

AMPLEON



Short Form Catalog

RF Power Solutions for
MultiMarket



July 2023

The Leading Global Partner in **RF** Power

This catalog is designed to give you an updated overview of our wide range of multi-market RF Power amplifiers targeting broadcast, industrial, scientific, medical as well as navigation and safety radio applications.

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

Highlights of this catalog include:

- GaN HEMT power amplifiers boosting power and efficiency in broadband and pulsed radar applications: CLF3H0060(S)-10, CLF3H0060(S)-30, CLF3H0035(S)-100 and CLL3H0914L(S)-700
- The new UHF-TV LDMOS broadcast amplifiers BLF989 and BLF989E addressing the demands for higher efficiency and larger bandwidth coverage
- The new line of 65 and 50 Volts Advanced Rugged Transistors (ART) designed to unlock so far untapped levels of 200 Volts breakdown voltages in ceramic and plastic packages
- Next-generation discrete wideband LDMOS amplifiers and drivers such as the BLF978P and the BLF974P (successor to the BLF578 and BLF574) as well as the recently introduced 13.6 Volts BLP5LA55S and BLP9LA25S transistors
- Latest UHF, Avionics, L-band and S-band LDMOS transistors for radar applications enabling best-in-class efficiency figures at a well optimized cost structure

All new products are based upon latest GaN HEMT 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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Discrete Wideband LDMOS Amplifiers

Frequency (MHz)	Type Number	Technology	Package Type	Package	$P_{L(1dB)}$ (W)	V_{DS} (V)	η_D (%)	G_o (dB)	Recommended Driver	Status
433	BLP05H9S500P	Gen9 - LDMOS	OMP	OMP-780-4F-1	500	50	75	25.3	BLP15H9S10	Production
1-700	BLF978P	Gen9 LDMOS	ACC	SOT539A	1200	50	80	25.5	BLP15H9S30	Production
1-700	BLF974P	Gen9 LDMOS	ACC	SOT539A	500	50	77	25.3	BLP15H9S10	Production
1-2000	BLP15H9S10	Gen9 LDMOS	OMP	TO-270-2F-1	10	50	65	21		Production
1-2000	BLP15H9S10G	Gen9 LDMOS	OMP	TO-270-2G-1	10	50	65	21		Production
1-2000	BLP15H9S30	Gen9 LDMOS	OMP	TO-270-2F-1	30	50	65	21		Production
1-2000	BLP15H9S30G	Gen9 LDMOS	OMP	TO-270-2G-1	30	50	65	21		Production
1-2000	BLP15H9S100	Gen9 LDMOS	OMP	TO-270-2F-1	100	50	62	20		Production
1-2000	BLP15H9S100G	Gen9 LDMOS	OMP	TO-270-2G-1	100	50	62	20		Production
1-2000	BLP15M9S30	Gen9 LDMOS	OMP	TO-270-2F-1	30	32	72	19.3		Production
1-2000	BLP15M9S30G	Gen9 LDMOS	OMP	TO-270-2G-1	30	32	72	19.3		Production
1-2700	BLP0427M9S20	Gen9 LDMOS	OMP	TO-270-2F-1	20	28	63	19		Production
1-2700	BLP0427M9S20G	Gen9 LDMOS	OMP	TO-270-2G-1	20	28	63	19		Production
1-2000	BLP15M9S70	Gen9 LDMOS	OMP	TO-270-2F-1	70	32	70	17.6		Production
1-2000	BLP15M9S70G	Gen9 LDMOS	OMP	TO-270-2G-1	70	32	70	17.6		Production
1-1500	BLP15M9S100	Gen9 LDMOS	OMP	TO-270-2F-1	100	32	68	16		Production
1-1500	BLP15M9S100G	Gen9 LDMOS	OMP	TO-270-2G-1	100	32	68	16		Production
1-520	BLP5LA55S	Gen9 LDMOS	OMP	TO-270-2F-1	55	13.6	78.5	19.2		Production
1-520	BLP5LA55SG	Gen9 LDMOS	OMP	TO-270-2G-1	55	13.6	78.5	19.2		Production
1-941	BLP9LA25S	Gen9 LDMOS	OMP	TO-270-2F-1	25	13.6	72	18.4		Production
1-941	BLP9LA25SG	Gen9 LDMOS	OMP	TO-270-2G-1	25	13.6	72	18.4		Production
1-1500	BLF647P	Gen7 LDMOS	ACC	SOT1121A	200	32	70	18		Production

