RFHIC

GaN
on Diamond

PRODUCT SELECTION GUIDE

High power RF source

Active Array

5G
Infrastructure

2019

Table of contents

5G

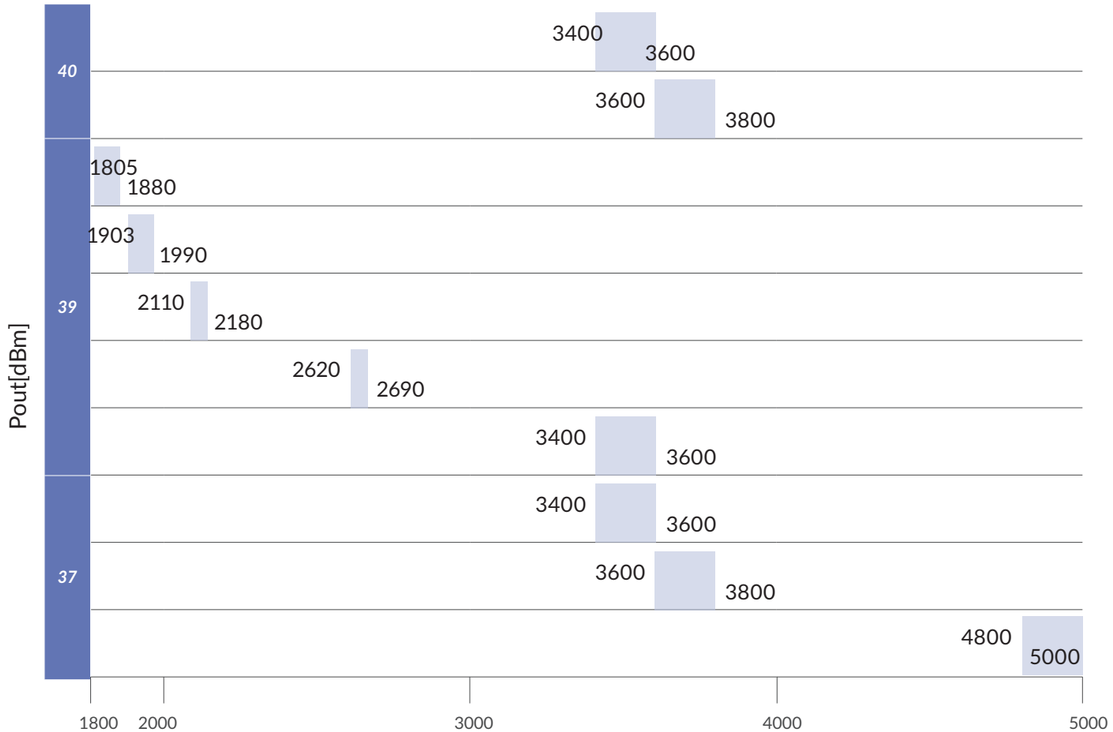
GaN SMD Modules
GaN MMICs

SP-6AL
15.8x10.8mm

SP-5CL
26.5x18mm

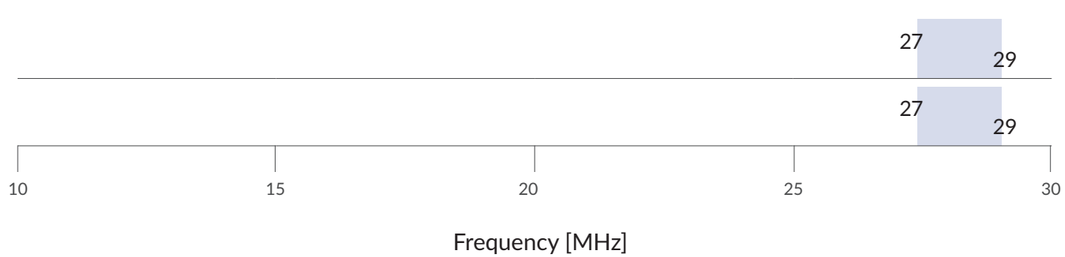
PP-1S
13x17x2.2mm

GaN SMD Modules



Part Number	Freq. (MHz)		Gain	Pout	Ppeak	Eff	Vdd	Package
	[Min]	[Max]	[dB]	[dBm]	[dBm]	[%]	[V]	
RTH343610X	3400	3600	27	40	48	42	36	SP-6AL
RTH363810X	3600	3800	27	40	48	42	36	SP-6AL
RTH18008R	1805	1880	30	39	46.5	45	31	SP-5CL
RTH19008R	1903	1990	30	39	46.5	45	31	SP-5CL
RTH21008R	2110	2180	30	39	46.5	45	31	SP-5CL
RTH26008R	2620	2690	29	39	46.5	45	31	SP-5CL
RPAM35008-25	3400	3600	25	39	47	41	28	PP-1S
RTH343605X	3400	3600	25	37	44.5	42	31	SP-6AL
RTH363805X	3600	3800	25	37	44.5	42	31	SP-6AL
RTH49005X	4800	5000	25	37	44.5	38	32	SP-6AL

GaN MMICs



Part Number	Freq. (MHz)		Small Signal Gain	Power Gain	Output Power	PAE	Voltage	Package
	[Min]	[Max]	[W]	[dBm]	[%]	[dB]	[V]	
GM27030010D	27	29	17	13	10	22	28	Die
GM27030005D	27	29	18.5	15	5	25	28	Die

Small Cell

GaN SMD Modules

NP-18
15 x 10 x 4.5

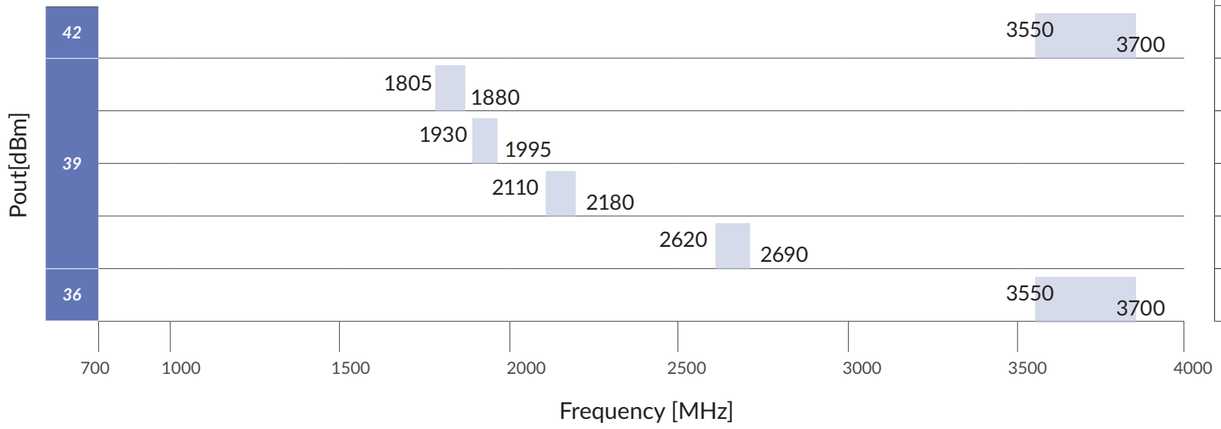
NP-18L2A
15 x 10 x 4.5

NP-1EL
20.5 x 15 x 3.5

NP-8CL
28 x 19 x 4.8

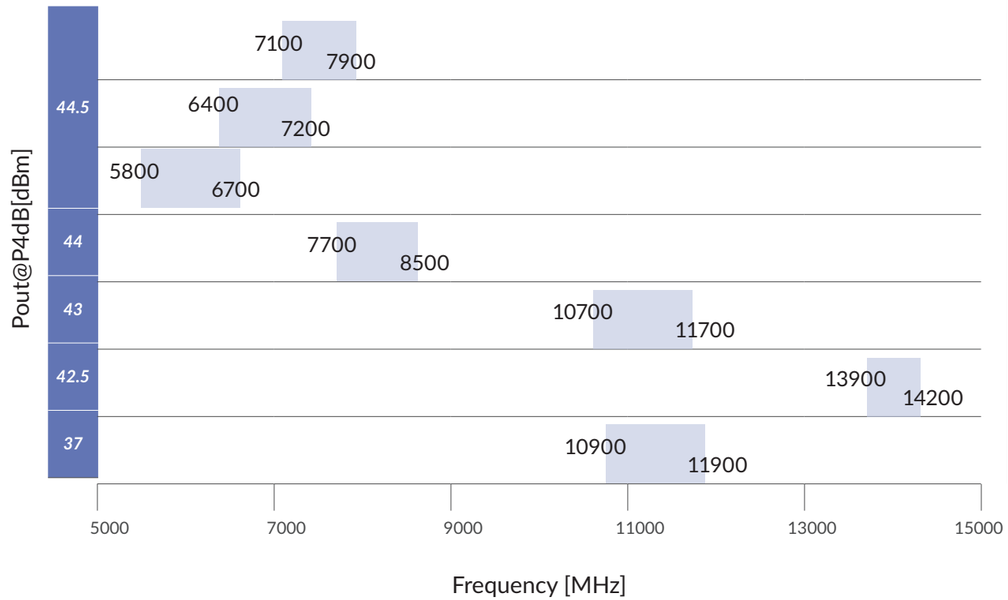
SP-1E
32 x 20 x 4.2

GaN SMD Module



Part Number	Freq. (MHz)		Gain	Pout	Ppeak	ACLR with DPD	Eff.	Vdd	Idd	Package
	[Min]	[Max]	[dB]	[dBm]	[dBm]	[dBc]	[%]	[V]	[mA]	
RTH36016M-23	3550	3700	23	42	49.5	-52	39	35	1160	SP-3CL
RTH18008S-30	1805	1880	31.5	39	46.5	-56	45	31	570	SP-2C
RTH19008S-30	1930	1995	31.5	39	46.5	-56	45	31	570	SP-2C
RTH21008S-30	2110	2180	30	39	46.5	-56	45	31	570	SP-2C
RTH26008S-30	2620	2690	29	39	46.5	-56	45	31	570	SP-2C
RTH36004N-24	3550	3700	30	36	44.5	-55	38	31	338	SP-3C

GaN SMD Module



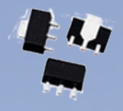
Part Number	Freq. (MHz)		Gain@ P4dB	Pout@ P4dB	IM3@S.C.L	Eff.@P4dB	Vdd	Idd	Package
	[Min]	[Max]	[dB]	[dBm]	[dB]	[%]	[V]	[mA]	
HS7179-20A	7100	7900	10.5	44.5	30@Pout=34dBm	35	40	1700	NP-18L2A
HS6472-20A	6400	7200	10.5	44.5	30@Pout=35dBm	45	40	1500	NP-18L2A
HS5867-20A	5800	6700	10.5	44.5	30@Pout=35dBm	45	40	1500	NP-18L2A
HS7785-20A	7700	8500	9	44	30@Pout=33dBm	35	40	1700	NP-18L2A
HS107117-20A	10700	11700	8	43	30@Pout=33dBm	35	40	1400	NP-18L2A
HS139142-18A	13900	14200	6	42.5	30@Pout=30dBm	35	40	1300	NP-18L2A
HS109119-5A	10900	11900	7	37	-	30	40	-	NP-18L2A

Base Station

GaN Power Transistors
GaAs MMICs
Connectorized Power Amplifiers
Low Noise Amplifiers
Variable Attenuators

