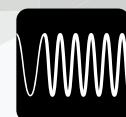


2.4mm Series

2.4mm Coaxial Connectors MIL Standard Compliant



Millimeter Wave



COAX 2.4mm



MIL Standard

Features

1. 2.4mm coaxial connector conforming to MIL-STD-348B Standard

2. Supports up to 50GHz frequency

3. Board Receptacle is Screw-mounted

- Provides excellent high frequency performance and consistent mounting quality
- Reusable
- Reduces mounting complexity
(No Soldering is required)
- Compatible with various PCB thicknesses

4. 0.085 inch flexible cable applicable

5. Attenuators and terminators are also available.

6. RoHS2 compliant

Applications

Data transmission measurement, radio communication equipment, measuring instruments, RF module, radio frequency power amplifier, high speed router, high speed switch, broadcasting equipment, etc.

Product Specifications

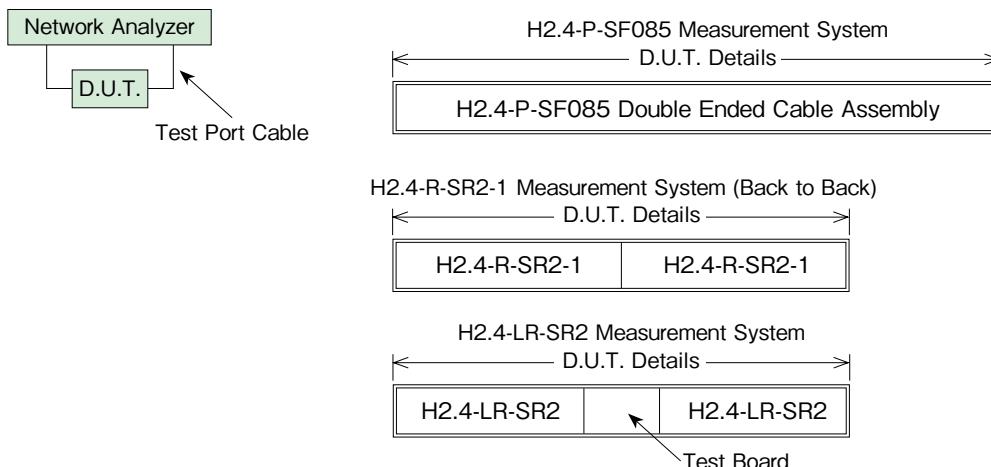
| | | | |
|----------------------------------|------------|---------------------------|-----------------------------|
| Nominal Characteristic Impedance | 50 Ω | Operating Temperature | -55 to +105°C (95% RH Max.) |
| Rated Frequency | 0 to 50GHz | Storage Temperature Range | -55 to +50°C (95% RH Max.) |

| Items | Specifications | Conditions |
|--|---|---|
| Contact Resistance | Center : 4m Ω Max. External : 2m Ω Max. | Measured at 100mA Max. |
| Insulation Resistance | 1000M Ω Min. | Measured at 100V DC |
| Withstanding Voltage | No breakdown | 200V AC for 1 min. |
| V.S.W.R.* | ● H2.4-P-SF085 V.S.W.R. 1.35 Max. (0 to 40GHz) V.S.W.R. 1.45 Max. (40 to 50GHz) | |
| | ● H2.4-LR-SR2 V.S.W.R. 1.3 Max. (0 to 40GHz) V.S.W.R. 1.4 Max. (40 GHz to 50GHz) | |
| | ● H2.4-R-SR2-1 V.S.W.R. 1.35 Max. (0 to 26.5GHz) V.S.W.R. 1.4 Max. (26.5 GHz to 40GHz) V.S.W.R. 1.45 Max. (40 GHz to 50GHz) | |
| Mating Cycles | Contact resistance Center : 6m Ω Max. External : 4m Ω Max. No broken, cracked, or loose parts | 500 cycles |
| Vibration Resistance | No electrical discontinuity greater than 1 μ s. No broken, cracked, or loose parts | Frequency : 10 to 500Hz, half amplitude : 0.75mm, Acceleration : 196m/s ² , 10 cycles in each of the 3 axis |
| Shock Resistance | No electrical discontinuity greater than 1 μ s. No broken, cracked, or loose parts | Acceleration : 980m/s ² , duration : 6ms, Wave form : half-sine wave, 3 times in each of the 3 axis |
| Moisture Resistance of Temperature/ Humidity Cycle | Insulation resistance : 100M Ω Min. (in a high humidity environment) Insulation resistance : 1000M Ω Min. (in a dry environment) No broken, cracked, or loose parts | Left for 10 cycles (240 hours) in an environment with the temperature ranging from -10 to 65°C and the humidity ranging from 90 to 98%. |
| Temperature Cycle | No broken, cracked, or loose parts | 5 cycles of the following test series condition : Temperature : -55°C → - → +105°C → - Time : 30 min. → 3 min. → 30 min. → 3 min. |
| Salt Spray | No considerable corrosion | Continuous 48 hour cycle in 5% salt water solution |

(Note) Information contained in this catalog represents general requirements for this Series. Contact us for the drawings and specifications for a specific part number shown.

