

BROADBAND LOW NOISE AMPLIFIERS

MLA 2100-000 SERIES

DESCRIPTION

This series of broadband low noise amplifiers offers non-temperature compensated performance over a variety of octave and multi-octave frequency bands. These amplifiers have a wide range of gain and output power options and are optimised for noise figure and dynamic range.

SPECIFICATIONS (guaranteed @ +25°C)

Frequency Range (GHz)	Output Power at 1dB Gain Comp (dBm) Min.	Gain (dB) Min.	Gain Flatness (dB) Min. Max.	Gain Variation with Temp (dB/°C)	Noise Figure (dB) Max.	Input and Output VSWR Max.	DC Current at +15V (mA)	Package Styles	Part Number	
0.5 - 2.0	+12	16	±1.00	0.020	4.0	2.0	65	A1, A3	MLA 2130-101	
		32	±2.00	0.040	4.0	2.0	130	A1, A3	MLA 2130-102	
		48	±2.50	0.060	4.0	2.0	200	A1, A3	MLA 2130-103	
	+20	8	±1.00	0.010	5.0	2.0	150	A1, A3	MLA 2130-201	
		24	±2.00	0.030	4.0	2.0	200	A1, A3	MLA 2130-202	
		40	±2.50	0.040	4.0	2.0	270	A1, A3	MLA 2130-203	
	+23	8	±1.00	0.020	5.0	2.0	150	A1, A3	MLA 2130-301	
		16	±2.00	0.040	4.0	2.0	280	A1, A3	MLA 2130-302	
		32	±2.50	0.060	4.0	2.0	350	A1, A3	MLA 2130-303	
	2.0 - 8.0	+10	48	±3.00	0.080	4.0	2.0	420	B1, B3	MLA 2130-304
			18	±1.50	0.025	3.5	2.0	130	A1, A3	MLA 2140-101
			27	±1.50	0.035	3.5	2.0	200	B1, B3	MLA 2140-102
+15		36	±1.75	0.050	3.5	2.0	270	B1, B3	MLA 2140-103	
		18	±1.50	0.025	4.0	2.0	150	A1, A3	MLA 2140-201	
		27	±1.50	0.035	4.0	2.0	220	B1, B3	MLA 2140-202	
+18		36	±1.75	0.050	4.0	2.0	300	B1, B3	MLA 2140-203	
		18	±1.50	0.025	5.0	2.0	180	A1, A3	MLA 2140-301	
		27	±1.50	0.035	5.0	2.0	280	B1, B3	MLA 2140-302	
6.0 - 12.0		+10	36	±1.75	0.050	5.0	2.0	350	B1, B3	MLA 2140-303
			12	±1.00	0.025	3.8	2.0	100	A1, A2	MLA 2150-101
			23	±1.25	0.050	3.8	2.0	200	B1, B2	MLA 2150-102
	+15	34	±1.75	0.075	3.8	2.0	300	B1, B2	MLA 2150-103	
		46	±2.00	0.100	3.8	2.0	400	C1, C2	MLA 2150-104	
		52	±2.00	0.120	3.8	2.0	450	D1, D2	MLA 2150-105	
	+18	11	±1.25	0.025	5.0	2.0	150	A1, A2	MLA 2150-201	
		22	±1.50	0.050	5.0	2.0	250	B1, B2	MLA 2150-202	
		33	±1.75	0.075	5.0	2.0	350	B1, B2	MLA 2150-203	
	+20	44	±2.00	0.100	5.0	2.0	450	C1, C2	MLA 2150-204	
		50	±2.00	0.120	5.0	2.0	500	D1, D2	MLA 2150-205	
		10	±1.25	0.025	7.0	2.0	175	A1, A2	MLA 2150-301	
21		±1.50	0.050	6.0	2.0	275	B1, B2	MLA 2150-302		
32		±1.75	0.075	6.0	2.0	400	B1, B2	MLA 2150-303		
42		±2.00	0.100	6.0	2.0	500	C1, C2	MLA 2150-304		
	48	±2.00	0.120	6.0	2.0	550	D1, D2	MLA 2150-305		

