

Coaxial Wideband Amplifier

ZX60-V81+

50Ω 20 to 6000 MHz

Features

- Wideband, 20 to 6000 MHz
- Output power at 1dB compression, +18.5 dBm typ.
- Good output IP3, 35 dBm typ.
- Good return loss
- Unconditionally stable
- Protected by US patents 6,790,049 & 6,943,629

Applications

- Base station infrastructure
- CATV & DBS
- MMDS & wireless LAN
- LTE
- Buffer amplifier
- PCS
- Test equipment



Case Style: GC957

| Connectors | Model | Price | Qty. |
|------------|-------------|-------------|-------|
| SMA | ZX60-V81-S+ | \$69.95 ea. | (1-9) |

+ RoHS compliant in accordance with EU Directive (2002/95/EC)

The +Suffix has been added in order to identify RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications.

Electrical Specifications at 25°C

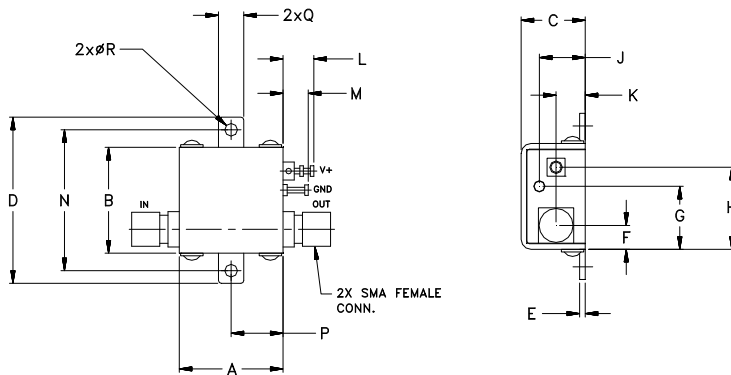
| Parameter | Condition (MHz) | Min. | Typ. | Max. | Units |
|------------------------------------|-----------------|------|------|------|-------|
| Frequency Range | | 20 | | 6000 | MHz |
| Gain | 100 | 9.5 | 10.5 | 11.5 | dB |
| | 1000 | | 10.2 | | |
| | 2000 | 8.5 | 9.7 | 11.0 | |
| | 3000 | | 9.0 | | |
| | 4000 | 7.3 | 8.5 | 10.0 | |
| | 6000 | | 7.0 | | |
| Output Power at 1dB compression | 100 | 17.0 | 18.5 | | dBm |
| | 1000 | 17.0 | 18.5 | | |
| | 2000 | 17.0 | 18.5 | | |
| | 3000 | | 19.0 | | |
| | 4000 | | 18.5 | | |
| | 6000 | | 16.5 | | |
| Noise Figure | 100 | | 7.5 | 9.0 | dB |
| | 1000 | | 8.0 | | |
| | 2000 | | 8.0 | 9.5 | |
| | 3000 | | 8.0 | | |
| | 4000 | | 8.0 | | |
| | 6000 | | 9.0 | | |
| Output third order intercept point | 100 | | 39.5 | | dBm |
| | 1000 | | 37.0 | | |
| | 2000 | 32 | 36.0 | | |
| | 3000 | | 35.0 | | |
| | 4000 | | 34.0 | | |
| | 6000 | | 31.0 | | |
| Input VSWR | 100 | | 1.10 | 1.5 | :1 |
| | 1000 | | 1.10 | | |
| | 2000 | | 1.20 | | |
| | 3000 | | 1.20 | | |
| | 4000 | | 1.20 | | |
| | 6000 | | 1.70 | | |
| Output VSWR | 100 | | 1.10 | 1.7 | :1 |
| | 1000 | | 1.15 | | |
| | 2000 | | 1.25 | | |
| | 3000 | | 1.40 | | |
| | 4000 | | 1.40 | | |
| | 6000 | | 1.90 | | |
| Active Directivity | 20-6000 | | 13 | | dB |
| DC Supply Voltage | | 4.8 | 5.0 | 5.2 | V |
| Supply Current | | | 103 | 115 | mA |

Maximum Ratings

| Parameter | Ratings |
|----------------------------|--------------------|
| Operating Temperature | -40°C to 85°C Case |
| Storage Temperature | -55°C to 100°C |
| DC Voltage | 5.5 V |
| Input RF Power (no damage) | 20 dBm |
| Power Consumption | 1 W |

