

# Coaxial Amplifier

## ZFL-2500+

50Ω Medium Power 500 to 2500 MHz

### Features

- wideband, 500 to 2500 MHz
- high gain, 31 dB typ.
- protected by US Patent, 6,943,629

### Applications

- spread-spectrum and optical communications
- cellular base stations
- GPS
- test instrumentation



Generic photo used for illustration purposes only

CASE STYLE: Y460

Connectors	Model
SMA	ZFL-2500+
BRACKET (OPTION "B")	

**+RoHS Compliant**

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

### Amplifier Electrical Specifications

MODEL NO.	FREQUENCY (MHz)		GAIN (dB)		MAXIMUM POWER (dBm)		DYNAMIC RANGE		VSWR (:1) Typ.		DC POWER	
	$f_L$	$f_U$	Min.	Flatness Max.	Output (1 dB Compr.)	Input (no damage)	NF (dB) Typ.	IP3 (dBm) Typ.	In	Out	Volt (V) Nom.	Current (mA) Max.
ZFL-2500+	500	2500	28	±1.5	+15	+5	8.0	+27	2.5	2.5	5	220

Open load is not recommended, potentially can cause damage.  
With no load derate max input power by 20 dB

### Maximum Ratings

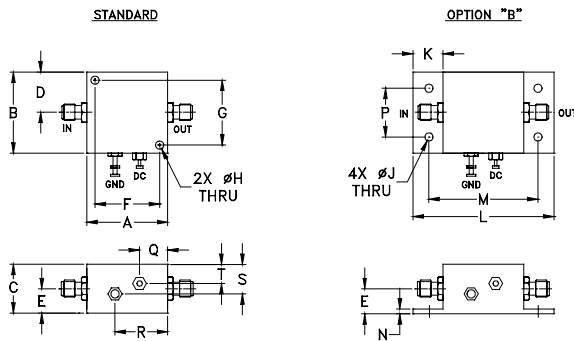
Operating Temperature -20°C to 65°C

Storage Temperature -55°C to 100°C

DC Voltage +6V Max.

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

### Outline Drawing



### Outline Dimensions (inch/mm)

A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	S	T	wt.
1.25	1.25	.75	.63	.36	1.000	1.000	.125	.125	.46	2.18	1.688	.06	.750	.50	.80	.45	.29	grams
31.75	31.75	19.05	16.00	9.14	25.40	25.40	3.18	3.18	11.68	55.37	42.88	1.52	19.05	12.70	20.32	11.43	7.37	38

