



698-2700MHz
CDMA, GSM, DCS, UMTS, LTE, TD-LTE, WiFi and WiMax etc.

Main Features:

- Low insertion loss
- Low PIM
- Available for indoor applications
- Connectors: N type female
- Applications: wireless base station, Indoor DAS, metro coverage etc.



Electrical Specifications			
Product Type	2-Way	3-Way	4-Way
Frequency Range	698-2700MHz	698-2700MHz	698-2700MHz
Split Loss	3.01dB	4.8dB	6.02dB
Insertion Loss	≤0.3dB	≤0.5dB	≤0.6dB
Power Handling	300W	300W	300W
VSWR	≤1.2		
PIM	≤-130dBc@2x43dBm inputs		
Impedance	50Ω		

Mechanical Specifications			
Product Type	2-Way	3-Way	4-Way
Weight	350gs	430gs	460gs
Dimensions	210mm * 60mm * 25mm	235mm * 60mm * 25mm	235mm * 60mm * 41mm
Connector	N-female		
Housing Material	Aluminum		
Colour	Black		
Operating Humidity	5-95%		
Operating Temperature	-35 to 70°C		
Application	Indoor		
Mounting	Wall Mount		
Waterproof grade	IP65		

*Note: The specification subject to change without notice, please obtain latest specification from Hexagon before ordering.

SYNERGY TELECOM PVT LTD
WZ-47 BUDHELLA VILLAGE VIKASPURI
NEW DELHI-110018
PHONE- 09810138894 , Mail: info@synergypvt.com

4 in 4 out Combiner

Product Name

4 in 4 out Combiner (700-2700MHz, 200W, -153dBc, N-female)

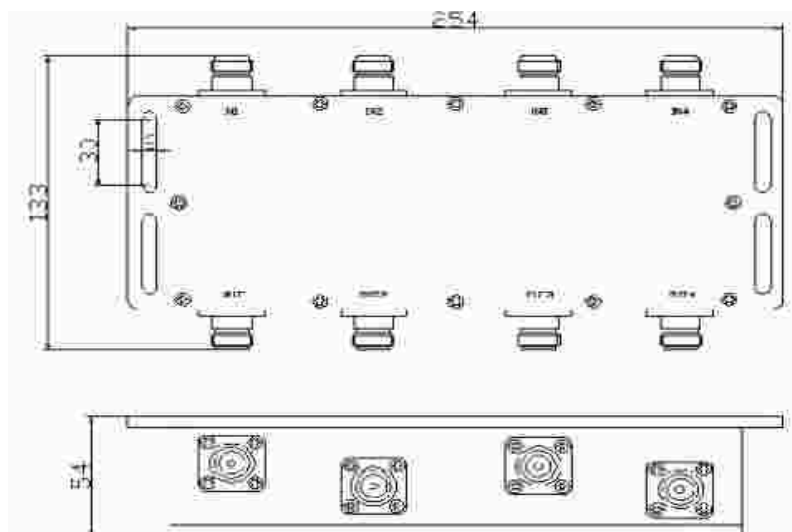
Product Features

- ◆ Wide Frequency Band 698-2700MHz
- ◆ 2G/3G/4G/LTE Coverage
- ◆ Low VSWR & Insertion Loss
- ◆ High Isolation
- ◆ Low Passive Intermodulation -153dBc
- ◆ Widely used in IBS projects

Technical & Mechanical Specifications

Frequency (MHz)	700-2700
Insertion Loss(dB)	7.0 max
Isolation(dB)	23 min
VSWR	≤1.30
Average Power(W)	200
PIM	≤-153dBc@2*43dBm
Impedance	50 ohm
Connector	N-female
Color	Black
Temp(deg)	-35~+85
Relative Humidity	5%-95%

Mechanical Drawing



4 in 1 out Combiner

Product Name

4 in 1 out Combiner (700-2700MHz, 100W, -153dBc, N-female)

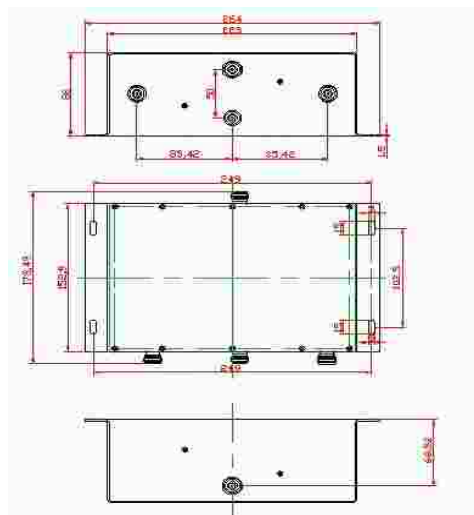
Product Features

- ◆ Wide Frequency Band 700-2700MHz
- ◆ 2G/3G/4G/LTE Coverage
- ◆ Low VSWR
- ◆ High Isolation
- ◆ Low Insertion Loss
- ◆ Widely used in IBS projects

