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PASSIVE COMPONENTS
UP TO 6 GHZ

RFS provides a complete family of passive components that operate in all frequency bands from 555 MHz to 6 GHz:

- **Combiners** that support one service per frequency band, multiple services per band, and multi-band applications. We also offer standardized combiner modules in 19-inch racks.
- **Hybrid combiners and couplers** that combine multiple signals in the same wireless band onto a common feeder cable.
- **Directional couplers** and tappers that uniformly distribute RF signals.
- **Diplexers and triplexers** that combine and separate signals in different wireless bands.
- **Power splitters** that evenly split input signals with minimal reflections or loss.
- **Loads** that terminate all types of open RF ports.
- **Attenuators** that adapt RF power levels to meet different system requirements.

All RFS passive components provide optimal PIM performance to reduce interference and support the highest possible throughput levels end-to-end.

SUPPORT MULTI-OPERATOR REQUIREMENTS ANYWHERE IN THE WORLD

Our passive components are the perfect complement to our CELLFLEX® coax cables, RADIAFLEX® radiating cables, and indoor antennas, which also operate in all frequency bands up to 6 GHz.

Together, our passive DAS solution components provide complete flexibility to support 5G and deliver broadband multi-operator, multi-technology services using a single DAS, anywhere in the world.

NEW PRODUCTS

RFS PORTFOLIO EXPANSION 617 MHZ TO 4.2 GHZ

Watch for new component announcements

We're continually updating our portfolio to include passive components that target specific requirements. Coming soon: Passive DAS components that enable high-quality and cost-effective operation in all frequency bands from 617 MHz to 4.2 GHz.

Directional Couplers

COUPLING VALUE, dB	INSERTION LOSS VALUE	PIM dBc	IP	CONNECTOR TYPE	MODEL NUMBER
Directional Couplers 555-6000MHz					
5	2.45	160	IP66	N Female	CDS5E-555/6000
6	1.9				CDS6E-555/6000
8	1.25				CDS8E-555/6000
10	0.8				CDS10E-555/6000
13	0.6				CDS13E-555/6000
15	0.5				CDS15E-555/6000
20	0.3				CDS20E-555/6000
30	0.3				CDS30E-555/6000
5	2.45	163		4.3-10 Female	CDS5-43-555/6000
6	1.9				CDS6-43-555/6000
8	1.25				CDS8-43-555/6000
10	0.8				CDS10-43-555/6000
13	0.6				CDS13-43-555/6000
15	0.5				CDS15-43E-555/6000
20	0.3				CDS20-43-555/6000
30	0.3				CDS30-43-555/6000
Directional Couplers 694-3800MHz					
6	1.7	155	IP65	N Female	CDS6E-694/3800
10	0.7				CDS10E-694/3800
15	0.4				CDS15E-694/3800
20	0.2				CDS20E-694/3800
30	0.2				CDS30E-694/3800
6	1.7	160		7-16 Female	CDS6DE-694/3800
10	0.7				CDS10DE-694/3800
15	0.4				CDS15DE-694/3800
20	0.2				CDS20DE-694/3800
30	0.2				CDS30DE-694/3800
6	1.7	160		4.3-10 Female	CDS6-43-694/3800
10	0.7				CDS10-43-694/3800
15	0.4				CDS15-43-694/3800
20	0.2				CDS20-43-694/3800
30	0.2				CDS30-43-694/3800
Directional Couplers 350-2700MHz					
6	1.8	160	IP65	N Female	CDS6E-350/2700-01
10	0.8				CDS10E-350/2700-01
15	0.5				CDS15E-350/2700-01
20	0.25				CDS20E-350/2700-01
30	0.3				CDS30E-350/2700-01
6	1.8			7-16 Female	CDS6DE-350/2700-01
10	0.8				CDS10DE-350/2700-01
15	0.5				CDS15DE-350/2700-01
20	0.25				CDS20DE-350/2700-01
30	0.3				CDS30DE-350/2700-01
6	1.8			4.3-10 Female	CDS6-43-350/2700-01
10	0.8				CDS10-43-350/2700-01
15	0.5				CDS15-43-350/2700-01
20	0.25				CDS20-43-350/2700-01
30	0.3				CDS30-43-350/2700-01