### Notes

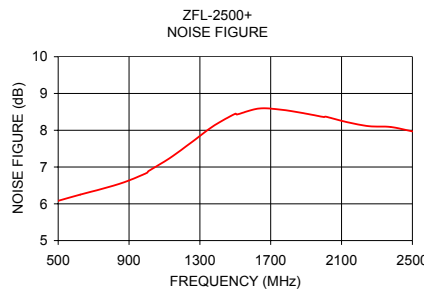
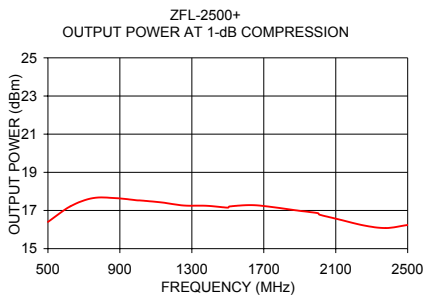
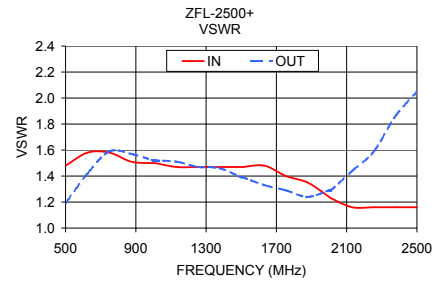
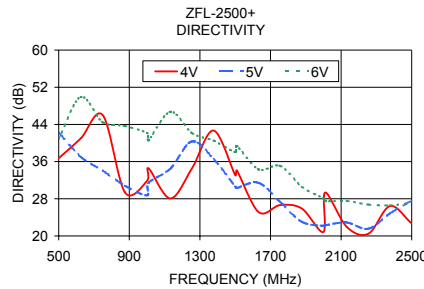
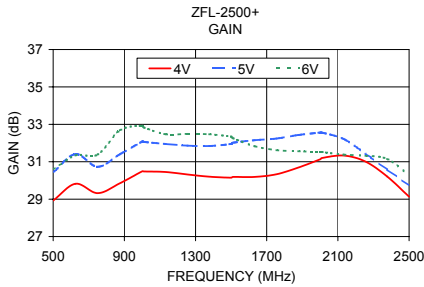
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FREQUENCY (MHz)	GAIN (dB)			DIRECTIVITY (dB)			VSWR (:1) 5V		NOISE FIGURE (dB)	POUT at 1 dB COMPR. (dBm)
	4V	5V	6V	4V	5V	6V	IN	OUT		
500.00	28.92	30.43	30.59	36.73	42.23	40.95	1.48	1.19	6.08	16.40
625.00	29.82	31.41	31.34	41.02	37.01	49.91	1.58	1.42	6.25	17.22
750.00	29.32	30.73	31.38	45.97	34.04	44.45	1.58	1.59	6.41	17.65
875.00	29.85	31.40	32.68	29.38	30.82	43.66	1.51	1.57	6.59	17.65
1000.00	30.49	32.08	32.93	31.84	28.74	42.15	1.50	1.52	6.84	17.53
1010.00	30.48	32.06	32.83	34.51	31.45	40.63	1.50	1.52	6.89	17.53
1132.50	30.45	31.95	32.47	28.07	34.48	46.73	1.47	1.51	7.25	17.42
1255.00	30.32	31.86	32.49	34.55	40.35	42.13	1.47	1.47	7.68	17.26
1377.50	30.20	31.84	32.47	42.68	36.54	40.51	1.47	1.46	8.12	17.25
1500.00	30.15	31.95	32.34	33.08	30.64	38.03	1.47	1.39	8.45	17.15
1510.00	30.19	32.05	32.26	34.08	30.33	39.34	1.47	1.39	8.43	17.21
1632.50	30.19	32.15	31.83	25.14	31.44	34.32	1.48	1.33	8.59	17.28
1755.00	30.33	32.24	31.62	26.65	27.32	35.09	1.40	1.29	8.56	17.17
1877.50	30.69	32.43	31.56	25.90	23.05	30.59	1.35	1.24	8.47	17.01
2000.00	31.13	32.56	31.53	20.85	22.18	28.08	1.24	1.29	8.36	16.86
2010.00	31.20	32.56	31.52	29.35	22.29	27.47	1.23	1.29	8.37	16.78
2132.00	31.33	32.22	31.38	21.96	22.88	27.51	1.16	1.44	8.22	16.50
2255.00	31.01	31.43	31.32	20.48	21.56	26.74	1.16	1.59	8.11	16.22
2377.00	30.21	30.58	31.15	26.43	24.85	26.58	1.16	1.86	8.09	16.08
2500.00	29.13	29.72	30.29	22.69	27.61	27.12	1.16	2.05	7.97	16.24



**Notes**

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# Amplifier

# ZFL-2500+

## Typical Performance Data

FREQUENCY (MHz)	GAIN (dB)			DIRECTIVITY (dB)			VSWR IN (:1) 5V	VSWR OUT (:1) 5V	NOISE FIGURE (dB) 5V	Pout at 1dB Comp. (dBm) 5V
	4V	5V	6V	4V	5V	6V				
500.0	28.9	30.4	30.59	36.73	42.23	40.95	1.48	1.19	6.08	16.40
625.0	29.8	31.4	31.34	41.02	37.01	49.91	1.58	1.42	6.25	17.22
750.0	29.3	30.7	31.38	45.97	34.04	44.45	1.58	1.59	6.41	17.65
875.0	29.9	31.4	32.68	29.38	30.82	43.66	1.51	1.57	6.59	17.65
1000.0	30.5	32.1	32.93	31.84	28.74	42.15	1.50	1.52	6.84	17.53
1010.0	30.5	32.1	32.83	34.51	31.45	40.63	1.50	1.52	6.89	17.53
1132.5	30.5	32.0	32.47	28.07	34.48	46.73	1.47	1.51	7.25	17.42
1255.0	30.3	31.9	32.49	34.55	40.35	42.13	1.47	1.47	7.68	17.26
1377.5	30.2	31.8	32.47	42.68	36.54	40.51	1.47	1.46	8.12	17.25
1500.0	30.2	32.0	32.34	33.08	30.64	38.03	1.47	1.39	8.45	17.15
1510.0	30.2	32.1	32.26	34.08	30.33	39.34	1.47	1.39	8.43	17.21
1632.5	30.2	32.2	31.83	25.14	31.44	34.32	1.48	1.33	8.59	17.28
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2377.0	30.2	30.6	31.15	26.43	24.85	26.58	1.16	1.86	8.09	16.08
2500.0	29.1	29.7	30.29	22.69	27.61	27.12	1.16	2.05	7.97	16.24

