



Tone Spread
Solutions for Wireless Signal

Tone Spread Technology

RF Coaxial Adapter

- ***High Quality***
- ***Low PIM***
- ***Low VSWR***
- ***Wide Frequency Band (DC~3000MHz,DC~6000MHz)***
- ***N type,7/16(DIN) type,4.3/10 MINI DIN type and 4.1/9.5 MINI DIN type***



2020.04

N MALE TO N MALE RF ADAPTER

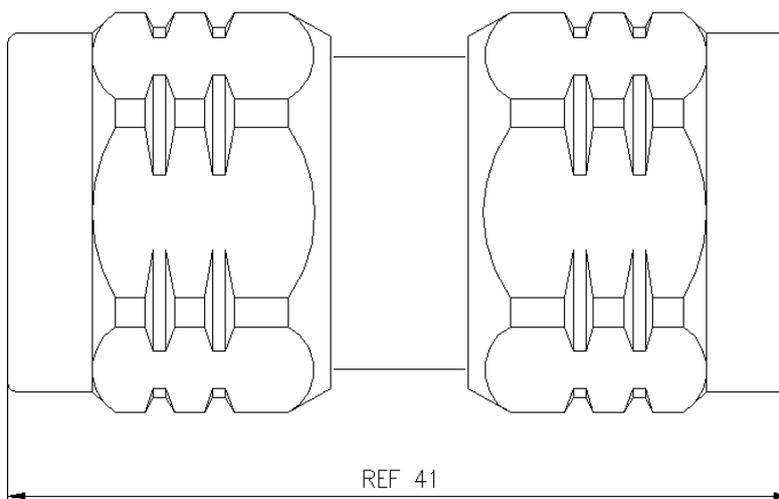
Specifications of N Male to N Male Adapter:

1. N/M-N/M adapter is in accordance with IEC60169-16: 1982
2. N Male interface screw thread: 5/8-24UNEF-2B
3. Material and plating:

Name of part	Material	Plating	Thickness of plating
Shell	Brass (HPb59-1)	Ternary Alloy or Silver Plated	2μ
Out conductor	Brass (HPb59-1)	Ternary Alloy or Silver Plated	2μ
Connecting nut	Brass (HPb59-1)	Ternary Alloy or Nickel Plated	2μ
Sealing	Silicone rubber		
Probe	Brass (HPb59-1)	Silver Plated	3μ
Insulator	PTEF (SFX-1)		

4. Working environment: Working temperature: -55~+155°, Relative moisture : 90%~95% (Temperature: 40±2°C
Atmospheric pressure: (70~106)Kpa.

5. Dimensions:



6. Mechanical characteristics:

Frequency range		0~3GHz
Contact resistance (mΩ)	Inner conductor	≤2 mΩ
	Outer conductor	≤0.5 mΩ
Insulation resistance (MΩ)		≥5000MΩ
Withstanding voltage AC(V/min)		≥2500V
VSWR(0~2GHz)		≤1.06(0~2GHz)
		≤1.10(0~3GHz)
Impedance(Ω)		50
Durability		500 Cycles

7. When results tested by different analyzers are different should adopt the HP testing device as criteria.

N FEMALE TO N FEMALE RF ADAPTER

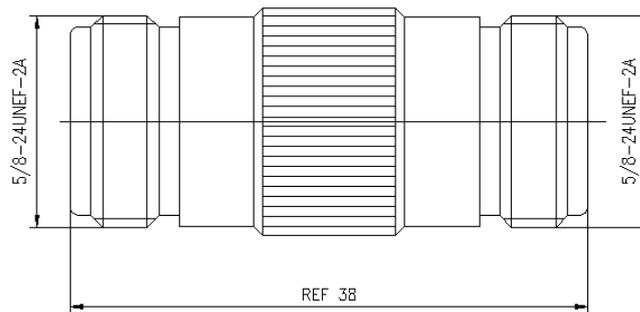
Specifications of N Female to N Female Adapter:

1. N/F-N/F adapter is in accordance with IEC60169-16: 1982
2. N Female interface screw thread: 5/8-24UNEF-2B
3. Material and plating:

Name of part	Material	Plating	Thickness of plating
Shell	Brass (HPb59-1)	Ternary Alloy or Silver Plated	2μ
Out conductor	Brass (HPb59-1)	Ternary Alloy or Silver Plated	2μ
Sealing	Silicone rubber		
Probe	Brass (HPb59-1)	Silver Plated	3μ
Insulator	PTEF (SFX-1)		

4. Working environment: Working temperature: -55~+155°, Relative moisture : 90%~95% (Temperature: 40±2°C
Atmospheric pressure: (70~106)Kpa.

