Product Selection Guide

2016.
vol 2

"Brilliance in RF Microwave"

Wireless

Broadcast

Automotive

Satellite

Military

ASB

ASB Inc.

ASB Inc, as a World Class Product Company Korean government certified, has been designing and manufacturing RF amplifier MMICs and modules with more than 20-year experience for use in wireless and cabled communication systems. The company strives to provide world leading customers with world best quality and cost-effective products timely to the market and consistently upgrades the products in pursuit of promptly satisfying the customers' requirement. A fully automated test and assembly environment is committed to offering highly quality-controlled reliable product with fast stable delivery.

Product Offerings

- Gain Block Amplifiers
- Low Noise Amplifiers
- Power Amplifiers
- Wideband Amplifiers
- Trans-Impedance Amplifiers
- LNA Modules
- PLL Synthesizers
- Digital Attenuators

Product Applications

- Mobile Wireless Communication Equipment
- Optical Node, RFoG, FTTH, FTTB, EOC, EPON
- Cable, Terrestrial, Satellite, Mobile TV Broadcasting System
- Automotive, FM, DAB/DVB, GPS, SDARS
- Radio Frequency Identification (RFID)
- Trunk Radio System, ISM Band System
- Point-to-Point Radio Link, Military, Satellite

PRODUCT CONTENTS

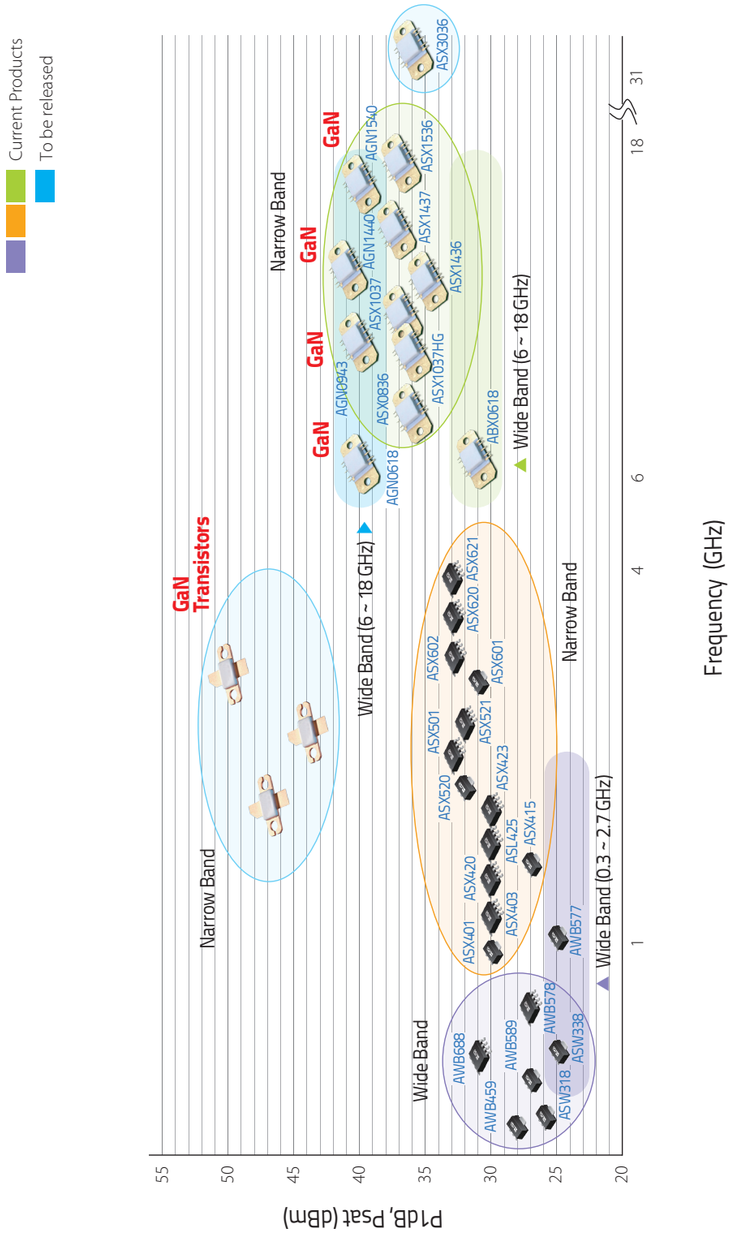
MMICs

Internally Matched, SMD Type Modules

Worldwide Representatives

GaAs, GaN
Power Amplifiers

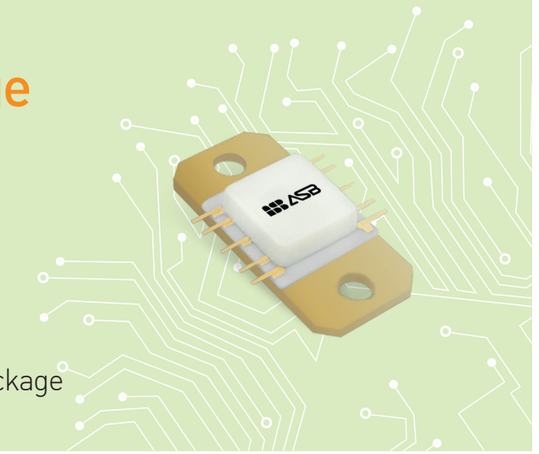
1 ~ 12 W, 6 ~ 18 GHz

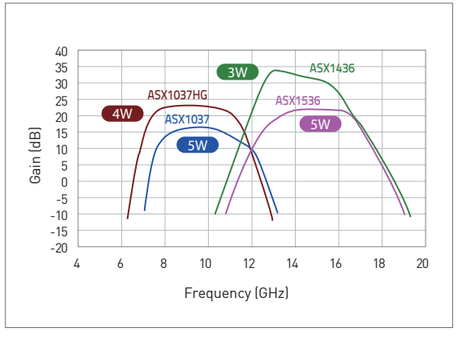


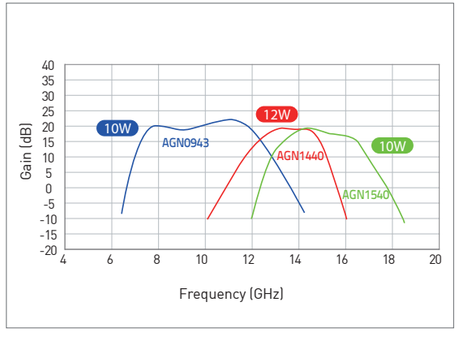
10 Lead Flange

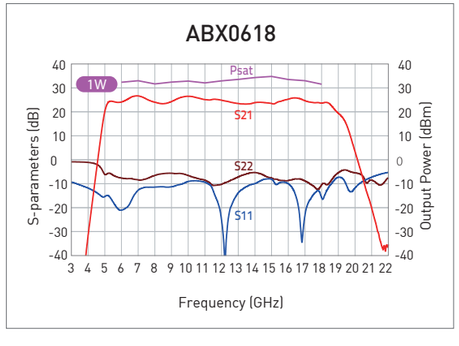
(11.30 x 17.78 x 3.71mm)

Internally Matched
High Efficiency
High Linearity
Small Metal-Ceramic Package







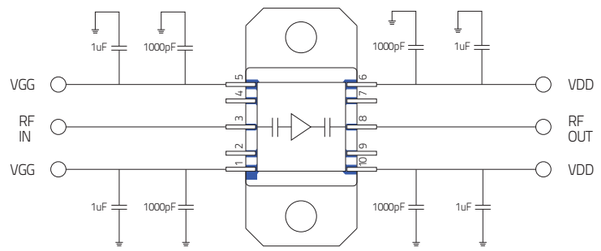


GaN, GaAs PowerAmplifiers
1 ~ 12 W, 6 ~ 18 GHz

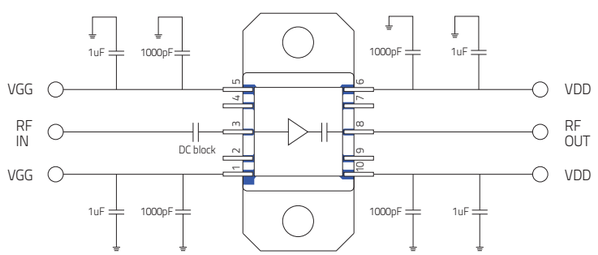
Frequency (GHz)	Part Number	Gain (dB)	Psat (dBm)	OIP3 (dBm)	P1dB (dBm)	PAE(%) @Psat	Vd / Id (V / mA)	Package	Technology
X-band (7.5 ~ 10.5)	ASX0836	22.0	36	42	33	33	7 / 1300	10 lead Flange	GaAs
	ASX1037	15.0	37	42	36	38	7 / 1300		
	ASX1037HG	22.0	36	42	34	39	7 / 1300		
	AGN0943	20.0	40	43	-	25	28 / 800		GaN
Ku band (13.5 ~ 16.0)	ASX1436 [1)]	32.0	35	42	34	28	7 / 1300	10 Lead Flange	GaAs
	ASX1437	21.0	37	42	36	32	7 / 1300		
	ASX1536	22.0	37	42	36	30	7 / 1300		
	AGN1440	18.5	41	43	-	28	28 / 350		GaN
	AGN1540	16.0	40	42	-	21	28 / 350		
Wide band (6.0 ~ 18.0)	ABX0618	25.0	31	38	30	26	7 / 700	10 lead Flange	GaAs

1) ASX1436 is replacement of FMM5059VF.

ASX0836
ASX1037
ASX1037HG
AGN0943
ASX1437
ASX1536
AGN1440
AGN1540
ABX0618



ASX1436



MMICs

Medium Power Amplifiers, up to 4 GHz, P1dB < 33 dBm

(If not specified, the data @ 2 GHz)

Part Number	Vd (V)	Id (mA)	S21 (dB) @ MHz						OIP3 (dBm)	OP1dB (dBm)	NF (dB)	S11 (dB)	S22 (dB)	Package	Remarks
			900	2000	2400	2700	3500	4500							
ASX403	3.3	620	16.5	11.0	-	-	-	-	39	30	4.50	-20	-9	SOIC8	
ASX415	5.0	155	20.0	14.3	-	11.0	9.0	-	42	27	4.60	-7	-11	SOT89	
	5.0	155	-	12.5	13.1	12.8	-	-	36	28	5.10	-8	-18		
ASX401	5.0	290	19.5	13.0	10.0	10.0	-	-	46	30	4.20	-15	-16	SOT89	
	5.0	560	-	14.0	-	-	-	-	46	32	5.20	-20	-20		(1)
ASX420	5.0	370	31.5	21.5	17.5	16.5	-	-	46	30	7.00	-15	-15	SOIC8	
ASX423	5.0	400	32.5	22.5	20.0	17.0	-	-	47	30	2.60	-11	-18	SOIC8	
ASL425	5.0	350	34.0	22.0	20.0	17.5	-	-	47	30	1.40	-13	-15	SOIC8	
ASX501	5.0	560	18.0	11.5	9.0	-	-	-	47	31	5.00	-15	-13	SOT89	
	5.0	1120	17.0	-	-	-	-	-	48	35	5.00	-30	-25		(2)
ASX520	5.0	650	31.0	-	-	-	-	-	48	33	7.00	-15	-9	SOIC8	
ASX521	5.0	870	28.0	19.0	18.5	16.5	-	-	48	32	5.60	-16	-9	SOIC8	
ASX601	5.0	850	16.0	9.5	-	-	-	-	47	31	5.80	-14	-12	SOT89	
	5.0	850	16.0	-	-	-	-	-	48	33	5.50	-18	-15		(3)
ASX602	5.0	580	16.5	10.5	8.9	-	-	-	43(48)	33(32)	5.20	-15	-10	SOIC8	
	5.0	580	16.8	-	-	-	-	-	48	33	4.90	-18	-7		(4)
	5.0	1100	-	11.3	-	-	-	-	43	35	5.50	-18	-18		(5)
ASX620	5.0	950	29.5	-	-	-	-	-	48	33	6.70	-15	-8	SOIC8	
ASX621	5.0	1150	30.0	18.0	13.0	16.0	-	-	49	33	5.60	-14	-14	SOIC8	
ASW318	8.0	120	16.5	15.0	14.0	14.0	-	-	46	26	3.30	-15	-11	SOT89	
ASW338	8.0	120	17.5	16.5	15.5	16.0	-	-	43	25	2.20	-14	-14	SOT89	

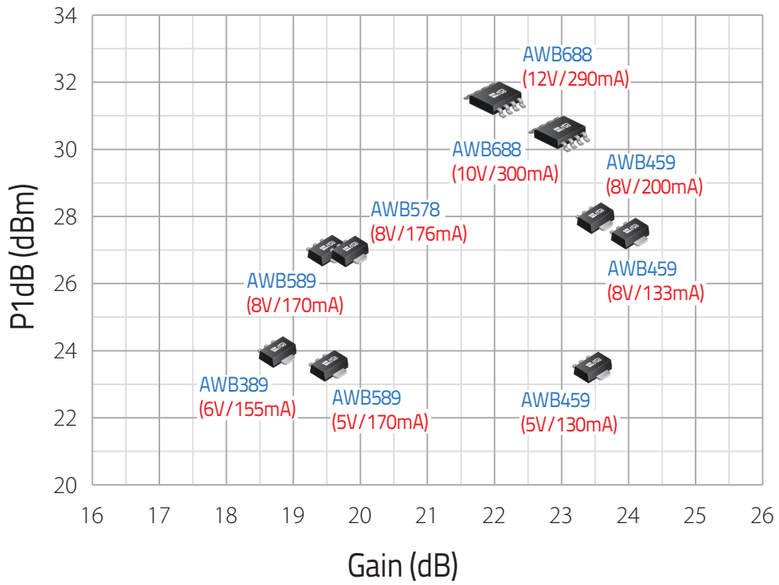
(1) Balanced type @ 1710 ~ 1785 MHz
(2) Balanced type @ 908 ~ 923 MHz
(3) RFID @ 902 ~ 928 MHz
(4) RFID (USA) @ 902 ~ 928 MHz
(5) Balanced type @ 1710 ~ 1785 MHz

Wideband Driver Amplifiers

5 ~ 1200 MHz

50 ~ 3000 MHz

Data @ 500 MHz (Vd / Id)



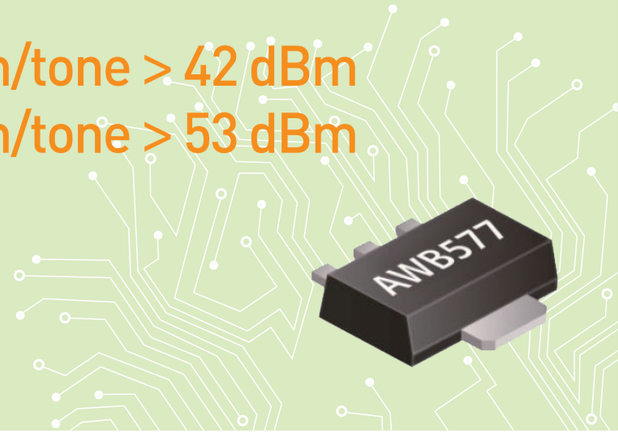
OIP3 @ 12 dBm/tone > 42 dBm

OIP2 @ 12 dBm/tone > 53 dBm

Replacement of AH102

Single Matching Circuit

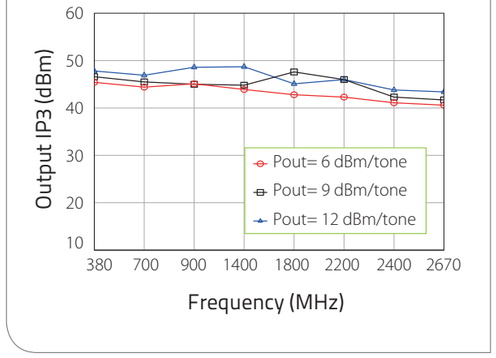
High Linearity



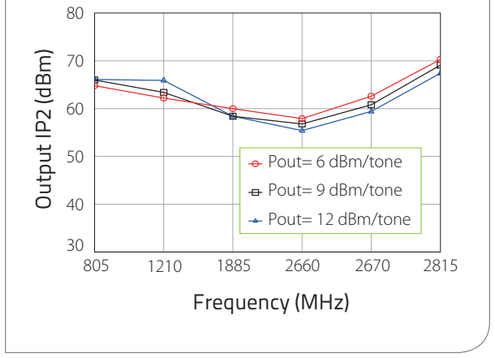
Tactical Radio Application 1.5 ~ 512 MHz

Part No.	Vd (V)	Id (mA)	S21 (dB) @ MHz			OIP3 (dBm) @ MHz			P1dB (dBm) @ MHz			NF (dB) @ MHz			Package
			1.5	30	512	1.5	30	512	1.5	30	512	1.5	30	512	
AWB459	6.5	138	23.4	24.8	23.9	42	41	42	23	25	26	0.75	0.63	1.15	SOT89
AWB688	11.6	280	22.5	22.7	22.8	48	47	43	27	30	30	1.75	1.49	1.78	SOIC8

OIP3 Vs. Freq & Tone Power



OIP2 Vs. Freq & Tone Power



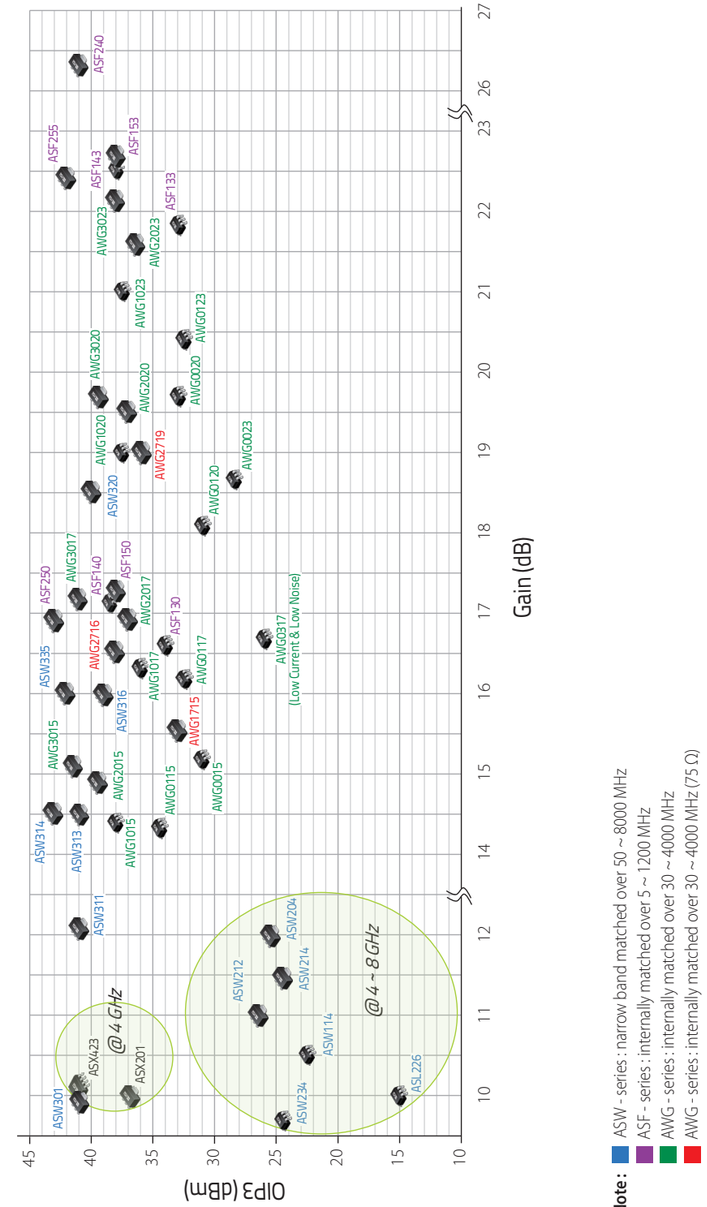
MMICs

Wideband Driver Amplifiers, 5 ~ 3000 MHz, P1dB 24 ~ 31 dBm

(If not specified, the data @ 2 GHz)

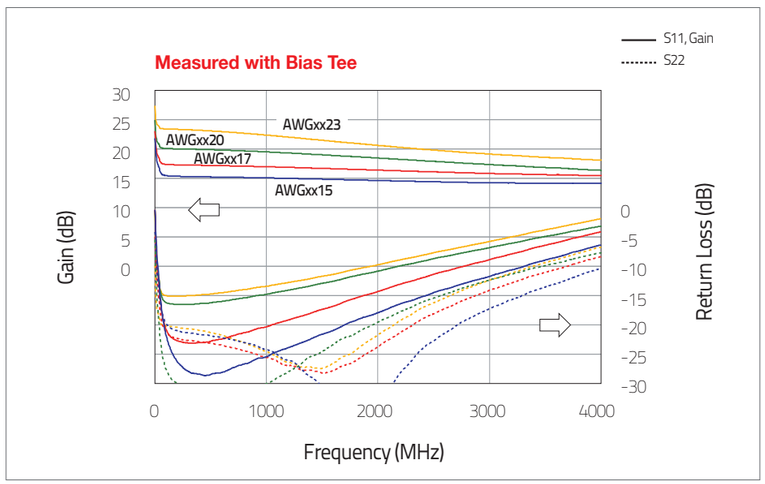
Part Number	Vd (V)	Id (mA)	S21 (dB) @ MHz						OIP3 (dBm)	OP1dB (dBm)	NF (dB)	S11 (dB)	S22 (dB)	Package	Remarks
			5	50	500	1200	2000	2700							
ASW318	8.0	120	-	16.0	15.0	-	14.5	14.0	43	24	2.40	-8	-7	SOT89	
ASW338	8.0	150	-	-	18.0	17.0	16.0	15.5	43	25	2.40	-10	-10	SOT89	
AWB459	8.0	200	-	20.2	-	21.0	22.5	-	38	24	1.80	-8	-13	SOT89	
AWB577	9.0	180	-	-	13.0	12.4	12.1	11.9	43	25	3.30	-10	-10	SOT89	
AWB589	8.0	170	-	20.0	19.5	-	-	-	42	27	3.00	-20	-20	SOT89	data @ 500 MHz
AWB688	10.0	300	-	22.5	22.8	-	-	-	46	31	2.20	-20	-17	SOIC8	data @ 500 MHz