* V.S.W.R. (Voltage Standing Wave Ratio) Measurement System

The above V.S.W.R. specification values were measured using the measurement system shown below.



Materials / Finish

| Part | Materials | Finish |
|-----------|-------------------------|--|
| Shell | Stainless Steel / Brass | Passivated / Nickel Plated / Gold Plated |
| Insulator | PTFE Resin / PEI Resin | - |
| Contact | Beryllium Copper | Gold Plated |

Product Number Structure

Refer to the chart below when determining the product specifications from the product number. Please select from the product numbers listed in this catalog when placing orders.

Receptacle

H2.4 - LR - SR2 (##)

① ② ③ ④

| | | | |
|------------------|---|-------------------------|---|
| ① Series Name | H2.4 | ③ Board Mounting Method | PCB Screw Mounting |
| ② Connector Type | LR : End Launch Receptacle R : Vertical Mount Receptacle | ④ Attached Screw | (00) : - (11) : 0-80UNF 1/4 inch (12) : 0-80UNF 3/16 inch |

Cable Assembly

H2.4 - 2P - SF085MC1 - A - 6IN

① ② ③ ④

| | | | |
|-----------------|---|-----------------------|----------------------------|
| ① Series Name | H2.4 | ③ Cable Type | 0.085 inch, Flexible Cable |
| ② Assembly Type | Double-ended Straight Plug Cable Assembly | ④ Total Length (inch) | 6, 12, 24, 36, 48, 60 inch |

Note : Plugs can be ordered only as terminated cable assemblies.

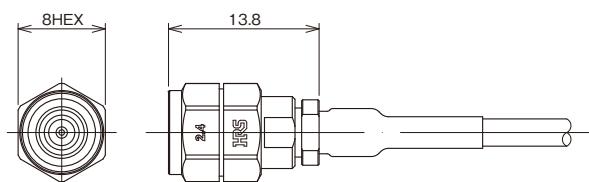
Functional Diagram

| Plug Side | Receptacle Side |
|---|---|
| Straight Plug H2.4-P-SF085 | PCB Vertical Launch Receptacle (For High Speed Transmission Evaluation Board Ports) H2.4-R-SR2-1 |
|  |  |
| Non-Reflective Terminator | PCB End Launch Receptacle (For High Speed Transmission Evaluation Board Ports) H2.4-LR-SR2 |
| Plug H2.4-TMP |  |
|  |  |
| Attenuator | |
| Plug-Jack H2.4-AT(##)-PJ ## : 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 20dB | |
|  | |

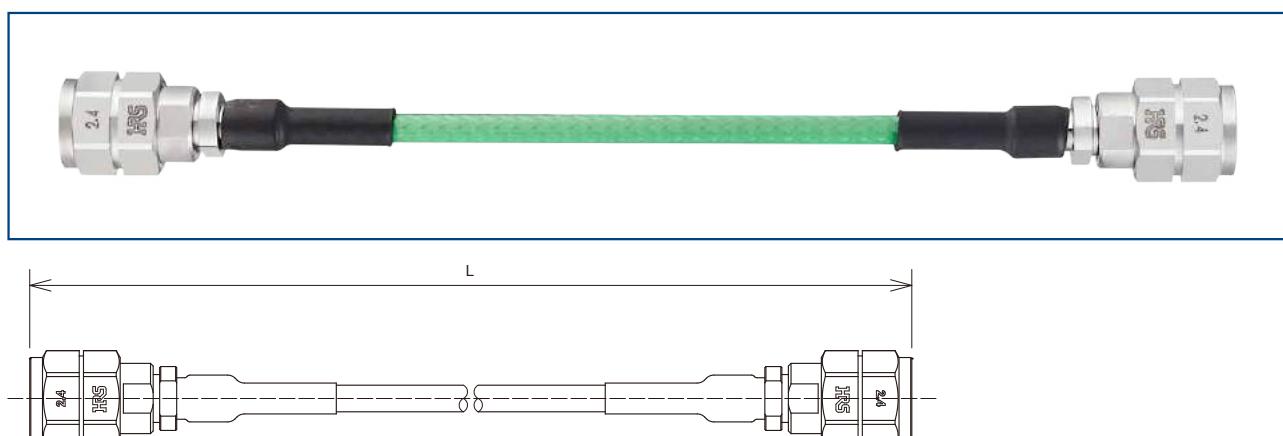
Plug

Plugs can be ordered only as terminated cable assemblies.

