

Coaxial

# RF Instrument Amplifier

TVA-63-183

50Ω

6 to 18 GHz

### Features

- Instrument model with built-in power supply 110/220 VAC
- Gain, 24 dB typ.
- Unconditionally stable
- Output Power, up to 18 dBm typ.
- Excellent Isolation, 62 dB typ.
- Thermally self-protected, LED indicator
- Good matching at input and output
- CE marked



CASE STYLE: AP1601

| Connectors | Model      |
|------------|------------|
| SMA        | TVA-63-183 |

### Applications

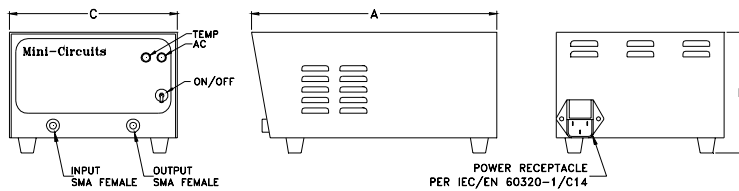
- Lab use
- Wideband test instrumentation

### Electrical Specifications at 25°C, unless otherwise noted

| Parameter                          | Condition (GHz) | Min | Typ.    | Max. | Units |
|------------------------------------|-----------------|-----|---------|------|-------|
| Frequency Range                    |                 | 6   | —       | 18   | GHz   |
| Gain                               | 6 - 18          | 20  | 23.6    | —    | dB    |
| Gain Flatness                      | 6 - 18          | —   | ±1.0    | —    | dB    |
| Output Power at 1dB compression    | 6 - 18          | 16  | 18      | —    | dBm   |
| Noise Figure                       | 6 - 18          | —   | 6.9     | —    | dB    |
| Output third order intercept point | 6 - 18          | —   | 26      | —    | dBm   |
| Input VSWR                         | 6 - 18          | —   | 1.5     | —    | :1    |
| Output VSWR                        | 6 - 18          | —   | 1.25    | —    | :1    |
| AC Supply Voltage                  | 6 - 18          | —   | 110/220 | —    | V     |

Note: Keep area adjacent to the louvers clear to allow free air flow.

### Outline Drawing



### Maximum Ratings

| Parameter                  | Ratings       |
|----------------------------|---------------|
| Operating Temperature      | 0°C to 55°C   |
| Storage Temperature        | -40°C to 70°C |
| Input RF Power (no damage) | +20 dBm       |

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

### Outline Dimensions (inch/mm)

| A     | B     | C     | D  | wt    |
|-------|-------|-------|----|-------|
| 9.8   | 4.8   | 6.7   | -- | grams |
| 248.9 | 121.9 | 170.2 | -- | 1200  |

### Notes

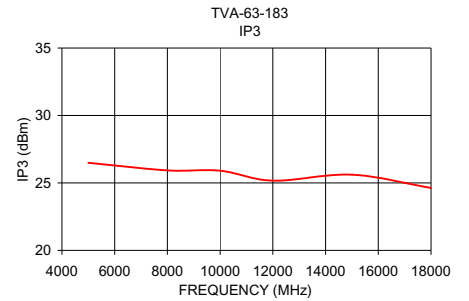
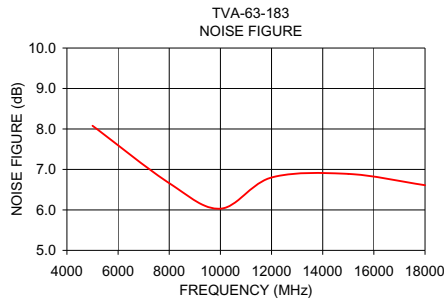
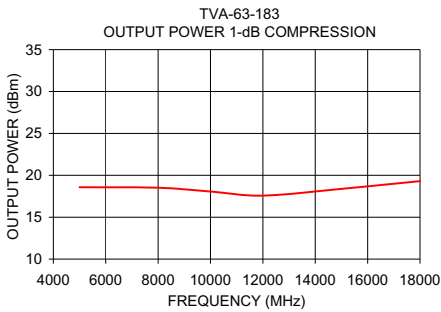
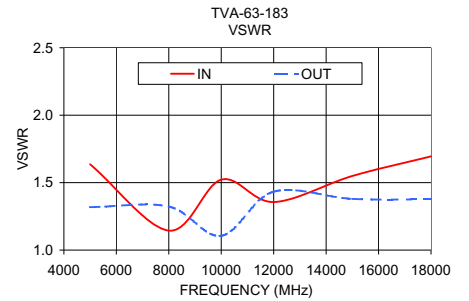
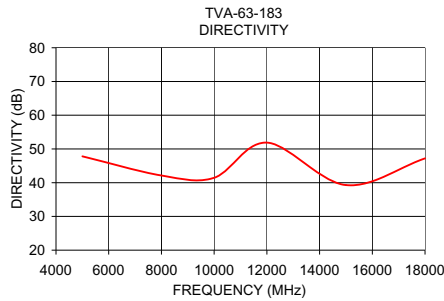
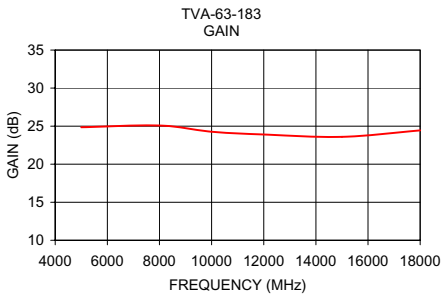
- Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.
- Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's 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](http://www.minicircuits.com/MCLStore/terms.jsp)



[www.minicircuits.com](http://www.minicircuits.com) P.O. Box 350166, Brooklyn, NY 11235-0003 (718) 934-4500 sales@minicircuits.com

REV. A  
M151496  
TVA-63-183  
160713  
Page 2 of 3

| FREQUENCY (MHz) | GAIN (dB) | DIRECTIVITY (dB) | VSWR (:1) |      | NOISE FIGURE (dB) | POUT at 1 dB COMPR. (dBm) | IP3 (dBm) |
|-----------------|-----------|------------------|-----------|------|-------------------|---------------------------|-----------|
|                 |           |                  | IN        | OUT  |                   |                           |           |
| 5000.00         | 24.86     | 47.82            | 1.64      | 1.32 | 8.08              | 18.58                     | 26.49     |
| 8000.00         | 25.08     | 42.13            | 1.14      | 1.32 | 6.66              | 18.52                     | 25.93     |
| 10000.00        | 24.26     | 41.45            | 1.52      | 1.11 | 6.03              | 18.06                     | 25.91     |
| 12000.00        | 23.90     | 51.88            | 1.36      | 1.43 | 6.80              | 17.58                     | 25.17     |
| 15000.00        | 23.60     | 39.30            | 1.55      | 1.38 | 6.89              | 18.38                     | 25.61     |
| 18000.00        | 24.44     | 47.20            | 1.70      | 1.38 | 6.61              | 19.30                     | 24.63     |



Notes

- A. 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.
- B. Electrical specifications and performance data contained in this specification document are based on Mini-Circuits' applicable established test performance criteria and measurement instructions.
- C. 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](http://www.minicircuits.com/MCLStore/terms.jsp)

