

Coaxial Amplifier

NON-CATALOG

ZX60-2514M+

50Ω High Isolation 0.5 to 2.5 GHz

Features

- from 2.8V to 5V operation
- wide bandwidth, 0.5 to 2.5 GHz
- high active directivity, 20 dB typ.
- output power, up to 18.3 dBm typ.
- protected by US patent 6,790,049

Applications

- buffer amplifier
- LO amplifiers for mixers
- cellular
- PCN



CASE STYLE: GC957

Connectors Model
SMA ZX60-2514M-S+

+RoHS Compliant

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

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

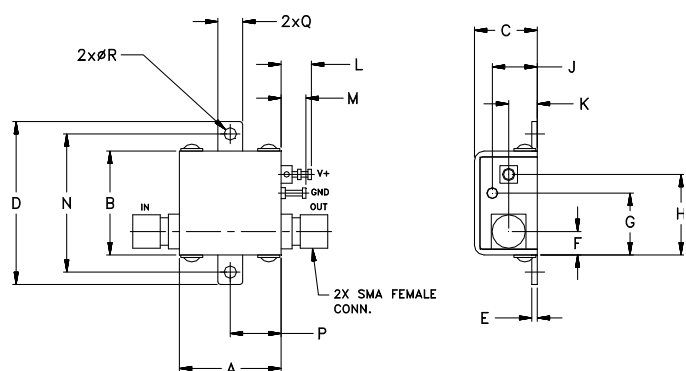
MODEL NO.	FREQ. (GHz)		DC VOLTS (V)	GAIN, dB Typical						MAXIMUM POWER (dBm)			DYNAMIC RANGE			VSWR (:1) Typ.		ACTIVE DIRECTIVITY (dB) (Isolation-Gain)	DC OPERATING CURRENT @ Pin V+ (mA)		
				over frequency, GHz						Output (1 dB Comp.) Typ.			NF (dB) Typ. IP3 (dBm) Typ.								
	f _L	f _U		0.5	1.0	1.5	2.0	2.5	Min. at 2 GHz	f _L	f _U	Input (no damage)	at 1 GHz	at 1 GHz	at 2 GHz	In	Out		Typ	Typ	Max.
ZX60-2514M+	0.5	2.5	5.0 2.8	14.1	16.5	16.4	15.7	14.1	14.0	18.3	16.2	10	4.8	30.3	27.8	1.5	1.7	20	75	90	
				12.9	14.9	14.8	14.3	13.0	—	14.3	14.2	10	4.9	26.0	24.9	1.5	1.7	20	67	—	

Maximum Ratings

Operating Temperature	-40°C to 85°C case
Storage Temperature	-55°C to 100°C
DC Voltage	7V
Input Power(no damage)	10 dBm
Power	500mW

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

Outline Drawing



NOTE: When soldering the DC connections, caution must be used to avoid overheating the DC terminal. See Application Note. [AN-40-010](#).

Outline Dimensions (inch mm)

A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	wt
.74	.75	.46	1.18	.04	.17	.45	.59	.33	.21	.22	.18	1.00	.37	.18	.106	grams
18.80	19.05	11.68	29.97	1.02	4.32	11.43	14.99	8.38	5.33	5.59	4.57	25.40	9.40	4.57	2.69	23.0

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.
- The parts covered by this specification document are subject to Mini-Circuits standard limited warranty and terms and conditions (collectively, "Standard Terms"); Purchasers of this part are entitled to the rights and benefits contained therein. For a full statement of the Standard Terms and the exclusive rights and remedies thereunder, please visit Mini-Circuits' website at www.minicircuits.com/MCLStore/terms.jsp



