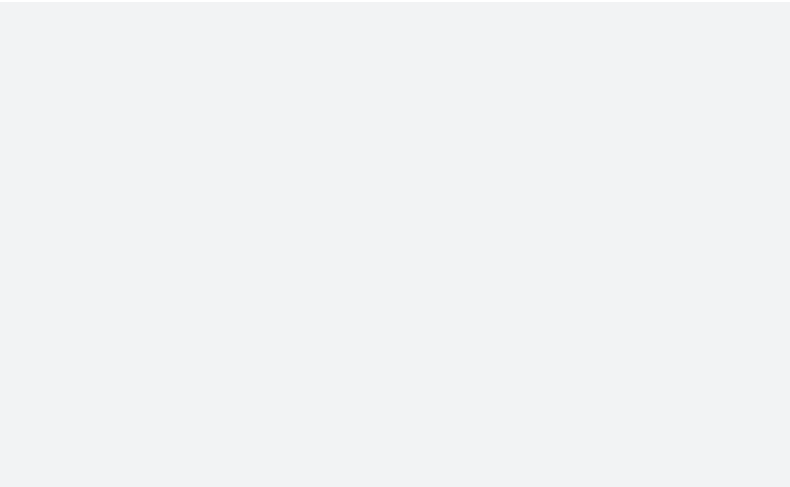


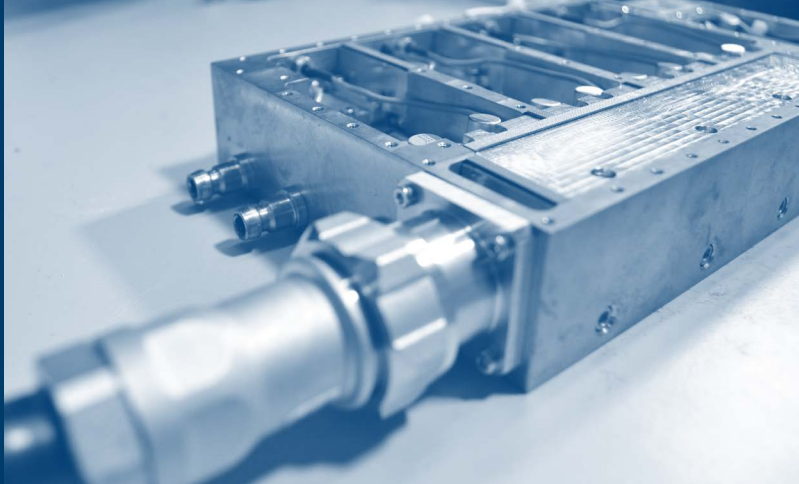
AMPLEON



Application Catalog



RF Power Solutions for
MultiMarket



March 2023

The Leading Global Partner in **RF** Power

This catalog is designed to give you an updated overview of our wide range of MultiMarket RF Power application reports targeting Navigation and Safety Radio, Broadcast, as well as Industrial, Scientific and Medical applications.

With brand new products constantly emerging, we continue supporting customer needs for current and future applications while ensuring longevity for business continuity.

Highlights of this catalog include:

- AR211135: 13 MHz ultra-compact over 90 % efficiency amplifier design with [ART2K0FE](#)
- AR211072: 650 MHz high-efficiency 50 V particle accelerator amplifier design with [BLF978P](#)
- AR201110: 960 - 1215 MHz avionics long-pulse 700 W GaN HEMT amplifier design with [CLL3H0914L\(S\)-700](#)
- AR191191: 470 - 700 MHz ultra-wide band 1100 W asymmetric Doherty amplifier design using [BLF989E](#)

All new application reports are based upon latest GaN and LDMOS technology generations, adhering to the highest quality and reliability standards from our own factories as well as from leading external manufacturers we partner with.

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Navigation and Safety Radio Application Reports

The RF Power transistor selection guide is available on: www.ampleon.com/applications. Its easy-to-use-parametric filters help you choose the right RF power transistor for your design.

