

Low Noise Amplifier

ZX60-06183LN+

Typical Performance Data

Definitions:

Input Return Loss = -S11 (dB)

Gain(Power Gain) = S21 (dB)

Reverse Isolation = -S12 (dB)

Output Return Loss = -S22 (dB)

TEST CONDITIONS: Vd = 5.00V, Id = 103.49mA @ Temperature = +25°C

FREQ	Gain	Isolation	Input Return Loss	Output Return Loss	Stability		IP-3 Output	1dB Comp. Output	Noise Figure
					K	Measure			
(GHz)	(dB)	(dB)	(dB)	(dB)	K	Measure	(dBm)	(dBm)	(dB)
4.0	14.87	56.14	3.83	5.77	24.64	1.04	15.08	5.89	3.22
4.5	19.10	60.72	5.22	6.33	32.20	1.00	18.98	8.77	2.66
5.0	21.12	57.57	8.19	7.01	22.67	0.92	21.18	10.81	2.37
5.5	21.73	56.08	12.51	7.67	20.50	0.87	22.58	12.02	2.23
6.0	21.66	55.73	15.55	8.28	20.97	0.87	23.60	12.90	2.15
6.5	21.36	56.08	14.78	8.91	22.95	0.90	24.48	13.68	2.09
7.0	21.05	56.49	13.45	9.65	25.21	0.93	25.72	14.43	2.07
7.5	20.80	56.86	12.74	10.51	27.39	0.96	26.14	15.00	1.93
8.0	20.65	57.34	12.61	11.50	30.00	0.98	25.80	14.78	1.88
8.5	20.56	57.09	12.72	12.55	29.96	0.99	26.69	15.37	1.82
9.0	20.50	56.44	12.74	13.47	28.35	1.01	27.01	15.59	1.86
9.5	20.48	55.62	12.66	14.09	26.00	1.01	27.25	15.79	1.87
10.0	20.48	54.51	12.66	14.44	22.96	1.01	27.13	15.83	1.90
10.5	20.53	53.19	13.00	14.77	19.77	1.01	27.31	16.15	1.88
11.0	20.64	51.65	13.82	15.46	16.57	1.01	27.80	16.14	1.91
12.0	20.98	48.88	14.54	18.70	11.85	1.02	27.70	16.18	2.00
12.5	21.09	47.87	12.70	22.68	10.32	1.04	27.07	15.81	2.02
13.0	21.05	47.09	10.55	28.78	9.16	1.08	27.39	16.01	2.13
13.5	20.92	46.32	8.91	23.05	8.10	1.12	27.03	15.63	2.19
14.0	20.75	45.54	7.86	17.42	7.17	1.14	26.49	15.40	2.39
14.5	20.63	44.62	7.35	14.09	6.28	1.13	26.86	15.34	2.44
15.0	20.60	43.58	7.35	12.24	5.52	1.10	26.18	15.05	2.44
15.5	20.69	42.30	8.03	11.61	4.86	1.05	25.71	14.77	2.57
16.0	20.84	40.95	9.59	12.25	4.37	1.02	25.70	14.68	2.48
16.5	20.91	39.70	12.38	14.72	4.05	1.00	25.59	14.73	2.56
17.0	20.71	38.69	15.75	20.44	3.88	1.00	25.80	14.83	2.48
18.0	19.35	37.36	14.35	21.28	3.88	1.01	26.51	15.26	2.45

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Reverse Isolation = -S12 (dB)

Output Return Loss = -S22 (dB)