● H2.4-P-SF085



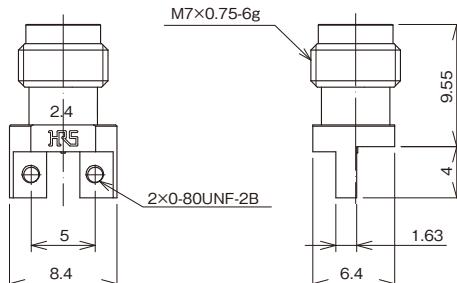
Cable Assembly (H2.4 Straight Plug - H2.4 Straight Plug)



| Part No. | HRS No. | Cable Assembly Length L | | Purchase Unit |
|-------------------------|------------------|-------------------------|-------------|------------------|
| | | Unit : inch | Unit : mm | |
| H2.4-2P-SF085MC1-A-6IN | CL0321-5132-0-01 | 6 ± 0.16 | 152.4 ± 4 | 20pcs per bag |
| H2.4-2P-SF085MC1-A-12IN | CL0321-5132-0-02 | 12 ± 0.32 | 304.8 ± 8 | |
| H2.4-2P-SF085MC1-A-24IN | CL0321-5132-0-03 | 24 ± 0.48 | 609.6 ± 12 | |
| H2.4-2P-SF085MC1-A-36IN | CL0321-5132-0-04 | 36 ± 0.48 | 914.4 ± 12 | |
| H2.4-2P-SF085MC1-A-48IN | CL0321-5132-0-05 | 48 ± 0.71 | 1219.2 ± 18 | |
| H2.4-2P-SF085MC1-A-60IN | CL0321-5132-0-06 | 60 ± 0.87 | 1524.0 ± 22 | |

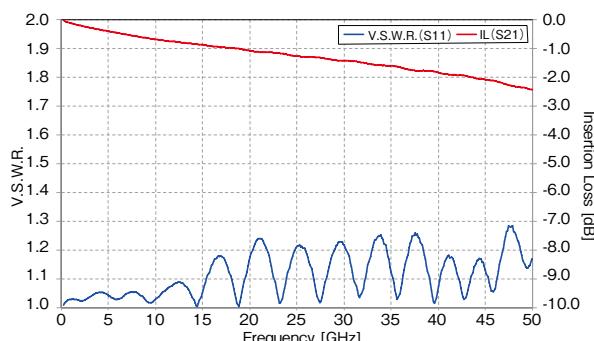
PCB End Launch Receptacle (For High Speed Transmission Evaluation Board Ports)

This product is a solderless mounted connector for prototype evaluation of high speed transmission boards. It is not recommended for use in actual commercial equipment.



| Part No. | HRS No. | Attached Screw | Purchase Unit |
|-----------------|------------------|-------------------|------------------|
| H2.4-LR-SR2 | CL0338-0603-0-00 | - | 20pcs per bag |
| H2.4-LR-SR2(11) | CL0338-0603-0-11 | 0-80UNF 1/4 inch | |
| H2.4-LR-SR2(12) | CL0338-0603-0-12 | 0-80UNF 3/16 inch | |

◆Frequency Characteristics (TYPICAL)

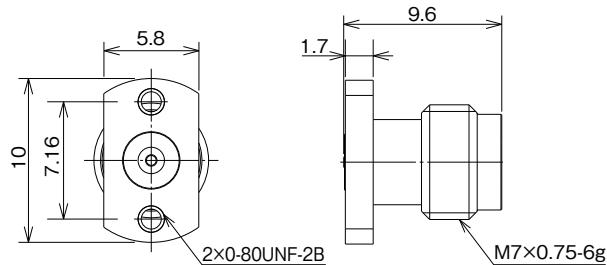


*Coplaner line length between both connector ends : 20mm

PCB Vertical Mount Receptacle

This product is a solderless mounted connector for prototype evaluation of high speed transmission boards. It is not recommended for use in actual commercial equipment.

