



Short Form Catalog

RF Power Solutions for

Broadcast
Navigation and Safety Radio
Industrial, Scientific and Medical



February 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)-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.

Download the **latest** version



www.ampleon.com/sfc

Discrete Wideband LDMOS Amplifiers

Page 4

Discrete Wideband GaN Amplifiers

Page 5

Extremely Rugged LDMOS Amplifiers

Page 5

UHF Broadcast Amplifiers

Page 6

Amplifiers Matched for ISM and Heating Applications

Page 6

UHF and Avionics Pulsed Radar Amplifiers

Page 7

L-band and S-band Pulsed Radar Amplifiers

Page 7-8

Package Portfolio

Page 9-10

Support

Page 11

Discrete Wideband LDMOS Amplifiers

Frequency (MHz)	Type Number	Technology	Package Type	Package	$P_{L(1dB)}$ (W)	V_{DS} (V)	η_D (%)	G_B (dB)	Recommended Driver	Replacement for	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	BLF578 BLF178P	Production
1-700	BLF974P	Gen9 LDMOS	ACC	SOT539A	500	50	77	25.3	BLP15H9S10	BLF574	Production
1-2000	BLP15H9S10	Gen9 LDMOS	OMP	TO-270-2F-1	10	50	65	21		BLP10H610	Production
1-2000	BLP15H9S10G	Gen9 LDMOS	OMP	TO-270-2G-1	10	50	65	21		BLP10H610	Production
1-2000	BLP15H9S30	Gen9 LDMOS	OMP	TO-270-2F-1	30	50	65	21		BLP10H630P	Production
1-2000	BLP15H9S30G	Gen9 LDMOS	OMP	TO-270-2G-1	30	50	65	21		BLP10H630PG	Production
1-2000	BLP15H9S100	Gen9 LDMOS	OMP	TO-270-2F-1	100	50	62	20		BLP10H690P BLP10H6120P	Production
1-2000	BLP15H9S100G	Gen9 LDMOS	OMP	TO-270-2G-1	100	50	62	20		BLP10H690PG BLP10H6120P	Production
1-2000	BLP15M9S30	Gen9 LDMOS	OMP	TO-270-2F-1	30	32	72	19.3		BLF642	Production
1-2000	BLP15M9S30G	Gen9 LDMOS	OMP	TO-270-2G-1	30	32	72	19.3		BLF642	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		BLF644P	Production
1-2000	BLP15M9S70G	Gen9 LDMOS	OMP	TO-270-2G-1	70	32	70	17.6		BLF644P	Production
1-1500	BLP15M9S100	Gen9 LDMOS	OMP	TO-270-2F-1	100	32	68	16		BLF645	Production
1-1500	BLP15M9S100G	Gen9 LDMOS	OMP	TO-270-2G-1	100	32	68	16		BLF645	Production
1-520	BLP5LA55S	Gen9 LDMOS	OMP	TO-270-2F-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	BLP15M7160P	Gen7 LDMOS	OMP	SOT1223-2	160	28	59.7	19.4			Production
1-1500	BLF647P	Gen7 LDMOS	ACC	SOT1121A	200	32	70	18			Production