Gain Block Amplifiers
5 ~ 8000 MHz

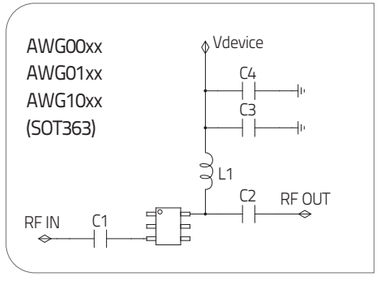


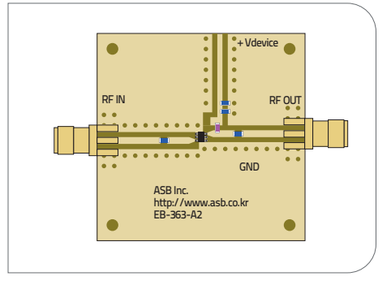
Wideband Gain Block Amplifiers
AWG-series

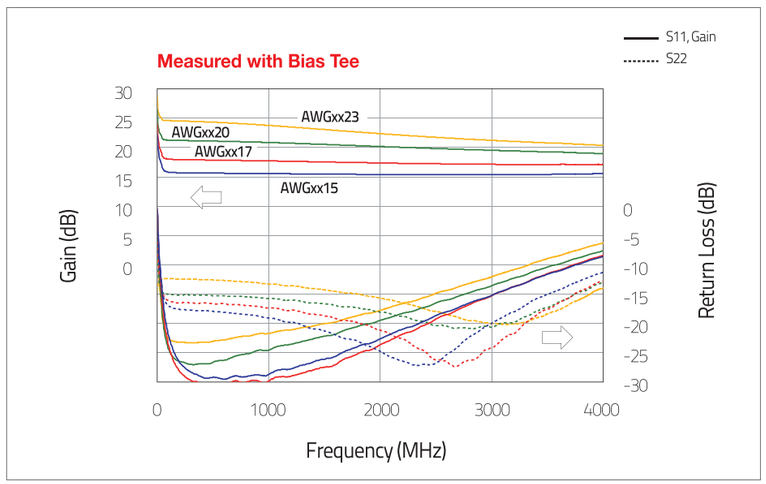
500 ~ 3000 MHz



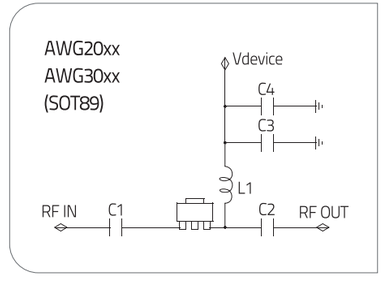
Part Number	Vd (V)	Id (mA)	OIP3 (dBm) @ MHz				
			500	900	1500	2000	2500
AWG0015	3.0	34	27	27	28	28	25
AWG0020	3.3	35	30	30	32	33	28
AWG0023	3.0	28	31	30	29	29	23
AWG0115	3.0	57	34	34	34	34	30
AWG0117	3.0	50	32	32	32	32	27
AWG0120	3.0	43	30	30	31	31	27
AWG0123	3.0	43	30	31	32	32	27
AWG1015	3.3	77	38	37	38	38	31
AWG1017	3.3	69	36	36	36	36	30
AWG1020	3.3	73	36	36	37	38	31
AWG1023	3.3	72	36	36	37	38	32

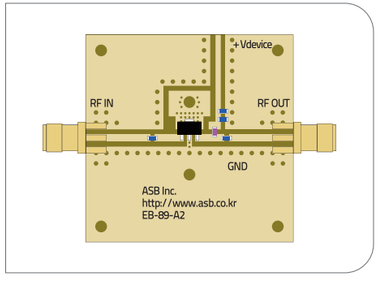






Part Number	Vd (V)	Id (mA)	OIP3 (dBm) @ MHz				
			500	900	1500	2000	2500
AWG2015	3.3	95	41	40	40	40	36
AWG2017	3.3	87	39	38	37	37	34
AWG2020	3.3	85	38	37	37	37	34
AWG2023	3.3	78	36	35	36	37	35
AWG3015	4.3	104	40	40	40	40	40
	4.6	124	42	41	42	42	41
AWG3017	4.2	104	40	39	40	40	39
	4.5	123	40	40	40	40	40
	4.6	140	42	41	41	41	41
AWG3020	3.9	104	40	39	40	40	40
AWG3023	3.6	104	39	30	38	38	37

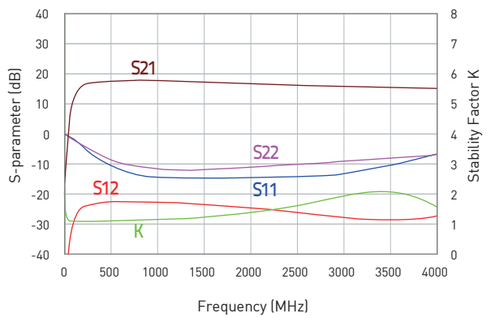


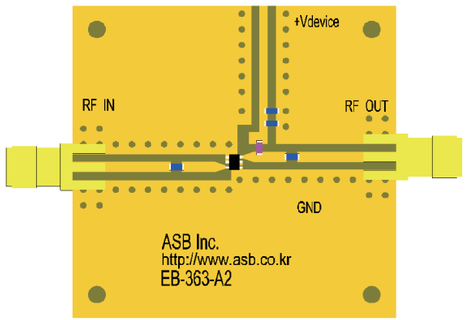


Wideband Gain Block Amplifiers
AWG-series

500 ~ 3000 MHz

Low Current & Low Noise, AWG0317

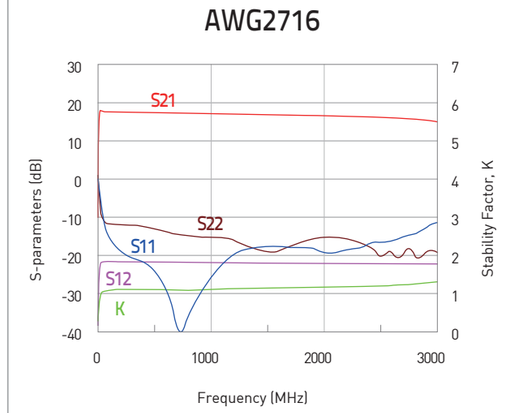


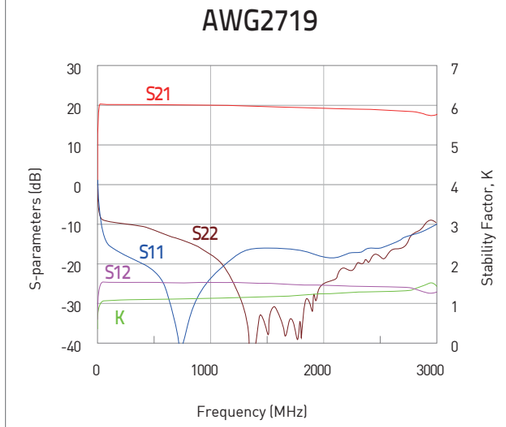


Part Number	Vd (V)	Id (mA)	S21 (dB) @ MHz		OIP3 (dBm) @ MHz		NF (dB) @ MHz		Package
			500	2500	500	2500	500	2500	
AWG0317	2.7	24	17.0	15.4	24	24	1.2	1.5	SOT363
	3.0	32	17.5	16.0	26	26	1.3	1.5	
	3.3	40	17.7	16.2	26	26	1.4	1.6	

Underlined bold is new.

75 Ω, Wideband AWG-series





Part Number	Vd (V)	Id (mA)	OIP3 (dBm) @ MHz					Package
			50	350	900	2000	2700	
AWG1715	3.3	58	32	36	33	33	29	SOT89
	3.0	45	29	34	30	30	27	
AWG2716	4.5	108	40	40	40	39	37	SOT89
	4.8	120	38	41	41	39	38	
	4.5	108	-	40	40	39	37	
	4.8	120	-	38	41	39	38	
AWG2719	5.0	110	40	39	38	35	32	SOT89
	5.0	110	-	38	38	36	32	

Underlined bold is new.

Gain Block Amplifiers, DC ~ 8 GHz, 50 Ω

(If not specified, the data @ 2 GHz)

Part Number	Vd (V)	Id (mA)	S21 (dB) @ MHz						OIP3 (dBm)	OP1dB (dBm)	NF (dB)	S11 (dB)	S22 (dB)	Package
			900	2000	2400	2700	3500	5800						
AWG0317	3.0	32	17.5	16.5	16.0	-	-	-	26	13	1.40	-15	-11	SOT363
AWG0015	3.3	47	15.8	15.2	15.0	14.9	-	-	31	16	2.60	-30	-16	SOT363
AWG0020	3.3	35	21.4	19.7	18.8	-	-	-	33	18	1.90	-14	-24	SOT363
AWG0023	3.0	28	20.5	18.7	17.8	-	-	-	29	17	1.90	-12	-25	SOT363
AWG0115	3.0	57	14.8	14.3	14.0	-	-	-	34	16	2.70	-30	-21	SOT363
AWG0117	3.0	50	16.9	16.2	15.9	-	-	-	32	17	2.40	-21	-25	SOT363
AWG0120	3.0	43	19.3	18.1	17.6	-	-	-	31	17	2.10	-15	-34	SOT363
AWG0123	3.0	43	22.0	20.4	19.7	-	-	-	32	17	1.90	-16	-22	SOT363
AWG1015	3.3	77	15.0	14.4	14.2	-	-	-	38	17	2.80	-25	-16	SOT363

Underlined bold is new.

(If not specified, the data @ 2 GHz)

Part Number	Vd (V)	Id (mA)	S21 (dB) @ MHz						OIP3 (dBm)	OP1dB (dBm)	NF (dB)	S11 (dB)	S22 (dB)	Package
			900	2000	2400	2700	3500	5800						
AWG1017	3.3	69	17.0	16.3	16.1	-	-	-	36	18	2.50	-29	-18	SOT363
AWG1020	3.3	73	20.2	19.0	18.6	-	-	-	38	18	2.10	-31	-17	SOT363
AWG1023	3.3	72	22.8	21.0	20.4	-	-	-	38	18	1.90	-20	-17	SOT363
AWG2015	3.3	95	15.2	14.9	14.8	-	-	-	40	18	2.60	-35	-20	SOT89
AWG2017	3.3	87	17.4	16.9	16.6	-	-	-	37	19	2.30	-35	-18	SOT89
AWG2020	3.3	85	20.4	19.5	19.1	-	-	-	37	19	2.00	-24	-19	SOT89
AWG2023	3.3	78	23.1	21.6	20.9	-	-	-	37	19	1.80	-19	-16	SOT89
ASW205	3.3	35	22.7	19.3	-	-	-	-	24	13	3.50	-12	-8	SOT89
ASW214	3.3	35	18.0	16.3	-	-	-	-	24	12	5.60	-11	-10	SOT89

MMICs

Gain Block Amplifiers, DC ~ 8 GHz, 50 Ω

(If not specified, the data @ 2 GHz)

Part Number	Vd (V)	Id (mA)	S21 (dB) @ MHz						OIP3 (dBm)	OP1dB (dBm)	NF (dB)	S11 (dB)	S22 (dB)	Package
			900	2000	2400	2700	3500	5800						
ASW216	3.0	35	13.1	11.0	-	-	-	-	24	15	2.40	-10	-12	SOT89
ASW204	3.3	35	18.5	16.3	-	-	-	-	28	18	1.80	-15	-12	SOT89
ASW114	3.3	53	20.5	17.0	16.0	15.5	14.0	11.0	29	15	3.30	-14	-16	SOT363
ASW135	3.3	60	18.5	16.5	15.7	15.0	-	-	29	19	1.80	-14	-15	SOT363
ASX101	2.7	38	21.5	16.0	13.0	13.0	-	-	29	17	3.20	-15	-15	SOT89
ASW101	3.3	40	18.0	11.0	9.5	-	-	-	31	18	4.00	-10	-18	SOT89
ASW103	3.3	44	17.0	11.0	9.0	-	-	-	31	18	3.90	-9	-15	SOT89
ASW105	3.3	65	19.3	17.5	16.9	16.3	-	-	32	19	1.80	-16	-11	SOT89
ASW234	3.0	53	18.8	16.5	-	14.8	12.5	-	32	17	2.20	-14	-16	SOT363

(If not specified, the data @ 2 GHz)

Part Number	Vd (V)	Id (mA)	S21 (dB) @ MHz						OIP3 (dBm)	OP1dB (dBm)	NF (dB)	S11 (dB)	S22 (dB)	Package
			900	2000	2400	2700	3500	5800						
ASW126	3.3	37	20.1	14.4	12.9	11.8	9.6	-	34	18	3.90	-19	-12	SOT363
ASL19D	3.0	90	-	24.5	21.5	20.0	16.0	-	36	19	0.95	-18	-10	DFN6 (1)
ASL210	3.3	67	18.5	12.5	-	-	-	-	37	21	0.85	-18	-12	SOT89
AWG3015	4.3	104	15.3	14.9	14.7	14.6	-	-	40	21	2.70	-24	-17	SOT89
	4.6	124	15.4	15.1	14.9	14.7	-	-	42	21	2.80	-25	-17	SOT89
AWG3017	4.2	104	17.5	16.9	16.7	-	-	-	40	21	2.30	-27	-16	SOT89
	4.5	123	17.6	17.1	16.8	16.6	-	-	40	21	2.40	-27	-16	SOT89
	4.6	140	17.9	17.2	16.9	16.8	-	-	41	22	2.40	-26	-17	SOT89
AWG3020	3.9	104	20.6	19.7	19.3	19.1	19.0	-	40	20	2.10	-28	-16	SOT89
AWG3023	3.6	104	23.8	22.2	21.5	21.3	-	-	38	20	1.90	-20	-16	SOT89

(1) 2.0 x 3.0 mm^2

Gain Block Amplifiers, DC ~ 8 GHz, 50 Ω

(If not specified, the data @ 2 GHz)

Part Number	Vd (V)	Id (mA)	S21 (dB) @ MHz						OIP3 (dBm)	OP1dB (dBm)	NF (dB)	S11 (dB)	S22 (dB)	Package
			900	2000	2400	2700	3500	5800						
ASW235	4.7	46	23.0	19.5	18.5	17.5	15.0	-	31	18	3.50	-15	-12	SOT363
ASW234	5.0	55	18.7	16.8	16.0	15.5	13.5	10.0	31	22	1.80	-11	-18	SOT363
ASL03H	4.3	36	19.0	14.0	12.5	12.0	9.0	-	32	18	0.90	-14	-12	SOT363
ASW214	4.9	52	19.5	18.2	17.0	16.4	15.0	13.5	32	16	5.70	-12	-12	SOT89
ASW204	5.0	55	19.8	18.0	-	16.7	15.0	12.5	33	21	1.75	-14	-12	SOT89
ASW205	5.0	70	24.2	20.7	20.0	18.3	17.0	15.0	33	20	3.60	-17	-10	SOT89
ASW212	4.8	73	14.0	12.5	12.0	12.0	11.0	11.0	34	18	5.50	-11	-14	SOT89
ASX201	4.8	66	19.0	16.0	14.0	14.0	12.0	-	35	21	3.30	-15	-18	SOT89
ASW208	5.5	80	21.0	19.0	-	17.0	-	-	35	22	1.70	-12	-12	SOT89

(If not specified, the data @ 2 GHz)

Part Number	Vd (V)	Id (mA)	S21 (dB) @ MHz						OIP3 (dBm)	OP1dB (dBm)	NF (dB)	S11 (dB)	S22 (dB)	Package
			900	2000	2400	2700	3500	5800						
ASW215	5.0	83	16.0	12.0	11.5	11.0	10.0	-	35	19	4.30	-15	-18	SOT89
ASL19W	4.4	73	19.0	13.0	12.0	11.0	-	-	38	22	0.90	-7	-18	SOT89
AWB207	5.0	74	16.6	16.0	-	-	-	-	38	18	2.70	-14	-15	SOT89
ASL13W	4.5	60	19.0	13.0	11.5	11.0	-	-	38	22	0.90	-20	-15	SOT363
ASW216	4.5	80	14.0	11.8	11.0	10.0	-	-	38	20	2.40	-14	-14	SOT89
AWB389	5.0	125	19.0	17.7	-	-	-	-	38	21	3.10	-12	-10	SOT89
ASW316	5.0	110	17.0	16.0	-	15.5	-	-	39	23	2.60	-20	-10	SOT89
ASL29W	4.3	75	19.0	12.5	11.5	10.2	-	-	40	22	0.90	-14	-18	SOT89
ASW320	5.0	120	22.0	18.5	16.5	15.5	13.0	-	40	22	2.40	-7	-10	SOT89

Gain Block Amplifiers, DC ~ 8 GHz, 50 Ω

(If not specified, the data @ 2 GHz)

Part Number	Vd (V)	Id (mA)	S21 (dB) @ MHz						OIP3 (dBm)	OP1dB (dBm)	NF (dB)	S11 (dB)	S22 (dB)	Package
			900	2000	2400	2700	3500	5800						
ASW301	4.8	75	16.5	10.0	8.0	-	-	-	41	22	7.00	-12	-14	SOT89
ASW311	5.0	120	14.3	12.1	11.0	10.5	-	-	41	21	2.40	-12	-12	SOT89
ASW313	5.0	95	16.5	14.5	14.0	13.8	-	-	41	22	3.20	-14	-10	SOT89
ASW335	5.0	100	17.5	16.0	16.0	15.0	-	-	42	22	2.10	-12	-13	SOT89
ASW314	5.0	105	16.0	14.5	-	-	-	-	43	23	3.00	-13	-13	SOT89
AWB459	5.0	130	20.0	-	-	-	-	-	39	24	1.20	-12	-18	SOT89
AWB589	5.0	100	19.0	-	-	-	-	-	38	22	3.00	-10	-12	SOT89
	5.0	170	19.0	-	-	-	-	-	43	23	3.00	-10	-12	SOT89

Gain Block Amplifiers, DC ~ 2700 MHz, 75 Ω

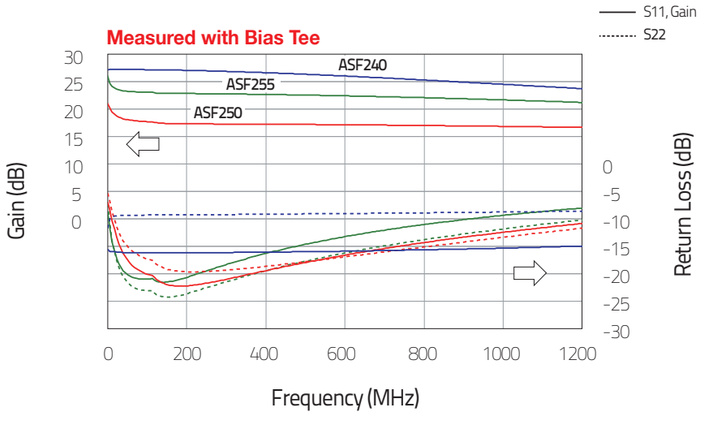
(If not specified, the data @ 2 GHz)

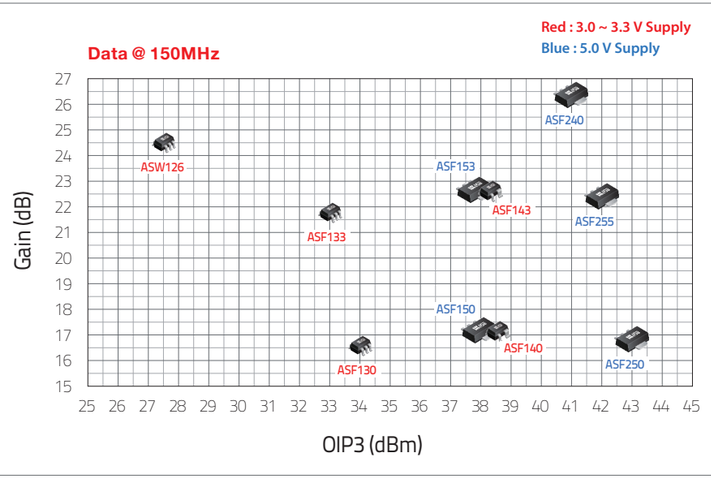
Part Number	Vd (V)	Id (mA)	S21 (dB) @ MHz					OIP3 (dBm)	OP1dB (dBm)	NF (dB)	S11 (dB)	S22 (dB)	Package
			50	350	900	2000	2700						
AWG1715	3.3	58	17.2	16.9	16.5	15.4	15.4	33	17	2.50	-10	-10	SOT89
AWG2716	4.8	120	17.7	17.4	17.2	16.5	15.9	39	21	2.30	-17	-15	SOT89
AWG2719	5.0	110	20.3	20.1	20.1	19.2	18.7	35	21	3.00	-18	-25	SOT89

Underlined bold is new.

