

**THE BIG DEAL**

- Ultra-Wideband, DC-34 GHz
- Flat Response
- Low Insertion Loss, 0.10 dB
- Excellent VSWR, 1.03:1

*Generic photo used for illustration purposes only***APPLICATIONS**

- Interconnection of RF cable and equipment

|            |                      |
|------------|----------------------|
| Model No.  | 35M-35M50+           |
| Case Style | DJ1863               |
| Connectors | 3.5 mm-M to 3.5 mm-M |

**+RoHS Compliant**

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

**PRODUCT OVERVIEW**

Mini-Circuits' 35M-35M50+ is a coaxial 3.5mm-M to 3.5mm-M adapter supporting a wide range of applications from DC to 34 GHz. This model provides excellent VSWR, low insertion loss, and flat response versus frequency. The 35M-35M50+ features rugged, passivated stainless steel construction and measures only 0.86" (l) x 0.36" (dia.).

**KEY FEATURES**

| Features                                             | Advantages                                                                                                             |
|------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|
| Ultra-Wideband, DC to 34 GHz                         | Wide frequency range provides application flexibility and makes this model ideal for broadband and multi-band use.     |
| Excellent VSWR, 1.03:1                               | Provides good matching for 50 $\Omega$ systems and minimizes signal reflections across wide frequency range.           |
| Low Insertion Loss, 0.10 dB                          | Provides excellent signal power transmission from input to output.                                                     |
| Rugged, passivated stainless steel construction.     | Stands up to wear and tear in demanding environments and provides excellent reliability.                               |
| Very wide operating temperature range, -55 to +100°C | Withstands extreme operating conditions and is suitable for use near high power componentry where heat rise is common. |



COAXIAL

# Adapter

**35M-35M50+**

50Ω DC to 34 GHz 3.5 mm-Male to 3.5 mm-Male

## ELECTRICAL SPECIFICATIONS AT 25°C

| Parameter       | Condition (GHz) | Min. | Typ. | Max. | Units |
|-----------------|-----------------|------|------|------|-------|
| Frequency Range | -               | DC   | —    | 34   | GHz   |
| Insertion Loss  | DC-34           | —    | 0.10 | —    | dB    |
| VSWR            | DC-18           | —    | 1.02 | 1.25 | :1    |
|                 | DC-26           | —    | 1.02 | 1.25 |       |
|                 | DC-34           | —    | 1.03 | 1.25 |       |

## ABSOLUTE MAXIMUM RATINGS

| Parameter             | Ratings         |
|-----------------------|-----------------|
| Operating Temperature | -55°C to +100°C |
| Storage Temperature   | -55°C to +100°C |

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



COAXIAL

# Adapter

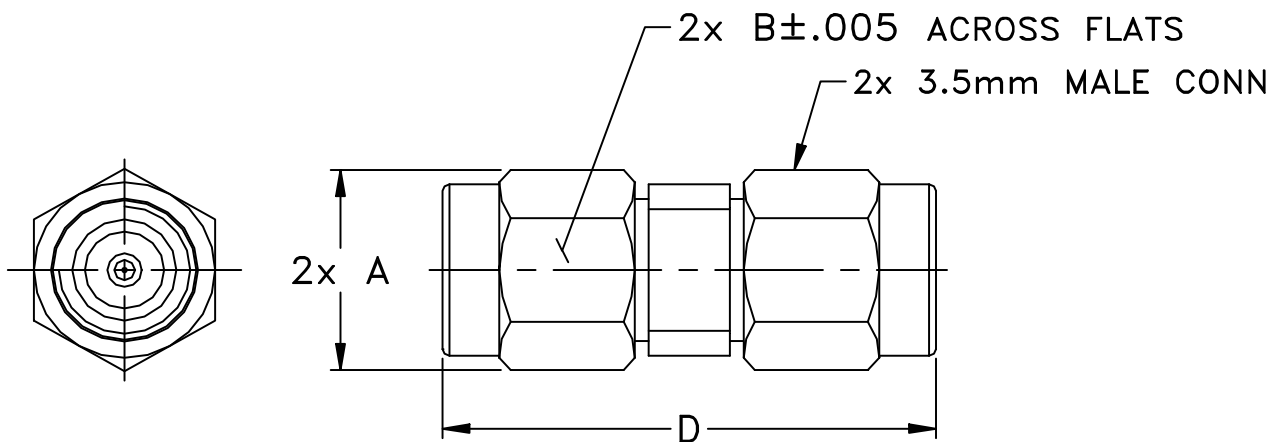
**35M-35M50+**

50Ω DC to 34 GHz 3.5 mm-Male to 3.5 mm-Male

## COAXIAL CONNECTIONS

|             |          |
|-------------|----------|
| Connector 1 | 3.5 mm-M |
| Connector 2 | 3.5 mm-M |