5. Dimensions:



6. Mechanical characteristics:

Frequency range	0~3GHz	
Contact resistance (mΩ)	Inner conductor	≤2 mΩ
	Outer conductor	≤0.5 mΩ
Insulation resistance (MΩ)	≥5000MΩ	
Withstanding voltage AC(V/min)	≥2500V	
VSWR(0~2GHz)	≤1.06(0~2GHz)	
	≤1.10(0~3GHz)	
Impedance(Ω)	50	
Durability	500 Cycles	

7. When results tested by different analyzers are different should adopt the HP testing device as criteria.

N FEMALE TO N FEMALE(BH) RF ADAPTER

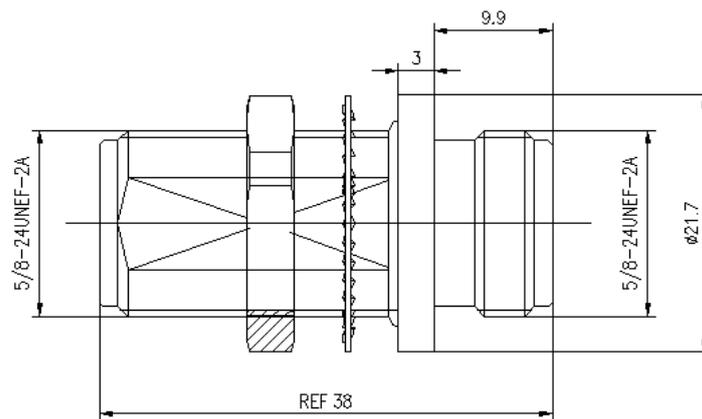
Specifications of N Female to N Female Bulkhead Adapter:

1. N/F-N/F Bulkhead adapter is in accordance with IEC60169-16: 1982
2. N Female interface screw thread: 5/8-24UNEF-2B
3. Material and plating:

Name of part	Material	Plating	Thickness of plating
Shell	Brass (HPb59-1)	Ternary Alloy or Silver Plated	2μ
Out conductor	Brass (HPb59-1)	Ternary Alloy or Silver Plated	2μ
Sealing	Silicone rubber		
Probe	Brass (HPb59-1)	Silver Plated	3μ
Insulator	PTEF (SFX-1)		

4. Working environment: Working temperature: -55~+155°, Relative moisture : 90%~95% (Temperature: 40±2°C
Atmospheric pressure: (70~106)Kpa.

5. Dimensions:



6. Mechanical characteristics:

Frequency range		0~3GHz
Contact resistance (mΩ)	Inner conductor	≤2 mΩ
	Outer conductor	≤0.5 mΩ
Insulation resistance (MΩ)		≥5000MΩ
Withstanding voltage AC(V/min)		≥2500V
VSWR(0~2GHz)		≤1.06(0~2GHz)
		≤1.10(0~3GHz)
Impedance(Ω)		50
Durability		500 Cycles

7. When results tested by different analyzers are different should adopt the HP testing device as criteria.

N MALE TO N MALE(RA) RF ADAPTER

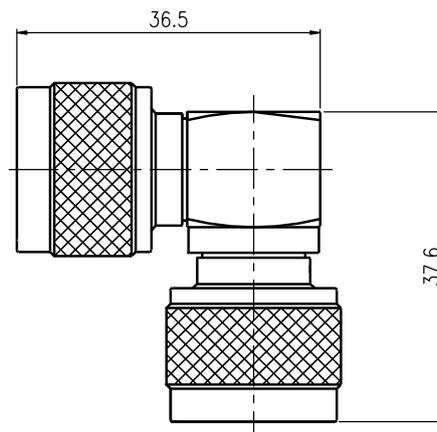
Specifications of N Male to N Male Adapter (Right Angle)

1. N/M-N/M(RA) adapter is in accordance with IEC60169-16: 1982
2. N Male interface screw thread: 5/8-24UNEF-2B
3. Material and plating:

Name of part	Material	Plating	Thickness of plating
Shell	Brass (HPb59-1)	Ternary Alloy or Silver Plated	2 μ
Out conductor	Brass (HPb59-1)	Ternary Alloy or Silver Plated	2 μ
Connecting nut	Brass (HPb59-1)	Ternary Alloy or Nickel Plated	2 μ
Sealing	Silicone rubber		
Probe	Brass (HPb59-1)	Silver Plated	3 μ
Insulator	PTEF (SFX-1)		

4. Working environment: Working temperature: -55~+155°, Relative moisture : 90%~95% (Temperature: 40 \pm 2°C)
Atmospheric pressure: (70~106)Kpa.

5. Dimensions:



6. Mechanical characteristics:

Frequency range	0~3GHz	
Contact resistance (m Ω)	Inner conductor	\leq 2 m Ω
	Outer conductor	\leq 0.5 m Ω
Insulation resistance (M Ω)	\geq 5000M Ω	
Withstanding voltage AC(V/min)	\geq 2500V	
VSWR(0~2GHz)	\leq 1.06(0~2GHz)	
	\leq 1.10(0~3GHz)	
Impedance(Ω)	50	
Durability	500 Cycles	

7. When results tested by different analyzers are different should adopt the HP testing device as criteria.

N MALE TO N FEMALE(RA) RF ADAPTER

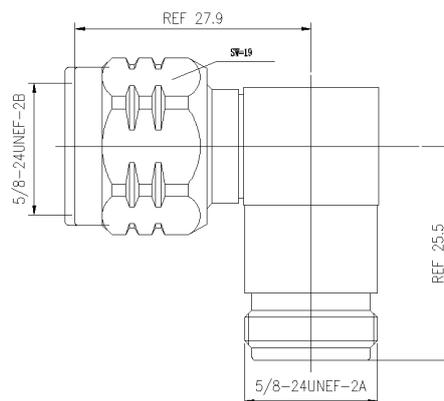
Specifications of N Male to N Female Adapter(Right Angle)

1. N/M-N/F(RA) adapter is in accordance with IEC60169-16: 1982
2. N Male/Female interface screw thread: 5/8-24UNEF-2B , N Female interface screw thread: 5/8-24UNEF-2A
3. Material and plating:

Name of part	Material	Plating	Thickness of plating
Shell	Brass (HPb59-1)	Ternary Alloy or Silver Plated	2μ
Out conductor	Brass (HPb59-1)	Ternary Alloy or Silver Plated	2μ
Connecting nut	Brass (HPb59-1)	Ternary Alloy or Nickel Plated	2μ
Sealing	Silicone rubber		
Probe	Brass (HPb59-1)	Silver Plated	3μ
Insulator	PTEF (SFX-1)		

4. Working environment: Working temperature: -55~+155°, Relative moisture : 90%~95% (Temperature: 40±2°C)
Atmospheric pressure: (70~106)Kpa.