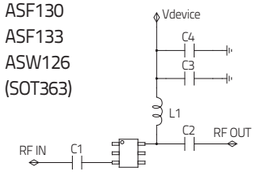
IF Gain Block Amplifiers

ASF-series 5 ~ 1200 MHz

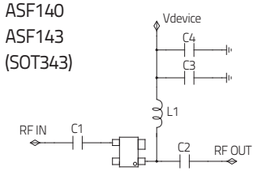




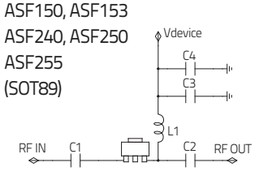
ASF130
ASF133
ASW126
(SOT363)



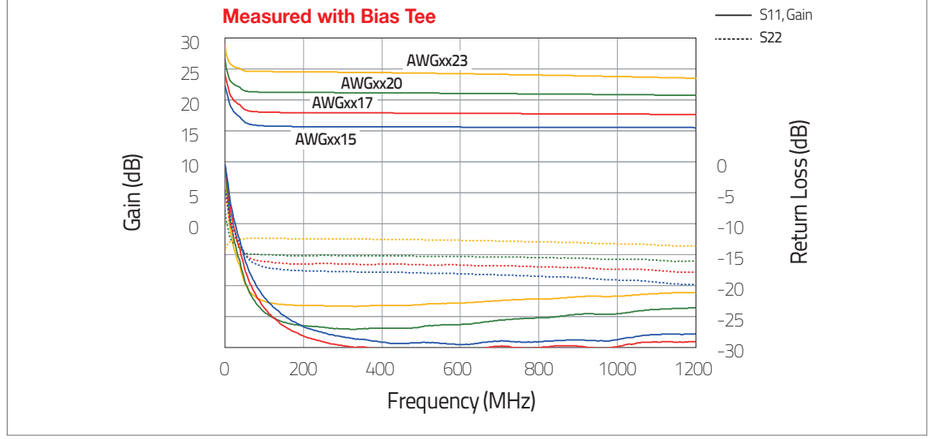
ASF140
ASF143
(SOT343)

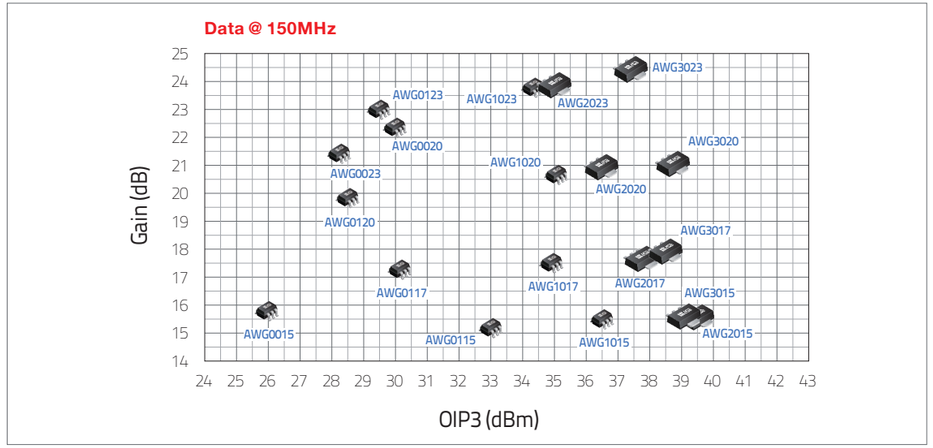


ASF150, ASF153
ASF240, ASF250
ASF255
(SOT89)

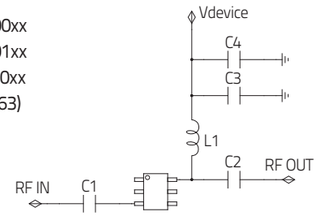


AWG-series 30 ~ 1200 MHz

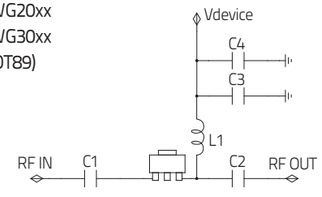




AWG00xx
AWG01xx
AWC10xx
(SOT363)



AWG20xx
AWG30xx
(SOT89)



IF Amplifiers, DC ~ 10 MHz, 50 Ω

Part Number	Vd (V)	Id (mA)	S21 (dB) @ MHz				OIP3 (dBm) @ MHz				OP1dB (dBm)	NF (dB)	S11 (dB)	S22 (dB)	Package
			0.3	0.5	5	10	0.3	0.5	5	10					
ASL033	3.3	10	-	-	18.3	18.2	-	-	19	19	17	1.45	-9	-14	SOT363
ASL03H	4.3	36	-	-	-	20.3	-	-	-	26	17	-	-18	-20	SOT363
ASW114	3.2	37	-	-	20.5	-	-	-	19	-	10	3.00	-18	-14	SOT363
ASW101	3.3	40	-	-	25.0	-	-	-	28	-	17	3.60	-15	-12	SOT89
ASW214	4.6	41	19.6	19.7	-	-	-	-	-	-	13	-	-14	-10	SOT89
ASW103	3.3	44	-	-	25.0	-	-	-	29	-	17	3.50	-15	-13	SOT89
ASW235	4.7	46	-	-	24.5	-	-	-	26	-	14	3.30	-17	-8	SOT363
ASL13W	4.5	60	-	-	26.0	-	-	-	28	-	21	-	-8	-12	SOT363
ASW215	5.0	83	-	-	18.5	-	-	-	37	-	19	3.40	-14	-11	SOT89
ASW314	5.0	105	-	-	13.7	-	-	-	40	-	20	2.90	-13	-12	SOT89
ASF240	4.8	108	-	-	26.5	-	-	-	40	-	20	3.00	-15	-9	SOT89
ASW316	5.0	110	-	-	14.8	-	-	-	40	-	21	2.90	-18	-10	SOT89
ASL550	8.0	120	-	-	17.5	16.5	-	-	34	40	23	2.00	-10	-10	SOT89
AWB688	9.0	160	23.4	-	-	23.5	-	-	-	44	27	1.31	-21	-18	SOIC8

IF Amplifiers, 5 ~ 1200 MHz, 50 Ω

Part Number	Vd (V)	Id (mA)	S21 (dB) @ MHz				OIP3 (dBm) @ MHz				OP1dB (dBm)	NF (dB)	S11 (dB)	S22 (dB)	Package
			70	150	300	450	70	150	300	450					
ASF130	3.0	53	16.8	16.6	16.5	16.4	33	34	34	32	18	2.50	-19	-18	SOT363
ASF133	3.3	54	21.8	21.8	21.6	21.3	33	33	34	32	18	2.10	-20	-20	SOT363
ASF140	3.3	86	17.4	17.2	17.0	16.8	38	39	39	36	19	2.40	-19	-20	SOT343
ASF143	3.3	87	22.7	22.6	22.3	21.8	38	38	39	37	20	2.00	-21	-19	SOT343
ASF150	3.3	85	17.3	17.1	17.0	16.8	38	38	36	34	19	2.40	-20	-22	SOT89
ASF153	3.3	87	22.7	22.6	22.4	22.1	37	38	38	36	20	2.00	-20	-25	SOT89
AWG0015	3.0	34	16.0	15.8	15.7	15.6	26	26	27	27	16	2.20	-25	-21	SOT363
AWG0020	3.3	35	22.3	22.3	22.3	22.1	31	30	30	30	18	1.40	-15	-17	SOT363
AWG0023	3.0	28	21.3	21.3	21.1	21.0	29	28	28	29	17	1.50	-13	-35	SOT363
AWG0115	3.0	57	15.4	15.2	15.1	15.1	32	33	34	33	16	2.30	-23	-22	SOT363
AWG0117	3.0	50	17.3	17.2	17.1	17.1	30	30	32	31	17	2.00	-21	-23	SOT363
AWG0120	3.0	43	19.9	19.8	19.7	19.6	28	29	30	29	17	1.60	-17	-24	SOT363
AWG0123	3.0	43	23.0	23.0	22.8	22.7	30	30	31	30	17	1.50	-13	-26	SOT363
AWG1015	3.3	77	15.7	15.5	15.3	15.3	35	37	38	37	18	2.30	-26	-18	SOT363
AWG1017	3.3	69	17.6	17.5	17.4	17.3	34	35	36	35	18	2.00	-26	-18	SOT363
AWG1020	3.3	73	20.8	20.7	20.6	20.5	35	35	37	36	19	1.60	-22	-17	SOT363
AWG1023	3.3	72	23.9	23.8	23.7	23.5	34	34	36	35	19	1.50	-17	-16	SOT363
AWG2015	3.3	95	15.8	15.6	15.5	15.4	39	40	40	40	17	2.20	-25	-17	SOT89

IF Amplifiers, 5 ~ 1200 MHz, 50 Ω

Part Number	Vd (V)	Id (mA)	S21 (dB) @ MHz				OIP3 (dBm) @ MHz				OP1dB (dBm)	NF (dB)	S11 (dB)	S22 (dB)	Package
			70	150	300	450	70	150	300	450					
AWG2017	3.3	87	17.8	17.7	17.6	17.6	38	38	39	38	18	2.00	-25	-18	SOT89
AWG2020	3.3	85	21.0	20.9	20.8	20.7	36	37	37	38	18	1.60	-24	-15	SOT89
AWG2023	3.3	78	24.0	23.9	23.8	23.7	35	35	36	36	19	1.50	-17	-15	SOT89
AST20S	3.5	45	-	21.0	21.0	-	-	29	30	-	19	1.00	-15	-14	SOT363
AST54S	3.3	12	18.3	-	-	-	17	-	-	-	7	1.10	-18	-13	SOT343
ASW114	3.2	37	21.0	21.0	21.0	20.5	23	23	23	24	12	3.20	-18	-16	SOT363
ASW126	3.3	37	24.8	24.5	24.0	23.0	28	28	30	29	16	3.50	-21	-11	SOT363
ASW135	3.3	60	20.5	19.6	19.2	19.0	28	28	29	29	18	1.80	-12	-17	SOT363
ASX101	3.5	55	28.5	28.5	25.0	-	28	28	29	-	18	3.50	-14	-15	SOT89
ASW101	3.3	40	25.0	24.5	23.5	21.5	28	29	30	30	17	3.80	-15	-13	SOT89
ASW103	3.3	44	25.0	24.0	23.0	21.0	29	30	31	30	17	3.80	-14	-15	SOT89
ASW105	3.3	65	22.0	21.0	20.0	20.0	31	32	33	34	19	1.70	-14	-12	SOT89
ASL210	3.0	80	24.5	24.0	22.6	23.0	35	35	35	35	19	2.40	-12	-20	SOT89
ASF240	4.9	114	26.4	26.3	26.0	25.6	41	41	38	35	21	3.00	-15	-11	SOT89
ASF250	5.0	98	17.0	16.9	16.7	16.1	40	43	43	40	22	2.70	-20	-20	SOT89
ASF255	6.0	123	22.9	22.8	22.7	22.4	40	43	42	41	25	2.50	-15	-18	SOT89
AWG3015	4.3	104	15.9	15.7	15.6	15.5	38	39	40	41	21	2.40	-37	-17	SOT89
AWG3017	4.2	104	18.1	17.9	17.9	17.8	38	39	40	39	21	2.00	-45	-16	SOT89

IF Amplifiers, 5 ~ 1200 MHz, 50 Ω

Part Number	Vd (V)	Id (mA)	S21 (dB) @ MHz				OIP3 (dBm) @ MHz				OP1dB (dBm)	NF (dB)	S11 (dB)	S22 (dB)	Package
			70	150	300	450	70	150	300	450					
AWG3020	3.9	104	21.2	21.1	21.0	20.9	39	39	40	39	20	1.70	-24	-16	SOT89
AWG3023	3.6	104	24.4	24.4	24.3	24.2	37	37	39	39	20	1.50	-21	-13	SOT89
ASW234	5.0	55	21.0	20.0	19.5	19.0	27	28	29	-	22	2.20	-8	-16	SOT363
ASW235	4.7	46	24.0	24.0	24.0	24.0	27	28	29	-	15	3.30	-12	-8	SOT363
AST54S	3.3	40	-	-	22.6	22.2	-	-	29	29	18	0.80	-18	-12	SOT343
ASW204	5.0	55	22.5	21.0	20.0	20.0	30	30	31	-	22	1.60	-8	-15	SOT89
ASL03H	4.3	36	-	23.1	-	22.5	-	30	-	30	17	1.25	-18	-15	SOT363
ASW214	4.9	52	20.0	20.0	20.0	19.5	30	30	30	31	16	5.50	-13	-11	SOT89
ASL29W	4.3	75	25.0	24.0	22.5	21.0	31	32	33	-	22	3.00	-11	-18	SOT89
ASW205	5.0	70	25.9	25.7	25.4	25.0	32	32	35	-	19	3.30	-17	-10	SOT89
ASL52D6	5.0	50	-	-	21.3	21.1	-	-	32	32	19	0.90	-18	-18	DFN6 (1)
ASL19W	4.4	73	24.5	24.0	22.5	21.0	32	33	34	-	21	2.90	-13	-18	SOT89
ASL13C	4.2	39	20.5	20.0	20.0	19.0	29	30	30	30	18	1.40	-16	-14	SOT363
ASL13W	4.5	60	24.5	23.5	22.3	21.0	30	33	35	35	23	0.80	-14	-13	SOT363
ASW208	5.5	80	21.0	20.0	20.0	19.5	32	33	34	34	24	3.40	-14	-18	SOT89
ASL19C	4.0	68	24.5	24.0	23.0	-	31	34	35	-	21	0.80	-13	-10	SOT89
ASW301	4.8	75	25.0	24.0	23.0	21.0	36	36	37	37	22	6.80	-14	-15	SOT89
ASW212	4.8	73	17.0	17.0	16.0	15.5	36	37	37	37	19	4.80	-18	-10	SOT89

(1) 2.0 x 3.0 mm^2

IF Amplifiers, 5 ~ 1200 MHz, 50 Ω

Part Number	Vd (V)	Id (mA)	S21 (dB) @ MHz				OIP3 (dBm) @ MHz				OP1dB (dBm)	NF (dB)	S11 (dB)	S22 (dB)	Package
			70	150	300	450	70	150	300	450					
ASW215	4.9	83	18.5	18.5	18.0	17.5	38	38	38	38	19	3.50	-15	-14	SOT89
ASW311	5.0	120	15.5	14.5	13.5	13.5	41	40	40	40	21	3.20	-12	-13	SOT89
ASW314	5.0	105	-	16.1	-	23.5	-	43	-	41	22	1.60	-9	-10	SOT89
AWB589	8.0	170	20.1	19.9	19.7	19.5	43	44	43	42	27	3.00	-20	-20	SOT89
AWB578	8.0	176	20.8	20.3	20.0	19.7	43	43	43	42	27	3.00	-20	-20	SOIC8
ASW316	5.0	110	14.8	14.7	17.0	16.5	41	41	41	40	21	2.00	-20	-18	SOT89
ASW313	5.0	95	17.0	17.0	16.5	16.0	42	42	43	-	22	1.80	-10	-10	SOT89
ASW335	5.0	100	18.8	-	18.5	17.3	45	-	43	41	22	1.60	-14	-18	SOT89
ASW350	4.8	150	24.5	24.3	23.0	-	41	41	40	-	24	8.00	-11	-16	SOT89
AWB459	5.0	130	22.5	-	22.5	22.3	40	-	42	40	24	1.10	-18	-16	SOT89
	6.0	140	20.0	20.5	20.5	20.5	40	40	41	41	25	1.30	-14	-17	SOT89
	6.5	140	24.5	24.0	24.0	23.5	42	43	43	42	26	0.95	-18	-18	SOT89
AWB389	6.0	155	19.5	-	-	-	41	-	-	-	24	2.50	-12	-16	SOT89
ASL360(p-p)	5.0	220	10.0	10.0	10.0	10.0	42	42	43	43	24	3.40	-9	-9	SOT89
AWB589	5.0	170	19.6	19.6	19.6	19.6	45	45	45	45	24	3.00	-14	-20	SOT89
ASL331	5.0	220	-	20.0	20.0	20.0	-	40	41	41	26	1.70	-10	-10	SOIC8
ASX415	5.0	155	-	-	-	22.0	-	-	-	37	28	6.00	-18	-15	SOT89
ASX401	5.0	280	-	21.8	-	-	-	42	-	-	30	8.40	-12	-14	SOT89

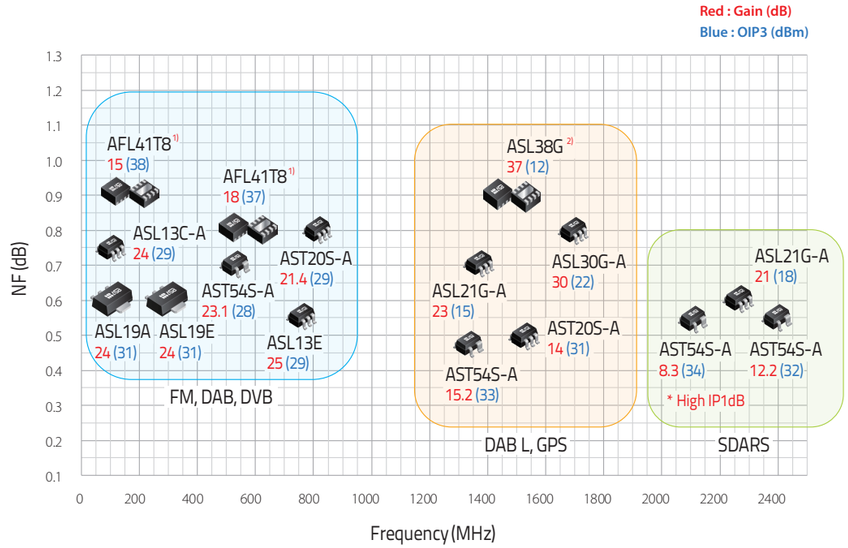
(p-p) means two chips in push-pull configuration

MMICs

IF Amplifiers, 5 ~ 1200 MHz, 50 Ω

Part Number	Vd (V)	Id (mA)	S21 (dB) @ MHz				OIP3 (dBm) @ MHz				OP1dB (dBm)	NF (dB)	S11 (dB)	S22 (dB)	Package
			70	150	300	450	70	150	300	450					
ASX423	5.0	400	-	-	35.0	-	-	-	42	-	30	2.90	-9	-8	SOIC8
ASX601	5.0	850	-	-	20.5	-	-	46	-	-	33	7.40	-14	-12	SOT89
ASX620	5.0	950	-	38.0	-	-	-	46	-	-	33	6.70	-13	-12	SOIC8
AWB517	6.5	163	-	14.2	-	14.0	-	46	47	46	25	2.70	-24	-28	SOT89
ASW318	8.0	120	17.5	17.5	17.0	16.5	44	44	41	-	26	1.80	-9	-11	SOT89
ASW338	8.0	120	19.0	-	18.5	18.0	48	-	45	-	26	1.70	-14	-15	SOT89
AWB589	8.0	170	20.0	20.0	20.0	20.0	43	43	43	42	27	3.00	-20	-20	SOT89
AWB459	8.0	220	22.5	-	22.5	22.2	41	-	43	41	27	1.10	-16	-15	SOT89
AWB688	10.0	320	-	22.7	-	22.8	-	48	-	47	31	2.00	-22	-22	SOIC8

LNAs for Automotive
AEC-Q100 Qualified

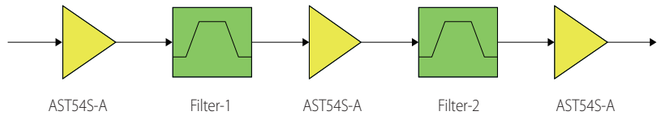


Note : 1) AFL41T8 : gain & current adjustable and high input impedance about 700 Ω.
2) ASL38G : external BPF connectable in between the 1st and the 2nd amplifiers inside chip.

Application	Part Number	Vd(V)	Id(mA)	Gain(dB)	NF(dB)	OIP3(dBm)	OP1dB(dBm)	Package
FM	AST20S-A	3.4	41	21.4	0.80	29	16	SOT363
	AST54S-A	3.3	40	23.4	0.65	27	17	SOT343
	ASL13C-A	3.5	40	25.0	0.75	29	17	SOT363
	ASL13E †	3.5	40	25.0	0.55	29	16	SOT363
	ASL19A	4.0	50	24.0	0.60	31	19	SOT89
	ASL19E †	4.0	50	24.0	0.60	31	18	SOT89
	AFL41T8	5.0	76	18.0	0.80	37	21	TDFN8
		8.0	84	15.0	0.90	38	22	TDFN8
DAB/DVB	AST20S-A	3.4	41	21.2	1.00	29	16	SOT363
	AST54S-A	3.3	40	23.1	0.70	28	17	SOT343
	ASL13C-A	3.5	40	24.0	0.75	29	17	SOT363
	ASL13E †	3.5	40	24.0	0.65	29	16	SOT363
	ASL19A	4.0	50	23.1	0.70	33	19	SOT89
	ASL19E †	4.0	50	23.0	0.65	32	18	SOT89
	AFL41T8	5.0	76	21.3	1.10	38	22	TDFN8
GPS/GNSS/ Galileo/Compass	AST20S-A	3.4	40	14.0	0.50	31	17	SOT363
	AST54S-A	3.3	40	15.2	0.45	33	18	SOT343
	ASL21G-A †	3.0	11	23.0	0.70	8	0	SOT363
	ASL30G-A	3.0	20	30.0	0.80	22	11	SOT363
	ASL38G †	3.0	20	37.0	0.90	1	12	TDFN10
SDARS	AST54S-A	3.2	35	12.2	0.55	32	17	SOT343

Underlined bold is new.
† means to be AEC-Q100 approved.

SDARS Antenna LNA Platform
AST54S-A

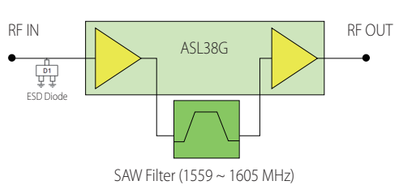


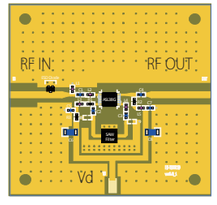
Typical Performance, Key Parameters, 3.9VDC Bias at LNA

Parameters	Test Condition	Options		Unit
		w/ SAW & BAW	w/ SAW & SAW	
NF		0.8	0.8	dB
Gain		30	30	dB
In-Band IP1dB		-12	-14	dBm
In-Band IIP3		-2	-3	dBm
OOB IP1dB	f = 698 ~ 806 MHz	+18	> +12	dBm
	f = 824 ~ 894 MHz	+10	+10	
	f = 1710 ~ 1755 MHz	+12	+10	
	f = 1850 ~ 1990 MHz	+10	+10	
	f = 2400 ~ 2484 MHz	+16	> +12	
	f = 2496 ~ 2690 MHz	+14	+10	
	f = 3500 MHz	+18	+10	
	f = 5725 ~ 5925 MHz	+18	> +12	
IMRRx	IMRR3, Case 1	80	81	dB
	IMRR3, Case 2	82	82	
	IMRR3, Case 3	83	85	
	IMRR3, Case 4	73	73	
	IMRR3, Case 5	73	74	
	IMRR2, Case 6	75	76	

Note : Contact ESD rating at the input is 8 kV without using additional ESD diode.

