

SPINNER Mobile Communication



4.3-10
The Future ... Now

HIGH FREQUENCY PERFORMANCE WORLDWIDE
www.spinner-group.com



SPINNER Continues to Set Standards in RF Technology

The New 4.3-10 Connector System for Mobile Communications

This is the first time that leading vendors have joined forces to specify and develop a dedicated connector system for the mobile communication industry. SPINNER has a long history of setting standards in RF technology, and was one of the drivers of the new 4.3-10 connector system.

One major improvement introduced by the 4.3-10 connector system is that it reduces the required coupling torque. This has been achieved by separating the electrical and mechanical reference planes. As a result, the system can be installed without using any tools. Instead, the connectors feature a screw, hand screw, or push-pull coupling mechanism. Their compact design also permits a higher connector density on equipment.



Three different coupling types:
screw – hand screw – push-pull

Our Products, Your Benefits

SPINNER products are best-in-class in terms of quality and performance. They ensure optimal, highly cost-effective connections between base stations and antennas. SPINNER applies extremely high standards with regard to quality, engineering, materials, and manufacture. This enables us to offer products with the best possible performance and lowest possible PIM while ensuring optimized installation and failure-free operation, under even the harshest environmental conditions.

The benefits are obvious: lower OPEX and better utilization of the entire site CAPEX.

For more information on our 4.3-10 portfolio, please feel free to contact our mobile communication sales division at:

mc@spinner-group.com


Overview of Connector Systems

Technical Data	Type N	Type 4.1-9.5	Type 4.3-10	Type 7-16
IEC standard	61169-16	60169-11	61169-54	61169-4
Nominal impedance	50 Ω	50 Ω	50 Ω	50 Ω
Cut off frequency	19 GHz	14 GHz	13 GHz	8.3 GHz
Intermodulation (IM3) 2 x 20 W (acc. to IEC)	Not specified	Not specified	< -166 dBc	< -155 dBc
Insulation resistance (initial)	≥ 5 G Ω	≥ 5 G Ω	≥ 5 G Ω	≥ 10 G Ω
Proof voltage at sea level	2.5 kV	2.5 kV	2.5 kV	3 kV
Working voltage at sea level	1.4 kV	1.7 kV	1.8 kV	2.7 kV
Power rating	450 W at 1 GHz 300 W at 2 GHz	650 W at 1 GHz 450 W at 2 GHz	700 W at 1 GHz 500 W at 2 GHz	1200 W at 1 GHz 850 W at 2 GHz
Contacting outer conductor	Face contact	Face contact	Contact bushing	Face contact
Coupling type	Screw	Screw	Screw, hand screw, push-pull	Screw
Coupling torque	3.0 Nm	10 Nm	5 Nm (screw only)	30 Nm
Proof torque	4.0 Nm	15 Nm	7 Nm (screw only)	55 Nm
Tensile strength of coupling	450 N	550 N	450 N	1000 N
Packaging density	1 inch 25.4 mm	1 inch 25.4 mm	1 inch 25.4 mm	1.26 inch 32 mm
Wrench size	19	22	22	32
Temperature range	-67 to 311 °F -55 to +155 °C	-67 to 311 °F -55 to +155 °C	-67 to 311 °F -55 to +155 °C	-67 to 311 °F -55 to +155 °C
Degree of protection (mated)	IP68	IP68	IP68	IP68
Interface example				


Coaxial Connectors

Cable Connectors

LMR-400 (RG8) - Crimp

Connector Style	Part Number	
4.3-10 male; screw type	BN 431130	
4.3-10 male; hand screw type	BN 431131	
4.3-10 male; push-pull type	BN 431129	


SF 1/4"-50 - CAF

Connector Style	Part Number	
4.3-10 male; screw type	BN 431100	
4.3-10 male; hand screw type	BN 431103	
4.3-10 male; push-pull type	BN 431104	


SF 3/8"-50 - CAF Profile Gasket

Connector Style	Part Number	
4.3-10 male; screw type	BN 431101	
4.3-10 male; hand screw type	BN 431105	
4.3-10 male; push-pull type	BN 431106	
4.3-10 male right angle; screw type	BN 431107	
4.3-10 male right angle; hand screw type	BN 431108	
4.3-10 male right angle; push-pull type	BN 431109	