SOT-143
2.8 x 2.4 x 1

SOIC-8
5 x 6 x 1.5



SOT-89
4.5 x 4 x 1.5

CP-16
10.2 x10.2 x 4

RF18001DKR3
15.5x10x4.5

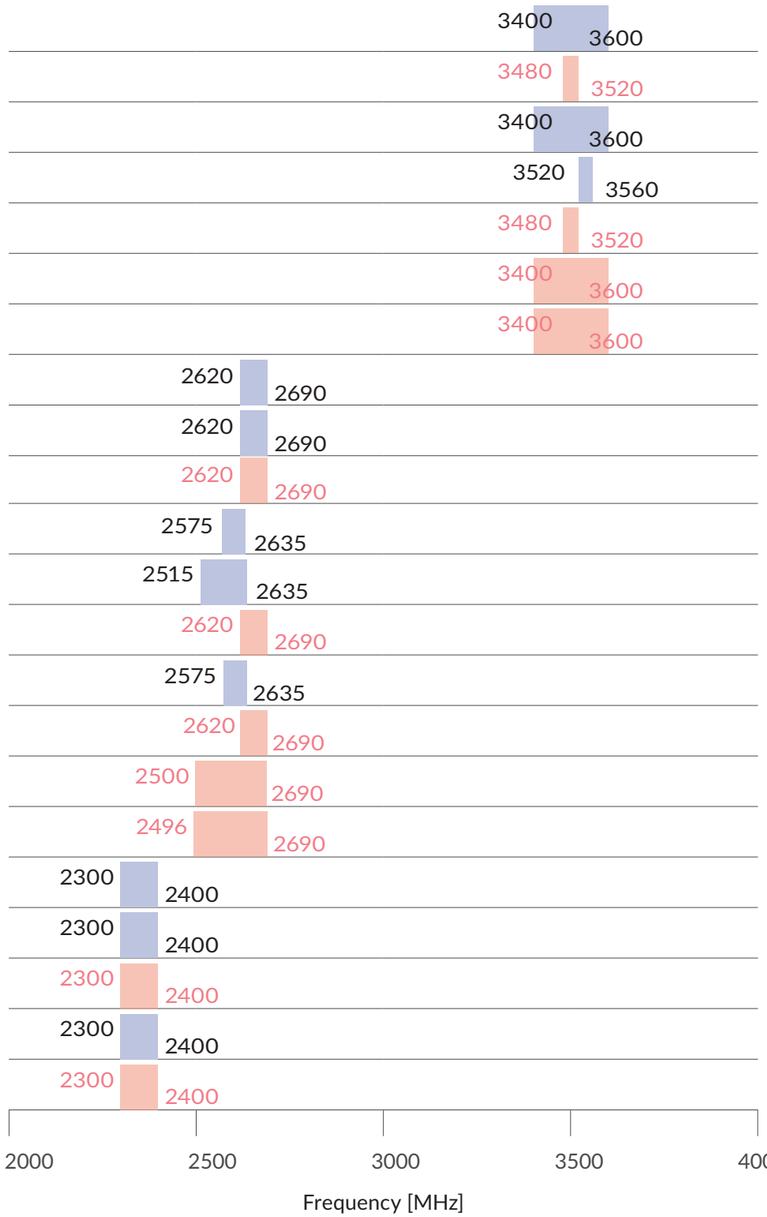
RF12001DKR3
10.2 x 10.2 x 4.1

NS-AS01
10.2 x 10.2 x 4.1

NS-CS01
5.1 x 4.1 x 4

RF24001DKR3
20.5 x10 x 4

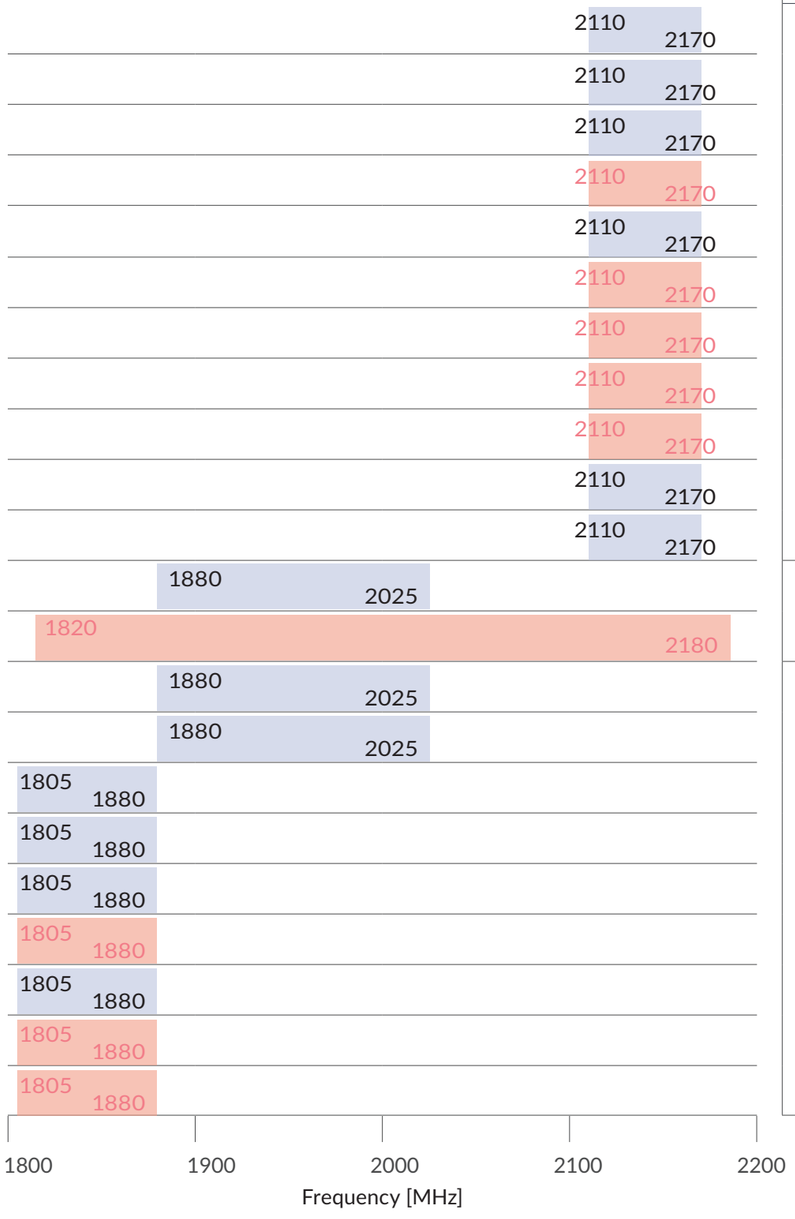
GaN Power Transistors



Band	Part Number	Type	Freq. (MHz)		Voltage	Output Power		Gain	Eff.@Pavg	ACPR	Package
			[Min]	[Max]	[Vds]	[W_{PEAK}]	[W_{AVG}]	[dB_{AVG}]	[%]	[dBc]	
3500	ID36300WD	D	3400	3600	48	300	35	11.5	45	27	RF24001DKR3
	IE36220W	S	3480	3520	48	220	50	14.7	34.8	29.6	RF12002KR3
	IE36195WD	D	3400	3600	48	195	32	14.0	45.3	26.1	RF12001DKR3
	IE36170WD	D	3520	3560	48	170	32	14.6	48.3	24.6	RF12001DKR3
	IE36165W	S	3480	3520	48	165	37	15.3	35.8	27.3	RF12002KR3
	IE36110W	S	3400	3600	48	110	25	17.1	35.5	27.3	RF12001KR3
	IE36085W	S	3400	3600	48	85	19	17.3	35.4	30.2	RF12002KR3
2600	IE27385D	D	2620	2690	48	385	69	13.8	53.6	23.7	RF24001DKR3
	IE27330D	D	2620	2690	48	330	63	14.2	54.1	22.5	RF24001DKR3
	IE27330P	S	2620	2690	48	330	79	15.4	39.1	29.2	NS-AS01
	IE27275D	D	2575	2635	48	275	50	14.1	59.4	21.5	RF24001DKR3
	IE26275WD	D	2515	2635	48	275	40	14.4	50.5	26.6	RF18001DKR3
	IE27220PE	S	2620	2690	48	220	50	17.0	41.5	27.0	NS-AS01
	IE26195WD	D	2575	2635	48	195	32	14.4	53.6	26.6	RF12001DKR3
	IE27165PE	S	2620	2690	48	165	40	16.9	43.1	28.9	NS-AS01
	IE26110P	S	2500	2690	48	110	25	19.1	39.6	27.7	NS-AS01
	IE26085P	S	2496	2690	48	85	19	20.2	42.0	26.2	NS-AS01
2300	IE23385D	D	2300	2400	48	385	63	14.5	55.1	24.6	RF24001DKR3
	IE23330D	D	2300	2400	48	330	63	14.6	54.2	23.4	RF24001DKR3
	IR23220P	S	2300	2400	48	220	50	16.1	42.1	28.4	NS-AS01
	IE23195WD	D	2300	2400	48	195	32	15.3	55.8	25.6	RF12001DKR3
	IR23110P	S	2300	2400	48	110	25	18.2	41.0	30.0	NS-AS01

S : Single Package D : Dual Package

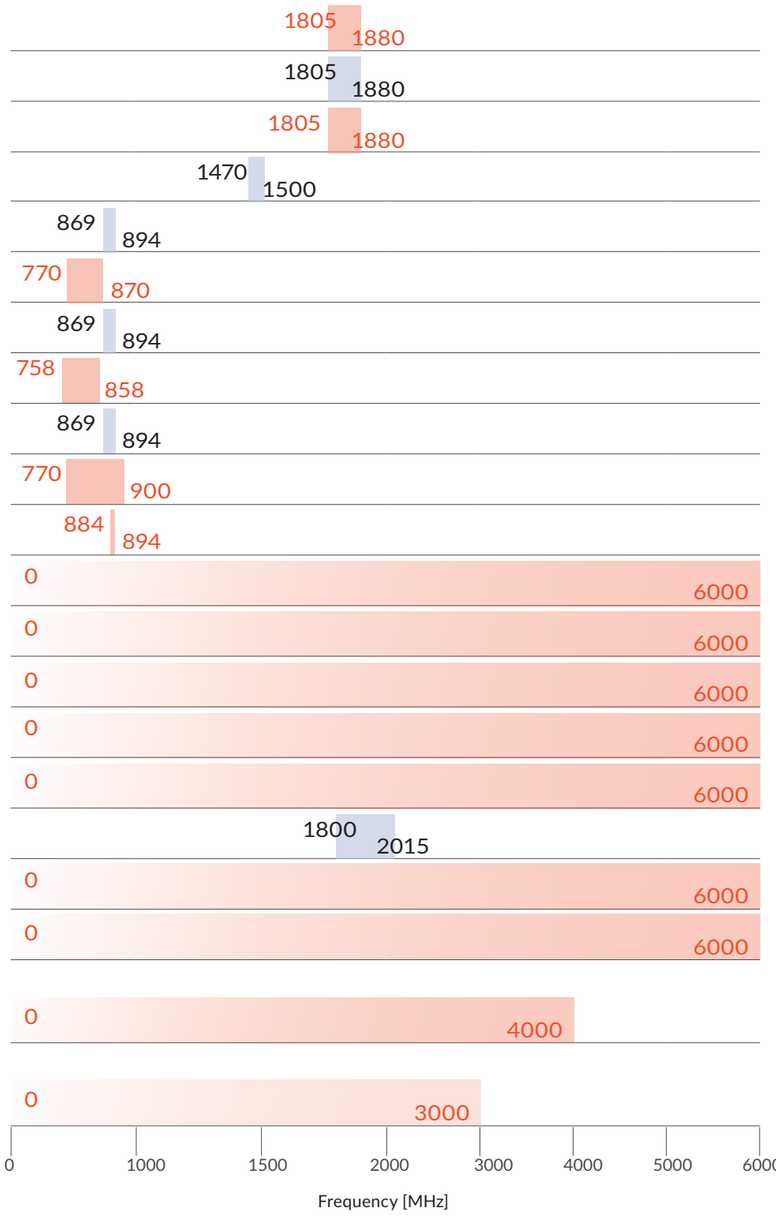
GaN Power Transistors



Band	Part Number	Type	Freq. (MHz)		Voltage	Output Power		Gain	Eff.@Pavg	ACPR	Package
			[Min]	[Max]	[Vds]	[W_{PEAK}]	[W_{AVG}]	[dBAVG]	[%]	[dBc]	
2100	IE21440D	D	2110	2170	48	440	79	14.7	54.1	27.3	RF24001DKR3
	IE21385D	D	2110	2170	48	385	63	14.6	55.7	25.5	RF24001DKR3
	IE21330D	D	2110	2170	48	330	63	14.8	55.7	29.4	RF24001DKR3
	IE21330P	S	2110	2170	48	330	79	15.6	39.2	30.2	NS-AS01
	IE21250D	D	2110	2170	48	250	45	15.7	57.1	26.5	RF24001DKR3
	IE21220P	S	2110	2170	48	220	50	17.4	40.0	30.8	NS-AS01
	IE21165PE	S	2110	2170	48	165	37	17.5	39.6	31.9	NS-AS01
	IE21110P	S	2110	2170	48	110	25	18.4	38.9	32.7	NS-AS01
	IE21085P	S	2110	2170	48	85	19	20.7	43.1	26.6	NS-AS01
	IE21083WD	D	2110	2170	48	83	15	16.2	57.1	30.3	RF12001DKR3
	IE21056WD	D	2110	2170	48	56	10	17.2	54.8	25.3	RF12001DKR3
2000	IE20275WD	D	1880	2025	48	275	38	15.0	51.0	28.4	RF18001DKR3
	IE20220WV	S	1820	2180	48	220	50	16.6	38.2	24.6	RF12001KR3
1800	IE19195WD	D	1880	2025	48	195	32	16.9	49.9	27.8	RF12001DKR3
	IE19170WD	D	1880	2025	48	170	30	17	48.9	25.6	RF12001DKR3
	IE18440D	D	1805	1880	48	440	79	14.6	54.5	27.6	RF24001DKR3
	IE18385D	D	1805	1880	48	385	63	15.1	56.2	25.8	RF24001DKR3
	IE18330D	D	1805	1880	48	330	63	15.5	57.7	25.2	RF24001DKR3
	IE18330PG	S	1805	1880	48	330	74	15.8	40.0	31.9	NS-AS01
	IE18250D	D	1805	1880	48	250	45	16.7	58.2	26.7	RF24001DKR3
	IE18220PG	S	1805	1880	48	220	50	18.1	40.9	30.3	NS-AS01
	IE18165P	S	1805	1880	48	165	37	18.3	39.2	31	NS-AS01

