


DUPLEXERS



Davicom Technologies manufactures an extensive line of base station duplexers that meet industry duplexing needs in all operating ranges from 30 to 1000 MHz.

We feature several models of bandpass and pass-reject duplexers utilizing either our 7" round cavity model, for greater isolation, or our "Modu-Pak Series", a 4" x 5" rectangular cavity with similar performances when reduced space is available.

Our pass-reject type duplexers, featuring our unique "W" Circuit design, produce a highly desirable pass-band selectivity, low branch losses and deep reject notches.

Through special cabling and coupling methods the «nose» response of bandpass duplexers is broader, which permits a single duplexer to serve a number of combined and multicoupled transmitters and receivers on a common antenna, provided of course that acceptable frequency spacing criteria are met.

Two and three cavity branch duplexers are available in both bandpass and pass-reject configurations.

Other types of duplexer options such as isolator/duplexer combinations, duplexers with more than three cavity branches and duplexer/multicoupler combinations are available on request.

PASS-REJECT "W" CIRCUIT DUPLEXERS "MODU-PAK" SERIES

Our "Modu-Pak" series of duplexers have been designed around a 4" x 5" rectangular aluminum extrusion which lends itself to compact and innovative packaging of assemblies to meet problems of on-site equipment space availability. All duplexers are comprised of individually welded cavities to eliminate leakage, intermod problems and system degradation commonly found on interlocking cavity type duplexers.

These cavity resonators fulfill the needs for highly selective filtering, antenna duplexing, transmitter combining and many other land mobile systems filter applications.

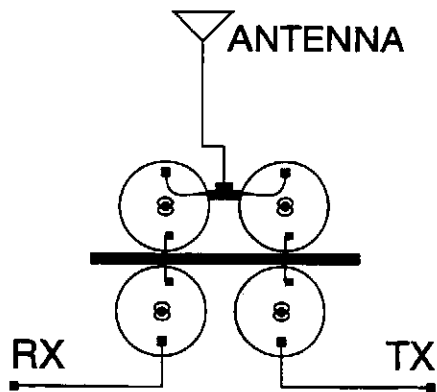
All models are carefully temperature compensated for stable characteristics over their operating frequency range using compensation techniques based on the reference physical properties of INVAR, a material having almost zero thermal expansion-contraction characteristics.

BASE STATION DUPLEXERS



Features

- ◆ Unique loop & harness design
- ◆ Tunable over entire range (132-174) with same harness
- ◆ Low loss to maximize system performance
- ◆ High isolation to minimize interference
- ◆ Temperature compensated to assure consistent performance
- ◆ Rotatable loops for other selectivity settings
- ◆ Field tunable
- ◆ Rack mount or cabinet



Band Pass Duplexer BPD-1574

132-174 MHz

Four cavity base station duplexer when maximum sideband filtering is needed to relieve intermodulation from high level mixing in receiver front-ends.

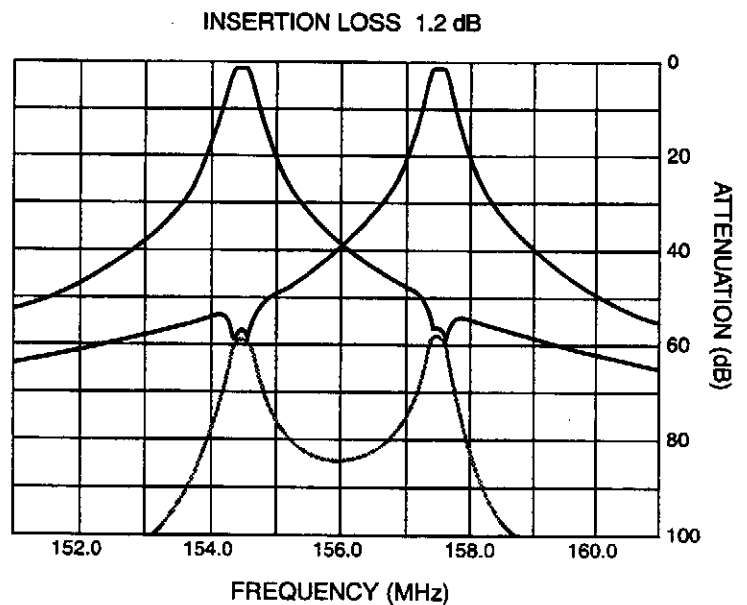
Electrical Specifications		BPD-1574
Frequency Range:	MHz	132-174
Frequency Separation:	MHz	3.0 min.
Insertion Loss:	dB	1.2
Isolation:	dB	55+
VSWR at Resonance:	(max.)	1.5:1
Power Rating:	watts	400
Temperature Range:	Deg.	-40°C to +60°C
Termination:		Type «N» Female