Bold = NEW

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	Replacement for	Status
0-6000	CLF3H0060-30	Gen3 GaN	ACC	SOT1227A	30	50	60.4	16.7		CLF1G0060-30	Production
0-6000	CLF3H0060S-30	Gen3 GaN	ACC	SOT1227B	30	50	60.4	16.7		CLF1G0060S-30	Production
0-3500	CLF3H0035-100	Gen3 GaN	ACC	SOT467C	100	50	60	14.7	CLF3H0060-30	CLF1G0035-100	Production
0-3500	CLF3H0035S-100	Gen3 GaN	ACC	SOT467B	100	50	60	14.7	CLF3H0060S-30	CLF1G0035S-100	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	Replacement for	Status
1-425	ART1K6FH	ART LDMOS	ACC	SOT539AN	1600	55	77	29	ART35FE BLP15H9S10	BLF188XR	Production
1-425	ART1K6FHS	ART LDMOS	ACC	SOT539BN	1600	55	77	29	ART35FE BLP15H9S10	BLF188XRS	Production
1-425	ART1K6FHG	ART LDMOS	ACC	SOT1248C	1600	55	77	29	ART35FE BLP15H9S10	BLF188XRG	Production
1-400	ART2K0FE	ART LDMOS	ACC	SOT539AN	2000	65	78	27	ART35FE ART150FE		Production
1-400	ART2K0FES	ART LDMOS	ACC	SOT539BN	2000	65	78	27	ART35FE ART150FE		Production
1-400	ART2K0FEG	ART LDMOS	ACC	SOT1248C	2000	65	78	27	ART35FE ART150FE		Production
1-450	ART700FH	ART LDMOS	ACC	SOT1214A	700	50	77	29	BLP15H9S10	BLF184XR BLF174XR	Production
1-450	ART700FHS	ART LDMOS	ACC	SOT1214B	700	50	77	29	BLP15H9S10	BLF184XRS BLF174XRS BLF574XRS	Production
1-450	ART700FHG	ART LDMOS	ACC	SOT1214C	700	50	77	29	BLP15H9S10	BLF184XRG	Production
1-650	ART150FE	ART LDMOS	ACC	SOT467C	150	65	74.6	30.6		BLF177	Production
1-600	ART150PE	ART LDMOS	OMP	TO-270-2F-1	150	65	82	31		BLP05H6150XR	Production
1-600	ART150PEG	ART LDMOS	OMP	TO-270-2G-1	150	65	82	31		BLP05H6150XRG	Production
1-650	ART35FE	ART LDMOS	ACC	SOT467C	35	65	72	30.4		BLF571 BLP05H635XR	Production

Bold = NEW

UHF Broadcast Amplifiers

Frequency (MHz)	Type Number	Technology	Package Type	Package	$P_{L(1dB)}$ (W)	V_{DS} (V)	η_D (%)	G_B (dB)	Recommended Driver	Replacement for	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	BLF888x BLF898	Production
470-860	BLF989S	Gen9 - LDMOS	ACC	SOT539B	900 / 200*	50	53	19	BLP0408H9S30	BLF888xS BLF898S	Production
470-860	BLF989E	Gen9 - LDMOS	ACC	SOT539AN	1000 / 180*	50	52	18	BLP0408H9S30	BLF888E	Production
470-860	BLF989ES	Gen9 - LDMOS	ACC	SOT539BN	1000 / 180*	50	52	18	BLP0408H9S30	BLF888ES	Production
470-860	BLF984PS	Gen9 - LDMOS	ACC	SOT1121B	450 / 80*	50	34	22	BLP15H9S10	BLF884PS	Production
470-860	BLF984P	Gen9 - LDMOS	ACC	SOT1121A	450 / 80*	50	34	22	BLP15H9S10	BLF884P	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_B (dB)	Recommended Driver	Replacement for	Status
433	BLP05H9S500P	Gen9 - LDMOS	OMP	OMP-780-4F-1	500	50	75	25.3			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	BLF0910H6L500	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	BLC2425M8LS300P BLF2425M7LS250P	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

