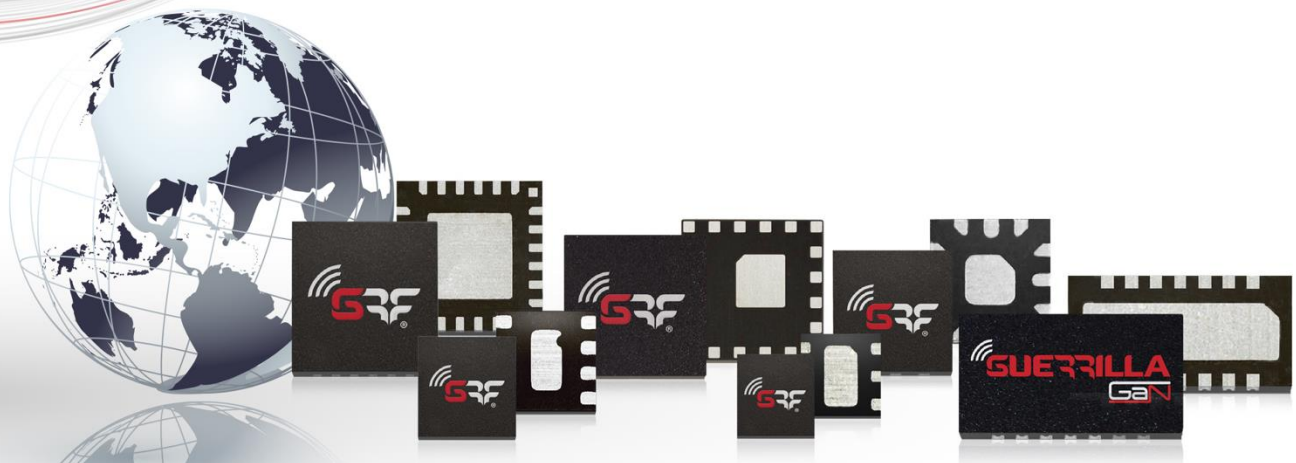
2026 PRODUCTS



GUERRILLA RF®

Making Better Networks™

OUR MARKETS

Multimarket

Aerospace & Defense

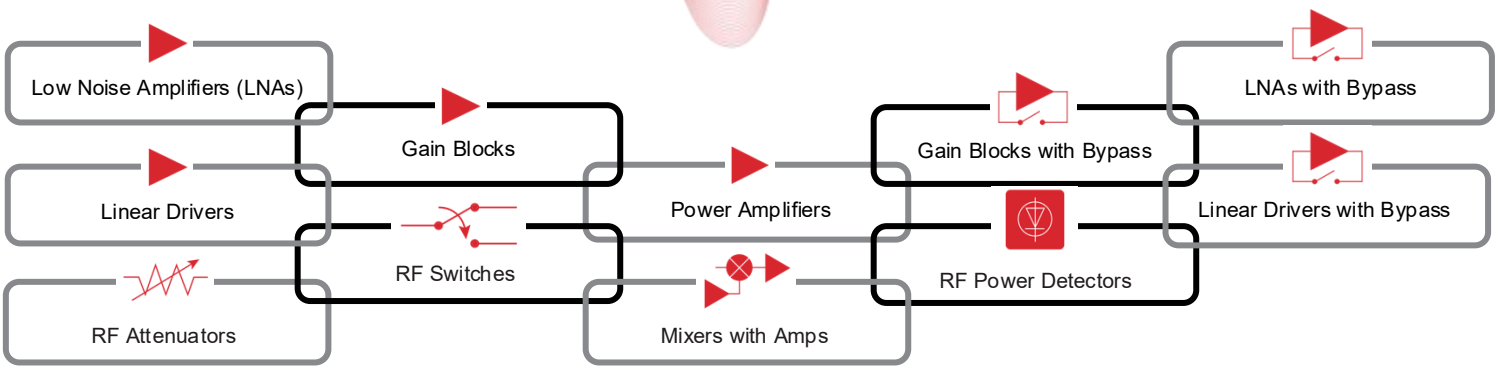
Wireless Infrastructure

Automotive

- Over 200 Million Devices Shipped
- 125+ Catalog and Custom Offerings
- 300+ Unique Customer Applications
- 2x Inc. 500 Award Recipient (2020 & 2021)
- Certified to ISO 9001 by TUV Rheinland
- Supports the European Union (EU) REACH Regulation
- Fully RoHS Compliant in China and Europe

With more than 200 million devices shipped globally, Guerrilla RF® has earned a reputation for excellence in providing reliable, high-performance MMIC solutions. Our extensive portfolio includes over 125 catalog and custom offerings, serving over 300 unique customer applications across diverse industries. We've been recognized for our rapid growth and innovation, having received the prestigious Inc. 500 award in both 2020 and 2021.

Our commitment to quality is demonstrated through our ISO 9001 certification from TUV Rheinland and adherence to global regulations, including the EU REACH and RoHS standards in China and Europe. When you choose Guerrilla RF, you can be confident you're partnering with a trusted leader in the semiconductor industry.



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LOW NOISE AMPLIFIERS (LNAs)

Guerrilla RF has one of the most extensive offerings of high performance LNAs in the industry. Each of the 60+ LNAs in the portfolio have been optimized to accentuate critical parameters like ultra low noise figure, frequency coverage, current consumption and linearity/compression performance.

ULTRA LNAs

Part Number	Frequency Range (GHz)	Gain (dB)	NF (dB)	OP1dB (dBm)	OIP3 (dBm)	V_{DD} Range (V)	I_{DD} Range (mA)	Package (mm)
GRF2070	0.1-1.5	20.8	0.35	20	39.5	2.7-5.0	20-100	2.0 DFN-8
GRF2080	0.1-1.5	20.8	0.35	20	39.5	2.7-5.0	20-100	2.0 DFN-8
GRF2133	0.1-2.7	28	0.6	20	30	1.8-5.0	35-120	1.5 DFN-6
GRF2133W	0.1-2.7	28	0.6	20	31	1.8-5.0	35-120	1.5 DFN-6
GRF2071	0.7-2.7	19	0.35	21	38	2.7-5.0	20-100	2.0 DFN-8
GRF2071W	0.7-2.7	19	0.35	21	38	2.7-5.0	20-100	2.0 DFN-8
GRF2081	0.7-2.7	19	0.35	21	38	2.7-5.0	20-100	2.0 DFN-8
GRF2078*	0.7-2.7	18.8	0.56	23.9	40.7	5	150	3.0 QFN-16
GRF2051	0.7-3.8	19	0.37	21	36	2.7-5.0	20-100	2.0 QFN-12
GRF2072	1.5-3.8	19.8	0.55	20	37.5	2.7-5.0	20-100	2.0 DFN-8
GRF2082	1.5-3.8	19.8	0.55	20	37.5	2.7-5.0	20-100	2.0 DFN-8
GRF2052	1.7-4.5	19.2	0.5	21	38	2.7-5.0	20-100	2.0 QFN-12
GRF2105	0.4-5.0	20.7	0.77	22.5	36	2.7-5.0	20-90	1.5 DFN-6
GRF2105W	0.4-5.0	20.5	0.77	21	37	2.7-5.0	20-90	1.5 DFN-6
GRF2171	2.5-5.0	29.5	0.75	18.7	41.5	5	75	1.5 DFN-6
GRF2074	1.0-6.0	20.5	0.35	17.5	35.5	2.7-5.0	20-100	2.0 DFN-8
GRF2074W	1.0-6.0	20.5	0.35	17.5	35.5	2.7-5.0	20-100	2.0 DFN-8
GRF2093	1.0-6.0	21	0.38	19	36	2.7-5.0	30-100	1.5 DFN-6
GRF2093W	1.0-6.0	21	0.37	19	36	2.7-5.0	30-100	1.5 DFN-6
GRF2084*	1.0-6.0	17.4	0.47	19.1	37.5	2.7-5.0	20-100	2.0 DFN-8
GRF2083	2.0-6.0	18.6	0.65	18	35	2.7-5.0	20-100	2.0 DFN-8
GRF2073	2.0-6.0	18.6	0.65	18	35	2.7-5.0	20-100	2.0 DFN-8
GRF2073W	2.0-6.0	20.5	0.4	19.8	35	2.7-5.0	20-100	2.0 DFN-8
GRF2110	5.0-8.0	17	1.1	22	38	2.7-6.0	70	1.5 DFN-6
GRF2584	3.0-9.0	36.5	1.0	17	30	2.7-6.0	50	1.5 DFN-6
GRF2101	4.0-10.0	18	0.9	10	22	2.7-5.0	12-28	1.5 DFN-6

* Product is in Pre-Production. Contact sales@guerrilla-rf.com for minimum order quantity.
W suffix appended to the part number indicates that the device is AEC-Q100 Automotive Qualified.