VSWR is referenced to 50 ohms.
Specify transmit and receive frequencies when ordering.

Mechanical Specifications		BPD-1574R	BPD-1574C
Height:	in. (mm)	32.5 (826)	40 (1016)
Width:	in. (mm)	19 (483)	22 (559)
Depth:	in. (mm)	14 (356)	18 (457)
Weight:	lbs. (kg)	41 (18.6)	90 (40.9)

Mounting Information

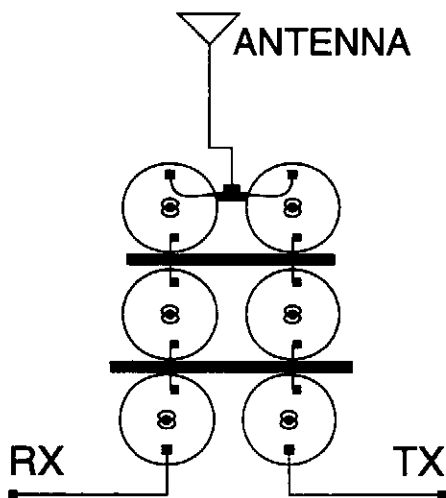
- Rack Mount Unit («R») : Protrudes 7 in. (178 mm) forward of rack.
- Cabinet Mount Unit («C») : Free standing.





Features

- ◆ Unique loop & harness design
- ◆ Tunable over entire range (132-174) with same harness
- ◆ Low loss to maximize system performance
- ◆ High isolation to minimize interference
- ◆ Temperature compensated to assure consistent performance
- ◆ Rotatable loops for other selectivity settings
- ◆ Field tunable
- ◆ Rack mount or cabinet



Band Pass Duplexer BPD-1576

132-174 MHz

Six cavity base station duplexer when maximum sideband filtering is needed to relieve intermodulation from high level mixing in receiver front-ends.

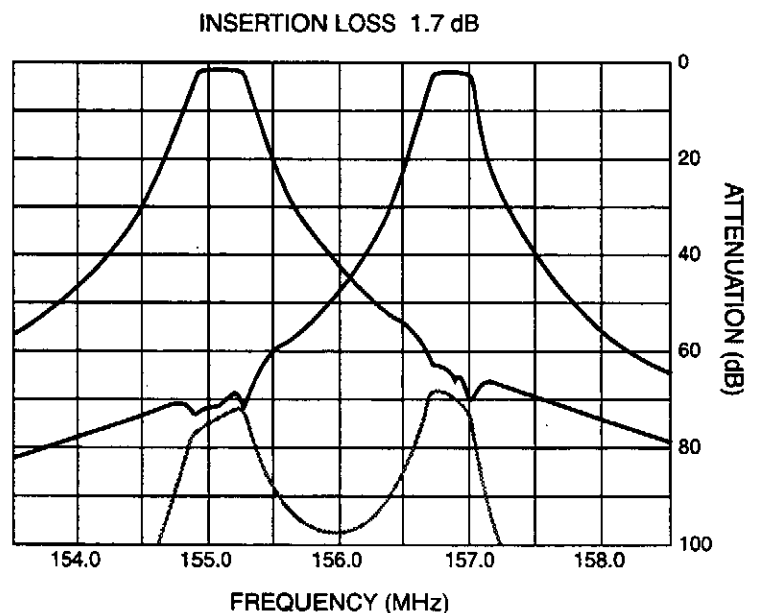
Electrical Specifications		BPD-1576
Frequency Range:	MHz	132-174
Frequency Separation:	MHz	1.7 min.
Insertion Loss:	dB	1.7
Isolation:	dB	67+
VSWR at Resonance:	(max.)	1.5:1
Power Rating:	watts	400
Temperature Range:	Deg.	-40°C to +60°C
Termination:		Type «N» Female

VSWR is referenced to 50 ohms.
Specify transmit and receive frequencies when ordering.