SF 1/2"-50 - MultiFit

Connector Style	Part Number	
4.3-10 male; screw type	BN 431171	
4.3-10 male; hand screw type	BN 431110	
4.3-10 male; push-pull type	BN 431111	
4.3-10 female	BN 431112	
4.3-10 male right angle; screw type	BN 431174	
4.3-10 male right angle; hand screw type	BN 431113	
4.3-10 male right angle; push-pull type	BN 431114	


LF 1/2"-50 - MultiFit

Connector Style	Part Number	
4.3-10 male; screw type	BN 431117	
4.3-10 male; hand screw type	BN 431115	
4.3-10 male; push-pull type	BN 431118	
4.3-10 female	BN 431017	
4.3-10 male right angle; screw type	BN 431116	
4.3-10 male right angle; hand screw type	BN 431119	
4.3-10 male right angle; push-pull type	BN 431121	


Coaxial Connectors

Cable Connectors


LF 7/8"-50 - MultiFit

Connector Style	Part Number	
4.3-10 male; screw type	BN 431102	
4.3-10 male; hand screw type	BN 431123	
4.3-10 male; push-pull type	BN 431124	
4.3-10 female	BN 431002	
4.3-10 male right angle; screw type	BN 431133	


LF 1 1/4"-50 - MultiFit

Connector Style	Part Number	
4.3-10 male; screw type	BN 431120	
4.3-10 male; hand screw type	BN 431125	
4.3-10 male; push-pull type	BN 431126	
4.3-10 female	BN 431020	


LF 1 5/8"-50 - MultiFit

Connector Style	Part Number	
4.3-10 male; screw type	BN 431122	
4.3-10 male; hand screw type	BN 431127	
4.3-10 male; push-pull type	BN 431128	
4.3-10 female	BN 431022	

Fixed Connectors - Bulkhead

Connector Style	Version	Part Number	
4.3-10 female	for RG402/U, 141-50	BN 431500	
4.3-10 female	for RG401/U, 250-50	BN 431501	
4.3-10 female	Inner conductor M3	BN 431502	
4.3-10 female	Inner conductor solder cup	BN 431503	


Fixed Connectors - Four-Hole Flange

Connector Style	Version	Part Number	
4.3-10 female	for RG402/U, 141-50	BN 431404	
4.3-10 female	for RG401/U, 250-50	BN 431403	
4.3-10 female	Inner conductor M3	BN 431405	
4.3-10 female	Inner conductor solder cup	BN 431406	


Adaptors

Inter Series / Within-Series Adaptors


Connector 1	Connector 2	Part Number
7-16 male	4.3-10 male; screw type	BN 432005
7-16 male	4.3-10 male; hand screw type	BN 432007
7-16 male	4.3-10 male; push-pull type	BN 432008
7-16 female	4.3-10 male; screw type	BN 432002
7-16 female	4.3-10 male; hand screw type	BN 432015
7-16 female	4.3-10 male; push-pull type	BN 432016
7-16 male	4.3-10 female	BN 432001
7-16 female	4.3-10 female	BN 432011




Connector 1	Connector 2	Part Number
4.3-10 male; screw type	4.3-10 male; screw type	BN 432029
4.3-10 male; hand screw type	4.3-10 male; hand screw type	BN 432018
4.3-10 male; push-pull type	4.3-10 male; push-pull type	BN 432035
4.3-10 male; screw type	4.3-10 female	BN 432017
4.3-10 male; hand screw type	4.3-10 female	BN 432028
4.3-10 male; push-pull type	4.3-10 female	BN 432034
4.3-10 female bulk head	4.3-10 female	BN 432019




Connector 1	Connector 2	Part Number
4.3-10 male; screw type	N male	BN 432024
4.3-10 male; hand screw type	N male	BN 432009
4.3-10 male; push-pull type	N male	BN 432030
4.3-10 male; screw type	N female	BN 432025
4.3-10 male; hand screw type	N female	BN 432003
4.3-10 male; push-pull type	N female	BN 432031
4.3-10 female	N male	BN 432004
4.3-10 female	N female	BN 432010