Discrete Wideband GaN Amplifiers

Frequency (MHz)	Type Number	Technology	Package Type	Package	P _L (W)	V _{DS} (V)	η _D [*] (%)	G _B (dB)	Recommended Driver	Status
0-6000	CLF3H0060-10	Gen3 GaN	ACC	SOT1227A	10	50	63	20.1		Production
0-6000	CLF3H0060S-10	Gen3 GaN	ACC	SOT1227B	10	50	63	20.1		Production
0-6000	CLF3H0060-30	Gen3 GaN	ACC	SOT1227A	30	50	60.4	16.7		Production
0-6000	CLF3H0060S-30	Gen3 GaN	ACC	SOT1227B	30	50	60.4	16.7		Production
0-3500	CLF3H0035-100	Gen3 GaN	ACC	SOT467C	100	50	60	14.7	CLF3H0060-30	Production
0-3500	CLF3H0035S-100	Gen3 GaN	ACC	SOT467B	100	50	60	14.7	CLF3H0060S-30	Production

* @ P_{3dB}

Extremely Rugged LDMOS Amplifiers

Frequency (MHz)	Type Number	Technology	Package Type	Package	P _{L(1dB)} (W)	V _{DS} (V)	η _D (%)	G _B (dB)	Recommended Driver	Status
1-425	ART1K6FH	ART LDMOS	ACC	SOT539AN	1600	55	77	29	ART35FE BLP15H9S10	Production
1-425	ART1K6FHS	ART LDMOS	ACC	SOT539BN	1600	55	77	29	ART35FE BLP15H9S10	Production
1-425	ART1K6FHG	ART LDMOS	ACC	SOT1248C	1600	55	77	29	ART35FE BLP15H9S10	Production
1-400	ART2K0FE	ART LDMOS	ACC	SOT539AN	2000	65	78	27	ART35FE ART150FE/PE(G)	Production
1-400	ART2K0FES	ART LDMOS	ACC	SOT539BN	2000	65	78	27	ART35FE ART150FE/PE(G)	Production
1-400	ART2K0FEG	ART LDMOS	ACC	SOT1248C	2000	65	78	27	ART35FE ART150FE/PE(G)	Production
1-400	ART2K0TFES	ART LDMOS	ACC	ACC-1230-6F-2	2000	65	73	29	ART35FE	Production
1-400	ART2K0TFEG	ART LDMOS	ACC	ACC-1230-6G-2	2000	65	73	29	ART35FE	Production
1-450	ART700FH	ART LDMOS	ACC	SOT1214A	700	50	77	29	BLP15H9S10	Production
1-450	ART700FHS	ART LDMOS	ACC	SOT1214B	700	50	77	29	BLP15H9S10	Production
1-450	ART700FHG	ART LDMOS	ACC	SOT1214C	700	50	77	29	BLP15H9S10	Production
1-650	ART150FE	ART LDMOS	ACC	SOT467C	150	65	74.6	30.6		Production
1-600	ART150PE	ART LDMOS	OMP	TO-270-2F-1	150	65	82	31		Production
1-600	ART150PEG	ART LDMOS	OMP	TO-270-2G-1	150	65	82	31		Production
1-650	ART35FE	ART LDMOS	ACC	SOT467C	35	65	72	30.4		Production
1-650	ART450FE	ART LDMOS	ACC	SOT1121A	450	65	74	27	ART35FE	Production