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

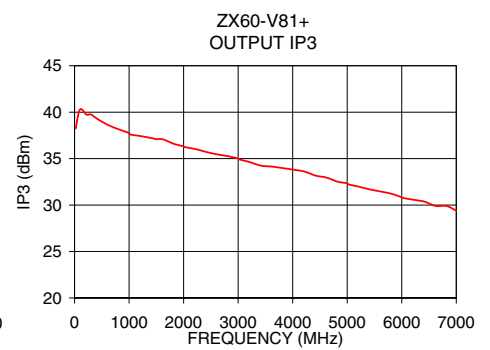
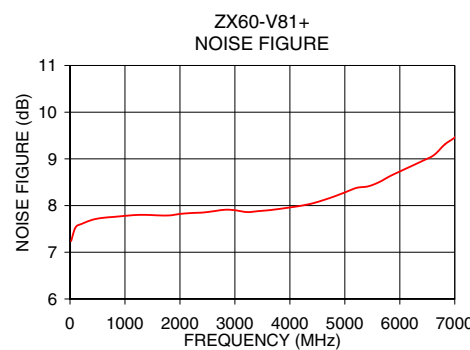
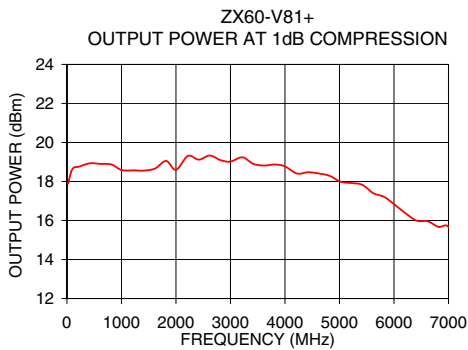
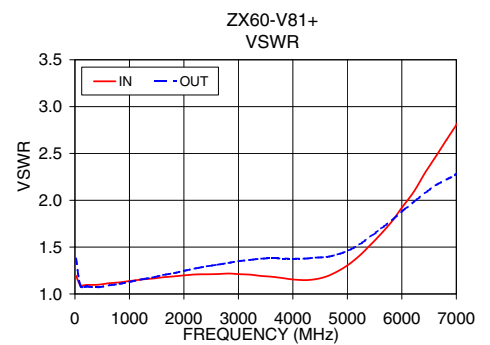
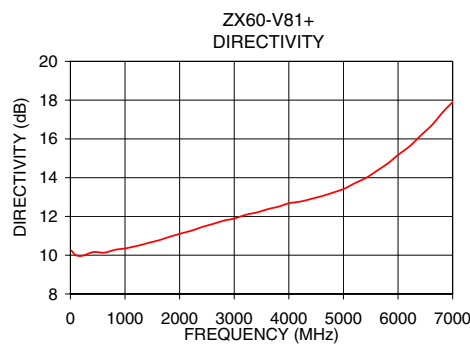
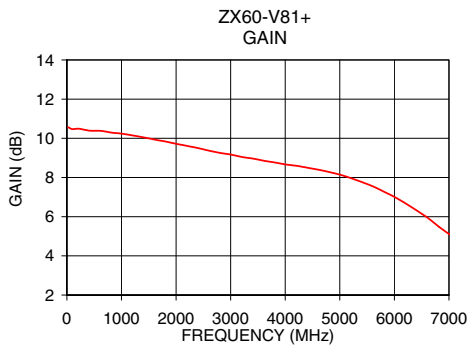
Outline Drawing



Outline Dimensions (inch / mm)

| A | B | C | D | E | F | G | H | J | K | L | M | N | P | Q | R | wt. |
|-------|-------|-------|-------|------|------|-------|-------|------|------|------|------|-------|------|------|------|-------|
| 0.74 | .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 |

| FREQUENCY (MHz) | GAIN (dB) | DIRECTIVITY (dB) | VSWR IN (:1) | VSWR OUT (:1) | POWER OUT @ 1dB COMPRESSION (dBm) | OUTPUT IP3 (dBm) | NF (dB) |
|-----------------|-----------|------------------|--------------|---------------|-----------------------------------|------------------|---------|
| 20 | 10.57 | 10.23 | 1.19 | 1.38 | 17.89 | 38.23 | 7.24 |
| 100 | 10.47 | 10.00 | 1.10 | 1.09 | 18.64 | 40.29 | 7.53 |
| 420 | 10.39 | 10.16 | 1.10 | 1.07 | 18.93 | 39.27 | 7.70 |
| 1000 | 10.24 | 10.35 | 1.14 | 1.13 | 18.59 | 37.75 | 7.78 |
| 1220 | 10.14 | 10.48 | 1.15 | 1.16 | 18.57 | 37.42 | 7.80 |
| 1420 | 10.04 | 10.63 | 1.16 | 1.18 | 18.56 | 37.20 | 7.80 |
| 1620 | 9.93 | 10.77 | 1.18 | 1.20 | 18.67 | 37.08 | 7.79 |
| 2000 | 9.72 | 11.10 | 1.20 | 1.25 | 18.60 | 36.32 | 7.82 |
| 2220 | 9.60 | 11.27 | 1.21 | 1.27 | 19.31 | 36.02 | 7.84 |
| 2420 | 9.49 | 11.46 | 1.21 | 1.29 | 19.12 | 35.71 | 7.85 |
| 2620 | 9.36 | 11.62 | 1.21 | 1.31 | 19.33 | 35.45 | 7.88 |
| 3000 | 9.17 | 11.89 | 1.21 | 1.35 | 19.02 | 35.01 | 7.90 |
| 3420 | 8.96 | 12.21 | 1.19 | 1.38 | 18.90 | 34.24 | 7.88 |
| 4000 | 8.67 | 12.68 | 1.15 | 1.38 | 18.77 | 33.82 | 7.96 |
| 4420 | 8.49 | 12.91 | 1.16 | 1.39 | 18.47 | 33.17 | 8.05 |
| 5000 | 8.14 | 13.43 | 1.30 | 1.46 | 18.12 | 32.35 | 8.28 |
| 5420 | 7.75 | 14.00 | 1.52 | 1.61 | 17.83 | 31.68 | 8.41 |
| 6000 | 7.01 | 15.17 | 1.92 | 1.88 | 16.84 | 30.83 | 8.73 |
| 6620 | 5.92 | 16.71 | 2.46 | 2.16 | 15.96 | 29.90 | 9.08 |
| 7000 | 5.12 | 17.90 | 2.80 | 2.28 | 15.67 | 29.40 | 9.46 |



For detailed performance specs & shopping online see web site

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Notes: 1. Performance and quality attributes and conditions not expressly stated in this specification sheet are intended to be excluded and do not form a part of this specification sheet. 2. Electrical specifications and performance data contained herein are based on Mini-Circuit's applicable established test performance criteria and measurement instructions. 3. The parts covered by this specification sheet 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.