GUERRILLA RF®

2026 Product Selection Guide

Low Noise Amplifiers (LNAs) | Gain Blocks | Linear Drivers | Power Amplifiers |
LNAs with Bypass | Gain Block with Bypass | Linear Drivers with Bypass |
RF Attenuators | RF Switches | Mixers with Amps | RF Power Detectors

PROVEN PERFORMANCE. TRUSTED WORLDWIDE.™

ADVANCED MMIC SOLUTIONS ENGINEERED FOR RELIABILITY, SCALE, AND REAL-WORLD SUCCESS.

Guerrilla RF® is a trusted provider of reliable, high-performance MMIC solutions for customers around the world. With more than 200 million devices shipped globally, we have earned a strong reputation for quality, innovation, and consistent execution.

Our extensive portfolio includes more than 175+ catalog and custom products designed to support over 500+ unique customer applications across a broad range of industries. This depth of offering reflects our commitment to meeting complex design requirements with solutions that deliver both performance and dependability.

Guerrilla RF's growth and innovation have been recognized with Inc. 500 awards in both 2020 and 2021. Our dedication to excellence is further demonstrated by our ISO 9001 certification from TUV Rheinland and compliance with important global regulations, including EU REACH and RoHS standards in Europe and China.

When you choose Guerrilla RF, you are choosing a proven semiconductor partner committed to quality, reliability, and long-term customer success.

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GUERRILLA RF®

2000 Pisgah Church Road | Greensboro, North Carolina, United States 27455 | +1.336.510.7840 | guerrilla-rf.com

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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	0.1-1.7	21	0.4	20	39	2.7-6.0	50-90	2x2 DFN-8
GRF2080	0.01-2.2	20.5	0.42	17.2	38.5	2.7-6.0	40-90	2x2 DFN-8
GRF2071	0.7-2.7	19	0.36	20	36	0-6.0	50-90	2x2 DFN-8
GRF2071W	0.7-2.7	19	0.36	20	36	0-6.0	50-90	2x2 DFN-8
GRF2081	0.38-2.7	18.5	0.4	19.5	37.5	2.7-6.0	50-95	2x2 DFN-8
GRF2051	0.35-3.8	19	0.37	20.6	36	2.7-6.0	55-95	2x2 QFN-12
GRF2072	1.17-3.8	19.8	0.55	20	37.5	2.7-6.0	70	2x2 DFN-8
GRF2082	0.3-3.8	19	0.55	20.5	38	2.7-6.0	50-90	2x2 DFN-8
GRF2133	0.1-4.2	28	0.6	20	31	0-6.0	70	1.5x1.5 DFN-6
GRF2133W	0.1-4.2	28	0.6	20	31	0-6.0	70	1.5x1.5 DFN-6
NEW! GRF2112	0.4-4.2	17.5	0.9	23	35	1.8-5.0	20-80	2x2 DFN-8
GRF2052	1.7-4.5	19	0.5	21	38.2	2.7-6.0	70	2x2 QFN-12
GRF2171	1.17-5.0	26.8	0.8	18.7	35	2.7-6.0	55-95	1.5x1.5 DFN-6
GRF2105	0.15-5.36	20.5	0.7	21	37	2.7-6.0	50-85	1.5x1.5 DFN-6
GRF2105W	0.15-5.36	20.5	0.7	21	37	2.7-6.0	50-85	1.5x1.5 DFN-6
GRF2074	1.0-6.0	20.5	0.37	17.5	35.5	0-6.0	45-80	2x2 DFN-8
GRF2074W	1.0-6.0	20.5	0.37	17.5	35.5	0-6.0	45-80	2x2 DFN-8
GRF2093	1.0-6.0	22	0.37	19	35.5	2.7-6.0	40-70	1.5x1.5 DFN-6
GRF2093W	1.0-6.0	22	0.37	19	35.5	2.7-6.0	40-70	1.5x1.5 DFN-6
GRF2201	1.2-6.1	20	0.75	12.0	23.0	2.7-5.5	10-20	1.5x1.5 DFN-6
GRF2073	1.0-6.8	18	0.65	18	35	0-6.0	50-90	2x2 DFN-8
GRF2073W	1.0-6.8	20.5	0.4	20	35	0-6.0	50-90	2x2 DFN-8
GRF2084	2.0-7.2	18.2	0.48	19.5	37.9	2.7-6.0	71	2x2 DFN-8
GRF2110	5.0-8.0	17	1.1	22	38	2.7-6.0	70	1.5x1.5 DFN-6
GRF2083	0.73-8.5	17.8	0.65	18.5	36.5	2.7-6.0	50-90	2x2 DFN-8
NEW! GRF2118	6.0-8.5	25.5	0.57	16	25.7	2.7-5.0	42-79	2x2 QFN-12
GRF2584	3.0-9.0	32.2	1.2	16.3	29.4	4.75-6.0	50	1.5x1.5 DFN-6
GRF2101	4.0-10.0	18	0.9	10	22	2.7-6.0	18	1.5x1.5 DFN-6
GRF2111	8.0-12.0	12.9	1.2	20.6	36	2.7-6.0	65	1.5x1.5 DFN-6
NEW! GRF2117	6.0-18.0	15.4	0.84	16.4	28.4	2.7-5.0	42	2x2 QFN-12

* 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)	VDD Range (V)	IDD Range (mA)	Package (mm)
GRF2176	0.5-6.0	32.9 I 16.3	0.65 I 0.68	19.6 I 15.1	33.6 I 28.8	4.75-5.25	66 I 28	1.5x1.5 DFN-6
GRF2583	4.4-6.0	27.2 I 15	1.2 I 1.25	16 I 10	33 I 21.2	2.7-5.25	52 I 15	1.5x1.5 DFN-6
GRF2076	0.6-7.12	27 I -2	1.1 I -	22 I 21	38 I 46	2.7-6.0	70	1.5x1.5 DFN-6