GPS/GLONASS/Galileo/Compass/BeiDou LNA, ASL38G



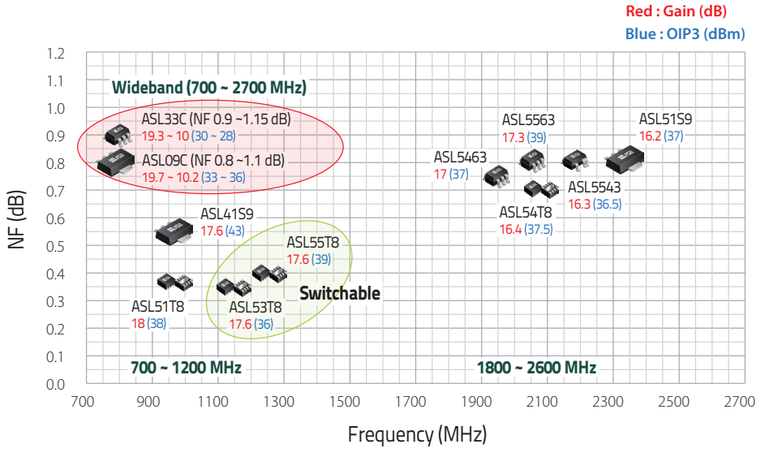


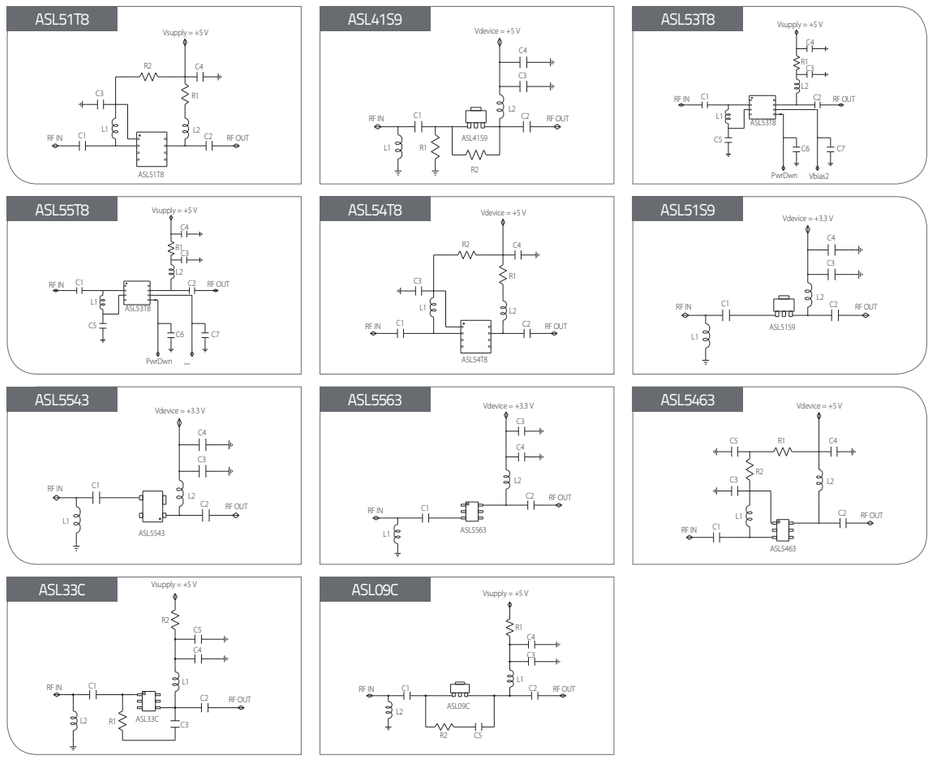
Wideband 1559 ~ 1605 MHz

Part Number	Vd(V)	Id(mA)	Gain(dB)	G/F(dB)	NF(dB)	OIP3(dBm)	OP1dB(dBm)	Package
ASL38G (w/ SAW Filter)	4.0	20	32.0	±0.75	1.30	17	4	TDFN10

Note : Contact ESD rating at the input is 15kV with using additional ESD diode.

LNAs for Mobile Communication
700 ~ 2700 MHz, ASL-series





MMICs

Low Noise Amplifiers (Internally Matched), DC ~ 6 GHz

(If not specified, the data @ 2 GHz)

Part Number	Vd (V)	Id (mA)	S21 (dB) @ MHz					NF (dB) @ MHz					OIP3 (dBm)	P1dB (dBm)	S11 (dB)	S22 (dB)	Package
			900	2000	2400	2700	3500	900	2000	2400	2700	3500					
ASL226	3.0	8.5	34.0	25.0	21.5	-	14.0	1.30	1.30	1.30	-	1.80	17	11	-15	-20	SOT363
ASL30G	3.0	20	36.0	25.0	23.0	-	-	0.90	-	1.10	-	-	20	8	-10	-15	SOT363
ASL033	3.3	10	-	-	12.2	-	-	-	-	1.15	-	-	21	18	-18	-10	SOT363
ASL54T8	3.3	50	-	16.3	14.2	-	-	-	0.65	0.85	-	-	32	17	-20	-12	TDFN8 (1)
ASL19D	3.0	90	-	24.5	21.5	-	16.0	-	0.95	1.10	-	1.60	36	19	-18	-10	DFN6 (2)
ASL51S9	3.3	54	-	17.5	15.4	-	-	-	0.85	0.95	-	-	38	18	-14	-11	SOT89
ASL5543	3.3	54	-	16.3	14.4	-	-	-	0.85	0.95	-	-	36	17	-15	-12	SOT343
ASL210	3.3	67	18.5	12.0	-	10.0	-	0.80	0.90	-	1.20	-	37	21	-18	-10	SOT89
ASL5563	3.3	54	-	17.3	15.2	-	-	-	0.82	0.95	-	-	39	18	-16	-13	SOT363

(If not specified, the data @ 2 GHz)

Part Number	Vd (V)	Id (mA)	S21 (dB) @ MHz					NF (dB) @ MHz					OIP3 (dBm)	P1dB (dBm)	S11 (dB)	S22 (dB)	Package
			900	2000	2400	2700	3500	900	2000	2400	2700	3500					
ASL226	5.0	18	38.0	28.0	25.0	23.0	-	-	1.05	1.05	1.15	1.80	23	14	-18	-12	SOT363
ASL30G	4.0	33	-	-	-	-	18.0	-	-	-	-	1.70	23	13	-18	-13	SOT363
ASL33C	4.2	35	19.3	13.3	11.3	10.0	-	0.90	1.00	1.05	1.15	-	30	16	-18	-10	SOT363
ASL52D6	5.0	50	27.0	19.0	-	-	-	0.55	0.60	-	-	-	32	19	-18	-18	DFN6 (2)
ASL03H	4.3	36	19.5	14.2	13.0	12.0	9.0	0.90	1.00	-	-	-	33	18	-20	-12	SOT363
ASL09C	4.5	51	19.7	12.8	11.2	10.2	-	0.80	0.85	1.05	1.10	-	35	20	-18	-10	SOT89
ASL5463	5.0	45	-	17.0	14.9	-	-	-	0.75	0.95	-	-	37	20	-15	-11	SOT363
ASL13C	4.5	59	18.5	13.0	-	-	-	0.85	0.75	-	-	-	37	22	-18	-13	SOT363
ASL19W	4.4	73	20.0	13.5	11.5	-	-	0.90	0.90	-	-	-	37	22	-20	-15	SOT89
ASL51T8	4.5	57	18.0	-	-	-	-	0.37	-	-	-	-	38	21	-18	-18	TDFN8 (1)

(1) 2.0 x 2.0 mm^2
(2) 2.0 x 3.0 mm^2

Low Noise Amplifiers (Internally Matched), DC ~ 6 GHz

(If not specified, the data @ 2 GHz)

Part Number	Vd (V)	Id (mA)	S21 (dB) @ MHz					NF (dB) @ MHz					OIP3 (dBm)	P1dB (dBm)	S11 (dB)	S22 (dB)	Package
			900	2000	2400	2700	3500	900	2000	2400	2700	3500					
ASL54T8	5.0	50	-	16.5	14.3	-	-	-	0.65	0.85	-	-	37	20	-17	-12	TDFN8 (1)
ASL13W	4.5	60	19.0	13.0	11.5	-	-	0.90	0.90	1.10	-	-	38	22	-20	-14	SOT363
ASL41S9	5.0	72	17.5	-	-	-	-	0.55	-	-	-	-	38	23	-18	-20	SOT89
ASL19D	4.6	90	-	24.0	19.5	19.0	-	-	0.90	1.10	1.25	-	38	23	-18	-9	DFN6 (2)
ASL29W	4.3	75	19.0	12.5	10.2	-	-	-	0.90	-	-	-	40	22	-15	-15	SOT89
ASL425	5.0	350	35.5	24.0	21.0	18.0	-	1.00	1.40	1.50	2.10	-	47	30	-13	-15	SOIC8

Low Noise Amplifiers (Discrete), DC ~ 6 GHz

(If not specified, the data @ 2 GHz)

Part Number	Vd (V)	Id (mA)	S21 (dB) @ MHz					NF (dB) @ MHz					OIP3 (dBm)	P1dB (dBm)	S11 (dB)	S22 (dB)	Package
			900	2000	2400	2700	3500	900	2000	2400	2700	3500					
AST11L	2.9	25	18.0	13.0	-	-	-	1.20	1.30	-	-	-	27	14	-14	-11	SOT363
ASL563	5.0	50	33.0	26.0	-	-	-	1.00	1.00	-	-	-	29	15	-15	-20	SOT363
AST20S	3.4	40	18.0	15.5	13.0	-	8.5	0.60	0.70	1.00	-	2.10	33	18	-11	-13	SOT363
AST54S	3.4	60	-	12.9	-	-	-	-	0.50	-	-	-	36	20	-18	-10	SOT343
	3.4	60	-	14.6	-	-	-	-	0.60	-	-	-	36	20	-18	-12	SOT343
AST30S	4.4	135	21.0	15.5	-	-	-	2.00	1.90	-	-	-	37	22	-15	-15	DFN6 (2)

(1) 2.0 x 2.0 mm^2
(2) 2.0 x 3.0 mm^2

DVB / DMB / CMMB Amplifiers

Part Number	Frequency (MHz)	Vd (V)	Id (mA)	S21 (dB)	OIP3 (dBm)	OP1dB (dBm)	NF (dB)	S11 (dB)	S22 (dB)	Package
ASW114	170 ~ 860	3.1	25	20.0 ~ 18.5	19	10 ~ 11	2.70 ~ 2.80	-14	-15	SOT363
ASW135	470 ~ 860	3.3	60	19.0 ~ 18.5	29	18	1.80	-12	-15	SOT363
ASL033	170 ~ 860	3.3	10	20.2 ~ 16.6	24 ~ 19	18	1.20	-6	-6	SOT363
	47 ~ 860	3.3	37	19.0	30	17	1.10	-13	-10	
ASW101	470 ~ 860	3.3	40	21.0 ~ 18.0	30	17	3.80 ~ 4.20	-10	-18	SOT89
ASW105	145 ~ 245	3.3	65	20.5	32	18	1.80	-12	-12	SOT89
	470 ~ 860	3.3	65	21.0 ~ 19.3	32	18	1.70	-16	-12	
AST11L	170 ~ 240	5.0	13	14.0	16	5	1.80	-8	-11	SOT363
	478 ~ 862	5.0	13	16.0 ~ 15.0	18 ~ 19	7	1.80 ~ 1.60	-9	-9	
ASW234	170 ~ 860	4.5	25	18.0 ~ 16.0	24	20	1.70 ~ 2.10	-7	-15	SOT363
AST20S	50 ~ 810	4.5	28	17.8	26	13	1.30	-9	-14	SOT363
ASL03H	470 ~ 860	4.3	36	19.4 ~ 17.7	28	15	1.05	-14	-23	SOT363
AST54S	1100 ~ 1700	2.6	15	17.6 ~ 14.1	23 ~ 24	11	0.50	-14	-14	SOT343
	50 ~ 860	3.3	40	19.0	29	17	1.05	-12	-12	
ASW235	470 ~ 860	4.7	46	25.0 ~ 23.0	29	16	3.40	-7	-13	SOT363
ASW234	470 ~ 860	5.0	55	19.0 ~ 18.7	30	22	1.90	-7	-18	SOT363
ASL19W	478 ~ 862	4.4	37	16.8 ~ 17.3	25 ~ 28	16 ~ 20	1.43 ~ 1.48	-9 ~ -12	-9 ~ -20	SOT89
	176 ~ 264	4.4	37	23.6 ~ 24.3	30	20	1.60 ~ 1.70	-10	-14 ~ -15	
ASW214	470 ~ 860	5.0	52	19.7 ~ 19.5	30	16	5.70	-12	-11	SOT89
ASW204	470 ~ 860	5.0	55	21.0 ~ 20.0	31	21	1.70	-13	-13	SOT89
ASW205	470 ~ 860	5.0	70	25.4 ~ 24.2	35	19	3.50	-12	-10	SOT89
ASW208	470 ~ 860	5.0	80	22.0 ~ 21.0	35	22	3.50	-12	-10	SOT89

DVB / DMB / CMMB Amplifiers

Part Number	Frequency (MHz)	Vd (V)	Id (mA)	S21 (dB)	OIP3 (dBm)	OP1dB (dBm)	NF (dB)	S11 (dB)	S22 (dB)	Package
ASW212	470 ~ 860	4.8	73	15.5 ~ 14.0	35	18	5.00	-10	-16	SOT89
ASW216	470 ~ 860	4.5	80	15.3 ~ 14.2	36	20	2.20	-14	-15	SOT89
ASW215	470 ~ 860	4.9	83	17.0 ~ 16.0	37	19	3.80	-12	-18	SOT89
ASL13C	70 ~ 400	4.5	59	25.7 ~ 23.0	31 ~ 34	22	0.75	-10	-16 ~ -18	SOT363
	1470	4.5	59	15.6	38	22	0.85	-18	-16	
ASW311	470 ~ 860	5.0	120	15.3 ~ 14.3	40	21	2.30	-13	-14	SOT89
ASW316	470 ~ 860	5.0	110	17.0	43	22	2.00	-9	-9	SOT89
ASW313	470 ~ 860	5.0	95	15.5	43 ~ 40	22	2.20	-12	-12	SOT89
ASW335	470 ~ 860	5.0	100	18.0 ~ 17.5	44 ~ 41	23	1.80 ~ 1.70	-16 ~ -14	-18 ~ -15	SOT89
ASL580	470 ~ 950	6.0	150	19.0	45	24	1.70	-10	-13	SOT89
ASW320	350 ~ 870	7.4	148	23.0	42	26	2.60	-12	-9	SOT89
ASW318	470 ~ 860	8.0	120	16.0	46 ~ 42	25	2.00	-11	-9	SOT89
ASW338	470 ~ 860	8.0	120	17.5	46 ~ 42	26	2.00	-15	-15	SOT89
AWB459	470 ~ 800	5.0	130	20.5	42	24	1.30	-13	-14	SOT89

SDARS

Part Number	Frequency (MHz)	Vd (V)	Id (mA)	S21 (dB)	IIP3 (dBm)	OIP3 (dBm)	OP1dB (dBm)	NF (dB)	S11 (dB)	S22 (dB)	Package
ASL20G	2338	5.0	23	21.0	-3	-	3	0.60	-10	-15	UQFN6 (1)
ASL21X	2338	5.0	23	19.5	3	-	6	0.65	-11	-16	SOT363
AST54S	2338	3.3	35	12.2	-	32	17	0.55	-10	-17	SOT343
		4.3	32	8.3	-	34	20	0.55	-13	-11	SOT343

(1) 1.0 x 1.0 mm^2

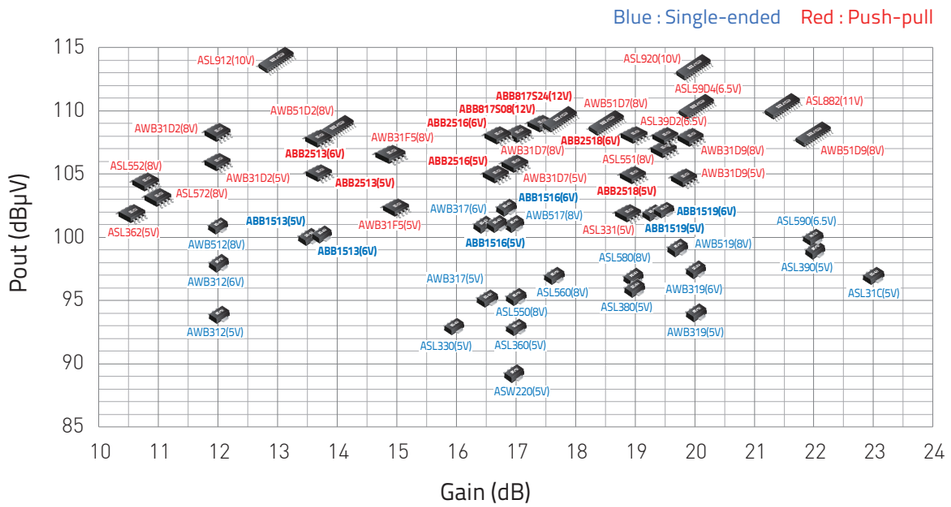
Galileo / GPS / GLONAS / COMPASS

Part Number	Frequency (MHz)	Vd (V)	Id (mA)	S21 (dB)	IIP3 (dBm)	OIP3 (dBm)	OP1dB (dBm)	NF (dB)	S11 (dB)	S22 (dB)	Package
ASL20G	1575	1.8	2	16.5	-21	-	-10	1.00	-6	-14	UQFN6 (1)
		1.8	4	20.0	-	-	-	0.70	-9	-14	
		2.8	7	21.5	-	-	-	0.60	-14	-14	
ASL21X	1575	1.8	2	16.5	-20	-	-10	1.10	-6	-12	SOT363
		3.0	13	21.5	-12	-	-2	0.60	-15	-12	
ASL226	1577	1.8	7	23.5	-	14	6	1.10	-14	-16	SOT363
	1163 ~ 1240	3.0	9	30.0	-	17	11	1.00	-20	-18	
	1580	3.3	10	28.5	-	17	11	0.95	-20	-20	
ASL22N	1575	3.0	9	29.5	-	19	10	1.00	-16	-15	UQFN6 (1)
ASL30G	1575	1.8	9	26.0	-	15	6	1.00	-14	-18	SOT363
	1575	3.0	20	30.0	-	22	9	0.85	-12	-18	
	1164 ~ 1300	3.3	23	32.0	-	23	12	0.95	-17	-16	
	1559 ~ 1610	3.3	23	30.0	-	23	12	0.80	-20	-16	
ASL38G (0)	1559 ~ 1605	4.0	20	32.0	-15	17	4	1.30	-12	-15	TDFN10 (2)
ASL563	1204 ~ 1240	3.0	8	26.0	-	21	11	1.00	-15	-16	SOT363
	1576	3.0	8	25.0	-5	19	10	1.10	-15	-15	
	1578	3.0	28	30.0	-5	26	11	0.80	-18	-18	
ASL033	1575	3.4	13	15.5	-	23	11	1.30	-20	-15	SOT363
AST20S	1210 ~ 1620	3.0	18	17.0	-	26	16	0.55	-11	-10	SOT363
	1164 ~ 1300	2.6	18	16.0	-	19	10	0.60	-14	-17	SOT363
	1560 ~ 1620	2.6	18	14.0	-	22	12	0.70	-14	-16	SOT363
AST54S	1575	3.8	18	14.5	-	28	18	0.50	-18	-10	SOT343
	1500 ~ 1610	3.3	40	15.0	-	33	18	0.50	-18	-18	
ASL19C	1575	3.2	25	14.5	-	29	20	0.90	-15	-11	SOT89
ASL19W	1575	3.3	20	15.5	-	29	17	0.90	-16	-12	SOT89
ASL52D6	1500 ~ 1600	5.0	50	24.1	-	33	15	0.55	-18	-17	DFN6 (3)

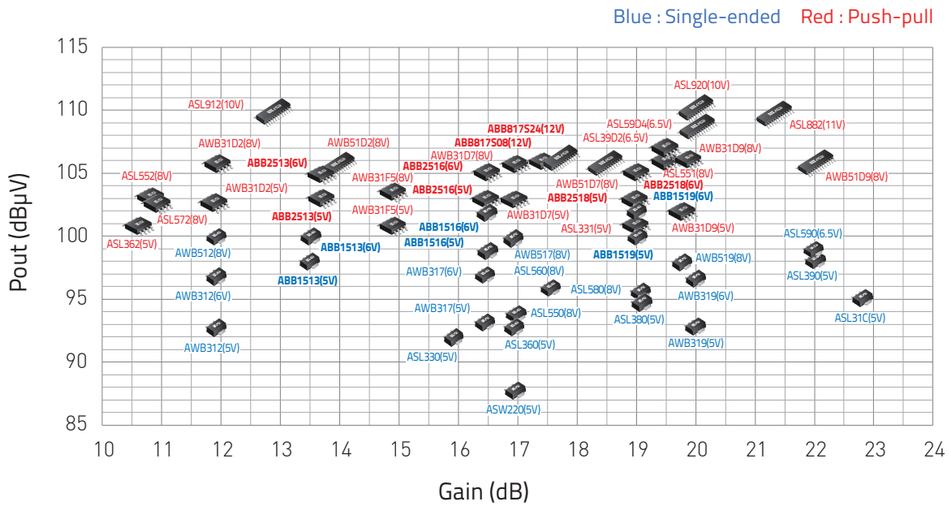
(0) Two stage amplifiers in one chip. A SAW filter connectable in between the amplifier stages.
(1) 1.0 x 1.0 mm^2
(2) 3.0 x 3.0 mm^2
(3) 2.0 x 3.0 mm^2

CATV Amplifiers
5 ~ 1200 MHz

Output power at CSO & CTB > 60 dBc CENELEC-42 ch



Output power at CSO & CTB > 60 dBc PAL-84 or NTSC-79 ch flat



Note : 1) ABB-series (bold) is applicable up to 50 ~ 1700 MHz.

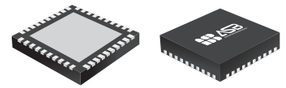
Brilliance in CATV 50 ~ 1200 MHz

AGN922 GaN Power Doubler

Highly Efficient !