## OUTLINE DRAWING



## OUTLINE DIMENSIONS (Inches mm)

| A    | B     | C  | D     | E  | wt    |
|------|-------|----|-------|----|-------|
| 0.36 | 0.312 | -- | 0.86  | -- | grams |
| 9.14 | 7.93  | -- | 21.80 | -- | 5.3   |





COAXIAL

# Adapter

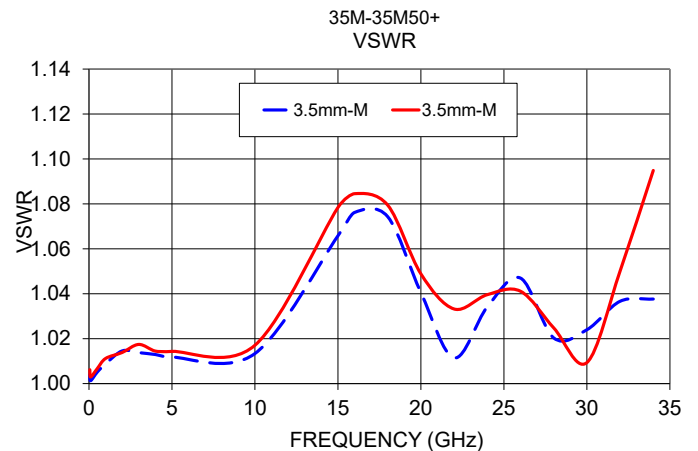
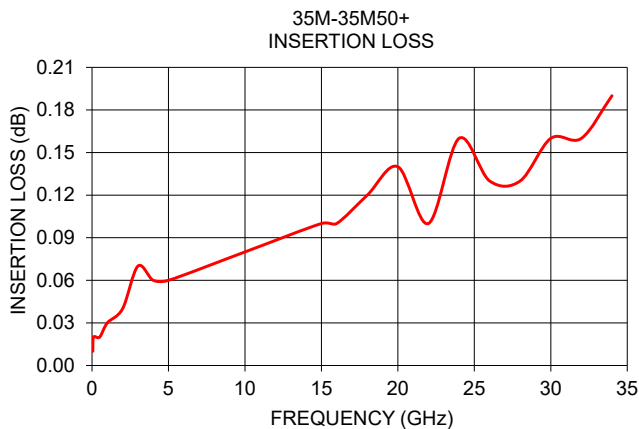
35M-35M50+

Mini-Circuits

50Ω DC to 34 GHz 3.5 mm-Male to 3.5 mm-Male

## TYPICAL PERFORMANCE DATA AND CHARTS

| Frequency<br>(GHz) | Insertion Loss<br>(dB) | VSWR<br>(:1) |             |
|--------------------|------------------------|--------------|-------------|
|                    |                        | 3.5 mm-Male  | 3.5 mm-Male |
| 0.05               | 0.01                   | 1.00         | 1.01        |
| 0.10               | 0.02                   | 1.00         | 1.00        |
| 0.50               | 0.02                   | 1.01         | 1.01        |
| 1.00               | 0.03                   | 1.01         | 1.01        |
| 2.00               | 0.04                   | 1.01         | 1.01        |
| 3.00               | 0.07                   | 1.01         | 1.02        |
| 4.00               | 0.06                   | 1.01         | 1.01        |
| 5.00               | 0.06                   | 1.01         | 1.01        |
| 10.00              | 0.08                   | 1.01         | 1.02        |
| 15.00              | 0.10                   | 1.07         | 1.08        |
| 16.00              | 0.10                   | 1.08         | 1.08        |
| 18.00              | 0.12                   | 1.07         | 1.08        |
| 20.00              | 0.14                   | 1.04         | 1.05        |
| 22.00              | 0.10                   | 1.01         | 1.03        |
| 24.00              | 0.16                   | 1.03         | 1.04        |
| 26.00              | 0.13                   | 1.05         | 1.04        |
| 28.00              | 0.13                   | 1.02         | 1.02        |
| 30.00              | 0.16                   | 1.02         | 1.01        |
| 32.00              | 0.16                   | 1.04         | 1.05        |
| 34.00              | 0.19                   | 1.04         | 1.09        |