Hybrid Combiners

COMBINER TYPE	COUPLING VALUE, dB	PIM dBc	IP	CONNECTOR TYPE	MODEL NUMBER
Hybrid Combiners 555-6000MHz					
2*2 Hybrid Combiner	3.1 ±0.9	160	IP66	N Female	CDSE2x2-555/6000
4*4 Hybrid Combiner	6.0 ±2.5				CDSE4x4-555/6000
2*2 Hybrid Combiner	3.1 ±0.9	163		4.3-10 Female	CDS2x2-43-555/6000
4*4 Hybrid Combiner	6.0 ±2.5				CDS4x4-43-555/6000
Hybrid Combiners 694-3800MHz					
2*2 Hybrid Combiner	3.1 ±0.5	155	IP65	N Female	CDSE2x2-694/3800
4*4 Hybrid Combiner	6.0 ±1.2				CDSE4x4-694/3800
2*2 Hybrid Combiner	3.1 ±0.5	160		7-16 Female	CDSDE2x2-694/3800
4*4 Hybrid Combiner	6.0 ±1.2				CDSDE4x4-694/3800
2*2 Hybrid Combiner	3.1 ±0.5	160		4.3-10 Female	CDS2x2-43-694/3800
4*4 Hybrid Combiner	6.0 ±1.2				CDS4x4-43-694/3800
Hybrid Combiners 350-2700MHz					
3dB Directional Hybrid Coupler	3.1±1.4@350-380MHz	160	IP65	N Female	CDSE2x2-350/2700-01
3dB Directional Hybrid Coupler	3.1±0.9@380-2700MHz	160		4.3-10 Female	CDS2x2-43-350/2700-01

Power Splitters

SPLITTER TYPE	SPLIT LOSS VALUE dB	PIM dBc	IP	CONNECTOR TYPE	MODEL NUMBER
Splitters 555-6000MHz					
2-way power splitter	≤3.0	160	IP66	N Female	PDS2E-555/6000
3-way power splitter	≤4.8				PDS3E-555/6000
4-way power splitter	≤6.0				PDS4E-555/6000
2-way power splitter	≤3.0	163		4.3-10 Female	PDS2-43-555/6000
3-way power splitter	≤4.8				PDS3-43-555/6000
4-way power splitter	≤6.0				PDS4-43-555/6000
Splitters Combiners 694-3800MHz					
2-way power splitter	≤3.3	155	IP65	N Female	PDS2E-694/3800
3-way power splitter	≤5.1				PDS3E-694/3800
4-way power splitter	≤6.4				PDS4E-694/3800
6-way power splitter	≤8.6				PDS6E-694/3800
2-way power splitter	≤3.3	160		7-16 Female	PDS2DE-694/3800
3-way power splitter	≤5.1				PDS3DE-694/3800
4-way power splitter	≤6.4				PDS4DE-694/3800
2-way power splitter	≤3.3	160		4.3-10 Female	PDS2-43-694/3800
3-way power splitter	≤5.1				PDS3-43-694/3800
4-way power splitter	≤6.4				PDS4-43-694/3800
6-way power splitter	≤8.6				PDS6-43-694/3800
Splitters 350-2700MHz					
2-way power splitter	≤3.4	160	IP65	N Female	PDS2E-350/2700-01
3-way power splitter	≤5.2				PDS3E-350/2700-01
4-way power splitter	≤6.5				PDS4E-350/2700-01
2-way power splitter	≤3.4			7-16 Female	PDS2DE-350/2700-01
3-way power splitter	≤5.2				PDS3DE-350/2700-01
4-way power splitter	≤6.5				PDS4DE-350/2700-01
2-way power splitter	≤3.4			4.3-10 Female	PDS2-43-350/2700-01
3-way power splitter	≤5.2				PDS3-43-350/2700-01
4-way power splitter	≤6.5				PDS4-43-350/2700-01