Pout 109 dBµV @ **24 V, 320 mA**
CSO & CTB > 60 dBc, NTSC-110 ch flat

QFN40 (6 x 6 mm²)



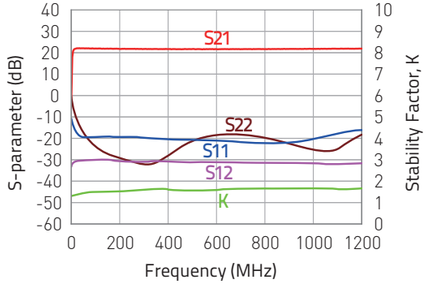


ABB Family World Best Linearity

ABB15xx Single-ended

DC ranges 5 V / 123 mA to 6 V / 150 mA

Part No.	Vd (V)	Id (mA)	S21 (dB) @ MHz 50	S21 (dB) @ MHz 1200	NF (dB)	Pout[1] (dBµV)	CSO[1] (dBc)	CTB[1] (dBc)	Remark
ABB1513	5	123	13.7	13.1	2.7	98	66	63	Pout = 101 dBµV @ CSO, CTB > 60 dBc CENELEC-42 flat
ABB1516			16.9	16.0	2.2	99	67	63	
ABB1519			19.4	18.1	2.0	100	68	62	

1) NTSC-77ch flat

ABB25xx Push-pull

DC ranges 5 V / 280 mA to 6 V / 330 mA

Part No.	Vd (V)	Id (mA)	S21 (dB) @ MHz 50	S21 (dB) @ MHz 1200	NF (dB)	Pout[1] (dBµV)	CSO[1] (dBc)	CTB[1] (dBc)	Remark
ABB2513	5	280	13.8	12.7	3.4	103	68	60	Pout = 109 dBµV @ CSO, CTB > 60dBc CENELEC-42 with 9 dB tilt
ABB2516			17.0	15.8	2.3	103	68	61	
ABB2518			19.3	17.5	2.3	103	71	61	

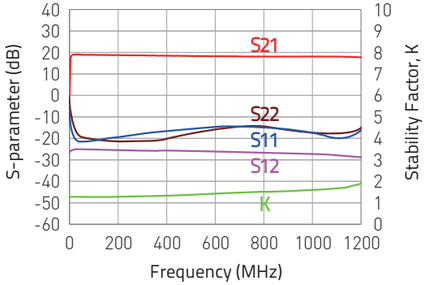
1) NTSC-77ch flat

ABB817 Push-pull, **12 V** / 370 mA

S08

S24

Pout 107 dBµV
@ CSO, CTB > 60 dBc
NTSC-77ch flat



MMICs

CATV Amplifiers, 50 ~ 1200 MHz, 75 Ω

Part Number	Vd (V)	Id (mA)	NF (dB)	S21(dB) @ MHz				S11(dB) @ MHz				S22 (dB) @ MHz				Chnl	Output (dBμV)	CSO (dBc)	CTB (dBc)	Pack-age	Re mark
				50	860	1000	1200	50	860	1000	1200	50	860	1000	1200						
AST54S	5.0	40	1.05	20.0	18.0	17.5	-	-18	-16	-20	-	-9	-18	-19	-	-	-	-	-	SOT343	
ASW114	3.3	53	3.20	21.6	20.5	19.8	19.0	-17	-17	-15	-16	-16	-20	-18	-20	-	-	-	-	SOT363	
ASF130	3.0	53	2.50	16.9	16.0	15.8	-	-17	-14	-13	-	-17	-13	-12	-	-	-	-	-	SOT363	
ASW205	5.0	70	3.70	23.8	23.8	23.2	-	-14	-11	-13	-	-10	-10	-8	-	-	-	-	-	SOT89	
ASW220	5.0	75	3.40	17.0	16.7	16.7	-	-20	-16	-16	-	-20	-18	-17	-	60	88	60	75	SOT89	
ASF240	5.0	107	2.90	25.4	24.2	23.5	-	-14	-14	-14	-	-10	-9	-8	-	-	-	-	-	SOT89	
ASL31C	5.0	105	1.50	23.8	22.7	22.5	22.3	-15	-19	-19	-13	-17	-16	-16	-16	84	95	64	72	SOT89	
ASL330	5.0	105	2.40	15.3	15.2	15.0	14.5	-12	-18	-18	-13	-11	-17	-15	-12	160	80	66	76	SOT89	
ASL360	5.0	110	2.00	16.8	16.5	16.2	15.8	-11	-13	-14	-12	-17	-13	-12	-11	60	93	60	75	SOT89	
ASL380	5.0	110	1.70	16.8	16.7	16.9	17.1	-10	-11	-13	-15	-10	-12	-13	-15	84	95	60	70	SOT89	
ASL390	5.0	120	2.50	23.0	22.8	22.3	21.2	-16	-13	-14	-12	-15	-15	-16	-17	84	98	60	69	SOT89	
AWB312	5.0	110	3.20	12.4	11.7	11.5	11.0	-15	-22	-22	-18	-19	-22	-22	-17	42	94	62	69	SOT89	
	6.0	135	3.30	12.4	11.5	11.3	11.2	-15	-22	-21	-18	-19	-20	-19	-16	42	98	61	68	SOT89	
AWB317	5.0	112	2.10	17.2	16.6	16.4	15.8	-15	-15	-16	-14	-17	-19	-18	-15	42	95	61	82	SOT89	
AWB319	5.0	110	2.20	20.1	19.2	18.9	18.1	-15	-16	-16	-13	-15	-19	-18	-15	42	94	61	78	SOT89	
ABB1513[1]	5.0	123	2.70	13.8	13.7	-	13.2	-19	-21	-	-30	-17	-30	-	-31	77	98	66	63	SOT89	
	6.0	150	2.75	13.9	13.7	-	13.1	-18	-21	-	-24	-17	-25	-	-26	77	100	68	61	SOT89	
ABB1516[1]	5.0	123	2.20	16.9	16.7	-	16.0	-18	-19	-	-20	-16	-24	-	-30	77	99	67	63	SOT89	
	6.0	150	2.30	16.9	16.6	-	15.9	-18	-20	-	-33	-17	-22	-	-31	77	102	69	60	SOT89	
ABB1519[1]	5.0	123	2.00	19.5	19.3	-	18.2	-19	-17	-	-18	-18	-27	-	-23	77	100	68	62	SOT89	
	6.0	150	2.05	19.5	19.2	-	18.2	-17	-18	-	-22	-16	-21	-	-29	77	102	70	63	SOT89	

Underlined bold is new.

(1) Pout = 101 dBμV @ Vd = 5 V, CSO, CTB > 60dBc, CENELEC-42 flat
Pout = 102 dBμV @ Vd = 6 V, CSO, CTB > 60dBc, CENELEC-42 flat

MMICs

CATV Amplifiers, 50 ~ 1200 MHz, 75 Ω

Part Number	Vd (V)	Id (mA)	NF (dB)	S21(dB) @ MHz				S11(dB) @ MHz				S22 (dB) @ MHz				Chnl	Output (dBμV)	CSO (dBc)	CTB (dBc)	Pack-age	Re mark
				50	860	1000	1200	50	860	1000	1200	50	860	1000	1200						
ASL330(p-p)	5.0	210	3.10	11.2	10.8	11.0	10.8	-15	-16	-18	-12	-15	-16	-18	-13	84	100	70	66	SOT89	(a)
ASL360(p-p)	5.0	220	2.90	11.4	11.1	11.4	11.3	-15	-18	-18	-12	-15	-14	-15	-13	84	100	70	66	SOT89	(a)
ASL380(p-p)	5.0	220	2.40	15.0	14.8	15.1	15.0	-15	-14	-14	-9	-15	-10	-12	-11	84	100	70	66	SOT89	(a)
ASL390(p-p)	5.0	240	2.60	19.2	17.8	17.5	-	-17	-14	-10	-	-17	-13	-11	-	60	103	66	63	SOT89	(a)
ASL331	5.0	220	2.10	19.0	19.0	19.0	19.0	-17	-15	-14	-13	-17	-15	-14	-13	84	101	64	60	SOIC8	(a)
ASL362	5.0	220	3.80	10.6	10.3	10.4	10.6	-16	-11	-12	-12	-16	-11	-12	-12	84	100	70	66	SOIC8	(b)
	6.5	320	3.80	10.6	10.3	10.4	10.6	-16	-11	-12	-12	-16	-11	-12	-12	84	102	70	66	SOIC8	(b)
AWB31D2	5.0	215	3.30	12.2	12.2	12.2	12.3	-20	-20	-20	-16	-20	-17	-19	-17	79+ QAM75	100	73	67	SOIC8	(a)
	8.0	350	3.30	12.2	12.2	12.2	12.3	-20	-20	-20	-16	-19	-17	-18	-18	79+ QAM75	110	60	60	SOIC8	(a)

(p-p) means two chips in push-pull configuration
(a) 1:1 transformer
(b) 2:1 transformer

CATV Amplifiers, 50 ~ 1200 MHz, 75 Ω

Part Number	Vd (V)	Id (mA)	NF (dB)	S21(dB) @ MHz				S11(dB) @ MHz				S22 (dB) @ MHz				Chnl	Output (dBµV)	CSO (dBc)	CTB (dBc)	Pack-age	Re mark
				50	860	1000	1200	50	860	1000	1200	50	860	1000	1200						
AWB31D7	5.0	220	2.20	17.2	17.0	17.0	17.1	-20	-20	-18	-18	-20	-20	-18	-15	79+ QAM75	99	68	67	SOIC8	(a)
	8.0	340	2.20	17.3	17.1	17.1	17.2	-22	-20	-22	-17	-20	-17	-17	-15	79+ QAM75	103	71	63	SOIC8	(a)
AWB31D9(p-p)	5.0	230	-	20.1	19.9	20	19.5	-19	-20	-	-20	-22	-19	-	-19	41	97	64 (79+ QAM75)	65 (79+ QAM75)	SOIC8	(a)
	8.0	370	-	20.4	20.1	20	19.7	-18	-21	-	-19	-22	-19	-	-20	44	108	64 (42 ch)	62 (42 ch)	SOIC8	(a)
AWB31F5	5.0	220	3.00	16.1	16.0	15.1	14.3	-16	-17	-15	-16	-18	-25	-20	-15	79+ QAM75	99	68	67	SOIC8	(a)

Part Number	Vd (V)	Id (mA)	NF (dB)	S21(dB) @ MHz				S11(dB) @ MHz				S22 (dB) @ MHz				Chnl	Output (dBµV)	CSO (dBc)	CTB (dBc)	Pack-age	Re mark
				50	860	1000	1200	50	860	1000	1200	50	860	1000	1200						
ABB2513(p-p) (1)	5.0	280	3.40	13.9	13.7	-	12.8	-16	-20	-	-19	-16	-20	-	-17	77	103	68	60	SOT89	(a)
	6.0	330	3.60	13.9	13.7	-	12.8	-16	-20	-	-19	-16	-20	-	-17	77	105	70	60	SOT89	(a)
ABB2516(p-p) (1)	5.0	280	2.30	17.0	16.7	-	15.8	-16	-18	-	-20	-16	-20	-	-19	77	103	68	61	SOT89	(a)
	6.0	330	2.65	16.8	16.5	-	15.4	-15	-29	-	-18	-17	-18	-	-22	77	105	71	60	SOT89	(a)
ABB2518(p-p) (1)	5.0	280	2.30	19.3	18.9	-	17.5	-16	-18	-	-18	-16	-16	-	-17	77	103	71	60.5	SOT89	(a)
	6.0	330	2.35	19.3	18.9	-	17.5	-16	-24	-	-16	-16	-17	-	-17	77	105	73	60.5	SOT89	(a)
ASL39D2	5.0	300	1.90	19.3	18.9	18.7	18.5	-15	-18	-18	-15	-15	-15	-15	-15	84	105	60	66	SOIC8	(a)
	6.5	420	1.40	19.5	-	-	18.9	-15	-	-	-15	-15	-	-	-15	-	-	-	-	SOIC8	(a)
ASL59D4	6.5	420	1.90	19.5	19.9	20.3	21.0	-15	-18	-18	-15	-15	-15	-17	-15	84	108	60	63	TSSOP24	(a)

Underlined bold is new.
(p-p) means two chips in push-pull configuration
(a) 1:1 transformer
(b) 2:1 transformer
(1) Pout = 109 dBµV @ Vd = 5V, CSO, CTB > 60dBc, CENELEC-42 with 9 dB tilt

MMICs

CATV Amplifiers, 50 ~ 1200 MHz, 75 Ω

Part Number	Vd (V)	Id (mA)	NF (dB)	S21(dB) @ MHz				S11(dB) @ MHz				S22 (dB) @ MHz				Chnl	Output (dBµV)	CSO (dBc)	CTB (dBc)	Pack-age	Re mark
				50	860	1000	1200	50	860	1000	1200	50	860	1000	1200						
ASL550	8.0	120	2.20	15.8	15.4	15.3	15.0	-10	-17	-17	-15	-11	-16	-13	-12	116	80	74	75	SOT89	
ASL560	8.0	120	1.90	17.5	17.2	16.8	16.2	-11	-13	-13	-12	-17	-13	-12	-12	60	96	60	75	SOT89	
ASL580	8.0	120	1.70	17.5	17.2	17.4	17.4	-10	-11	-14	-15	-10	-12	-13	-14	84	95	60	70	SOT89	
AWB512	8.0	125	3.50	12.0	11.5	11.3	11.0	-16	-21	-21	-19	-19	-19	-18	-15	42	101	60	73	SOT89	
AWB517	8.0	124	2.30	17.1	16.4	16.2	15.6	-17	-18	-19	-17	-18	-18	-16	-13	42	101	61	74	SOT89	
AWB519	8.0	135	2.70	20.0	19.2	19.0	18.3	-17	-19	-19	-18	-14	-18	-16	-13	42	99	61	73	SOT89	
ASL590	6.5	160	2.40	22.8	22.4	22.2	21.5	-16	-14	-15	-13	-14	-14	-14	-15	84	98	64	70	SOT89	
ASW338(p-p)	8.0	240	2.80	14.1	14.2	14.0	-	-15	-14	-12	-	-11	-12	-12	-	60	104	67	64	SOT89	(a)
ASL550(p-p)	8.0	240	3.10	11.2	10.6	11.0	10.8	-14	-15	-18	-12	-15	-12	-15	-14	60	102	76	73	SOT89	(b)
ASL560(p-p)	8.0	240	3.20	11.7	11.3	11.6	11.4	-15	-13	-16	-10	-15	-13	-15	-10	60	102	76	73	SOT89	(a)

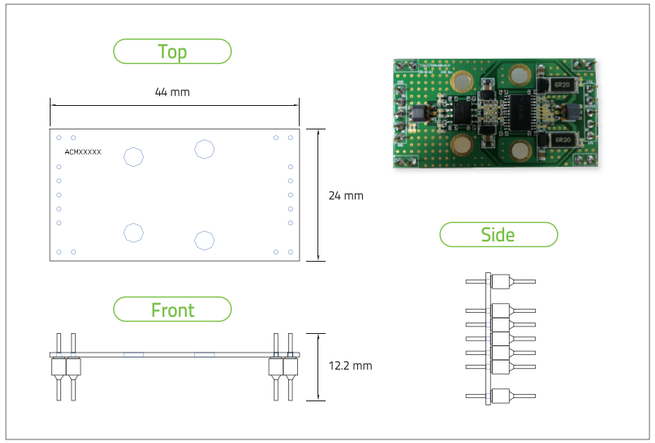
(p-p) means two chips in push-pull configuration
(a) 1:1 transformer
(b) 2:1 transformer

CATV Amplifiers, 50 ~ 1200 MHz, 75 Ω

Part Number	Vd (V)	Id (mA)	NF (dB)	S21(dB) @ MHz				S11(dB) @ MHz				S22 (dB) @ MHz				Chnl	Output (dBμV)	CSO (dBc)	CTB (dBc)	Pack-age	Re mark
				50	860	1000	1200	50	860	1000	1200	50	860	1000	1200						
ASL580(p-p)	8.0	240	2.30	15.3	15.0	15.3	15.3	-15	-13	-16	-10	-15	-11	-13	-12	60	102	76	73	SOT89	(a)
ASL590(p-p)	8.0	320	3.10	19.7	18.3	18.0	-	-18	-15	-10	-	-18	-18	-16	-	-	-	-	-	SOT89	(a)
ASL551	8.0	250	2.30	18.8	18.8	18.8	18.8	-16	-16	-14	-12	-16	-13	-14	-13	84	105	62	63	SOIC8	(a)
	6.5	433	2.40	18.8	18.8	18.8	18.8	-16	-16	-14	-12	-16	-13	-14	-13	84	106	60	64	SOIC8	(a)
ASL552	8.0	240	3.70	10.3	10.2	10.4	10.6	-18	-14	-16	-15	-18	-17	-18	-15	42	102	76	73	SOIC8	(a)
ASL572	8.0	240	3.50	11.0	10.6	10.8	11.0	-16	-11	-13	-15	-16	-11	-12	-12	84	100	61	65	SOIC8	(b)
AWB51D2	8.0	350	3.30	13.6	14.5	14.9	15.3	-18	-18	-18	-14	-22	-20	-20	-17	79	103	73	66	TSSOP24	(a)
AWB51D7	8.0	340	2.40	18.1	18.7	18.9	19.6	-21	-20	-22	-19	-21	-20	-22	-17	79	103	71	63	TSSOP24	(a)
AWB51D9	8.0	370	2.40	21.8	21.8	22.0	22.2	-19	-20	-20	-15	-21	-20	-20	-16	79	103	65	62	TSSOP24	(a)
ASL882	10.7	520	3.10	21.0	21.9	22.5	23.8	-20	-18	-25	-18	-19	-12	-13	-13	84	110	65	60	TSSOP24	(a)
ASL912	10.0	620	5.40	12.8	13.8	14.0	14.3	-20	-17	-18	-15	-23	-20	-25	-17	79+ QAM75	110	69	66	TSSOP24	(a)
ASL920	10.0	630	4.40	19.8	19.8	20.0	19.8	-18	-20	-20	-14	-19	-18	-19	-16	79+ QAM75	110	65	66	TSSOP24	(a)
ABB817S08	12.0	370	3.30	18.7	18.1	17.9	17.6	-21	-16	-17	-16	-19	-17	-17	-16	NTSC -77	107	64	61	SOIC8	(a)
ABB817S24	12.0	370	3.30	18.7	18.1	17.9	17.6	-21	-16	-17	-16	-19	-17	-17	-16	NTSC -77	107	64	61	SOIC8	(a)
AGN922	24.0	320	-	22.1	21.7	21.8	22.0	-19	-19	-19	-16	-18	-20	-20	-17	NTSC -110	109	60.5	60.5	QFN40	(a) IN (b) OUT

Underlined bold is new.
(p-p) means two chips in push-pull configuration
(a) 1:1 transformer
(b) 2:1 transformer

Put & Play Type Module (Customized)



Parameters	ACM34104-2N110A	ACM34107-1N110A
Gain (dB)	36.4	34.2
CSO (dBc)	-69 1)	-69 2)
CTB (dBc)	-65 1)	-63 2)
XMOD (dBc)	-60 1)	-59 2)
Vd (V)	12	12
Id (mA)	645	760

1) Pout = 107 dBμV flat for NTSC 77 channels
2) Pout = 107 dBμV flat for NTSC 110 channels

CATV Amplifiers, 5 ~ 300 MHz

Part Number	Vd (V)	Id (mA)	NF (dB)	S21(dB) @ MHz				S11(dB) @ MHz				S22 (dB) @ MHz				OP1dB (dBm)	OIP2 (dBm)	OIP3 (dBm)	Pack-age	Re mark
				5	50	200	300	5	50	200	300	5	50	200	300					
ASW220	3.3	48	3.20	16.5	16.5	16.5	16.5	-20	-20	-20	-20	-18	-20	-15	-14	12	40	30	SOT89	
ASL390	3.3	68	2.40	23.3	23.4	23.0	-	-12	-16	-17	-	-16	-20	-20	-	18	43	34	SOT89	
ASW205	5.0	70	3.50	25.5	25.8	25.5	-	-12	-12	-12	-	-12	-20	-15	-	18	40	32	SOT89	
ASW220	5.0	75	3.30	16.9	17.0	16.9	16.7	-20	-20	-20	-20	-20	-20	-15	-15	18	47	36	SOT89	
ASF240	5.0	114	3.60	26.3	26.3	26.0	25.8	-15	-16	-17	-19	-17	-21	-12	-9	20	56	42	SOT89	
ASL330	5.0	105	1.90	16.5	16.5	16.5	16.5	-12	-16	-18	-20	-14	-14	-16	-18	21	55	40	SOT89	
AWB312	5.0	110	3.00	11.0	11.7	11.3	10.9	-24	-25	-23	-18	-21	-21	-15	-12	19	62	34	SOT89	
AWB317	5.0	112	2.00	17.4	18.0	17.5	17.0	-19	-25	-19	-14	-19	-25	-17	-12	21	55	40	SOT89	
AWB319	5.0	110	2.10	20.8	21.4	20.8	20.2	-21	-25	-20	-16	-21	-24	-22	-16	22	52	40	SOT89	
ASL360	5.0	110	1.50	17.5	17.5	17.5	17.0	-12	-20	-18	-20	-12	-20	-15	-13	21	56	41	SOT89	
ASL380	5.0	110	1.20	21.0	21.0	20.5	20.1	-20	-20	-18	-16	-20	-20	-15	-13	22	54	42	SOT89	
		98	1.20	14.0	14.1	13.6	-	-24	-30	-19	-	-36	-36	-29	-	14	49	35		
	5.0	110	1.60	13.5	13.6	13.1	-	-20	-20	-18	-	-20	-20	-20	-	14	47	35	SOT89	
ASL390	5.0	120	2.50	23.3	23.8	23.3	23.0	-15	-15	-18	-18	-16	-20	-20	-17	22	50	40	SOT89	
ASL550	5.0	100	1.90	16.8	16.5	16.5	16.3	-12	-16	-18	-20	-14	-14	-16	-18	25	54	41	SOT89	
ASL360(p-p)	5.0	220	2.70	11.5	11.5	11.3	11.0	-16	-18	-16	-14	-16	-18	-16	-14	24	63	40	SOT89	(a)
ASL331	5.0	220	1.40	20.9	20.9	20.7	20.5	-20	-20	-18	-16	-20	-20	-18	-14	25	70	39	SOIC8	(a)
ASL362	5.0	220	2.10	16.8	16.8	16.0	15.6	-18	-18	-18	-17	-18	-18	-16	-13	24	78	41	SOIC8	(b)
ASL39D2	5.0	300	1.20	20.0	20.0	20.0	20.0	-18	-18	-18	-18	-18	-18	-18	-18	-	-	-	SOIC8	(a)
ASL550	8.0	120	1.90	16.8	16.5	16.5	16.2	-12	-16	-18	-20	-14	-14	-16	-18	25	56	42	SOT89	(b)
ASL560	8.0	120	1.50	18.0	18.0	18.0	17.8	-11	-20	-18	-16	-10	-20	-13	-11	24	56	41	SOT89	

(p-p) means two chips in push-pull configuration
(a) 1:1 transformer
(b) 2:1 transformer