Radar

Report number	Type number	Technology	F _{range} (MHz)	P _{out} (W)	P _{1dB} (W)	P _{3dB} (W)	η _D (%)	V _{DS} (V)	Demo signal
AR191123	BLU9H0408L-800P	LDMOS	410 - 460			850	66	50	CW pulsed
AR212045	BLP05H9S500P	LDMOS	430 - 450			500	70	50	CW
AR212087	ART2K0FE	LDMOS	430 - 435				50 - 55	62	CW pulsed
AR171117	BLA9H0912L-1200P	LDMOS	960 - 1215		1000		55	50	CW pulsed
AR171117	BLA9H0912LS-1200P	LDMOS	960 - 1215		1000		55	50	CW pulsed
AR181082	BLA9H0912L-1200P	LDMOS	960 - 1215		1100		55	50	CW pulsed
AR181082	BLA9H0912LS-1200P	LDMOS	960 - 1215		1100		55	50	CW pulsed
AR181109	BLA9H0912L-250	LDMOS	960 - 1215		250	300	55	50	CW pulsed
AR181109	BLA9H0912LS-250	LDMOS	960 - 1215		250	300	55	50	CW pulsed
AR201110	CLL3H0914L-700	GaN	960 - 1215		> 725		> 52	50	CW pulsed 50 μs 10 %
AR201110	CLL3H0914LS-700	GaN	960 - 1215		> 725		> 52	50	CW pulsed 50 μs 10 %
AR202046	BLP15H9S30	LDMOS	1025 - 1150		30	39	> 50	50	CW pulsed 128 μs 10 %
AR181125	BLA9H0912L-250	LDMOS	1030 - 1090		275	340	55	50	CW pulsed
AR181125	BLA9H0912LS-250	LDMOS	1030 - 1090		275	340	55	50	CW pulsed
AR181126	BLA9H0912L-700	LDMOS	1030 - 1090		600	750	60	50	CW pulsed
AR181126	BLA9H0912LS-700	LDMOS	1030 - 1090		600	750	60	50	CW pulsed
AR191184	BLP15H9S10	LDMOS	1030 - 1090			10.9	63.5	50	CW pulsed
AR212046	BLP15H9S30G	LDMOS	1200 - 1400		25		> 55	50	CW pulsed 100 μs 10 %
AR191060	CLL3H0914L-700	GaN	1200 - 1400	700			> 61	50	CW pulsed 100 μs 10 %
AR191060	CLL3H0914LS-700	GaN	1200 - 1400	700			> 61	50	CW pulsed 100 μs 10 %
AR161098	BLS9G2729LS-350	LDMOS	2700 - 2900		325	360	49	32	CW pulsed
AR161075	BLS9G2731LS-400	LDMOS	2700 - 3100		425	500	46	32	CW pulsed

Report number	Type number	Technology	F _{range} (MHz)	P _{out} (W)	P _{1dB} (W)	P _{3dB} (W)	η _D (%)	V _{DS} (V)	Demo signal
AR161065	BLS9G2735L-50	LDMOS	2700 - 3100		45	54	50	32	CW pulsed
AR161048	BLS9G2934LS-400	LDMOS	2900 - 3400		400	450	46	32	CW pulsed
AR151004	BLS9G2735L-50	LDMOS	2900 - 3500		45	53	47	32	CW pulsed
AR231023	BLS9G2735L-50	LDMOS	3000 - 3100		46	54	62	32	CW pulsed 50 μs 2 %
AR231024	BLS9G2934LS-400	LDMOS	3000 - 3100		420	480	55	32	CW pulsed 50 μs 2 %
AR161033	BLS9G2735LS-50	LDMOS	3100 - 3500		43	50	48	32	CW pulsed
AR161047	BLS9G3135LS-400	LDMOS	3100 - 3500		400	475	44	32	CW pulsed