S : Single Package D : Dual Package

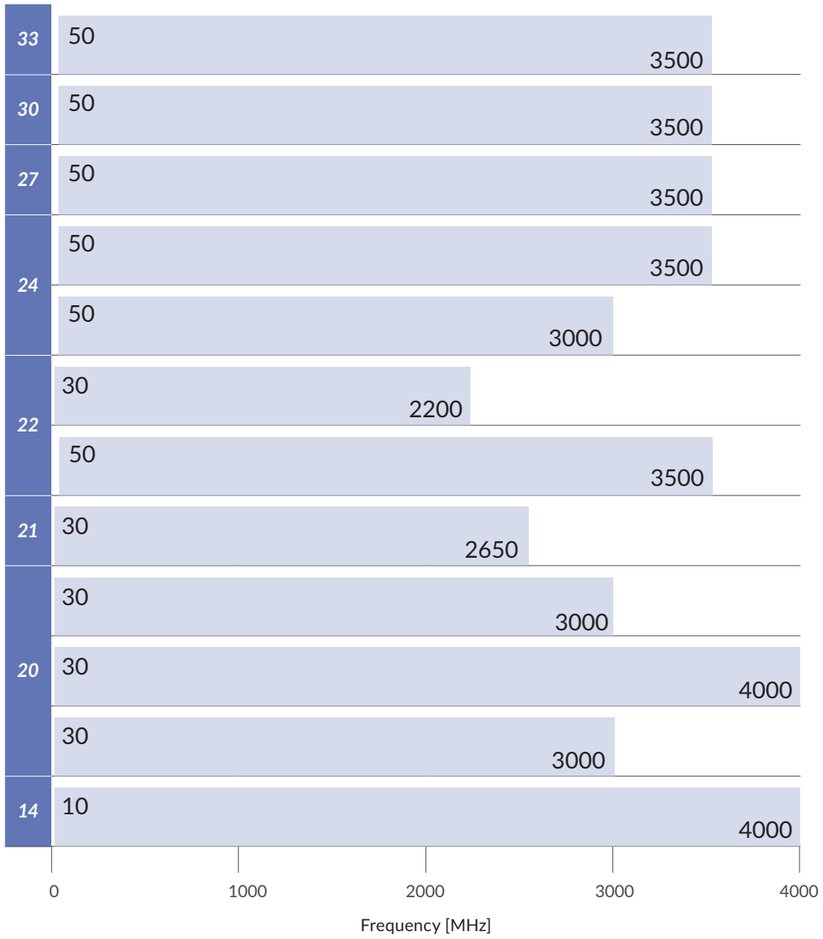
GaN Power Transistors



Band	Part Number	Type	Freq. (MHz)		Voltage	Output Power		Gain	Eff.@Pavg	ACPR	Package
			[Min]	[Max]	[Vds]	[W_{PEAK}]	[W_{AVG}]	[dBAVG]	[%]	[dBc]	
1800	IE18110P	S	1805	1880	48	110	25	18.9	38.2	29.2	NS-AS01
	IE18110WD	D	1805	1880	48	110	25	15.4	54.8	28.5	RF12001DKR3
	IE18085P	S	1805	1880	48	85	19	18.9	36.6	31.5	RF12002KR3
1500	IE15275D	D	1470	1500	48	275	50	17.0	58.0	26.5	RF24001DKR3
800	IE08330D	D	869	894	48	330	63	20.5	57.9	26.4	RF24001DKR3
	IR08330P	S	770	870	48	330	79	21.0	41.6	30.6	NS-AS01
	IE08220WD	D	869	894	48	220	35	20.7	57.9	25.7	RF12001DKR3
	IE08220P	S	758	858	48	220	50	22.0	38.9	29.4	NS-AS01
	IE08195WD	D	869	894	48	195	32	20.6	61.8	27.4	RF12001DKR3
	IE08165P	S	770	900	48	165	37	20.9	39.8	33.3	NS-AS01
	ET13110P	S	884	894	48	110	25	21.8	39.4	29.9	NS-BS01
Driver 0~6000	RT12014P	S	DC	6000	48	14	3.2	17.5@2.6GHz	35.2	37.3	NS-CS01
	RT12028P	S	DC	6000	48	28	6.3	17.6@2.6GHz	29.7	37.1	NS-CS01
	RT12055P	S	DC	6000	48	55	12.6	15.7@2.6GHz	34.1	36.5	NS-CS01
	ETQ2014P	S	DC	6000	48	14	3.2	18.5@2.6GHz	35.2	31.3	DFN66726L-Q2
	ETQ2028P	S	DC	6000	48	28	6.3	18.7@2.6GHz	33.8	33.0	DFN66726L-Q2
	ETQ2028D	D	1880	2015	48	28.2	2	17.9@1.95GHz	31.0	28.4	DFN66726L-Q2
	DT12030P	S	DC	6000	50	30	7.1	18.7@2.6GHz	39.7	30.4	NS-CS01
	DT12060P	S	DC	6000	50	60	14.1	17@2.6GHz	37.5	31.7	NS-CS01
General Purpose	GT14045	S	DC	4000	28	45	-	14@2.5GHz	55	-	RF06001KR3 & NS-BS01PK2
	GT14120	S	DC	3000	28	120	-	15.5@1.3GHz	60	-	RF06001KR3 & NS-BS01PK2

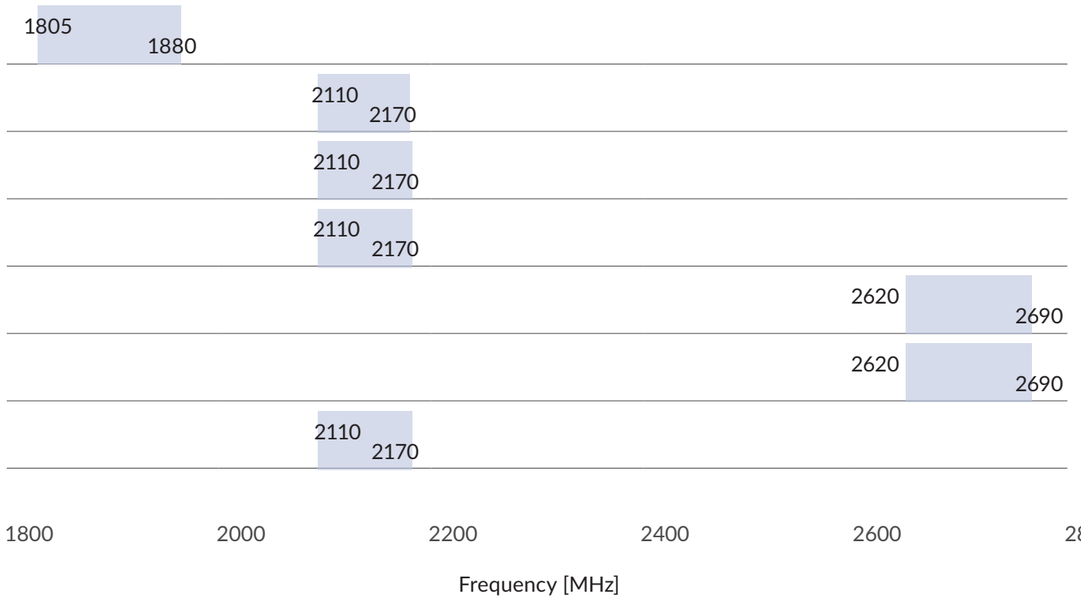
S : Single Package D : Dual Package

GaAs MMICs



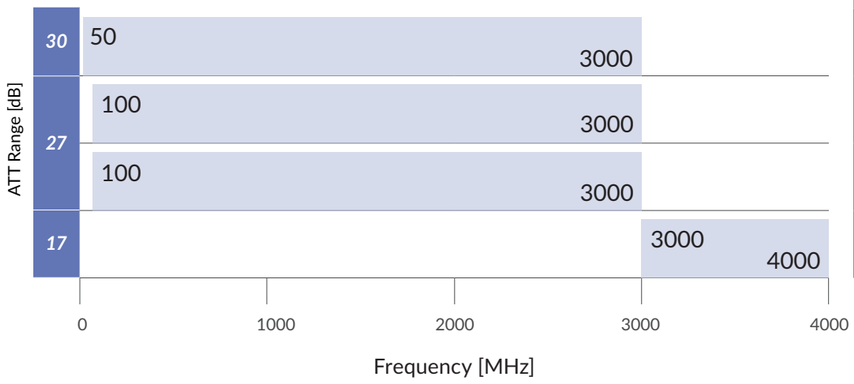
Part Number	Freq. (MHz)		Gain	NF	P1dB	Eff.@ P1dB	OIP3	WCDMA	Voltage	Current	Package	Process Type
	[Min]	[Max]	[dB]	[dB]	[dBm]	[%]	[dBm]	[dBm]	[V]	[mA]		
AE379	50	3500	11.5	2.3	33	55	43	20	5	390	SOIC-8	GaAs E-pHEMT
AE368	50	3500	13.7	2.9	30	52	48	17	5	300	SOIC-8	GaAs E-pHEMT
AE367	50	3500	15.5	3.5	27	50	39	15	5	140	SOT-89	GaAs E-pHEMT
AP209	50	3500	13.5	2.5	24	-	43	13	9	120	SOT-89	GaAs MESFET
AP211	50	3000	13	2.5	24	-	42	15	5	240	SOIC-8	GaAs MESFET
AE366	30	2200	22.5	1.6	22	-	37.5	11	5	100	SOT-89	GaAs E-pHEMT
AP205A	50	3500	14	2.3	22	-	43	13	5	115	SOT-89	GaAs MESFET
AE305	30	2650	14.5	2.7	21	-	38	12	5	110	SOT-89	GaAs E-pHEMT
AE314	30	3000	23	3	20	-	35	11	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	2.3	20	-	34	11	5	100	SOT-89	GaAs E-pHEMT
AE608	10	4000	14	0.7	14	-	32	-	3	45	SOT-143	GaAs E-pHEMT

Connectorized Power Amplifiers



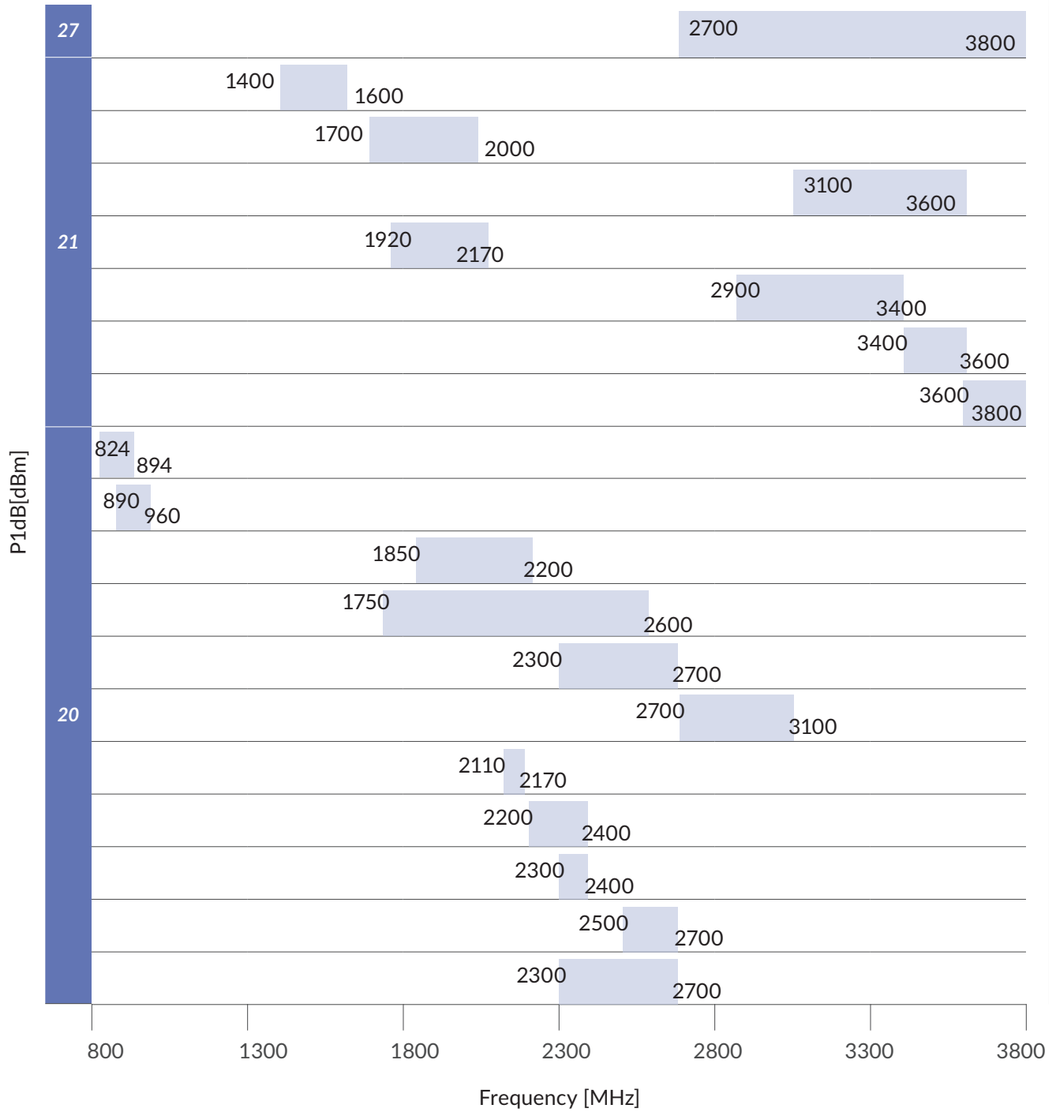
Part Number	Freq. (MHz)		Pout	Gain	Peak Power	Eff.	Dimension
	[Min]	[Max]	[dBm]	[dBAVG]	[dBm]	[%]	[mm]
RTP18080-20	1805	1880	49	55	56.2	42	170x100x20
RTP21028-20	2110	2170	44.5	44.5	52	43	125x90x20
RTP21056-20	2110	2170	47.5	44.5	52	43	150x90x20
RTP21080-20	2110	2170	49	47.5	55	42	170x100x20
RTP26056-20	2620	2690	47.5	55	56.2	42	150x90x20
RTP26080-20	2620	2690	49	47.5	55	42	170x100x20
RTP21030-20	2110	2170	44.8	45	52	48	100x50x20