Technical & Mechanical Specifications

Model No.	
Frequency (MHz)	700-2700
Insertion Loss(dB)	7.4 max
Isolation(dB)	23 min
VSWR	≤1.30
Average Power(W)	100
PIM	≤-153dBc@2*43dBm
Impedance	50 ohm
Connector	N-female
Color	Black
Temp(deg)	-35~+85
Relative Humidity	5%-95%

Mechanical Drawing



3 in 1 out Combiner

Product Name

3 in 1 out Combiner (700-2700MHz, 100W, -153dBc, N-female)

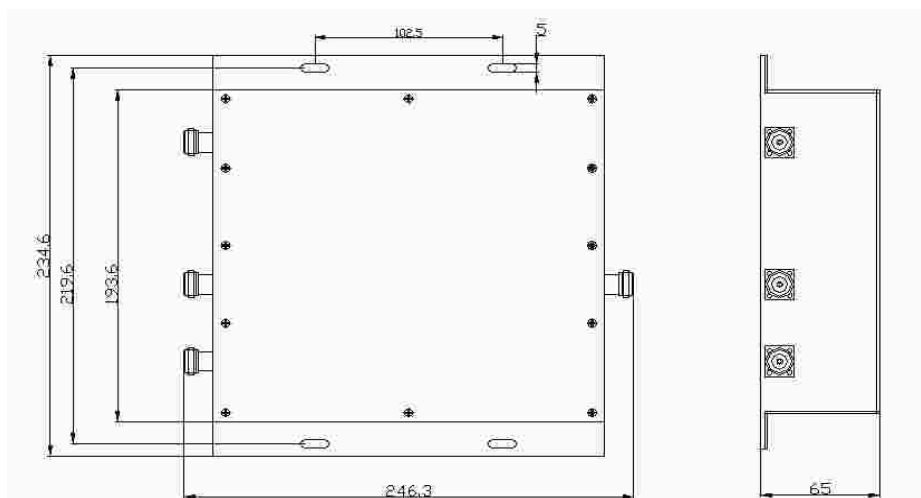
Product Features

- ◆ Wide Frequency Band 698-2700MHz
- ◆ 2G/3G/4G/LTE Coverage
- ◆ Low VSWR
- ◆ High Isolation
- ◆ Low Insertion Loss
- ◆ Widely used in IBS projects

Technical & Mechanical Specifications

Model No.	YFHC-727-31-NF-120
Frequency (MHz)	700-2700
Insertion Loss(dB)	5.5 max
Isolation(dB)	23 min
VSWR	≤1.30
PIM	≤-153dBc@2*43dBm
Average Power(W)	100
Impedance	50 ohm
Connector	N-female
Color	Black
Temp(deg)	-35~+85
Relative Humidity	5%-95%

Mechanical Drawing



Directional Coupler

Product Name

Directional Coupler (698-2700MHz, -153dBc , 200W, N-female)