Mobile Radio

Report number	Type number	Technology	F _{range} (MHz)	P _{out} (W)	P _{1dB} (W)	P _{3dB} (W)	η _D (%)	V _{DS} (V)	Demo signal
AR212082	ART1K6FH	LDMOS	2 - 30			900	> 60	50	CW, 2-Tone
AR204002	ART1K6FH	LDMOS	2 - 30	350 - 450			34 - 44	50	CW
AR222005	BLP15H9S10G	LDMOS	2 - 30			> 10	> 44	50	CW
AR201250	BLF974P	LDMOS	30 - 512			430	> 55	50	CW pulsed
AR174005	BLP0427M9S20	LDMOS	30 - 512		> 18	> 25	> 52	28	CW, 2-Tone
AR212069	ART700FH	LDMOS	30 - 520			550	> 40	50	CW pulsed 50 %
AR212016	BLF647P	LDMOS	30 - 520			> 100	> 58	28 - 32	CW
AR192177	BLF984P	LDMOS	30 - 520			80	47 - 60	28	CW
AR192035	BLP15M9S30	LDMOS	30 - 520			> 25	> 50	28	CW
AR212058	BLP15H9S30 x2	LDMOS	30 - 600			> 50	> 50	28	CW
AR212005	BLP15H9S100	LDMOS	30 - 900			> 75	> 37	50	CW pulsed 50 %
AR212026	BLP15H9S30	LDMOS	30 - 1000			> 25	> 35	50	CW
AR202075	ART150FE	LDMOS	100 - 140			127 - 166	61.7 - 81.5	62	CW pulsed
AR212091	ART2K0FE	LDMOS	270 - 310		1500		> 56	62	CW pulsed 10 %
AR192182	BLP15H9S30	LDMOS	360 - 450				60.1	50	CW
AR192151	BLP15H9S10	LDMOS	380 - 450			6 - 8	50 - 57	50	CW pulsed
AR202140	BLP15M9S100	LDMOS	400 - 470	90			> 47	32	2-Tone
AR202051	BLP15H9S30	LDMOS	750 - 950			35	16.3	50	CW pulsed
AR202063	BLP15H9S10	LDMOS	768 - 870			10	53.1	50	CW pulsed
AR202037	CLF3H0035-100	GaN	500 - 2500	90			> 46	50	CW
AR202037	CLF3H0035S-100	GaN	500 - 2500	90			> 46	50	CW
AR202113	CLF3H0060-30	GaN	500 - 2600	25			> 47	50	CW

Non-Cellular Communications

Report number	Type number	Technology	F _{range} (MHz)	P _{out} (W)	P _{1dB} (W)	P _{3dB} (W)	η_D (%)	V _{DS} (V)	Demo signal
AR222005	BLP15H9S10G	LDMOS	2 - 30			> 10	> 44	50	CW
AR201250	BLF974P	LDMOS	30 - 512			430	> 55	50	CW pulsed
AR174005	BLP0427M9S20	LDMOS	30 - 512		> 18	> 25	> 52	28	CW, 2-Tone
AR212069	ART700FH	LDMOS	30 - 520			550	> 40	50	CW pulsed 50 %
AR212016	BLF647P	LDMOS	30 - 520			> 100	> 58	28 - 32	CW
AR192177	BLF984P	LDMOS	30 - 520			80	47 - 60	28	CW
AR192035	BLP15M9S30	LDMOS	30 - 520			> 25	> 50	28	CW
AR212058	BLP15H9S30 x2	LDMOS	30 - 600			> 50	> 50	28	CW
AR212005	BLP15H9S100	LDMOS	30 - 900			> 75	> 37	50	CW pulsed 50 %
AR212026	BLP15H9S30	LDMOS	30 - 1000			> 25	> 35	50	CW
AR202075	ART150FE	LDMOS	100 - 140			127 - 166	61.7 - 81.5	62	CW pulsed
AR201074	BLP5LA55S	LDMOS	150 - 170	55	60	72	74	14.4	CW
AR191179	BLP9LA25S	LDMOS	225 - 400		13.1		48	13.6	CW
AR192182	BLP15H9S30	LDMOS	360 - 450				60.1	50	CW
AR192143	BLP15H9S100	LDMOS	360 - 450		> 100		50	50	CW, CW pulsed
AR192151	BLP15H9S10	LDMOS	380 - 450			6 - 8	50 - 57	50	CW pulsed
AR191172	BLP5LA55S	LDMOS	380 - 450			53	62	13.6	CW
AR202140	BLP15M9S100	LDMOS	400 - 470	90			> 47	32	2T
AR201054	BLP9LA25SG	LDMOS	740 - 800			28.2	55	13.6	CW
AR202051	BLP15H9S30	LDMOS	750 - 950			35	16.3	50	CW pulsed
AR202063	BLP15H9S10	LDMOS	768 - 870			10	53.1	50	CW pulsed
AR191173	BLP9LA25S	LDMOS	800 - 870		24.2	29	64.7	13.6	CW
AR191005	BLP0427M9S20G	LDMOS	1450 - 1550		> 21.8	> 28.5	> 53	28	CW, CW pulsed
AR202003	BLP15H9S100	LDMOS	1700 - 1850			100	47.6 - 53.7	50	CW pulsed

