

Amplifier

50Ω 0.5 to 2.5 GHz

Features

- From 2.8V to 5V operation
- High directivity, 30 dB typ.
- Wide bandwidth, 0.5 to 2.5 GHz
- Low noise figure, 3.5 dB typ.
- Output power, up to 18.2 dBm typ.
- Protected by US patent 6,790,049

Applications

- Buffer amplifier
- Cellular
- PCN
- Lab
- Instrumentation
- Test equipment



CASE STYLE: GA955

Connectors	Model
SMA	ZX60-2531M-S+

+RoHS Compliant

The +Suffix identifies RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications

Electrical Specifications at T_{AMB} = 25°C

MODEL NO.	FREQ. (GHz)	DC VOLTAGE @ Pin V+ (V)	GAIN over frequency in GHz							MAXIMUM POWER (dBm)		DYNAMIC RANGE			VSWR (:1) Typ.		ACTIVE DIRECTIVITY (dB) Isolation-Gain	DC OPERATING CURRENT @ Pin V+ (mA)		
			Typ (dB)							Output (1 dB Comp.)								Typ.	Typ. Max.	
			0.5	1.0	1.5	2.0	2.5	Min.at 2 GHz	f _L	f _U	NF (dB) Typ.	IP3 (dBm) Typ.		In	Out					
												1GHz	1GHz			2GHz				
ZX60-2531M+	0.5-2.5	5.0*	30.3	38.0	37.4	35.5	32.8	31.0	18.2	16.1	3.5	28.4	26.1	1.3	1.6	30	102	130		

*DC Voltage @ Pin V+ can also be 2.8V

Maximum Ratings

Operating Temperature -40°C to 80°C case

Storage Temperature -55°C to 100°C

DC Voltage 7V

Input Power (no damage) -15dBm

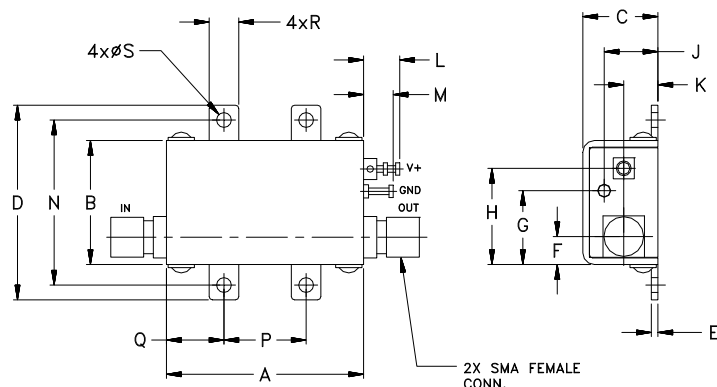
Power 700mW

Permanent damage may occur if any of these limits are exceeded.



NOTE: When soldering the DC connections, caution must be used to avoid overheating the DC terminals. See Application Note [AN-40-10](#).

Outline Drawing



Outline Dimensions (inch mm)

A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	S	wt.
1.20	.75	.46	1.18	.04	.17	.45	.59	.33	.21	.22	.18	1.00	.50	.35	.18	.106	grams
30.48	19.05	11.68	29.97	1.02	4.32	11.43	14.99	8.38	5.33	5.59	4.57	25.40	12.70	8.89	4.57	2.69	35.0

Notes

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Typical Performance Data at 25°C