Bold = NEW

UHF Broadcast Amplifiers

Frequency (MHz)	Type Number	Technology	Package Type	Package	$P_{L(1dB)}$ (W)	V_{DS} (V)	η_D (%)	G_o (dB)	Recommended Driver	Status
470-860	BLP0408H9S30	Gen9 - LDMOS	OMP	TO-270-2F-1	30 / 30*	50	32	20		Production
470-860	BLF989	Gen9 - LDMOS	ACC	SOT539A	900 / 200*	50	53	19	BLP0408H9S30	Production
470-860	BLF989S	Gen9 - LDMOS	ACC	SOT539B	900 / 200*	50	53	19	BLP0408H9S30	Production
470-860	BLF989E	Gen9 - LDMOS	ACC	SOT539AN	1000 / 180*	50	52	18	BLP0408H9S30	Production
470-860	BLF989ES	Gen9 - LDMOS	ACC	SOT539BN	1000 / 180*	50	52	18	BLP0408H9S30	Production
470-860	BLF984PS	Gen9 - LDMOS	ACC	SOT1121B	450 / 80*	50	34	22	BLP15H9S10	Production
470-860	BLF984P	Gen9 - LDMOS	ACC	SOT1121A	450 / 80*	50	34	22	BLP15H9S10	Production
470-860	BLF881	Gen6 - LDMOS	ACC	SOT467C	140 / 33*	50	49	21		Production
470-860	BLF881S	Gen6 - LDMOS	ACC	SOT467B	140 / 33*	50	49	21		Production

* $P_{L(AV)}$ (W)

Amplifiers Matched for Industrial, Scientific, Medical and Heating Applications

Frequency (MHz)	Type Number	Technology	Package Type	Package	$P_{L(1dB)}$ (W)	V_{DS} (V)	η_D (%)	G_o (dB)	Recommended Driver	Status
433	BLP05H9S500P	Gen9 - LDMOS	OMP	OMP-780-4F-1	500	50	75	25.3	BLP15H9S10	Production
915	BLF0910H9LS750P	Gen9 - LDMOS	ACC	SOT539B	750	50	72.5	21.5	BLP15H9S10	Production
915	BLF0910H9LS600	Gen9 - LDMOS	ACC	SOT502B	600	50	68.5	19.8	BLP15H9S10	Production
1300	BLF13H9L750P	Gen9 - LDMOS	ACC	SOT539A	750	50	62.5	17	BLP15H9S30	Production
1300	BLF13H9LS750P	Gen9 - LDMOS	ACC	SOT539B	750	50	62.5	17	BLP15H9S30	Production
2450	BLF2425M9L30	Gen9 - LDMOS	ACC	SOT1135A	30	32	61	18.5		Production
2450	BLF2425M9LS30	Gen9 - LDMOS	ACC	SOT1135B	30	32	61	18.5		Production
2450	BLF2425M9LS140	Gen9 - LDMOS	ACC	SOT502B	140	28	58	19		Production
2450	BLM2425M7S60P	Gen7 - LDMOS	OMP	SOT1211-3	60	32	45	27.5		Production
2450	BLC2425M10LS500P	Gen10 - LDMOS	ACP	SOT1250-1	500	32	67.5	15	BLM2425M7S60P	Production
2450	BLC2425M10LS250	Gen10 - LDMOS	ACP	SOT1270-1	250	32	68.5	15.2	BLM2425M9S20	Production
2450	BLM2425M9S20	Gen9 - LDMOS	OMP	OMP-400-8F-1	20	32	50	27		Production
2450	BLP2425M10S250P	Gen10 - LDMOS	OMP	OMP-780-4F-1	250	32	67.5	15.2	BLM2425M9S20	Production