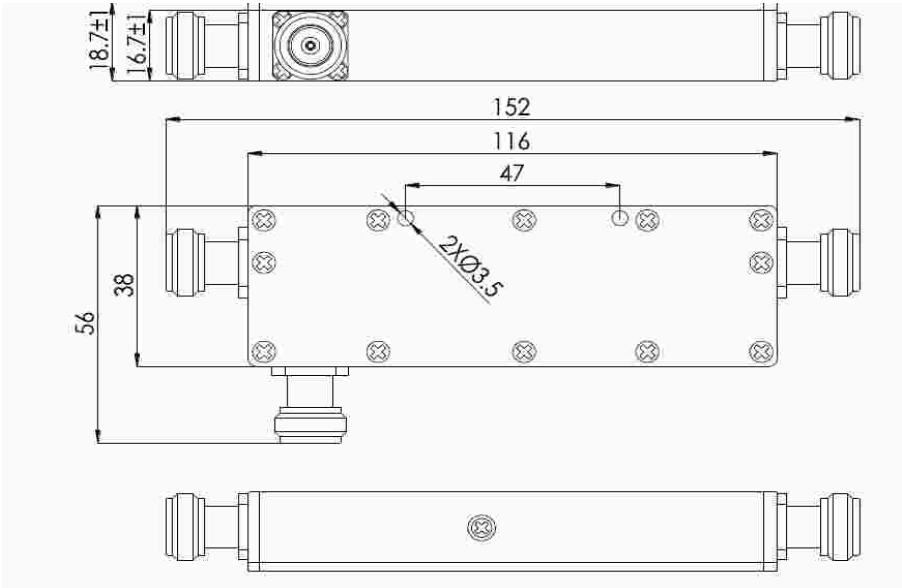
Product Features

- ◆ Wide Frequency Band 698-2700MHz
- ◆ 2G/3G/4G/LTE Coverage
- ◆ Low VSWR
- ◆ Low VSWR
- ◆ High Isolation
- ◆ Widely used for In-building Solutions

Technical & Mechanical Specifications

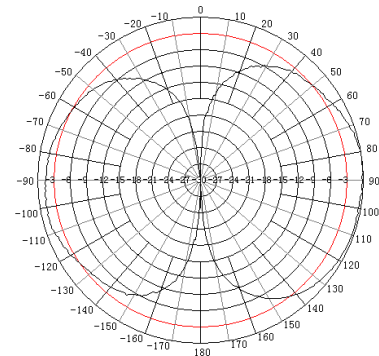
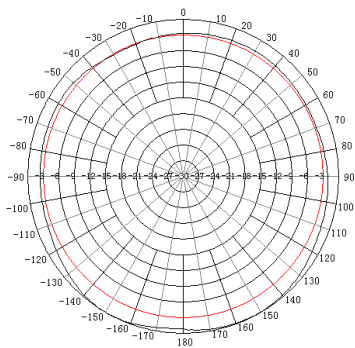
Freq(MHz)	698-2700					
Coupling(dB)	5/6	7/8	10/12	13/15	20	30
IL(dB)	≤2.1/≤1.7	≤1.45/≤1.3	≤0.8/≤0.8	≤0.7/≤0.5	≤0.4	≤0.4
Accuracy(dB)	±0.8/±0.8	±0.8/±0.8	±1.0/±1.0	±1.0/±1.0	±1.2	±1.5
Isolation(dB)	≥25/≥26	≥27/≥28	≥28/≥30	≥31/ ≥33	≥35	≥45
VSWR	≤1.25					
Power(W)	200					
Impedance	50 ohm					
Connector	N-female					
Color	Black					
Temp(deg)	-30~+65					
PIM	≤-153 dBc@2*43dBm					

Mechanical Drawing



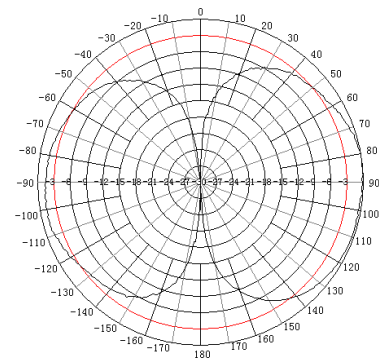
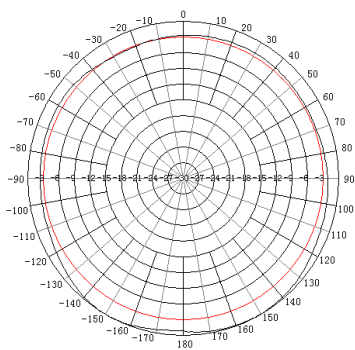
Indoor Omnidirectional Ceiling Antennas

Electrical Properties		
Frequency range (MHz)	698~960/1710~2700	
Polarization	Linear	
VSWR	≤2.0	
Gain(dBi)	700MHz band	2×3.5
	800/900 MHz band	2×4.0
	1800/1900/UMTS MHz band	2×5.5
	2400/2500 MHz band	2×5.0
Effectiveness (%)	700MHz band	93%
	800/900 MHz band	89%
	1800/1900/UMTS MHz band	85%
	2400/2500 MHz band	85%
Order passive intermodulation	Intermodulation IM3	≤-140dBc (2X43dBm carrier)
Maximum power	Max. power	50W
Impedance	Impedance	50Ω
Mechanical Properties		
Dimensions (mm)	φ220×42 mm	
weight (kg)	0.41	
Operating temperature (°C)	-40~+60	
Max. wind velocity (km/h)	—	
Connector	2×N-K	