5. Dimensions:



6. Mechanical characteristics:

Frequency range		0~3GHz
Contact resistance (mΩ)	Inner conductor	≤2 mΩ
	Outer conductor	≤0.5 mΩ
Insulation resistance (MΩ)		≥5000MΩ
Withstanding voltage AC(V/min)		≥2500V
VSWR(0~2GHz)		≤1.06(0~2GHz)
		≤1.10(0~3GHz)
Impedance(Ω)		50
Durability		500 Cycles

7. When results tested by different analyzers are different should adopt the HP testing device as criteria.

DIN MALE TO N MALE RF ADAPTER

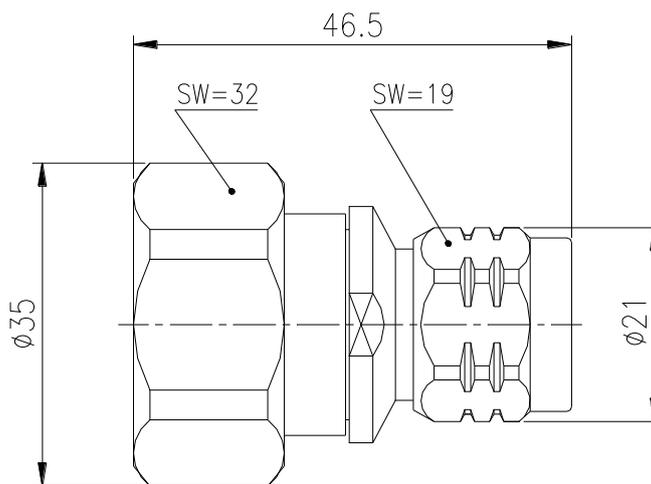
Specifications of 7/16(DIN) Male to N Male Adapter

- 7/16(DIN)M-N/M adapter is in accordance with IEC60169-16: 1982
- DIN interface screw thread:M29x1.5 ,N interface screw thread:5/8-24UNEF-2B
- Material and plating:

Name of part	Material	Plating	Thickness of plating
Shell	Brass (HPb59-1)	Ternary Alloy or Silver Plated	2μ
Out conductor	Brass (HPb59-1)	Ternary Alloy or Silver Plated	2μ
Connecting nut	Brass (HPb59-1)	Ternary Alloy or Nickel Plated	2μ
Sealing	Silicone rubber		
Probe	Brass (HPb59-1)	Silver Plated	3μ
Insulator	PTEF (SFX-1)		

- Working environment: Working temperature: -55~+155°, Relative moisture : 90%~95% (Temperature: 40±2°C)
Atmospheric pressure: (70~106)Kpa.

- Dimensions:



- Mechanical characteristics:

Frequency range		0~3GHz
Contact resistance (mΩ)	Inner conductor	≤1.4 mΩ
	Outer conductor	≤0.45 mΩ
Insulation resistance (MΩ)		≥5000MΩ
Withstanding voltage AC(V/min)		≥2500V
VSWR(0~2GHz)		≤1.08(0~2GHz)
		≤1.10(0~3GHz)
Impedance(Ω)		50
Durability		500 Cycles

- When results tested by different analyzers are different should adopt the HP testing device as criteria.

DIN FEMALE TO N MALE RF ADAPTER

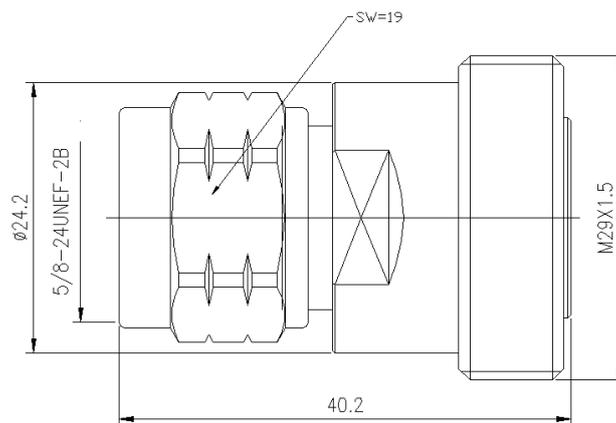
Specifications of 7/16(DIN) Female to N Male Adapter

- 7/16(DIN)F-N/M adapter is in accordance with IEC60169-16: 1982
- DIN interface screw thread:M29x1.5 ,N interface screw thread:5/8-24UNEF-2B
- Material and plating:

Name of part	Material	Plating	Thickness of plating
Shell	Brass (HPb59-1)	Ternary Alloy or Silver Plated	2μ
Out conductor	Brass (HPb59-1)	Ternary Alloy or Silver Plated	2μ
Connecting nut	Brass (HPb59-1)	Ternary Alloy or Nickel Plated	2μ
Sealing	Silicone rubber		
Probe	Brass (HPb59-1)	Silver Plated	3μ
Insulator	PTEF (SFX-1)		

- Working environment: Working temperature: -55~+155°, Relative moisture : 90%~95% (Temperature: 40±2°C)
Atmospheric pressure: (70~106)Kpa.