MMICs

CATV Amplifiers, 5 ~ 300 MHz

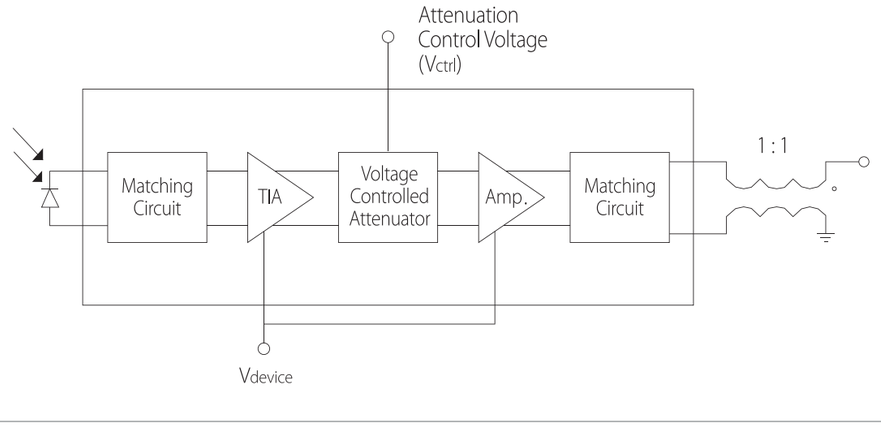
Part Number	Vd (V)	Id (mA)	NF (dB)	S21(dB) @ MHz				S11(dB) @ MHz				S22 (dB) @ MHz				OP1dB (dBm)	OIP2 (dBm)	OIP3 (dBm)	Pack-age	Re mark
				5	50	200	300	5	50	200	300	5	50	200	300					
ASL580	8.0	120	1.20	21.0	21.0	20.5	20.2	-18	-20	-18	-16	-18	-20	-15	-11	25	53	39	SOT89	
AWB512	8.0	125	3.10	11.3	11.8	11.3	10.9	-24	-25	-23	-18	-20	-20	-16	-11	24	60	42	SOT89	
AWB517	8.0	124	2.10	17.4	18.0	17.6	17.0	-19	-25	-19	-14	-19	-25	-16	-11	25	56	42	SOT89	
AWB519	8.0	135	2.50	20.9	21.1	20.6	20.3	-21	-25	-20	-16	-20	-27	-20	-15	26	53	41	SOT89	
ASL590	8.0	160	2.50	23.9	24.0	23.6	-	-13	-16	-18	-	-16	-20	-20	-	25	55	43	SOT89	
ASL550(p-p)	8.0	240	2.20	15.5	15.8	15.5	15.2	-16	-15	-18	-20	-16	-15	-13	-13	28	78	42	SOT89	(b)
ASL560(p-p)	8.0	240	2.90	12.0	12.0	11.8	11.3	-17	-18	-17	-11	-17	-18	-17	-14	26	67	42	SOT89	(a)
ASL551	8.0	250	1.40	20.5	20.5	20.5	20.3	-20	-20	-18	-16	-20	-20	-18	-16	26	70	40	SOIC8	(a)
ASL552	8.0	240	2.30	15.0	15.3	15.0	15.0	-16	-15	-18	-18	-14	-14	-15	-14	26	74	42	SOIC8	(b)
ASL572	8.0	240	1.90	17.0	17.0	16.5	16.0	-15	-20	-14	-12	-15	-20	-12	-11	26	79	42	SOIC8	(b)

(p-p) means two chips in push-pull configuration
(a) 1:1 transformer
(b) 2:1 transformer

Optical Trans-Impedance Amplifiers

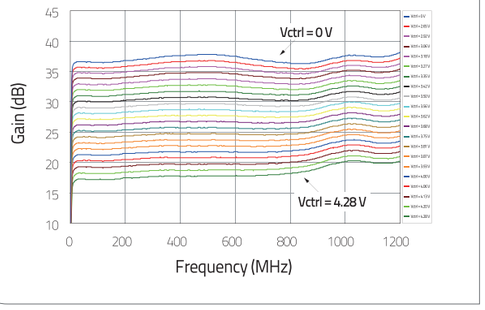
50 ~ 1200 MHz AGC included

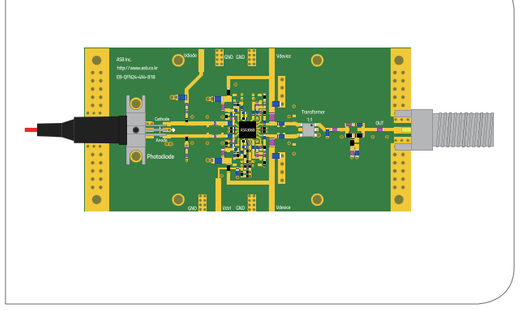
ASA306B



Part Number	Frequency (MHz)	Vd (V)	Id (mA)	Gain @ Vc (dB)	GF (+/-) (dB)	S22 (dB)	EIN (pA/rtHz)	Output Power (dBµV)	CSO (dBc)	CTB (dBc)	Package
ASA306B	50 ~ 1200	5.0	290	38 ~ 18 @ 0 ~ 4.3 V	1.2	-15	3.1	86 (1)	57	53	QFN24

(1) OMI = 3.5 %, 541.25 MHz of NTSC 79 channels in the optical input range of -7 ~ +1 dBm.





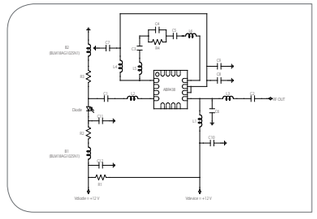
AGC not included

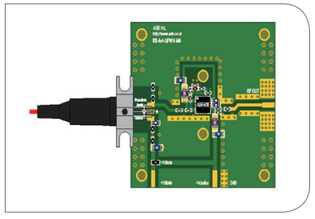
Part No.	Frequency (MHz)	Vd (V)	Id (mA)	S21 (dB) @ MHz		GF(dB)	S22 (dB) @ MHz		EIN (pA/rtHz) @ MHz		OIP3 (dBm) @ MHz		P1dB (dBm) @ MHz		Package
				5	200	p-to-p	5	200	5	200	5	200	5	200	
ASL19C	5 ~ 200	5.0	54	29.0	23.7	5.3	-9	-9	4.2	4.2	-	-	-	-	SOT89
ASL31C		5.0	106	26.5	24.6	1.9	-4	-4	7.4	5.3	-	-	-	-	

Part No.	Frequency (MHz)	Vd (V)	Id (mA)	S21 (dB) @ MHz		GF(dB)	S22 (dB) @ MHz		EIN (pA/rtHz) @ MHz		OIP3 (dBm) @ MHz		P1dB (dBm) @ MHz		Package
				140	850	p-to-p	140	850	140	850	140	850	140	850	
ASL31C + AWB589	140 ~ 850	6 / 8	130 / 178	38.0	37.1	2.1	-17	-16	-	-	40	39	21	20	SOT89

Part No.	Frequency (MHz)	Vd (V)	Id (mA)	S21 (dB) @ MHz		GF(dB)	S22 (dB) @ MHz		EIN (pA/rtHz) @ MHz		OIP3 (dBm) @ MHz		P1dB (dBm) @ MHz		Package
				50	2500	p-to-p	50	2500	50	2500	50	2500	50	2500	
AST54S	50 ~ 2500	5.0	30	18.9	17.5	4.0	-10	-9	8.2	8.5	16	3	-	-	SOT343

High gain, low current for compact optical receiver





Part No.	Frequency (MHz)	Vd (V)	Id (mA)	Gain (dB)	S22 (dB)	EIN (pA/rtHz)	OIP3 (dBm)	OIP2 (dBm)	OP1dB (dBm)	Package
ABR438	50 ~ 1200	12.0	160	37.0	-12.0	6.3	39 (1)	48 (1), (2)	19	QFN24

(1) OIP3 and OIP2 are measured with two tones at an output power of +7 dBm/tone separated by 6 MHz.
(2) OIP2 is measured at F1+F2 Frequency. (F1 = 400 MHz, F2 = 450 MHz)

Digital Attenuators

Part Number	Frequency (MHz)	Attenuation Range (dB)	Insertion Loss (dB)	Attenuation Accuracy (dB)	RL (dB)	Rise/fall (ns)	On/off (ns)	OP1dB (dBm)	OIP3 (dBm)	Remark
AAT530B5	500 ~ 3000	31.0	< 2.5	± (0.2 + 3% of atten. setting)	-13	600	660	22	42	QFN16 (1)
AAT530B6	500 ~ 3000	31.5	< 2.6	± (0.2 + 3% of atten. setting)	-13	600	660	22	42	QFN16 (1)
AAT2075B2 (2)	DC ~ 2700	15.0	< 0.5	± (0.15 + 3% of atten. setting)	-18	600	660	22	40	QFN14 (3)

Underlined bold is new.
(1) 4.0 x 4.0 mm^2
(2) 75 Ω, 2-Bit
(3) 2.0 x 2.0 mm^2

MMICs

SMATV (DVB-S), MOCA, ONU

Part Number	Frequency (MHz)	Vd (V)	Id (mA)	Gain (dB)	GF(+/-) (dB)	NF (dB)	S11 (dB)	S22 (dB)	OP1dB (dBm)	OIP3 (dBm)	Package	Impedance
AWG1017	900 ~ 3000	2.7	35	15.5	0.40	2.20	-18	-14	13	26	SOT363	75 Ω
AST20S	900 ~ 2100	2.6	12	13.5	0.25	1.50	-6	-14	5	20	SOT363	50 Ω
ASW114	50 ~ 2150	3.1	25	18.9	1.90	3.00	-16	-16	9	20	SOT363	75 Ω
	950 ~ 2150	3.3	53	18.5	1.75	3.20	-14	-14	15	29		50 Ω
ASW135	950 ~ 2150	3.3	60	17.3	1.00	2.20	-13	-14	18	32	SOT363	50 Ω
ASW235	500 ~ 2700	4.7	46	19.5	2.75	3.50	-15	-12	18	31	SOT363	50 Ω
AST20S	70 ~ 2700	5.0	63	16.8	1.30	1.20	-5	-14	19	33	SOT363	50 Ω
ASW204	950 ~ 2150	5.0	55	18.6	1.05	1.75	-13	-12	22	32	SOT89	50 Ω
	500 ~ 3500	5.0	55	17.4	2.40	1.85	-16	-11	21	33		
ASW205	500 ~ 2700	5.0	70	20.7	2.95	3.60	-17	-9	20	33	SOT89	50 Ω
ASW208	50 ~ 2600	5.0	80	20.0	2.40	2.10	-8	-9	21	31	SOT89	75 Ω
	950 ~ 2150	5.0	80	20.0	1.50	1.70	-11	-11	22	35		50 Ω
ASW212	70 ~ 2700	4.8	73	13.7	3.00	5.30	-14	-12	18	35	SOT89	50 Ω
ASW220	900 ~ 2100	5.0	75	16.4	0.20	3.80	-9	-9	18	33	SOT89	75 Ω
AWB207	900 ~ 2000	5.0	74	15.7	0.90	2.75	-16	-13	19	36	SOT89	50 Ω
ASF255	50 ~ 2150	5.0	104	18.4	0.05	2.60	-10	-17	22	37	SOT89	50 Ω
ASL330	150 ~ 2200	5.0	105	15.3	0.85	2.30	-9	-9	18	38	SOT89	50 Ω
ASL360	950 ~ 2150	5.0	110	16.6	0.95	2.30	-8	-12	17	37	SOT89	75 Ω

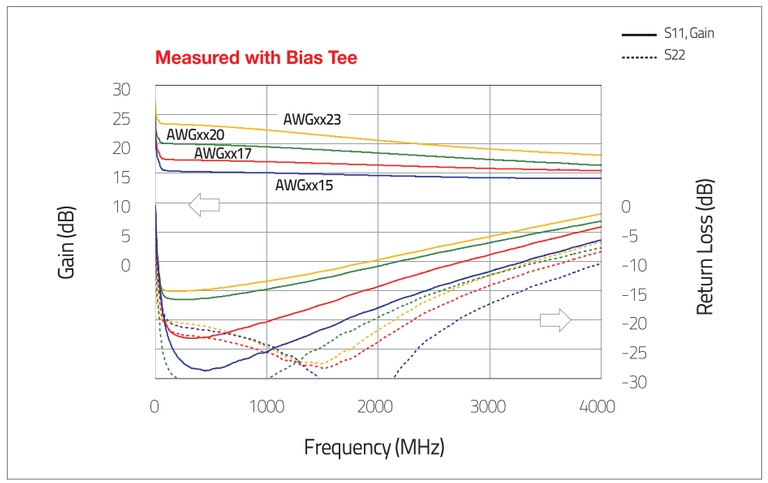
MMICs

SMATV (DVB-S), MOCA, ONU

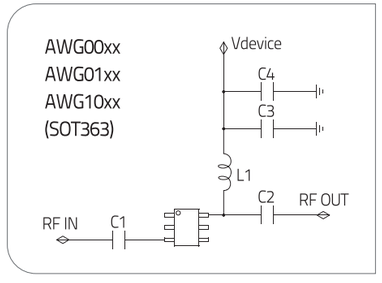
Part Number	Frequency (MHz)	Vd (V)	Id (mA)	Gain (dB)	GF(+/-) (dB)	NF (dB)	S11 (dB)	S22 (dB)	OP1dB (dBm)	OIP3 (dBm)	Package	Impedance
ASL380	950 ~ 2150	5.0	110	16.8	0.10	2.60	-5	-15	19	38	SOT89	50 Ω
ASW313	70 ~ 2700	5.0	95	14.5	1.10	2.20	-7	-10	21	40	SOT89	50 Ω
ASW311	500 ~ 3500	5.0	120	13.2	1.10	2.30	-13	-13	21	41	SOT89	50 Ω
ASW335	70 ~ 2500	5.0	100	15.8	1.65	1.80	-7	-6	22	37	SOT89	50 Ω
	900 ~ 2200	5.0	100	16.2	0.20	1.70	-7	-7	22	42		
AWB389	800 ~ 2200	5.0	125	17.3	0.85	2.80	-12	-11	22	40	SOT89	50 Ω
ASW314	800 ~ 1500	5.0	105	15.5	0.20	2.00	-17	-18	22	43	SOT89	50 Ω
	900 ~ 2200	5.0	105	15.0	0.25	2.00	-9	-9	22	41		
	50 ~ 2170	5.0	105	13.5	0.50	3.20	-15	-9	22	40		
ASW320	900 ~ 1600	5.0	120	20.8	1.75	2.45	-8	-7	22	40	SOT89	50 Ω
	900 ~ 1600	6.0	145	20.8	1.75	2.50	-8	-7	24	42		
AWB459	800 ~ 1600	5.0	130	20.0	0.25	1.25	-14	-12	24	38	SOT89	50 Ω
ASL550	950 ~ 2600	8.0	120	16.5	0.30	2.50	-12	-8	24	41	SOT89	75 Ω
ASL560	800 ~ 2500	8.0	120	14.0	0.05	3.00	-11	-13	20	36	SOT89	75 Ω
	950 ~ 1500	8.0	120	17.5	0.30	2.00	-7	-17	22	40		
ASW318	50 ~ 2700	8.0	120	13.8	1.00	2.70	-6	-9	22	42	SOT89	75 Ω

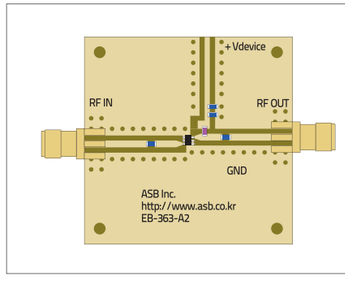
Wideband Gain Block Amplifiers
AWG-series

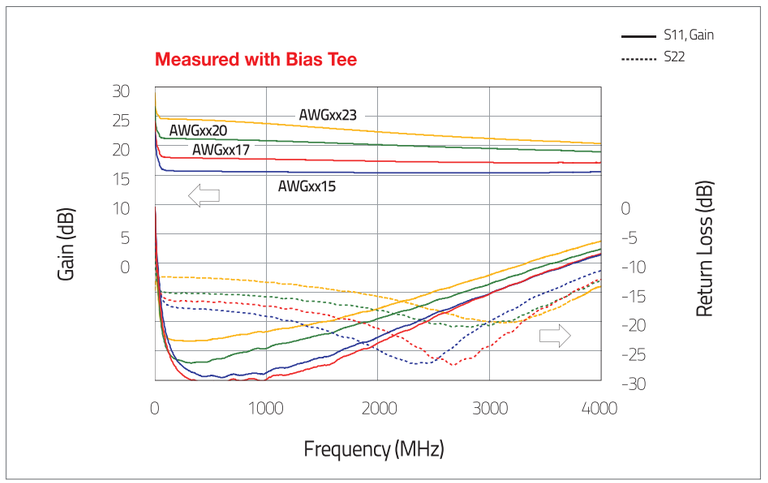
50 ~ 3000 MHz



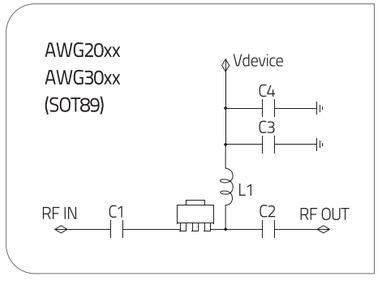
Part Number	Vd (V)	Id (mA)	OIP3 (dBm) @ MHz				
			50	500	1000	2000	2500
AWG0015	3.0	34	25	27	25	23	22
AWG0020	3.3	35	30	30	30	27	26
AWG0023	3.0	28	27	28	28	24	23
AWG0115	3.0	57	31	33	32	30	27
AWG0117	3.0	50	28	30	29	27	24
AWG0120	3.0	43	27	29	28	27	24
AWG0123	3.0	43	28	30	29	30	27
AWG1015	3.3	77	35	38	36	35	31
AWG1017	3.3	69	34	36	34	33	30
AWG1020	3.3	73	34	36	35	34	32
AWG1023	3.3	72	33	36	35	34	31

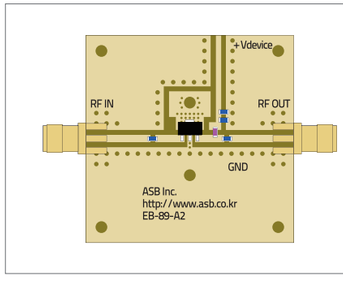






Part Number	Vd (V)	Id (mA)	OIP3 (dBm) @ MHz				
			50	500	1000	2000	2500
AWG2015	3.3	95	37	40	39	38	37
AWG2017	3.3	87	36	38	37	36	35
AWG2020	3.3	85	35	38	36	36	35
AWG2023	3.3	78	35	36	35	34	35
AWG3015	4.3	104	36	40	39	38	37
AWG3017	4.2	104	35	40	38	37	37
AWG3020	3.9	104	37	40	38	37	37
AWG3023	3.6	104	36	39	37	37	37





MMICs

Wideband Amplifiers

Part Number	Frequency (MHz)	Vd (V)	Id (mA)	Measured @ MHz	S21 (dB)	OIP3 (dBm)	OP1dB (dBm)	NF (dB)	S11 (dB)	S22 (dB)	Package
AST20S	70 ~ 2700	3.7	54	70	17.3	27	16	1.20	-15	-6	SOT363
				2700	14.8	33	20	1.30	-9	-16	
ASW205	5 ~ 4000	5.0	70	5	19.0	32	17	4.10	-7	-8	SOT89
				4000	18.3	27	15	4.10	-10	-20	
AWB207	500 ~ 3000	5.0	74	500	16.0	37	21	2.40	-10	-10	SOT89
				3000	15.3	33	18	2.40	-12	-10	
ASW313	70 ~ 2700	5.0	95	70	16.0	41	21	1.90	-8	-14	SOT89
				2700	13.8	35	18	2.90	-14	-7	
ASW311	500 ~ 3500	5.0	120	500	14.3	41	22	2.20	-13	-14	SOT89
				3500	12.1	41	21	2.40	-12	-12	
ASW314	20 ~ 3000	5.0	105	20	14.0	43	22	3.40	-10	-7	SOT89
				3000	13.0	36	19	3.40	-17	-7	
ASW316	500 ~ 3000	5.0	110	500	17.0	42	22	1.80	-8	-7	SOT89
				3000	14.5	34	16	3.30	-11	-5	
ASW335	70 ~ 2500	5.0	100	70	17.9	43	22	1.40	-9	-20	SOT89
				2500	14.6	36	20	3.20	-13	-8	
AWB389	900 ~ 2000	5.0	125	900	19.0	41	22	2.10	-10	-12	SOT89
				2000	18.5	39	22	2.70	-10	-10	
ASW318	50 ~ 2700	8.0	120	50	15.0	44	23	2.00	-10	-15	SOT89
				2700	14.0	37	19	3.30	-18	-13	

MMICs

Wideband Amplifiers

Part Number	Frequency (MHz)	Vd (V)	Id (mA)	Measured @ MHz	S21 (dB)	OIP3 (dBm)	OP1dB (dBm)	NF (dB)	S11 (dB)	S22 (dB)	Package
ASW338	350 ~ 3000	8.0	150	350	18.0	45	26	2.00	-9	-10	SOT89
				3000	14.6	41	20	-	-6	-5	
AWB459	1200 ~ 1700	5.0	130	1200	21.0	39	23	1.30	-13	-18	SOT89
				1700	21.5	37	22	1.40	-12	-15	
		8.0	200	1200	21.0	43	27	1.30	-15	-19	
				1700	21.5	47	26	1.50	-12	-16	
AWB577	380 ~ 2400	9.0	180	380	13.0	45	25	2.90	-10	-10	SOT89
				2400	11.9	41	24	4.00	-10	-11	
AWB688	30 ~ 860	10.0	300	30	22.2	47	27	1.70	-12	-10	SOIC8
				860	22.5	45	30	2.10	-10	-10	
AWG0317	50 ~ 2500	3.0	32	500	17.5	26	13	1.27	-10	-9	SOT363
				2500	16.0	26	13	1.50	-14	-11	
AWG0015	50 ~ 2500	3.0	34	50	15.9	25	15	2.20	-15	-20	SOT363
				2500	12.8	22	14	3.00	-13	-12	
AWG0020	50 ~ 2500	3.3	35	50	22.4	30	18	1.60	-13	-17	SOT363
				2500	17.6	26	15	2.30	-9	-11	
AWG0023	50 ~ 2500	3.0	28	50	21.3	27	16	1.60	-11	-20	SOT363
				2500	16.9	23	15	2.30	-8	-10	
AWG0115	50 ~ 2500	3.0	57	50	15.4	31	16	2.30	-14	-21	SOT363
				2500	12.5	27	14	3.10	-17	-13	

Underlined bold is new.