BROADBAND LNAs

Part Number	Frequency Range (GHz)	Reference Design Tunes [1] (MHz)			Gain (dB)	NF (dB)	OP1dB (dBm)	OIP3 (dBm)	V_{DD} Range (V)	I_{DD} Range (mA)	Package (mm)
GRF2114	0.02-2.7	20-50	100-400	450-520	17.9	0.93	24.3	40.2	1.8-6.0	135	2x2 DFN-8
GRF5040	0.025-3.8	25-35 30-2500	900-1300 1200-1400	1500-1600 1700-2700	15	0.85	29.8	46.3	3.3-9.0	200	1.5x1.5 DFN-6
GRF4004	0.029-3.8	20-60 400-900	600-1000	1700-2700	12.5	0.95	26.7	42.3	1.8-6.0	108-162	2x2 DFN-8
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	12	2x2 DFN-8
GRF4003	0.01-3.8	10-500 30-450	700-3600	868-915	12.5	0.85	25	41	1.8-6.0	76-114	2x2 DFN-8
GRF2113	0.05-4.0		50-4000		21.5	1.75	22.6	38.3	3.0-6.0	115	1.5x1.5 DFN-6
GRF2373	0.09-4.0	90-110 240-260 500-3000	800-1000 1700-2200	1900-2700 3600-4000	18	1.3	13	25	1.8-5.5	15	2x2 DFN-8
GRF2133	0.1-4.2	400-500 700-2700	800-2700 900-1200	700-960 1200-1600	28	0.6	20	31	0-6.0	70	2x2 DFN-8
GRF2133W	0.1-4.2	400-500 700-2700	800-2700 900-1200	1600-2100 1200-1600	28.5	0.6	20	31	0-6.0	70	1.5x1.5 DFN-6
GRF2100	0.8-5.3	80-120 400-650 408-410 700-960	1150-1200 1150-1615 1540-1640 1700-2200	1600-2100 2300-2700 3400-3800 4300-5300	16.5	0.8	10	19	0-5.5	10-21	1.5x1.5 DFN-6
GRF2100W	0.8-5.3	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	0-5.5	10-21	2x2 DFN-8
GRF2171	1.7-5.35	1170-1300 1525-1610 2000-2500	2100-2500 2900-3000 3400-3800	3300-4200 3800-4250	26.8	0.8	18.7	35	2.7-6.0	55-95	1.5x1.5 DFN-6
GRF2105	0.15-5.36	150-3500 450-1250 700-2700	800-3000 1000-2000 3000-5000	3300-4200 3400-3800 4400-5000	20.5	0.7	21	37	2.7-6.0	50-85	1.5x1.5 DFN-6
GRF2105W	0.15-5.36	150-3500 450-1250 700-2700	800-3000 1000-2000 3000-5000	3300-4200 3400-3800 4400-5000	20.5	0.7	21	37	2.7-6.0	50-85	1.5x1.5 DFN-6
GRF4002	0.015-5.9	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	1.8-6.0	70	3x3 QFN-16
GRF4002W	0.015-5.9	700-3600			15	0.85	23.5	36.5	1.8-6.0	70	2x2 QFN-12
GRF5010	0.01-6.0	10-200 70-150 100-400	700-960 700-2700 900-1300	1700-3800 3400-3800 4250-4350	17	0.85	28.5	45	2.7-10	95	3x3 QFN-16
GRF5020	0.03-6.0	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	17.5	0.85	29	43	2.7-12.0	95	2x2 QFN-12
GRF4001	0.1-6.0	0.1-6000			15.5	0.9	16.5	30.5	1.8-6.0	45	1.5x1.5 DFN-6
GRF4012	0.03-7.125		2320-2345		17.8	0.9	22.5	33	1.8-6.0	35-70	1.5x1.5 DFN-6
GRF4012W	0.03-7.125		2320-2345		17.8	0.9	22.5	33	1.8-6.0	35-70	2x2 DFN-8

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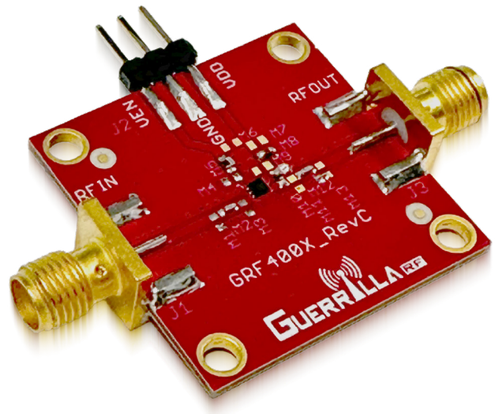
BROADBAND LNAs

Part Number	Frequency Range (GHz)	Reference Design Tunes [1] (MHz)			Gain (dB)	NF (dB)	OP1dB (dBm)	OIP3 (dBm)	V_{DD} Range (V)	I_{DD} Range (mA)	Package (mm)
GRF4014	0.01-6.0	10-50 100-115 140-650 150-400	400-1000 902-928 950-1250 1240-1525	1700-3800 2400-2800 2700-3600 5800-6000	17.5	0.8	24	39	3.0-8.0	44-75	1.5x1.5 DFN-6
GRF4014W	0.01-6.0	1700-3800			17.5	0.8	24	39	3.0-8.0	44-75	1.5x1.5 DFN-6
GRF2505	4.0-7.0	4000-5925			12.5	1.2	19	30	1.8-6.0	40	1.5x1.5 DFN-6
GRF2110	5.0-8.0	5000-8000			16.3	1.2	22	38	2.7-6.0	70	1.5x1.5 DFN-6
GRF2013	0.01-9.0	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	90	1.5x1.5 DFN-6
GRF2013W	0.01-9.0	700-3900			18.5	1.3	22.5	38.5	2.7-8.0	90	1.5x1.5 DFN-6
GRF2584	3.0-9.0	3300-4200	4400-5000 5700-6200	5925-7125	32.2	1.2	16.3	29.4	4.75-6.0	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	18.-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		01-15000[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 to view the latest set of matching options.
Note 2: Assumes a broadband choke. See datasheet for details.



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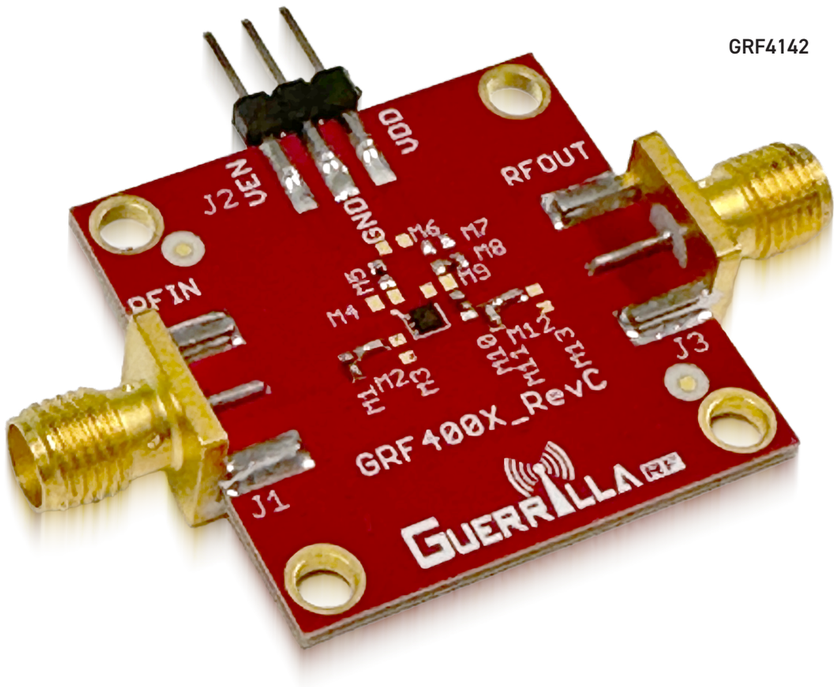
BROADBAND LNAs with BYPASS