●Inner Layer, Back Surface Trace Type



| Part No. | HRS No. | Attached Screw | Purchase Unit |
|------------------|------------------|-------------------|------------------|
| H2.4-R-SR2-1 | CL0338-0607-0-00 | - | 20pcs per bag |
| H2.4-R-SR2-1(11) | CL0338-0607-0-11 | 0-80UNF 1/4 inch | |
| H2.4-R-SR2-1(12) | CL0338-0607-0-12 | 0-80UNF 3/16 inch | |

Precautions

1. The diameter of the center contact pin is only 0.511mm.
Please handle with care. When mating the component with the corresponding connector, rotate the hex part only.
2. If any dust is found on the shell interface when mating the components, please wipe with alcohol.

While Taking into Consideration

Specifications mentioned in this catalog are reference values.

When considering to order or use this product, please confirm the Drawing and Product Specifications sheets.

Use an appropriate cable when using the connector in combination with cables.

If considering usage of a non-specified cable, please contact your sales representative.

If assembly process is done by jigs & tools which are not identified by Hirose, assurance will not be given.

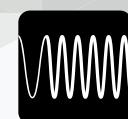
If considering usage for below mentioned applications, please contact your sales representative.

In cases where the application will demand a high level of reliability, such as automotive, medical instruments, public infrastructure, aerospace/ defense etc. Hirose must review before assurance of reliability can be given.

2.4mm-TM Series

2.4mm Coaxial Connectors

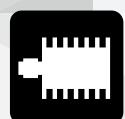
MIL Standard Compliant/Non-Reflective Terminator



Millimeter Wave



COAX 2.4mm



Terminator



Features

1. Non-reflective Terminator Supporting 0 to 50GHz
2. Small Size, Light Weight
3. Low V.S.W.R. & High Reliability
4. MIL Compliant (MIL-STD-348B) 2.4mm Coaxial Terminator

Applications

Optical transmission devices, data transmission measurement, radio communication equipment, measuring instruments, other high frequency devices, etc.

Product Specifications

| | | | |
|----------------------------------|------------------|-----------------------------|--------------|
| Nominal Characteristic Impedance | 50 Ω | Operating Temperature | -40 to +85°C |
| Rated Frequency | 0 to 50GHz | Operating Relative Humidity | 95% RH Max. |
| Power | 0.5W CW (+65°C) | | |

Materials / Finish

| Part | Materials | Finish |
|-------------------|-------------------------|--|
| Shell | Stainless Steel / Brass | Passivated / Gold Plated / Nickel Plated |
| Insulator | PTFE Resin | — |
| Male Contact | Brass | Gold Plated |
| Coupling | Stainless Steel | Passivated |
| Resistive Element | Metal Film | — |

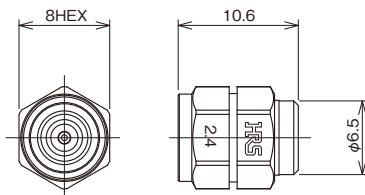
Product Number Structure

H2.4 - TM P

① ② ③

| | | | |
|---------------|---------------------------|------------------|---------------|
| ① Series Name | H2.4 | ③ Connector Type | P : Plug Type |
| ② TM | Non-reflective Terminator | | |

Terminator

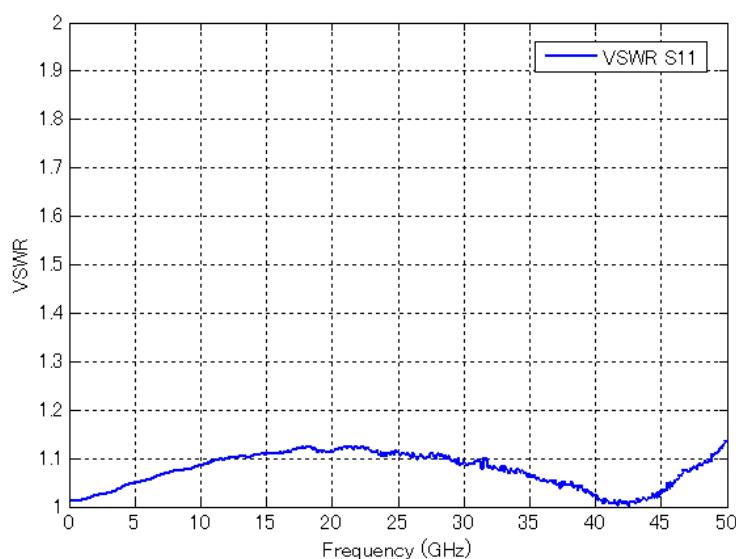


| Part No. | HRS No. | Purchase Unit |
|----------|------------------|---------------|
| H2.4-TMP | CL0353-0174-0-00 | 1pc per bag |

V.S.W.R. (Max.)

| |
|------------|
| 0 to 50GHz |
| 1.2 |

◆Frequency Characteristics (TYPICAL)



Precautions

1. The diameter of the center contact pin is only 0.511mm.
Please handle with care. When mating the component with the corresponding connector, rotate the hex part only.
2. If any dust is found on the shell interface when mating the components, please wipe with alcohol.

