	24	135@30	-72	-50	9	120	SOT-89	GaAs MESFET	50 3000
AE607	5	1500	12.5	3.5	43	28	79@40	-69	-70	8	240	SOIC-8	GaAs E-pHEMT	5 1500
AE617	5	1000	22	2	41	28	79@40	-65	-63	8	260	SOIC-8	GaAs E-pHEMT	5 1000
AP211	30	870	12.5	2.5	43	24.5	135@40	-63	-70	5	240	SOIC-8	GaAs MESFET	30 870
AE505	30	2650	14	3.4	41.5	24.5	79@40	-65	-72	5	220	SOIC-8	GaAs E-pHEMT	30 2650
AE417	5	1100	14	3	41	25	135@30	-73	-63	8	120	SOT-89	GaAs E-pHEMT	5 1100
AE427	5	1000	25	2	41	24	135@30	-71	-56	8	130	SOT-89	GaAs E-pHEMT	5 1100
AE510	30	3000	19	3	40	23	79@30	-73	-74	5	200	SOIC-8	GaAs E-pHEMT	30 3000
AE514	30	2150	18	2.5	40	25	135@37	-69	-67	5	250	SOIC-8	GaAs E-pHEMT	30 2150
AE305	30	2650	13.5	2.3	38	22	135@30	-68	-60	5	110	SOT-89	GaAs E-pHEMT	30 2650
ACQ102	30	1000	21.5	2.5	38	21	135@30	-65	-60	5	130	QFN4X4	GaAs E-pHEMT	30 1000
AE314	30	2655	19	2	38	22	135@20	-70	-65	5	100	SOT-89	GaAs E-pHEMT	30 2655
AE342A	5	1100	16	1.7	36	21	135@30	-68	-60	5	90	SOT-89	GaAs E-pHEMT	5 1100
AE410	30	3000	20	2.1	36	20	135@30	-65	-55	5	100	SOT-89	GaAs E-pHEMT	30 3000
ACQ624	50	870	34.5	2	36	23	79@35	-60	-60	5	280	QFN4X4	GaAs E-pHEMT	50 870
ACQ629	50	1000	37.5	2	36	22	135@30	-65	-60	12	130	QFN4X4	GaAs E-pHEMT	50 1000
AE512	30	2150	17	1.5	34	20	79@30	-61	-65	5	100	SOIC-8	GaAs E-pHEMT	30 2150
AE312	5	2655	20	1	32	19	135@15	-80	-60	5	50	SOT-89	GaAs E-pHEMT	5 2655
AE308	50	1000	22	2	29	17	135@16	-64	-58	5	55	SOT-89	GaAs E-pHEMT	50 1000

Active Dividers

At RFHIC we offer cost-efficient Gallium Arsenide (GaAs) Active Dividers designed for 75-ohm tuner, CATV systems, and Set-Top Box (STB) applications. Our GaAs Active Dividers are based on Gallium Arsenide Enhancement Mode pHEMT which ensures minimal noise and low current draw. Our GaAs Active Dividers are designed to be RoHS compliant delivering customers with high quality and environmentally conscious products

*All product datasheets can be downloaded here: [Active Dividers](#)

Part Number	Freq. [MHz]		Gain	NF	InOut-SL	Out-OutISL	OIP3	P1dB	CTB	CSO	XMOD	Volt	Current	Splitter	Frequency
	Min	Max	[dB]	[dB]	[dB]	[dB]	[dBm]	[dBm]	[dBc]	[dBc]	[dBc]	[V]	[mA]		
AD211	30	1000	8	4	-26	-35	30	16.5	-73	-63	-65	5	90	2	30 1000
AD211	30	1000	8	3.5	-25	-35	30	14	-73	-57	-65	3.3	90	2	30 1000
AD254	30	1200	4.5	3.5	-30	-20	28	12	-71	-59	-73	5	110	2	30 1200
AD254	30	1200	4	3.5	-30	-20	28	8	-62	-55	-61	3.3	75	2	30 1200
AD274	30	1200	5.5	3.5	-30	-20	26	12	-62	-57	-66	5	110	2	30 1200
AD274	30	1200	4	3.3	-30	-20	18	8	-58	-51	-56	3.3	75	2	30 1200
AD311	30	1000	8	4.5	-25	-40	32	17.8	-72	-63	-65	5	120	3	30 1000
AD311	30	1000	8	4	-25	-35	30	14	-72	-59	-65	3.3	110	3	30 1000
AD412	30	1000	6	5.2	-26	-29	33	18.3	-77	-63	-78	5.0	220	4	30 1000

Wideband Amplifiers

At RFHIC, we offer a broad range of 50-ohm RF input and output matched wideband amplifiers explicitly designed for cable/broadband and communication applications. Each wideband amplifier utilizes our cutting-edge Gallium Nitride (GaN) technology resulting in high efficiency and excellent performance.

*All product datasheets can be downloaded here: [Wideband Amplifiers](#)

Part Number	Freq. [MHz]		P3dB	OIP3	Gain	Vdd	Idd	Package	Frequency
	Min	Max	[dBc]	[dBc]	[dBc]	[V]	[mA]		
RFC1G21H4-24	20	1000	36	44	21	24	550	DP-27	20 1000
RFC1G21H4-24-S	20	1000	36	44	21	24	550	SOT-115J	20 1000

RFHIC