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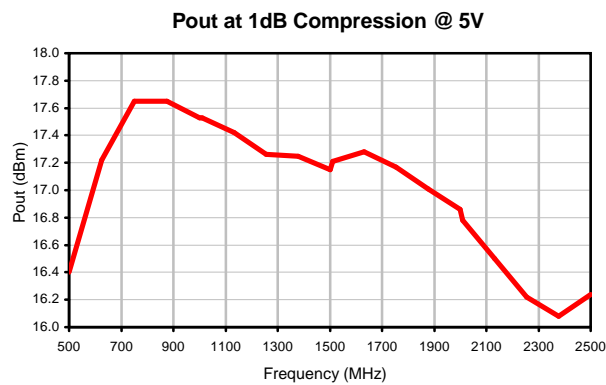
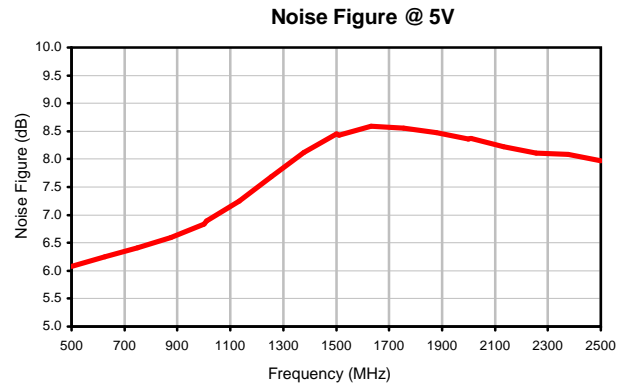
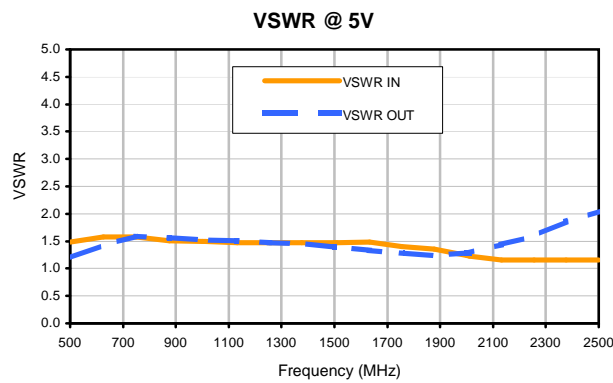
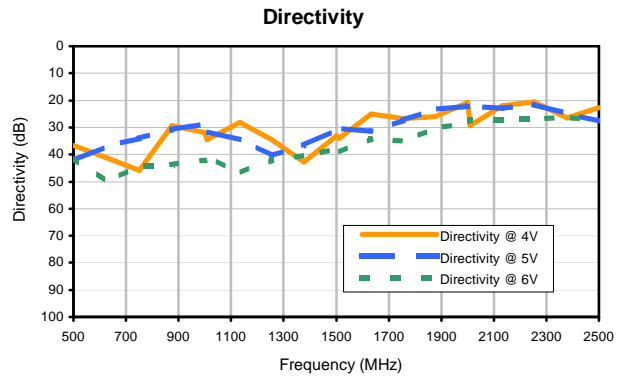
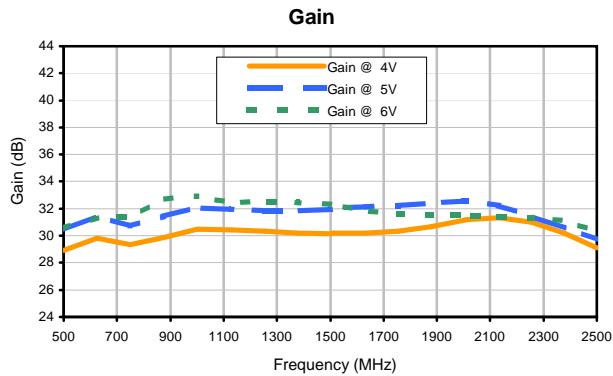
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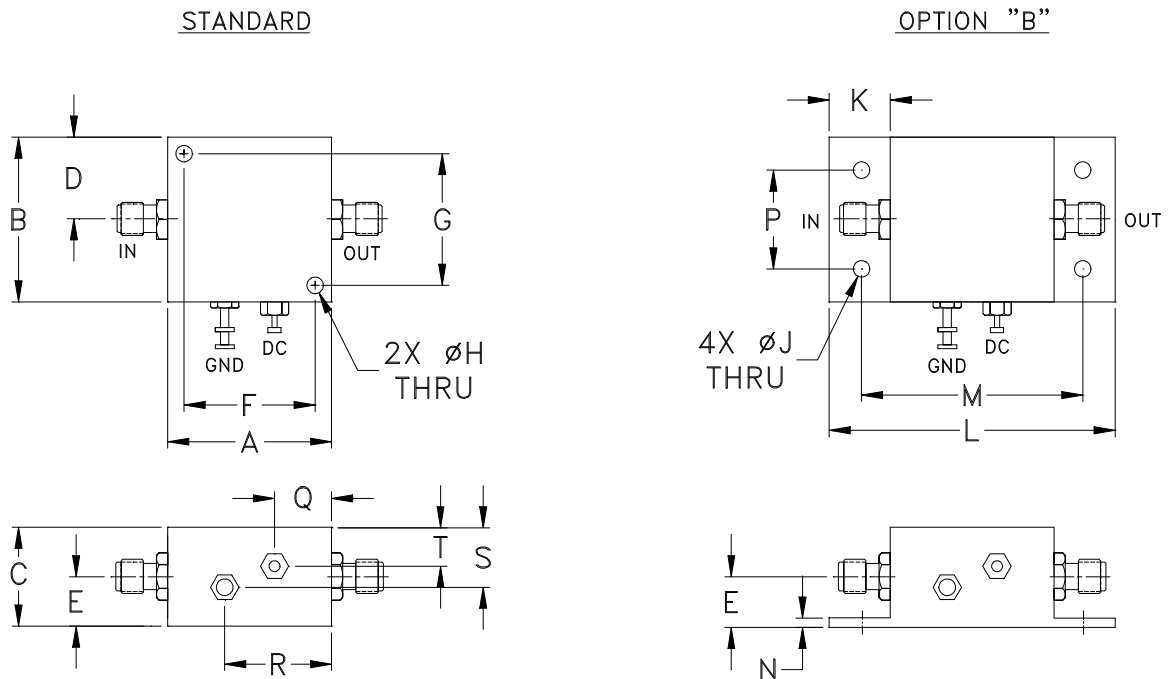
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## Typical Performance Curves