Connector 1	Connector 2	Part Number
4.3-10 male; screw type	3.5 mm male	BN 432026
4.3-10 male; hand screw type	3.5 mm male	BN 432020
4.3-10 male; push-pull type	3.5 mm male	BN 432032
4.3-10 male; screw type	3.5 mm female	BN 432027
4.3-10 male; hand screw type	3.5 mm female	BN 432021
4.3-10 male; push-pull type	3.5 mm female	BN 432033
4.3-10 female	3.5 mm male	BN 432022
4.3-10 female	3.5 mm female	BN 432023




DC Break

Frequency Range	IM3	Part Number	
380 - 2700 MHz	< -160 dBc (-165dBc typical)	BN 432046	

Low PIM for Test & Measurement

To support automated test environments, SPINNER has developed a dedicated portfolio of PIM testing and measurement tools for minimizing passive intermodulation while achieving major time and cost savings.

EasyDock - Nonlocking

Connector 1	Connector 2	IM3 2 x 20 W	Part Number	
7-10 male; bulkhead; push-pull	4.3-10 female	< -162 dBc	BN 194476	
4.3-10 male; bulkhead; push-pull	4.3-10 female	< -162 dBc	BN 432014	

Other interface versions available on request.

EasyDock - Lockable by Hand

Connector 1	Connector 2	IM3 2 x 20 W	Part Number	
4.3-10 male; push-pull	4.3-10 female	< -165 dBc	BN 432048	


Other interface versions available on request.

EasyDock - Mechanically Lockable

Connector 1	Connector 2	IM3 2 x 20 W	Part Number	
4.3-10 male; push-pull	4.3-10 female	< -165 dBc	BN 432047	

Other interface variants on request.

Coaxial Load

Description	IM3 2 x 20 W	Part Number	
Coaxial load for IM test Frequency range: 0.25 - 3800 MHz Average power rating: 50 W Connector: 4.3-10 female	< -170 dBc	BN 157151	

Low PIM for Test & Measurement


Low PIM Switch

Switch	IM3 2 x 20 W	Part Number	 
Two-way switch Double pole double through (DPDT) Frequency ranges: 690 - 2690 MHz 3400 - 3800 MHz Average power rating: 300 W Connectors: 4.3-10 female	< -168 dBc	BN 754082	

Low PIM Rotary Joint

Connector 1	Connector 2	IM3 2 x 20 W	Part Number	 
4.3-10 male; screw type	4.3-10 female	< -165 dBc	BN 835103	

Low PIM Measurement Cables


Connector 1	Connector 2	IM3*	 
4.3-10 male; screw type	Any 4.3-10 or 7-16 interface	< -160 dBc	
4.3-10 male right angle; screw type		< -165 dBc	
4.3-10 female		< -170 dBc	

*Please specify when ordering


Please use the sales article numbers on page 13 for ordering.

Calibration Components


4-in-1 OSLT Compact Calibration Kits

Connector Style	Frequency Range	Part Number	
4.3-10 male; screw type	6 GHz	BN 533301	
4.3-10 female	6 GHz	BN 533302	
4.3-10 male; screw type	12 GHz	BN 533313	
4.3-10 female	12 GHz	BN 533314	

OSLT High Precision Calibration Kit


Connector Style	Frequency Range	Part Number	
4.3-10 male screw type / female	12 GHz	BN 533312	

Precision Adaptors, Grade 0, up to 12 GHz


Connector 1	Connector 2	Part Number	
4.3-10 male; screw type	N male	BN 194442	
4.3-10 male; screw type	N female	BN 194443	
4.3-10 female	N male	BN 194440	
4.3-10 female	N female	BN 194441	

Accessories


Connector Gauges

Type	Part Number	
4.3-10 male inner conductor (MIC)	BN 533315	
4.3-10 female inner conductor (FIC)	BN 533317	
4.3-10 female outer conductor (FOC)	BN 533318	

Port Saver

Connector 1	Connector 2	Part Number	
4.3-10 male; screw type	4.3-10 female	BN 432017	
7-16 male	4.3-10 female	BN 432001	

Torque Wrenches

Type	Part Number	
Torque wrench 22 mm / M = 5 Nm For standard applications	BN 238739	
Torque wrench 22 mm / M = 2.5 Nm For test and measurement	BN 238740	