MMICs

Wideband Amplifiers

Part Number	Frequency (MHz)	Vd (V)	Id (mA)	Measured @ MHz	S21 (dB)	OIP3 (dBm)	OP1dB (dBm)	NF (dB)	S11 (dB)	S22 (dB)	Package
AWG0117	50 ~ 2500	3.0	50	50	17.3	28	16	2.10	-14	-21	SOT363
				2500	14.3	24	15	2.80	-12	-12	
AWG0120	50 ~ 2500	3.0	43	50	19.7	27	16	1.70	-14	-21	SOT363
				2500	16.2	24	15	2.50	-11	-11	
AWG0123	50 ~ 2500	3.0	43	50	22.8	28	17	1.50	-12	-20	SOT363
				2500	18.1	27	16	2.30	-9	-11	
AWG1015	50 ~ 2500	3.3	77	50	15.6	35	18	2.40	-13	-18	SOT363
				2500	12.7	31	17	3.20	-17	-13	
AWG1017	50 ~ 2500	3.3	69	50	17.6	34	18	2.00	-14	-18	SOT363
				2500	14.5	30	17	2.90	-15	-13	
AWG1020	50 ~ 2500	3.3	73	50	20.7	34	19	1.80	-15	-15	SOT363
				2500	17.2	32	17	2.50	-14	-13	
AWG1023	50 ~ 2500	3.3	72	50	23.8	33	19	1.60	-14	-14	SOT363
				2500	19.0	31	18	2.30	-11	-13	
AWG1715 (1)	50 ~ 2700	3.3	58	50	17.2	32	17	2.00	-11	-12	SOT89
				2700	15.4	29	17	2.70	-17	-12	
AWG2015	50 ~ 2500	3.3	95	50	15.8	37	17	2.40	-13	-17	SOT89
				2500	13.5	37	17	2.90	-16	-15	
AWG2017	50 ~ 2500	3.3	87	50	17.7	36	18	2.00	-14	-17	SOT89
				2500	15.4	35	18	2.70	-16	-15	

Underlined bold is new.
(1) 75 Ω

MMICs

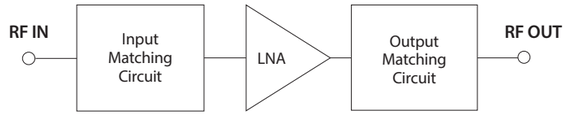
Wideband Amplifiers

Part Number	Frequency (MHz)	Vd (V)	Id (mA)	Measured @ MHz	S21 (dB)	OIP3 (dBm)	OP1dB (dBm)	NF (dB)	S11 (dB)	S22 (dB)	Package
AWG2020	50 ~ 2500	3.3	85	50	20.8	35	18	1.60	-15	-14	SOT89
				2500	18.0	35	18	2.40	-15	-18	
AWG2023	50 ~ 2500	3.3	78	50	23.8	35	19	1.50	-14	-13	SOT89
				2500	19.6	35	18	2.10	-12	-15	
AWG2716 (1)	50 ~ 2700	4.8	120	50	17.7	38	20	2.00	-11	-11	SOT89
				2700	15.9	38	20	2.50	-14	-14	
AWG2719 (1)	50 ~ 2700	5.0	110	50	20.3	40	21	3.00	-12	-9	SOT89
				2700	18.7	32	21	3.80	-13	-16	
AWG3015	50 ~ 2500	4.3	104	50	15.9	36	21	2.50	-12	-17	SOT89
				2500	13.4	37	20	3.00	-15	-15	
AWG3017	50 ~ 2500	4.2	104	50	17.9	35	21	2.30	-13	-15	SOT89
				2500	15.4	37	20	2.80	-16	-16	
	100 ~ 4700	4.2	104	100	17.5	37	20	1.90	-9	-10	SOT89
		4.2	104	1000	17.3	37	20	2.00	-15	-18	
		4.2	104	2000	17.0	37	21	2.30	-14	-20	
		4.2	104	4000	16.7	27	17	3.30	-12	-13	
		4.2	104	4700	17.6	20	14	4.40	-9	-9	
AWG3020	50 ~ 2500	3.9	104	50	20.9	37	20	2.00	-14	-13	SOT89
				2500	18.1	37	19	2.50	-15	-17	
AWG3023	50 ~ 2500	3.6	104	50	24.2	36	20	1.60	-14	-11	SOT89
				2500	20.3	37	19	2.20	-13	-19	

Underlined bold is new.
(1) 75 Ω

Internally Matched, SMD Type Modules
Customized

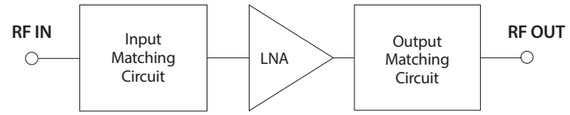
1-stage LNA



Part Number	Frequency Range (MHz)	Vd (V)	Id (mA)	Gain (dB)	NF (dB)	OP1dB (dBm)	OIP3 (dBm)	Package
ALN0070WT	60 ~ 80	5.0	40	22.0	0.90	17	27	10x10x3.8 SMT
ALN0071WT	65 ~ 75	5.0	60	22.0	0.90	21	30	10x10x3.8 SMT
ALN0140WT	125 ~ 155	5.0	73	25.0	0.70	21	31	10x10x3.8 SMT
ALN0195AT	180 ~ 210	5.0	65	21.0	1.00	18	32	10x10x3.8 SMT
ALN0196AT	180 ~ 210	5.0	70	23.0	1.00	18	32	10x10x3.8 SMT
ALN0450AT	400 ~ 500	5.0	70	20.0	1.10	17	32	10x10x3.8 SMT
ALN0450WT	400 ~ 500	5.0	35	19.0	1.10	22	29	10x10x3.8 SMT
ALN0460WT	450 ~ 470	5.0	65	22.0	0.75	21	35	10x10x3.8 SMT
ALN0667WT	470 ~ 860	5.0	40	17.0	1.10	21	30	10x10x3.8 SMT

Part Number	Frequency Range (MHz)	Vd (V)	Id (mA)	Gain (dB)	NF (dB)	OP1dB (dBm)	OIP3 (dBm)	Package
ALN0675WT	450 ~ 900	5.0	40	17.0	1.10	21	30	10x10x3.8 SMT
ALN0742AT	698 ~ 787	5.0	65	19.0	0.80	17	31	10x10x3.8 SMT
ALN0742WT	698 ~ 787	5.0	70	19.0	0.70	22	35	10x10x3.8 SMT
ALN0743AT	698 ~ 787	5.0	65	22.0	0.55	16	31	10x10x3.8 SMT
ALN0836AT	824 ~ 849	5.0	40	21.0	0.55	15	28	10x10x3.8 SMT
ALN0837AT	824 ~ 849	5.0	40	21.0	0.65	15	28	10x10x3.8 SMT
ALN0838AT	824 ~ 849	5.0	40	21.0	0.70	15	28	10x10x3.8 SMT
ALN0839AT	824 ~ 849	5.0	40	20.0	0.60	15	28	10x10x3.8 SMT
ALN0859AT	824 ~ 894	5.0	65	19.5	0.75	16	31	10x10x3.8 SMT

1-stage LNA

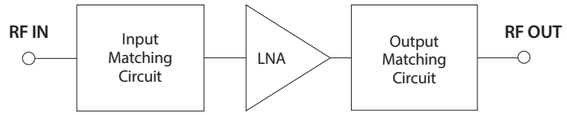


Part Number	Frequency Range (MHz)	Vd (V)	Id (mA)	Gain (dB)	NF (dB)	OP1dB (dBm)	OIP3 (dBm)	Package
ALN0859BT	824 ~ 894	5.0	60	19.0	0.80	17	31	10x10x3.8 SMT
ALN0882AT	873 ~ 892	3.3	75	20.0	0.80	16	32	10x10x3.8 SMT
ALN0902AT	890 ~ 915	5.0	60	22.0	1.00	17	30	10x10x3.8 SMT
ALN0925AT	890 ~ 960	5.0	70	20.0	0.80	17	31	10x10x3.8 SMT
ALN0925BT	890 ~ 960	5.0	60	18.0	0.80	17	31	10x10x3.8 SMT
ALN0926AT	890 ~ 960	5.0	40	18.5	0.60	15	29	10x10x3.8 SMT
ALN1100BT	950 ~ 1250	5.0	50	16.0	0.75	15	28	10x10x3.8 SMT
ALN1220AT	940 ~ 1500	5.0	40	17.5	0.65	15	28	10x10x3.8 SMT
ALN1500AT	1400 ~ 1600	5.0	70	16.0	0.65	18	33	10x10x3.8 SMT

Part Number	Frequency Range (MHz)	Vd (V)	Id (mA)	Gain (dB)	NF (dB)	OP1dB (dBm)	OIP3 (dBm)	Package
ALN1502AT	1400 ~ 1600	5.0	30	15.9	0.65	12	26	10x10x3.8 SMT
ALN1747AT	1710 ~ 1785	5.0	65	13.0	0.70	17	33	10x10x3.8 SMT
ALN1750AT	1700 ~ 1800	5.0	65	15.5	0.65	18	34	10x10x3.8 SMT
ALN1750BT	1700 ~ 1800	5.0	55	15.0	0.80	17	33	10x10x3.8 SMT
ALN1765AT	1740 ~ 1790	5.0	70	17.5	0.70	18	31	10x10x3.8 SMT
ALN1810AT	1750 ~ 1870	5.0	65	15.3	0.65	18	34	10x10x3.8 SMT
ALN1810BT	1750 ~ 1870	5.0	45	14.5	0.80	17	33	10x10x3.8 SMT
ALN1811BT	1750 ~ 1870	5.0	45	14.5	0.80	17	31	10x10x3.8 SMT
ALN1880AT	1850 ~ 1910	5.0	65	14.9	0.65	18	34	10x10x3.8 SMT

Internally Matched, SMD Type Modules
Customized

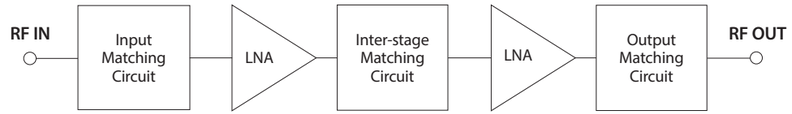
1-stage LNA



Part Number	Frequency Range (MHz)	Vd (V)	Id (mA)	Gain (dB)	NF (dB)	OP1dB (dBm)	OIP3 (dBm)	Package
ALN1930AT	1875 ~ 1985	5.0	65	14.8	0.65	18	34	10x10x3.8 SMT
ALN1931AT	1875 ~ 1985	5.0	50	14.8	0.60	18	34	10x10x3.8 SMT
ALN1950BT	1900 ~ 2000	3.5	25	14.2	0.80	17	31	10x10x3.8 SMT
ALN1951BT	1920 ~ 1980	5.0	50	15.0	0.90	17	31	10x10x3.8 SMT
ALN2044AT	1920 ~ 2170	5.0	50	14.2	0.65	19	34	10x10x3.8 SMT
ALN2045AT	1920 ~ 2170	5.0	65	14.3	0.65	18	34	10x10x3.8 SMT
ALN2046AT	1920 ~ 2170	5.0	65	15.2	0.70	18	34	10x10x3.8 SMT
ALN2140BT	2110 ~ 2170	5.0	35	14.5	0.80	17	32	10x10x3.8 SMT
ALN2500AT	2300 ~ 2700	5.0	80	12.2	0.75	19	34	10x10x3.8 SMT
ALN2501AT	2300 ~ 2700	5.0	80	12.2	0.75	19	34	10x10x3.8 SMT

Part Number	Frequency Range (MHz)	Vd (V)	Id (mA)	Gain (dB)	NF (dB)	OP1dB (dBm)	OIP3 (dBm)	Package
ALN2502AT	2300 ~ 2700	5.0	40	12.2	0.60	18	31	10x10x3.8 SMT
ALN2503AT	2300 ~ 2700	5.0	40	13.5	0.70	17	32	10x10x3.8 SMT
ALN2504AT	2300 ~ 2700	5.0	60	14.0	0.80	18	32	10x10x3.8 SMT
ALN2505AT	2300 ~ 2700	5.0	65	13.5	0.65	18	35	10x10x3.8 SMT
ALN2506AT	2300 ~ 2700	5.0	25	12.0	0.60	15	28	10x10x3.8 SMT

2-stage LNA

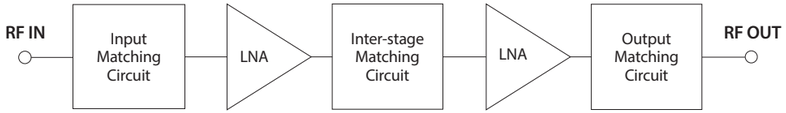


Part Number	Frequency Range (MHz)	Vd (V)	Id (mA)	Gain (dB)	NF (dB)	OP1dB (dBm)	OIP3 (dBm)	Package
ALN0098	88 ~ 108	5.0	180	35.0	1.30	21	36	13x13x3.8 SMT
ALN0113	108 ~ 118	5.0	180	35.0	1.40	21	35	13x13x3.8 SMT
ALN0207	200 ~ 215	5.0	160	35.0	0.80	21	37	13x13x3.8 SMT
ALN0223	215 ~ 231	5.0	160	35.0	0.80	21	37	13x13x3.8 SMT
ALN0332	329 ~ 335	5.0	180	31.0	0.80	21	37	13x13x3.8 SMT
ALN0450	400 ~ 500	5.0	170	36.0	0.65	21	39	13x13x3.8 SMT
ALN0665	470 ~ 860	5.0	130	36.5	0.70	21	40	13x13x3.8 SMT
ALN0742	698 ~ 787	5.0	110	37.0	0.65	21	35	13x13x3.8 SMT
ALN0742T2	698 ~ 787	5.0	110	38.0	0.70	20	35	10x10x3.8 SMT
ALN0743	698 ~ 787	5.0	130	37.0	0.70	21	41	13x13x3.8 SMT

Part Number	Frequency Range (MHz)	Vd (V)	Id (mA)	Gain (dB)	NF (dB)	OP1dB (dBm)	OIP3 (dBm)	Package
ALN0810	780 ~ 840	5.0	100	38.0	0.60	18	34	13x13x3.8 SMT
ALN0832	830 ~ 835	5.0	130	29.0	0.70	17	32	13x13x3.8 SMT
ALN0836	823.5 ~ 848.5	5.0	130	29.0	0.70	17	32	13x13x3.8 SMT
ALN0837	828 ~ 847	3.3	100	36.0	0.80	18	30	13x13x3.8 SMT
ALN0838	776 ~ 901	5.0	100	32.0	0.45	18	34	13x13x3.8 SMT
ALN0855	829 ~ 881	5.0	180	27.0	0.65	21	36	13x13x3.8 SMT
ALN0859	824 ~ 894	5.0	105	37.5	0.65	17	34	13x13x3.8 SMT
ALN0860	824 ~ 894	5.0	90	37.5	0.55	16	37	13x13x3.8 SMT
ALN0878	816 ~ 940	5.0	170	30.0	0.75	20	40	13x13x3.8 SMT
ALN0892	824 ~ 960	5.0	170	34.0	0.65	21	39	13x13x3.8 SMT

Internally Matched, SMD Type Modules
Customized

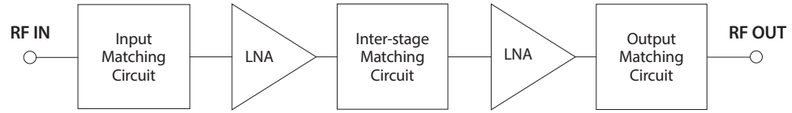
2-stage LNA



Part Number	Frequency Range (MHz)	Vd (V)	Id (mA)	Gain (dB)	NF (dB)	OP1dB (dBm)	OIP3 (dBm)	Package
ALN0892R2	824 ~ 960	5.0	110	35.0	0.70	21	36	10x10x3.8 SMT
ALN0892T1	824 ~ 960	5.0	100	36.0	0.80	21	37	10x10x3.8 SMT
ALN0905	885 ~ 925	5.0	320	29.0	0.80	22	36	13x13x3.8 SMT
ALN0910	905 ~ 915	5.0	160	22.0	1.10	19	35	13x13x3.8 SMT
ALN0925	890 ~ 960	5.0	80	37.5	1.10	19	35	13x13x3.8 SMT
ALN1100	950 ~ 1250	5.0	100	32.0	0.75	18	35	13x13x3.8 SMT
ALN1100R2	950 ~ 1250	5.0	100	32.5	0.75	20	32	10X10X3.8 SMT
ALN1100T2	950 ~ 1250	5.0	20	25.0	0.85	12	18	10x10x3.8 SMT
ALN1101R2	950 ~ 1250	5.0	100	33.0	0.75	21	35	10x10x3.8 SMT
ALN1102	950 ~ 1250	5.0	80	26.0	0.65	18	31	13x13x3.8 SMT

Part Number	Frequency Range (MHz)	Vd (V)	Id (mA)	Gain (dB)	NF (dB)	OP1dB (dBm)	OIP3 (dBm)	Package
ALN1250	1000 ~ 1500	5.0	80	30.0	0.90	16	32	13x13x3.8 SMT
ALN1280	1270 ~ 1290	5.0	100	32.0	0.70	18	38	13x13x3.8 SMT
ALN1400	1200 ~ 1600	5.0	55	25.0	0.70	19	30	13x13x3.8 SMT
ALN1425	1200 ~ 1650	5.0	80	30.0	1.00	34	17	13x13x3.8 SMT
ALN1465	1450 ~ 1480	5.0	85	27.0	0.95	18	33	13x13x3.8 SMT
ALN1500	1400 ~ 1600	5.0	180	28.0	0.60	21	38	13x13x3.8 SMT
ALN1542T2	1525 ~ 1559	5.0	35	24.0	0.53	8	19	10x10x3.8 SMT
ALN1585	1550 ~ 1620	5.0	100	34.0	0.95	21	34	13x13x3.8 SMT
ALN1700	1550 ~ 1850	5.0	100	28.0	0.80	18	37	13x13x3.8 SMT
ALN1733	1710 ~ 1755	5.0	170	27.5	0.60	21	38	13x13x3.8 SMT

2-stage LNA

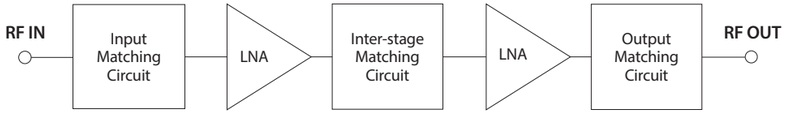


Part Number	Frequency Range (MHz)	Vd (V)	Id (mA)	Gain (dB)	NF (dB)	OP1dB (dBm)	OIP3 (dBm)	Package
ALN1735T2	1720 ~ 1750	5.0	80	20.0	0.60	18	30	10x10x3.8 SMT
ALN1748T2	1710 ~ 1785	5.0	120	23.0	0.75	20	37	10x10x3.8 SMT
ALN1750	1700 ~ 1800	5.0	80	27.0	0.95	18	33	13x13x3.8 SMT
ALN1750T2	1700 ~ 1800	5.0	100	22.0	0.60	21	35	10x10x3.8 SMT
ALN1751T2	1700 ~ 1800	5.0	120	23.3	0.60	20	37	10x10x3.8 SMT
ALN1800T2	1700 ~ 1900	5.0	100	26.0	0.65	21	34	10x10x3.8 SMT
ALN1810	1750 ~ 1870	5.0	80	30.0	0.90	19	37	13x13x3.8 SMT
ALN1812	1750 ~ 1870	5.0	180	27.0	0.60	22	38	13x13x3.8 SMT
ALN1850T2	1700 ~ 2000	5.0	100	23.0	0.60	21	35	10x10x3.8 SMT
ALN1880	1850 ~ 1920	5.0	100	32.0	0.90	20	34	13x13x3.8 SMT

Part Number	Frequency Range (MHz)	Vd (V)	Id (mA)	Gain (dB)	NF (dB)	OP1dB (dBm)	OIP3 (dBm)	Package
ALN1883T2	1850 ~ 1915	5.0	100	22.8	0.60	21	36	10x10x3.8 SMT
ALN1884T2	1850 ~ 1915	5.0	100	23.5	0.55	21	34	10x10x3.8 SMT
ALN1910	1900 ~ 1920	5.0	170	30.0	0.80	20	38	13x13x3.8 SMT
ALN1912	1900 ~ 1920	5.0	120	27.0	0.65	21	34	13x13x3.8 SMT
ALN1922	1850 ~ 1995	5.0	170	30.0	0.65	21	39	13x13x3.8 SMT
ALN1930	1875 ~ 1985	5.0	80	27.0	0.95	18	33	13x13x3.8 SMT
ALN1945T2	1920 ~ 1980	5.0	80	32.0	1.00	17	31	10x10x3.8 SMT
ALN1950T2	1920 ~ 1980	5.0	130	23.5	0.60	22	37	10x10x3.8 SMT
ALN1956	1920 ~ 1980	5.0	110	29.0	0.60	21	36	10x10x3.8 SMT
ALN1960	1940 ~ 1980	5.0	80	30.0	0.95	19	36	13x13x3.8 SMT

Internally Matched, SMD Type Modules
Customized

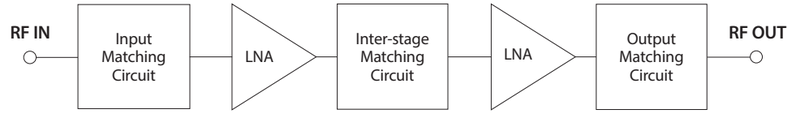
2-stage LNA



Part Number	Frequency Range (MHz)	Vd (V)	Id (mA)	Gain (dB)	NF (dB)	OP1dB (dBm)	OIP3 (dBm)	Package
ALN1967T2	1960 ~ 1975	5.0	80	19.5	0.65	19	30	10x10x3.8 SMT
ALN1970	1960 ~ 1980	5.0	110	30.0	0.75	20	36	13x13x3.8 SMT
ALN1970T2	1960 ~ 1980	5.0	90	29.0	0.65	17	33	10x10x3.8 SMT
ALN1972T2	1960 ~ 1980	5.0	100	22.0	0.65	20	34	10x10x3.8 SMT
ALN2017	2010 ~ 2025	5.0	95	32.5	0.95	21	34	13x13x3.8 SMT
ALN2045	1920 ~ 2170	5.0	80	27.0	0.95	18	35	13x13x3.8 SMT
ALN2045R2	1920 ~ 2170	5.0	110	25.5	0.95	21	37	10x10x3.8 SMT
ALN2045T1	1920 ~ 2170	5.0	95	28.0	1.00	20	35	10x10x3.8 SMT
ALN2046	1920 ~ 2170	5.0	80	28.0	0.95	18	29	13x13x3.8 SMT
ALN2046R2	1920 ~ 2170	5.0	110	22.0	0.95	21	38	10x10x3.8 SMT