TEST CONDITIONS: Vd = 5.00V, Id = 112.60mA @ Temperature = -45°C

FREQ	Gain	Isolation	Input Return Loss	Output Return Loss	Stability		IP-3 Output	1dB Comp. Output	Noise Figure
					K	Measure			
(GHz)	(dB)	(dB)	(dB)	(dB)	K	Measure	(dBm)	(dBm)	(dB)
4.0	16.36	55.34	3.45	5.53	17.20	1.05	17.33	7.33	2.47
4.5	20.75	59.67	4.88	6.03	22.22	1.00	21.15	10.21	1.94
5.0	22.85	56.85	8.18	6.74	16.81	0.91	23.41	12.25	1.69
5.5	23.44	55.39	13.33	7.52	15.61	0.86	24.77	13.49	1.59
6.0	23.31	55.14	17.05	8.25	16.33	0.86	25.67	14.31	1.40
6.5	22.94	55.37	15.01	8.95	17.70	0.90	26.48	15.07	1.45
7.0	22.55	56.00	12.92	9.62	19.91	0.94	27.67	15.65	1.45
7.5	22.23	56.47	11.86	10.37	21.85	0.97	27.82	16.18	1.29
8.0	22.05	57.19	11.49	11.24	24.54	0.99	27.67	16.09	1.20
8.5	21.95	57.17	11.45	12.21	25.18	1.01	28.32	16.54	1.19
9.0	21.88	56.83	11.48	13.13	24.73	1.02	28.58	16.71	1.19
9.5	21.84	56.10	11.42	13.75	22.97	1.03	28.79	16.86	1.21
10.0	21.82	55.15	11.37	13.97	20.69	1.03	28.71	16.95	1.25
10.5	21.85	53.83	11.63	14.09	17.82	1.02	28.69	17.19	1.29
11.0	21.97	52.22	12.51	14.64	14.87	1.02	29.38	17.07	1.24
12.0	22.40	49.17	13.56	17.69	10.29	1.02	29.35	17.18	1.29
12.5	22.56	48.10	11.87	21.71	8.83	1.05	29.08	17.10	1.33
13.0	22.55	47.25	9.73	29.12	7.70	1.10	29.34	17.21	1.38
13.5	22.45	46.46	8.13	23.29	6.72	1.14	29.07	17.02	1.42
14.0	22.32	45.68	7.16	17.71	5.90	1.16	28.87	16.91	1.53
14.5	22.26	44.74	6.73	14.68	5.15	1.16	29.10	16.78	1.52
15.0	22.33	43.62	6.77	12.95	4.47	1.13	28.55	16.61	1.60
15.5	22.54	42.17	7.51	12.39	3.86	1.08	28.04	16.42	1.72
16.0	22.77	40.74	9.10	12.74	3.43	1.03	27.95	16.35	1.61
16.5	22.90	39.42	11.92	14.41	3.14	0.99	27.84	16.34	1.67
17.0	22.73	38.30	16.46	18.25	2.99	0.98	27.87	16.38	1.61
18.0	21.42	36.64	15.01	21.90	2.88	0.99	28.24	16.61	1.61

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Reverse Isolation = -S12 (dB)

Output Return Loss = -S22 (dB)

TEST CONDITIONS: Vd = 5.00V, Id = 97.02mA @ Temperature = +85°C

FREQ	Gain	Isolation	Input Return Loss	Output Return Loss	Stability		IP-3 Output	1dB Comp. Output	Noise Figure
					K	Measure			
(GHz)	(dB)	(dB)	(dB)	(dB)	K	Measure	(dBm)	(dBm)	(dB)
4.0	13.55	56.83	4.07	5.91	32.64	1.04	13.54	4.74	3.86
4.5	17.70	61.45	5.45	6.42	42.41	0.99	17.54	7.62	3.26
5.0	19.69	58.07	8.29	7.04	28.45	0.92	19.77	9.69	2.87
5.5	20.33	56.56	12.14	7.67	25.31	0.88	21.14	10.97	2.74
6.0	20.32	56.30	14.88	8.26	25.98	0.88	22.18	11.90	2.62
6.5	20.08	56.46	14.79	8.90	27.81	0.90	23.06	12.71	2.59
7.0	19.81	57.14	13.87	9.65	31.44	0.93	24.21	13.45	2.56
7.5	19.61	57.38	13.57	10.58	33.76	0.95	24.67	14.03	2.44
8.0	19.49	57.22	13.69	11.71	34.38	0.97	24.32	13.84	2.34
8.5	19.41	56.72	13.90	12.90	33.40	0.99	25.22	14.47	2.35
9.0	19.36	56.06	13.81	13.88	31.47	1.00	25.51	14.71	2.42
9.5	19.34	55.14	13.51	14.37	28.43	1.01	25.73	14.91	2.40
10.0	19.34	54.04	13.36	14.51	25.04	1.01	25.68	14.95	2.47
10.5	19.40	52.63	13.76	14.64	21.27	1.00	25.78	15.25	2.47
11.0	19.51	51.09	14.83	15.31	17.85	1.00	26.13	15.26	2.47
12.0	19.80	48.63	15.52	19.23	13.29	1.01	26.01	15.28	2.59
12.5	19.84	47.79	13.14	24.52	11.88	1.04	25.39	14.86	2.65
13.0	19.74	47.10	10.87	29.07	10.72	1.08	25.63	15.01	2.76
13.5	19.56	46.28	9.25	20.84	9.49	1.11	25.22	14.55	2.87
14.0	19.36	45.48	8.24	16.06	8.42	1.12	24.81	14.25	3.03
14.5	19.21	44.59	7.77	13.31	7.44	1.11	25.03	14.17	3.10
15.0	19.16	43.59	7.80	11.81	6.59	1.08	24.42	13.83	3.17
15.5	19.21	42.36	8.49	11.42	5.86	1.04	23.98	13.55	3.30
16.0	19.29	41.13	9.98	12.21	5.34	1.02	23.98	13.46	3.35
16.5	19.28	39.96	12.34	14.63	4.99	1.01	23.93	13.54	3.31
17.0	19.03	39.06	14.77	19.73	4.84	1.01	24.26	13.69	3.16
18.0	17.70	37.97	13.81	22.26	4.98	1.02	24.89	14.19	3.22