While Taking into Consideration

Specifications mentioned in this catalog are reference values.

When considering to order or use this product, please confirm the Drawing and Product Specifications sheets.

Use an appropriate cable when using the connector in combination with cables.

If considering usage of a non-specified cable, please contact your sales representative.

If assembly process is done by jigs & tools which are not identified by Hirose, assurance will not be given.

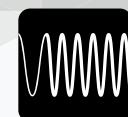
If considering usage for below mentioned applications, please contact your sales representative.

In cases where the application will demand a high level of reliability, such as automotive, medical instruments, public infrastructure, aerospace/ defense etc. Hirose must review before assurance of reliability can be given.

2.4mm-AT Series

2.4mm Coaxial Connectors

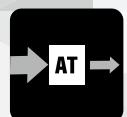
MIL Standard Compliant/Fixed Attenuators



Millimeter Wave



COAX 2.4mm



Attenuator



Features

- 1. Fixed Attenuators
Supporting 0 to 50GHz
(0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 20dB)**
- 2. Small Size, Light Weight**
- 3. Unique internal spring connection for robustness and excellence impedance matching even with temperature change.**
- 4. Low V.S.W.R. & High Reliability**
- 5. MIL Compliant
(MIL-STD-348B) 2.4mm Coaxial Attenuator**

Applications

Optical transmission devices, data transmission measurement, radio communication equipment, measuring instruments, other high frequency devices, etc.

Product Specifications

| | | | |
|----------------------------------|---------------|-----------------------------|--------------|
| Nominal Characteristic Impedance | 50 Ω | Operating Temperature | -10 to +65°C |
| Rated Frequency | 0 to 50GHz | Operating Relative Humidity | 90% RH Max. |
| Power | 1W CW (+65°C) | | |

Materials / Finish

| Part | Materials | Finish |
|-------------------|------------------|-------------|
| Shell | Stainless Steel | Passivated |
| Insulator | PTFE Resin | — |
| Male Contact | Brass | Gold Plated |
| Female Contact | Beryllium Copper | Gold Plated |
| Coupling | Stainless Steel | Passivated |
| Resistive Element | Metal Film | — |

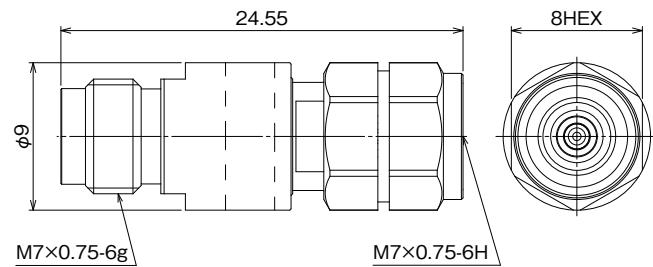
Product Number Structure

H2.4 - AT (##) - PJ

① ② ③ ④

| | | | |
|---------------|------------------|------------------|---|
| ① Series Name | H2.4 | ③ Attenuation | (Ex.) (0) : 0dB (Through) (3) : 3dB (10) : 10dB |
| ② AT | Fixed Attenuator | ④ Connector Type | PJ : Plug Jack |