ULTRA LNAs WITH BYPASS

Part Number	Frequency Range (GHz)	Gain (dB)	NF (dB)	OP1dB (dBm)	OIP3 (dBm)	V_{DD} Range (V)	I_{DD} Range (mA)	Package (mm)
GRF2076	0.6-6.0	17.2 -2	1.1 -	21 21	41 46	2.7-5.0	20-100	1.5 DFN-6
NEW PRODUCT GRF2176	1.7-6.0	32.4 15.8	0.68 0.65	20.9 13.9	32 24.9	2.7-6.0	66 28	1.5 DFN-6
GRF2583*	5.8-6.0	27.2 15	1.2 1.25	16 10	33 21.2	2.7-6.0	52 16	1.5 DFN-6

* Product is in Pre-Production. Contact sales@guerrilla-rf.com for minimum order quantity.

▶ BROADBAND LNAs

Part Number	Frequency Range (GHz)	Reference Design Tunes [1] (MHz) [Standard Datasheet Tune in BOLD]			Gain (dB)	NF (dB)	OP1dB (dBm)	OIP3 (dBm)	V_{DD} Range (V)	I_{DD} Range (mA)	Package (mm)
GRF2114	0.1-2.7	20-50	100-400	450-520 **700-960**	17.9	0.93	24.3	40.2	1.8-5.0	30-150	2x2 DFN-8
GRF2133	0.4-2.7	400-500 **700-2700**	800-2700 900-1200	1200-1600 1600-2100	28.5	0.65	20.3	30	1.8-5.0	30-160	1.5x1.5 DFN-6
GRF2133W	0.4-2.7	400-500 **700-2700**	800-2700 900-1200	1200-1600 1600-2100	28.5	0.65	20.3	30	1.8-5.0	30-160	1.5x1.5 DFN-6
GRF2100	0.1-3.8	80-120 400-650 408-410 700-960	1150-1200 1150-1615 1540-1640 1700-2200	2300-2700 3400-3800 4300-5300	16.5	0.8	10	19	1.8-5.0	6-30	1.5x1.5 DFN-6
GRF2100W	0.1-3.8	80-120 400-650 408-410 700-960	1150-1200 1150-1615 1540-1640 1700-2200	2300-2700 3400-3800 4300-5300	16.5	0.8	10	19	1.8-5.0	6-30	1.5x1.5 DFN-6
GRF2108	0.1-3.8	100-700 118-174 241-251	470-960 **400-2700**	1100-1600 1000-2500	17	0.9	17.5	21	1.8-5.0	4-20	1.5x1.5 DFN-6
GRF2373	0.1-3.8	90-110 240-260 500-3000	800-1000 **1700-2200**	1900-2700 3600-4000	18.5	1.2	12.5	25	2.7-5.0	10-25	1.5x1.5 DFN-6
GRF4002	0.1-3.8	15-50 20-40 70-110	100-1000 434-868 **700-3600**	1100-1700 1200-1400 2320-2345	15	0.85	23.5	36.5	1.8-5.0	20-80	1.5x1.5 DFN-6
GRF4002W	0.1-3.8		700-3600		15	0.85	23.5	36.5	1.8-5.0	20-80	1.5x1.5 DFN-6
GRF4003	0.1-3.8	10-500 30-450	700-3600	868-915	13	0.85	25	41	1.8-5.0	30-120	1.5x1.5 DFN-6
GRF4004	0.1-3.8	20-60 400-900	600-1000	1700-2700	12.7	0.85	26.5	43	1.8-5.0	30-150	1.5x1.5 DFN-6
GRF5020	0.1-3.8	30-2500 80-1000 350-750 470-870 500-3000 700-2700 800-1000	900-1300 1000-3300 1200-2000 1300-2700 **1700-2700** 1800-3800 2000-4000	2300-3500 2600-3400 3000-5000 3600-4400 4300-5300 5000-6000	17.3	0.8	24.5	37.2	4.5-10.0	50-200	3x3 QFN-16
GRF5040	0.1-3.8	25-35 30-2500	900-1300 1200-1400	1500-1600 **1700-2700**	15	0.85	29.8	46.3	4.5-10.0	100-250	3x3 QFN-16
GRF2113	0.05-4.0		50-4000		21.5	1.75	22.6	38.3	3.0-6.0	115	2x2 DFN-8
NEW PRODUCT GRF4012	0.4-4.2		2320-2345		17.8	0.9	21	32	1.8-5.0	20-80	1.5x1.5 DFN-6
NEW PRODUCT GRF4012W	0.4-4.2		2320-2345		17.8	0.9	21	32	1.8-5.0	20-80	1.5x1.5 DFN-6
GRF2105	0.4-5.0	150-3500 450-1250 700-2700	800-3000 1000-2000 3000-5000	3300-4200 3400-3800 4400-5000	20.7	0.77	22.5	36	2.7-5.0	20-90	1.5x1.5 DFN-6
GRF2105W	0.4-5.0	150-3500 450-1250 700-2700	800-3000 1000-2000 3000-5000	3300-4200 3400-3800 4400-5000	20.7	0.77	21	37	2.7-5.0	20-90	1.5x1.5 DFN-6

▶ BROADBAND LNAs (CONTINUED)

Part Number	Frequency Range (GHz)	Reference Design Tunes [1] (MHz) [Standard Datasheet Tune in BOLD]			Gain (dB)	NF (dB)	OP1dB (dBm)	OIP3 (dBm)	V_{DD} Range (V)	I_{DD} Range (mA)	Package (mm)
GRF2171	2.5-5.0	1170-1300 1525-1610 2000-2500	2100-2500 2900-3000 **3400-3800**	3300-4200 3800-4250	29.5	0.75	18.7	41.5	5	75	1.5x1.5 DFN-6
GRF5010	0.05-6.0	10-200 70-150 100-400	700-960 700-2700 900-1300	1700-3800 3400-3800 4250-4350	17	0.82	24.5	38.5	4.5-9.0	50-150	3x3 QFN-16
GRF4001	0.1-6.0		0.1-6000		15.5	1	16.5	30.5	1.8-5.0	5-50	1.5x1.5 DFN-6
GRF4014	0.1-6.0	10-50 100-115 140-650 150-400	400-1000 902-928 950-1250 1240-1525	1700-3800 2400-2800 2700-3600 5800-6000	16.5	0.8	24	39	3.0-8.0	30-130	1.5x1.5 DFN-6
GRF4014W	0.1-6.0		1700-3800		17	0.8	24	39	3.0-8.0	30-130	1.5x1.5 DFN-6
GRF2505	4.0-6.0		4000-5925		12.5	1.2	19	30	1.8-5.0	20-60	1.5x1.5 DFN-6
GRF2013	0.05-8.0	50-100 50-2200 70-6000 100-500 100-1000 400-1000	700-900 **700-3900** 800-860 1200-1500 1700-2000 2000-6000	2500-2700 3000-6000 3400-3800 5855-5925 6000-7000 7750-8250	18.5	1.3	22.5	38.5	2.7-8.0	15-100	1.5x1.5 DFN-6
GRF2013W	0.05-8.0		700-3900		18.5	1.3	22.5	38.5	2.7-8.0	15-100	1.5x1.5 DFN-6
NEW PRODUCT GRF2110	5.0-8.0		5000-8000		16.3	1.2	22	38	2.7-6.0	70	1.5x1.5 DFN-6
GRF2584	3.0-9.0	3300-4200	4400-5000 5700-6200	5925-7125	36.5	1.0	17	30	2.7-6.0	50	1.5x1.5 DFN-6
GRF2003	0.1-10.0	400-6000	1000-5000	1000-10000	12	3.5	15	29	2.7-5.0	40-80	1.5x1.5 DFN-6
GRF2004	0.1-10.0	0.1-10000 [2] 50-300 50-10000	950-1700 2000-6000	7000-8000 9000-10000	16.5	1.9	18	31	1.8-5.0	60-120	1.5x1.5 DFN-6
GRF3044	0.01-11.0	0.1-11000 [2]	5000-6000	9000-11000	16.9	2.1	19.6	31.5	> 5.0	60-120	1.5x1.5 DFN-6
GRF2710	8.0-13.0		8000-12000		13.9	2.1	13	21	3.0-8.0	20-40	1.5x1.5 DFN-6
GRF3042	0.01-15.0		0.1-15000 [2]		14.5	3.4	14.7	26	> 5.0	35-60	1.5x1.5 DFN-6

* Product is in Pre-Production. Contact sales@guerrilla-rf.com for minimum order quantity.
W suffix appended to the part number indicates that the device is AEC-Q100 Automotive Qualified.

Note 1: New custom tunes are being added everyday. Be sure to look under the 'Custom Tunes' tab on the product's web page toview the latest set of matching options.
Note 2: Assumes a broadband choke. See datasheet for details.