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 700-2170	1600-2100 2500-2700	16	1	22	36.3	0-6.0	40	2x2 QFN-12
GRF2374	0.1-3.8	380-480	400-960 1700-2200	820-920	14.3	1.4	11	23.5	2.7-5.5	15	1.5x1.5 DFN-6
GRF2140	0.085-4.2	85-115	493-547 1700-2200	2000-3000	17.8	1.1	9.3	20	2.7-5.0	13-25	1.5x1.5 DFN-6
GRF2243	0.4-5.0	400-500 900-1000	1700-2100 2300-2700	3400-3800 4400-5000	19.7	0.75	12	23	0-6.0	15	1.5x1.5 DFN-6
GRF4142	0.03-6.0	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	0-6.0	55	1.5x1.5 DFN-6
GRF2043	0.15-6.0	400-2700			18.5	1.8	22	36	2.7-6.0	80	1.5x1.5 DFN-6



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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)
GRF2108	0.1-3.8	17	0.9	17.5	21	1.8-5.0	12	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
GRF2373	0.09-4.0	18	1.3	13	25	1.8-5.5	15	1.5x1.5 DFN-6
GRF2106	0.1-5.0	21.5	0.8	11	21	2.7-5.0	15	1.5x1.5 DFN-6
GRF2106W	0.1-5.0	21.5	0.8	11	21	2.7-5.0	15	1.5x1.5 DFN-6
GRF2100	0.08-5.3	16.5	0.8	10	19	0-5.5	10-21	1.5x1.5 DFN-6
GRF2100W	0.08-5.3	16.5	0.8	10	19	0-5.5	10-21	1.5x1.5 DFN-6
GRF2012	0.05-6.0	14.8	2.7	23	40	0-9.0	80-108	1.5x1.5 DFN-6
GRF2012W	0.05-6.0	14.8	2.7	23	40	0-9.0	80-108	1.5x1.5 DFN-6
GRF2201	1.2-6.1	20	0.75	12	23	2.7-5.5	10-20	1.5x1.5 DFN-6
GRF2501	4.3-9.0	17	1	9.0	19	2.7-5.0	12-28	1.5x1.5 DFN-6
GRF2501W	4.9-9.0	17	1	9.0	19	0-6.0	12-28	1.5x1.5 DFN-6
GRF2013	0.01-9.0	18.5	1.3	22.5	38.5	2.7-8.0	90	1.5x1.5 DFN-6
GRF2013W	0.01-9.0	18.5	1.3	22.5	38.5	2.7-8.0	90	1.5x1.5 DFN-6
GRF2101	4.0-10.0	18	0.9	10	22	2.7-6.0	18	1.5x1.5 DFN-6

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)
GRF2374	0.1-3.8	14.3 I -1.7	1.4 I -	11 I 6.5	23.5 I 19.5	2.7-5.5	15	1.5x1.5 DFN-6
GRF2140	0.085-4.2	17.8 I -2.5	1.1 I -	9.3 I 21.8	20 I 39	2.7-5.0	13-25	1.5x1.5 DFN-6
GRF2243	0.4-5.0	19.7 I -1.6	0.75 I -	12 I 22.5	23 I 16	2.7-5.0	8-25	1.5x1.5 DFN-6
GRF2042	0.15-6.0	15.5 I -1.6	2.3 I -	22 I 22	39 I 45	2.7-6.0	80	1.5x1.5 DFN-6
GRF2043	0.15-6.0	18.5 I -1.5	1.8 I -	22 I 23	36 I 45	2.7-6.0	80	1.5x1.5 DFN-6
GRF2543	3.75-6.0	14.5 I -1.0	1 I -	11.5 I 24	25.5	0-6.0	10-21	1.5x1.5 DFN-6
GRF2541	4.9-6.0	16.4 I -5.1	1.2 I -	7 I 5	19	2.7-5.0	12-28	1.5x1.5 DFN-6

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	0.1-2.2	19	1.3	28.5	43.5	3.0-6.0	160	3x3 QFN-16
GRF5115	0.026-2.7	14.8	1.3	33.2	43	3.3-5.5	200-400	3x3 QFN-16
GRF5112	0.03-3.0	17.1	1.7	32.2	40	1.8-5.25	212	3x3 QFN-16
GRF5040	0.025-3.8	15	0.85	29.8	46.3	3.3-9.0	200	3x3 QFN-16
GRF5110	0.47-3.9	15	0.9	28.5	46	5	100-190	3x3 QFN-16
GRF5010	0.01-6.0	17	0.85	28.5	45	2.7-10	95	3x3 QFN-16
GRF5020	0.03-6.0	17.5	0.85	29	43	2.7-12.0	95	3x3 QFN-16
GRF5511	0.4-8.0	20.1	1.5	26	39.5	3.3-9.0	105-165	3x3 QFN-16
GRF4015	0.7-9.0	21	1.5	25.4	41	4.5-9.0	165	1.5x1.5 DFN-6