PIM Standards

Connectors		4.3-10 Male Screw Type - Female					
Passive Intermodulation Level (3rd order)		-70 dBm	-80 dBm	-90 dBm	-100 dBm	-110 dBm	-120 dBm
Frequency Band		Part number starting with BN 756617... For specific type, please continue with suffix from table below.					
GSM 900 f _{IM3} : 890.3 MHz	f1: 925.1 MHz f2: 959.9 MHz	...C0070	...C0080	...C0090	...C0100	...C0110	...C0120
GSM 1800 f _{IM3} : 1730 MHz	f1: 1805 MHz f2: 1880.9 MHz	...C1070	...C1080	...C1090	...C1100	...C1110	...C1120
UMTS f _{IM3} : 2050 MHz	f1: 2110 MHz f2: 2170 MHz	...C2070	...C2080	...C2090	...C2100	...C2110	...C2120
LTE 2.6 f _{IM3} : 2550 MHz	f1: 2620 MHz f2: 2690 MHz	...C3070	...C3080	...C3090	...C3100	...C3110	...C3120

Example of part number:

PIM standard for LTE 2.6 with - 110 dBm: BN 756617C3110

SpinnerFlex® TopFit Jumpers

Available 4.3-10 Connector Interfaces

SF 1/2"-50

Connector Style	
4.3-10 male	
4.3-10 female	
4.3-10 female four-hole	
4.3-10 female bulkhead	
4.3-10 male right angle	

All male / male right angle connectors are available as screw, hand screw and push-pull types.

SF 3/8"-50

Connector Style	
4.3-10 male	
4.3-10 female	
4.3-10 female four-hole	
4.3-10 female bulkhead	
4.3-10 male right angle	

All male / male right angle connectors are available as screw, hand screw and push-pull types.

SF 1/4"-50

Connector Style	
4.3-10 male	
4.3-10 female	
4.3-10 female four-hole	
4.3-10 female bulkhead	
4.3-10 male right angle	

All male / male right angle connectors are available as screw, hand screw and push-pull types.

LF 1/2"-50

Connector Style	
4.3-10 male	
4.3-10 female	
4.3-10 female four-hole	
4.3-10 female bulkhead	
4.3-10 male right angle	

All male / male right angle connectors are available as screw, hand screw and push-pull types.

Note: SpinnerFlex® TopFit Jumpers can be ordered using sales article numbers. See the next page for instructions.

SpinnerFlex® TopFit Jumpers

Use our sales article numbers to flexibly configure your product:

Jumper	Cable Type	Cable Size	Cable Jacket	Connector 1	Connector 2	Length	Unit	Length	Extra Features		
J	Z	X	Z	-	XZ	XZ	-	X	Z	X	-Z
LF	L	14 38 12	Blank for PE	Any combination of connectors below is possible. Please specify an XZ combination for connectors 1 and 2. In case of pigtail, leave blank for connector 2					Leave blank if not applicable		
SF	S										
1/4"											
3/8"											
1/2"											
Fire retardant			F								
Gray			G								
X = Connector system		Z = Connector style		X	Z						
7-16		male		7	M						
4.1-9.5		male right angle		41	R						
N		female		N	F						
		female bulkhead			B						
		female four-hole			P						
4.3-10		male; screw		43	MS						
		male; hand screw			MH						
		male; push-pull			MP						
		male right angle; screw			RS						
		male right angle; hand screw			RH						
		male right angle; push-pull			RP						
		female			F						
		female bulkhead			B						
		female four-hole			P						
Length in meters/feet (depending on unit specified)											
Meters							M				
Feet							F				
Length in decimeters/inches (depending on unit specified)											
Low PIM measurement cable (only available with PE jacket)											
- IM3 (2 x 43 dBm) ≤ -160 dBc ¹⁾ , inspection certificate 3.1 ²⁾ per jumper										I0	
- IM3 (2 x 43 dBm) ≤ -160 dBc ¹⁾ , inspection certificate 3.1 ²⁾ per order										I1	
- IM3 (2 x 43 dBm) ≤ -165 dBc ¹⁾ , inspection certificate 3.1 ²⁾ per jumper										I2	
- IM3 (2 x 43 dBm) ≤ -165 dBc ¹⁾ , inspection certificate 3.1 ²⁾ per order										I3	
- IM3 (2 x 43 dBm) ≤ -170 dBc ¹⁾ , inspection certificate 3.1 ²⁾ per jumper										I4	
- IM3 (2 x 43 dBm) ≤ -170 dBc ¹⁾ , inspection certificate 3.1 ²⁾ per order										I5	
Defined phase length										P	
Extended frequency range (> 3800 MHz)										E	
Connector specified on side B kitted to the jumper										K	
Jumper set										S	