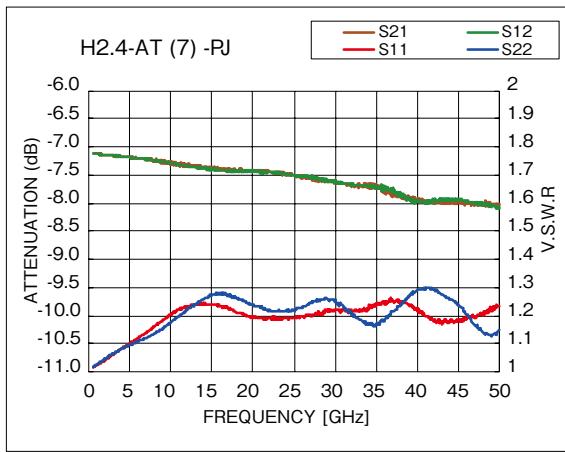
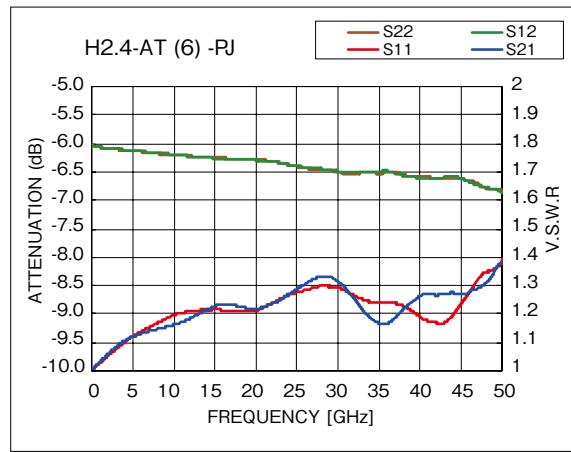
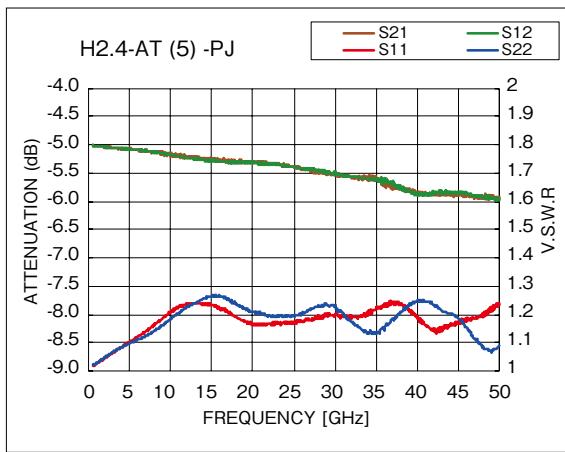
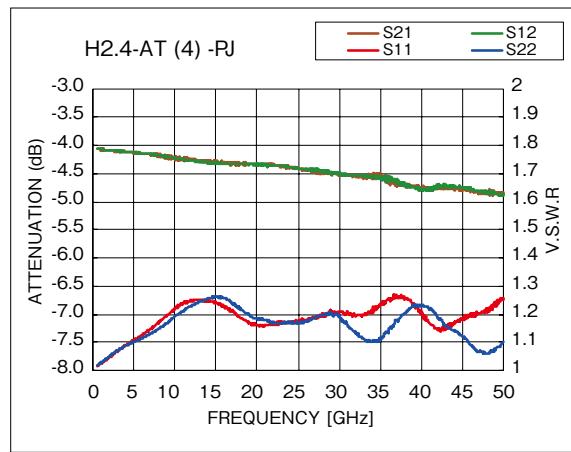