### NOTES

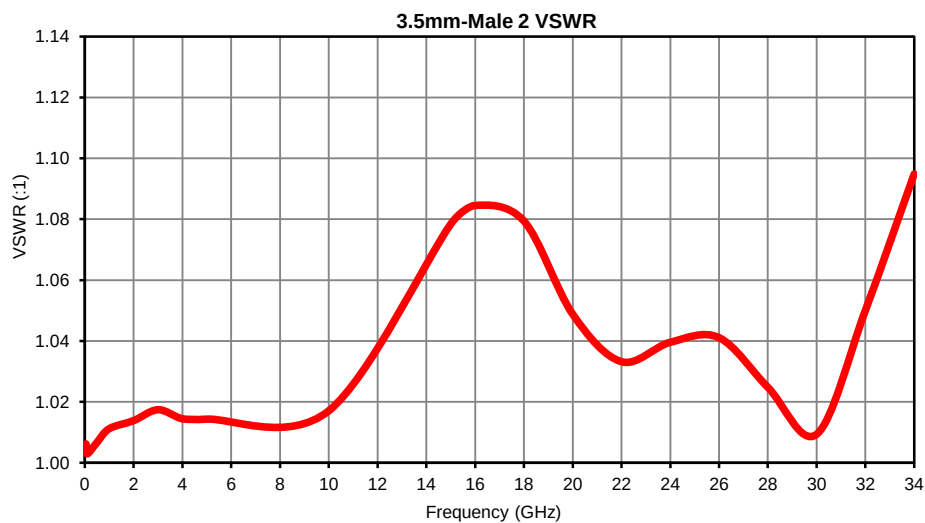
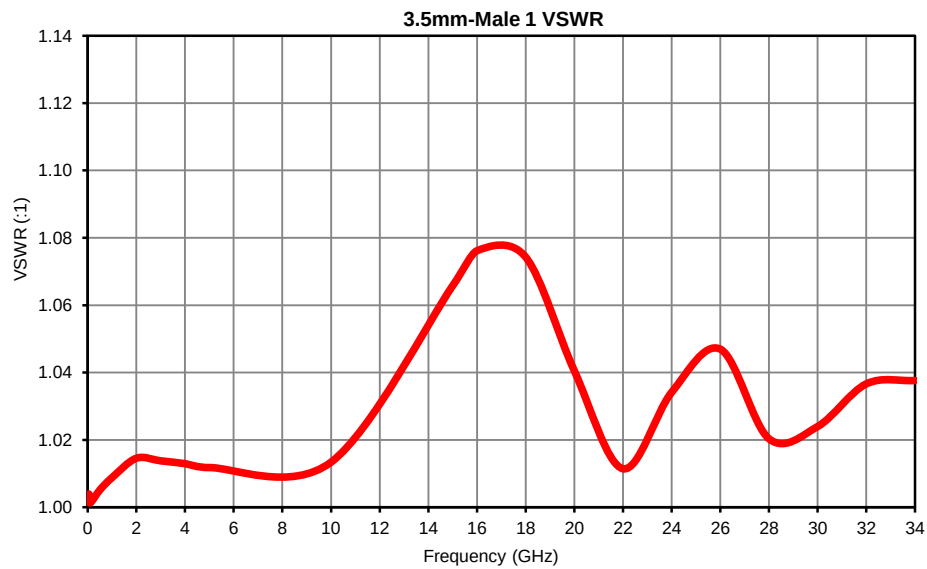
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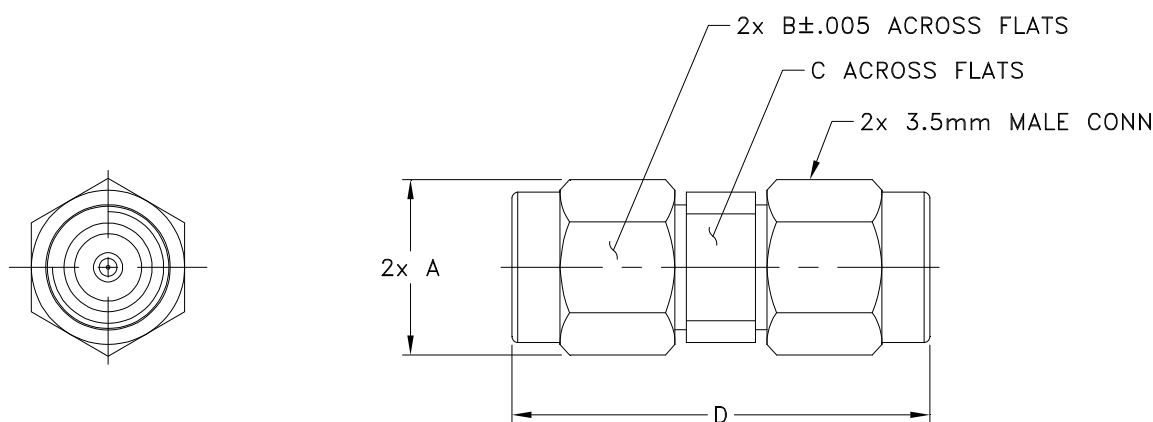
*Typical Performance Data*