Mechanical Specifications		BPD-1576R	BPD-1576C
Height:	in. (mm)	32.5 (826)	40 (1016)
Width:	in. (mm)	19 (483)	22 (559)
Depth:	in. (mm)	21 (533)	18 (457)
Weight:	lbs. (kg)	62 (28.2)	110 (50.0)

Mounting Information

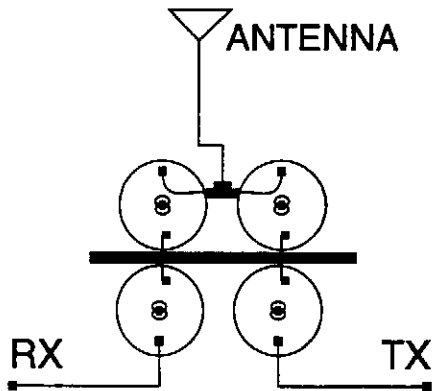
- Rack Mount Unit («R») : Protrudes 7 in. (178 mm) forward of rack.
- Cabinet Mount Unit («C») : Free standing.





Features

- ◆ Unique loop & harness design
- ◆ Tunable over entire range (406-512) with same harness
- ◆ Low loss to maximize system performance
- ◆ High isolation to minimize interference
- ◆ Temperature compensated to assure consistent performance
- ◆ Rotatable loops for other selectivity settings
- ◆ Field tunable
- ◆ Rack mount or cabinet



Band Pass Duplexer BPD-4574

406-512 MHz

Four cavity base station duplexer to achieve greater rejection of transmitter spurious and noise radiation, providing better receiver protection.

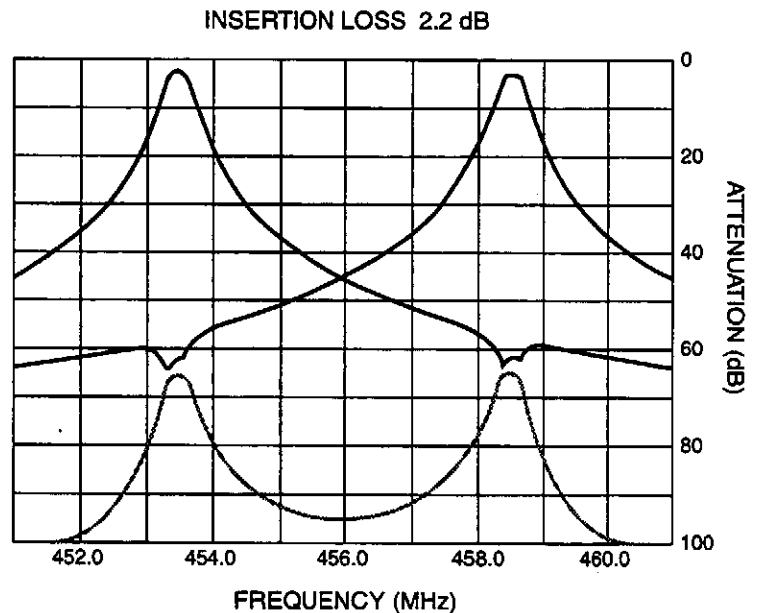
Electrical Specifications	BPD-4574	
Frequency Range:	MHz	406-512
Frequency Separation:	MHz	5.0 min.
Insertion Loss:	dB	2.2
Isolation:	dB	60 +
VSWR at Resonance:	(max.)	1.5:1
Power Rating:	watts	300
Temperature Range:	Deg.	-40°C to +60°C
Termination:	Type «N» Female	

VSWR is referenced to 50 ohms.
Specify transmit and receive frequencies when ordering.