1) According to IEC 62037-2 and WN 20 000

2) According to EN 10204

Examples of sales article numbers:


JL12-7M43RS-2M5 (LF 1/2" jumper with 7-16 male and 4.3-10 male right angle screw type; length of 2.5 meters)

JS12-43MSNM-1M5 (SF 1/2" jumper with 4.3-10 male screw type and N male; length of 1.5 meters)

SpinnerFlex® MultiFit Jumpers

Available 4.3-10 Connector Interfaces

Connector Style	
4.3-10 male; screw type	
4.3-10 male; hand screw type	
4.3-10 male; push-pull type	
4.3-10 female	
4.3-10 male right angle; screw type	
4.3-10 male right angle; hand screw type	
4.3-10 male right angle; push-pull type	



Use our sales article numbers to flexibly configure your product:

Jumper Multifit	Cable Type	Cable Size	Cable Jacket		Connector	Feeder Connection		Length	Unit	Length
JM	S	12	Z	-	XZ	L78	-	X	Z	X
Currently only SF1/2" available			Blank for PE		Please specify XZ combination for connector	Currently only LF7/8" available				
Fire retardant			F							
Gray			G							
X = Connector system		Z = Connector style			X	Z				
7-16		male			7	M				
4.1-9.5		male right angle			41	R				
N		female			N	F				
		female bulk head				B				
		female panel four hole				P				
4.3-10		male; screw			43	MS				
		male; hand screw				MH				
		male; push-pull				MP				
		male right angle; screw				RS				
		male right angle; hand screw				RH				
		male right angle; push-pull				RP				
		female				F				
		female bulk head				B				
		female panel four hole				P				
Length in meters/feet (max. length from 0.5 m - 3 m/3 ft. - 10 ft., depending on unit specified)										
Meters									M	
Feet									F	
Length in decimeters/inch (depending on unit specified)										

Example of sales article numbers:

JMS12-43MSL78-1M5 (SF 1/2" jumper with 4.3-10 male screw type and assemble to feeder LF 7/8"; length of 1.5 meter)

SpinnerFlex® Hybrid Jumpers

Available 4.3-10 Connector Interfaces



Use our sales article numbers to flexibly configure your product:

Jumper	Hybrid		Connector 1	Connector 2		Length	Unit	Length
J	H	-	XZ	XZ	-	X	Z	X
SF1/2"+LF7/8"+SF1/2"		Any combination of connectors below is possible. Please specify an XZ combination for connectors 1 and 2.						
X = Connector system		Z = Connector style						
7-16	7	male		M				
4.1-9.5	41	male right angle		R				
N	N	female		F				
		female bulk head		B				
		female panel four hole		P				
4.3-10	43	male; screw		MS				
		male; hand screw		MH				
		male; push-pull		MP				
		male right angle; screw		RS				
		male right angle; hand screw		RH				
		male right angle; push-pull		RP				
		female		F				
		female bulk head		B				
		female panel four hole		P				
Total length in meters/feet (depending on unit specified; please consider fix length for each SF1/2" end is 1 m by default and included in total length)								
Meters						M		
Feet						F		
Length in decimeters/inch (depending on unit specified)								

Example of Sales article numbers:

JH-7M43RS-6M (hybrid jumper with 7-16 male and 4.3-10 male right angle screw type; length of 6 meters; 2x jumper SF 1/2" 1 meter each and feeder LF 7/8" with 4 meters)

Seriflex Cables (RG401/RG402)

Seriflex 250-50 (RG401)

Connector Style	
4.3-10 male	
4.3-10 female	
4.3-10 female four-hole	
4.3-10 female bulkhead	
4.3-10 male right angle	

All male / male right angle connectors are available as screw, hand screw and push-pull types.