BROADBAND LNAs WITH BYPASS

Part Number	Frequency Range (GHz)	Reference Design Tunes [1] (MHz) [Standard Datasheet Tune in BOLD]			Gain (dB)	NF (dB)	OP1dB (dBm)	OIP3 (dBm)	V_{DD} Range (V)	I_{DD} Range (mA)	Package (mm)
GRF4042	0.4-2.7	415-460 700-960	700-2700 1710-2170	1600-2100 2500-2700	16	0.9	22	36	1.8-5.0	20-180	2x2 QFN-12
GRF2140	0.1-3.8	85-115	493-547 **1700-2200**	2000-3000	16.2	1.1	10	23.5	2.7-5.0	6-30	1.5x1.5 DFN-6
GRF2374	0.1-3.8	380-480	400-960 **1700-2200**	820-920	16.5	1.2	10	22	2.7-5.0	10-25	1.5x1.5 DFN-6
GRF2077*	0.7-3.8		1700-2700		17	0.9	22	40	3.0-5.0	70	2x2 DFN-8
GRF2243	0.4-5.0	400-500 900-1000	1700-2100 **2300-2700**	3400-3800 4400-5000	19.7	0.75	14	23	2.7-5.0	8-25	1.5x1.5 DFN-6
GRF2243W*	0.4-5.0		2300-2700		19.7	0.75	14	23	2.7-5.0	8-25	1.5x1.5 DFN-6
NEW PRODUCT GRF2043	0.05-6.0		400-2700		18.4	1.6	22	37	2.7-5.0	20-100	1.5x1.5 DFN-6
GRF4142	0.1-6.0	30-90 100-150 150-2700 415-460	700-2700 1700-2200 1920-2170 2400-2600	3600-3800 4400-4900 5000-6000	15.3	0.9	19.3	33	1.8-5.0	15-80	1.5x1.5 DFN-6

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Note 1: New custom tunes are being added everyday. Be sure to look under the 'Custom Tunes' tab on the product's web page toview the latest set of matching options.

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LOW CURRENT LNAs

Part Number	Frequency Range (GHz)	Gain (dB)	NF (dB)	OP1dB (dBm)	OIP3 (dBm)	V_{DD} Range (V)	I_{DD} Range (mA)	Package (mm)
GRF2100	0.1-3.8	16.5	0.8	10	19	1.8-5.0	6-30	1.5x1.5 DFN-6
GRF2100W	0.1-3.8	16.5	0.8	10	19	1.8-5.0	8-30	1.5x1.5 DFN-6
GRF2108	0.1-3.8	17	0.9	17.5	21	1.8-5.0	4-20	1.5x1.5 DFN-6
GRF2373	0.1-3.8	18.5	1.2	12.5	25	2.7-5.0	10-25	1.5x1.5 DFN-6
GRF2201	0.4-3.8	20.5	0.8	12	26	2.7-5.0	10-30	1.5x1.5 DFN-6
GRF2113	0.05-4.0	21.5	1.75	22.6	38.3	3.0-6.0	115	1.5x1.5 DFN-6
GRF2106	0.1-4.2	20.5	0.8	12	26	2.7-5.0	8-30	1.5x1.5 DFN-6
GRF2106W	0.1-4.2	20.5	0.8	12	26	2.7-5.0	8-30	1.5x1.5 DFN-6
GRF2012	0.05-6.0	15	2.7	22.5	40	2.7-8.0	15-100	1.5x1.5 DFN-6
GRF2012W	0.05-6.0	14.8	2.7	23	40	2.7-8.0	15-100	1.5x1.5 DFN-6
GRF2501	4.9-9.0	16	1	7	19	2.7-5.0	12-28	1.5x1.5 DFN-6
GRF2501W	4.9-9.0	16	1	7	19	2.7-5.0	12-28	1.5x1.5 DFN-6
GRF2013	0.05-8.0	18.5	1.3	22.5	38.5	2.7-8.0	15-100	1.5x1.5 DFN-6
GRF2013W	0.05-8.0	18.5	1.3	22.5	38.5	2.7-8.0	15-100	1.5x1.5 DFN-6
GRF2101	4.0-10.0	18	0.9	10	22	2.7-5.0	12-28	1.5x1.5 DFN-6

* Product is in Pre-Production. Contact sales@guerrilla-rf.com for minimum order quantity.
W suffix appended to the part number indicates that the device is AEC-Q100 Automotive Qualified.

LOW CURRENT LNAs WITH BYPASS

Part Number	Frequency Range (GHz)	Gain (dB)	NF (dB)	OP1dB (dBm)	OIP3 (dBm)	V_{DD} Range (V)	I_{DD} Range (mA)	Package (mm)
GRF2140	0.1-3.8	16.2	1.1	10	23.5	2.7-5.0	6-30	1.5x1.5 DFN-6
GRF2374	0.1-3.8	16.5	1.2	10	22	2.7-5.0	10-25	1.5x1.5 DFN-6
GRF2243	0.4-5.0	19.7	0.75	14	23	2.7-5.0	8-25	1.5x1.5 DFN-6
GRF2243W*	0.4-5.0	19.7	0.75	14	23	2.7-5.0	8-25	1.5x1.5 DFN-6
NEW PRODUCT GRF2042	0.05-6.0	15	2.3	22	39	2.7-5.0	20-100	1.5x1.5 DFN-6
NEW PRODUCT GRF2043	0.05-6.0	18.4	1.6	22	37	2.7-5.0	20-100	1.5x1.5 DFN-6
GRF2541	4.9-6.0	16.4	1	7	19	2.7-5.0	12-28	1.5x1.5 DFN-6
GRF2543	4.9-6.0	14.4	1	13.4	25.5	2.7-5.0	15	1.5x1.5 DFN-6

* Product is in Pre-Production. Contact sales@guerrilla-rf.com for minimum order quantity.
W suffix appended to the part number indicates that the device is AEC-Q100 Automotive Qualified.

POWER LNAs

Part Number	Frequency Range (GHz)	Gain (dB)	NF (dB)	OP1dB (dBm)	OIP3 (dBm)	V_{DD} Range (V)	I_{DD} Range (mA)	Package (mm)
GRF5109	0.4-1.5	17.9	1.2	28.3	45	2.7-5.0	50-200	3x3 QFN-16
GRF5112	0.1-2.7	17.5	1.55	32	41	2.7-5.0	230	3x3 QFN-16
GRF5115	0.1-2.7	14.8	1.4	33	45	2.7-5.0	100-300	3x3 QFN-16
GRF5110	1.5-2.7	15	0.9	28.8	45	2.7-5.0	50-200	3x3 QFN-16
GRF5020	0.1-3.8	17.3	0.8	24.5	37.2	4.5-10.0	50-200	3x3 QFN-16
GRF5040	0.1-3.8	15	0.85	29.8	46.3	4.5-10.0	100-250	3x3 QFN-16
GRF5010	0.05-6.0	17	0.82	24.5	38.5	4.5-9.0	50-150	3x3 QFN-16
GRF5511	0.7-8.0	20.1	1.5	26.1	39.6	4.5-9.0	50-200	3x3 QFN-16
GRF4015*	0.7-9.0	20.5	1.5	26.5	38.5	4.5-9.0	160	1.5x1.5 DFN-6

* Product is in Pre-Production. Contact sales@guerrilla-rf.com for minimum order quantity.

GAIN BLOCKS & DRIVERS

Guerrilla RF has over 30 gain block and driver cores which offer excellent linearity and compression performance over a wide variety of frequency ranges.

GRF's gain block portfolio provides up to 22 dBm of OP1dB over multiple octaves, whereas the driver line extends this capability up to 33 dBm for select bands of operation. Variants with bypass capability are also available within the driver and high linearity gain block families.

