

# Amplifier

# ZX60-V83-S+

## Typical Performance Data

**NOTE: Use PDF Bookmarks to view DATA at required conditions  
or to view GRAPHS.**

**Definitions:**

Input Return Loss = -S11 (dB)

Gain(Power Gain) = S21 (dB)

Reverse Isolation = -S12 (dB)

Output Return Loss = -S22 (dB)

TEST CONDITIONS: I = 69mA, Vd = 5V @Temperature = +25degC

FREQ	Gain	Isolation	Input Return Loss	Output Return Loss	Stability		IP3 Output	1dB Comp. Output	Noise Figure
					K	Delta			
(MHz)	(dB)	(dB)	(dB)	(dB)	K	Delta	(dBm)	(dBm)	(dB)
20	19.12	29.70	21.36	12.01	1.74	0.32	27.19	15.65	6.50
100	19.84	28.90	29.98	16.60	1.56	0.35	29.84	16.88	6.19
200	19.84	28.87	31.46	16.50	1.56	0.35	29.47	16.83	6.18
400	19.74	28.63	27.85	15.98	1.53	0.35	30.33	17.09	6.18
500	19.65	28.53	26.99	15.53	1.52	0.35	29.51	16.99	6.20
800	19.22	28.15	23.66	14.54	1.51	0.35	29.45	16.98	6.23
1000	18.87	27.77	22.04	13.70	1.49	0.34	29.14	17.05	6.23
1200	18.46	27.52	21.04	13.02	1.49	0.33	29.64	16.70	6.22
1400	18.05	27.15	20.17	12.47	1.49	0.33	29.85	17.03	6.21
1500	17.84	27.04	19.93	12.25	1.49	0.32	30.21	17.14	6.22
1600	17.63	26.86	19.67	12.06	1.49	0.32	30.32	17.12	6.23
1800	17.21	26.58	19.26	11.73	1.50	0.32	31.41	16.86	6.25
2000	16.79	26.23	18.88	11.40	1.50	0.31	31.78	16.85	6.26
2200	16.38	25.94	18.56	11.06	1.51	0.31	31.48	17.02	6.28
2400	15.99	25.74	18.38	10.86	1.53	0.30	32.07	16.94	6.33
2500	15.79	25.64	18.24	10.79	1.54	0.29	31.36	17.03	6.34
2600	15.61	25.51	18.05	10.75	1.54	0.29	30.77	17.07	6.36
2800	15.25	25.30	17.78	10.82	1.56	0.28	31.23	17.08	6.39
3000	14.92	25.10	17.58	10.89	1.58	0.28	31.10	16.74	6.37
3200	14.60	24.91	17.48	11.11	1.61	0.27	30.90	17.30	6.38
3400	14.31	24.72	17.65	11.37	1.63	0.27	30.62	17.40	6.40
3500	14.17	24.65	17.78	11.51	1.65	0.27	30.48	17.43	6.41
3800	13.72	24.43	18.75	11.97	1.70	0.27	30.51	17.11	6.45
4000	13.45	24.38	19.96	12.07	1.76	0.26	30.64	17.73	6.49
4200	13.14	24.26	21.25	12.20	1.80	0.26	30.40	17.58	6.55
4400	12.84	24.28	21.16	12.14	1.87	0.26	30.24	17.40	6.64
4500	12.70	24.31	20.75	12.05	1.90	0.26	30.28	17.38	6.69
4600	12.56	24.25	20.19	11.96	1.91	0.26	30.08	17.44	6.74
4700	12.44	24.28	19.22	11.73	1.94	0.26	30.15	17.40	6.79
4800	12.30	24.24	18.26	11.45	1.95	0.27	30.17	17.50	6.83
5000	12.05	24.23	16.60	10.90	1.97	0.27	30.08	17.43	6.93
5500	11.42	24.28	13.55	9.37	2.02	0.28	29.56	17.25	7.11
5800	10.92	24.32	11.93	8.40	2.05	0.30	29.17	17.04	7.27
6000	10.54	24.47	10.89	7.79	2.10	0.30	29.20	16.88	7.33
6500	9.42	24.87	8.46	6.66	2.22	0.33	28.48	16.51	7.60
6600	9.15	24.97	7.99	6.45	2.24	0.33	28.52	15.65	7.69
6800	8.60	25.20	7.28	6.14	2.32	0.34	28.15	16.02	7.84
7000	8.02	25.46	6.53	5.89	2.40	0.35	28.37	15.38	8.05