Seriflex 141-50 (RG402)

Connector Style	
4.3-10 male	
4.3-10 female	
4.3-10 female four-hole	
4.3-10 female bulkhead	
4.3-10 male right angle	

All male / male right angle connectors are available as screw, hand screw and push-pull types.


Loads

Coaxial Loads - Low Intermodulation

Average Power	Frequency Range	Part Number	
20 W	350 - 3800 MHz	BN 594282	
50 W	350 - 3800 MHz	BN 594283	
100 W	350 - 3800 MHz	BN 594284	
150 W	350 - 3800 MHz	BN 594285	

All coaxial loads are equipped with 4.3-10 female connectors.

Coaxial Loads - Low Power

Average Power	Frequency Range	Part Number	
2 W	0 - 4000 MHz	BN 531702	
5 W	0 - 7000 MHz	BN 531726	

All coaxial loads are equipped with 4.3-10 male screw type connectors.


Loads


Standard Coaxial Loads

Use our sales article numbers to flexibly configure your product:

Load	Power	Connector		Extra Feature
L	X	-	Z	-X
25 W	25			Leave blank if not applicable
50 W	50			
100 W	100			
200 W	200			
7-16 male		7M		
7-16 female		7F		
4.3-10 male; screw		43MS		
4.3-10 male; hand screw		43MH		
4.3-10 male; push-pull		43MP		
4.3-10 female		43F		
N male		NM		
N female		NF		
Measurement protocol (acc. to EN 10204, incl. VSWR gradient)				P
Extended frequency range				E
Extended frequency range + measurement protocol				EP

Examples of sales article numbers:

Sales Article Number	Article Details	
L25-43MH	Load 25 W 4.3-10 male hand screw type	


Sales Article Number	Article Details	
L200-43MP	Load 200 W 4.3-10 male push-pull type	

Attenuators

Use our sales article numbers to flexibly configure your product:

Attenuator	Power		Connector 1	Connector 2		Attenuation	Extra Features
A	X	-	Z	X	-	Z	-X
25 W	25	Any combination of connectors below is possible.					Leave blank if not applicable
50 W	50						
100 W	100						
200 W	200						
7-16 male		7M					
7-16 female		7F					
4.3-10 male; screw		43MS					
4.3-10 male; hand screw		43MH					
4.3-10 male; push-pull		43MP					
4.3-10 female		43F					
N male		NM					
N female		NF					
3 dB						3	
6 dB						6	
10 dB						10	
20 dB						20	
30 dB						30	
40 dB						40	
Measurement protocol (acc. to EN 10204, incl. VSWR gradient)							P
Extended frequency range							E
DC break integrated in one connector, available for NM, other Interfaces on request							D
Extended frequency range + measurement protocol							EP
DC break + measurement protocol							DP

Examples of sales article numbers:

Sales Article Number	Article Details	
A25-43MH43F-10	Attenuator 25 W 4.3-10 male hand screw type / 4.3-10 female 10 dB attenuation	
A200-43MPNF-20	Attenuator 200 W 4.3-10 male push-pull type / N female 20 dB attenuation	

Couplers & Splitters

Coaxial Directional Couplers

Coupling	Style	Average Power	Protection Class	Part Number
3 dB	X	300 W	IP65 (mated)	BN 923076
3 dB	H	500 W	IP68 (mated)	BN 753361
3 dB	X	500 W	IP68 (mated)	BN 753366
4.77 dB	H	500 W	IP68 (mated)	BN 753362
6 dB	H	500 W	IP68 (mated)	BN 753363
10 dB	H	500 W	IP68 (mated)	BN 753364
30 dB	H	500 W	IP68 (mated)	BN 753365



All coaxial directional couplers are equipped with 4.3-10 female connectors. Frequency range from 694 - 2700 MHz.

Coaxial Symmetrical Splitters

Splitter Type	Average Power	Frequency Range	Part Number
2-way splitter	300 W	694 - 2700 MHz	BN 433000
3-way splitter	300 W	694 - 2700 MHz	BN 433001
4-way splitter	300 W	694 - 2700 MHz	BN 433002



All coaxial directional couplers are equipped with 4.3-10 female connectors. Protection class: IP62 (mated).