| FREQUENCY<br>(GHz) | INSERTION LOSS<br>(dB) | 3.5mm-MALE 1<br>VSWR<br>(:1) | 3.5mm-MALE 2<br>VSWR<br>(:1) |
|--------------------|------------------------|------------------------------|------------------------------|
| 0.05               | 0.01                   | 1.00                         | 1.01                         |
| 0.10               | 0.02                   | 1.00                         | 1.00                         |
| 0.5                | 0.02                   | 1.01                         | 1.01                         |
| 1.0                | 0.03                   | 1.01                         | 1.01                         |
| 2.0                | 0.04                   | 1.01                         | 1.01                         |
| 3.0                | 0.07                   | 1.01                         | 1.02                         |
| 4.0                | 0.06                   | 1.01                         | 1.01                         |
| 5.0                | 0.06                   | 1.01                         | 1.01                         |
| 10                 | 0.08                   | 1.01                         | 1.02                         |
| 15                 | 0.10                   | 1.07                         | 1.08                         |
| 16                 | 0.10                   | 1.08                         | 1.08                         |
| 18                 | 0.12                   | 1.07                         | 1.08                         |
| 20                 | 0.14                   | 1.04                         | 1.05                         |
| 22                 | 0.10                   | 1.01                         | 1.03                         |
| 24                 | 0.16                   | 1.03                         | 1.04                         |
| 26                 | 0.13                   | 1.05                         | 1.04                         |
| 28                 | 0.13                   | 1.02                         | 1.02                         |
| 30                 | 0.16                   | 1.02                         | 1.01                         |
| 32                 | 0.16                   | 1.04                         | 1.05                         |
| 34                 | 0.19                   | 1.04                         | 1.09                         |

## Typical Performance Curves



### Outline Dimensions



| CASE # | A             | B              | C              | D              | E        | WT. GRAM |
|--------|---------------|----------------|----------------|----------------|----------|----------|
| DJ1863 | .36<br>(9.14) | .312<br>(7.93) | .275<br>(7.00) | .86<br>(21.80) | --<br>-- | 5.3      |

Dimensions are in inches (mm). Tolerances: 2 Pl.  $\pm .03$ ; 3Pl.  $+ .015$

#### Notes:

1. Case material:Stainless Steel.
2. Finish: Passivation.



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 | -55° to 100° C or -55° to 85° C<br>Ambient Environment | Individual Model Data Sheet                                           |
| Storage Temperature   | -55° to 100° C<br>Ambient Environment                  | Individual Model Data Sheet                                           |
| Thermal Shock         | -55° to 100°C, 100 cycles                              | MIL-STD-202, Method 107, condition B -3, except over<br>-55° to 100°C |
| Connector Durability  | 500 mating/unmating cycles                             | MIL-PRF-39012E, PARAGRAPH 4.6.12                                      |
| Drop Test             | 3' height, 3 times                                     |                                                                       |