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Frequency Range (GHz)	Output Power at 1dB Gain Comp (dBm) Min.	Gain (dB) Min.	Gain Flatness (dB) Max.	Gain Variation with Temp (dB/°C)	Noise Figure (dB) Max.	Input and Output VSWR Max.	DC Current at +15V (mA)	Package Styles	Part Number	
12.0 - 18.0	+10	11	±1.00	0.025	4.2	2.0	100	A1, A2	MLA 2160-101	
		22	±1.25	0.050	4.2	2.0	200	B1, B2	MLA 2160-102	
		33	±1.75	0.075	4.2	2.0	300	B1, B2	MLA 2160-103	
		44	±2.00	0.100	4.2	2.0	400	C1, C2	MLA 2160-104	
	+15	50	±2.00	0.120	4.2	2.0	450	D1, D2	MLA 2160-105	
		10	±1.00	0.025	6.0	2.0	150	A1, A2	MLA 2160-201	
		21	±1.25	0.050	6.0	2.0	250	B1, B2	MLA 2160-202	
		32	±1.75	0.075	6.0	2.0	350	B1, B2	MLA 2160-203	
		43	±2.00	0.100	6.0	2.0	450	C1, C2	MLA 2160-204	
		49	±2.00	0.120	6.0	2.0	500	D1, D2	MLA 2160-205	
		+18	9	±1.00	0.025	8.0	2.0	175	A1, A2	MLA 2160-301
			20	±1.25	0.050	7.0	2.0	275	B1, B2	MLA 2160-302
30	±1.75		0.075	7.0	2.0	400	B1, B2	MLA 2160-303		
40	±2.00		0.100	7.0	2.0	500	C1, C2	MLA 2160-304		
6.0 - 18.0	+10	46	±2.00	0.120	7.0	2.0	550	D1, D2	MLA 2160-305	
		11	±1.00	0.025	4.2	2.0	100	A1, A2	MLA 2170-101	
		22	±1.50	0.050	4.2	2.0	200	B1, B2	MLA 2170-102	
		33	±1.75	0.075	4.2	2.0	300	B1, B2	MLA 2170-103	
	+15	44	±2.00	0.100	4.2	2.0	400	C1, C2	MLA 2170-104	
		50	±2.00	0.120	4.2	2.0	450	D1, D2	MLA 2170-105	
		10	±1.25	0.025	6.0	2.0	150	A1, A2	MLA 2170-201	
		21	±1.50	0.050	6.0	2.0	250	B1, B2	MLA 2170-202	
		32	±1.75	0.075	6.0	2.0	350	B1, B2	MLA 2170-203	
		43	±2.00	0.100	6.0	2.0	450	C1, C2	MLA 2170-204	
		49	±2.00	0.120	6.0	2.0	500	D1, D2	MLA 2170-205	
		+18	9	±1.50	0.025	8.0	2.0	175	A1, A2	MLA 2170-301
20	±1.50		0.050	7.0	2.0	275	B1, B2	MLA 2170-302		
30	±1.75		0.075	7.0	2.0	400	B1, B2	MLA 2170-303		
40	±2.00		0.100	7.0	2.0	500	C1, C2	MLA 2170-304		
2.0 - 18.0	+2	46	±2.00	0.120	7.0	2.0	550	D1, D2	MLA 2170-305	
		10	±1.00	0.018	4.8	2.2	50	A1, A2	MLA 2180-101	
		20	±1.50	0.036	4.8	2.2	100	A1, A2	MLA 2180-102	
		10	±1.25	0.036	5.5	2.2	250	A1, A2	MLA 2180-201	
	+12	20	±2.00	0.072	5.5	2.2	500	B1, B2	MLA 2180-202	
		30	±2.50	0.090	5.5	2.2	550	B1, B2	MLA 2180-203	
		7	±0.75	0.018	8.0	2.2	180	A1, A2	MLA 2180-301	
		15	±1.50	0.036	8.5	2.2	360	A1, A2	MLA 2180-302	
	+17	20	±2.00	0.054	8.5	2.2	450	A1, A2	MLA 2180-303	
		30	±2.50	0.072	8.5	2.2	500	B1, B2	MLA 2180-304	

NOTES

- 1) Maximum input power without damage +20dBm (cw)
- 2) Third order intercept point is typically 10dB above P1dB
- 3) All amplifiers have reverse polarity and over voltage power supply protection
- 4) Alternative +8V and +12V power supplies are available on selected amplifiers, please contact the factory
- 5) All amplifiers are unconditionally stable for any input or output VSWR, any phase
- 6) Case operating temperature -55°C to +95°C
Storage temperature -55°C to +125°C(7)
- 7) Amplifiers are supplied in standard package styles (A1, B1, C1, D1) unless miniature option (A2, B2 etc) is specified.

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