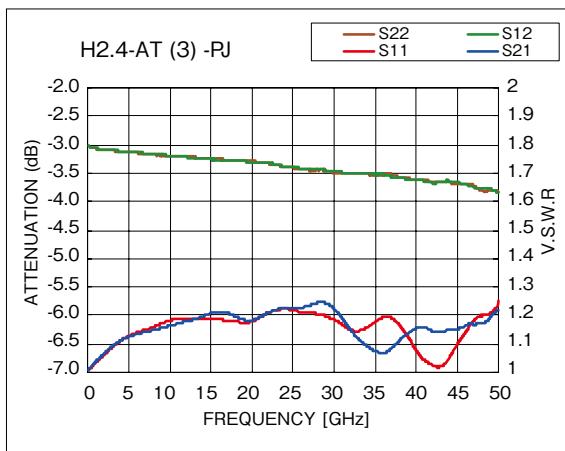
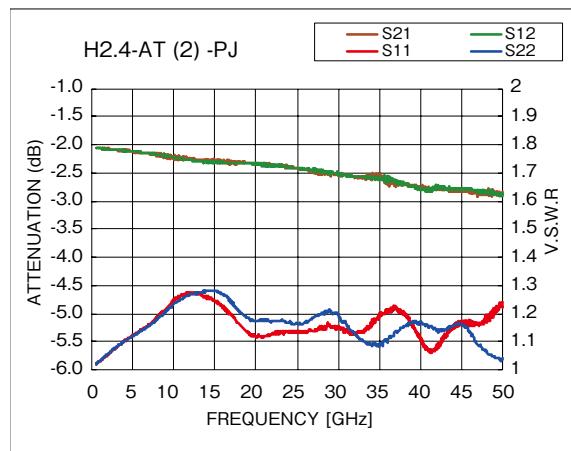
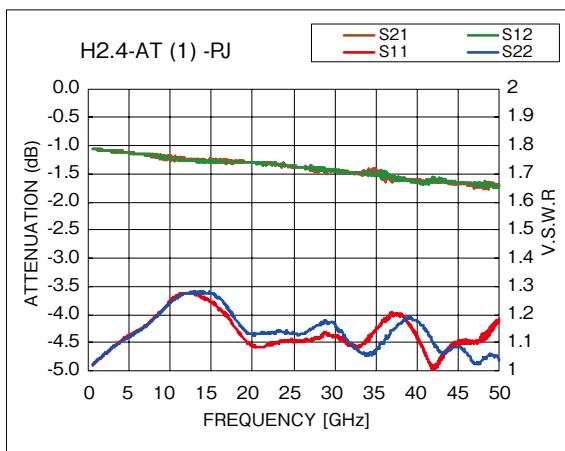
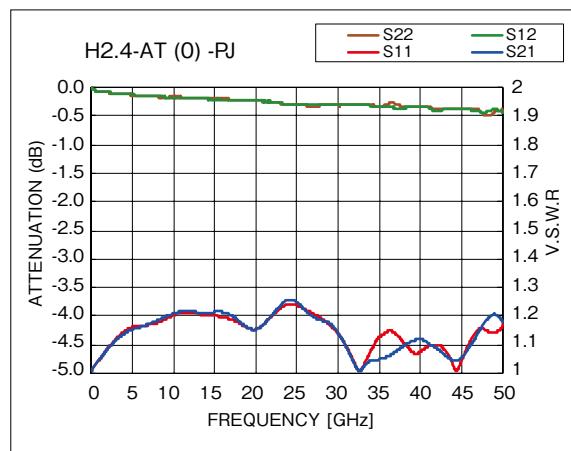
Attenuator