HIGH LINEARITY GAIN BLOCKS

Part Number	Frequency Range (GHz)	Reference Design Tunes [1] (MHz) [Standard Datasheet Tune in BOLD]			Gain (dB)	NF (dB)	OP1dB (dBm)	OIP3 (dBm)	V_{DD} Range (V)	I_{DD} Range (mA)	Package (mm)
NEW PRODUCT GRF2011	0.05-3.8	20-70 40-60	174-240 450-520	700-3800	15.2	2	22.7	40	2.7-8.0	15-100	1.5x1.5 DFN-6
GRF2014	0.05-3.8	100-1800	500-3000	1500-2400	15.9	3.3	24	43.5	2.7-8.0	50-180	1.5x1.5 DFN-6
GRF4002	0.1-3.8	15-50 20-40 70-110	100-1000 100-3600 430-870 **700-3600**	1100-1700 1200-1400 2320-2345	15	0.85	23.5	36.5	1.8-5.0	20-80	1.5x1.5 DFN-6
GRF4002W	0.1-3.8		700-3600		15	0.85	23.5	36.5	1.8-5.0	20-80	1.5x1.5 DFN-6
GRF4003	0.1-3.8	10-500 30-450	100-3800 **700-3600**	868-915	13	0.85	25	41	1.8-5.0	30-120	1.5x1.5 DFN-6
GRF2113	0.05-4.0		50-4000		21.5	1.75	22.6	38.3	3.0-6.0	115	2x2 DFN-8
NEW PRODUCT GRF4012	0.4-4.2	30-100 200-3000	2320-2345	3200-4200	17.8	0.9	21	32	1.8-5.0	20-80	1.5x1.5 DFN-6
NEW PRODUCT GRF4012W	0.4-4.2		2320-2345		17.8	0.9	21	32	1.8-5.0	20-80	1.5x1.5 DFN-6
NEW PRODUCT GRF2010	0.05-5		400-4000		10.5	3.1	20.5	32.5	2.7-8.0	15-100	1.5x1.5 DFN-6
GRF2010W	0.05-5		400-4000		10.5	3.1	20.5	32.5	2.7-8.0	15-100	1.5x1.5 DFN-6
GRF2012	0.05-6.0	50-6000 700-900	700-1200 **400-3800**	1700-2000 2500-2700	15	2.7	22.5	40	2.7-8.0	30-120	1.5x1.5 DFN-6
GRF2012W	0.05-6.0		400-3800		14.8	2.7	23	40	2.7-8.0	15-100	1.5 DFN-6
GRF4001	0.1-6.0	100-5500	3300-3800		15.5	1	16.5	30.5	1.8-5.0	5-50	1.5x1.5 DFN-6
GRF2013	0.05-8.0	50-100 50-2200 70-6000 100-500 100-1000 400-1000	700-900 **700-3800** 800-860 800-860 1200-1500 1700-2000 2000-6000	2500-2700 3000-6000 3400-3800 5855-5925 6000-7000 7750-8250	18.5	1.3	22.5	38.5	2.7-8.0	15-100	1.5x1.5 DFN-6
GRF2013W	0.05-8.0		700-3800		18.5	1.3	22.5	38.5	2.7-8.0	15-100	1.5x1.5 DFN-6

* Product is in Pre-Production. Contact sales@guerrilla-rf.com for minimum order quantity.
W suffix appended to the part number indicates that the device is AEC-Q100 Automotive Qualified.
Note 1: New custom tunes are being added everyday. Be sure to look under the 'Custom Tunes' tab on the product's web page to view the latest set of matching options.

HIGH LINEARITY GAIN BLOCKS WITH BYPASS

Part Number	Frequency Range (GHz)	Reference Design Tunes [1] (MHz) [Standard Datasheet Tune in BOLD]	Gain (dB)	NF (dB)	OP1dB (dBm)	OIP3 (dBm)	V_{DD} Range (V)	I_{DD} Range (mA)	Package (mm)
NEW PRODUCT GRF2040	0.05-5.0	400-4000	10.2	3.1	20	36	2.7-8.0	20-100	1.5x1.5 DFN-6
NEW PRODUCT GRF2042	0.05-6.0	600-2700 3500-4500 5000-6000	15.5	2.1	22	38	2.7-6.0	20-100	1.5x1.5 DFN-6
NEW PRODUCT GRF2043	0.05-6.0	400-2700 700-5000	18.5	1.8	22	36	2.7-6.0	20-100	1.5x1.5 DFN-6

HIGH FREQUENCY GAIN BLOCKS

Part Number	Frequency Range (GHz)	Reference Design Tunes [1] (MHz) [Standard Datasheet Tune in BOLD]	Gain (dB)	NF (dB)	OP1dB (dBm)	OIP3 (dBm)	V_{DD} Range (V)	I_{DD} Range (mA)	Package (mm)
GRF3016	0.001-10.0	1-10000 [2]	13.5	4.2	16.5	30	5.0-9.0	65-80	1.5x1.5 DFN-6
GRF2004	0.1-10.0	50-300 50-10000 100-10000 950-1700 2000-6000 7000-8000 9000-10000	16.5	1.9	18	31	1.8-5.0	60-120	1.5x1.5 DFN-6
NEW PRODUCT GRF2003	0.1-10.0	400-6000 1000-5000 **1000-10000**	12	3.5	15	29	2.7-5.0	40-80	1.5x1.5 DFN-6
GRF3044	0.01-11.0	100-10000 100-12000 5000-6000 9000-11000	16.9	2.1	19.6	31.5	> 5.0	60-120	1.5x1.5 DFN-6
GRF2115	0.05-11.0	50-11000	17	1.8	21.8	35.3	3.0-6.0	130	1.5x1.5 DFN-6
GRF3012	0.001-12.0	1-12000 [2]	11	5.0	5	18	4.5-9.0	17-22	1.5x1.5 DFN-6
GRF2710	8.0-12.0	8000-12000	13.9	2.1	13	21	3.0-8.0	20-40	1.5x1.5 DFN-6
GRF3010*	0.001-15.0	1-15000 [2]	14.3	5	5	17.5	5	17-22	1.5x1.5 DFN-6
GRF3042	0.01-15.0	100-15000	14.5	3.4	14.7	26	> 5.0	35-60	1.5x1.5 DFN-6

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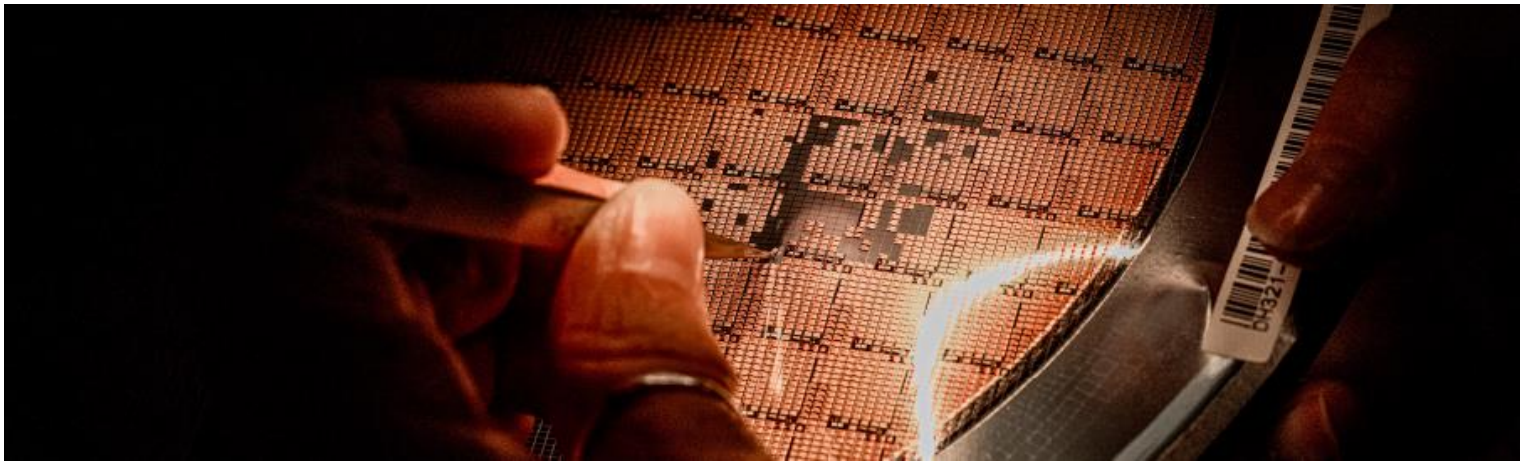
Note 1: New custom tunes are being added everyday. Be sure to look under the 'Custom Tunes' tab on the product's web page to view the latest set of matching options.
Note 2: Assumes a broadband choke. See datasheet for details.



