

Coaxial

# Low Noise Amplifier

## ZX60-542LN+

50Ω 4400 to 5400 MHz

### Features

- low noise figure, 1.9 dB typ.
- output power, up to 10 dBm typ.
- reverse polarity protection

### Applications

- front-end amplifier
- Satellite TV
- public safety
- astronomy
- weather
- defense & radar
- instrumentation
- test equipment



CASE STYLE: GA955

Connectors	Model
SMA	ZX60-542LN-S+

### +RoHS Compliant

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

### Electrical Specifications $T_{AMB}=25^{\circ}C$

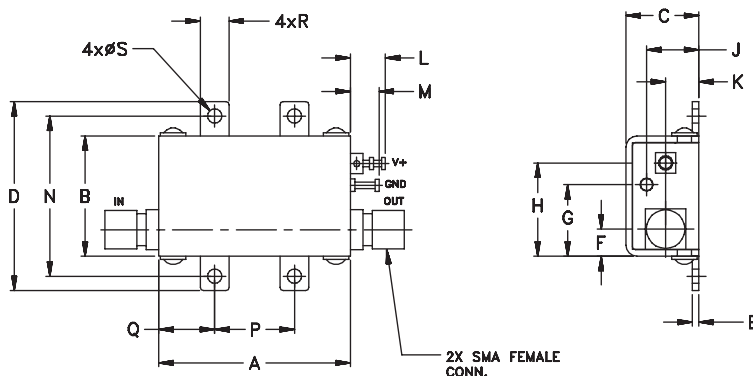
MODEL NO.	FREQUENCY (MHz)	DC VOLTS (V)	NOISE FIGURE (dB)		GAIN (dB)				MAXIMUM POWER (dBm)			3rd ORDER INTERCEPT POINT AT OUTPUT (dBm)	VSWR (:1) Typ.		DC OPERATING CURRENT @ Pin V+ (mA)	
			Typ.	Max.	Typ.	Min.	Flatness		Output (1 dB Compr.)		Input (no damage)		In	Out	Typ.	Max.
							Typ.	Max.	Typ.	Min.						
ZX60-542LN+	4400-5400	12.0	1.9	3.0	24	22	±0.3	±0.8	10	8	+13	23	1.5	1.5	60	80

### Maximum Ratings

Operating Temperature	-40°C to 85°C case
Storage Temperature	-55°C to 100°C
DC Voltage	+13V
Power	0.96W

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	wt
1.20	.75	.46	1.18	.04	.17	.45	.59	.33	.21	.22	.18	1.00	.50	.35	.18	.09	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	2.29	35.00

### Notes

- Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.
- Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
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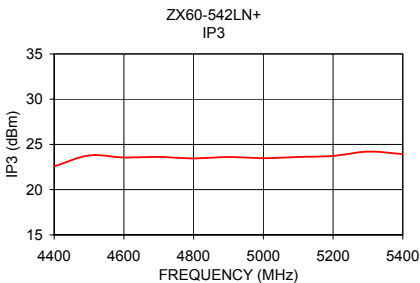
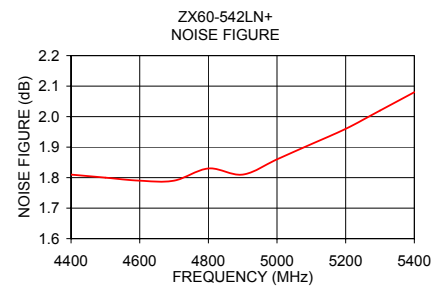
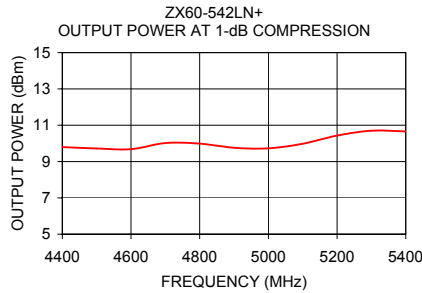
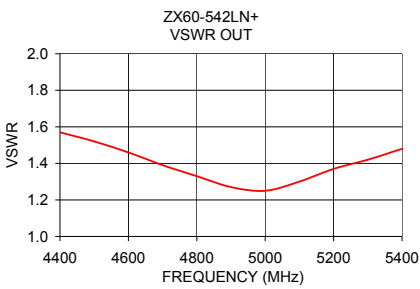
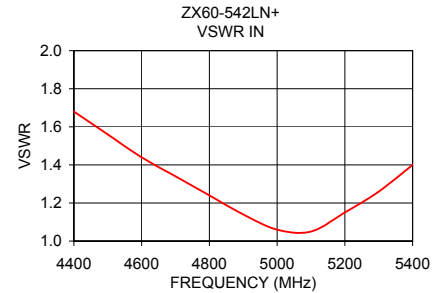
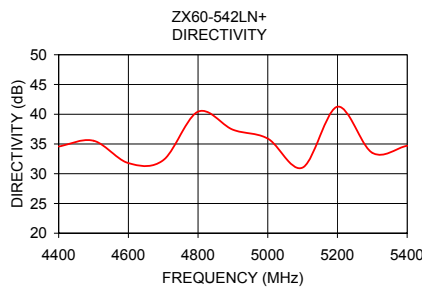
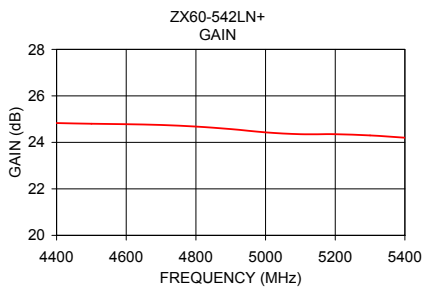
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REV. A  
M151107  
ZX60-542LN+  
ED-13494/4  
MR/MM/CP  
161031  
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# Typical Performance Data/Curves