Various Attenuators



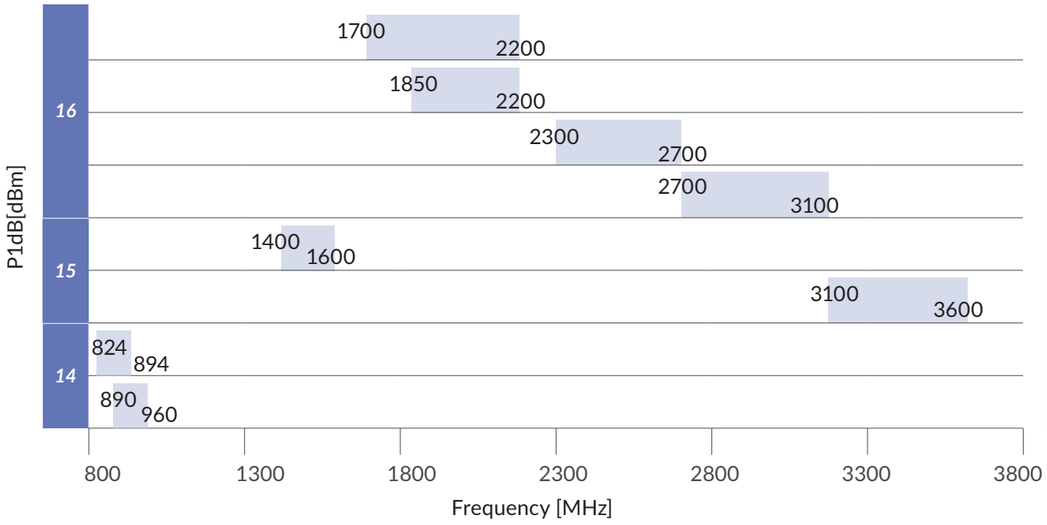
Part Number	Freq. (MHz)		ATT Range	Insertion Loss	Return Loss	Flatness	Vdd	Vctl	Idd	Package
	[Min]	[Max]	[dB]	[dB]	[dB]	[dBm]	[V]	[V]	[mA]	
VA101	50	3000	30@1~2GHz	3	-15	+0.5, -0.5	5	0~10	40	HY-46
VA102	100	3000	27@1~2GHz	2	-15	+0.5, -0.5	3	0~12	34	HY-46
VA102	100	3000	27@1~2GHz	3	-15	+0.5, -0.5	3	0~4.5	10	HY-46
VA103	3000	4000	17@3.5GHz	2.2	-16	+0.5, -0.5	3	0~10	30	HY-46

Low Noise Amplifiers



Part Number	Freq. (MHz)		Gain	NF	P1dB	OIP3	Vdd	Idd	Package
	[Min]	[Max]	[dB]	[dB]	[dBm]	[dBm]	[V]	[mA]	
LCL3322-L	2700	3800	21	1.4	27	39	5	190~250	CP-16B
CL1502-L	1400	1600	17	0.6	21	33	5	90	CP-16A
CL1802-L	1700	2000	16	0.6	21	33	5	100	CP-16A
CL3502-L	3100	3600	10.5	1	21	36	5	100	CP-16A
LCL2112-L	1920	2170	24.8	0.8	21	42	5	180~240	CP-16B
LCL3212-L	2900	3400	20.5	1.1	21	42	5	180~240	CP-16B
LCL3512-L	3400	3600	19	1.2	21	42	5	180~240	CP-16B
LCL3712-L	3600	3800	18.5	1.3	21	42	5	180~240	CP-16B
CL0902-L	824	894	20.5	0.7	20	31	5	100	CP-16A
CL0902-L	890	960	20	0.7	20	31	5	100	CP-16A
CL2102-L	1850	2200	15	0.6	20	33	5	100	CP-16A
CL2102D-L	1750	2600	14.5	0.7	20	33	5	100	CP-16A
CL2702-L	2300	2700	12.5	0.9	20	33	5	100	CP-16A
CL2702-L	2700	3100	11.5	0.9	20	33	5	100	CP-16A
LCL2102-L	2110	2170	24.5	0.9	20	35	5	150~190	CP-16B
LCL2302-L	2200	2400	21.5	0.9	20	35	5	150~190	CP-16B
LCL2312-L	2300	2400	22	1	20	41	5	180~240	CP-16B
LCL2702-L	2500	2700	20.5	1	20	34	5	150~190	CP-16B
LCL2712-L	2300	2700	20.5	1	20	40	5	180~240	CP-16B

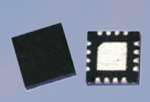
Low Noise Amplifiers



Part Number	Freq. (MHz)		Gain	NF	P1dB	OIP3	Vdd	Idd	Package
	[Min]	[Max]	[dB]	[dB]	[dBm]	[dBm]	[V]	[mA]	
CL1801-L	1700	2200	15.5	0.6	16	27	5	45	CP-16A
CL2101-L	1850	2200	14	0.7	16	27	5	45	CP-16A
CL2701-L	2300	2700	12	0.9	16	28	5	45	CP-16A
CL2701-L	2700	3100	10.5	0.9	16	28	5	45	CP-16A
CL1501-L	1400	1600	16	0.7	15	27	5	45	CP-16A
CL3501-L	3100	3600	10	1	15	31	5	45	CP-16A
CL0901-L	824	894	19	0.5	14	27	5	65	CP-16A
CL0901-L	890	960	18	0.5	14	27	5	65	CP-16A

Radar

GaN MMIC
Connectorized Power Amplifiers
Pallet Amplifiers
GaN TR Modules
GaN SMD Modules
Low Noise Amplifiers



QFN

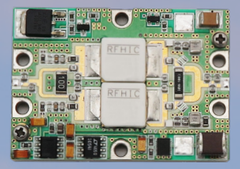
CP-16
10.2 x10.2 x 4

NP-1E
20.5 x 15 x 4.8

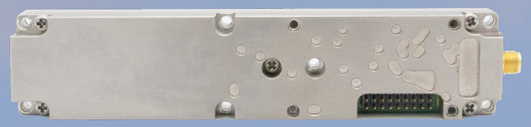
CP-8A
20.5 x 15 x 4.8

NP-18
15 x 10 x 4.5

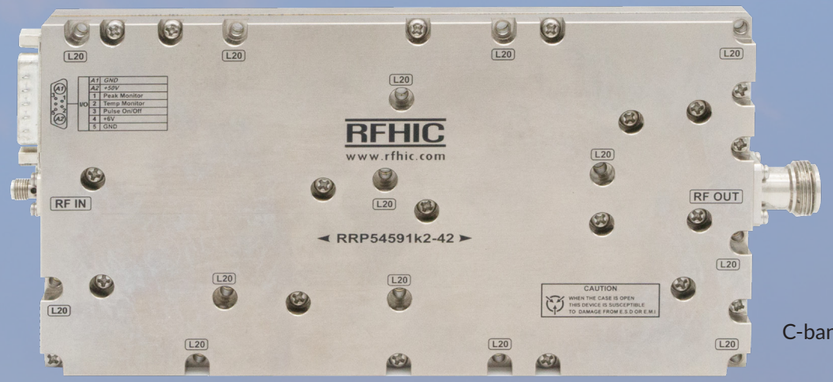
NP-36
20.5 x 12.5 x 4.8



S-band Pallet Amplifier
51x36x11

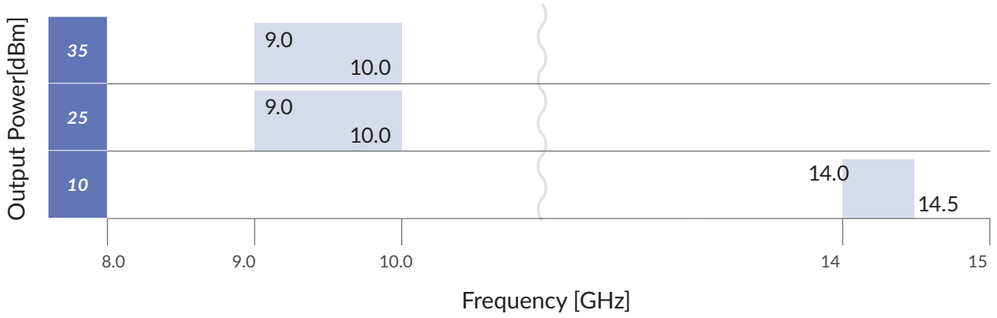


C-band TRM
129x261x135



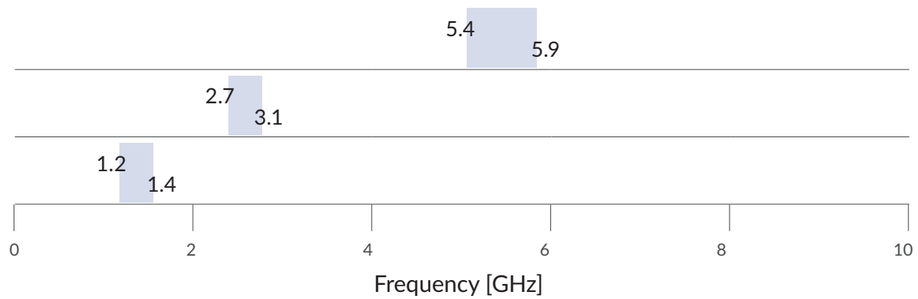
C-band Power Amplifer
190x99x23

GaN MMICs



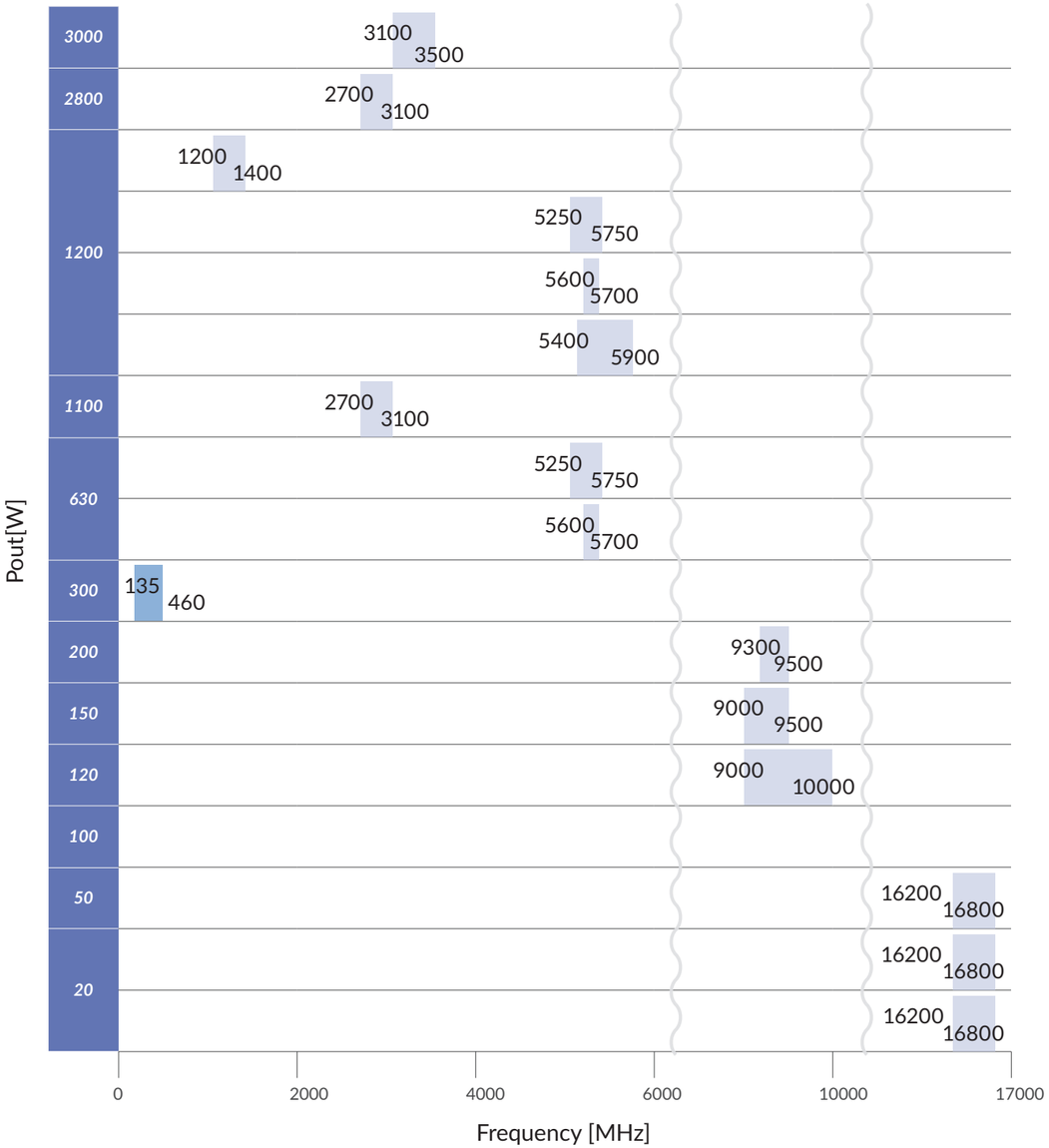
Part Number	Freq. (GHz)		Small Signal Gain	Power Gain	Output Power	PAE	Voltage	Package
	[Min]	[Max]	[dB]	[dB]	[dBm]	[dBm]	[V]	
GM09010035D	9.0	10.0	22.5	18	35	40	28	Die
GM09010025D	9.0	10.0	23.5	20	25	40	24	Die
GM13514510D	14	14.5	21	17	10	32	28	Die