- Dimensions:



- Mechanical characteristics:

Frequency range		0~3GHz
Contact resistance (mΩ)	Inner conductor	≤1.4 mΩ
	Outer conductor	≤0.45 mΩ
Insulation resistance (MΩ)		≥5000MΩ
Withstanding voltage AC(V/min)		≥2500V
VSWR(0~2GHz)		≤1.08(0~2GHz)
		≤1.10(0~3GHz)
Impedance(Ω)		50
Durability		500 Cycles

- When results tested by different analyzers are different should adopt the HP testing device as criteria.

DIN MALE TO N FEMALE RF ADAPTER

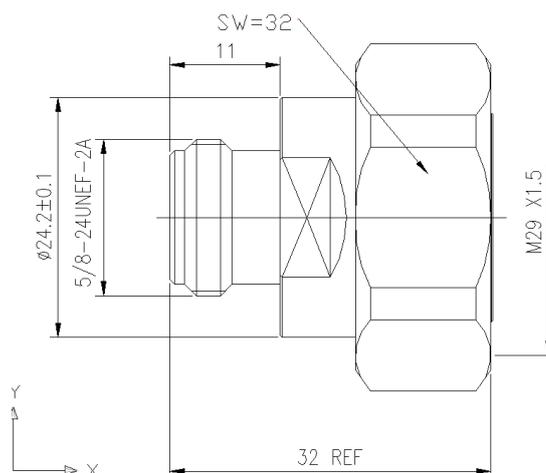
Specifications of 7/16(DIN) Male to N Female Adapter

- 7/16(DIN)M-N/F adapter is in accordance with IEC60169-16: 1982
- DIN interface screw thread:M29x1.5 ,N interface screw thread:5/8-24UNEF-2B
- Material and plating:

Name of part	Material	Plating	Thickness of plating
Shell	Brass (HPb59-1)	Ternary Alloy or Silver Plated	2μ
Out conductor	Brass (HPb59-1)	Ternary Alloy or Silver Plated	2μ
Connecting nut	Brass (HPb59-1)	Ternary Alloy or Nickel Plated	2μ
Sealing	Silicone rubber		
Probe	Brass (HPb59-1)	Silver Plated	3μ
Insulator	PTEF (SFX-1)		

- Working environment: Working temperature: -55~+155°, Relative moisture : 90%~95% (Temperature: 40±2°C)
Atmospheric pressure: (70~106)Kpa.

- Dimensions:



- Mechanical characteristics:

Frequency range		0~3GHz
Contact resistance (mΩ)	Inner conductor	≤1.4 mΩ
	Outer conductor	≤0.45 mΩ
Insulation resistance (MΩ)		≥5000MΩ
Withstanding voltage AC(V/min)		≥2500V
VSWR(0~2GHz)		≤1.08(0~2GHz)
		≤1.10(0~3GHz)
Impedance(Ω)		50
Durability		500 Cycles

- When results tested by different analyzers are different should adopt the HP testing device as criteria.

DIN FEMALE TO N FEMALE RF ADAPTER

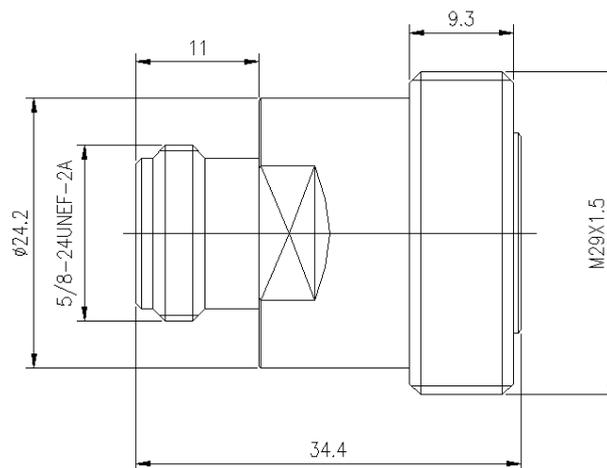
Specifications of 7/16(DIN) Female to N Female Adapter

- 7/16(DIN)F-N/F adapter is in accordance with IEC60169-16: 1982
- DIN interface screw thread:M29x1.5 ,N interface screw thread:5/8-24UNEF-2B
- Material and plating:

Name of part	Material	Plating	Thickness of plating
Shell	Brass (HPb59-1)	Ternary Alloy or Silver Plated	2μ
Out conductor	Brass (HPb59-1)	Ternary Alloy or Silver Plated	2μ
Sealing	Silicone rubber		
Probe	Brass (HPb59-1)	Silver Plated	3μ
Insulator	PTEF (SFX-1)		

- Working environment: Working temperature: -55~+155°, Relative moisture : 90%~95% (Temperature: 40±2°C)
Atmospheric pressure: (70~106)Kpa.