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)
GRF4003	0.01-3.8	100-500 30-450	100-3800 700-3600	868-915	12.5	0.85	25	41	1.8-6.0	76-114	1.5x1.5 DFN-6
GRF2011	0.02-3.8	20-70 40-60	174-240 450-520	700-3800	15.2	2	22.7	40	2.7-8.0	90	1.5x1.5 DFN-6
GRF2014	0.03-4.0	100-1800	500-3000	1500-2400	15.9	3.4	24	43.5	2.7-9.0	150	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! GRF2112	0.04-4.2	50-4200			17.5	0.9	23	35	1.8-5.0	20-80	2x2 DFN-8
GRF2010	0.05-5.0	400-4000			10.2	3.1	20	36	2.7-9.0	90	1.5x1.5 DFN-6
GRF2010W	0.05-5.0	400-4000			10.2	3.1	20	36	2.7-9.0	90	1.5x1.5 DFN-6
GRF4002	0.015-5.9	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	1.8-6.0	70	1.5x1.5 DFN-6
GRF4002W	0.015-5.9	700-3600			15	0.85	23.5	36.5	1.8-6.0	70	1.5x1.5 DFN-6
GRF2012	0.05-6.0	50-6000 700-900	700-1200 400-3800	1700-2000 2500-2700	14.8	2.7	23	40	0-9.0	80-108	1.5x1.5 DFN-6
GRF2012W	0.05-6.0	400-3800			14.6	2.7	23	40	0-9.0	80-108	1.5x1.5 DFN-6
GRF4001	0.1-6.0	100-5500	3300-3800		15.5	0.9	16.5	30.5	1.8-6.0	45	1.5x1.5 DFN-6
GRF4012	0.03-7.125	30-100 200-3000	2320-2345	3200-4200	17.8	0.9	22.5	33	1.8-6.0	35-70	1.5x1.5 DFN-6
GRF4012W	0.03-7.125	2320-2345			17.8	0.9	22.5	33	1.8-6.0	35-70	1.5x1.5 DFN-6
GRF2013W	0.01-8.0	700-3800			18.5	1.3	22.5	38.5	2.7-8.0	90	1.5x1.5 DFN-6
GRF2013	0.01-9.0	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	90	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)
GRF2040	0.05-5.0		400-4000		10.2	3.4	20.9	35.3	2.7-9.0	90	1.5x1.5 DFN-6
GRF2042	0.15-6.0	600-2700	3500-4500	5000-6000	15.5	2.1	22	38	2.7-6.0	80	1.5x1.5 DFN-6
GRF2043	0.15-6.0	400-2700	700-5000		18.5	1.8	22	36	2.7-6.0	80	1.5x1.5 DFN-6

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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)
NEW! GRF2118	6.0-8.5	6000-12000			25.5	0.57	16	25.7	2.7-5.0	42-79	2x2 QFN-12
GRF3016	Near DC-10	1-10000[2]			13.5	4.2	16.5	30	5.0-9.0	70	1.5x1.5 DFN-6
GRF2004	0.05-10.0	50-300 50-10000	100-10000 950-1700 2000-6000	7000-8000 9000-10000	14.5	1.9	16	25.5	1.8-6.0	120	1.5x1.5 DFN-6
GRF2003	0.5-10.0	400-6000	1000-5000 1000-10000		14.5	3.5	17	31	1.7-5.25	55	1.5x1.5 DFN-6
GRF2115	0.05-11.0	50-11000			17.3	1.7	21.5	35.6	3.0-6.0	130	2x2 DFN-8
GRF3044	0.1-12.0	100-10000	100-12000 500-6000	9000-11000	16.7	2.4	19.5	28.3	6.0-12.0	100	1.5x1.5 DFN-6
GRF3012	Near DC-12	1-12000[2]			11	5.0	5	18	4.5-9.0	22	1.5x1.5 DFN-6
GRF2710	8.0-12.7	8000-12700			13.2	1.9	12.8	24	0-6.0	25	1.5x1.5 DFN-6
GRF3042	0.01-15.0	100-15000			14	3.5	13	23	0-6.0	45	1.5x1.5 DFN-6
NEW! GRF2116	0.1-15	100-15000			14.3	2.5	19	33.5	5.0	88	2x2 DFN-8
NEW! GRF2117	6.0-18.0	6000-18000			15.4	0.84	16.4	28.4	2.7-5.0	42	2x2 QFN-12

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.

CATV AND GENERAL PURPOSE AMPLIFIERS

Guerrilla RF now offers a comprehensive set of single-ended and push-pull amplifiers targeting broadband applications such as HFC (hybrid fiber coaxial) headends, CMTS, optical nodes and distributed architectures supporting the DOCSIS® standards.

Although originally designed to natively support 75 Ω environments, these amplifier cores work equally well within 50 Ω systems via minor changes to the impedance transformation circuits. Contact GRF's applications team for 50 Ω evaluation boards and datasets. These devices are available in ultra-small 2x2mm DFN-8 and 3x3mm QFN-16 packages as well as larger SOIC-8 offerings (allowing for drop-in compatibility with legacy solutions).

CATV / BROADBAND AMPLIFIERS

Part Number	Frequency Range (GHz)	Topology	Gain (dB)	NF (dB)	OP1dB (dBm)	OIP2dB (dBm)	OIP3 (dBm)	V_{DD} Range (V)	I_{DD} Range (mA)	Package (mm)
NEW! GRF9897	0.005-0.7	Push-Pull	26.4	1.1	26.4	70	43	5.0	270	3.9x4.9 SOIC-8
NEW! GRF7896	0.005-1.0	Push-Pull	25.6	1.3	26.4	70	42	5.0	270	3.9x4.9 SOIC-8
NEW! GRF9896	0.005-1.0	Push-Pull	25.4	1.3	26.4	70	42	5.0	260	3x3 QFN-16
NEW! GRF7163	0.005-2.0	Push-Pull	20	1.8	25	68	41	5.0	290	3.9x4.9 SOIC-8
NEW! GRF9163	0.005-2.0	Push-Pull	20	1.8	25	68	41	5.0	280	3x3 QFN-16
NEW! GRF7240	0.005-2.0	Push-Pull	18.6	2.4	24.2	68	41	5.0	270	3.9x4.9 SOIC-8
NEW! GRF9240	0.005-2.0	Push-Pull	18.6	2.4	24.3	68	41	5.0	250	3x3 QFN-16
NEW! GRF9297	0.005-2.0	Push-Pull	18	1.7	25.4	60	42.5	5.0	290	3.9x4.9 SOIC-8
NEW! GRF9811	0.005-2.3	Push-Pull	17	2.2	25.5	75	41	5.0	280	3.9x4.9 SOIC-8
NEW! GRF9834	0.005-2.3	Push-Pull	14.3	2.6	24.2	70	43.4	5.0	280	3.9x4.9 SOIC-8
NEW! GRF9457	0.05-1.0	Single Ended	20	1.7	21	61	40	5.0	120	2x2 DFN-8
NEW! GRF9163	0.005-2.0	Single Ended	20	1.8	25	58	41	5.0	280	3x3 QFN-16
NEW! GRF9461	0.04-2.0	Single Ended	19.8	1.8	18.8	49	37	5.0	132	2x2 DFN-8
NEW! GRF9460	0.04-2.6	Single Ended	17.5	1.8	19.5	58	40	5.0	115	2x2 DFN-8