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## 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: I = 69mA, Vd = 5V @Temperature = -40degC

FREQ	Gain	Isolation	Input Return Loss	Output Return Loss	Stability		IP3 Output	1dB Comp. Output	Noise Figure
					K	Delta			
(MHz)	(dB)	(dB)	(dB)	(dB)	K	Delta	(dBm)	(dBm)	(dB)
20	19.20	29.71	21.25	11.59	1.72	0.32	26.12	15.17	5.96
100	19.77	28.83	29.25	15.43	1.56	0.36	28.49	16.21	5.59
200	19.77	28.75	31.41	15.04	1.54	0.36	28.09	16.11	5.55
400	19.69	28.52	28.25	15.61	1.52	0.36	29.19	16.48	5.53
500	19.61	28.41	27.92	15.11	1.51	0.36	28.46	16.40	5.54
800	19.20	28.01	24.27	14.04	1.49	0.35	28.52	16.38	5.55
1000	18.87	27.66	23.08	13.28	1.47	0.35	28.15	16.42	5.54
1200	18.48	27.41	22.02	12.73	1.48	0.34	28.76	16.03	5.54
1400	18.09	27.07	20.37	12.55	1.47	0.33	29.17	16.42	5.53
1500	17.89	26.92	19.91	12.36	1.47	0.33	29.49	16.54	5.54
1600	17.68	26.75	19.43	12.20	1.47	0.33	29.67	16.54	5.56
1800	17.27	26.43	18.93	11.81	1.47	0.32	30.97	16.26	5.58
2000	16.85	26.14	18.81	11.38	1.48	0.32	30.50	16.22	5.57
2200	16.45	25.91	18.68	10.93	1.49	0.31	31.23	16.38	5.59
2400	16.07	25.72	18.31	10.74	1.51	0.30	31.61	16.35	5.62
2500	15.87	25.56	18.06	10.64	1.51	0.30	31.45	16.45	5.63
2600	15.69	25.45	17.91	10.55	1.51	0.29	31.43	16.45	5.65
2800	15.35	25.22	18.00	10.57	1.53	0.29	31.87	16.45	5.65
3000	15.04	25.01	18.36	10.58	1.54	0.29	31.43	16.04	5.63
3200	14.76	24.76	18.69	10.80	1.56	0.29	30.83	16.77	5.65
3400	14.49	24.61	18.79	11.08	1.59	0.28	30.58	16.93	5.66
3500	14.36	24.49	18.86	11.17	1.59	0.28	30.79	17.03	5.67
3800	13.97	24.27	18.97	11.72	1.64	0.28	30.65	16.58	5.69
4000	13.71	24.20	19.57	11.80	1.67	0.28	30.77	17.43	5.73
4200	13.44	24.12	20.45	11.90	1.72	0.28	30.98	17.45	5.80
4400	13.16	24.05	20.99	11.71	1.75	0.28	30.73	17.06	5.87
4500	13.03	24.07	21.01	11.62	1.78	0.28	31.15	17.19	5.93
4600	12.90	24.03	21.09	11.51	1.80	0.28	30.70	17.19	5.97
4700	12.77	24.04	20.48	11.37	1.82	0.28	30.81	17.30	6.03
4800	12.63	24.00	19.58	11.13	1.84	0.28	30.96	17.26	6.08
5000	12.36	24.02	17.85	10.65	1.87	0.28	30.73	17.34	6.16
5200	12.12	24.04	15.96	10.20	1.90	0.29	30.62	17.11	6.23
5500	11.69	24.11	13.63	9.41	1.94	0.30	30.12	17.02	6.30
5800	11.25	24.20	12.23	8.54	1.98	0.30	29.88	17.08	6.39
6000	10.92	24.30	11.31	8.00	2.01	0.31	30.10	16.91	6.44
6500	9.92	24.61	8.88	6.79	2.10	0.34	29.35	16.68	6.70
6600	9.67	24.69	8.35	6.51	2.11	0.34	29.24	16.10	6.81
6800	9.09	24.92	7.24	6.00	2.14	0.37	29.37	16.36	7.11
7000	8.48	25.27	6.35	5.64	2.21	0.38	29.50	15.64	7.43



