

50Ω High Power 80W 20 to 1000 MHz

### The Big Deal

- Very high power handling, 80W
- High isolation (DC-RF), up to 70 dB
- Good VSWR, 1.2:1



CASE STYLE: AW1564

### Product Overview

Mini-Circuits' ZABT-80W-13-S+ is a coaxial bias-tee providing high power handling, low loss and high isolation across the 20 to 1000 MHz band. Capable of handling up to 5A DC current, this model is ideal for high power systems requiring DC feed on the RF line such as remote antennas and repeaters. The unit comes housed in a rugged aluminum alloy case (3.00 x 2.06 x 2.03") with SMA connectors and a heat sink for efficient cooling.

### Key Features

| Feature  | Advantages  |
|--|---|
| High RF power and DC current handling, 80W, 5A | ZABT-80W-13-S+ supports systems with high power requirements such as high power amplifiers, transmit antennas and more. |
| Low insertion loss, 0.6 dB                     | Preserves signal strength from input to output and minimizes overall system loss.                                       |
| Good VSWR, 1.2:1                               | Provides efficient power utilization with minimal power reflected back to source.                                       |
| High DC-RF isolation, up to 70 dB              | Minimizes RF signal leakage and interference with other system elements.  |
| Wideband, 20 to 1000 MHz                       | Supports a variety of high power wideband and multi-band applications.  |

#### 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-Circuit's applicable established test performance criteria and measurement instructions.  
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# Coaxial Bias-Tee

50Ω High Power 80W 20 to 1000 MHz

## ZABT-80W-13-S+

### Maximum Ratings

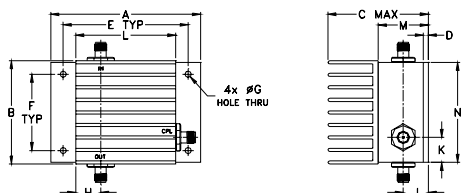
|                                     |                |
|-------------------------------------|----------------|
| Operating Temperature               | -55°C to 65°C  |
| Storage Temperature                 | -55°C to 100°C |
| RF Power                            | 49 dBm max.    |
| Voltage at DC port                  | 50 V max.      |
| Input Current                       | 5A             |
| DC resistance from DC to RF&DC port | 1.0 ohm typ.   |

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

### Coaxial Connections

|       |     |
|-------|-----|
| RF    | OUT |
| RF&DC | IN  |
| DC    | CPL |

### Outline Drawing



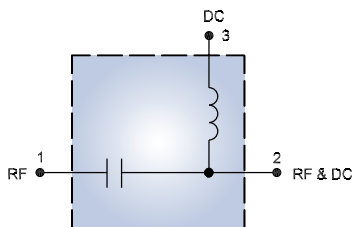
### Outline Dimensions (inch/mm)

|       |       |       |      |       |       |      |
|-------|-------|-------|------|-------|-------|------|
| A     | B     | C     | D    | E     | F     | G    |
| 3.00  | 2.06  | 2.03  | .10  | 2.500 | 1.525 | .125 |
| 76.20 | 52.32 | 51.56 | 2.54 | 63.50 | 38.74 | 3.18 |

|       |       |       |       |       |       |       |
|-------|-------|-------|-------|-------|-------|-------|
| H     | J     | K     | L     | M     | N     | wt    |
| .50   | .50   | .50   | 2.00  | 1.00  | 2.00  | grams |
| 12.70 | 12.70 | 12.70 | 50.80 | 25.40 | 50.80 | 230   |

### Electrical Schematic



### Features

- high isolation (DC-RF), 50 dB typ.
- low insertion loss, 0.6 dB typ.
- good VSWR 1.2:1 typ.