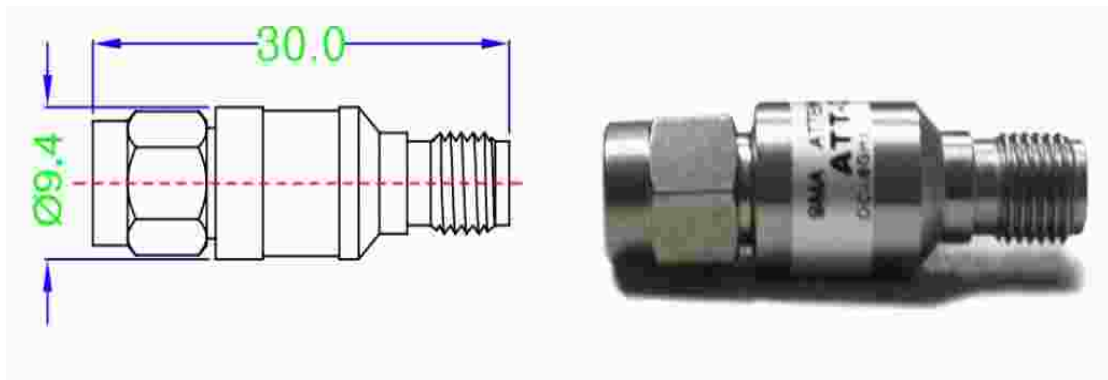


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Connector	2×N-K	



2W DC-3GHz SMA Attenuator

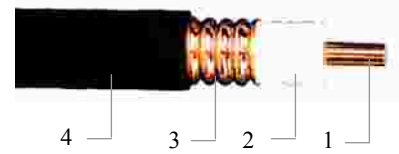


Model		
Frequency(GHz)	DC-3	
Impedence(Ohm)	50	
VSWR	≤1.20:1	
Application	Indoor	
Attenuation(dB)	3	10
Tolerance(dB)	±0.5	±1.0
Interface	SMA-male to SMA-female	
Temperature(°C)	-40 ~ + 80	
IP Grade	IP60	
Color	Black	
Average Power (W)	2W	

1/2" low loss physical foamed insulation coaxial cable

RF 50 1/2"

Construction			
Inner Conductor	Material	Copper clad aluminum wire	
	Diameter, mm	4.80±0.05	
Insulation	Material	Physically foamed PE	
	Diameter, mm	12.20±0.30	
Outer conductor	Material	Ring corrugated copper	
	Diameter, mm	13.80±0.20	
Jacket	Material	PE or fire retardant PE	
	Diameter, mm	15.80±0.20	
Mechanical properties			
Bending radius, mm	Single	70	
	Repeated	125	
	Moving	350	
Pulling strength, N		1130	
Crush resistance, kg/mm		2.0	
Recommended temperature, °C	PE jacket	Store	-70~+85
		Installation	-40~+60
		Operation	-55~+85
	Fire retardant PE jacket	Store	-30~+80
		Installation	-25~+60
		Operation	-30~+80
Electrical properties			
Impedance, Ω		50±2	
Capacitance, PF/m		75.8	
Inductance, μH/m		0.19	
Propagation velocity, %		88	
DC breakdown voltage, kV		4.0	
Insulation resistance, MΩ •km		>5×10 ³	
Peak power, kW		40	
Screening attenuation, dB		>>120	
Cut-off frequency, GHz		8.8	



1: Inner Conductor 2: Insulation
3: Outer conductor 4: Jacket

Attenuation and average power

Frequency MHz	Nom. attenuation @20°C, dB/100m	Power rate @20°C, kW
10	0.67	11.30
100	2.17	3.49
200	3.10	2.44
450	4.75	1.59
800	6.46	1.17
900	6.85	1.10
1000	7.28	1.04
1500	9.09	0.833
1800	10.10	0.753
2000	10.70	0.710
2300	11.50	0.627
3000	13.40	0.565

- Maximum attenuation value shall be 105% of the nominal attenuation value

VSWR

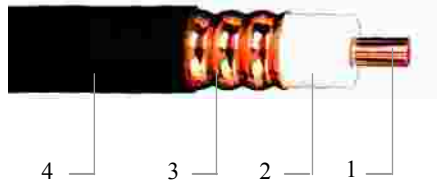
800~1000MHz	≤1.15
1700~2200MHz	≤1.15

Standards

2011/65/EU	Compliant
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**7/8" low loss physical foamed insulation coaxial cable
RF 50 7/8"**