Mechanical Specifications	BPD-4574R	BPD-4574C
Height:	in. (mm) 16 (406)	24 (610)
Width:	in. (mm) 19 (483)	22 (559)
Depth:	in. (mm) 14 (356)	18 (457)
Weight:	lbs. (kg) 25 (11.4)	65 (29.5)

Mounting Information

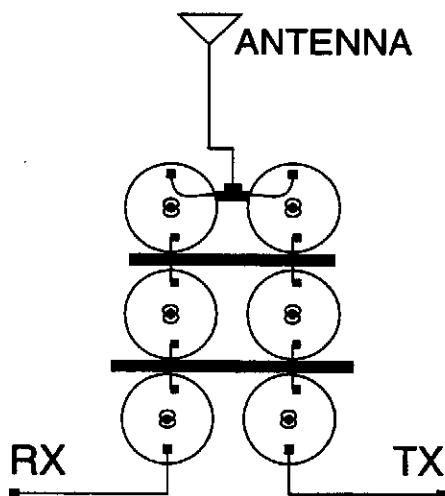
- Rack Mount Unit («R») : Protrudes 7 in. (178 mm) forward of rack.
- Cabinet Mount Unit («C») : Free standing.





Features

- ◆ Unique loop & harness design
- ◆ Tunable over entire range (406-512) with same harness
- ◆ Low loss to maximize system performance
- ◆ High isolation to minimize interference
- ◆ Temperature compensated to assure consistent performance
- ◆ Rotatable loops for other selectivity settings
- ◆ Field tunable
- ◆ Rack mount or cabinet



Band Pass Duplexer BPD-4576

406-512 MHz

Six cavity base station duplexer to achieve maximum rejection of transmitter spurious and noise radiation, providing maximum receiver protection.

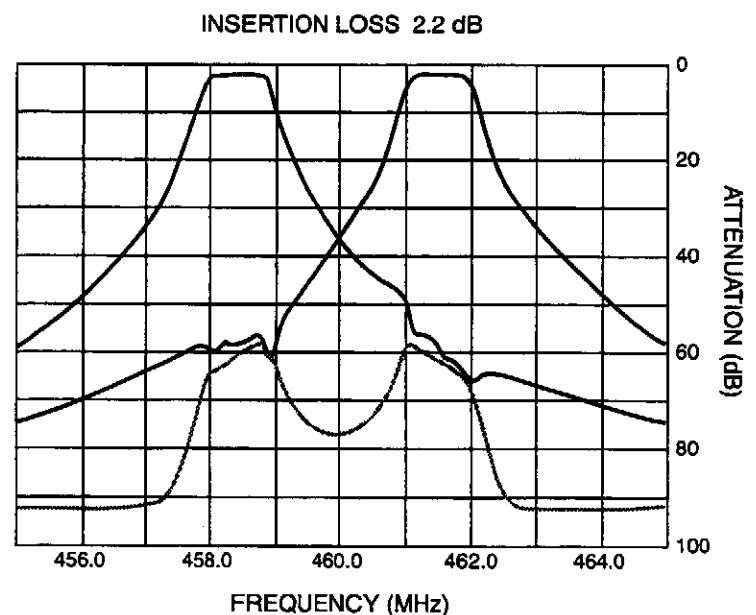
Electrical Specifications	BPD-4576	
Frequency Range:	MHz	406-512
Frequency Separation:	MHz	3 min.
Insertion Loss:	dB	2.2
Isolation:	dB	62 +
VSWR at Resonance:	(max.)	1.5:1
Power Rating:	watts	300
Temperature Range:	Deg.	-40°C to +60°C
Termination:	Type «N» Female	

VSWR is referenced to 50 ohms.
Specify transmit and receive frequencies when ordering.

Mechanical Specifications	BPD-4576R	BPD-4576C
Height:	in. (mm)	16 (406) / 24 (610)
Width:	in. (mm)	19 (483) / 22 (559)
Depth:	in. (mm)	21 (533) / 18 (457)
Weight:	lbs. (kg)	38 (17.3) / 82 (37.3)

Mounting Information

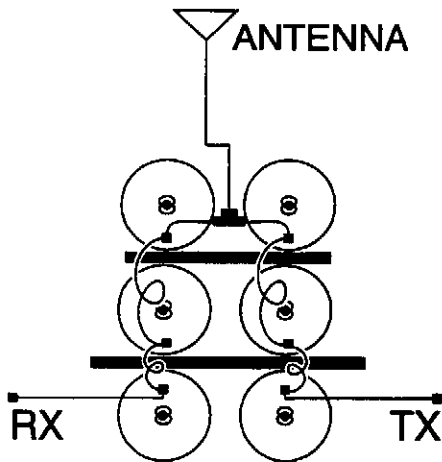
- Rack Mount Unit («R») : Protrudes 7 in. (178 mm) forward of rack.
- Cabinet Mount Unit («C») : Free standing.