Broadcast Application Reports

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UHF/D-TV

Report number	Type number	Technology	F _{range} (MHz)	P _{out} (W)	P _{1dB} (W)	P _{3dB} (W)	η _D (%)	V _{DS} (V)	Demo signal
AR194004	BLF989	LDMOS	470 - 494	200		950	51- 56	50	DVB-T
BLF989 Doherty	BLF989	LDMOS	470 - 500	300			50	50	DVB-T
AR181056	BLF989	LDMOS	470 - 700	150		> 850	> 32	50	DVB-T
AR191191	BLF989E	LDMOS	470 - 700	180		1000	46	50	DVB-T
AR204007	BLP15H9S100	LDMOS	470 - 700	20		110	30	50	CW pulsed, DVB-T
AR192124	BLF989	LDMOS	470 - 710	180			> 30	50	DVB-T
AR182059	BLF989	LDMOS	474 - 714	150			33	50	DVB-T
AR191150	BLP0408H9S30	LDMOS	470 - 860	6		> 35	> 25	50	DVB-T

FM/HDR/DAB Radio

Report number	Type number	Technology	F _{range} (MHz)	P _{out} (W)	P _{1dB} (W)	P _{3dB} (W)	η _D (%)	V _{DS} (V)	Demo signal
AR201210	ART35FE	LDMOS	81 - 108	29.4		38.9	74.6	65	CW
AR201070	ART2K0FE	LDMOS	88 - 108			1742	84.6 - 81.7	60	CW
AR184005	BLP0427M9S20	LDMOS	88 - 108		> 29	> 37	> 62	32	CW
AR211050	ART1K6FH	LDMOS	88 - 108			1239 / 1375 / 1316	84.3 - 82.7	48	CW

VHF/D-TV

Report number	Type number	Technology	F _{range} (MHz)	P _{out} (W)	P _{1dB} (W)	P _{3dB} (W)	η _D (%)	V _{DS} (V)	Demo signal
AR201249	ART2K0FE	LDMOS	165 - 235	1100			43	50	DVB-T
AR201097	ART2K0FE	LDMOS	170 - 240	1400			47	63	DVB-T

Industrial, Scientific and Medical Application Reports

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CO₂ Lasers & Plasma

Report number	Type number	Technology	F _{range} (MHz)	P _{out} (W)	P _{1dB} (W)	P _{3dB} (W)	η _D (%)	V _{DS} (V)	Demo signal
AR221063	ART2K0FE	LDMOS	2	1300			82	56	CW, P _L = P _{-5dB}
AR201212	ART35FE	LDMOS	10 - 54		37.2		75	65	CW
AR211135*	ART2K0FE	LDMOS	13			1600	76.5	60	CW
AR211135*	ART2K0FE	LDMOS	13			1000	89	60	CW
AR201008	ART2K0FE	LDMOS	13 - 41			1050	53 - 59	65	CW
AR222014	ART700FH	LDMOS	27			730	70	50	CW
AR201104	ART2K0FE	LDMOS	41	1600			79	50	CW
AR194008	ART2K0FE	LDMOS	60		1027 / 1591	1893 / 2047	83 / 86	65	CW, CW pulsed
AR201093	ART2K0FE	LDMOS	60 / 64 - 85	1785			84.7	50	CW pulsed
AR201213	ART35FE	LDMOS	60 - 130		38.9		79.1	65	CW
AR212099	ART1K6FH	LDMOS	81			1500	81	50	CW
AR211018	ART2K0FE	LDMOS	81			1750	80	65	CW
AR201195	BLM2425M9S20	LDMOS	2400 - 2500		22.5		47.2	32	CW
AR201017	BLC2425M10LS250	LDMOS	2400 - 2500			280	68.5	32	CW
AR191199	BLC2425M10LS500P	LDMOS	2400 - 2500			544	68	32	CW

* For access, please contact our local sales representative via: www.ampleon.com/contact