Bold = NEW

UHF and Avionics Pulsed Radar Amplifiers

Frequency (MHz)	Type Number	Technology	Package Type	Package	$P_{L(1dB)}$ (W)	V_{DS} (V)	η_D (%)	G_B (dB)	Recommended Driver	Replacement for	Status
400-800	BLU9H0408L-800P	Gen9 LDMOS	ACC	SOT539A	800	50	70	22	BLP0408HS30P		Production
960-1215	BLA9H0912L-250G	Gen9 LDMOS	ACC	SOT502F	250	50	60	22			Production
960-1215	BLA9H0912LS-250	Gen9 LDMOS	ACC	SOT502B	250	50	60	22			Production
960-1215	BLA9H0912LS-250G	Gen9 LDMOS	ACC	SOT502E	250	50	60	22			Production
960-1215	BLA9H0912L-250	Gen9 LDMOS	ACC	SOT502A	250	50	60	22			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	BLA6H0912-500	Production
960-1215	BLA9H0912L-1200P	Gen9 LDMOS	ACC	SOT539A	1200	50	60	19	BLP15H9S30	BLA6H0912L-1000	Production
960-1215	BLA9H0912LS-1200P	Gen9 LDMOS	ACC	SOT539B	1200	50	60	19	BLP15H9S30	BLA6H0912LS-1000	Production
960-1215	BLA9H0912LS-1200PG	Gen9 LDMOS	ACC	SOT1248C	1200	50	60	19	BLP15H9S30G		Production
1030-1090	BLA9G1011L-300	Gen9 LDMOS	ACC	SOT502A	317	32	64.8	21.5	BLP0427M9S20	BLA8G1011L-300 BLA6G1011-200R	Production
1030-1090	BLA9G1011L-300G	Gen9 LDMOS	ACC	SOT502F	317	32	64.8	21.5	BLP0427M9S20G	BLA8G1011L-300G BLA6G1011L-200RG	Production
1030-1090	BLA9G1011LS-300	Gen9 LDMOS	ACC	SOT502B	317	32	64.8	21.5	BLP0427M9S20	BLA8G1011LS-300	Production
1030-1090	BLA9G1011LS-300G	Gen9 LDMOS	ACC	SOT502E	317	32	64.8	21.5	BLP0427M9S20G	BLA8G1011LS-300G BLA6G1011LS-200RG	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_B (dB)	Recommended Driver	Replacement for	Status
500-1400	BLL8H0514L-130	Gen6 LDMOS	ACC	SOT1135A	130	50	50	17	BLP15H9S10	BLL6H0514L-130	Production
500-1400	BLL8H0514LS-130	Gen6 LDMOS	ACC	SOT1135B	130	50	50	17	BLP15H9S10	BLL6H0514LS-130	Production
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
1200-1400	BLL8H1214L-250	Gen6 LDMOS	ACC	SOT502A	250	50	55	17	BLP15H9S30	BLL6H1214L-250	Production
1200-1400	BLL8H1214L-500	Gen6 LDMOS	ACC	SOT539A	500	50	50	17	BLP15H9S30	BLL6H1214-500	Production
2700-3500	BLS9G2735L-50	Gen9 LDMOS	ACC	SOT1135A	45	32	48	12		BLS6G2735L-30	Production
2700-3500	BLS9G2735LS-50	Gen9 LDMOS	ACC	SOT1135B	45	32	48	12		BLS6G2735LS-30	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_B (dB)	Recommended Driver	Replacement for	Status
2700-3100	BLS9G2731L-400	Gen9 LDMOS	ACC	SOT502A	400	32	47	13	BLS9G2735L-50	BLS8G2731L-400P	Production
2700-3100	BLS9G2731LS-400	Gen9 LDMOS	ACC	SOT502B	400	32	47	13	BLS9G2735LS-50	BLS8G2731LS-400P	Production
2700-2900	BLS9G2729L-350	Gen9 LDMOS	ACC	SOT502A	350	28	50	14	BLS9G2735L-50	BLS7G2729L-350P	Production
2700-2900	BLS9G2729LS-350	Gen9 LDMOS	ACC	SOT502B	350	28	50	14	BLS9G2735LS-50	BLS7G2729LS-350P	Production
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		BLS6G3135-120	Production
3100-3500	BLS9G3135LS-115	Gen9 LDMOS	ACC	SOT1135B	115	32	49	14		BLS6G3135S-120	Production
3100-3500	BLS9G3135L-400	Gen9 LDMOS	ACC	SOT502A	400	32	43	12	BLS9G2735L-50	BLS7G3135L-350P	Production
3100-3500	BLS9G3135LS-400	Gen9 LDMOS	ACC	SOT502B	400	32	43	12	BLS9G2735LS-50	BLS7G3135LS-350P	Production

Package Portfolio

Air-Cavity Ceramic (ACC) Packages*



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))



SOT1223-2
(20.6 x 10 x max. 3.9 (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).

For inquiries, please contact your local sales representative listed on: www.ampleon.com/contact.

Register and Enjoy the Benefits of myAmpleon

MyAmpleon offers you valuable content, integrated services and a personalized experience at your fingertips: www.ampleon.com/my-ampleon.

Additional Information

- www.ampleon.com/products
- www.ampleon.com/applications