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)
GRF5109	0.1-2.2	19	1.3	28.5	43.5	3.0-6.0	160	3x3 QFN-16
NEW! GRF5217	1.5-2.2	31	3.8	29	35	3.0-5.25	160	3x3 QFN-16
NEW! GRF5219	1.8-2.2	44.1	4.1	30	33.6	3.3-5.0	85-109	3x3 QFN-16
GRF2114	0.02-2.7	17.9	0.93	24.3	40.2	1.8-6.0	135	2x2 DFN-8
GRF5115	0.026-2.7	14.8	1.3	33.2	43	3.3-5.0	200-400	3x3 QFN-16
NEW! GRF5225	2.3-2.7	27.8	TBD			4.0-5.0	39	3x3 QFN-16
NEW! GRF5226	2.3-2.7	41.5	4.1	30.4	35.3	3.0-5.5	103	3x3 QFN-16
GRF5112	0.03-3.0	17.1	1.55	32.2	40	1.8-5.25	212	3x3 QFN-16
GRF5040	0.025-3.8	15	0.85	31.5	47	3.3-9.0	200	3x3 QFN-16
GRF4004	0.029-3.8	12.5	0.95	26.7	42.3	1.8-6.0	108-162	1.5x1.5 DFN-6
GRF4003	0.01-3.8	12.5	0.85	25	41	1.8-6.0	76-114	1.5x1.5 DFN-6
GRF4005	0.1-3.8	12.8	0.88	27.5	42	1.8-6.0	145-195	1.5x1.5 DFN-6
GRF2011	0.02-3.8	15.2	2	22.7	40	2.7-8.0	90	1.5x1.5 DFN-6
GRF5110	0.47-3.9	15	0.9	28.5	46	5	100-190	3x3 QFN-16
GRF2014	0.03-4.0	15.9	3.4	24	43.5	2.7-9.0	150	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
GRF2133	0.1-4.2	28	0.6	20	31	0-6.0	70	1.5x1.5 DFN-6
GRF2133W	0.1-4.2	28	0.6	20	31	0-6.0	70	1.5x1.5 DFN-6
NEW! GRF5236	3.1-4.2	36.7	4.1	30.1	33.8	3.0-5.5	95	3x3 QFN-16
GRF2010	0.05-5.0	10.2	3.1	20	36	2.7-9.0	90	1.5x1.5 DFN-6
GRF2010W	0.05-5.0	10.2	3.1	20	36	2.7-8.0	90	1.5x1.5 DFN-6
NEW! GRF5126	1.8-5.0	37.5 / 31.1	1.9 /1.9	24.6 / 24	31.1 / 31.4	3.0-5.5	97	3x3 QFN-16
GRF4002	0.015-5.9	15	0.85	23.5	36.5	1.8-6.0	70	1.5x1.5 DFN-6
GRF4002W	0.015-5.9	15	0.85	23.5	36.5	1.8-6.0	70	1.5x1.5 DFN-6
GRF5010	0.01-6.0	17	0.85	28.5	45	2.7-10	95	3x3 QFN-16
GRF4014	0.01-6.0	17.5	0.8	24	39	3.0-8.0	44-75	1.5x1.5 DFN-6
GRF4014W	0.01-6.0	17.5	0.8	24	39	3.0-8.0	44-75	1.5x1.5 DFN-6
GRF5020	0.03-6.0	17.5	0.85	29	43	2.7-12.0	95	3x3 QFN-16
GRF2012	0.05-6.0	14.8	2.7	23	40	0-9.0	80-108	1.5x1.5 DFN-6
GRF2012W	0.05-6.0	14.8	2.7	23	40	0-9.0	80-108	1.5x1.5 DFN-6
GRF4001	0.1-6.0	15.5	0.9	16.5	30.5	1.8-6.0	45	1.5x1.5 DFN-6
GRF4012	0.03-7.125	17.8	0.9	22.5	33	1.8-6.0	35-70	1.5x1.5 DFN-6
GRF4012W	0.03-7.125	17.8	0.9	22.5	33	1.8-6.0	35-70	1.5x1.5 DFN-6
GRF2505	4.0-7.5	12.5	1.2	19	30	1.8-6.0	40	1.5x1.5 DFN-6
GRF5511	0.4-8.0	20.1	1.5	26	39.5	3.3-9.0	105-165	3x3 QFN-16
NEW! GRF2110	5.0-8.0	16.3	1.2	22	38	2.7-6.0	70	1.5x1.5 DFN-6
GRF2013	0.01-9.0	18.5	1.3	22.5	38.5	2.7-8.0	90	1.5x1.5 DFN-6
GRF2013W	0.01-9.0	18.5	1.3	22.5	38.5	2.7-8.0	90	1.5x1.5 DFN-6
GRF4015	0.7-9.0	21	1.5	25.4	41	2.7-6.0	165	1.5x1.5 DFN-6
NEW! GRF2115	0.05-11.0	17.3	1.7	21.5	35.6	3.0-6.0	130	2x2 DFN-8
NEW! GRF2111	8.0-12	12.9	1.2	20.6	36	2.7-6.0	65	1.5x1.5 DFN-6

W suffix appended to the part number indicates that the device is AEC-Q100 Automotive Qualified.

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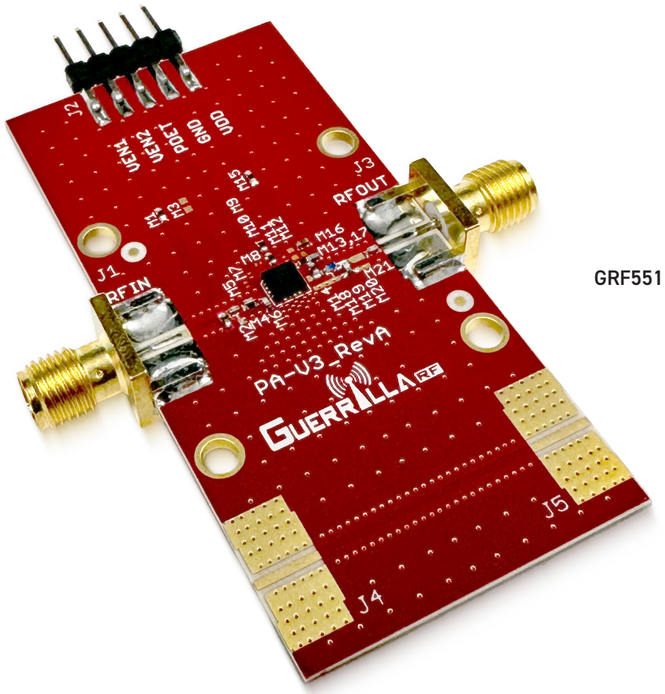
LINEAR DRIVERS with BYPASS

