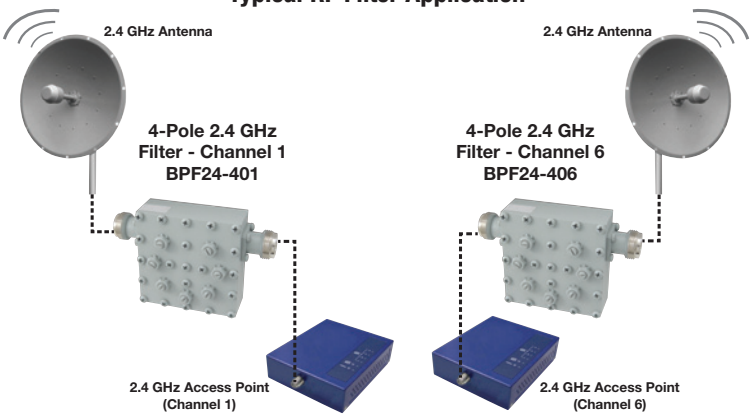
RF Filters / Splitters Tutorial

What are RF Filters?

RF Filters reduce out of band interference and improve performance of co-located equipment. An RF Filter will only pass the frequency and channel you are transmitting or receiving and reduce the interference of signals outside your channel. Interference is usually caused by transmission sources near the channel you are transmitting on.

L-com's RF Filters are available in full band versions or fixed channel versions and provide excellent channel rejection. All filters feature rugged aluminum construction and are available for indoor or outdoor applications.

Typical RF Filter Application

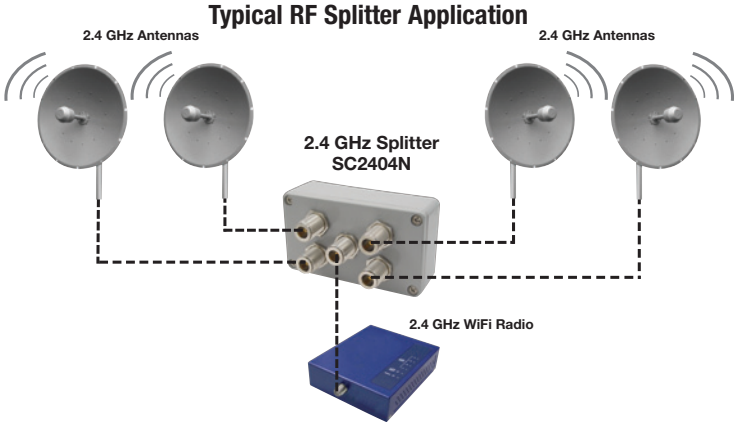


2.4 GHz Bandpass Channel Filter Application

What are RF Splitters / Combiners?

An RF Splitter / Combiner is a transmission component which divides or sums power between two or more ports. Typically they are used for connecting more than one antenna to a single radio and can also be used to connect multiple radios to a single antenna using the same frequency.