Features

- ◆ Unique loop & harness design
- ◆ Tunable over entire range (132 -174) with same harness
- ◆ Low loss to maximize system performance
- ◆ High isolation to minimize interference
- ◆ Temperature compensated to assure consistent performance
- ◆ Rotatable loops for other selectivity settings
- ◆ Field tunable
- ◆ Rack mount or cabinet



Pass Reject "W" Circuit Duplexer PRD-1576

132-174 MHz

This duplexer combines three pass-reject cavities in each channel to provide greater suppression of spurious and sideband noise at close-spaced duplex frequencies.

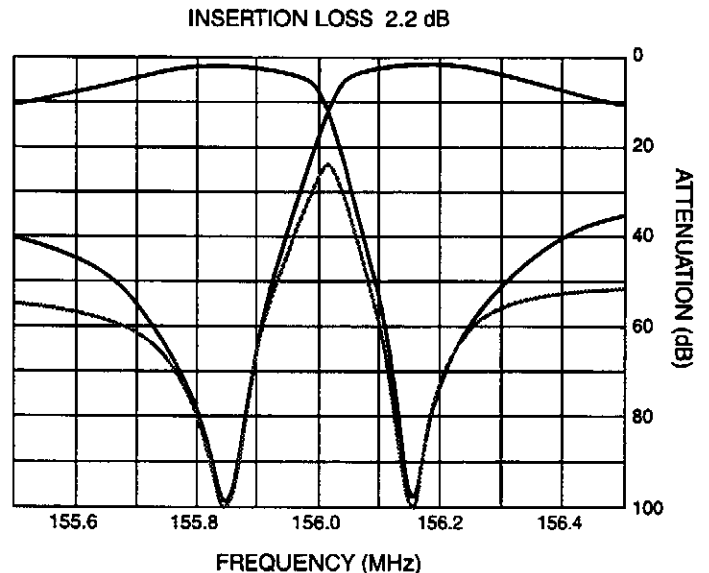
Electrical Specifications		PRD-1576
Frequency Range:	MHz	132-174
Frequency Separation:	MHz	0.3 min.
Insertion Loss:	dB	2.2
Isolation:	dB	95+
VSWR at Resonance:	(max.)	1.5:1
Power Rating:	watts	400
Temperature Range:	Deg.	-40 C to +60 C
Termination:		Type «N» Female

VSWR is referenced to 50 ohms.
Specify transmit and receive frequencies when ordering.

Mechanical Specifications		PRD-1576R	PRD-1576C
Height:	in. (mm)	32.5 (826)	40 (1016)
Width:	in. (mm)	19 (483)	22 (559)
Depth:	in. (mm)	21 (533)	18 (457)
Weight:	lbs. (kg)	62 (28.2)	110 (50.0)

Mounting Information

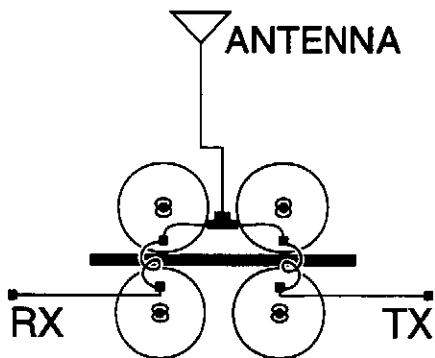
Rack Mount Unit («R») Protrudes 7 in. (178 mm) forward of rack.
Cabinet Mount Unit («C») Free standing.





Features

- ◆ Unique loop & harness design
- ◆ Tunable over entire range (132 -174) with same harness
- ◆ Low loss to maximize system performance
- ◆ High isolation to minimize interference
- ◆ Temperature compensated to assure consistent performance
- ◆ Rotatable loops for other selectivity settings
- ◆ Field tunable
- ◆ Rack mount or cabinet



Pass Reject "W" Circuit Duplexer PRD-1574

132-174 MHz

This duplexer combines two pass-reject cavities in each channel to provide greater suppression of spurious and sideband noise at close-spaced duplex frequencies.