Part Number	Frequency Range (MHz)	Vd (V)	Id (mA)	Gain (dB)	NF (dB)	OP1dB (dBm)	OIP3 (dBm)	Package
ALN2250	2200 ~ 2300	5.0	80	25.0	1.00	18	33	13x13x3.8 SMT
ALN2251	2000 ~ 2500	5.0	80	26.0	1.00	17	33	13x13x3.8 SMT
ALN2313R2	2300 ~ 2326	5.0	120	20.0	1.10	21	38	10x10x3.8 SMT
ALN2330T2	2300 ~ 2360	5.0	100	21.0	0.70	21	35	10x10x3.8 SMT
ALN2331	2300 ~ 2360	5.0	165	25.0	0.88	20	36	13x13x3.8 SMT
ALN2333	2300 ~ 2360	5.0	90	24.0	1.00	20	34	13x13x3.8 SMT
ALN2350	2300 ~ 2400	5.0	85	30.0	0.95	20	32	13x13x3.8 SMT
ALN2351	2300 ~ 2400	5.0	130	35.0	0.90	21	37	13x13x3.8 SMT
ALN2352	2300 ~ 2400	4.5	130	35.0	0.90	21	37	13x13x3.8 SMT
ALN2355	2300 ~ 2400	5.0	140	35.0	0.70	21	37	13x13x3.8 SMT
ALN2376	2363 ~ 2390	5.0	100	28.0	0.80	21	36	13x13x3.8 SMT

2-stage LNA



Part Number	Frequency Range (MHz)	Vd (V)	Id (mA)	Gain (dB)	NF (dB)	OP1dB (dBm)	OIP3 (dBm)	Package
ALN2400	2300 ~ 2500	5.0	80	25.0	1.10	18	35	13x13x3.8 SMT
ALN2450T2	2300 ~ 2600	5.0	90	28.0	0.65	18	34	10x10x3.8 SMT
ALN2500	2480 ~ 2520	3.3	30	28.0	1.00	13	29	13x13x3.8 SMT
ALN2575T1	2560 ~ 2590	3.0	60	24.0	0.80	15	31	10x10x3.8 SMT
ALN2590T2	2490 ~ 2690	5.0	80	23.0	0.80	15	32	10x10x3.8 SMT
ALN2592	2577.5 ~ 2607	5.0	120	25.0	0.95	20	33	13x13x3.8 SMT
ALN2593T2	2496 ~ 2690	5.0	80	24.0	0.80	15	32	13x13x3.8 SMT
ALN2600T2	2500 ~ 2700	5.0	80	23.0	0.70	14	30	10x10x3.8 SMT
ALN3300	3050 ~ 3500	5.0	100	20.0	0.95	21	34	13x13x3.8 SMT
ALN3500	3400 ~ 3600	5.0	160	19.0	1.10	20	36	13x13x3.8 SMT

Part Number	Frequency Range (MHz)	Vd (V)	Id (mA)	Gain (dB)	NF (dB)	OP1dB (dBm)	OIP3 (dBm)	Package
ALN3501	3400 ~ 3600	5.0	160	19.0	1.15	20	36	13x13x3.8 SMT
ALN3687	3680 ~ 3695	5.0	100	18.0	1.00	20	33	13x13x3.8 SMT
ALN3800T2	3400 ~ 4200	5.0	100	12.0	1.50	18	30	10x10x3.8 SMT
ALN4500	4000 ~ 5000	5.0	160	18.0	1.85	21	35	13x13x3.8 SMT
ALN5000	4000 ~ 6000	5.0	160	18.0	2.10	21	35	13x13x3.8 SMT
ALN5050	4300 ~ 5800	5.0	160	17.0	2.05	21	35	13x13x3.8 SMT
ALN5500	5000 ~ 6000	5.0	160	17.0	2.10	21	35	13x13x3.8 SMT
ALN5850	5750 ~ 5950	5.0	160	17.0	2.00	20	34	13x13x3.8 SMT
ACL4275T2	4200 ~ 4350	5.0	50	21.0	1.25	14	30	10x10x3.8 SMT
ACL4300T2	4200 ~ 4400	5.0	50	20.0	1.25	14	30	10x10x3.8 SMT
ACL4400T2	4300 ~ 4500	5.0	50	20.0	1.50	14	30	10x10x3.8 SMT
ACL5000T2	4900 ~ 5100	5.0	50	18.5	1.50	14	30	10x10x3.8 SMT

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3-stage LNA

Part Number	Frequency Range (MHz)	Vd (V)	Id (mA)	Gain (dB)	NF (dB)	OP1dB (dBm)	OIP3 (dBm)	Package
ALN0859M3	824 ~ 894	5.0	400	55.0	0.70	29	46	25x13x3.0 SMT
ALN1810M3	1710 ~ 1910	5.0	400	36.0	0.70	28	42	25x13x3.0 SMT
ALN2045M3	1920 ~ 2170	5.0	400	36.0	0.70	29	44	25x13x3.0 SMT
ALN2540M3	2525 ~ 2555	5.0	200	35.5	0.65	18	35	25x13x3.0 SMT

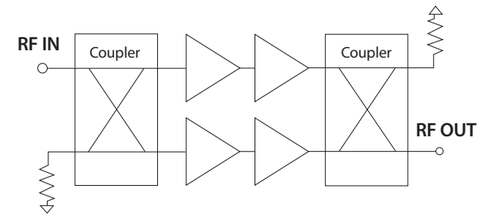
Highly Linear LNA

Part Number	Frequency Range (MHz)	Vd (V)	Id (mA)	Gain (dB)	NF (dB)	OP1dB (dBm)	OIP3 (dBm)	Package
ALE0859T3	824 ~ 894	5.0	200	34.0	0.60	21	40	10x10x3.8 SMT
ALE0925T2	890 ~ 960	5.0	200	35.0	0.65	23	42	10x10x3.8 SMT
ALE1500T2	1400 ~ 1600	5.0	200	28.0	0.60	23	42	10x10x3.8 SMT
ALE1810T2	1750 ~ 1870	5.0	200	28.0	0.75	24	42	10x10x3.8 SMT
ALE2045T2	1920 ~ 2170	5.0	200	26.0	0.80	24	42	10x10x3.8 SMT
ALE2045T3	1920 ~ 2170	5.0	200	24.0	0.70	21	40	10x10x3.8 SMT
ALE2350T2	2300 ~ 2400	5.0	200	24.5	0.75	24	42	10x10x3.8 SMT
ALE2500T2	2300 ~ 2700	5.0	200	24.0	0.85	24	42	10x10x3.8 SMT
ALE3025T2	2900 ~ 3150	5.0	200	19.5	1.05	23	42	10x10x3.8 SMT
ALE3275T2	3150 ~ 3400	5.0	200	19.0	1.05	23	42	10x10x3.8 SMT
ALE3276T2	3050 ~ 3500	5.0	200	19.0	1.20	23	36	10x10x3.8 SMT
ALE3500T2	3400 ~ 3600	5.0	200	18.0	1.20	23	42	10x10x3.8 SMT
ALE3700T2	3600 ~ 3800	5.0	200	17.0	1.30	23	42	10x10x3.8 SMT

CATV / DVB / CMMB LNA

Part Number	Frequency Range (MHz)	Vd (V)	Id (mA)	Gain (dB)	NF (dB)	OP1dB (dBm)	OIP3 (dBm)	Package
ALN0665	470 ~ 860	5.0	130	36.5	0.70	21	40	13x13x3.8 SMT
ALN0667	470 ~ 860	5.0	140	35.0	0.80	21	40	13x13x3.8 SMT
ALN0667WT	470 ~ 860	5.0	40	17.0	1.10	21	30	10x10x3.8 SMT
ALN0675WT	450 ~ 900	5.0	40	17.0	1.10	21	30	10x10x3.8 SMT
ALN50-1000AT	300 ~ 600	5.0	90	16.0	2.10	21	39	10x10x3.8 SMT
	50 ~ 300	5.0	90	16.0	2.00	21	39	10x10x3.8 SMT
	600 ~ 1000	5.0	90	15.5	2.20	20	36	10x10x3.8 SMT
ALN50-1001AT	300 ~ 600	5.0	100	16.0	2.40	21	41	10x10x3.8 SMT
	50 ~ 300	5.0	100	16.0	2.35	20	41	10x10x3.8 SMT
	600 ~ 1000	5.0	100	15.5	2.50	21	39	10x10x3.8 SMT

Balanced LNA, Couplers included



Part Number	Frequency Range (MHz)	Vd (V)	Id (mA)	Gain (dB)	NF (dB)	OP1dB (dBm)	OIP3 (dBm)	Package
ALUC1405B1	1030 ~ 1780	5.0	120	14.5	1.60	20	32	21x13x5 SMT
ALUC1900B2	1880 ~ 1920	5.0	240	27.0	0.65	24	41	22x12x5 SMT
ALUC2380B1	1760 ~ 3000	5.0	180	13.0	1.60	19	31	16x13x5 SMT
ALUC2535B3	2500 ~ 2570	5.0	340	34.0	0.75	24	40	22x12x5 SMT

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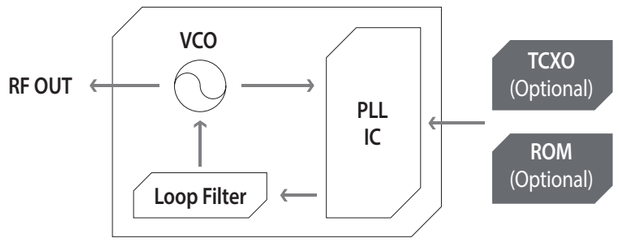
PLL Synthesizer



Part Number	Package Size (mm)
APLT0000	15.3 x 15.3 x 3.2
APL0000	19.0 x 19.0 x 5.8

Part Number	Options
APL0000	Standard
APL0000 - T	TCXO included
APL0000 - R	ROM included
APL0000 - R/T	ROM and TCXO included
APLT0000 - T	TCXO included
APLT0000 - R/T	ROM and TCXO included

PLL Synthesizer

Part Number	Frequency Range (MHz)		Output Level (dBm)	Vd (V)	Id (mA)	2nd Harmonics (dBm)	Phase Noise (dBc/Hz)	
	Min.	Max.					@ 10 kHz	@ 100 kHz
APLT0600-T	550	650	4	5.0	≤ 40	≤ -23	≤ -102	≤ -118
APLT0730-T	720	740	4	5.0	≤ 30	≤ -25	≤ -102	≤ -120
APLT0827.5-R	830		-5	5.0	≤ 35	≤ -25	≤ -102	-
APLT0845-T	840	850	4	5.0	≤ 30	≤ -25	≤ -100	≤ -120
APLT0909-R/T	909		4	5.0	≤ 35	≤ -23	≤ -103	≤ -117
APLT0915-T	900	930	4	5.0	≤ 30	≤ -25	≤ -100	≤ -120
APLT0923	913	933	4	5.0	≤ 40	≤ -20	≤ -98	≤ -115
APLT1000-T	995	1005	4	5.0	≤ 30	≤ -25	≤ -100	≤ -120
APLT1015-R/T	1015		4	5.0	≤ 40	≤ -25	≤ -108	-

PLL Synthesizer

Part Number	Frequency Range (MHz)		Output Level (dBm)	Vd (V)	Id (mA)	2nd Harmonics (dBm)	Phase Noise (dBc/Hz)	
	Min.	Max.					@ 10 kHz	@ 100 kHz
APLT1100-T	1090	1110	4	5.0	≤ 30	≤ -25	≤ -100	≤ -120
APLT1750-R/T	1750		3	5.0	≤ 30	≤ -25	≤ -100	≤ -120
APLT1870.5-R/T	1871		3	5.0	≤ 30	≤ -25	≤ -100	≤ -120
APLT1998	1998		4	5.0	≤ 40	≤ -25	≤ -96	≤ -115
APLT2040-R/T	2040		3	5.0	≤ 30	≤ -25	≤ -101	≤ -120
APLT2150-R/T	2150		3	5.0	≤ 30	≤ -25	≤ -100	≤ -120
APLT5797.5-T	5798		1	5.0	≤ 45	≤ -10	≤ -80	≤ -95
APLR1984	1945	2023	3	5.0	≤ 50	≤ -20	≤ -95	≤ -115

Part Number	Frequency Range (MHz)		Output Level (dBm)	Vd (V)	Id (mA)	2nd Harmonics (dBm)	Phase Noise (dBc/Hz)	
	Min.	Max.					@ 10 kHz	@ 100 kHz
APL0039.19-R/T	39		7	5.0	≤ 35	≤ -20	≤ -105	≤ -115
APL0075	70	80	7	5.0	≤ 30	≤ -25	≤ -110	≤ -120
APL0120-R	120		5	5.0	≤ 35	≤ -15	≤ -102	≤ -115
APL0155	150	160	5	5.0	≤ 30	≤ -25	≤ -109	≤ -120
APL0215	210	220	5	5.0	≤ 30	≤ -25	≤ -107	≤ -120
APL0285.19-R/T	285		7	5.0	≤ 35	≤ -20	≤ -102	≤ -115
APL0335	330	340	3	5.0	≤ 23	≤ -25	≤ -105	≤ -120
APL0381.19-R/T	381		7	5.0	≤ 35	≤ -20	≤ -102	≤ -115
APL0400	390	410	3	5.0	≤ 25	≤ -25	≤ -105	≤ -120

Internally Matched, SMD Type Modules
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PLL Synthesizer

Part Number	Frequency Range (MHz)		Output Level (dBm)	Vd (V)	Id (mA)	2nd Harmonics (dBm)	Phase Noise (dBc/Hz)	
	Min.	Max.					@ 10 kHz	@ 100 kHz
APL0441.5	427	457	5	5.0	≤ 35	≤ -15	≤ -97	≤ -115
APL0477.19-R	477		7	5.0	≤ 35	≤ -20	≤ -102	≤ -115
APL0518	513	523	5	5.0	≤ 30	≤ -25	≤ -105	≤ -122
APL0565-T	555	575	7	5.0	≤ 40	≤ -20	≤ -100	≤ -110
APL0570.25-R/T	570		4	5.0	≤ 35	≤ -20	≤ -100	≤ -115
APL0675	670	680	5	5.0	≤ 30	≤ -25	≤ -105	≤ -122
APL0700-R/T	700		4	5.0	≤ 35	≤ -20	≤ -100	≤ -115
APL0734-R	734		4	5.0	≤ 25	≤ -25	≤ -105	≤ -120
APL0742.5	735	750	3	5.0	≤ 30	≤ -20	≤ -100	≤ -116
APL0810	780	840	0	5.0	≤ 35	≤ -20	≤ -102	≤ -122
APL0840-R/T	840		4	5.0	≤ 35	≤ -20	≤ -100	≤ -115
APL0887-R/T	887		7	5.0	≤ 45	≤ -20	≤ -103	≤ -115
APL0915	900	930	0	5.0	≤ 30	≤ -45	≤ -107	≤ -120
APL0917	914	921	4	5.0	≤ 40	≤ -20	≤ -103	≤ -117
APL0925-R/T	925		5	5.0	≤ 35	≤ -20	≤ -100	≤ -115
APL0940	920	960	4	5.0	≤ 35	≤ -20	≤ -100	≤ -115
APL0970-R/T	970		5	5.0	≤ 35	≤ -20	≤ -100	≤ -116
APL0990.1	980	1000	5	5.0	≤ 30	≤ -25	≤ -103	≤ -120

PLL Synthesizer

Part Number	Frequency Range (MHz)		Output Level (dBm)	Vd (V)	Id (mA)	2nd Harmonics (dBm)	Phase Noise (dBc/Hz)	
	Min.	Max.					@ 10 kHz	@ 100 kHz
APL1015-T	1015		4	5.0	≤ 40	≤ -25	-	≤ -104
APL1020	1010	1030	4	5.0	≤ 30	≤ -25	≤ -101	≤ -119
APL1051.54	1042	1062	3	5.0	≤ 30	≤ -25	≤ -102	≤ -120
APL1083	1053	1113	5	5.0	≤ 30	≤ -20	≤ -100	≤ -115
APL1112	1090	1135	4	5.0	≤ 30	≤ -25	≤ -104	≤ -121
APL1190	1140	1240	4	5.0	≤ 30	≤ -30	≤ -100	≤ -120
APL1257	1235	1280	4	5.0	≤ 30	≤ -25	≤ -105	≤ -122
APL1288-R/T	1288		4	5.0	≤ 35	≤ -20	≤ -100	≤ -115
APL1345	1335	1355	4	5.0	≤ 30	≤ -25	≤ -101	≤ -122
APL1400-T	1350	1450	4	5.0	≤ 45	≤ -20	≤ -100	≤ -115
APL1445	1435	1455	4	5.0	≤ 30	≤ -25	≤ -103	≤ -120
APL1495	1485	1505	3	5.0	≤ 30	≤ -25	≤ -102	≤ -120
APL1515-R	1515		0	5.0	≤ 25	≤ -25	≤ -103	≤ -115
APL1545	1535	1555	2	5.0	≤ 30	≤ -25	≤ -104	≤ -119
APL1595	1585	1605	4	5.0	≤ 30	≤ -25	≤ -107	≤ -122
APL1666-R	1666		5	5.0	≤ 40	≤ -20	≤ -97	≤ -115
APL1685	1685		0	5.0	≤ 30	≤ -25	≤ -104	≤ -120
APL1705	1685	1725	2	5.0	≤ 30	≤ -25	≤ -105	≤ -122

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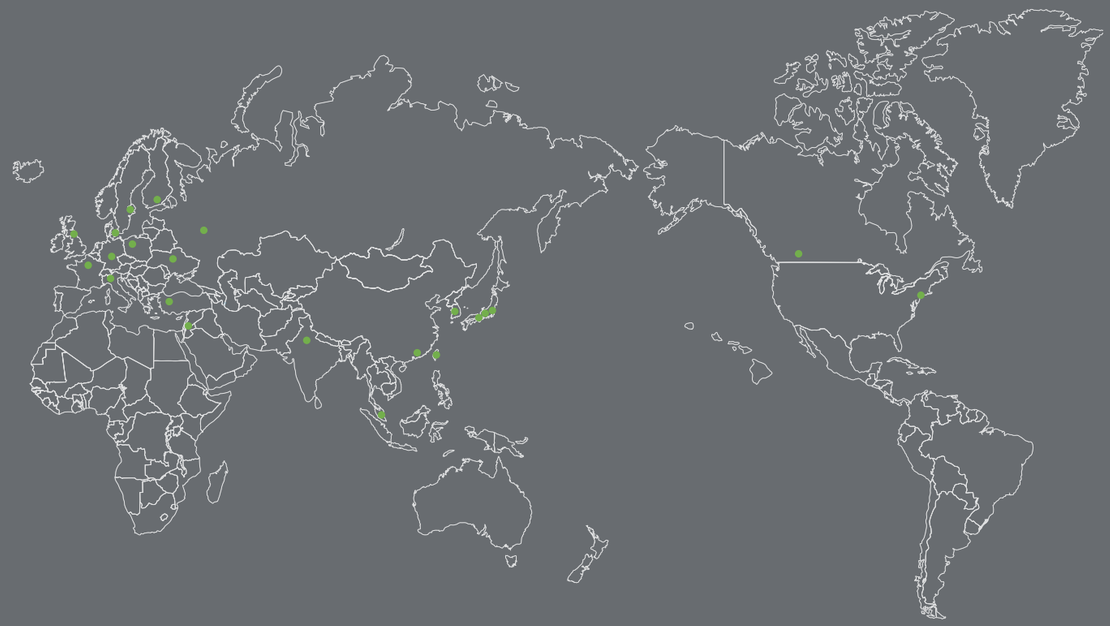
PLL Synthesizer

Part Number	Frequency Range (MHz)		Output Level (dBm)	Vd (V)	Id (mA)	2nd Harmonics (dBm)	Phase Noise (dBc/Hz)	
	Min.	Max.					@ 10 kHz	@ 100 kHz
APL1750	1700	1800	2	5.0	≤ 30	≤ -20	≤ -103	≤ -120
APL1775	1775		5	5.0	≤ 30	≤ -25	≤ -105	≤ -122
APL1792-R/T	1792		2	5.0	≤ 35	≤ -20	≤ -98	≤ -115
APL1810-T	1780	1840	3	5.0	≤ 40	≤ -20	≤ -100	≤ -120
APL1830	1830		0	5.0	≤ 30	≤ -25	≤ -103	≤ -120
APL1865	1865		3	5.0	≤ 25	≤ -25	≤ -103	≤ -120
APL1905	1875	1935	5	5.0	≤ 35	≤ -20	≤ -102	≤ -119
APL1912.5-R	1913		4	5.0	≤ 40	≤ -20	≤ -97	≤ -115
APL1945.3-R	1945		3	5.0	≤ 30	≤ -25	≤ -103	≤ -120
APL1955-R/T	1955		4	5.0	≤ 40	≤ -20	≤ -98	≤ -115

Part Number	Frequency Range (MHz)		Output Level (dBm)	Vd (V)	Id (mA)	2nd Harmonics (dBm)	Phase Noise (dBc/Hz)	
	Min.	Max.					@ 10 kHz	@ 100 kHz
APL1982.5	1945	2020	3	5.0	≤ 35	≤ -20	≤ -97	≤ -115
APL2020-T	1970	2070	5	5.0	≤ 40	≤ -20	≤ -95	≤ -115
APL2042	2042		4	5.0	≤ 40	≤ -20	≤ -97	≤ -115
APL2062.5-R/T	2063		10	5.0	≤ 50	≤ -20	≤ -100	≤ -118
APL2090-R	2090		0	5.0	≤ 30	≤ -30	≤ -100	≤ -120
APL2100-T	2040	2160	2	5.0	≤ 40	≤ -20	≤ -95	≤ -115
APL2255	2225	2285	3	5.0	≤ 35	≤ -20	≤ -100	≤ -118
APL2290-R/T	2290		4	5.0	≤ 40	≤ -20	≤ -96	≤ -114
APL2361	2359	2365	2	5.0	≤ 30	≤ -25	≤ -102	≤ -119
APL2440	2440		4	5.0	≤ 34	≤ -20	≤ -95	≤ -65
APL2562	2538	2588	2	5.0	≤ 30	≤ -25	≤ -102	≤ -119
APL2610	2610		4	5.0	≤ 34	≤ -20	≤ -95	≤ -65
APL5800	5700	5900	0	5.0	≤ 60	≤ -8	≤ -75	≤ -95

Worldwide Representatives



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