Coaxial Symmetrical Splitters

Splitter Type	Average Power	Frequency Range	Part Number
2-way splitter	500 W	694 - 3800 MHz	BN 818266
3-way splitter	500 W	694 - 3800 MHz	BN 818267
4-way splitter	500 W	694 - 3800 MHz	BN 818268
2-way splitter	450 W	330 - 2700 MHz	BN 818292
3-way splitter	450 W	330 - 2700 MHz	BN 818293
4-way splitter	450 W	330 - 2700 MHz	BN 818294



All coaxial symmetrical splitters are equipped with 4.3-10 female connectors. Protection class: IP68 (mated).

Couplers & Splitters

Coaxial Asymmetrical Splitters (Tappers)

Coupling	Frequency Range	Protection Class	Part Number
4.8 dB	694 - 2700 MHz	IP65 (mated)	BN 923014
6 dB	694 - 2700 MHz	IP65 (mated)	BN 923001
7 dB	694 - 2700 MHz	IP65 (mated)	BN 923003
8 dB	694 - 2700 MHz	IP65 (mated)	BN 923006
10 dB	694 - 2700 MHz	IP65 (mated)	BN 923007
13 dB	694 - 2700 MHz	IP65 (mated)	BN 923008
15 dB	694 - 2700 MHz	IP65 (mated)	BN 923009
20 dB	694 - 2700 MHz	IP65 (mated)	BN 923012
30 dB	694 - 2700 MHz	IP65 (mated)	BN 923013



All tappers are equipped with 4.3-10 female connectors. Average power is 300 W.

Coaxial Asymmetrical Splitters (Tappers)

Coupling	Frequency Range	Protection Class	Part Number
6 dB	170 - 2700 MHz	IP68 (mated)	BN 818342
7 dB	170 - 2700 MHz	IP68 (mated)	BN 818343
8 dB	170 - 2700 MHz	IP68 (mated)	BN 818344
10 dB	170 - 2700 MHz	IP68 (mated)	BN 818345
13 dB	170 - 2700 MHz	IP68 (mated)	BN 818346
15 dB	170 - 2700 MHz	IP68 (mated)	BN 818399
20 dB	170 - 2700 MHz	IP68 (mated)	BN 818348
30 dB	170 - 2700 MHz	IP68 (mated)	BN 818349



All tappers are equipped with 4.3-10 female connectors. Average power is 500 W.

Combiners

Diplexers

Version	Frequency Range	DC Pass	Part Number
single	Port 1: 694 - 960 MHz (LTE700 - GSM900) Port 2: 1710 - 2170 MHz (GSM1800 - UMTS)	All ports	BN 572638
double	Port 1: 694 - 960 MHz (LTE700 - GSM900) Port 2: 1710 - 2170 MHz (GSM1800 - UMTS)	All ports	BN 572640
single	Port 1: 694 - 960 MHz (LTE700 - GSM900) Port 2: 1710 - 2170 MHz (GSM1800 - UMTS)	Port 2 to output	BN 572639
double	Port 1: 694 - 960 MHz (LTE700 - GSM900) Port 2: 1710 - 2170 MHz (GSM1800 - UMTS)	Port 2 to output	BN 572641
single	Port 1: 790 - 862 MHz (LTE800) Port 2: 880 - 960 MHz (GSM900)	All ports	BN 572652
double	Port 1: 790 - 862 MHz (LTE800) Port 2: 880 - 960 MHz (GSM900)	All ports	BN 572653
single	Port 1: 694 - 960 MHz (LTE700-GSM900) Port 2: 2400 - 2690 MHz (LTE2600)	All ports	BN 572649
double	Port 1: 694 - 960 MHz (LTE700-GSM900) Port 2: 2400 - 2690 MHz (LTE2600)	All ports	BN 572651
single	Port 1: 694 - 960 MHz (LTE700-GSM900) Port 2: 2400 - 2690 MHz (LTE2600)	Port 2 to output	BN 572648
double	Port 1: 694 - 960 MHz (LTE700-GSM900) Port 2: 2400 - 2690 MHz (LTE2600)	Port 2 to output	BN 572650
single	Port 1: 1710 - 1880 MHz (GSM1800) Port 2: 1920 - 2170 MHz (UMTS)	All ports	BN 572630
double	Port 1: 1710 - 1880 MHz (GSM1800) Port 2: 1920 - 2170 MHz (UMTS)	All ports	BN 572632
single	Port 1: 1710 - 1880 MHz (GSM1800) Port 2: 1920 - 2170 MHz (UMTS)	Port 2 to output	BN 572631
double	Port 1: 1710 - 1880 MHz (GSM1800) Port 2: 1920 - 2170 MHz (UMTS)	Port 2 to output	BN 572633
single	Port 1: 1710 - 2170 MHz (GSM1800 - UMTS) Port 2: 2496 - 2690 MHz (LTE2600)	All ports	BN 572656
double	Port 1: 1710 - 2170 MHz (GSM1800 - UMTS) Port 2: 2496 - 2690 MHz (LTE2600)	All ports	BN 572659
single	Port 1: 1710 - 2170 MHz (GSM1800 - UMTS) Port 2: 2496 - 2690 MHz (LTE2600)	Port 2 to output	BN 572655
double	Port 1: 1710 - 2170 MHz (GSM1800 - UMTS) Port 2: 2496 - 2690 MHz (LTE2600)	Port 2 to output	BN 572658
single	Port 1: 1710 - 2170 MHz (GSM1800 - UMTS) Port 2: 2496 - 2690 MHz (LTE2600)	Port 1 to output	BN 572654
double	Port 1: 1710 - 2170 MHz (GSM1800 - UMTS) Port 2: 2496 - 2690 MHz (LTE2600)	Port 1 to output	BN 572657