Description		TYPE No.	PART No.
Construction			
Inner Conductor	Material	Smooth copper tube	
	Diameter, mm	8.85±0.10	
Insulation	Material	Physically foamed PE	
	Diameter, mm	22.50±0.40	
Outer conductor	Material	Ring corrugated copper	
	Diameter, mm	24.90±0.30	
Jacket	Material	PE or fire retardant PE	
	Diameter, mm	27.30±0.20	
Mechanical properties			
Bending radius, mm	Single	120	
	Repeated	250	
	Moving	500	
Pulling strength, N		1470	
Crush resistance, kg/mm		1.4	
Recommended temperature, °C	PE jacket	Store	-70~+85
		Installation	-40~+60
		Operation	-55~+85
	Fire retardant PE jacket	Store	-30~+80
		Installation	-25~+60
		Operation	-30~+80
Electrical properties			
Impedance, Ω		50±2	
Inductance, μH/m		0.187	
Capacitance, PF/m		75	
Propagation velocity, %		88	
DC breakdown voltage, kV		6.0	
Insulation resistance, MΩ •km		>5 × 10 ³	
Peak power, kW		91	
Screening attenuation, dB		>>120	
Cut-off frequency, GHz		5.0	



1: Inner Conductor 2: Insulation
3: Outer conductor 4: Jacket

Attenuation and average power		
Frequency MHz	Nom. attenuation @20°C, dB/100m	Power rate @20°C, kW
10	0.366	24.6
100	1.19	7.56
450	2.65	3.41
800	3.63	2.48
900	3.88	2.33
1000	4.12	2.19
1500	5.18	1.74
1800	5.75	1.57
2000	6.11	1.48
2500	6.95	1.30
3000	7.76	1.16

- Maximum attenuation value shall be 105% of the nominal attenuation value

VSWR	
800~1000MHz	≤1.15
1700~2200MHz	≤1.15

Standards	
2011/65/EU	Compliant

8~9 dBi Panel Antenna 700-2700Mhz

Electrical Specifications			
Item No.		700-27009DBi	
Frequency Range		MHz	698-960 1710-2700
Gain		dBi	7.0 9.0
Polarization			Vertical
Beam width	Horizontal	deg	78 70
	Vertical		70 65
Front-To-Back Ratio		dB	> 20
X-pol (0 deg)		dB	18
VSWR			≤1.8:1
Maximum Power		W	100
Impedance		Ω	50
Mechanical Specifications			
Dimensions, HxWxD		mm (in)	165x155x50(6.5x6.1x1.96)
Weight, without Mounting Kit		kg (lb)	0.25(0.55)
Radome Material and Color			ABS, White, RAL7035
Mounting Kit			On-wall
Connector Type and Location			N-Female
Operational Temperature		°C	-55 to +60
Operational Humidity		%	< 95
Shipping Dimensions, HxWxD		mm	190x165x55 (7.48x6.5x2.1)

Synergy Telecom P Ltd.

	(in)	
Shipping Weight	kg (lb)	0.4 (0.88)