- Dimensions:



- Mechanical characteristics:

Frequency range		0~3GHz
Contact resistance (mΩ)	Inner conductor	≤1.4 mΩ
	Outer conductor	≤0.45 mΩ
Insulation resistance (MΩ)		≥5000MΩ
Withstanding voltage AC(V/min)		≥2500V
VSWR(0~2GHz)		≤1.08(0~2GHz)
		≤1.10(0~3GHz)
Impedance(Ω)		50
Durability		500 Cycles

- When results tested by different analyzers are different should adopt the HP testing device as criteria.

DIN MALE TO DIN MALE RF ADAPTER

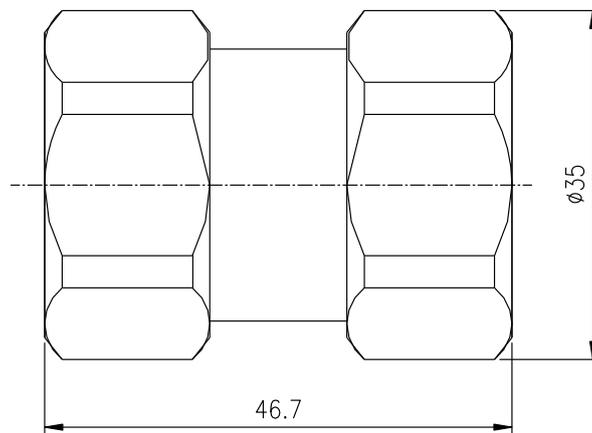
Specifications of 7/16(DIN) Male to 7/16(DIN) Male Adapter

1. DIN/M-DIN/M Adapter is in accordance with IEC60169-16: 1975
2. Interface screw thread: M29*1.5
3. Material and plating:

Name of part	Material	Plating	Thickness of plating
Shell	Brass (HPb59-1)	Ternary Alloy or Silver Plated	2μ
Out conductor	Brass (HPb59-1)	Ternary Alloy or Silver Plated	2μ
Connecting nut	Brass (HPb59-1)	Ternary Alloy or Nickel Plated	2μ
Sealing	Silicone rubber		
Probe	Brass (HPb59-1)	Silver Plated	2μ
Insulator	PTEF (SFX-1)		

4. Working environment: Working temperature: -40~+85° Relative moisture : 90%~95% (Temperature: 40±2℃)
Atmospheric pressure: (70~106)Kpa.

5. Dimensions:



6. Mechanical characteristics:

Frequency range		0~3GHz
Impedance(Ω)		50
Contact resistance (mΩ)	Inner conductor	≤0.8 mΩ
	Outer conductor	≤0.4 mΩ
Insulation resistance(MΩ)		≥10000MΩ
Withstanding voltage AC(V/min)		≥4000V
VSWR(0~2GHz)		≤1.08(0~2GHz)
Durability		500 Cycles

7. When results tested by different analyzers are different should adopt the HP testing device as criteria.

DIN MALE TO DIN FEMALE RF ADAPTER

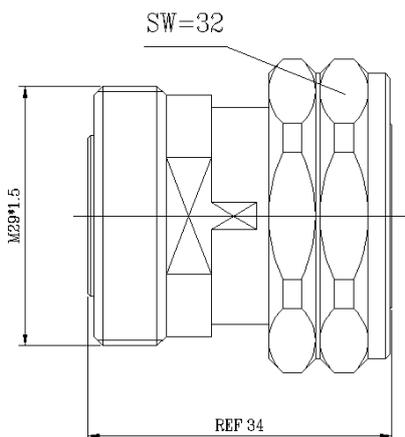
Specifications of 7/16(DIN) Male to 7/16(DIN) Female Adapter

1. DIN/M-DIN/F Adapter is in accordance with IEC60169-16: 1975
2. Interface screw thread: M29*1.5
3. Material and plating

Name of part	Material	Plating	Thickness of plating
Shell	Brass (HPb59-1)	Ternary Alloy or Silver Plated	2μ
Out conductor	Brass (HPb59-1)	Ternary Alloy or Silver Plated	2μ
Connecting nut	Brass (HPb59-1)	Ternary Alloy or Nickel Plated	2μ
Sealing	Silicone rubber		
Probe	Brass (HPb59-1)	Silver Plated	2μ
Insulator	PTEF (SFX-1)		

4. Working environment: Working temperature: -40~+85° Relative moisture : 90%~95% (Temperature: 40±2℃)
Atmospheric pressure: (70~106)Kpa

5. Dimensions:



6. Mechanical characteristics:

Frequency range		0~3GHz
Impedance(Ω)		50
Contact resistance (mΩ)	Inner conductor	≤0.8 mΩ
	Outer conductor	≤0.4 mΩ
Insulation resistance(MΩ)		≥10000MΩ
Withstanding voltage AC(V/min)		≥4000V
VSWR(0~2GHz)		≤1.08(0~2GHz)
Durability		500 Cycles