### Outline Dimensions



CASE#	A	B	C	D	E	F	G	H	J	K	L	M	N
Y460	1.25 (31.75)	1.25 (31.75)	.75 (19.05)	.63 (16.0)	.36 (9.15)	1.000 (25.4)	1.000 (25.4)	.125 (3.2)	.125 (3.2)	.46 (11.7)	2.18 (55.4)	1.688 (42.9)	.06 (1.5)

CASE#	P	Q	R	S	T	WT. GRAMS
Y460	.750 (19.0)	.50 (12.7)	.80 (20.3)	.45 (11.4)	.29 (7.4)	38

Dimensions are in inches (mm). Tolerances: 2 Pl.  $\pm .03$ ; 3 Pl.  $\pm .015$

#### Notes:

1. Case material: Aluminum alloy.
2. Case finish:  
For RoHS Case Styles: Clear chemical conversion coating, non-chrome or trivalent chrome based.
3. Mounting bracket available on request. Add suffix B to part number



All Mini-Circuits products are manufactured under exacting quality assurance and control standards, and are capable of meeting published specifications after being subjected to any or all of the following physical and environmental test.

Specification	Test/Inspection Condition	Reference/Spec
Operating Temperature	-20° to 65° C Ambient Environment	Individual Model Data Sheet
Storage Temperature	-55° to 100° C Ambient Environment	Individual Model Data Sheet
Stabilization Bake	(non-operating) 125°C, 24 hours	- - -
Burn-in at Elevated Temp.	(DC on) 160 hours at 85° C	MIL-STD-202, Method 108
Thermal Shock	-55° to 100°C, 5 cycles	MIL-STD-202, Method 107, Condition A, except 100°C