Radiation Patterns

Horizontal
pattern



Vertical
pattern



900MHz

1710MHz

2500MHz

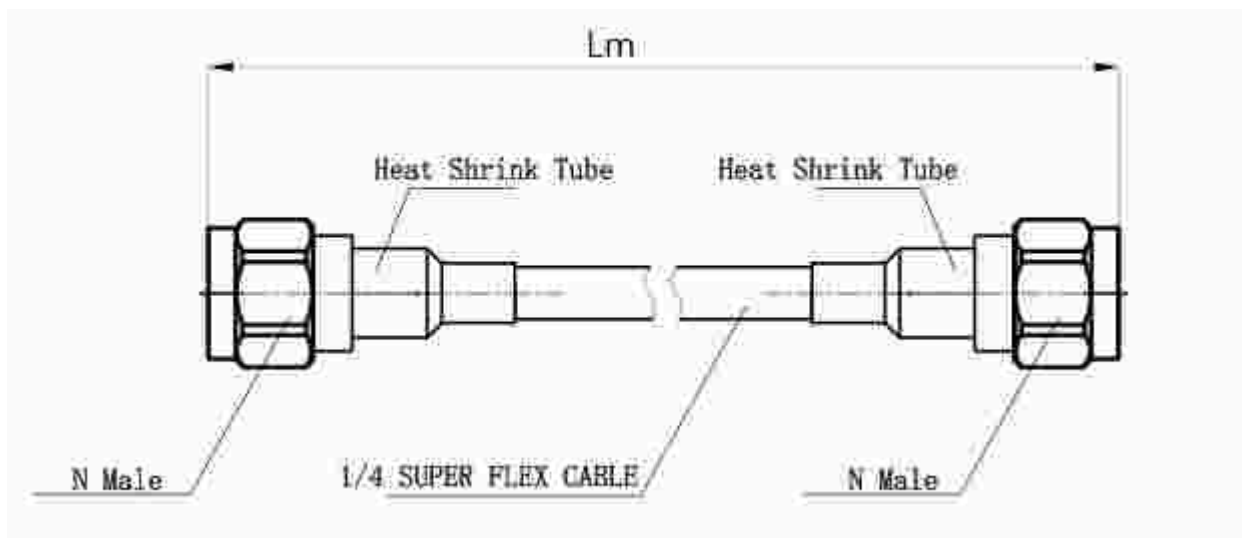
Features and Product Description

- New generation wideband Directional Antenna, coverage 700MHz - 2700MHz.
- Smaller size, light-weight and easy to install.
- Typically used in indoor distribution of LTE services.
- Low return loss, High gain, Stable performance.



SPECIFICATION OF 1/4" SUPERFLEXIBLE JUMPER

N MALE STRAIGHT TO N MALE STRAIGHT, Lm

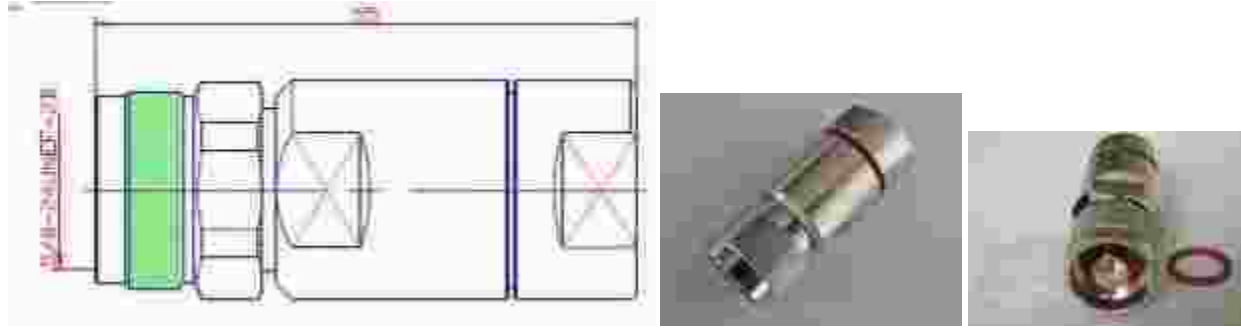


L=1M

Interface	IEC 60169-16	
Electrical		
Characteristic Impedance	50Ω	
Frequency Range	DC-3GHz	
	≥23 (VSWR=1.15)	
Intermodulation@2-tonex20w	≤-153dBc	
Dielectric Withstanding Voltage	≥1000V RMS,50Hz,	
Dielectric Resistance	≥5000MΩ	
Mechanical		
Durability	Mating cycles ≥500	
Material and plating		
Part	Material	plating
Body	Brass	Tri-Alloy
Center conductor	Brass / Phosphor bronze	Ag
Insulator	PTFE	
Other	Brass	Ni
Environmental		
Temperature Range	-40℃~+85℃	
ROHS	FULL	



N Male 1/2" Feeder Cable:-



Electrical Specification

Characteristic Impedance	50 ohm
Frequency Range	DC- 3 GHz
VSWR	≤ 1.10(0~2.2G) ≤ 1.15(0~3G)
Dielectric strength	≥2500V RMS, at sea level
Dielectric Resistance	≥ 5000 M Ω
Insertion Loss	≤ 0.08dB (@2200MHz)
Center Contact Resistance	≤ 1.0 m Ω
Center Contact Resistance	≤ 0.25 m Ω
RoHS	Compliance

Mechanical

Durability Mating cycle	≥500
Termination cable retention	≥300N

Material Specification

Connector Parts	Material	Plating
Outer Contact	Brass	CuSnZn
Center Contact	Brass	Au
Fastener	Brass	Ni
Dielectric	PTFE	-

Environmental

Temperature Range	- 40°C – +85 °C
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