ZX60-2531M+

V+ = 5.0V

FREQUENCY (MHz)	GAIN (dB)	DIRECTIVITY (dB)	VSWR IN (:1)	VSWR OUT (:1)	POWER OUT @1dB COMPRESSION (dBm)	IP3 (dBm)	NF (dB)
500	30.42	58.99	2.10	3.13	18.53	28.97	3.69
650	34.57	41.15	2.04	2.14	19.76	30.57	3.53
700	35.40	40.35	1.99	1.91	19.70	30.65	3.56
750	36.08	36.46	1.92	1.76	19.60	30.59	3.54
800	36.64	33.60	1.83	1.63	19.49	30.42	3.56
1000	37.92	29.50	1.65	1.42	18.34	29.24	3.61
1210	38.18	26.55	1.68	1.33	17.67	28.10	3.66
1500	37.30	25.92	1.50	1.42	17.27	27.58	3.64
1680	36.69	25.65	1.46	1.20	16.94	27.66	3.59
1780	36.41	24.84	1.42	1.20	16.73	27.68	3.64
1880	36.15	25.00	1.36	1.28	16.54	27.64	3.70
2000	35.84	24.28	1.26	1.32	16.36	27.45	3.75
2050	35.75	23.86	1.21	1.34	16.21	27.33	3.81
2100	35.58	24.00	1.17	1.40	16.25	27.18	3.81
2150	35.29	23.98	1.12	1.40	16.10	27.02	3.84
2200	35.16	23.52	1.06	1.48	16.18	26.84	3.82
2300	34.55	23.52	1.10	1.55	16.16	26.53	3.87
2400	33.65	23.81	1.24	1.62	16.31	26.39	3.87
2450	32.62	24.84	1.29	1.68	16.30	26.44	3.91
2500	32.50	24.73	1.39	1.69	16.37	26.62	3.95

V+ = 2.8V

FREQUENCY (MHz)	GAIN (dB)	DIRECTIVITY (dB)	VSWR IN (:1)	VSWR OUT (:1)	POWER OUT @1dB COMPRESSION (dBm)	IP3 (dBm)	NF (dB)
500	28.36	62.18	2.17	3.38	14.21	24.17	3.76
650	32.12	43.07	2.03	2.34	15.23	25.65	3.62
700	32.89	39.27	1.97	2.14	15.31	25.80	3.59
750	33.47	37.14	1.91	1.99	15.33	25.84	3.64
800	33.95	35.03	1.83	1.90	15.33	25.79	3.65
1000	34.96	30.63	1.69	1.75	14.74	25.15	3.67
1210	35.03	27.96	1.69	1.73	14.64	24.41	3.71
1500	34.25	26.71	1.66	1.65	14.67	24.01	3.69
1680	33.86	27.07	1.50	1.59	14.39	24.02	3.69
1780	33.66	26.25	1.43	1.54	14.30	24.01	3.70
1880	33.48	26.31	1.37	1.53	14.07	23.96	3.76
2000	33.28	25.82	1.24	1.55	14.01	23.81	3.82
2050	33.30	25.39	1.21	1.58	13.81	23.71	3.88
2100	33.17	24.92	1.16	1.64	13.81	23.60	3.84
2150	32.95	25.70	1.10	1.66	13.79	23.48	3.92
2200	32.88	25.33	1.07	1.71	13.37	23.35	3.91
2300	32.40	25.04	1.11	1.82	13.82	23.11	3.88
2400	31.60	25.39	1.23	1.99	13.93	22.98	3.97
2450	30.47	26.29	1.30	2.10	14.05	23.00	3.92
2500	30.51	26.26	1.38	2.18	14.02	23.10	3.95