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## 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: I = 73mA, Vd = 5V @Temperature = +85degC

FREQ	Gain	Isolation	Input Return Loss	Output Return Loss	Stability		IP3 Output	1dB Comp. Output	Noise Figure
					K	Delta			
(MHz)	(dB)	(dB)	(dB)	(dB)	K	Delta	(dBm)	(dBm)	(dB)
20	18.88	30.03	20.77	11.56	1.83	0.30	27.58	15.63	6.95
100	19.82	28.95	29.99	17.09	1.58	0.35	30.55	17.08	6.68
200	19.83	28.75	29.47	17.64	1.55	0.36	30.19	17.09	6.68
400	19.70	28.54	26.47	16.34	1.52	0.36	30.88	17.29	6.69
500	19.59	28.50	26.08	15.61	1.53	0.35	30.17	17.20	6.71
800	19.14	28.07	22.87	14.56	1.51	0.34	30.09	17.15	6.75
1000	18.77	27.73	21.42	13.76	1.49	0.34	29.80	17.22	6.75
1200	18.36	27.45	20.56	13.12	1.50	0.33	30.37	16.94	6.74
1400	17.93	27.17	19.98	12.52	1.50	0.32	30.51	17.22	6.75
1500	17.71	26.98	19.84	12.26	1.50	0.32	30.90	17.33	6.76
1600	17.50	26.86	19.64	12.07	1.51	0.32	31.00	17.31	6.78
1800	17.06	26.53	19.21	11.75	1.51	0.31	32.10	17.07	6.80
2000	16.63	26.27	18.87	11.45	1.53	0.30	31.08	17.10	6.81
2200	16.22	25.98	18.49	11.21	1.54	0.30	32.13	17.26	6.85
2400	15.81	25.74	18.13	11.06	1.55	0.29	32.41	17.15	6.89
2500	15.61	25.65	17.85	11.04	1.57	0.29	31.90	17.26	6.91
2600	15.42	25.49	17.56	11.03	1.57	0.28	31.08	17.31	6.93
2800	15.04	25.31	16.98	11.12	1.60	0.28	31.41	17.30	6.96
3000	14.68	25.13	16.77	11.20	1.62	0.27	31.76	17.03	6.95
3200	14.33	24.97	16.69	11.39	1.66	0.26	31.40	17.43	6.97
3400	14.00	24.81	16.83	11.58	1.69	0.25	31.33	17.51	6.99
3500	13.84	24.77	17.02	11.74	1.72	0.25	31.14	17.44	6.99
3800	13.32	24.62	18.29	12.24	1.81	0.25	31.30	17.15	7.03
4000	12.98	24.54	19.62	12.44	1.88	0.24	31.15	17.55	7.09
4200	12.58	24.60	20.05	12.63	1.98	0.24	30.94	17.21	7.16
4400	12.21	24.63	19.42	12.40	2.06	0.23	30.29	17.13	7.25
4500	12.09	24.61	18.97	12.24	2.08	0.23	30.58	17.11	7.29
4600	11.99	24.54	18.42	12.03	2.08	0.24	30.53	17.17	7.33
4700	11.92	24.51	17.70	11.75	2.08	0.24	30.57	17.09	7.37
4800	11.84	24.49	16.97	11.38	2.07	0.25	30.53	17.32	7.42
5000	11.71	24.30	15.73	10.86	2.04	0.26	30.78	17.35	7.53
5200	11.52	24.23	14.75	10.37	2.04	0.26	30.24	17.19	7.60
5500	11.13	24.22	13.86	9.49	2.07	0.27	29.83	17.21	7.69
5800	10.60	24.30	12.21	8.45	2.12	0.28	29.95	16.87	7.82
6000	10.15	24.44	11.04	7.75	2.17	0.29	30.60	16.66	7.93
6500	8.81	25.05	8.14	6.54	2.36	0.32	29.96	16.10	8.30
6600	8.52	25.15	7.61	6.38	2.38	0.33	29.34	15.10	8.41
6800	7.94	25.44	6.93	6.17	2.49	0.33	28.79	15.36	8.59
7000	7.37	25.66	6.33	6.02	2.58	0.34	29.35	14.80	8.75



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