GaN TR Modules



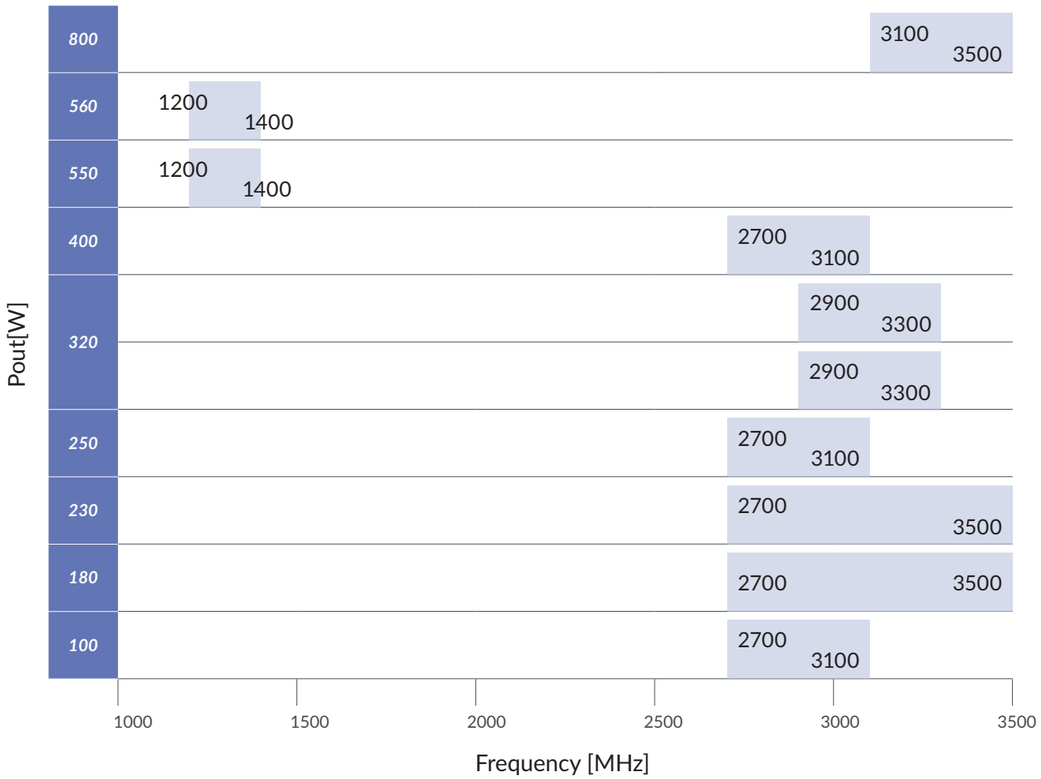
Part Number	Freq. (MHz)		TX Pout	RX NF	RX Gain	TX Gain	Duty Ratio	Pulse Width	Attenuator	Phase Shifter
	[Min]	[Max]	[W]	[dB]	[dB]	[dB]	[%]	[μs]		
RFMR57-CTRM-020SP-500A-SM	5.4	5.9	20	3.5	25	40	10	50	6BIT,31.5dB	6BIT,360deg
RFMR29-SFEM-200-400A	2.7	3.1	200	3	28	59	10	100	-	-
RFMR13-LTRM-250-200B	1.2	1.4	250	2.5	45	52	10	2000	6BIT,31.5dB	6BIT,360deg

Connectorized Power Amplifiers



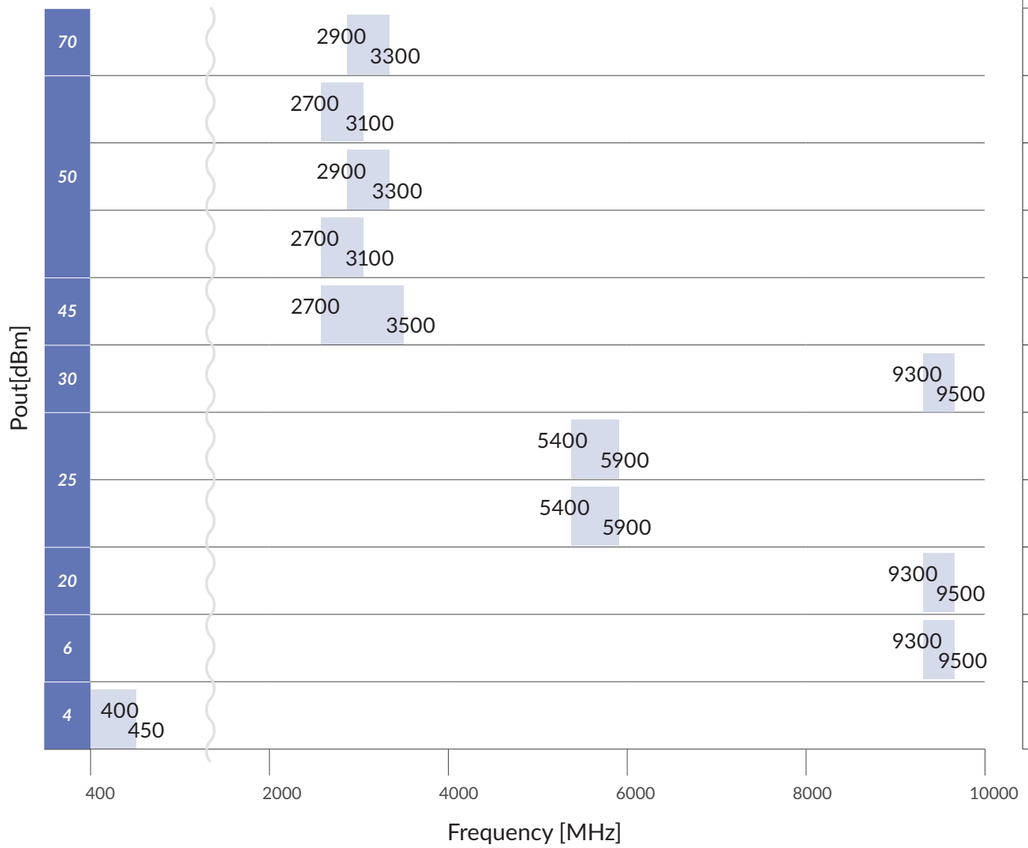
Part Number	Freq. (MHz)		Gain	Pout	Eff.	Pulse Droop	Duty Ratio	Pulse Width	Vds	Dimension
	Min]	[Max]	[dB]	[W]	[%]	[dB]	[%]	[ms]	[V]	[mm]
RRP31352K6-20	3100	3500	21	3000	42	0.5	5	50	10/50	278.38x165.1x32.3
RRP27312K5-30	2700	3100	30	2800	40	1	10	100	50	175x234x25
RRP131K0-10	1200	1400	54	1200	50	0.5	10	500	12/50	250x150x28
RRP52571K0-41	5250	5750	41	1200	30	0.5	10	100	6/50	190x99x23
RRP56571K0-42	5600	5700	42	1200	35	0.5	10	200	6/50	190x99x23
RRP54591K2-42	5400	5900	42	1200	30	0.5	10	100	6/50	190x99x23
RRP291K0-10	2700	3100	60.5	1100	35	0.5	10	500	12/50	220x145x27
RRP5257550-35	5250	5750	35	630	30	0.5	10	100	12/50	163x42.5x14
RRP5657550-35	5600	5700	35	630	30	0.5	10	100	12, 50	163x42.5x14
RRP03250-10	135	460	31	300	45	0.5	20	500	50	114.3x25.4x28
RRM9395200-56	9300	9500	56	200	20	0.5	10	100	5.6/50	140x140x25
RRP9095150-18	9000	9500	18	150	35	0.5	10	100	50	88x45x14
RRP090100120-15	9000	10000	15	120	30	0.5	10	100	50	88x45x14
RRP162168100-08A	16200	16800	8	100	20	1	6	7.5	50	70x35x11.7
RRP162168050-05A	16200	16800	5	50	30	1	6	7.5	50	27x 35x15.6
RRP162168020-07A	16200	16800	7	20	35	1	6	7.5	50	27x35x15.6
RRP162168020-17A	16200	16800	17	20	25	1	6	7.5	50	50x35x11.7

Pallet Amplifiers



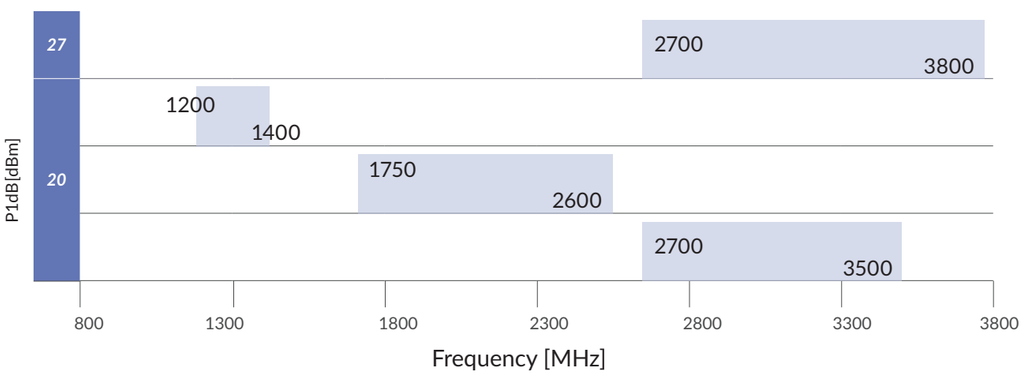
Part Number	Freq. (MHz)		Gain	Pout	Eff.	Pulse Droop	Duty Ratio	Pulse Width	Vds	Dimension
	[Min]	[Max]	[dB]	[W]	[%]	[dB]	[%]	[ms]	[V]	[mm]
RRP3135900-12	3100	3500	12	800	56	0.5	5	50	50	-
RRP1214500-14	1200	1400	14	560	65	0.5	20	200	50	83x35x12
RRP1214550-14	1200	1400	14	550	65	0.5	15	500	50	86x60x12
RRP2731330-09	2700	3100	9	400	55	0.5	20	500	50	50x25x12
RRP2933300-HR	2900	3300	9	320	45	0.5	20	200	50	86x34x10
RRP2933300-SR	2900	3300	9	320	45	0.5	20	200	50	86x34x10
RRP2731200-08	2700	3100	8	250	55	0.5	20	500	38	50.8x35.8x11.1
RRP2735200-30	2700	3500	32	230	35	0.5	20	1000	50	75X30X10.7
RRP2735160-35	2700	3500	35	180	40	0.5	20	2000	50	76X25X14
RRP2731080-39	2700	3100	39	100	42	0.5	20	500	50	100x36x14

GaN SMD Modules



Part Number	Freq. (MHz)		Gain	Pout	Eff.	Pulse Droop	Duty Ratio	Pulse Width	Vds	Package
	[Min]	[Max]	[dB]	[dBm]	[%]	[dB]	[%]	[μs]	[V]	
HR2933-70A	2900	3300	25	70	50	0.5	10	500	50	NP-1E
HR2731-50A	2700	3100	24	50	50	0.5	10	500	50	NP-1EL
HR2933-50A	2900	3300	24	50	50	0.5	10	500	50	NP-1E
RRC29050-10	2700	3100	24	50	50	0.5	10	500	48	NP-1E
RRC31050-10	2700	3500	24	45	45	0.5	10	500	48	NP-1E
HR9395-30A	9300	9500	10	30	40	0.5	10	100	50	NP-18
HR5459-25B	5400	5900	20	25	40	0.5	10	50	50	NP-36
HR5459-25C	5400	5900	15	25	40	0.5	10	50	28	NP-36
RRC94030-10	9300	9500	15	20	35	0.5	10	100	48	CP-8A
HR9395-08A	9300	9500	11	6	45	0.5	10	100	50	NP-18
RNP04006-A1	400	450	33	4	70	0.5	10	100	24	HY-6

