

Connectorized Amplifier

ZX60-6013E+

50Ω 20 MHz to 6 GHz

Features

- Wide Bandwidth, 20 MHz to 6 GHz
- Low Noise Figure, 3.3 dB Typ.
- Protected by US Patent 6,790,049

Applications

- Buffer Amplifier
- Cellular
- PCS
- Lab
- Instrumentation
- Test Equipment



CASE STYLE: GC957

| Connectors | Model | Price | Qty. |
|------------|---------------|-------------|-------|
| SMA | ZX60-6013E-S+ | \$49.95 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 T_{AMB} = 25°C

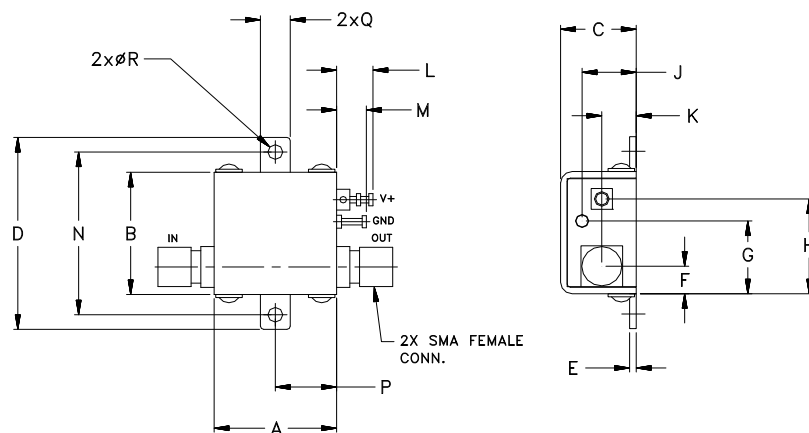
| MODEL NO. | FREQ. (GHz) f _L - f _U | DC VOLTAGE @ Pin V+ (V) | GAIN over frequency in GHz Typ (dB) | | | | | | | MAXIMUM POWER (dBm) Output (1 dB Comp.) Typ. f _L f _U | DYNAMIC RANGE | | VSWR (:1) Typ. | | | | ACTIVE DIRECTIVITY (dB) Isolation-Gain Typ. | DC OPERATING CURRENT @ Pin V+ (mA) | | | |
|-------------|--|-------------------------|--|------|------|------|------|------|------|---|---------------|-----------------|-------------------|--------------------------|----------------------|---------------------------|---|------------------------------------|------|------|------|
| | | | 0.1 | 1.0 | 2.0 | 3.0 | 4.0 | 5.0 | 6.0 | | Min.at 2 GHz | NF (dB) Typ. | IP3 (dBm) Typ. | In f _L -3 GHz | 3-f _U GHz | Out f _L -3 GHz | | 3-f _U GHz | Typ. | Typ. | Max. |
| ZX60-6013E+ | 0.02-6 | 12.0 | 16.2 | 15.9 | 15.2 | 14.3 | 13.4 | 12.7 | 12.1 | 13.0 | 13.4 | 5.8 | 3.3 | 28.7 | 1.4 | 1.6 | 1.2 | 1.2 | 3-9 | 39 | 50 |

Maximum Ratings

| | |
|------------------------|--------------------|
| Operating Temperature | -45°C to 80°C case |
| Storage Temperature | -55°C to 100°C |
| DC Voltage | 12.5V |
| Input Power(no Damage) | 15dBm |
| Power | 650mW |

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. |
|-------|-------|-------|-------|------|------|-------|-------|------|------|------|------|-------|------|------|------|------|
| .74 | .75 | .46 | 1.18 | .04 | .17 | .45 | .59 | .33 | .21 | .22 | .18 | 1.00 | .37 | .18 | .106 | GRAM |
| 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 |

Mini-Circuits®

ISO 9001 ISO 14001 AS 9100 CERTIFIED

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IF/RF MICROWAVE COMPONENTS

For detailed performance specs & shopping online see web site

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.

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Typical Performance Data & Curves at 25°C ZX60-6013E+

| FREQUENCY (MHz) | GAIN (dB) | DIRECTIVITY (dB) | VSWR IN (:1) | VSWR OUT (:1) | POWER OUT @1dB COMPRESSION (dBm) | IP3 (dBm) | NF (dB) |
|-----------------|-----------|------------------|--------------|---------------|----------------------------------|-----------|---------|
| 20 | 16.09 | 3.60 | 1.24 | 1.03 | 13.24 | 29.97 | 3.33 |
| 50 | 16.28 | 3.33 | 1.21 | 1.08 | 13.28 | 29.96 | 3.27 |
| 100 | 16.31 | 3.24 | 1.20 | 1.10 | 13.35 | 29.95 | 3.20 |
| 500 | 16.20 | 3.40 | 1.22 | 1.11 | 13.61 | 29.73 | 3.26 |
| 1000 | 15.94 | 3.73 | 1.27 | 1.12 | 13.50 | 29.20 | 3.16 |
| 1500 | 15.60 | 4.12 | 1.38 | 1.14 | 13.22 | 28.42 | 3.27 |
| 2000 | 15.22 | 4.54 | 1.48 | 1.18 | 12.87 | 27.42 | 3.35 |
| 2500 | 14.76 | 5.59 | 1.57 | 1.21 | 12.45 | 26.23 | 3.20 |
| 3000 | 14.24 | 6.08 | 1.59 | 1.22 | 11.90 | 24.91 | 3.11 |
| 3220 | 14.11 | 6.22 | 1.57 | 1.25 | 11.60 | 24.28 | 3.32 |
| 3500 | 13.85 | 6.78 | 1.54 | 1.22 | 11.16 | 23.48 | 3.42 |
| 3670 | 13.72 | 6.91 | 1.55 | 1.22 | 10.86 | 22.97 | 3.36 |
| 3850 | 13.52 | 7.28 | 1.53 | 1.23 | 10.51 | 22.43 | 3.25 |
| 4000 | 13.37 | 7.13 | 1.51 | 1.22 | 10.21 | 21.98 | 3.21 |
| 4200 | 13.15 | 7.35 | 1.69 | 1.15 | 9.78 | 21.37 | 3.10 |
| 4500 | 13.05 | 7.95 | 1.68 | 1.13 | 9.10 | 20.45 | 3.04 |
| 5000 | 12.62 | 8.79 | 1.60 | 1.05 | 7.93 | 18.92 | 3.16 |
| 5500 | 12.33 | 8.81 | 1.51 | 1.07 | 6.81 | 17.44 | 3.19 |
| 5750 | 12.18 | 9.27 | 1.45 | 1.12 | 6.30 | 16.72 | 3.22 |
| 6000 | 12.06 | 9.18 | 1.39 | 1.19 | 5.81 | 16.04 | 3.21 |