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	1	22	36.3	0-6.0	40	2x2 QFN-12
GRF2040	0.05-5.0	10.2	3.4	20.9	35.3	2.7-9.0	90	1.5x1.5 DFN-6
GRF4142	0.03-6.0	15.3	0.9	19.3	33	0-6.0	55	1.5x1.5 DFN-6
GRF2042	0.15-6.0	15.5	2.1	22	38	2.7-6.0	80	1.5x1.5 DFN-6
GRF2043	0.15-6.0	18.5	1.8	22	36	2.7-6.0	80	1.5x1.5 DFN-6



GRF5511

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 -45dBc 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 6.0GHZ

Linear POUT 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	2300-2700	3300-4200	4400-5000	5400-6000
1/10 W			5307							5217 / 5317						5225			
1/4 W	5505	5506	5507		5508				5510	5515	5516	5517	5518	5519	5521	5526	5536	5847	5857
1/2 W	5605	5606	5607	5608		5609	5610		5611	5615	5616	5617	5618	5619	5621	5826	5837		

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]	28.9	4.1	35.2	48.3	3.0-5.25	310[3]	3x3 QFN-16
GRF5606	0.663-0.716	26[1]	27.5	3.9	35.6	50	3.0-5.25	310[3]	3x3 QFN-16
GRF5506	0.66-0.72	28.4[1]	28.4	4.5	33.3	46.8	3.3-5.0	290[3]	3x3 QFN-16
GRF5607	0.703-0.748	27[1]	29	4.1	35	49	3.3-5.25	210[3]	3x3 QFN-16
GRF5608	0.729-0.830	27[1]	27.8	4.8	35.4	47.4	3.0-5.25	310[3]	3x3 QFN-16
GRF5307*	0.617-0.862	20[1]	35.6	3.6	32.9	39	5	150[3]	3x3 QFN-16
GRF5609	0.814-0.862	26[1]	27.4	4.1	35.4	56.6	3.3-5.25	310[3]	3x3 QFN-16
GRF5507	0.7-0.91	24[1]	30.5	4.5	33.4	47.3	3.3-5.0	305[3]	3x3 QFN-16
GRF5507W	0.7-0.91	24[1]	30.5	4.5	33.4	47.3	3.3-5.0	305[3]	3x3 QFN-16
GRF5610	0.860-0.928	27[1]	26.5	4.5	35.2	46.9	3.3-5.25	205[3]	3x3 QFN-16
NEW! GRF5603	0.865-0.928	-	32	4.5	37	44.8	5	500	3x3 QFN-16
GRF5508	0.777-0.96	24[1]	29.7	4.5	33.1	45.4	3.3-5.0	302[3]	3x3 QFN-16
GRF5510	0.88-0.96	24[1]	29.2	4.5	33.8	46.1	3.3-5.0	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
GRF5616	1.625-1.675	26[1]	23.5	3.7	36	46.8	5	275	3x3 QFN-16
GRF5617	1.71-1.785	26.5[1]	25.1	4.2	35.4	49.3	6.0-5.25	650[3]	3x3 QFN-16
GRF5618	1.805-1.915	25.5[1]	25.1	4.4	34.9	48	3.0-5.25	380[3]	3x3 QFN-16
GRF5517	1.6-1.92	22.5[1]	27.5	5.4	32	48	3.3-5.0	305[3]	3x3 QFN-16
GRF5517W	1.6-1.92	22.5[1]	27.5	5.4	32	48	3.3-5.0	305[3]	3x3 QFN-16
GRF5619	1.92-1.99	25.5[1]	29.9	3.4	34.5	50.7	3.0-5.25	380[3]	3x3 QFN-16

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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)
GRF5317*	1.7-2.0	18[1]	27.6	4.0	31.8	40.6	5	150[3]	3x3 QFN-16
GRF5518	1.8-2.0	23[1]	27	4.2	32	45	3.3-5.0	310[3]	3x3 QFN-16
GRF5518W	1.8-2.0	23[1]	27	4.2	32	45	3.3-5.0	310[3]	3x3 QFN-16
GRF5621	2.025-2.17	25.5[1]	29	3.3	34.1	53	3.0-5.25	380[3]	3x3 QFN-16
GRF5521	2.11-2.17	23[1]	31	3.1	33	45	3.0-5.0	235[3]	3x3 QFN-16
GRF5109	0.1-2.2	-	19	1.3	28.5	43.5	3.0-6.0	160	3x3 QFN-16
GRF5217	1.5-2.2	22[5]	31	3.8	29	35	3.0-5.25	160[3]	3x3 QFN-16
GRF5519	1.92-2.2	23[1]	26.5	4.1	32	45	3.0-5.25	310[3]	3x3 QFN-16
GRF5526	2.2-2.5	23[1]	28.5	3.0	32	45	4.0-5.5	250[3]	3x3 QFN-16
GRF5115	0.026-2.7	-	14.8	1.3	33.2	43	3.3-5.5	200-400	3x3 QFN-16
GRF5526W	2.2-2.7	23[1]	28.5	3.0	32	45	5.0	150	3x3 QFN-16
GRF5225	2.3-2.7	22[1]	27.8	TBD	-	-	4.0-5.0	400[3]	3x3 QFN-16
GRF5112	0.03-3.0	20	17.1	1.55	32.2	40	1.8-5.25	212	3x3 QFN-16
GRF5040	0.025-3.8	-	15	0.85	29.8	46.3	3.3-9.0	200	3x3 QFN-16
GRF4004	0.029-3.8	-	12.5	0.95	26.7	42.3	1.8-6.0	108-162	1.5x1.5 DFN-6
GRF4005	0.1-3.8	-	12.8	0.88	27.5	42	1.8-6.0	145-195	1.5x1.5 DFN-6
GRF5110	0.47-3.9	-	15	0.9	28.5	46	5	100-190	3x3 QFN-16
NEW! GRF5837*	3.3-3.8	-	40	4.8	33	43	2.7-5.5	260	2.5x3 LAMM-12
GRF5536	3.3-4.2	23[1]	24.8	4.1	32.8	47.8	4.0-5.5	280[3]	3x3 QFN-16
GRF5536W	3.3-4.2	23[1]	24.8	4.1	32.8	47.8	4.0-5.5	280[3]	3x3 QFN-16
NEW! GRF5847*	4.4-5.2	-	40	4.8	33.5	43	2.7-5.5	270	2.5x3 LAMM-12
NEW! GRF5857*	5.2-6.0	-	40	4.9	33.5	43	2.7-5.5	310	2.5x3 LAMM-12
GRF5511	0.4-8.0	-	20.1	1.5	26	39.5	3.3-9.0	105-165	3x3 QFN-16
GRF4015	0.7-9.0	-	21	1.5	25.4	41	5	165	1.5x1.5 DFN-6

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

Note 1: Rated POUT Yields Better Than -45dBc ACLR (LTE 20MHz 100RB TM1.1 Downlink Waveform with 9.8dB PAR).