Low Noise Amplifiers



Part Number	Freq. (MHz)		Gain	NF	P1dB	OIP3	Vdd	Idd	Maximum Input Power	Package
	[Min]	[Max]	[dB]	[dB]	[dBm]	[dBm]	[V]	[mA]	[dBm]	
LCL3322-L	2700	3800	21	1.4	27	39	5	190~250		CP-16B
CL1302D-L	1200	1400	18	0.7	20	33	5	100	30	CP-16A
CL2102D-L	1750	2600	14.5	0.7	20	33	5	100	30	CP-16A
CL3102D-L	2700	3500	11.5	1.1	20	33	5	100	30	CP-16A

RF Energy

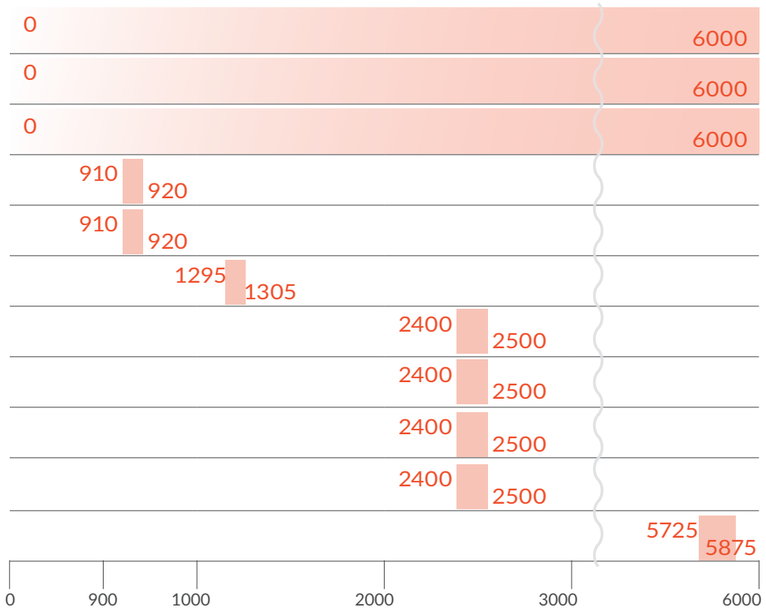
GaN Power Transistors
CW Solid State Power Amplifiers
Microwave Generator
Microwave Electrodeless Lighting

NS-AS01
10.2 x 10.2 x 4.1

NS-CS01
5.1 x 4.1 x 4

RF24001DKR3
20.5 x10 x 4

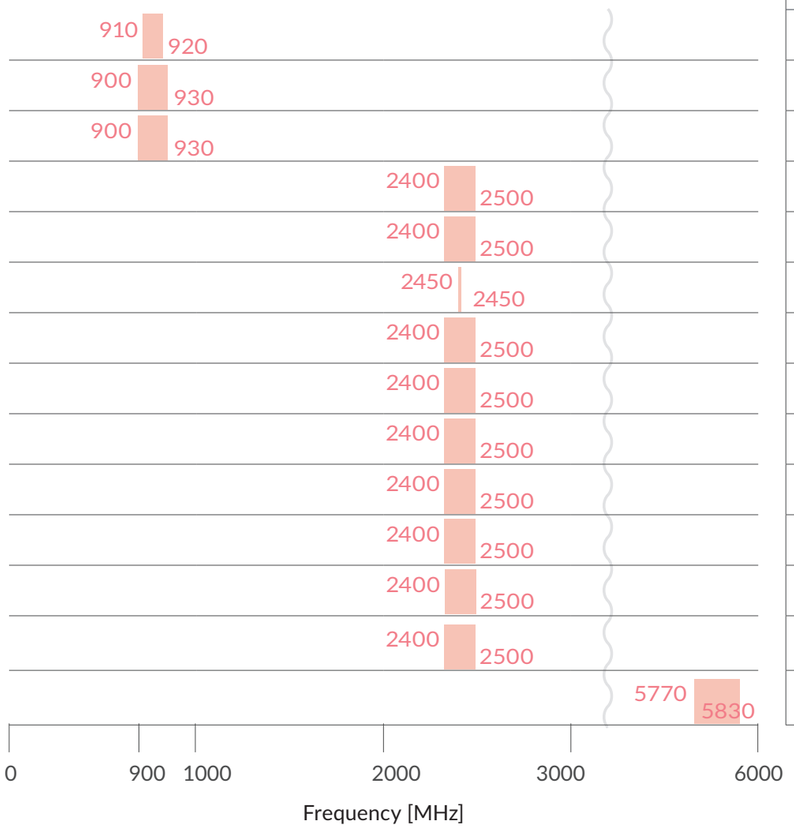
GaN Power Transistors



Band	Part Number	Type	Freq. (MHz)		Voltage	Output Power	Power Gain	Eff.@Ppeak	Package
			[Min]	[Max]	[Vds]	[W_{PEAK}]	[dB_{AVG}]	[%]	
0~6000	ET43014P	S	DC	6000	50	16	16.5	63.0	NS-CS01
	ET43028P	S	DC	6000	50	32	15.5	64.0	NS-CS01
	ET43055P	S	DC	6000	50	64	14	67.0	NS-CS01
915	IE09150PC	S	910	920	50	165	20	80	NS-AS01
	IE09300PC	S	910	920	50	330	19	78	NS-AS01
1300	IE13550D	S	1295	1305	50	550	15	80	RF24001DKR3
2450	IE24100P	S	2400	2500	50	105	14.5	72	NS-AS01
	IE24150P	S	2400	2500	50	165	13.5	74	NS-AS01
	IE24200P	S	2400	2500	50	220	14	73	NS-AS01
	IE24300P	S	2400	2500	50	320	12.5	70	NS-AS01
5825	IE58110Y	S	5725	5875	50	100	7	45	NS-AS01

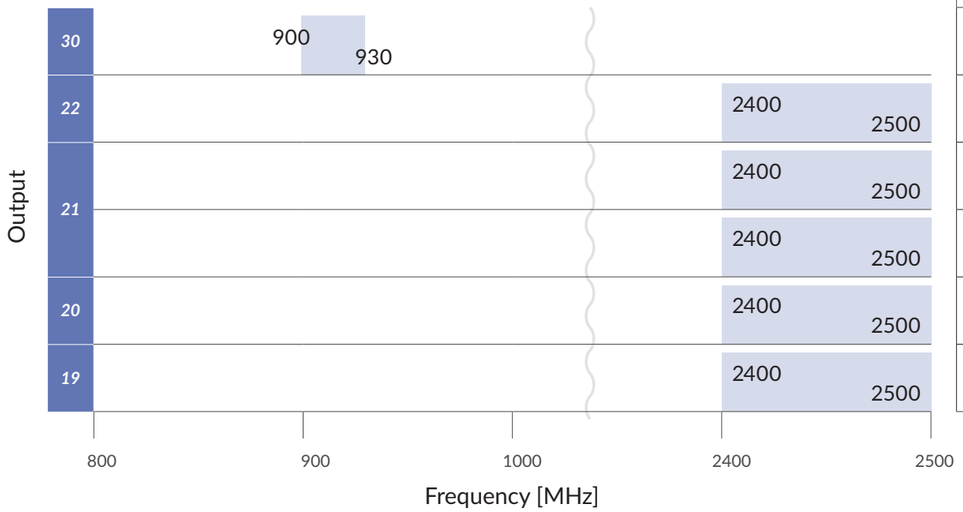
S : Single Package D : Dual Package

CW Solid State Power Amplifier



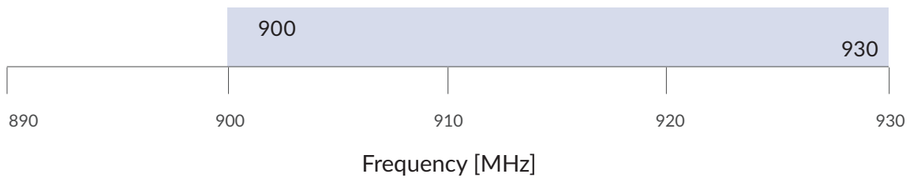
Part Number	Freq. (MHz)		Voltage	Output Power	Power Gain	Eff. @Ppeak	Dimension
	[Min]	[Max]	[Vds]	[W]	[dBPEAK]	[%]	[mm]
RNP09550-20	910	920	50	550	57	67	240x98x26
RNP091K1-20	900	930	50	1100	50	64	280x170x51
RNP091K5-20	900	930	50	1500	50	63	400x219x45
RYP24200-20S	2400	2500	50	200	28	68	70x30x4
RCP25400-20L	2400	2500	50	420	13.3	63	106x43x12
RFM245-10	2450	2450	+40VDC, +12VDC	100	-	37	150x290x92
RNP24100-20	2400	2500	50	100	50	60	160x65x32
RNP24150-20	2400	2500	50	150	52	60	160x65x32
RNP24200-20	2400	2500	50	200	53	57	160x65x32
RNP24300-20	2400	2500	50	300	55	56	180x80x35
RNP24550-20	2400	2500	50	550	42	55	240x98x26
RNP24800-20	2400	2500	50	800	42	55	285x98x35.2
RIM251K6-20	2400	2500	50	1600	60	53	332x188x44
RNP58100-C2	5770	5830	40	100	30	33	200x50x50

Microwave Generator



Part Number	Freq. (MHz)		Pout	Efficiency	Output	Cooling	Type	PSU	Package
	[Min]	[Max]	[W]	[%]					[mm]
RIK0915K-40T	900	930	15000	52	WR975 Waveguide	water	19" Rack	Yes	600x1630x750
RIU256K0-40T	2400	2500	6000	52	WR284 Waveguide	water	Stand-alone	Yes	507x392x192(Head) 482x443x133(PSU)
RIF253K0-40T	2400	2500	3000	50	WR340 Waveguide	water	19" Shelf	Yes	576x482x140(Head) 448x402x88(PSU)
RIF252K0-40T	2400	2500	2000	50	WR340 Waveguide	water	19" Shelf	Yes	576x482x140(Head) 448x402x88(PSU)
RIM24300-20	2400	2500	300	60	N Type Connector	air	Module	No	200x95x25
RIM24200-20	2400	2500	200	60	N Type Connector	air	Module	No	200x95x25

Microwave Electrodeless Lighting



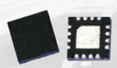
Part Number	Freq. (MHz)		Pout	Efficiency	Output	Cooling	Type	PSU	Package
	[Min]	[Max]	[W]	[%]					[mm]
RIK0915K-40T	900	930	15000	52	WR975 Waveguide	water	19" Rack	Yes	600x1630x750

Microwave Electrodeless Lighting
600x1630x750

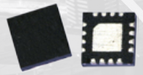
Communication
Cable&Broadband
Wifi
SATCOM
Point-to-Point