▶ LINEAR DRIVERS

Part Number	Frequency Range (GHz)	Gain (dB)	NF (dB)	OP1dB (dBm)	OIP3 (dBm)	V_{DD} Range (V)	I_{DD} Range (mA)	Package (mm)
GRF5307*	0.617-0.862	35.6	3.6	32.9	39	5	150 [1]	3x3 QFN-16
GRF5109	0.4-1.5	17.9	1.2	28.3	45	2.7-5.0	50-200	3x3 QFN-16
GRF5317*	1.7-2.0	27.6	4.0	31.8	40.6	5	150 [1]	3x3 QFN-16
GRF5217*	1.5-2.2	30	4.0	29	35	5	160 [1]	3x3 QFN-16
GRF2114	0.1-2.7	17.9	0.93	24.3	40.2	1.8-5.0	30-150	2x2 DFN-8
GRF2133	0.4-2.7	28.5	0.65	20.3	30	1.8-5.0	30-160	1.5x1.5 DFN-6
GRF2133W	0.4-2.7	28.5	0.65	20.3	30	1.8-5.0	30-160	1.5x1.5 DFN-6
GRF5112	0.1-2.7	17.5	1.55	32	41	2.7-5.0	230	3x3 QFN-16
GRF5115	0.1-2.7	14.8	1.4	33	45	2.7-5.0	100-300	3x3 QFN-16
GRF5110	1.5-2.7	15	0.9	28.8	45	2.7-5.0	50-200	3x3 QFN-16
GRF5226*	2.3-2.7	40	4.0	29	35	3.0-5.5	85-105	3x3 QFN-16
NEW PRODUCT GRF2011	0.05-3.8	15.2	2	22.7	40	2.7-8.0	15-100	1.5x1.5 DFN-6
GRF2014	0.05-3.8	15.9	3.3	24	43.5	2.7-8.0	50-180	1.5x1.5 DFN-6
GRF4002	0.1-3.8	15	0.85	23.5	36.5	1.8-5.0	20-80	1.5x1.5 DFN-6
GRF4002W	0.1-3.8	15	0.85	23.5	36.5	1.8-5.0	20-80	1.5x1.5 DFN-6
GRF4003	0.1-3.8	13	0.85	25	41	1.8-5.0	30-120	1.5x1.5 DFN-6
GRF4004	0.1-3.8	12.7	0.85	26.5	43	1.8-5.0	30-150	1.5x1.5 DFN-6
GRF4005	0.1-3.8	13	0.85	27.5	43	1.8-5.0	50-200	1.5x1.5 DFN-6
GRF5020	0.1-3.8	17.3	0.8	24.5	37.2	4.5-10.0	50-200	3x3 QFN-16
GRF5040	0.1-3.8	15	0.85	29.8	46.3	4.5-10.0	100-250	3x3 QFN-16
GRF2113	0.05-4.0	21.5	1.75	22.6	38.3	3.0-6.0	115	1.5x1.5 DFN-6
NEW PRODUCT GRF4012	0.4-4.2	17.8	0.9	21	32	1.8-5.0	20-80	1.5x1.5 DFN-6
NEW PRODUCT GRF4012W	0.4-4.2	17.8	0.9	21	32	1.8-5.0	20-80	1.5x1.5 DFN-6
GRF5236*	3.3-4.2	36.3	4.2	30.2	33.2	3.0-5.5	85-105	3x3 QFN-16
NEW PRODUCT GRF2010	0.05-5.0	10.5	3.1	20.5	32.5	2.7-8.0	15-100	1.5x1.5 DFN-6
GRF2010W	0.05-5.0	10.5	3.1	20.5	32.5	2.7-8.0	15-100	1.5x1.5 DFN-6
GRF5126*	1.8-5.0	37 / 31	2.0 / 2.1	24.5 / 24	35 / 33	3.0-5.5	85-100	3x3 QFN-16
GRF2012	0.05-6.0	15	2.7	22.5	40	2.7-8.0	30-120	1.5x1.5 DFN-6
GRF2012W	0.05-6.0	14.8	2.7	23	40	2.7-8.0	15-100	1.5x1.5 DFN-6
GRF5010	0.05-6.0	17	0.82	24.5	38.5	4.5-9.0	50-150	3x3 QFN-16

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W suffix appended to the part number indicates that the device is AEC-Q100 Automotive Qualified. Note 1: I_{DD} with RF power applied.

▶ LINEAR DRIVERS (CONTINUED)

Part Number	Frequency Range (GHz)	Gain (dB)	NF (dB)	OP1dB (dBm)	OIP3 (dBm)	V_{DD} Range (V)	I_{DD} Range (mA)	Package (mm)
GRF4001	0.1-6.0	15.5	1	16.5	30.5	1.8-5.0	5-50	1.5x1.5 DFN-6
GRF4014	0.1-6.0	16.5	0.8	24	39	3.0-8.0	30-130	1.5x1.5 DFN-6
GRF4014W	0.1-6.0	17	0.8	24	39	3.0-8.0	30-130	1.5x1.5 DFN-6
GRF2505	4.0-6.0	12.5	1.2	19	30	1.8-5.0	20-60	1.5x1.5 DFN-6
GRF2013	0.05-8.0	18.5	1.3	22.5	38.5	2.7-8.0	15-100	1.5x1.5 DFN-6
GRF2013W	0.05-8.0	18.5	1.3	22.5	38.5	2.7-8.0	15-100	1.5x1.5 DFN-6
GRF5511	0.7-8.0	20.1	1.5	26.1	39.6	4.5-9.0	50-200	3x3 QFN-16
GRF2110	5.0-8.0	16.3	1.2	22	38	2.7-6.0	70	1.5x1.5 DFN-6
GRF4015*	0.7-9.0	20.5	1.5	26.5	38.5	2.7-6.0	160	1.5x1.5 DFN-6
GRF2115	0.05-11.0	17	1.8	21.8	35.3	3.0-6.0	130	1.5x1.5 DFN-6

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W suffix appended to the part number indicates that the device is AEC-Q100 Automotive Qualified. Note 1: I_{DD} with RF power applied.

LINEAR DRIVERS WITH BYPASS

Part Number	Frequency Range (GHz)	Gain (dB)	NF (dB)	OP1dB (dBm)	OIP3 (dBm)	V_{DD} Range (V)	I_{DD} Range (mA)	Package (mm)
GRF4042	0.4-2.7	16	0.9	22	36	1.8-5.0	20-180	2x2 QFN-12
NEW PRODUCT GRF2040	0.05-5.0	10.2	3.1	20	36	2.7-8.0	15-90	1.5x1.5 DFN-6
GRF4142	0.1-6.0	15.3	0.9	19.3	33	1.8-5.0	15-80	1.5x1.5 DFN-6
NEW PRODUCT GRF2042	0.15-6.0	15.5	2.1	22	38	2.7-5.0	20-100	1.5x1.5 DFN-6
NEW PRODUCT GRF2043	0.15-6.0	18.5	1.8	22	36	2.7-5.0	20-100	1.5x1.5 DFN-6

LINEAR POWER AMPLIFIERS

Guerrilla RF has over 40 linear PAs which provide up to ½ W of average output power while operating within a natively linear mode.

The GRF53xx, GRF55xx and GRF56xx series capitalize on this native linearity to meet the stringent -45dB ACLR mask requirements typically found in cellular applications – all without the aid of supplemental linearization schemes like DPD or CFR. The ability to beat this ACLR performance metric without DPD is critical for size, cost and power-sensitive cellular applications like home and commercial repeaters/boosters, femtocells, picocells and cable loss compensators found in automobiles.

Due to their versatility, this extensive line of amplifiers can also be used as highly linear drivers within a variety of wireless infrastructure applications.

THE GRF53xx / GRF55xx / GRF56xx PIN-COMPATIBLE FAMILY OF LINEAR PAs COVER ALL MAJOR CELLULAR BANDS BELOW 4.2GHz

Linear P_{OUT} Rating [1]	Frequency Coverage (MHz)																
	615-650	660-720	700-750	745-800	800-815	815-860	860-870	880-900	880-960	1500-1600	1600-1700	1700-1800	1800-1920	1920-2000	2110-2170	2500-2700	3300-4200
1/10 W			5307							5217 / 5317							
1/4 W	5505	5506	5507		5508				5510	5515	5516	5517	5518	5519	5521	5526	5536
1/2 W	5605	5606	5607	5608		5609	5610	5611		5615	5616	5617	5618	5619	5621	5626	5636

LINEAR POWER AMPLIFIERS

Part Number	Frequency Range (GHz)	Rated P_{OUT} [1] (dBm)	Gain (dB)	NF (dB)	OP1dB (dBm)	OIP3 (dBm)	V_{DD} Range (V)	I_{DD} Range (mA)	Package (mm)
GRF5604	0.1-0.6	25 [1] / 38 [4]	36.3	4	38	-	3.6-5.0	190	3x3 QFN-16
GRF5605	0.617-0.652	25 [1]	28.2	4.2	35.3	47.5	5	310 [3]	3x3 QFN-16
GRF5606	0.663-0.716	26 [1]	27.5	4.2	35.6	54.7	5	310 [3]	3x3 QFN-16
GRF5506	0.66-0.72	24 [1]	28.4	4.5	33.3	46.8	5	290 [3]	3x3 QFN-16
GRF5307*	0.617-0.862	20 [1]	35.6	3.6	32.9	39	5	150 [3]	3x3 QFN-16
GRF5607	0.709-0.748	27 [1]	28.2	4.1	35.7	51.3	5	210 [3]	3x3 QFN-16
GRF5507	0.7-0.8	24 [1]	30.5	4.5	33.4	47.3	5	305 [3]	3x3 QFN-16
GRF5507W	0.7-0.8	24 [1]	30.5	4.5	33.4	47.3	5	305 [3]	3x3 QFN-16
GRF5608	0.746-0.83	27 [1]	27.8	4.8	36.0	49.0	5	310 [3]	3x3 QFN-16
GRF5609	0.814-0.862	26 [1]	27.8	4.6	35.7	49.4	5	310 [3]	3x3 QFN-16
GRF5508	0.8-0.9	24 [1]	29.7	4.5	33.1	45.4	5	302 [3]	3x3 QFN-16
GRF5610*	0.865-0.928	27 [1]	26	4.3	34.5	48	5	205 [3]	3x3 QFN-16
GRF5510	0.88-0.96	24 [1]	29.2	4.5	33.8	46.1	5	352 [3]	3x3 QFN-16
GRF5611	0.902-0.96	26 [1]	26.3	4.1	34.9	46.9	5	420 [3]	3x3 QFN-16
GRF5613	1.35-1.45	26 [1]	24.5	3.5	35.4	-	5	185	3x3 QFN-16
GRF5109	0.4-1.5		17.9	1.2	28.3	45	2.7-5.0	50-200	3x3 QFN-16
GRF5616	1.625-1.675	26 [1]	23.5	3.7	36	46.8	5	275	3x3 QFN-16