Dummy Loads

POWER HANDLING, W	IP	CONNECTOR TYPE	MODEL NUMBER
Dummy Loads DC-6000MHz			
2	IP65	N Male	TER-E-6000-2W
5			TER-E-6000-5W
10			TER-E-6000-10W
20			TER-E-6000-20W
50			TER-E-6000-50W
100			TER-E-6000-100W
200			TER-E-6000-200W
2		4.3-10 Female	TER-43-6000-2W
5			TER-43-6000-5W
10			TER-43-6000-10W
20			TER-43-6000-20W
50			TER-43-6000-50W
100			TER-43-6000-100W
200			TER-43-6000-200W
Dummy Loads DC-3800MHz			
2	Indoor	N Male	TER-E-3800-2W
5			TER-E-3800-5W
10			TER-E-3800-10W
20			TER-E-3800-20W
30			TER-E-3800-30W
50			TER-E-3800-50W
100			TER-E-3800-100W
5		7-16 Female	TER-DE-3800-5W
10			TER-DE-3800-10W
20			TER-DE-3800-20W
30			TER-DE-3800-30W
50			TER-DE-3800-50W
2		4.3-10 Female	TER-43-3800-2W
5			TER-43-3800-5W
10			TER-43-3800-10W
20			TER-43-3800-20W
30			TER-43-3800-30W
50			TER-43-3800-50W
100			TER-43-3800-100W

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Tappers

COUPLING VALUE, dB	INSERTION LOSS VALUE	PIM dBc	IP	CONNECTOR TYPE	MODEL NUMBER
Tappers 350-6000MHz					
3 / 2:1	1.8dB@0.35-0.96GHz 2.1dB@1.695-2.7GHz 2dB@3.5-4.5 & 4.9-6GHz	160	IP66	N Female	TPS3E-350/6000
5 / 3:1	1.65				TPS5E-350/6000
6 / 4:1	1.5				TPS6E-350/6000
8 / 6:1	1.15				TPS8E-350/6000
10 / 10:1	0.75				TPS10E-350/6000
13 / 20:1	0.65				TPS13E-350/6000
15 / 30:1	0.4				TPS15E-350/6000
20 / 100:1	0.2dB@0.35-0.96 & 1.695-2.7GHz 0.3dB@3.5-4.5 & 4.9-6GHz				TPS20E-350/6000
30 / 1000:1	0.2				TPS30E-350/6000
3 / 2:1	1.8dB@0.35-0.96GHz 2.1dB@1.695-2.7GHz 2dB@3.5-4.5 & 4.9-6GHz	163		4.3-10 Female	TPS3-43-350/6000
5 / 3:1	1.65				TPS5-43-350/6000
6 / 4:1	1.5				TPS6-43-350/6000
8 / 6:1	1.15				TPS8-43-350/6000
10 / 10:1	0.75				TPS10-43-350/6000
13 / 20:1	0.65				TPS13-43-350/6000
15 / 30:1	0.4				TPS15-43-350/6000
20 / 100:1	0.2dB@0.35-0.96 & 1.695-2.7GHz 0.3dB@3.5-4.5 & 4.9-6GHz				TPS20-43-350/6000
30 / 1000:1	0.2				TPS30-43-350/6000
Tappers 694-3800MHz					
5 / 3:1	1.3	155	IP65	N Female	TPS5E-694/3800
6 / 4:1	1.1				TPS6E-694/3800
8 / 6:1	0.8				TPS8E-694/3800
10 / 10:1	0.5				TPS10E-694/3800
13 / 20:1	0.3				TPS13E-694/3800
15 / 30:1	0.2				TPS15E-694/3800
20 / 100:1	0.2				TPS20E-694/3800
30 / 1000:1	0.2				TPS30E-694/3800
5 / 3:1	1.3	160		7-16 Female	TPS5DE-694/3800
6 / 4:1	1.1				TPS6DE-694/3800
8 / 6:1	0.8				TPS8DE-694/3800
10 / 10:1	0.5				TPS10DE-694/3800
13 / 20:1	0.3				TPS13DE-694/3800
15 / 30:1	0.2				TPS15DE-694/3800
20 / 100:1	0.2				TPS20DE-694/3800
30 / 1000:1	0.2				TPS30DE-694/3800
5 / 3:1	1.3	160		4.3-10 Female	TPS5-43-694/3800
6 / 4:1	1.1				TPS6-43-694/3800
8 / 6:1	0.8				TPS8-43-694/3800
10 / 10:1	0.5				TPS10-43-694/3800
13 / 20:1	0.3				TPS13-43-694/3800
15 / 30:1	0.2				TPS15-43-694/3800
20 / 100:1	0.2				TPS20-43-694/3800
30 / 1000:1	0.2				TPS30-43-694/3800