Electrical Specifications		PRD-1574
Frequency Range:	MHz	132-174
Frequency Separation:	MHz	0.5 min.
Insertion Loss:	dB	1.5
Isolation:	dB	80+
VSWR at Resonance:	(max.)	1.5:1
Power Rating:	watts	400
Temperature Range:	Deg.	-40 C to +60 C
Termination:		Type «N» Female

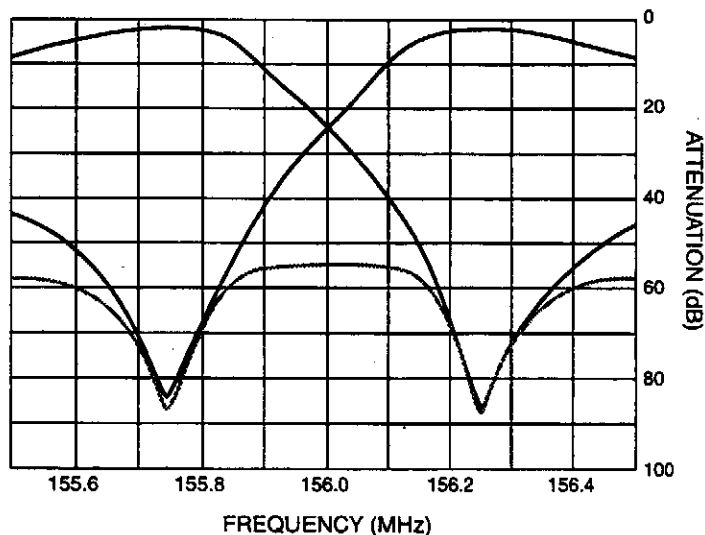
VSWR is referenced to 50 ohms.
Specify transmit and receive frequencies when ordering.

Mechanical Specifications		PRD-1574R	PRD-1574C
Height:	in. (mm)	32.5 (826)	40 (1016)
Width:	in. (mm)	19 (483)	22 (559)
Depth:	in. (mm)	14 (356)	18 (457)
Weight:	lbs. (kg)	41 (18.6)	90 (40.9)

Mounting Information

- Rack Mount Unit («R») : Protrudes 7 in. (178 mm) forward of rack.
- Cabinet Mount Unit («C») : Freestanding.

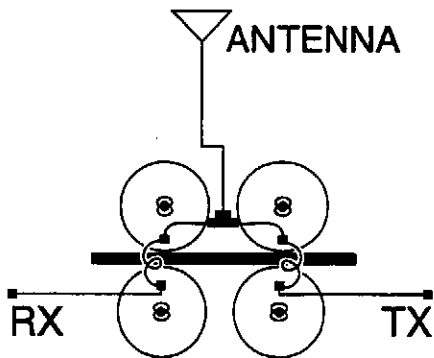
INSERTION LOSS 1.5 dB





Features

- ◆ Unique loop & harness design
- ◆ Tunable over entire range (406-512) with same harness
- ◆ Low loss to maximize system performance
- ◆ High isolation to minimize interference
- ◆ Temperature compensated to assure consistent performance
- ◆ Rotatable loops for other selectivity settings
- ◆ Field tunable
- ◆ Rack mount or cabinet



Pass Reject "W" Circuit Duplexer PRD-4574

406-512 MHz

This duplexer combines two pass-reject cavities in each channel to maximize its capability in suppressing spurious and sideband noise at close-spaced duplex frequencies.