LINEAR POWER AMPLIFIERS (CONTINUED)

Part Number	Frequency Range (GHz)	Rated P_{OUT} [1] (dBm)	Gain (dB)	NF (dB)	OP1dB (dBm)	OIP3 (dBm)	V_{DD} Range (V)	I_{DD} Range (mA)	Package (mm)
GRF5617	1.71-1.785	26.5 [1]	25.1	4.2	35.4	49.3	5	650 [3]	3x3 QFN-16
GRF5517	1.7-1.8	22.5 [1]	27.5	5.4	32	48	5	305 [3]	3x3 QFN-16
GRF5517W	1.7-1.8	22.5 [1]	27.5	5.4	32	48	5	305 [3]	3x3 QFN-16
GRF5518	1.8-1.91	23 [1]	27	4.2	32	45	5	310 [3]	3x3 QFN-16
GRF5518W	1.8-1.91	23 [1]	27	4.2	32	45	5	310 [3]	3x3 QFN-16
GRF5618*	1.805-1.915	25.5 [1]	25.1	4.2	35.9	47.7	5	380 [3]	3x3 QFN-16
GRF5317*	1.7-2.0	18 [1]	27.6	4.0	31.8	40.6	5	150 [3]	3x3 QFN-16
GRF5619*	1.92-1.99	25.5 [1]	29	3.6	35	47	5	380 [3]	3x3 QFN-16
GRF5519	1.92-2.0	23 [1]	26.5	4.1	32	45	5	310 [3]	3x3 QFN-16
GRF5621*	2.11-2.17	25.5 [1]	29	3.6	35	47	5	380 [3]	3x3 QFN-16
GRF5521	2.11-2.17	23 [1]	31	3.1	33	45	5	235 [3]	3x3 QFN-16
GRF5217*	1.525-2.2	22 [5]	27.6	4.0	29	35	5	160 [3]	3x3 QFN-16
GRF5112	1.5-2.7		17.5	1.55	32	41	2.7-5.0	300	3x3 QFN-16
GRF5115	0.1-2.7		14.8	1.4	33	45	2.7-5.0	100-300	3x3 QFN-16
GRF5110	1.5-2.7		15	0.9	28.8	45	2.7-5.0	50-200	3x3 QFN-16
GRF5626*	2.3-2.7	25.5 [1]	29	3.6	35	47	5	400 [3]	3x3 QFN-16
GRF5526	2.3-2.7	23 [1]	28.5	3.0	32	45	5	250 [3]	3x3 QFN-16
GRF4004	0.1-3.8		12.7	0.85	26.5	43	1.8-5.0	30-150	1.5x1.5 DFN-6
GRF4005	0.1-3.8		13	0.85	27.5	43	1.8-5.0	50-200	1.5x1.5 DFN-6
GRF5040	0.1-3.8		15	0.85	29.8	46.3	4.5-10.0	100-250	3x3 QFN-16
GRF5636*	3.3-3.8	25.5 [1]	27	3.6	35	47	5	420 [3]	3x3 QFN-16
GRF5536	3.3-4.2	23 [1]	24.8	4.1	32.8	47.8	5	280 [3]	3x3 QFN-16
GRF5536W	3.3-4.2	23 [1]	24.8	4.1	32.8	47.8	5	280 [3]	3x3 QFN-16
GRF5458*	5.855-5.925	28.5	31.7	-	-	-	5	525 [2]	3.8 x 2.7 LGA
GRF5511	0.7-8.0		20.1	1.5	26.1	39.6	4.5-9.0	50-200	3x3 QFN-16
GRF4015*	0.7-9.0		20.5	1.5	26.5	38.5	5	160	1.5x1.5 DFN-6

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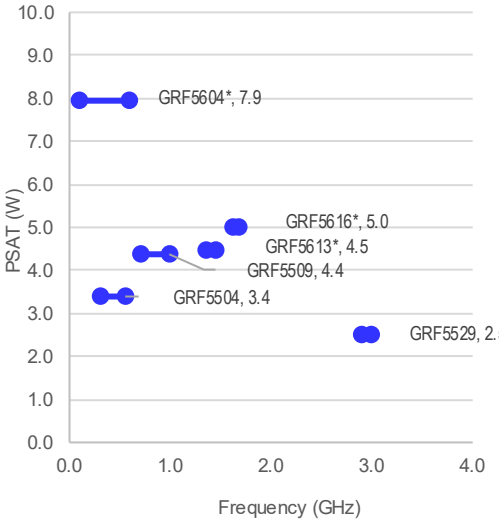
Note 1: Rated P_{OUT} Yields Better Than -45dBc ACLR (LTE 20MHz 100RB TM1.1 Downlink Waveform with 9.8dB PAR).
Note 2: Rated P_{OUT} for DSRC/802.11p operation.
Note 3: I_{DD} with RF power applied.
Note 4: Rated P_{OUT} for AMR applications.
Note 5: Rated P_{OUT} when used with DPD + CFR and yielding better than -50dBc ACLR (LTE 20MHz 100RB TM1.1 Downlink Waveform with 9.8dB PAR).

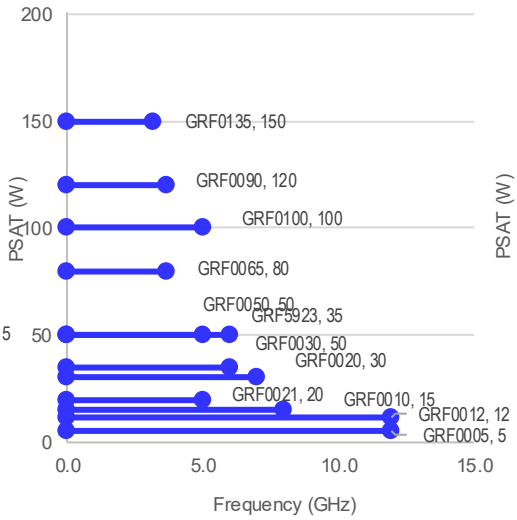
HIGH EFFICIENCY POWER AMPLIFIERS

GRF now offers a full suite of InGaP HBT and GaN on SiC High Efficiency PAs in both packaged and die form. Together, these cores provide 2.5 W to 600 W of rated output power delivered over frequency ranges that extend from near-DC to X-band.

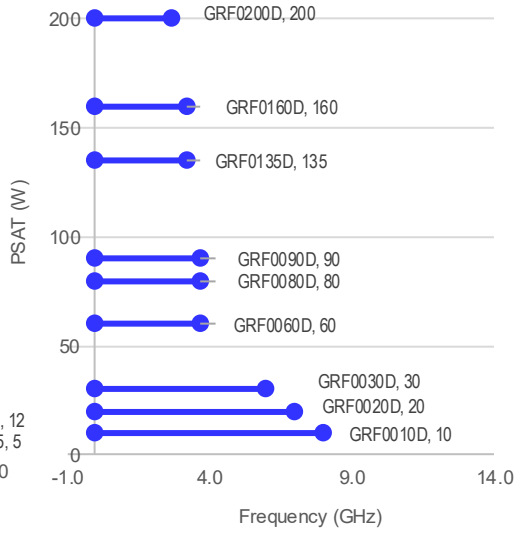
Sub-10W High Efficiency InGaP HBT PAs in QFN Packaging



Wideband Discrete GaN Transistors in DFN & QFN Packaging



Wideband Discrete GaN Transistors in Bare Die Form



HIGH EFFICIENCY InGaP HBT PAs (< 10W)

Part Number	Frequency Range (GHz)	P_{SAT} (W)	P_{SAT} (dBm)	Gain (dB)	OP1dB (dBm)	Efficiency (%)	V_{DD} Range (V)	I_{DD} (mA)	Package (mm)
GRF5504	0.3-0.55	3.4	35.5	41	34.3	61	3.5-5	125 [1]	3x3 QFN-16
GRF5604*	0.1-0.6	7.9	39	36.3	38	62	3.6-5	190 [1]	3x3 QFN-16
GRF5509	0.7-1.0	4.4	36.4	33.4	35.5	55	3.5-5	125 [1]	3x3 QFN-16
GRF5613*	1.35-1.45	4.5	36.5	24.5	35.4	48	3.6-5	185 [1]	3x3 QFN-16
GRF5616*	1.625-1.675	5.0	37	23.5	36	47	3.6-5	275 [1]	3x3 QFN-16
GRF5529	2.9-3.0	2.5	34	29.5	33	57	3.6-5	110 [1]	3x3 QFN-16