UHF and Avionics Pulsed Radar Amplifiers

Frequency (MHz)	Type Number	Technology	Package Type	Package	$P_{L(1dB)}$ (W)	V_{DS} (V)	η_D (%)	G_o (dB)	Recommended Driver	Status
400-800	BLU9H0408L-800P	Gen9 LDMOS	ACC	SOT539A	800	50	70	22	BLP0408H9S30	Production
960-1215	BLA9H0912L-250G	Gen9 LDMOS	ACC	SOT502F	250	50	60	22	BLP15H9S10	Production
960-1215	BLA9H0912LS-250	Gen9 LDMOS	ACC	SOT502B	250	50	60	22	BLP15H9S10	Production
960-1215	BLA9H0912LS-250G	Gen9 LDMOS	ACC	SOT502E	250	50	60	22	BLP15H9S10	Production
960-1215	BLA9H0912L-250	Gen9 LDMOS	ACC	SOT502A	250	50	60	22	BLP15H9S10	Production
960-1215	BLA9H0912L-700G	Gen9 LDMOS	ACC	SOT502F	700	50	62	20	BLP15H9S10	Production
960-1215	BLA9H0912LS-700	Gen9 LDMOS	ACC	SOT502B	700	50	62	20	BLP15H9S10	Production
960-1215	BLA9H0912LS-700G	Gen9 LDMOS	ACC	SOT502E	700	50	62	20	BLP15H9S10	Production
960-1215	BLA9H0912L-700	Gen9 LDMOS	ACC	SOT502A	700	50	62	20	BLP15H9S10	Production
960-1215	BLA9H0912L-1200P	Gen9 LDMOS	ACC	SOT539A	1200	50	60	19	BLP15H9S30	Production
960-1215	BLA9H0912LS-1200P	Gen9 LDMOS	ACC	SOT539B	1200	50	60	19	BLP15H9S30	Production
960-1215	BLA9H0912LS-1200PG	Gen9 LDMOS	ACC	SOT1248C	1200	50	60	19	BLA6H0912LS-1000	Production
1030-1090	BLA9G1011L-300	Gen9 LDMOS	ACC	SOT502A	317	32	64.8	21.5	BLP0427M9S20	Production
1030-1090	BLA9G1011L-300G	Gen9 LDMOS	ACC	SOT502F	317	32	64.8	21.5	BLP0427M9S20G	Production
1030-1090	BLA9G1011LS-300	Gen9 LDMOS	ACC	SOT502B	317	32	64.8	21.5	BLP0427M9S20	Production
1030-1090	BLA9G1011LS-300G	Gen9 LDMOS	ACC	SOT502E	317	32	64.8	21.5	BLP0427M9S20G	Production

L-band and S-band Pulsed Radar Amplifiers

Frequency (MHz)	Type Number	Technology	Package Type	Package	$P_{L(1dB)}$ (W)	V_{DS} (V)	η_D (%)	G_o (dB)	Recommended Driver	Status
900-1400	CLL3H0914L-700	Gen3 GaN	ACC	SOT502A	750	50	71	16	CLF3H0060-30 BLP15H9S30	Production
900-1400	CLL3H0914LS-700	Gen3 GaN	ACC	SOT502B	750	50	71	16	CLF3H0060S-30 BLP15H9S30	Production
1200-1400	BLL9G1214L-600	Gen9 LDMOS	ACC	SOT502A	600	32	60	19	BLP0427M9S20	Production
1200-1400	BLL9G1214LS-600	Gen9 LDMOS	ACC	SOT502B	600	32	60	19	BLP0427M9S20	Production
2700-3500	BLS9G2735L-50	Gen9 LDMOS	ACC	SOT1135A	45	32	48	12		Production
2700-3500	BLS9G2735LS-50	Gen9 LDMOS	ACC	SOT1135B	45	32	48	12		Production
2700-3100	BLS9G2731L-400	Gen9 LDMOS	ACC	SOT502A	400	32	47	13	BLS9G2735L-50	Production
2700-3100	BLS9G2731LS-400	Gen9 LDMOS	ACC	SOT502B	400	32	47	13	BLS9G2735LS-50	Production
2700-2900	BLS9G2729L-350	Gen9 LDMOS	ACC	SOT502A	350	28	50	14	BLS9G2735L-50	Production
2700-2900	BLS9G2729LS-350	Gen9 LDMOS	ACC	SOT502B	350	28	50	14	BLS9G2735LS-50	Production

Bold = NEW

L-band and S-band Pulsed Radar Amplifiers (continued)