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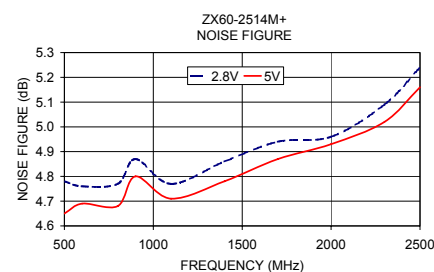
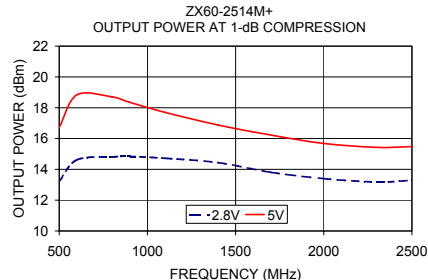
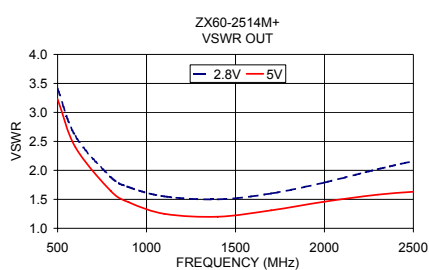
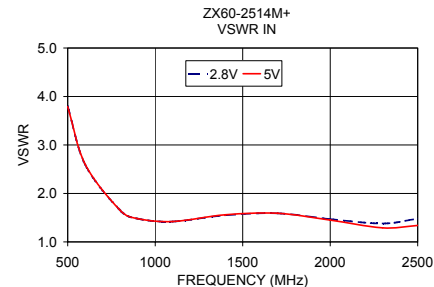
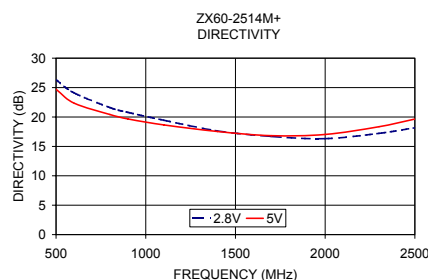
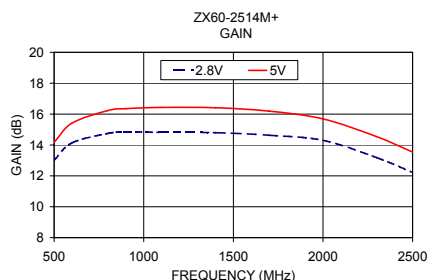
REV. D
M160892
ZX60-2514M+
EDR-6137
RVN/TD/CP/AM
150811

NON-CATALOG

Typical Performance Data/Curves

ZX60-2514M+

FREQUENCY (MHz)	GAIN (dB)		DIRECTIVITY (dB)		VSWR IN (:1)		VSWR OUT (:1)		NOISE FIGURE (dB)		POUT at 1 dB COMPR. (dBm)	
	2.8V	5V	2.8V	5V	2.8V	5V	2.8V	5V	2.8V	5V	2.8V	5V
500.00	13.02	14.17	26.34	24.71	3.80	3.79	3.41	3.23	4.78	4.65	13.23	16.73
600.00	14.14	15.42	24.11	22.36	2.59	2.60	2.59	2.40	4.76	4.69	14.62	18.84
800.00	14.75	16.23	21.61	20.42	1.65	1.65	1.88	1.64	4.77	4.68	14.81	18.70
900.00	14.85	16.35	20.80	19.67	1.48	1.48	1.71	1.45	4.87	4.80	14.84	18.35
1100.00	14.82	16.43	19.45	18.65	1.42	1.42	1.55	1.25	4.77	4.71	14.72	17.70
1400.00	14.80	16.41	17.63	17.53	1.55	1.56	1.50	1.20	4.86	4.78	14.44	16.88
1700.00	14.63	16.19	16.69	16.82	1.59	1.59	1.60	1.31	4.94	4.87	13.81	16.23
2000.00	14.30	15.69	16.32	17.03	1.47	1.45	1.79	1.46	4.96	4.93	13.40	15.68
2300.00	13.18	14.54	17.22	18.34	1.38	1.29	2.02	1.58	5.09	5.02	13.18	15.43
2500.00	12.23	13.54	18.16	19.65	1.48	1.34	2.16	1.63	5.24	5.16	13.29	15.48



Notes

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Amplifier

ZX60-2514M+

Typical Performance Data

FREQUENCY (MHz)	GAIN (dB)		DIRECTIVITY (dB)		VSWR IN (:1)		VSWR OUT (:1)		NOISE FIGURE (dB)		Pout at 1dB Comp. (dBm)	
	2.8V	5V	2.8V	5V	2.8V	5V	2.8V	5V	2.8V	5V	2.8V	5V
500.0	13.02	14.17	26.34	24.71	3.80	3.79	3.41	3.23	4.78	4.65	13.23	16.73
600.0	14.14	15.42	24.11	22.36	2.59	2.60	2.59	2.40	4.76	4.69	14.62	18.84
800.0	14.57	16.23	21.61	20.42	1.65	1.65	1.88	1.64	4.77	4.68	14.81	18.70
900.0	14.85	16.35	20.80	19.67	1.48	1.48	1.71	1.45	4.87	4.80	14.84	18.35
1100.0	14.82	16.43	19.45	18.65	1.42	1.42	1.55	1.25	4.77	4.71	14.72	17.70
1400.0	14.80	16.41	17.63	17.53	1.55	1.56	1.50	1.20	4.86	4.78	14.44	16.88
1700.0	14.63	16.19	16.69	16.82	1.59	1.59	1.60	1.31	4.94	4.87	13.81	16.23
2000.0	14.30	15.69	16.32	17.03	1.47	1.45	1.79	1.46	4.96	4.93	13.40	15.68
2300.0	13.18	14.54	17.22	18.34	1.38	1.29	2.02	1.58	5.09	5.02	13.18	15.43
2500.0	12.23	13.54	18.16	19.65	1.48	1.34	2.16	1.63	5.24	5.16	13.29	15.48