# ZX60-542LN+

FREQUENCY (MHz)	GAIN (dB)	DIRECTIVITY (dB)	VSWR IN (:1)	VSWR OUT (:1)	NOISE FIGURE (dB)	POUT at 1dB COMPR. (dBm)	IP3 (dBm)
4400.0	24.83	34.58	1.68	1.57	1.81	9.80	22.57
4500.0	24.80	35.55	1.56	1.52	1.80	9.72	23.78
4600.0	24.78	31.78	1.44	1.46	1.79	9.68	23.55
4700.0	24.75	32.27	1.34	1.39	1.79	10.02	23.62
4800.0	24.68	40.43	1.24	1.33	1.83	9.99	23.45
4900.0	24.57	37.39	1.14	1.27	1.81	9.76	23.61
5000.0	24.43	35.91	1.06	1.25	1.86	9.73	23.48
5100.0	24.35	31.03	1.05	1.30	1.91	9.98	23.61
5200.0	24.35	41.27	1.15	1.37	1.96	10.43	23.73
5300.0	24.30	33.52	1.26	1.42	2.02	10.70	24.21
5400.0	24.20	34.70	1.40	1.48	2.08	10.66	23.93



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# ZX60-542LN-S+

## Typical Performance Data

FREQUENCY (MHz)	Gain (dB) 12V	Directivity (dB) 12V	VSWR IN (:1) 12V	VSWR OUT (:1) 12V	Noise Figure (dB) 12V	Pout @ 1dB Compression (dBm) 12V	Output IP3 (dBm) 12V
4000	24.96	39.46	2.29	1.70	1.93	9.43	22.51
4100	24.92	34.62	2.12	1.68	1.87	9.50	22.60
4200	24.86	34.98	1.96	1.65	1.84	9.61	23.15
4300	24.84	31.14	1.82	1.61	1.81	9.66	23.15
4400	24.83	34.58	1.68	1.57	1.81	9.80	22.57
4500	24.80	35.55	1.56	1.52	1.80	9.72	23.78
4600	24.78	31.78	1.44	1.46	1.79	9.68	23.55
4700	24.75	32.27	1.34	1.39	1.79	10.02	23.62
4800	24.68	40.43	1.24	1.33	1.83	9.99	23.45
4900	24.57	37.39	1.14	1.27	1.81	9.76	23.61
5000	24.43	35.91	1.06	1.25	1.86	9.73	23.48
5100	24.35	31.03	1.05	1.30	1.91	9.98	23.61
5200	24.35	41.27	1.15	1.37	1.96	10.43	23.73
5300	24.30	33.52	1.26	1.42	2.02	10.70	24.21
5400	24.20	34.70	1.40	1.48	2.08	10.66	23.93
5500	24.04	34.54	1.57	1.54	2.19	10.78	24.05
5600	23.85	30.86	1.75	1.59	2.26	10.80	23.97
5700	23.59	30.84	1.96	1.62	2.32	10.85	23.90
5800	23.31	32.98	2.19	1.65	2.36	10.79	23.86