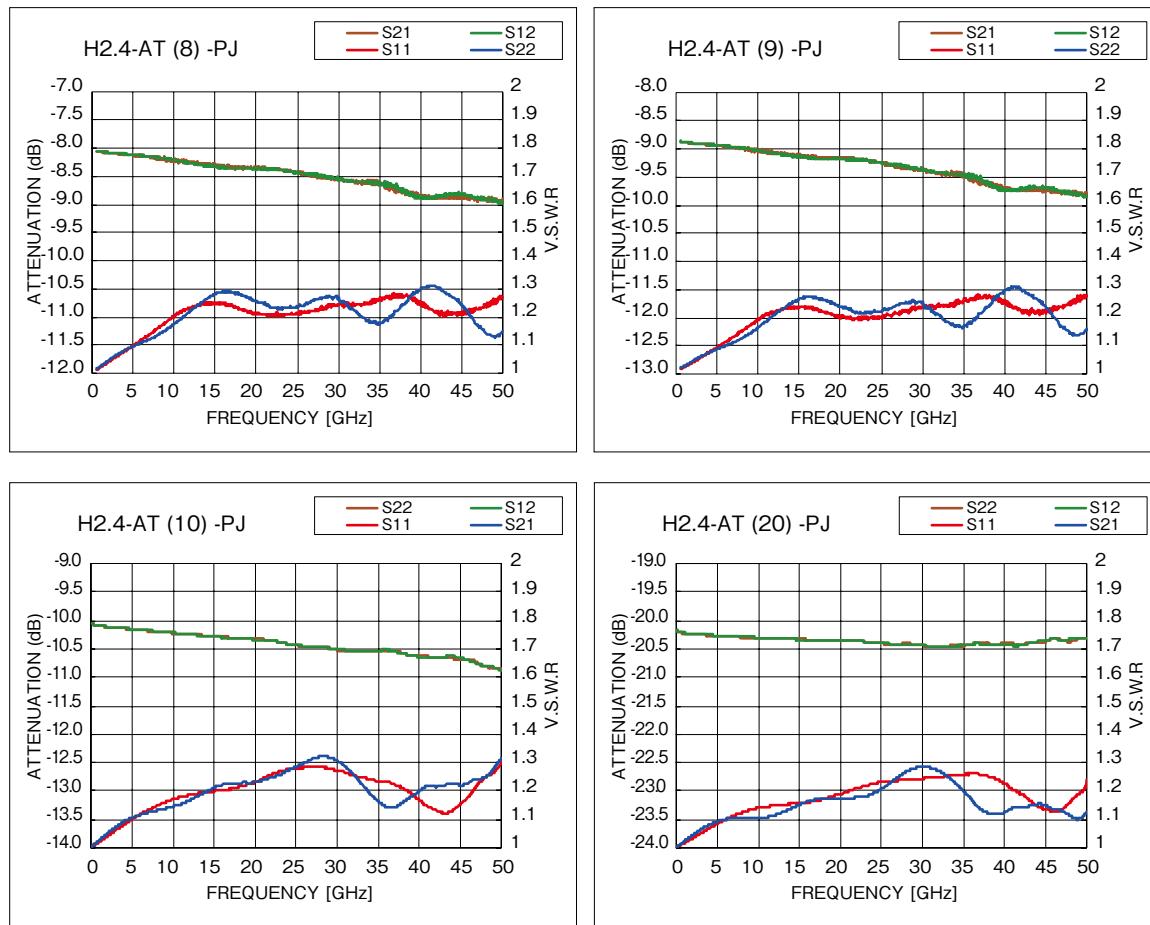


| Part No. | HRS No. | Attenuation (dB) | | | Voltage Standing Wave Ratio (V.S.W.R.)(Max.) | |
|----------------|------------------|------------------------------------|------------------------------------|------------------------------------|--|-------------|
| | | 0 to 18GHz | 18 to 26.5GHz | 26.5 to 50GHz | 0 to 12GHz | 12 to 50GHz |
| H2.4-AT(0)-PJ | CL0354-0290-0-00 | 0 ^{+0.5} ₀ | 0 ^{+0.8} ₀ | 0 ^{+1.0} ₀ | 1.35 | 1.4 |
| H2.4-AT(1)-PJ | CL0354-0309-0-00 | 1 ^{+0.8} _{-0.3} | 1 ^{+1.0} _{-0.3} | 1 ^{+1.6} _{-0.3} | | |
| H2.4-AT(2)-PJ | CL0354-0310-0-00 | 2 ^{+0.8} _{-0.3} | 2 ^{+1.0} _{-0.3} | 2 ^{+1.6} _{-0.3} | | |
| H2.4-AT(3)-PJ | CL0354-0291-0-00 | 3 ^{+0.7} _{-0.3} | 3 ^{+0.8} _{-0.3} | 3 ^{+1.5} _{-0.3} | | |
| H2.4-AT(4)-PJ | CL0354-0311-0-00 | 4 ^{+0.7} _{-0.4} | 4 ^{+0.9} _{-0.4} | 4 ^{+1.6} _{-0.4} | | |
| H2.4-AT(5)-PJ | CL0354-0312-0-00 | 5 ^{+0.8} _{-0.4} | 5 ^{+1.0} _{-0.4} | 5 ^{+1.8} _{-0.4} | | |
| H2.4-AT(6)-PJ | CL0354-0292-0-00 | 6 ^{+0.8} _{-0.2} | 6 ^{+0.9} _{-0.2} | 6 ^{+1.5} _{-0.2} | | |
| H2.4-AT(7)-PJ | CL0354-0313-0-00 | 7 ^{+1.0} _{-0.4} | 7 ^{+1.2} _{-0.4} | 7 ^{+2.0} _{-0.4} | | |
| H2.4-AT(8)-PJ | CL0354-0314-0-00 | 8 ^{+1.0} _{-0.5} | 8 ^{+1.2} _{-0.5} | 8 ^{+1.8} _{-0.5} | | |
| H2.4-AT(9)-PJ | CL0354-0315-0-00 | 9 ^{+1.0} _{-0.5} | 9 ^{+1.2} _{-0.5} | 9 ^{+1.8} _{-0.5} | | |
| H2.4-AT(10)-PJ | CL0354-0293-0-00 | 10 ^{+0.9} _{-0.5} | 10 ^{+1.0} _{-0.5} | 10 ^{+1.6} _{-0.5} | 1.35 | 1.45 |
| H2.4-AT(20)-PJ | CL0354-0294-0-00 | 20 ^{±1.0} | 20 ^{+1.2} _{-1.0} | 20 ^{+1.4} _{-1.0} | | |

Purchase Unit : 1pc per box

Frequency Characteristics (TYPICAL)





Precautions

1. The diameter of the center contact pin is only 0.511mm.
Please handle with care. When mating the component with the corresponding connector, rotate the hex part only.
2. If any dust is found on the shell interface when mating the components, please wipe with alcohol.

While Taking into Consideration

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