7. When results tested by different analyzers are different should adopt the HP testing device as criteria.

DIN FEMALE TO DIN FEMALE RF ADAPTER

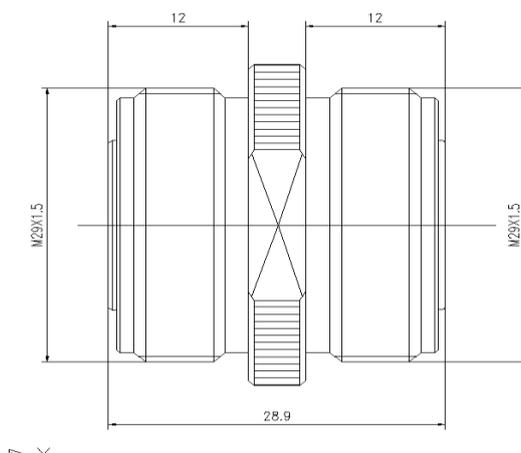
Specifications of 7/16(DIN) Female to 7/16(DIN) Female Adapter

1. DIN/F-DIN/F Adapter is in accordance with IEC60169-16: 1975
2. Interface screw thread: M29*1.5
3. Material and plating

Name of part	Material	Plating	Thickness of plating
Shell	Brass (HPb59-1)	Ternary Alloy or Silver Plated	2μ
Out conductor	Brass (HPb59-1)	Ternary Alloy or Silver Plated	2μ
Connecting nut	Brass (HPb59-1)	Ternary Alloy or Nickel Plated	2μ
Sealing	Silicone rubber		
Probe	Brass (HPb59-1)	Silver Plated	2μ
Insulator	PTEF (SFX-1)		

4. Working environment: Working temperature: -40~+85° Relative moisture : 90%~95% (Temperature: 40±2℃)
Atmospheric pressure: (70~106)Kpa

5. Dimensions:



6. Mechanical characteristics:

Frequency range		0~3GHz
Impedance(Ω)		50
Contact resistance (mΩ)	Inner conductor	≤0.8 mΩ
	Outer conductor	≤0.4 mΩ
Insulation resistance(MΩ)		≥10000MΩ
Withstanding voltage AC(V/min)		≥4000V
VSWR(0~2GHz)		≤1.08(0~2GHz)
Durability		500 Cycles

7. When results tested by different analyzers are different should adopt the HP testing device as criteria.

DIN FEMALE TO DIN FEMALE(BH) RF ADAPTER

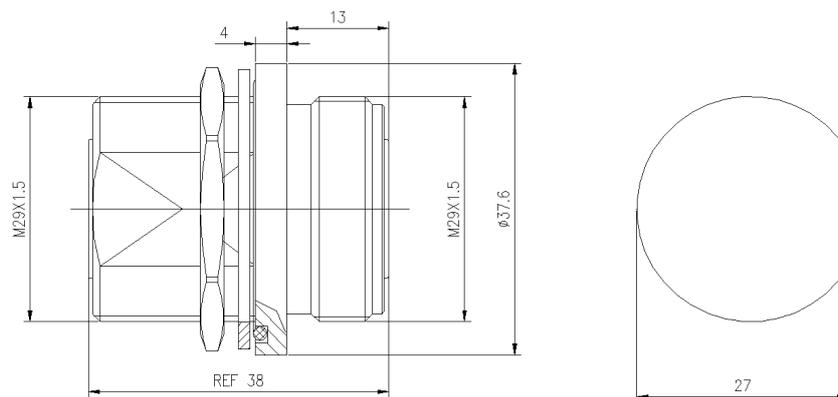
Specifications of Bulkhead 7/16(DIN) Female to 7/16(DIN) Female Adapter

1. DIN/F-DIN/F Adapter is in accordance with IEC60169-16: 1975
2. Interface screw thread: M29*1.5
3. Material and plating

Name of part	Material	Plating	Thickness of plating
Shell	Brass (HPb59-1)	Ternary Alloy or Silver Plated	2μ
Out conductor	Brass (HPb59-1)	Ternary Alloy or Silver Plated	2μ
Connecting nut	Brass (HPb59-1)	Ternary Alloy or Nickel Plated	2μ
Sealing	Silicone rubber		
Probe	Brass (HPb59-1)	Silver Plated	2μ
Insulator	PTEF (SFX-1)		

4. Working environment: Working temperature: -40~+85° Relative moisture : 90%~95% (Temperature: 40±2℃)
Atmospheric pressure: (70~106)Kpa

5. Dimensions:



6. Mechanical characteristics:

Frequency range		0~3GHz
Impedance(Ω)		50
Contact resistance (mΩ)	Inner conductor	≤0.8 mΩ
	Outer conductor	≤0.4 mΩ
Insulation resistance(MΩ)		≥10000MΩ
Withstanding voltage AC(V/min)		≥4000V
VSWR(0~2GHz)		≤1.08(0~2GHz)
Durability		500 Cycles

7. When results tested by different analyzers are different should adopt the HP testing device as criteria.

DIN MALE TO DIN FEMALE(RA) RF ADAPTER

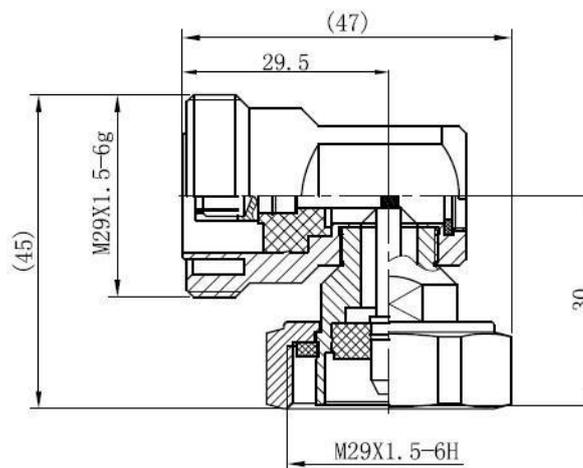
Specifications of Bulkhead 7/16(DIN) Male to 7/16(DIN) Female Right Angle Adapter