All diplexers are equipped with 4.3-10 female connectors.

Combiners

Triplexers

Version	Frequency Range	DC Pass	Part Number
Single	Port 1: 694 - 960 MHz (LTE700 - GSM900) Port 2: 1710 - 1880 MHz (GSM1800) Port 3: 1920 - 2170 MHz (UMTS)	All ports	BN 572634
Double	Port 1: 694 - 960 MHz (LTE700 - GSM900) Port 2: 1710 - 1880 MHz (GSM1800) Port 3: 1920 - 2170 MHz (UMTS)	All ports	BN 572636
Single	Port 1: 694 - 960 MHz (LTE700 - GSM900) Port 2: 1710 - 1880 MHz (GSM1800) Port 3: 1920 - 2170 MHz (UMTS)	Port 3 to output	BN 572635
Double	Port 1: 694 - 960 MHz (LTE700 - GSM900) Port 2: 1710 - 1880 MHz (GSM1800) Port 3: 1920 - 2170 MHz (UMTS)	Port 3 to output	BN 572637



All triplexers are equipped with 4.3-10 female connectors.

Quadruplexers


Version	Frequency Range	DC Pass	Part Number
Single	Port 1: 694 - 960 MHz (LTE700 - GSM900) Port 2: 1710 - 1880 MHz (GSM1800) Port 3: 1920 - 2170 MHz (UMTS) Port 4: 2500 - 2700 MHz (LTE2600)	All ports	BN 572642
Double	Port 1: 694 - 960 MHz (LTE700 - GSM900) Port 2: 1710 - 1880 MHz (GSM1800) Port 3: 1920 - 2170 MHz (UMTS) Port 4: 2500 - 2700 MHz (LTE2600)	All ports	BN 572643
Single	Port 1: 694 - 960 MHz (LTE700 - GSM900) Port 2: 1710 - 1880 MHz (GSM1800) Port 3: 1920 - 2170 MHz (UMTS) Port 4: 2500 - 2700 MHz (LTE2600)	Port 4 to output	BN 572646
Double	Port 1: 694 - 960 MHz (LTE700 - GSM900) Port 2: 1710 - 1880 MHz (GSM1800) Port 3: 1920 - 2170 MHz (UMTS) Port 4: 2500 - 2700 MHz (LTE2600)	Port 4 to output	BN 572647



All quadruplexers are equipped with 4.3-10 female connectors.

Combiners

3-Way Combiner

Frequency Range	Part Number	
694 - 2700 MHz	BN 570635	

The 3-way combiner is equipped with 4.3-10 female connectors.

4-Way Combiner

Frequency Range	Part Number	
694 - 2700 MHz	BN 570634	

The 4-way combiner is equipped with 4.3-10 female connectors.



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