Wireless Indoor Solutions

Tappers

COUPLING VALUE, dB	INSERTION LOSS VALUE	PIM dBc	IP	CONNECTOR TYPE	MODEL NUMBER
Tappers 350-2700MHz					
5 / 3:1	1.4	155	?	N Female	TPS5E-350/2700-01
6 / 4:1	1				TPS6E-350/2700-01
8 / 6:1	0.8				TPS8E-350/2700-01
10 / 10:1	0.4				TPS10E-350/2700-01
13 / 20:1	0.3				TPS13E-350/2700-01
15 / 30:1	0.3				TPS15E-350/2700-01
5 / 3:1	1.4			7-16 Female	TPS5DE-350/2700-01
6 / 4:1	1				TPS6DE-350/2700-01
8 / 6:1	0.8				TPS8DE-350/2700-01
10 / 10:1	0.4				TPS10DE-350/2700-01
13 / 20:1	0.3				TPS13DE-350/2700-01
15 / 30:1	0.3				TPS15DE-350/2700-01
5 / 3:1	1.4	160		4.3-10 Female	TPS5-43-350/2700-01
6 / 4:1	1.1				TPS6-43-350/2700-01
8 / 6:1	0.8				TPS8-43-350/2700-01
10 / 10:1	0.5				TPS10-43-350/2700-01
13 / 20:1	0.3				TPS13-43-350/2700-01
15 / 30:1	0.3				TPS15-43-350/2700-01
20 / 100:1	0.2				TPS20-43-350/2700-01
30 / 1000:1	0.2				TPS30-43-350/2700-01

Low PIM Cable Loads

POWER HANDLING, W	PIM dBc	IP	CONNECTOR TYPE	MODEL NUMBER
Cable Loads DC-6000MHz				
2	160	IP65	N Male	TERP-E-6000-2W
5				TERP-E-6000-5W
10				TERP-E-6000-10W
20				TERP-E-6000-20W
50				TERP-E-6000-50W
100				TERP-E-6000-100W
200				TERP-E-6000-200W
2	163		4.3-10 Male	TERP-43-6000-2W
5				TERP-43-6000-5W
10				TERP-43-6000-10W
20				TERP-43-6000-20W
50				TERP-43-6000-50W
100				TERP-43-6000-100W
200				TERP-43-6000-200W
Cable Loads DC-3800MHz				
5	155	Indoor	N Female	TERP-E-3800-5W
50				TERP-E-3800-50W
100				TERP-E-3800-100W
50	160		7-16 Female	TERP-DE-3800-50W
100				TERP-DE-3800-100W
50			4.3-10 Female	TERP-43-3800-50W
100				TERP-43-3800-100W

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COMBINING SOLUTIONS
MULTIPLEXERS

MAXIMIZE RF SPECTRUM EFFICIENCY

RFS multiplexers combine multiple frequency bands from several base stations into a single feeder cable or antenna. They give operators a fast, easy and efficient way to adapt existing physical infrastructure to support new frequency bands and deliver more capacity to end users. Without multiplexers, operators often augment or replace feeder cables and antennas to support new frequency bands, adding considerable costs, complications and time to roll outs, and extra weight to already loaded towers.