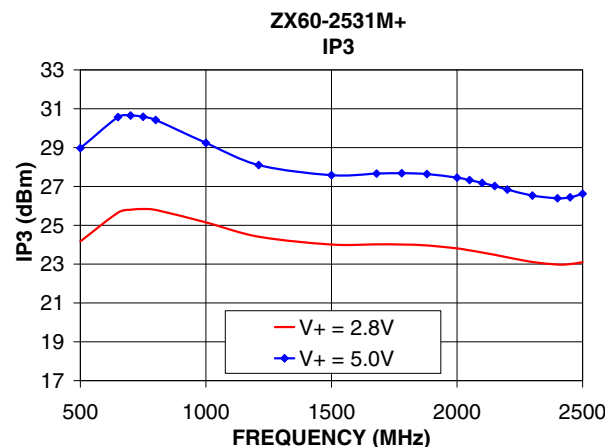
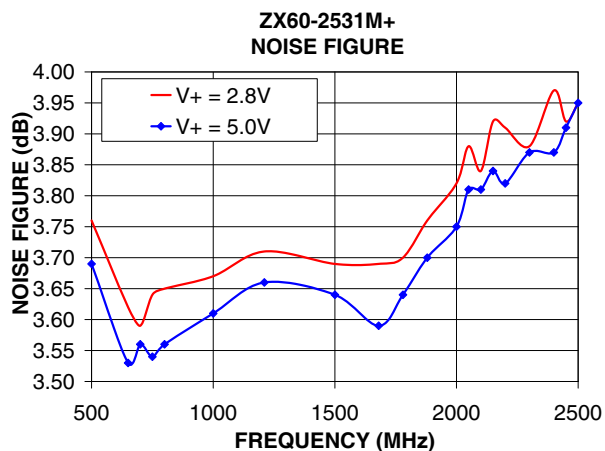
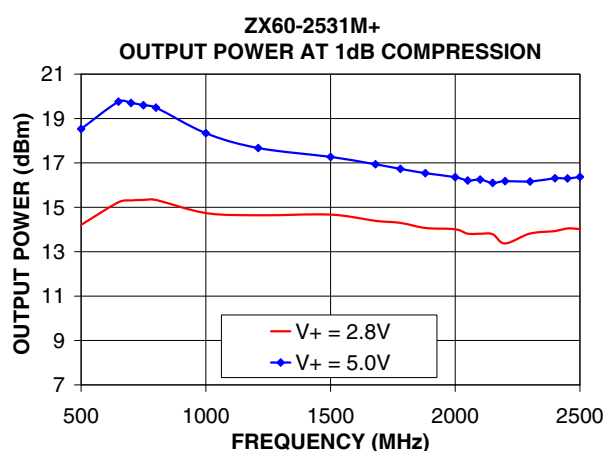
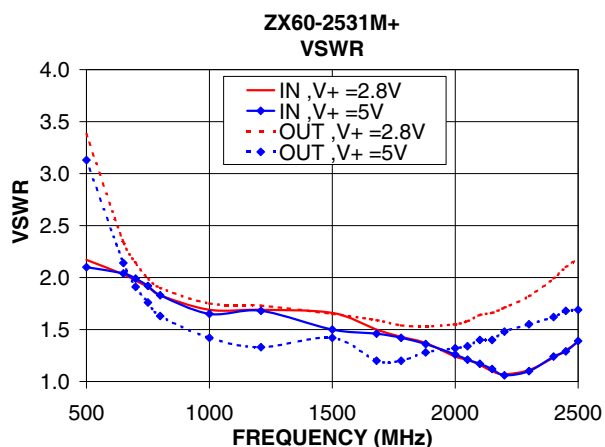
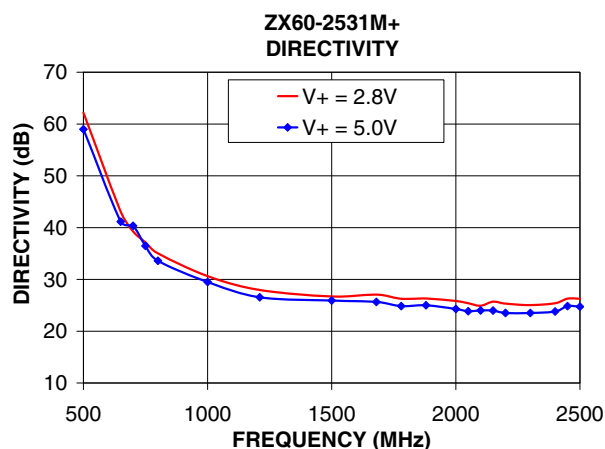
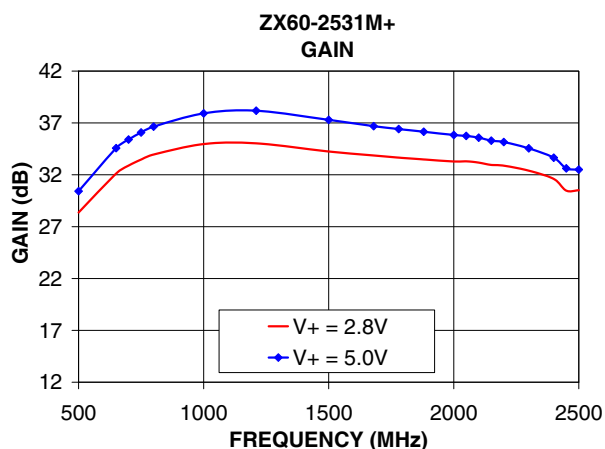
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Typical Performance Curves at 25 °C

ZX60-2531M+



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