### Applications

- biasing amplifiers
- biasing of laser diodes
- biasing of active antennas
- DC return
- DC blocking
- test accessory



CASE STYLE: AW1564

|            |                |
|------------|----------------|
| Connectors | Model          |
| SMA        | ZABT-80W-13-S+ |

**+RoHS Compliant**

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

### Electrical Specifications at 25°C

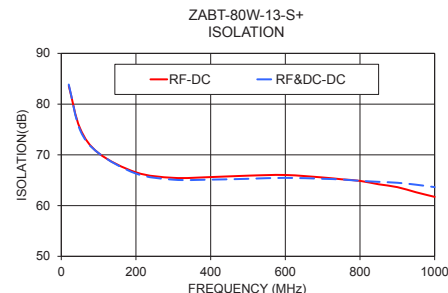
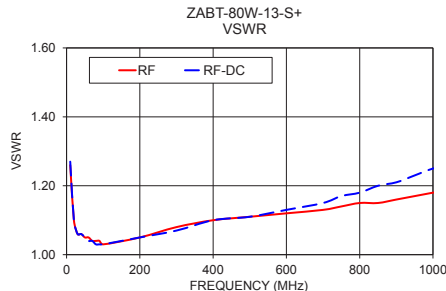
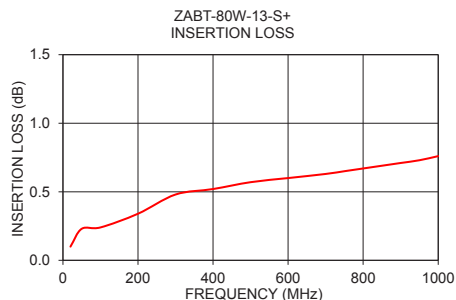
| Parameter       | Frequency (MHz) | Min. | Typ. | Max. | Unit |
|-----------------|-----------------|------|------|------|------|
| Frequency Range |                 | 20   |      | 1000 | MHz  |
| Insertion Loss* | 20-200          | —    | 0.15 | 0.6  | dB   |
|                 | 200-500         | —    | 0.6  | 0.8  |      |
|                 | 500-1000        | —    | 0.8  | 1.1  |      |
| Isolation       | 20-200          | 40   | 70   | —    | dB   |
|                 | 200-500         | 35   | 60   | —    |      |
|                 | 500-1000        | 30   | 50   | —    |      |
| VSWR**          | 20-200          | —    | 1.06 | 1.2  | :1   |
|                 | 200-500         | —    | 1.13 | 1.3  |      |
|                 | 500-1000        | —    | 1.25 | 1.5  |      |

\*Insertion Loss and Isolation are guaranteed up to 40 dBm-RF power and 3A DC current.

\*\*VSWR measured with open and short at DC port.

### Typical Performance Data

| Freq. (MHz) | INSERTION LOSS (dB) | VSWR(:1) |       | ISOLATION (dB) |          |
|-------------|---------------------|----------|-------|----------------|----------|
|             |                     | RF       | RF&DC | RF-DC          | RF&DC-DC |
| 20.00       | 0.10                | 1.10     | 1.10  | 83.62          | 83.86    |
| 50.00       | 0.23                | 1.05     | 1.05  | 75.27          | 74.94    |
| 100.00      | 0.24                | 1.03     | 1.03  | 70.33          | 70.33    |
| 200.00      | 0.34                | 1.05     | 1.05  | 66.55          | 66.31    |
| 300.00      | 0.48                | 1.08     | 1.07  | 65.47          | 65.11    |
| 400.00      | 0.52                | 1.10     | 1.10  | 65.62          | 65.12    |
| 500.00      | 0.57                | 1.11     | 1.11  | 65.90          | 65.28    |
| 600.00      | 0.60                | 1.12     | 1.13  | 66.03          | 65.47    |
| 700.00      | 0.63                | 1.13     | 1.15  | 65.54          | 65.28    |
| 750.00      | 0.65                | 1.14     | 1.17  | 65.19          | 65.15    |
| 800.00      | 0.67                | 1.15     | 1.18  | 64.87          | 64.88    |
| 850.00      | 0.69                | 1.15     | 1.20  | 64.20          | 64.68    |
| 900.00      | 0.71                | 1.16     | 1.21  | 63.64          | 64.50    |
| 950.00      | 0.73                | 1.17     | 1.23  | 62.63          | 64.12    |
| 1000.00     | 0.76                | 1.18     | 1.25  | 61.72          | 63.64    |



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