Multiplexers

SERIES	MODEL NUMBER	600	700	750	800	850	900	1500	1600	1800	2100	AWS-UL	PCS	AWS-DL	WCS	BRS	CBRS	LAA	DC/ AISG	Config.	Conn.	Application
Diplexer 1850-1915 MHz / 1930-1995 MHz and 1695-1780 MHz / 2110-2360 MHz																						
FDPAW3040	FDPAW3040S2-3C											PORT 2	PORT 1	PORT 2	PORT 2				Port 2	Single	2.2-5	Super small/street lamp post
	FDPAW3040S0-3C																		Port 2	Single	Nex10	Super small/street lamp post
	FDPAW3040CD2-3C																		Port 2	Dual	2.2-5	Super small/street lamp post
	FDPAW3040CD0-3C																		Port 2	Dual	Nex10	Super small/street lamp post
Diplexer PCS/AWS, WCS, BRS																						
FDPL4020	FDPL4020CQ4-NC											PORT 2	PORT 1	PORT 2	PORT 2	PORT 2			None	Quad	4.3-10	Stacked, small cell
	FDPL4020CQ4-1C																		All Ports	Quad	4.3-10	Stacked, small cell
	FDPL4020CD4-NC																		None	Dual	4.3-10	Stacked, small cell
	FDPL4020CD4-1C																		All Ports	Dual	4.3-10	Stacked, small cell
	FDPL4020AQ4-NC																		None	Quad	4.3-10	Side by Side, small cell
	FDPL4020AQ4-1C																		All Ports	Quad	4.3-10	Side by Side, small cell
	FDPL4020AD4-NC																		None	Dual	4.3-10	Side by Side, small cell
Triplexer 380-960 MHz / 1695-2200 MHz / 2300-2690 MHz																						
FTBRM5015	FTBRM5015D4-S1	PORT 1	PORT 1	PORT 1	PORT 1	PORT 1	PORT 1			PORT 2	PORT 2	PORT 2	PORT 2	PORT 2	PORT 3	PORT 3			Auto Sense	Dual	4.3-10	General
	FTBRM5015D4-1C																		All Ports	Dual	4.3-10	General
Quadplexer 380-960 MHz / 1427-1880 MHz / 1920-2200 MHz / 2300-2690 MHz																						
FQBDWM5020	FQBDWM5020D4-S1	PORT 1	PORT 1	PORT 1	PORT 1	PORT 1	PORT 1	PORT 2	PORT 2	PORT 2	PORT 3				PORT 4	PORT 4			Auto Sense	Dual	4.3-10	General
	FQBDWM5020D4-1C																		All Ports	Dual	4.3-10	General
Diplexer 380-960 MHz / 1695-2700 MHz																						
FDBL5003	FDBL5003D4-S2	PORT 1	PORT 1	PORT 1	PORT 1	PORT 1	PORT 1			PORT 2	PORT 2	PORT 2	PORT 2	PORT 2	PORT 2	PORT 2			Auto Sense	Dual	4.3-10	General
	FDBL5003D4-S1																		Auto Sense	Dual	4.3-10	General
	FDBL5003D4-1C																		All Ports	Dual	4.3-10	General
Diplexer 80-2690 MHz / 3300-5925 MHz																						
FDFX55020	FDFX55020S4-2C	PORT 1	PORT 1	PORT 1	PORT 1	PORT 1	PORT 1	PORT 1	PORT 1	PORT 1	PORT 1	PORT 1	PORT 1	PORT 1	PORT 1	PORT 1	PORT 2	PORT 2	Port 1	Single	4.3-10	CBRS/Street Lamp post
	FDFX55020S2-2C																		Port 1	Single	2.2-5	CBRS/Street Lamp post
	FDFX55020D4-2C																		Port 1	Dual	4.3-10	CBRS/Street Lamp post
	FDFX55020D2-2C																		Port 1	Dual	2.2-5	CBRS/Street Lamp post