Typical RF Splitter Application

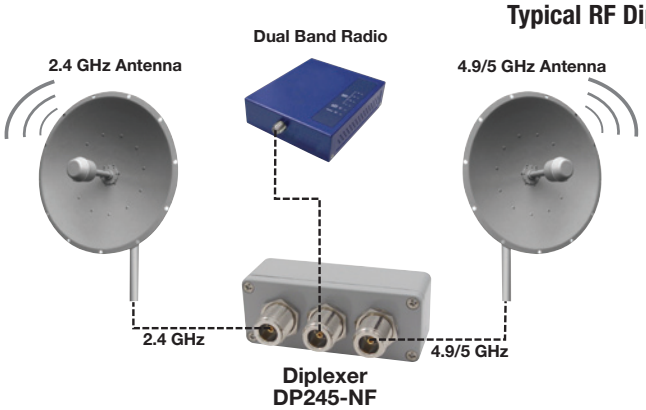


4-Way Signal Splitter Application

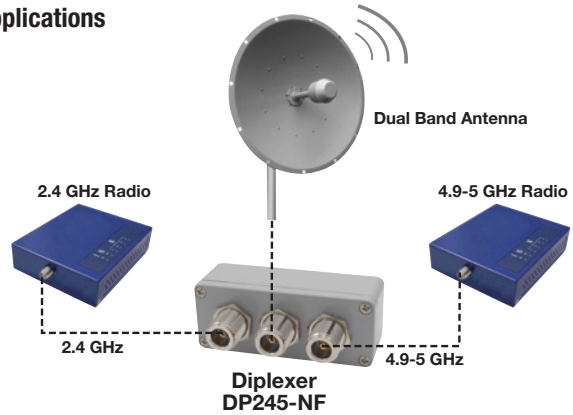
What are RF Diplexers?

An RF Diplexer is a device that combines two signals onto a single transmission line. In general the two signals operate at different frequencies. L-com's Diplexers are designed to split 2.4 GHz and 5 GHz from a single radio feed to separate 2.4 GHz and 5 GHz antennas. Many dual-band 802.11a/b/g radios share a single antenna. These devices split these signals so that two separate 2.4 GHz and 5 GHz antennas can be used to improve performance. In addition, L-com Diplexers can also be used to combine 2.4 GHz or 5 GHz signals onto a single cable.

Typical RF Diplexer Applications



Dual Band Radio Application



Dual Band Antenna Application

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Item #	Style	Description	1-9	10-24	25-99	100+
800-2600 MHz Broadband Signal Splitters						
SCW02N	A	2-Way, Type N Female Connectors	48.91	44.99	41.08	CALL
SCW03N	A	3-Way, Type N Female Connectors	70.67	65.01	59.36	CALL
SCW04N	A	4-Way, Type N Female Connectors	92.43	85.03	77.64	CALL
900 MHz Signal Splitters						
SC902N	C	2-Way, Type N Female Connectors	59.79	55.00	50.22	CALL
SC903N	C	3-Way, Type N Female Connectors	70.67	65.01	59.36	CALL
2.4 GHz Signal Splitters						
SC2402N	B	2-Way, Type N Female Connectors	59.79	55.00	50.22	CALL
SC2402RTM	B	2-Way, RP-TNC Jack Connectors	59.79	55.00	50.22	CALL
SC2403N	C	3-Way, Type N Female Connectors	70.67	65.01	59.36	CALL
SC2403RTM	C	3-Way, RP-TNC Jack Connectors	70.67	65.01	59.36	CALL
SC2404N	C	4-Way, Type N Female Connectors	81.55	75.02	68.50	CALL
3.5 GHz Signal Splitters						
SC3502N	B	2-Way, Type N Female Connectors	48.91	44.99	41.08	CALL
SC3504N	C	4-Way, Type N Female Connectors	81.55	75.02	68.50	CALL
5.8 GHz Signal Splitters						
SC5802N	B	2-Way, Type N Female Connectors	114.19	105.05	95.92	CALL
SC5804N	C	4-Way, Type N Female Connectors	184.91	170.11	155.32	CALL

900 MHz Full Band Ultra High Q 4-Pole Indoor and Outdoor Bandpass Filters

HyperLink® 900 MHz 4-Pole ultra-high Q full band filters are designed for full band applications. By reducing interference outside the 915 MHz band such as from cellular and paging signals, improved performance in noisy environments can be achieved.

BPF900	D	4-Pole, Indoor, Full Band	119.63	112.45	105.27	CALL
BPF900A	F	4-Pole, Outdoor, Full Band	179.47	168.70	157.93	CALL

2.4 GHz 802.11b/g Compatible Ultra High Q 4-Pole and 8-Pole WiFi Bandpass Channel Filters

L-com's HyperLink® indoor and outdoor 2.4 GHz ultra-high Q WiFi channel filters are ideal for co-located equipment installations. Available in seven versions for channels 1, 3, 6, 9, 11, 13 and 14, they provide excellent adjacent channel rejection. By reducing interference from both inside and outside the band, improved performance of co-located equipment can be achieved.