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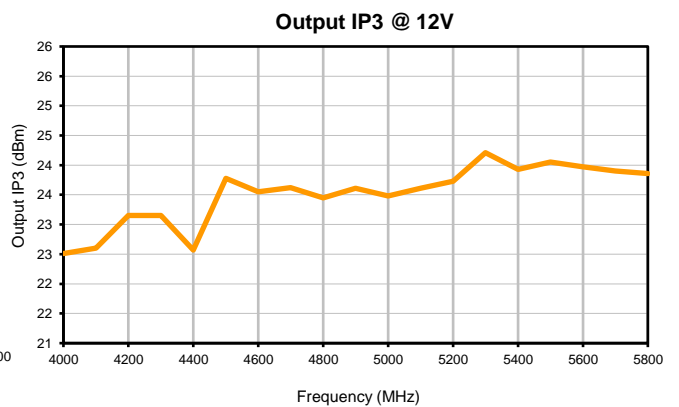
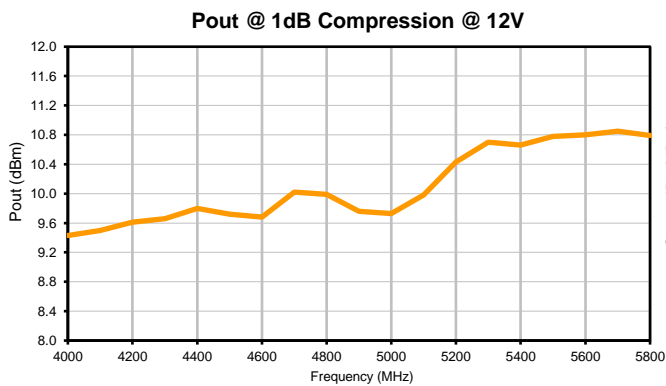
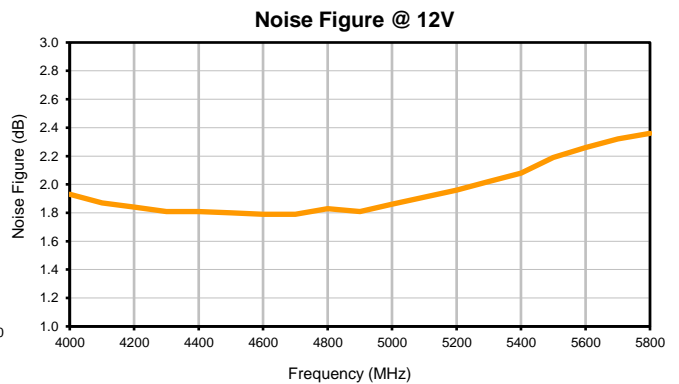
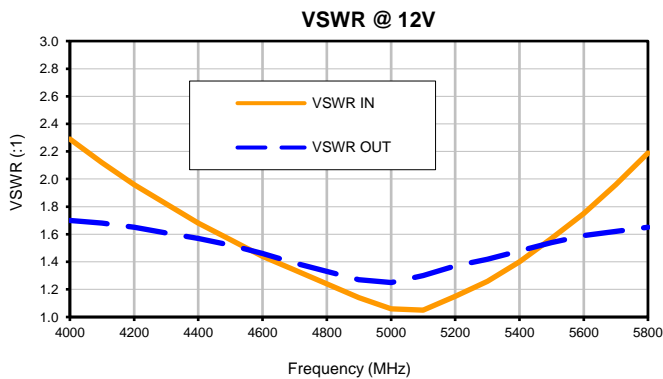
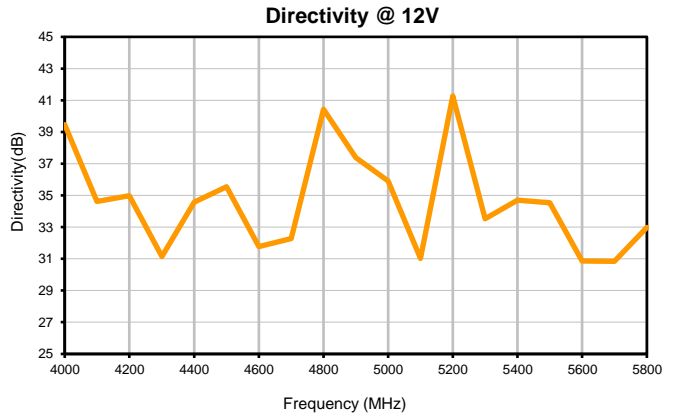
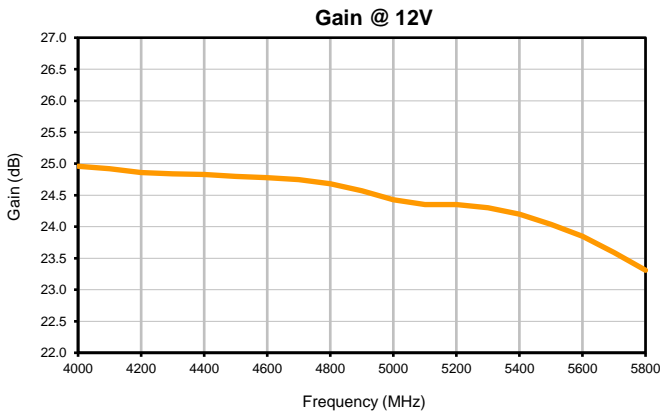
IF/RF MICROWAVE COMPONENTS

REV. OR  
ZX60-542LN-S+  
12/13/2018  
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### Typical Performance Curves