SOT-89
4.5 x 4 x 1.5

SOIC-8
5 x 6 x 1.5



QFN3X3
3 x 3 x 1



QFN4x4
4x 4 x 1

NP-1A
21.1 x 10 x 2.5

NP-18
15 x 10 x 4.5

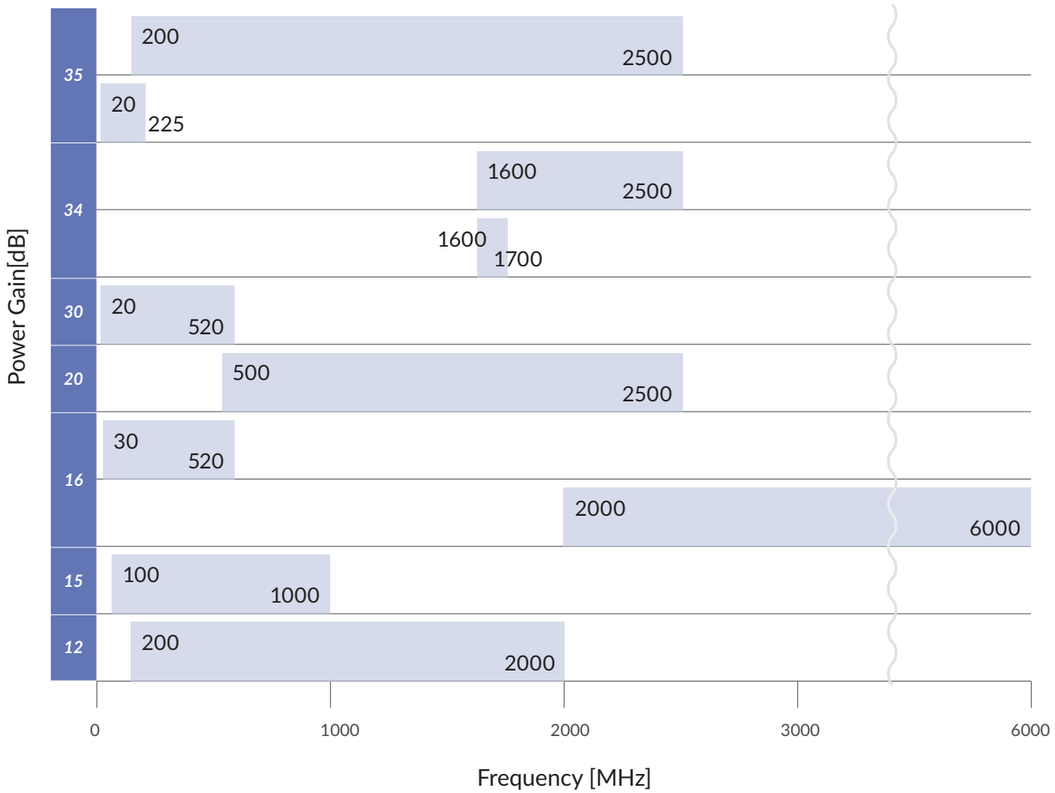
NP-1EL
20.5 x 15 x 3.5

CP-16
10.2 x 10.2 x 4

NP-26
20.5 x 15 x 4.8

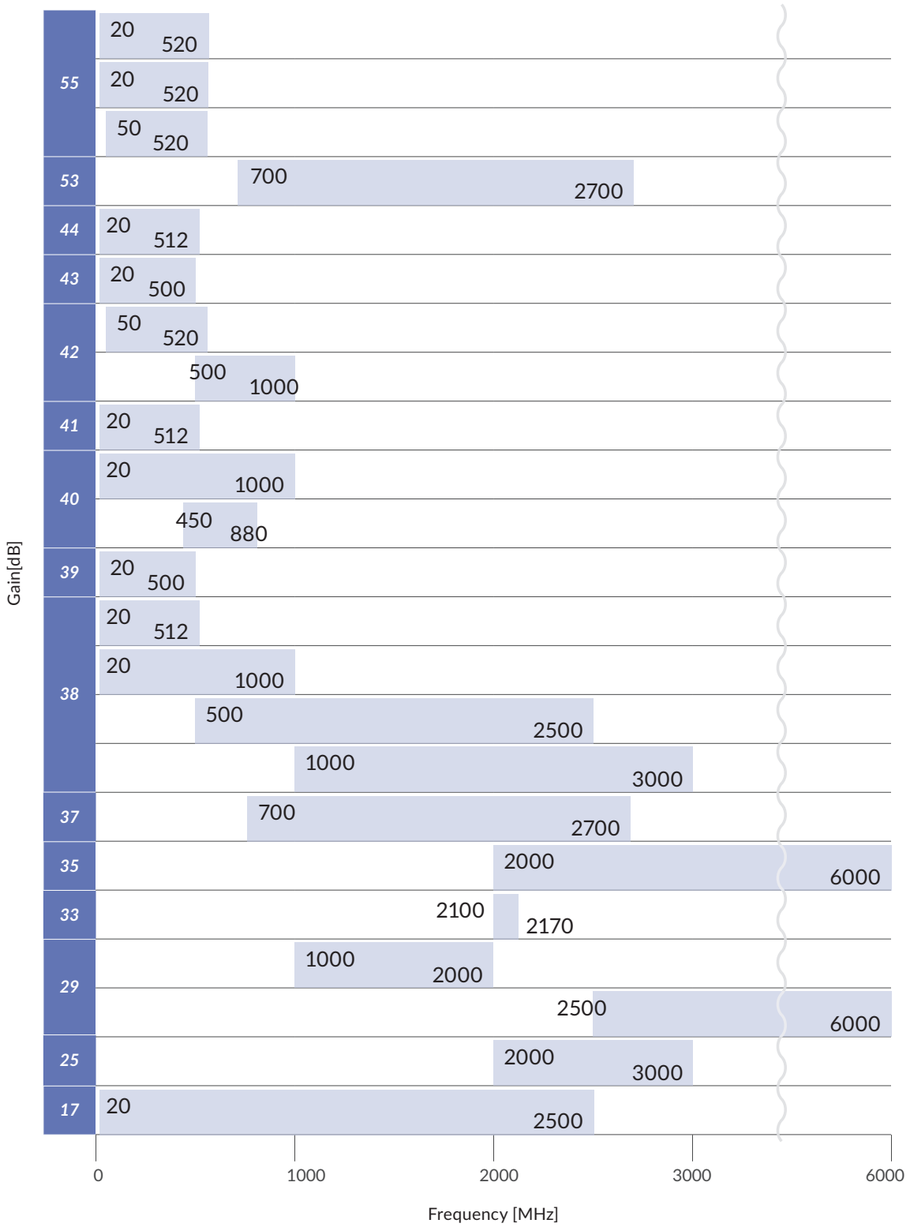
DP-75
70 x 51 x 17.1

GaN SMD Modules



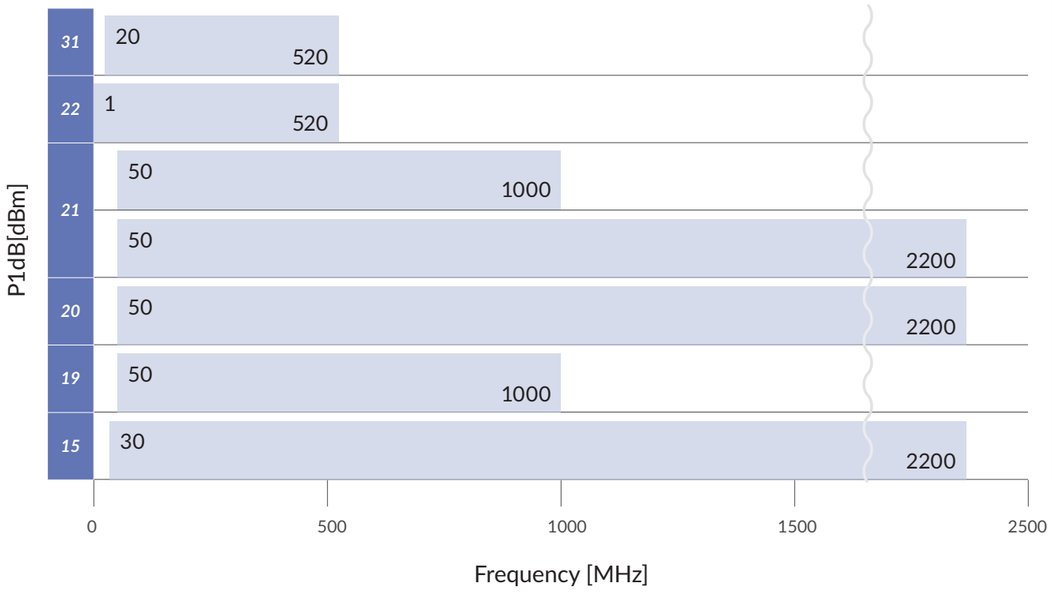
Part Number	Freq. (MHz)		P3dB	Eff.@P3dB	Power Gain	Vdd	Idd	Package
	[Min]	[Max]	[dBm]	[%]	[dB]	[V]	[mA]	
HM0220-05A	200	2500	37	40	35	24	525	NP-1A
HM0225-05A	20	225	37	35	35	24	525	NP-1A
HM0220-03A	1600	2500	35	39	34	18	450	NP-1A
HM0225-05B	1600	1700	37	31	34	24	670	NP-1A
HM0005-10A	20	520	40	45	30	28	900	NP-1E
HM0525-10A	500	2500	40	30	20	28	1300	NP-1E
TG520-10	30	520	40 [39]	60	16	28	600	NP-18
HM2060-10A	2000	6000	40 (Psat)	25	16	32	1400	NP-1EL
TG1000-10	100	1000	40 [39]	50	15	28	700	NP-18
TG2000-10	200	2000	40	50	12	28	600	NP-18

Wideband Amplifiers



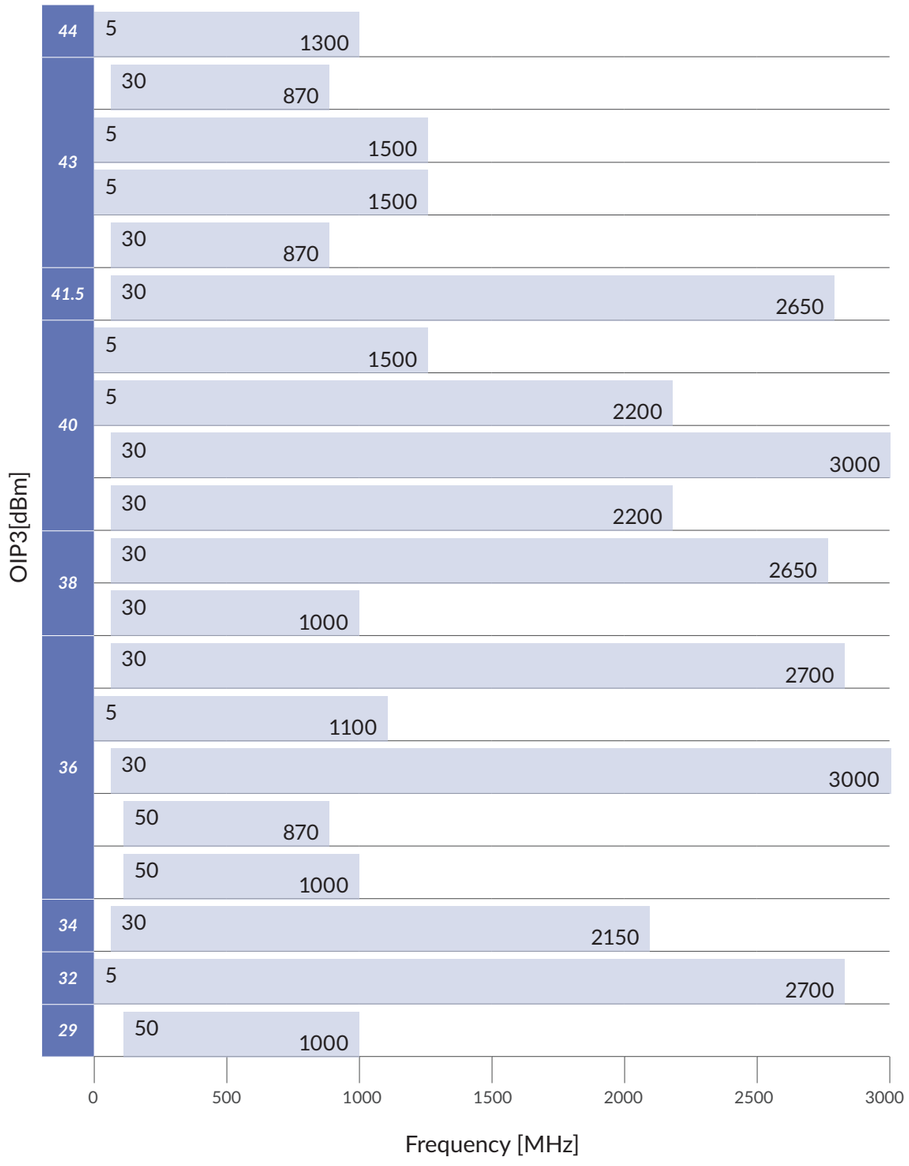
Part Number	Freq. (MHz)		P3dB	Gain	OIP3	NF	Vdd	Idd	Dimension	Package
	[Min]	[Max]	[dBm(peak)]	[dB]	[dBm]	[dB]	[V]	[mA]	[mm]	
RWM03060-10	20	520	49	55	-	-	28	7	162.6x86.4x27	-
RWM03125-10	20	520	51	55	-	-	28	9	162.6x86.4x27	-
RWM03125-20	50	520	51	55	-	-	28	9	162.6x86.4x27	-
RWP15080-10	700	2700	(50)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

Low Noise Amplifiers



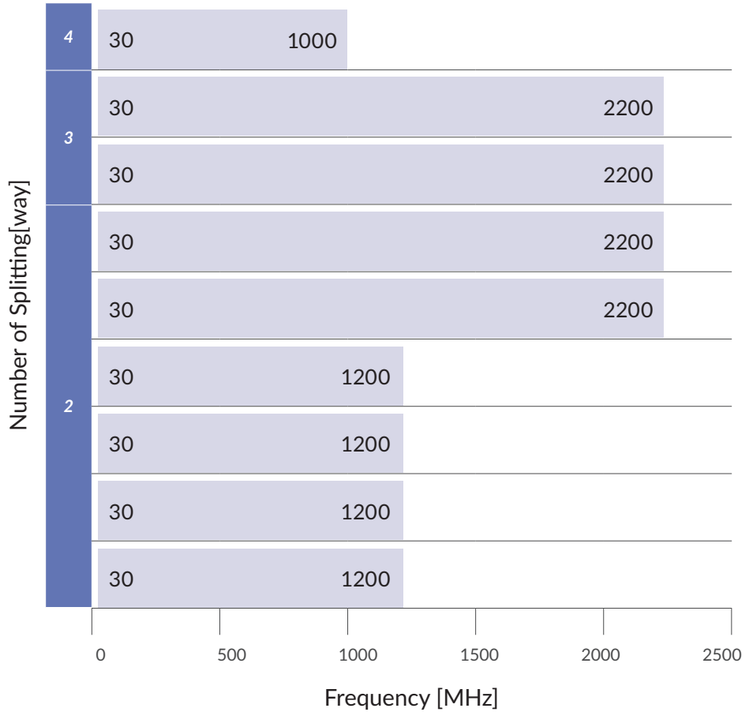
Part Number	Freq. (MHz)		Gain	Flatness	NF	P1dB	OIP3	Vdd	Idd	Package
	[Min]	[Max]	[dB]	[dB]	[dB]	[dBm]	[dBm]	[V]	[mA]	
WLP0640	20	520	19.5	0.8	2.5~2.9	31	43	12	360	CP-6C
WL0510	1	520	23	1.2	1.4~2.0	22	33	5	100	CP-16
WL1015-L	50	1000	16	2	1.7	21	35	5	160	CP-16A
WL2215-L	50	2200	15	4	1.7	21	35	5	160	CP-16A
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