1. DIN/M-DIN/F(RA) Adapter is in accordance with IEC60169-16: 1975
2. Interface screw thread: M29*1.5
3. Material and plating

Name of part	Material	Plating	Thickness of plating
Shell	Brass (HPb59-1)	Ternary Alloy or Silver Plated	2μ
Out conductor	Brass (HPb59-1)	Ternary Alloy or Silver Plated	2μ
Connecting nut	Brass (HPb59-1)	Ternary Alloy or Nickel Plated	2μ
Sealing	Silicone rubber		
Probe	Brass (HPb59-1)	Silver Plated	2μ
Insulator	PTEF (SFX-1)		

4. Working environment: Working temperature: -40~+85° Relative moisture : 90%..95% (Temperature: 40±2℃)
Atmospheric pressure: (70~106)Kpa

5. Dimensions:



6. Mechanical characteristics:

Frequency range	0~7.5GHz	
Impedance(Ω)	50	
Contact resistance (mΩ)	Inner conductor	≤0.8 mΩ
	Outer conductor	≤0.4 mΩ
Dielectric Resistance	≥500MΩ	
PIM	<-155dBc@2X43dBm	
Withstanding voltage AC(V/min)	≥4000V	
VSWR(0~3GHz)	≤1.10(0~3GHz)	
Durability	500 Cycles	

7. When results tested by different analyzers are different should adopt the HP testing device as criteria.

QMA MALE TO SMA FEMALE RF ADAPTER

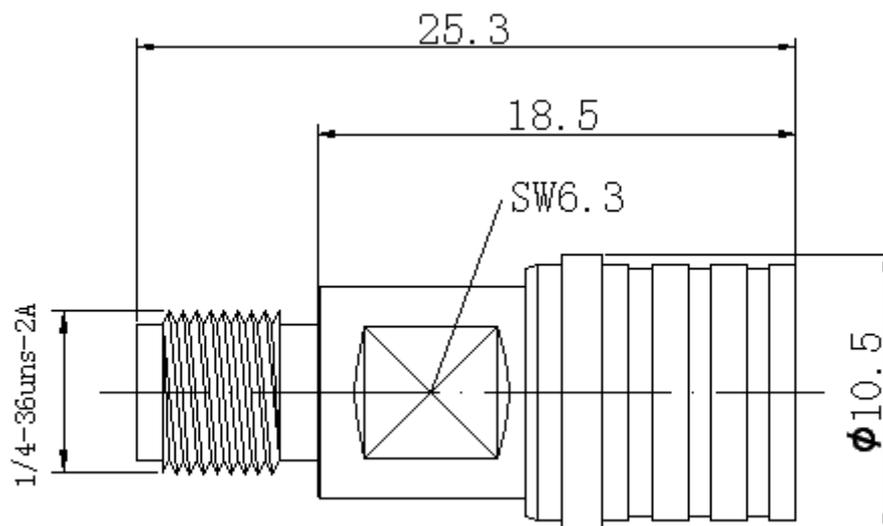
Specifications of QMA Male to SMA Female RF Adapter

Mechanical characteristics:

Item	Specification
Frequency range	0~8.5GHz
Connector	QMA Male to SMA Female
Impedance	50Ω
VSWR(0~3GHz)	≤1.15(0~6GHz)
Dielectric Withstanding voltage	1000 VRMS
Temperature Range	-65~165°C
Durability	100 Cycles

When results tested by different analyzers are different should adopt the HP testing device as criteria.

Dimensions:



Note: The drawing only for reference, please make the object as the standard.

SMA FEMALE TO SMA FEMALE(BH) RF ADAPTER

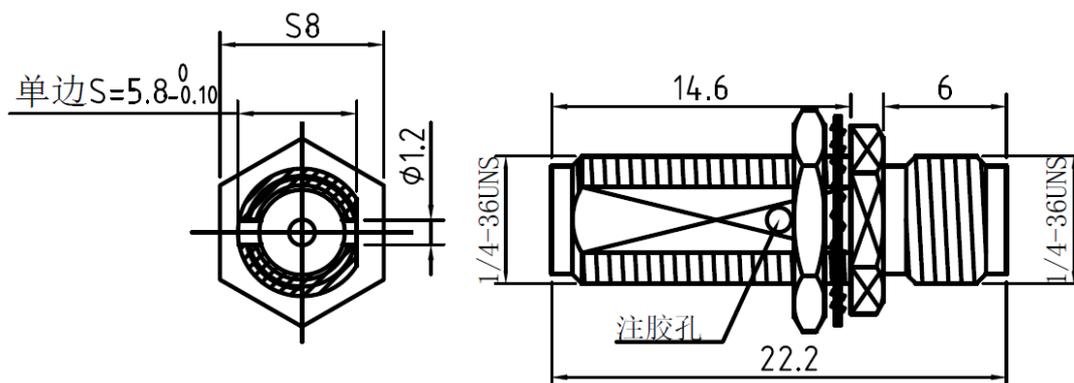
Specifications of SMA Female to SMA Female(Bulkhead) RF Adapter

Mechanical characteristics:

Item	Specification
Model	SMA/F-SMA/F(BH)
Frequency range	0~12.4GHz
Connector	SMA Female to SMA Female(Bulkhead)
Impedance	50Ω
VSWR	≤1.15
Dielectric Withstanding voltage	1000 VRMS
Temperature Range	-40~155°C
Durability	500 Cycles

When results tested by different analyzers are different should adopt the HP testing device as criteria.