Healthcare / MRI

Report number	Type number	Technology	F _{range} (MHz)	P _{out} (W)	P _{1dB} (W)	P _{3dB} (W)	η _D (%)	V _{DS} (V)	Demo signal
AR201213	ART35FE	LDMOS	60 - 130		38.9		79.1	65	CW
AR211049	ART150FE	LDMOS	64	147.9			78.8	65	CW

Healthcare / MRI (continued)

Report number	Type number	Technology	F _{range} (MHz)	P _{out} (W)	P _{1dB} (W)	P _{3dB} (W)	η _D (%)	V _{DS} (V)	Demo signal
AR201106*	ART2K0FE	LDMOS	64			1740	78	63	CW pulsed
AR211142*	ART2K0FE	LDMOS	120 - 132		2100		0.75	65	CW pulsed
AR192069	ART2K0FE	LDMOS	123 - 133			1900	63 - 67	62	CW pulsed
AR211048	ART150FE	LDMOS	128	148.8			81.9	65	CW

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Particle Accelerators

Report number	Type number	Technology	F _{range} (MHz)	P _{out} (W)	P _{1dB} (W)	P _{3dB} (W)	η _D (%)	V _{DS} (V)	Demo signal
AR201090	BLF974P	LDMOS	225		587	633	82	50	CW
AR191188	BLF974P	LDMOS	230 - 236			650	76.7	50	CW
AR201176	BLP15H9S100G	LDMOS	325 - 352			90	61	50	CW
AR201138	ART2K0FE	LDMOS	352				0.74	65	CW
AR201165	BLF978P	LDMOS	352		1166	1294	77.4	50	CW
AR201178	BLP15H9S10G	LDMOS	325 - 352			10	71	50	CW
AR211056	BLF978P	LDMOS	500		812	951	70.4	50	CW
AR202059	BLF978P	LDMOS	500		> 1000		70	45	CW
AR211072	BLF978P	LDMOS	650		1150		70	50	CW
AR181152	BLF13H9LS750P	LDMOS	1300		700		60	50	CW, CW pulsed

Industrial Heating

Report number	Type number	Technology	F _{range} (MHz)	P _{out} (W)	P _{1dB} (W)	P _{3dB} (W)	η _D (%)	V _{DS} (V)	Demo signal
AR211147	ART150PEG	LDMOS	6.78	150			86.3	63	CW
AR201212	ART35FE	LDMOS	10 - 54		37.2		75	65	CW
AR201104	ART2K0FE	LDMOS	41	1600			79	50	CW
AR191206	BLF0910H9LS750P	LDMOS	902 - 928			> 875	70.8	50	CW
AR191162	BLP0427M9S20	LDMOS	902 - 928		> 23	> 27	> 75	32	CW
AR182075	BLF0910H9LS600	LDMOS	902 - 928			> 600	> 65	50	CW
AR204006	BLP15M9S30	LDMOS	915			35	78	28	CW
AR201195	BLM2425M9S20	LDMOS	2400 - 2500		22.5		47.2	32	CW
AR201017	BLC2425M10LS250	LDMOS	2400 - 2500			280	68.5	32	CW
AR201045	BLP2425M10S250P	LDMOS	2400 - 2500		275	300	> 65	32	CW
AR191199	BLC2425M10LS500P	LDMOS	2400 - 2500			544	68	32	CW

Cooking and Defrosting

Report number	Type number	Technology	F _{range} (MHz)	P _{out} (W)	P _{1dB} (W)	P _{3dB} (W)	η_D (%)	V _{DS} (V)	Demo signal
AR211103	ART150PEG	LDMOS	40	134			86	55	CW
AR211125	ART150PEG	LDMOS	40	150			86	56	CW
AR201212	ART35FE	LDMOS	10 - 54		37.2		75	65	CW
AR191162	BLP0427M9S20	LDMOS	902 - 928		> 23	> 27	> 75	32	CW
AR182075	BLF0910H9LS600	LDMOS	902 - 928			> 600	> 65	50	CW
AR204006	BLP15M9S30	LDMOS	915			35	78	28	CW
AR201195	BLM2425M9S20	LDMOS	2400 - 2500		22.5		47.2	32	CW
AR201045	BLP2425M10S250P	LDMOS	2400 - 2500		275	300	> 65	32	CW

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