Wireless Indoor Solutions

COMBINING SOLUTIONS
MULTIPLEXERS

BUILT TO PERFORM

To ensure optimal performance across the combined frequency bands, all RFS multiplexers have extremely high rejection levels and very low insertion loss. The multiplexer housings are lightweight and compact. They withstand severe weather conditions including rapid temperature changes.

Multiplexers

SERIES	MODEL NUMBER	600	700	750	800	850	900	1500	1600	1800	2100	AWS-UL	PCS	AWS-DL	WCS	BRS	CBRS	LAA	DC/ AISG	Config.	Conn.	Application
Diplexer 1695-2200 MHz / 2300-2690 MHz																						
FDRM5015	FDRM5015D4-1C									Port 1	Port 1	Port 1	Port 1	Port 1	Port 2	Port 2			All Ports	Dual	4.3-10	General
Twin Diplexer 555-806 MHz / 824-960 MHz																						
FDJ85020	FDJ85020D4-S1	PORT 1	PORT 1	PORT 1	PORT 2	PORT 2	PORT 2												Auto Sense	Dual	4.3-10	Low band only Diplexer
	FDJ85020Q4-S1																		Auto Sense	Quad	4.3-10	Low band only Diplexer
	FDJ85020D4-1C																		All Ports	Dual	4.3-10	Low band only Diplexer
Triplexer 694-862 MHz / 880-960 MHz / 1427-2690 MHz																						
FTEGL5020	FTEGL5020S4-1C		Port 1	Port 1	Port 1		Port 2	Port 3	Port 3	Port 3	Port 3	Port 3	Port 3	Port 3	Port 3	Port 3			All Ports	Single	4.3-10	General
Triplexer 380-2200 MHz / 2496-2700 MHz / 3300-3800 MHz																						
FTCMX5020	FTCMX5020S4-1C	Port 1	Port 1	Port 1	Port 1	Port 1	Port 1	Port 1	Port 1	Port 1	Port 1	Port 1	Port 1	Port 1		Port 2	Port 3		All Ports	Single	4.3-10	General
Triplexer 380-960 MHz / 1427-1880 MHz / 1920-2690 MHz																						
FTBDV5015	FTBDV5015S4-1C	Port 1	Port 1	Port 1	Port 1	Port 1	Port 1	Port 2	Port 2	Port 2	Port 3				Port 3	Port 3			All Ports	Single	4.3-10	General
Quadplexer 380-960 MHz / 1350-1525 MHz / 1710-1880 MHz / 1920-2170 MHz																						
FQBLDW5020	FQBLDW5020S4-1C	Port 1	Port 1	Port 1	Port 1	Port 1	Port 1	Port 2		Port 3	Port 4								All Ports	Single	4.3-10	General
Diplexer 694-862 MHz / 880-960 MHz																						
FDEG5020	FDEG5020S4-1C		Port 1	Port 1	Port 1		Port 1												All Ports	Single	4.3-10	General
	FDEG5020S7-1C																		All Ports	Single	7/16	General
Diplexer 1427-1880 MHz / 1920-2690 MHz																						
FDDV5015	FDDV5015S4-1C						Port 1	Port 1	Port 1	Port 2									All Ports	Single	4.3-10	General
In-line Wideband Diplexer 698-960 MHz / 1710-2200 MHz																						
FD9R6004	FD9R6004S4-1C		Port 1	Port 1	Port 1	Port 1	Port 1			Port 2	Port 2	Port 2	Port 2	Port 2					All Ports	Single	4.3-10	General

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03

RADIO FREQUENCY SYSTEMS

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