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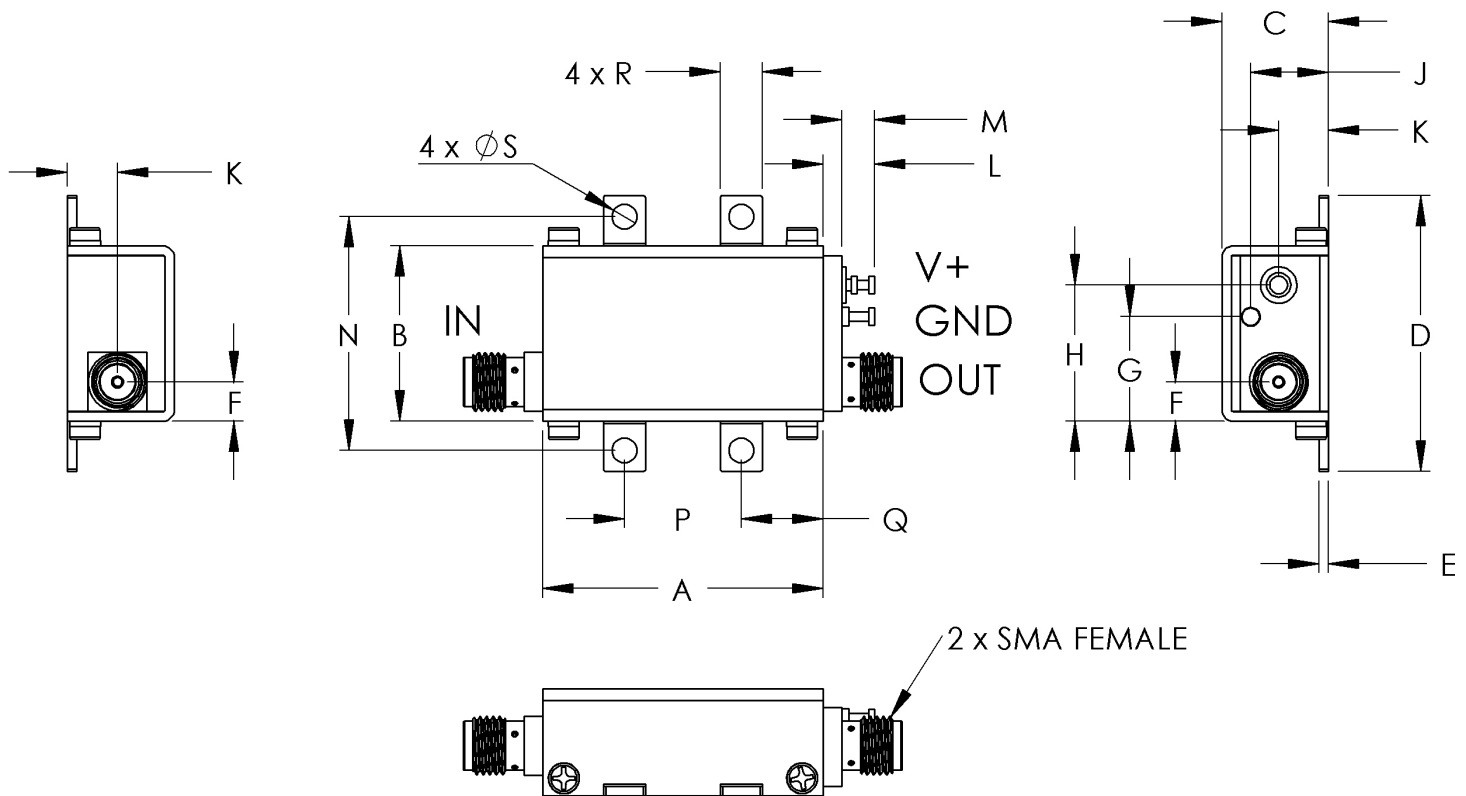
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# Case Style

# GA

## Outline Dimensions

## GA955



CASE #.	A	B	C	D	E	F	G	H	J	K	L	M	N
GA955	1.20 (30.48)	.75 (19.05)	.46 (11.61)	1.18 (29.97)	.04 (1.02)	.17 (4.27)	.45 (11.35)	.58 (14.81)	.33 (8.46)	.21 (5.44)	.22 (5.59)	.14 (3.56)	1.000 (25.4)

CASE #.	P	Q	R	S	WT GRAMS
GA955	.500 (12.70)	.35 (8.89)	.18 (4.57)	.106 (2.69)	35.0

Dimensions are in inches (mm). Tolerances: 2Pl.  $\pm .03$ ; 3Pl.  $\pm .015$   
Tolerance on hole size and interaxes dimensions to be  $\pm .005$ .

### Note:

1. Case material: Brass
2. Case finish: Nickel plate

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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	-40° to 85° C Case Temperature	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