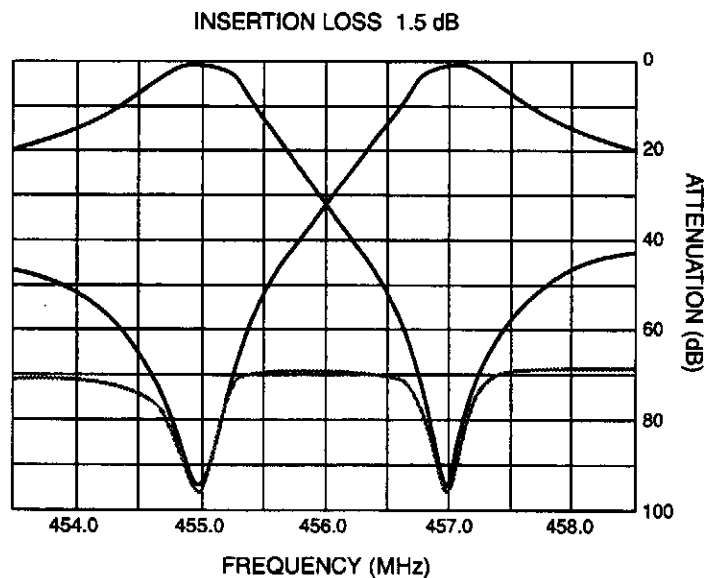
Electrical Specifications	PRD-4574	
Frequency Range:	MHz	406-512
Frequency Separation:	MHz	2.0 min.
Insertion Loss:	dB	1.5
Isolation:	dB	90+
VSWR at Resonance:	(max.)	1.5:1
Power Rating:	watts	300
Temperature Range:	Deg.	-40 C to +60 C
Termination:	Type «N» Female	

VSWR is referenced to 50 ohms.
Specify transmit and receive frequencies when ordering.

Mechanical Specifications	PRD-4574R	PRD-4574C
Height:	in. (mm)	16 (406) 24 (610)
Width:	in. (mm)	19 (483) 22 (559)
Depth:	in. (mm)	14 (356) 18 (457)
Weight:	lbs. (kg)	25 (11.4) 65 (29.5)

Mounting Information

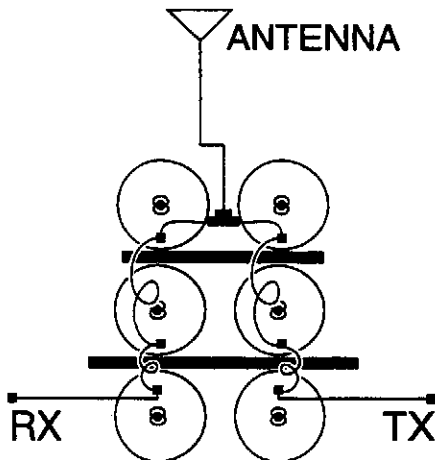
Rack Mount Unit («R») Protrudes 7 in. (178 mm) forward of rack.
Cabinet Mount Unit («C») Freestanding.





Features

- ◆ Unique loop & harness design
- ◆ Tunable over entire range (406-512) with same harness
- ◆ Low loss to maximize system performance
- ◆ High isolation to minimize interference
- ◆ Temperature compensated to assure consistent performance
- ◆ Rotatable loops for other selectivity settings
- ◆ Field tunable
- ◆ Rack mount or cabinet



Pass Reject "W" Circuit Duplexer PRD-4576

406-512 MHz

This duplexer combines three pass-reject cavities in each channel to provide greater suppression of spurious and sideband noise at close-spaced duplex frequencies.

Electrical Specifications	PRD-4576	
Frequency Range:	MHz	406-512
Frequency Separation:	MHz	0.7 min.
Insertion Loss:	dB	2.2
Isolation:	dB	100+
VSWR at Resonance:	(max.)	1.5:1
Power Rating:	watts	300
Temperature Range:	Deg.	-40 C to +60 C
Termination:		Type «N» Female

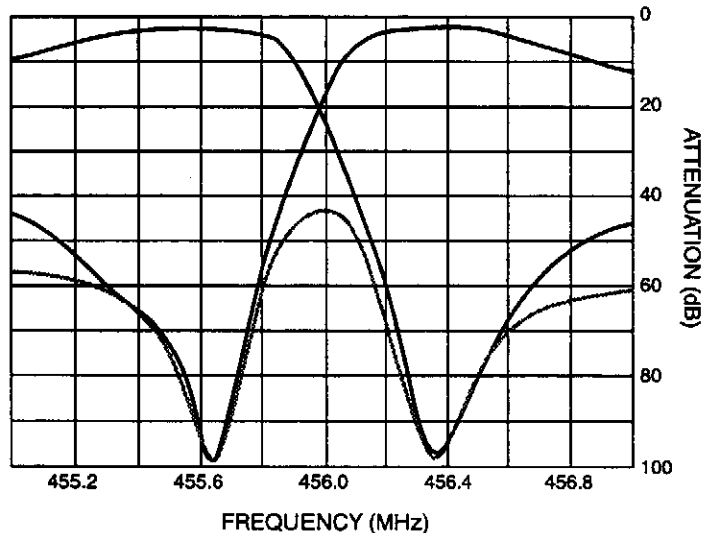
VSWR is referenced to 50 ohms.
Specify transmit and receive frequencies when ordering.