50V GaN-ON-SiC BARE DIE

Part Number	Description	Paths	Type	Frequency (GHz)	P_{SAT} (W)	Gain (dB)	Efficiency (%)	Voltage (V)
GRF0010D	10W	Single	Unmatched Discrete	DC-8.0	10	20	61	28/50
GRF0020D	20W	Single	Unmatched Discrete	DC-7.0	20	21	63	28/50
GRF0030D	30W	Single	Unmatched Discrete	DC-6.0	30	21	64	28/50
GRF0060D*	60W	Single	Unmatched Discrete	DC-3.7	60	21	64	28/50
GRF0080D*	80W	Single	Unmatched Discrete	DC-3.7	80	21	66	28/50
GRF0090D*	90W	Single	Unmatched Discrete	DC-3.7	90	22	67	28/50
GRF0135D*	135W	Single	Unmatched Discrete	DC-3.2	135	19	66	28/50
GRF0160D*	160W	Single	Unmatched Discrete	DC-3.2	160	19	65	28/50
GRF0200D*	200W	Single	Unmatched Discrete	DC-2.7	200	15	64	28/50
GRF0250D*	250W	Single	Unmatched Discrete	DC-2.7	250	15	64	28/50

* Product is in Pre-Production. Contact sales@guerrilla-rf.com for availability and minimum order quantity.

DISCRETE WIDEBAND GaN AMPLIFIERS IN QFN/DFN PLASTIC PACKAGING

Part Number	Description	Paths	Type	Frequency (GHz)	P_{SAT} (W)	Gain (dB)	Efficiency (%)	Voltage (V)	Package (mm)
GRF0005*	5W	Single	Unmatched Discrete	DC-12.0	5	22	67	28	3x3 QFN-16
GRF0012*	12W	Single	Unmatched Discrete	DC-12.0	12	21	66	28	3x3 QFN-16
GRF0010	15W	Single	Unmatched Discrete	DC-8.0	15	19	62	50	3x3 QFN-16
GRF0021*	20W	Single	Pre-matched Discrete	4.4-5.0	20	13	50	50	3x3 QFN-16
GRF0020	30W	Single	Unmatched Discrete	DC-7.0	30	19	64	50	3x3 QFN-16
GRF5923*	35W	Dual Symmetric	Unmatched Discrete	DC-6.0	35	14	55	50	4x4QFN-24
GRF0030	50W	Single	Unmatched Discrete	DC-6.0	50	21	65	50	3x3 QFN-16
GRF0050*	50W	Dual Symmetric	Unmatched Discrete	DC-5.0	50	13	45	50	3x6 DFN-14
GRF0065*	80W	Single	Unmatched Discrete	DC-3.7	80	21.9	66	50	3x6 DFN-14
GRF0100*	100W	Dual Symmetric	Unmatched Discrete	DC-5.0	100	12	44	50	3x6 DFN-14
GRF0090*	120W	Single	Unmatched Discrete	DC-3.7	110	21.6	66	50	3x6 DFN-14
GRF0135*	150W	Single	Unmatched Discrete	DC-3.2	150	19	64	50	3x6 DFN-14

* Product is in Pre-Production. Contact sales@guerrilla-rf.com for availability and minimum order quantity.

DISCRETE WIDEBAND GaN AMPLIFIERS IN ACC PACKAGING

Part Number	Description	Paths	Type	Frequency (GHz)	P_{SAT} (W)	Gain (dB)	Efficiency (%)	Voltage (V)	Package (mm)
GRF0015*	15W	Single Asymmetric	Unmatched Discrete	DC-8.0	15	20	63	50	ACC NI-200
GRF0031*	30W	Single Asymmetric	Unmatched Discrete	DC-7.0	30	19	68	50	ACC NI-200
GRF0051*	50W	Single Asymmetric	Unmatched Discrete	DC-6.0	50	19	66	50	ACC NI-360
GRF0081*	80W	Single Asymmetric	Unmatched Discrete	DC-3.7	80	19	68.6	50	ACC NI-360
GRF0101*	100W	Single Asymmetric	Unmatched Discrete	DC-2.5	100	16	70	28	ACC NI-360
GRF0110*	110W	Single Asymmetric	Unmatched Discrete	DC-3.7	110	21	65	50	ACC NI-360
GRF0150*	150W	Single Asymmetric	Unmatched Discrete	DC-3.2	150	18	70	50	ACC NI-360
GRF0180*	180W	Single Asymmetric	Unmatched Discrete	DC-3.2	180	18	66	50	ACC NI-650

* Product is in Pre-Production. Contact sales@guerrilla-rf.com for availability and minimum order quantity.

PULSED RADAR GaN AMPLIFIERS

Part Number	Description	Paths	Type	Band	Frequency (GHz)	P_{SAT} (W)	Gain (dB)	Efficiency (%)	Voltage (V)	Package (mm)
GRF0415*	150W	Single	Pre-matched Discrete	L-Band	1.0-1.4	150	18	75	50	6.5x7 DFN-6
GRF0450*	500W	Single	Pre-matched Discrete	L-Band	1.2-1.4	500	18	66	50	ACP 800 4L
GRF0250*	500W	Single	Pre-matched Discrete	L-Band	0.96-1.215	500	18	66	50	ACP 800 4L
GRF0512*	125W	Single	Pre-matched Discrete	S-Band	2.7-3.3	125	15	63	50	ACP 462 2L
GRF0315*	250W	Single	Pre-matched Discrete	S-Band	2.7-3.3	150	17	67	50	6.5x7 DFN-6
GRF0125*	250W	Single	Pre-matched Discrete	S-Band	2.7-3.1	250	15.5	64	50	ACP 462 2L
GRF0525*	250W	Single	Pre-matched Discrete	S-Band	3.1-3.5	250	16	65	50	ACP 462 2L
GRF0905*	50W	Single	Gflex / 1 stage	X-Band	9.1-9.9	50	14	51	40	7x6 LGA
GRF0910*	100W	Single	Gflex / 2 stage	X-Band	9.1-9.9	100	22	42	40	10x12 LGA

* Product is in Pre-Production. Contact sales@guerrilla-rf.com for availability and minimum order quantity.

ISM CW GaN AMPLIFIERS

Part Number	Description	Paths	Type	Band	Frequency (GHz)	P_{SAT} (W)	Gain (dB)	Efficiency (%)	Voltage (V)	Package (mm)
GRF0505*	27W	Dual Symmetric	Prematched Discrete	ISM	2.4-2.5	27 (single path) 55 (dual path)	18	70	50	6.5x7 DFN-6
GRF0530*	300W	Single	Prematched Discrete	ISM	2.4-2.5	300	18	73	50	ACP 800 4L
GRF0560*	600W	Single	Prematched Discrete	ISM	2.4-2.5	600	17	73	50	ACP 1600 4L

* Product is in Pre-Production. Contact sales@guerrilla-rf.com for availability and minimum order quantity.

DISCRETE GaN AMPLIFIERS IN DFN PACKAGES FOR mMIMO DOHERTY APPLICATIONS

Part Number	Description	Paths	Type	Bands	Frequency (GHz)	P_{SAT} (W)	P_{AVG} (W)	Gain (dB)	Efficiency (%)	Voltage (V)	Package (mm)
GRF0710*	100W	Dual Symmetric	Pre-matched Discrete	n40, n41	2.3-2.7	100	14	15	57	50	6.5x7 DFN-6
GRF0805*	50W	Dual Symmetric	Pre-matched Discrete	n48, n77, n78	3.3-3.8	50	7	15	52	50	6.5x7 DFN-6
GRF0810*	100W	Dual Symmetric	Pre-matched Discrete	n48, n77, n78	3.3-3.8	100	14	14	51	50	6.5x7 DFN-6
GRF0205*	50W	Dual Symmetric	Pre-matched Discrete	n77	3.7-4.2	50	7	14	50	50	6.5x7 DFN-6
GRF0210*	100W	Dual Symmetric	Pre-matched Discrete	n77	3.7-4.2	100	14	13.5	48	50	6.5x7 DFN-6
GRF0021*	20W	Single	Pre-matched Discrete	n79	4.4-5.0	20	-	13	50	50	3x6 DFN-14
GRF0070*	70W	Dual Symmetric	Pre-matched Discrete	n79	4.4-5.0	70	7	13	42	50	3x6 DFN-14
GRF0050*	50W	Dual Symmetric	Unmatched Discrete	Multiple	DC-5.0	50	8	13	45	50	3x6 DFN-14
GRF0100*	100W	Dual Symmetric	Unmatched Discrete	Multiple	DC-5.0	100	15	12	44	50	3x6 DFN-14

* Product is in Pre-Production. Contact sales@guerrilla-rf.com for availability and minimum order quantity.