2.4 GHz Filters

BPF24-401	D	4-Pole, Indoor, Channel 1	85.90	80.74	75.59	CALL
BPF24-403	D	4-Pole, Indoor, Channel 3	85.90	80.74	75.59	CALL
BPF24-406	D	4-Pole, Indoor, Channel 6	85.90	80.74	75.59	CALL
BPF24-409	D	4-Pole, Indoor, Channel 9	85.90	80.74	75.59	CALL
BPF24-411	D	4-Pole, Indoor, Channel 11	85.90	80.74	75.59	CALL
BPF24-801	E	8-Pole, Indoor, Channel 1	108.75	102.22	95.70	CALL
BPF24-801A	I	8-Pole, Outdoor, Channel 1	152.27	143.13	133.99	CALL
BPF24-803	E	8-Pole, Indoor, Channel 3	108.75	102.22	95.70	CALL
BPF24-806	E	8-Pole, Indoor, Channel 6	108.75	102.22	95.70	CALL
BPF24-806A	I	8-Pole, Outdoor, Channel 6	152.27	143.13	133.99	CALL
BPF24-809	E	8-Pole, Indoor, Channel 9	108.75	102.22	95.70	CALL
BPF24-809A	I	8-Pole, Outdoor, Channel 9	152.27	143.13	133.99	CALL
BPF24-811	E	8-Pole, Indoor, Channel 11	108.75	102.22	95.70	CALL
BPF24-811A	I	8-Pole, Outdoor, Channel 11	152.27	143.13	133.99	CALL
BPF24-813	E	8-Pole, Indoor, Channel 13	108.75	102.22	95.70	CALL
BPF24-813A	I	8-Pole, Outdoor, Channel 13	152.27	143.13	133.99	CALL
BPF24-814	E	8-Pole, Indoor, Channel 14	108.75	102.22	95.70	CALL
BPF2400	D	4-Pole, Indoor, Full Band	119.63	112.45	105.27	CALL
BPF2400A	G	4-Pole, Outdoor, Full Band	179.47	168.70	157.93	CALL

4.9 GHz and 5.8 GHz Full Band Ultra High Q 4-Pole Bandpass Filters

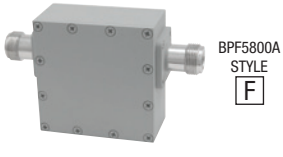
HyperLink® 4.9 GHz and 5.8 GHz 4-Pole ultra high Q full band channel filters are ideal for co-located equipment installations. These filters are designed for full band applications. By reducing interference outside the respective bands (4900 MHz or 5800 MHz depending on model), improved performance on the co-located equipment can be achieved.

4.9 GHz Filters

BPF4900A	F	4-Pole, Outdoor/Indoor, Full Band	179.47	168.70	157.93	CALL

5.8 GHz Filters

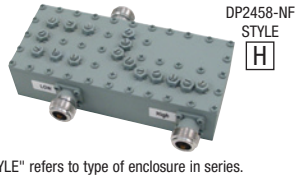
BPF5800A	F	4-Pole, Outdoor/Indoor, Full Band	179.47	168.70	157.93	CALL



2.4/5 GHz Diplexers

HyperLink® 2.4/5 GHz diplexers are designed to split 2.4 GHz and 5 GHz from a single radio feed to separate 2.4 GHz and 5 GHz antennas. They can also be used to combine those frequencies into a single cable. HyperLink® diplexers are available for indoor and outdoor applications and feature Type N Female connectors.

DP245-NF	B	2.4/5 GHz, Outdoor, Type N Female Connectors	59.79	55.00	50.22	CALL
DP2458-NF	H	2.4/5 GHz, Indoor, Type N Female Connectors	163.15	150.10	137.04	CALL



Accessories

ANM-TERM1		Type N Male, 50 Ohm Terminator, 0-6 GHz	9.96	9.16	8.36	CALL
HGX-PMT14		Splitter Mast Mount Kit, 1-1/4" (3.2cm) to 2" (5.1cm) Diameter	16.00	14.72	13.44	CALL
HGX-AMOUNT02		Splitter Wall/Enclosure Mounting Kit	13.00	11.96	10.92	CALL

"STYLE" refers to type of enclosure in series.