GaAs MMICs



Part Number	Freq. (MHz)		Gain	NF	OIP3	P1dB	CH@Vo	CTB	CSO	Voltage	Cur-rent	Package	Process Type
	[Min]	[Max]	[dB]	[dB]	[dBm]	[dBm]	[dBmV]	[dBc]	[dBc]	[V]	[mA]		
AE618	5	1300	20	2.5	44	32	79@43	-64	-69	12	360	SOIC-8	GaAs E-pHEMT
AP209	30	870	13	2.5	43	24	135@30	-72	-50	9	120	SOT-89	GaAs MESFET
AE607	5	1500	12.5	3.5	43	28	79@40	-69	-70	8	240	SOIC-8	GaAs E-pHEMT
AE617	5	1500	22	2.3	43	28	79@40	-65	-63	8	260	SOIC-8	GaAs E-pHEMT
AP211	30	870	12	2.5	43	24	135@40	-70	-63	5	240	SOIC-8	GaAs MESFET
AE505	30	2650	14	3.4	41.5	24.5	79@40	-65	-72	5	220	SOIC-8	GaAs E-pHEMT
AE417	5	1500	14	3	40	24	135@30	-71	-62	8	120	SOT-89	GaAs E-pHEMT
AE427	5	2200	25	2	40	24	135@30	-70	-55	8	130	SOT-89	GaAs E-pHEMT
AE510	30	3000	19	3	40	23	79@30	-73	-74	5	200	SOIC-8	GaAs E-pHEMT
AE514	30	2200	18	2.5	40	25	79@40	-60	-64	5	200	SOIC-8	GaAs E-pHEMT
AE305	30	2650	14.5	2.3	38	22	135@30	-68	-60	5	110	SOT-89	GaAs E-pHEMT
ACQ102	30	1000	21.5	2.5	38	21	135@30	-65	-60	5	130	QFN4X4	GaAs E-pHEMT
AE314	30	2700	21	2	36	21	135@30	-63	-54	5	100	SOT-89	GaAs E-pHEMT
AE342A	5	1100	16	1.7	36	21	135@30	-69	-60	5	90	SOT-89	GaAs E-pHEMT
AE410	30	3000	20	2.1	36	20	135@20	-80	-65	5	100	SOT-89	GaAs E-pHEMT
ACQ624	50	870	34.5	2	36	23	79@25	-75	-70	5	280	QFN4X4	GaAs E-pHEMT
ACQ629	50	1000	37.5	2	36	22	135@30	-65	-60	12	130	QFN4X4	GaAs E-pHEMT
AE512	30	2150	17	1.5	34	20	79@30	-61	-65	5	100	SOIC-8	GaAs E-pHEMT
AE312	5	2700	20	1	32	18	135@15	-80	-60	5	50	SOT-89	GaAs E-pHEMT
AE308	50	1000	22	2	29	17	135@16	-64	-58	5	55	SOT-89	GaAs E-pHEMT

Active Dividers

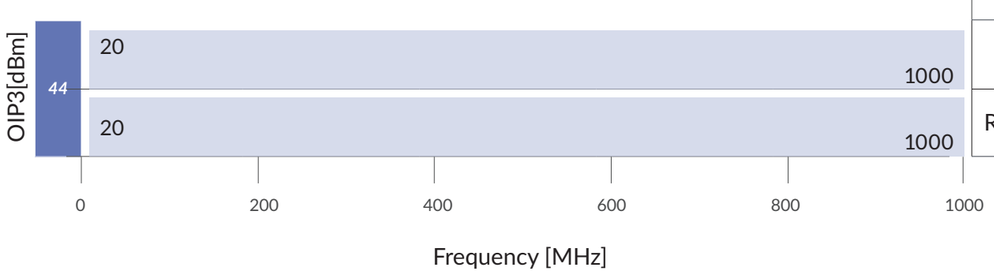


Part Number	Freq. (MHz)		Gain	NF	InOutISL	Out-OutISL	OIP3	P1dB	CTB	CSO	XMOD	Volt	Current	Package	Process Type	Splitter
	[Min]	[Max]	[dB]	[dB]	[dB]	[dB]	[dBm]	[dBm]	[dBc]	[dBc]	[dBc]	[V]	[mA]			
AD412	30	1000	6	4.5	-25	-30	27	13	-70	-58	-60	3.3	160	QFN3X3	GaAs E-pHEMT	4
AD311	30	2200	8	4.5	-25	-40	32	17.8	-72	-63	-65	5	120	QFN3X3	GaAs E-pHEMT	3
AD311	30	2200	8	4	-25	-35	30	14	-72	-59	-65	3.3	110	QFN3X3	GaAs E-pHEMT	3
AD211	30	2200	8	4	-26	-35	30	16.5	-73	-63	-65	5	90	QFN3X3	GaAs E-pHEMT	2
AD211	30	2200	8	3.5	-25	-35	30	14	-73	-57	-65	3.3	90	QFN3X3	GaAs E-pHEMT	2
AD254	30	1200	4.5	3.5	-30	-20	28	12	-71	-59	-73	5	110	QFN3X3	GaAs E-pHEMT	2
AD254	30	1200	4	3.5	-30	-20	20	8	-62	-55	-61	3.3	75	QFN3X3	GaAs E-pHEMT	2
AD274	30	1200	5.5	3.5	-30	-20	26	12	-62	-57	-66	5	110	QFN3X3	GaAs E-pHEMT	2
AD274	30	1200	5	3.3	-30	-20	18	8	-58	-51	-56	3.3	75	QFN3X3	GaAs E-pHEMT	2

DP-27
44.4 x 20 x 13.5

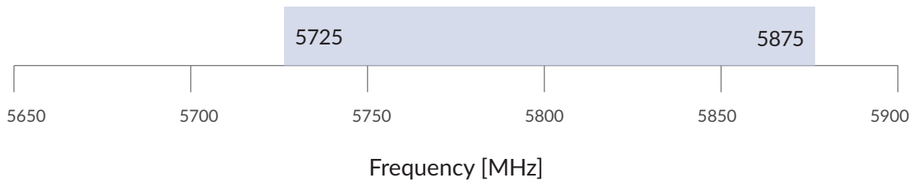
SOT-115J
44.4 x 15 x 21.1

Wideband Amplifiers



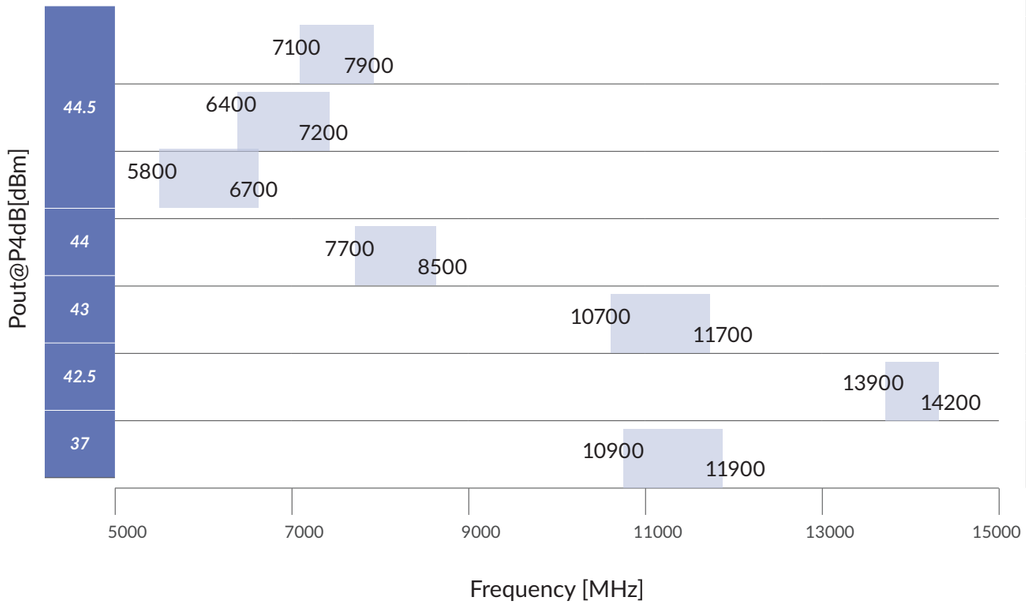
Part Number	Freq. (MHz)		P3dB	OIP3	Gain	NF	Vdd	Idd	Package
	[Min]	[Max]	[dBm] (p1dB)	[dBm]	[dB]	[dB]	[V]	[mA]	
RFC1G21H4-24	20	1000	36	44	21	-	24	550	DP-27
RFC1G21H4-24-S	20	1000	36	44	21	-	24	550	SOT-115J

GaN SMD Modules

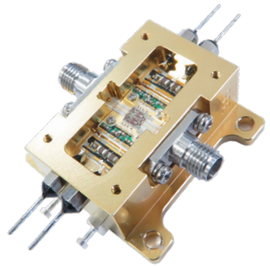


Part Number	Freq. (MHz)		Pave @3% EVM	Psat	Eff.	Power Gain	Vdd	Idd	Package
	[Min]	[Max]	[W]	[dBm]	[%]	[dB]	[V]	[mA]	
HS5758-10A	5725	5875	1.5	41	45	18.5	28	850	NP-26

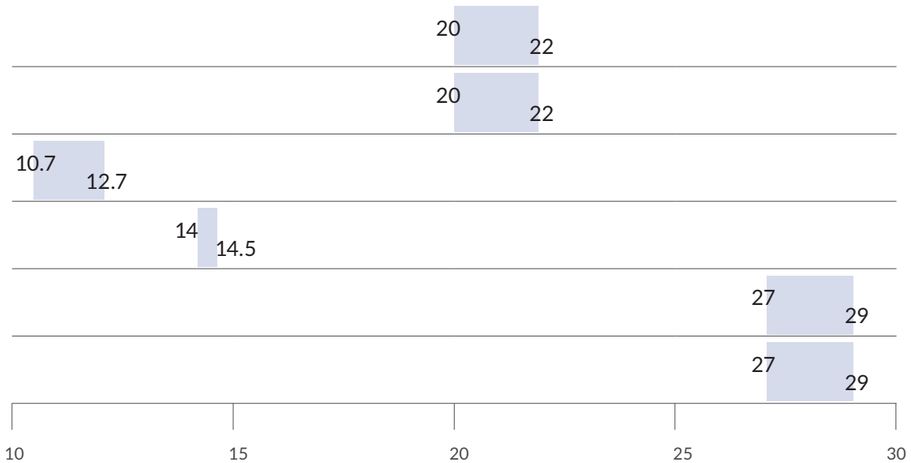
GaN SMD Module



Part Number	Freq. (MHz)		Gain@ P4dB	Pout@ P4dB	IM3@S.C.L	Eff.@P4dB	Vdd	Idd	Package
	[Min]	[Max]	[dB]	[dBm]	[dB]	[%]	[V]	[mA]	
HS7179-20A	7100	7900	10.5	44.5	30@Pout=34dBm	35	40	1700	NP-18L2A
HS6472-20A	6400	7200	10.5	44.5	30@Pout=35dBm	45	40	1500	NP-18L2A
HS5867-20A	5800	6700	10.5	44.5	30@Pout=35dBm	45	40	1500	NP-18L2A
HS7785-20A	7700	8500	9	44	30@Pout=33dBm	35	40	1700	NP-18L2A
HS107117-20A	10700	11700	8	43	30@Pout=33dBm	35	40	1400	NP-18L2A
HS139142-18A	13900	14200	6	42.5	30@Pout=30dBm	35	40	1300	NP-18L2A
HS109119-5A	10900	11900	7	37	-	30	40	-	NP-18L2A



GaN MMICs



Part Number	Freq. (MHz)		Small Signal Gain	Power Gain	Output Power	PAE	Voltage	Package
	[Min]	[Max]	[dB]	[dB]	[W]	[%]	[V]	
GM20022005D	20	22	25	23	5	27	28	Die
GM20022010D	20	22	25	22	10	24	28	Die
GM10712710D	10.7	12.7	24	20	10	38	28	Die
GM13514510D	14	14.5	21	17	10	32	28	Die
GM27030005D	27	29	18.5	15	5	25	28	Die
GM27030010D	27	29	17	13	10	22	28	Die

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