DUAL PATH ASYMMETRICAL DOHERTY GaN FINALS IN ACP PACKAGES FOR MACRO BASESTATION APPLICATIONS

Part Number	Description	Paths	Type	Bands	Frequency (GHz)	P_{SAT} (W)	P_{AVG} (W)	Gain (dB)	Efficiency (%)	Voltage (V)	Package (mm)
GRF0240*	400W	Dual Symmetric	Pre-matched Discrete	n1, n2, n3	1.8-2.2	400	56	17	56	50	ACP 800 4L
GRF0740*	400W	Dual Symmetric	Pre-matched Discrete	n40, n41	2.3-2.7	400	56	15	53	50	ACP 800 4L
GRF0845*	450W	Dual Symmetric	Pre-matched Discrete	n48, n77, n78	3.3-3.8	450	56	13	45	50	ACP 800 4L

* Product is in Pre-Production. Contact sales@guerrilla-rf.com for availability and minimum order quantity.

SINGLE PATH GaN DRIVERS IN DFN PACKAGES FOR MACRO BASESTATION APPLICATIONS

Part Number	Description	Paths	Type	Bands	Frequency (GHz)	P_{SAT} (W)	P_{AVG} (W)	Gain (dB)	Efficiency (%)	Voltage (V)	Package (mm)
GRF0706*	60W	Single	Pre-matched Discrete	n40, n41	2.3-2.7	60	-	17	65	50	6.5x7 DFN-6
GRF0709*	90W	Single	Pre-matched Discrete	n40, n41	2.3-2.7	90	-	16	65	50	6.5x7 DFN-6
GRF0714*	140W	Single	Pre-matched Discrete	n40, n41	2.3-2.7	140	-	15	65	50	6.5x7 DFN-6
GRF0806*	60W	Single	Pre-matched Discrete	n48, n77, n78	3.3-3.8	60	-	16	70	50	6.5x7 DFN-6
GRF0809*	90W	Single	Pre-matched Discrete	n48, n77, n78	3.3-3.8	90	-	15	65	50	6.5x7 DFN-6
GRF0814*	140W	Single	Pre-matched Discrete	n48, n77, n78	3.3-3.8	140	-	14	65	50	6.5x7 DFN-6
GRF0208*	80W	Single	Pre-matched Discrete	n78	3.7-4.2	80	3.2	17	10	50	6.5x7 DFN-6

* Product is in Pre-Production. Contact sales@guerrilla-rf.com for availability and minimum order quantity.

RF SWITCHES

Part Number	Switch Type	Frequency Range (GHz)	Path	IL (dB)	RF1/2 to RFC ISO (dB)	RF1 to RF2 ISO (dB)	OP1dB (dBm)	OIP3 (dBm)	V_{DD} Range (V)	Package (mm)
GRF6001*	Reflective SPDT	0.1-10.0	RFC to RF1: RFC to RF2:	1 1	-	28 38	26 26	50 50	3.0-5.0	1.5x1.5 DFN-6
GRF6011	Reflective SPDT	0.1-6.0	RFC to RF1: RFC to RF2:	0.43 0.33	-	22 25	32 30.5	49.5 51	3.0-5.0	1.5x1.5 DFN-6

* Product is in Pre-Production. Contact sales@guerrilla-rf.com for minimum order quantity.
W suffix appended to the part number indicates that the device is AEC-Q100 Automotive Qualified.

DSAs (DIGITAL STEP ATTENUATORS)

Part Number	Frequency Range (GHz)	Attenuation Range (dB)	Step Size (dB)	Control Interface	Supported Addresses	IL (dB)	IIP3 (dBm)	V_{DD} Range (V)	I_{DD} (mA)	Package (mm)
GRF6402	0.05 – 6.0	31.75	0.25	SPI	8	1.3	60	3.0-5.5	2.5	3.0 QFN-16
GRF6402W	0.05 – 6.0	31.75	0.25	SPI	8	1.3	60	3.3-5.5	2.5	3.0 QFN-16
GRF6403*	0.05 – 6.0	31.75	0.25	SPI + Parallel	1	1.3	60	3.0-5.5	2.5	4.0 QFN-24

* Product is in Pre-Production. Contact sales@guerrilla-rf.com for minimum order quantity.
W suffix appended to the part number indicates that the device is AEC-Q100 Automotive Qualified.

DVGAs (DIGITAL VARIABLE GAIN AMPLIFIERS)

Part Number	Frequency Range (GHz)	Attenuation Range (dB)	Step Size (dB)	Control Interface	Supported Addresses	Gain (dB)	OP1dB (dBm)	OIP3 (dBm)	V_{DD} Range (V)	I_{DD} (mA)	Package (mm)
GRF6411*	0.05 – 6.0	31.75	0.25	SPI	1	18.8	23.1	37	3.0-5.5	128.4	3x3 QFN-16
GRF6412*	0.05 – 6.0	31.75	0.25	SPI	8	19	23.1	34	3.0-5.5	125.7	4x4 QFN-24
GRF6414*	0.05 – 6.0	31.75	0.25	SPI + Parallel	8	19	23.1	35	3.0-5.5	126.2	5x5 QFN-32

* Product is in Pre-Production. Contact sales@guerrilla-rf.com for minimum order quantity.

RF POWER DETECTORS

Part Number	Detector Type	Frequency Range (GHz)	RF Input Power Range (dBm)	Output Voltage Range (V)	Slope (mV/dB)	Intercept (dBm)	V_{DD} Range (V)	I_{DD} (mA)	Package (mm)
GRF1201	Logarithmic Average Power Detector	0.1-6.0	-20 to +20	1.1-4.3	80	-33.2	2.7-5.0	7	1.5x1.5 DFN-6
GRF1201W	Logarithmic Average Power Detector	0.1-6.0	-20 to +20	1.1-4.3	80	-33.2	2.7-5.0	7	1.5x1.5 DFN-6
NEW PRODUCT GRF1202*	Logarithmic Average Power Detector	0.1-8.0	-60 to +5	0.4-3.5	27	-	3.3-6.0	18	1.5x1.5 DFN-6

* Product is in Pre-Production. Contact sales@guerrilla-rf.com for minimum order quantity.
W suffix appended to the part number indicates that the device is AEC-Q100 Automotive Qualified.

MIXERS

Part Number	Description	RF/IF (GHz)	LO (GHz)	Conv Gain (dB)	IP1dB (dBm)	IIP3 (dBm)	V_{DD} Range (V)	I_{DD} Range (mA)	Package (mm)
GRF7001	Linear TX/RX Mixer with Integrated LO Buffer	0.1-4.0	0.1-4.0	-6	>17.0	25	3.0-5.0	10-30	1.5x1.5 DFN-6
GRF7034*	Linear RX Mixer with Integrated LO Buffer and IF Amplifier	0.1-4.0	0.1-4.0	11.8	0	11	3	26	2x2 QFN-12
GRF7042*	Double-Balanced TX/RX Mixer with Integrated LO Buffer	0.1-5.0	0.1-4	-7.5	> 13	23.5	3.0-5.0	18.3	2x2 QFN-12

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COMPETITIVE DIFFERENTIATORS

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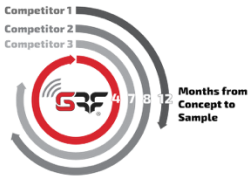

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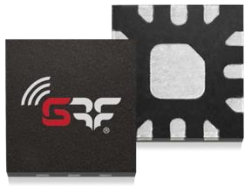
'Best of Breed',
Cost Effective,
High Volume Processes

OUR PACKAGES


1.5x1.5 DFN-6


2x2 DFN-8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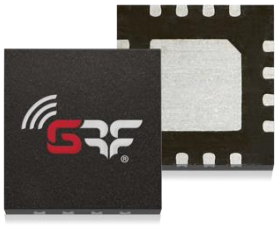
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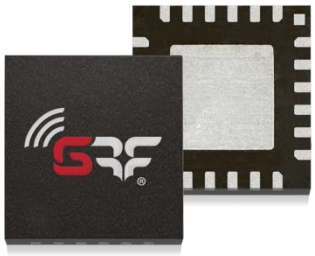
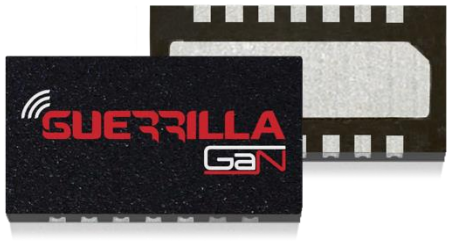
3.5x3.5 QFNM-20


4x4 QFN-24



3x6 DFN-14

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