Note 2: Rated POUT for AMR applications.

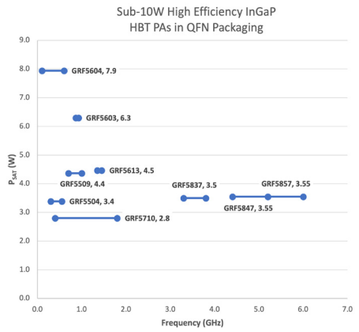
Note 3: IDD with RF power applied.

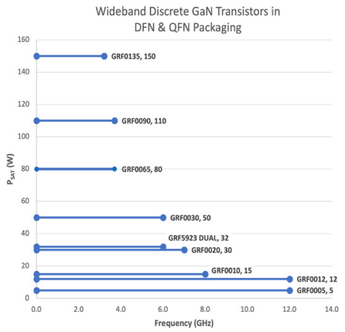
Note 4: Rated POUT when used with DPD + CFR and yielding better than -50dBc ACLR (LTE 20MHz 100RB TM1.1 Downlink Waveform with 9.8dB PAR).

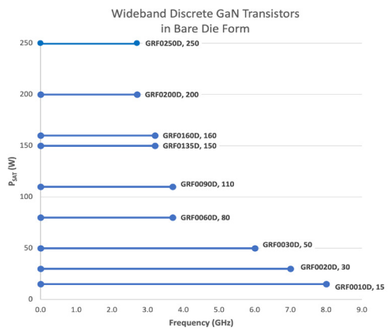
GRF5507 in Balanced PA Configuration

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.



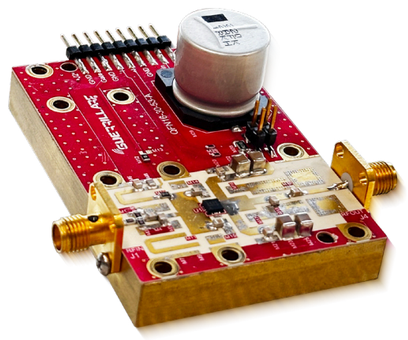




HIGH EFFICIENCY InGaP HBT PAs (< 10W)

Part Number	Frequency (GHz)	P_{SAT} (W)	P_{SAT} (dBm)	Gain (dB)	OP1dB (dBm)	Efficiency (%)	V_{DD} Range (V)	I_{DD} Range (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
NEW! GRF5603	0.865-0.928	6.3	38	32	37	44.8	3.6-5	250	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
NEW! GRF5710	0.4-1.8	2.8	34.5	17.4	33.8	47	3.6-5	500	4x4 QFN-24
NEW! GRF5837*	3.3-3.8	3.5	35.5	40	33.5	53	2.7-5.5	260	2.5x3 LAMM-12
NEW! GRF5847*	4.4-5.2	3.6	35.5	40	33.5	52	2.7-5.5	270	2.5x3 LAMM-12
NEW! GRF5857*	5.2-6.0	3.6	35.5	40	33	52	2.7-5.5	310	2.5x3 LAMM-12

Note 1: IDD with RF power applied.



GRF0020

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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 Development. Contact sales@guerrilla-rf.com for availability.

DISCRETE WIDEBAND GaN AMPLIFIERS IN 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	18.9	48.7	28	3x3 QFN-16
GRF0012	12W	Single	Unmatched Discrete	DC-12.0	12	12.2	59.1	28	3x3 QFN-16
GRF0010	15W	Single	Unmatched Discrete	DC-8.0	15	14.4	57.4	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	13.5	51	50	3x3 QFN-16
GRF5923	35W	Dual Symmetric	Unmatched Discrete	DC-6.0	30	14	55	50	4x4 QFN-24
GRF0030	50W	Single	Unmatched Discrete	DC-6.0	50	12.7	60	50	3x3 QFN-16
GRF0050*	50W	Dual Symmetric	Unmatched Discrete	DC-5.0	50	13	45	50	3x6 DFN-14
GRF0065	80W	Dual	Unmatched Discrete	DC-3.7	80	21.9	50	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	10	56.3	50	3x6 DFN-14
GRF0135	150W	Single	Unmatched Discrete	DC-3.2	150	13.8	57	50	3x6 DFN-14

* Product is in Development. Contact sales@guerrilla-rf.com for availability.

ACC/ACP 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	ACP-1230-2L
GRF0031*	30W	Single Asymmetric	Unmatched Discrete	DC-7.0	30	19	68	50	ACP-1230-2L
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 Development. Contact sales@guerrilla-rf.com for availability.

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 / 1 stage	X-Band	9.1-9.9	100	22	42	40	10x12 LGA
GRF5907*	10W	Single	3 stage internally matched	X band	7.5-8.2	10	20.5	34	24	5x5 QFN-32
GRF5908*	10W	Single	3 stage internally matched	X band	8.2-9.0	10	21.5	39	24	5x5 QFN-32
GRF5909*	10W	Single	3 stage internally matched	X band	9.0-9.9	10	21	40	24	5x5 QFN-32
GRF5910*	10W	Single	3 stage internally matched	X band	9.9-10.9	10	21	35	24	5x5 QFN-32
GRF5911*	10W	Single	3 stage internally matched	X band	10.9-12.0	10	20	30	24	5x5 QFN-32

* Product is in Development. Contact sales@guerrilla-rf.com for availability.