REV. X1

ZX60-2514M+

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IF/Rf MICROWAVE COMPONENTS • ISO 9001 ISO 14001 AS9100 CERTIFIED RoHS compliant

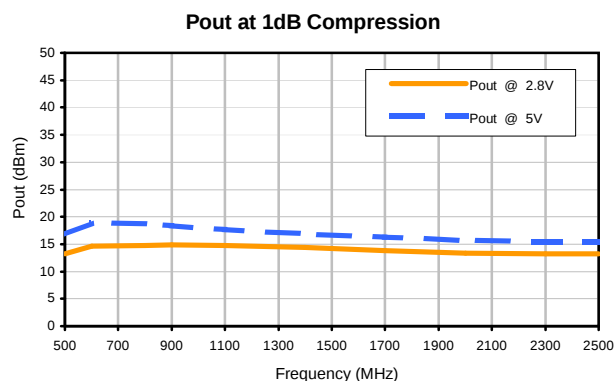
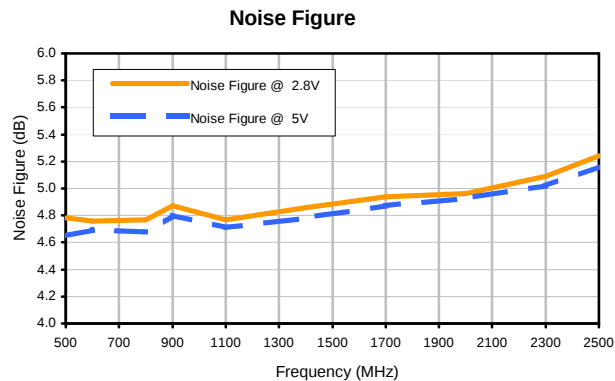
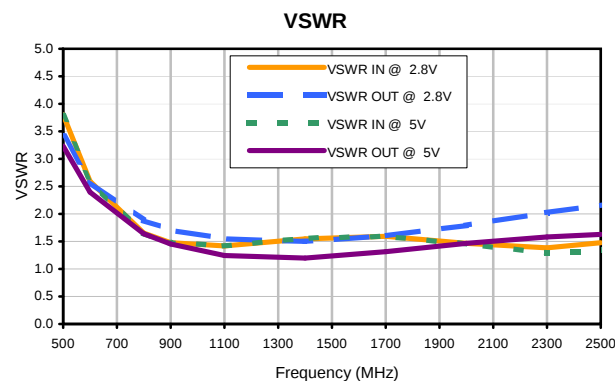
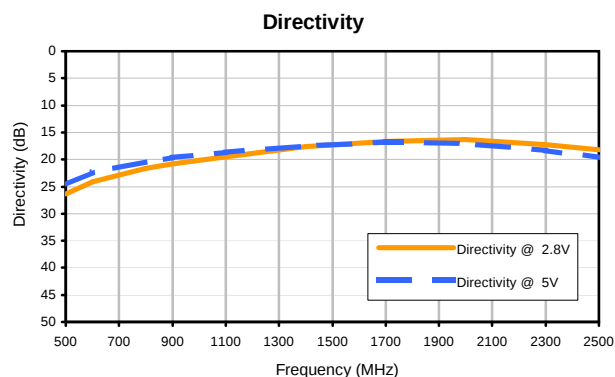
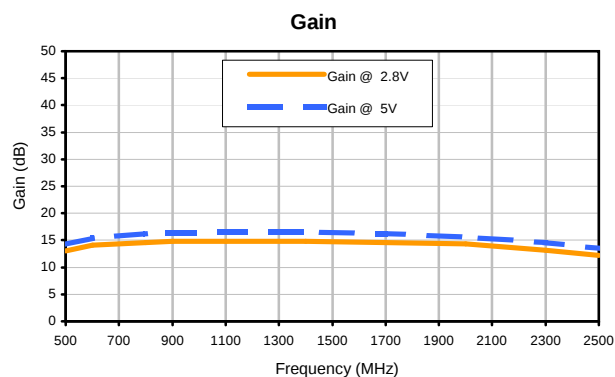
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The Design Engineers Search Engine finds the model you need, Instantly • For detailed performance specs & shopping online see