Frequency (MHz)	Type Number	Technology	Package Type	Package	$P_{L(1dB)}$ (W)	V_{DS} (V)	η_D (%)	G_o (dB)	Recommended Driver	Status
2900-3400	BLS9G2934L-400	Gen9 LDMOS	ACC	SOT502A	400	32	43	12	BLS9G2735L-50	Production
2900-3400	BLS9G2934LS-400	Gen9 LDMOS	ACC	SOT502B	400	32	43	12	BLS9G2735LS-50	Production
3100-3500	BLS9G3135L-115	Gen9 LDMOS	ACC	SOT1135A	115	32	49	14		Production
3100-3500	BLS9G3135LS-115	Gen9 LDMOS	ACC	SOT1135B	115	32	49	14		Production
3100-3500	BLS9G3135L-400	Gen9 LDMOS	ACC	SOT502A	400	32	43	12	BLS9G2735L-50	Production
3100-3500	BLS9G3135LS-400	Gen9 LDMOS	ACC	SOT502B	400	32	43	12	BLS9G2735LS-50	Production

Package Portfolio

Air-Cavity Ceramic (ACC) Packages*



ACC1230-6F-2
(32.26 x 10.16 x max. 5.5 (mm))



ACC1230-6G-2
(32.26 x 10.16 x max. 5.5 (mm))



SOT467B
(9.7 x 5.8 x max. 4.7 (mm))



SOT467C
(20.3 x 5.8 x max. 4.7 (mm))



SOT502A
(34.0 x 9.8 x max. 4.7 (mm))



SOT502B
(20.6 x 9.8 x max. 4.7 (mm))



SOT502E
(20.6 x 9.8 x max. 4.7 (mm))



SOT502F
(34.0 x 9.8 x max. 4.7 (mm))



SOT539A
(41.2 x 10.2 x max. 4.7 (mm))



SOT539AN
(41.2 x 10.2 x max. 4.7 (mm))



SOT539B
(32.3 x 10.2 x max. 4.7 (mm))



SOT539BN
(32.3 x 10.2 x max. 4.7 (mm))



SOT1121A
(34.0 x 9.8 x max. 4.7 (mm))



SOT1121B
(20.6 x 9.8 x max. 4.7 (mm))



SOT1135A
(20.3 x 9.8 x max. 4.7 (mm))



SOT1135B
(9.8 x 9.8 x max. 4.7 (mm))



SOT1214A
(34.0 x 9.8 x max. 4.7 (mm))



SOT1214B
(20.6 x 9.8 x max. 4.7 (mm))



SOT1214C
(34.0 x 9.8 x max. 4.7 (mm))



SOT1227A
(14.0 x 4.1 x max. 3.7 (mm))



SOT1227B
(5.1 x 4.1 x max. 3.7 (mm))



SOT1248C
(32.3 x 10.2 x max. 5.5 (mm))

Air-Cavity Plastic (ACP) Packages*



SOT1250-1
(32.2 x 10.1 x max. 4.5 (mm))



SOT1270-1
(20.6 x 9.8 x max. 3.7 (mm))

* Not drawn to scale

Overmolded Plastic (OMP) Packages*



OMP-400-8F-1
(10.3 x 10.3 x max. 4.0 (mm))



OMP-780-4F-1
(20.75 x 9.96 x max. 4.0 (mm))



TO-270-2F-1
(10.67 x 6.1 x max. 2.0 (mm))



TO-270-2G-1
(10.67 x 6.1 x max. 2.0 (mm))



SOT1211-3
(20.75 x 9.96 x max. 4.0 (mm))

* Not drawn to scale

Committed to Your Success

At Ampleon, we are passionate about your success. Rest assured that we deliver world class innovation for a broad range of applications. In line with your challenges increasing, we continuously improve and enhance our LDMOS technology and strengthen our footprint in GaN.

During the entire process from design to delivery, you will enjoy outstanding technical support from well trained staff and knowledgeable Field Application Engineers (FAEs) as part of our distribution network. Whether you require load-pull data, application boards, samples, ADS / AWR models or other, you will be accompanied in every step on the way to success.

Our application engineering resources are spread around the globe, with our offices (Nijmegen / The Netherlands, Toulouse / France, Smithfield / USA, Shanghai / China) providing local customer support.

Support

Datasheets, test reports and simulation models are available online on: www.ampleon.com/support/documentation.

To make sure your request is processed quickly and directed to the right contact partner at Ampleon, please contact us via: www.ampleon.com/contact.

Order samples

To support customers in designing new products, Ampleon supplies samples and demonstration boards.

Samples can be requested via our online e-samples store: www.ampleon.com/samples (please register at first log-in).

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