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ISM CW GaN AMPLIFIERS

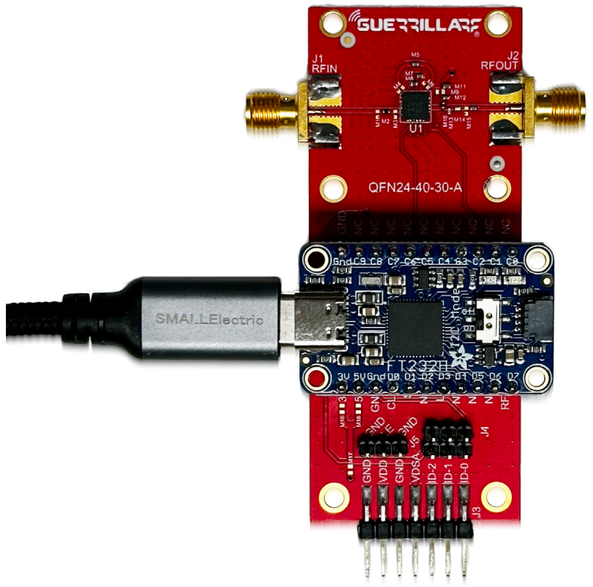
Part Number	Description	Paths	Type	Band	Frequency (GHz)	P_{SAT} (W)	Gain (dB)	Efficiency (%)	Voltage (V)	Package (mm)
GRF0505*	27W	Dual Symmetric	Pre-matched Discrete	ISM	2.4-2.5	27 (single path) 55 (dual path)	18	70	50	6.5x7 DFN-6
GRF0530*	300W	Single	Pre-matched Discrete	ISM	2.4-2.5	300	18	73	50	ACP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

* Product is in Development. Contact sales@guerrilla-rf.com for availability.

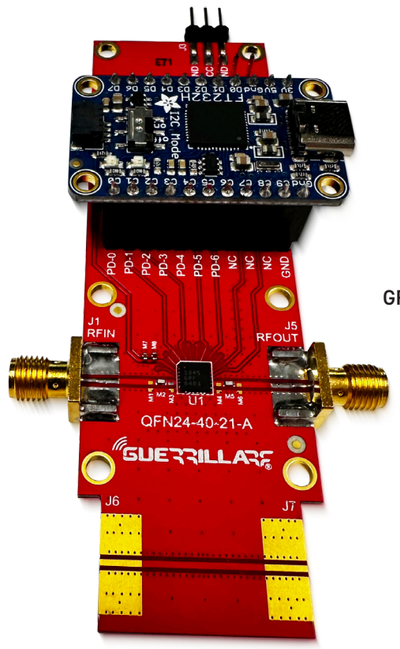
DISCRETE GaN AMPLIFIERS IN DFN PACKAGES FOR mMIMO DOHERTY APPLICATIONS

Part Number	Description	Paths	Type	Band	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	14.7	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	6.5x7 DFN-6
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 Development. Contact sales@guerrilla-rf.com for availability.



GRF6412



GRF6403

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RF SWITCHES

Part Number	Switch Type	Frequency Range (GHz)	Path	IL (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	0.01-6.0	RFC to RF1: RFC to RF2:	0.43 0.33	22 25	30.4 28.6	49.5 51	3.0-6.0	1.5x1.5 DFN-6
NEW! GRF6018	Reflective SPDT	0.01-12.0	RFC to RF1: RFC to RF2:	.85 0.9	16.5 15.7	33.2 25.5	59 48	1.8-5.0	1.5x1.5 DFN-6

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

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	3x3 QFN-16
GRF6402W	0.05 – 6.0	31.75	0.25	SPI	8	1.3	60	3.3-5.5	2.5	3x3 QFN-16
GRF6403	0.05 – 6.0	31.75	0.25	SPI + Parallel	1	1.3	60	3.0-5.5	2.5	4x4 QFN-24

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 – 8.0	31.75	0.25	SPI	1	19.2	22.7	35.8	3.0-6.0	128.4	3x3 QFN-16
GRF6412	0.05 – 8.0	31.75	0.25	SPI	8	19.8	22.5	37	3.0-5.5	125.7	4x4 QFN-24

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	0.01-6.0	-20 to +20	1.1-4.3	80	-33.2	0-6.0	7	1.5x1.5 DFN-6
GRF1201W	Logarithmic Average Power Detector	0.01-6.0	-20 to +20	1.1-4.3	80	-33.2	0-5.0	7	1.5x1.5 DFN-6
GRF1202	Logarithmic Average Power Detector	0.4-8.0	-60 to +5	0.4-3.5	27	–	3.3-6.0	18	1.5x1.5 DFN-6

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	>19.0	25	1.8-5.0	12.5	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	0.1-4.0	-7.5	>13	24	1.8-5.0	18	2x2 QFN-12

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

Guerrilla RF HQ
Greensboro, NC, USA

OUR MISSION.

Making Better Networks™ Since our inception in 2013, we have dedicated ourselves to the development of innovative, high performance MMICs that allow wireless infrastructure equipment manufacturers to provide greater coverage area and higher data rates.

We identify and develop high-performance RF solutions for underserved market segments that larger suppliers often overlook. These include applications in SatCom, UAS/C-UAS, Tactical Radio, Radar, Wireless Infrastructure (including 5G and Point to Point networks), Automotive Connectivity, Cellular Boosters and DAS, and Wireless Audio.

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Enables Agile Design Approach with Time-to-Samples as Short as 4 Months

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

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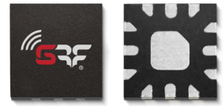
OUR PACKAGES


1.5x1.5 DFN-6


2.0x2.0 DFN-8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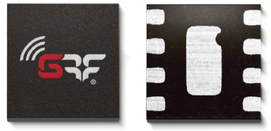
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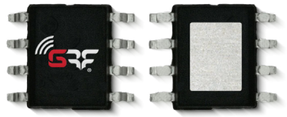
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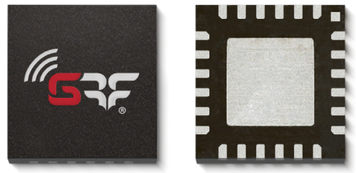
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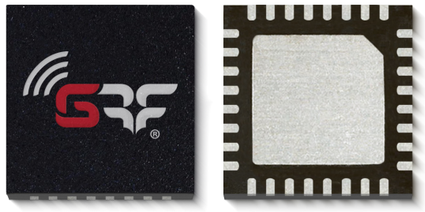
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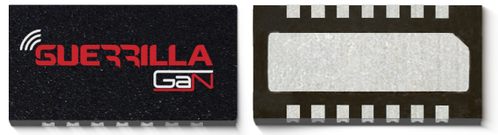
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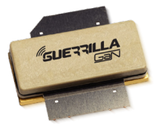
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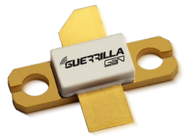
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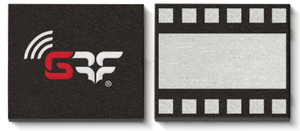
2.5x3.0 LAMM

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2000 Pisgah Church Road | Greensboro, North Carolina, United States 27455 | +1.336.510.7840 | guerrilla-rf.com

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