Dimensions:



Note: The drawing only for reference, please make the object as the standard.

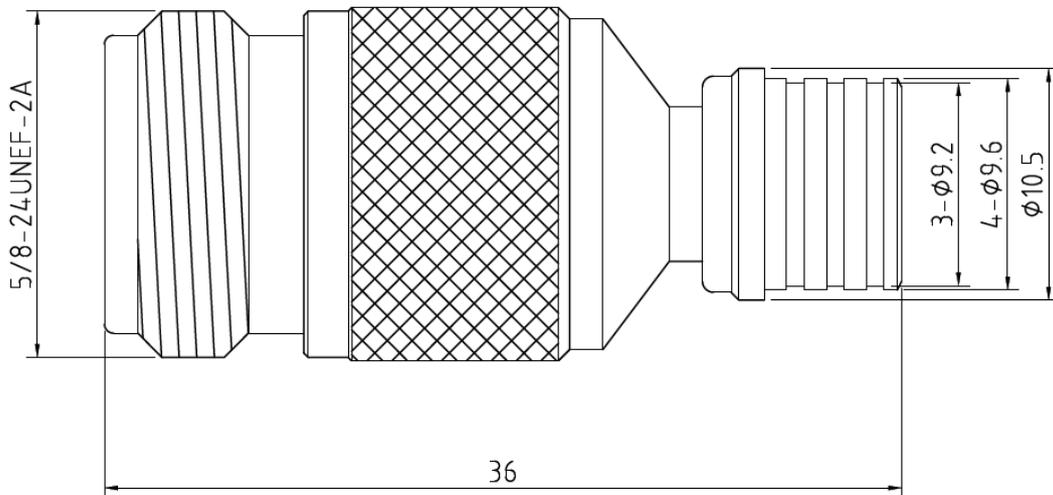
Specifications of low PIM N Female to QMA Male RF Adapter

Mechanical & Electrical Specification:

Model	N/F-QMA/M(LP)
Frequency Range	0~18GHz
VSWR	≤1.10(0~6GHz)
	≤1.15(0~8.5GHz)
	≤1.25(0~18GHz)
PIM (2X43dBm)	<-155dBc (<-165dBc Typical)
Plating	Silvering & Ternary Alloy
Insulator	PTFE
Connector	N Female to QMA Male
Impedance	50Ω
Durability	500 Cycles

When results tested by different analyzers are different should adopt the HP testing device as criteria.

Dimensions:



Note: The drawing only for reference, please make the object as the standard.

NEX10/M-7/16(DIN)/M RF ADAPTER(BH)

Specifications of low PIM NEX10 Male to 7/16(DIN) Male RF Adapter

Mechanical & Electrical Specification:

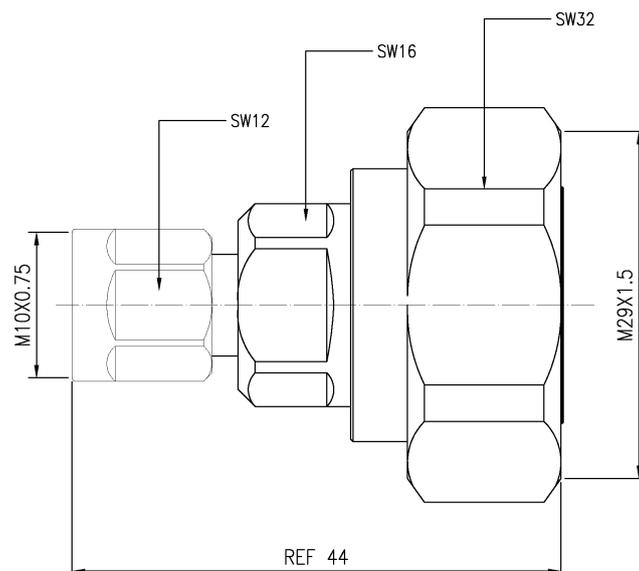
Model	NEX10/M-DIN/M
Frequency Range	0~6GHz
VSWR	≤1.15(0~6GHz)
PIM (2X43dBm)	<-153dBc (<-165dBc Typical)
Plating	Silvering & Ternary Alloy
Insulator	PTFE
Connector	NEX10 Male to 7/16(DIN) Male
Impedance	50Ω
Durability	500 Cycles

When results tested by different analyzers are different should adopt the HP testing device as criteria.

Material & Plating:

Name of part	Material	Plating	Thickness of Plating
Shell	Brass (HPb59-1)	Ternary Alloy or Silver Plated	2~3μ
Out conductor	Brass (HPb59-1)	Ternary Alloy or Silver Plated	2~3μ
Connecting nut	Brass (HPb59-1)	Ternary Alloy or Nickel Plated	2~3μ
Sealing	Silicone rubber		
Probe	Brass (HPb59-1)	Silver Plated	2~3μ
Insulator	PTEF (SFX-1)		

Dimensions:



Note: The drawing only for reference, please make the object as the standard.