Typical Performance Curves

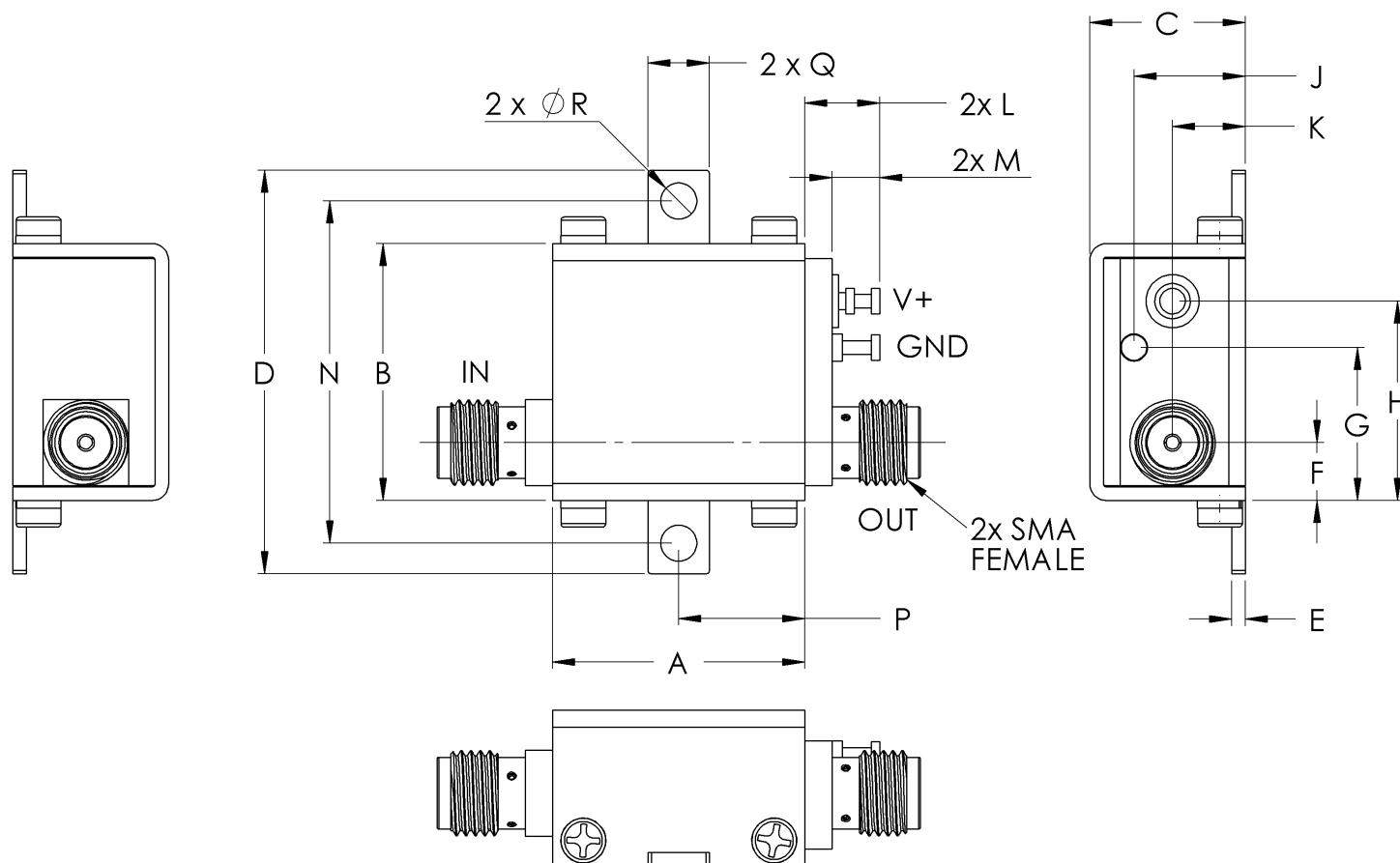


Case Style

Outline Dimensions

GC

GC957



CASE #.	A	B	C	D	E	F	G	H	J	K	L	M	N
GC957	.74 (18.80)	.75 (19.15)	.46 (11.61)	1.18 (30.07)	.04 (1.02)	.17 (4.32)	.45 (11.40)	.59 (14.86)	.33 (8.31)	.21 (5.44)	.22 (5.59)	.14 (3.56)	1.00 (25.4)

CASE #.	P	Q	R	WT GRAMS
GC957	.37 (9.40)	.18 (4.57)	.106 (2.69)	23.0

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