Mechanical Specifications	PRD-4576R	PRD-4576C
Height:	in. (mm) 16 (406)	24 (610)
Width:	in. (mm) 19 (483)	22 (559)
Depth:	in. (mm) 21 (533)	18 (457)
Weight:	lbs. (kg) 38 (17.3)	82 (37.3)

Mounting Information

- Rack Mount Unit («R») : Protrudes 7 in. (178 mm) forward of rack.
- Cabinet Mount Unit («C») : Free-standing.

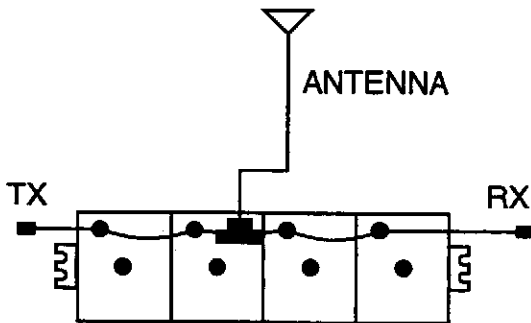
INSERTION LOSS 2.2 dB





Features

- ◆ Modu-Pak design - High «Q» 4" x 5" cavity for increased isolation in a compact configuration
- ◆ Individually welded cavities to prevent leakage & degradation
- ◆ Unique «W» circuit loop & harness design
- ◆ Tunable over entire range (132-174) with same harness
- ◆ Pseudo band pass characteristic for high Tx to Rx isolation
- ◆ Low loss to maximize system performance
- ◆ Temperature compensated to assure consistent performance
- ◆ Rotatable loops for other selectivity settings
- ◆ Compact & rugged



Compact Pass Reject "W" Circuit Duplexer

PRD-1544

132-174 MHz

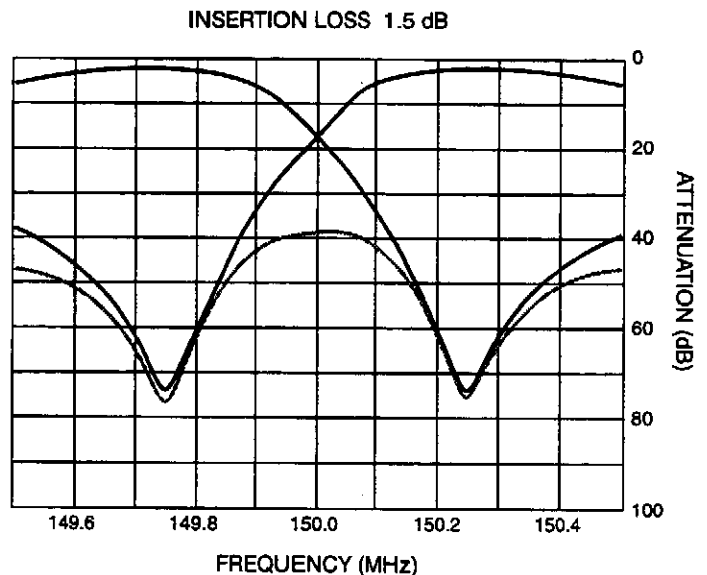
This compact duplexer combines two pass-reject cavities in each channel to maximize its capabilities in suppressing spurious and side-band noise at close-spaced duplex frequencies.

Electrical Specifications		PRD-1544
Frequency Range:	MHz	132-174
Frequency Separation:	MHz	0.5 min.
Insertion Loss:	dB	1.5
Isolation:	dB	70+
VSWR at Resonance:	(max.)	1.5:1
Power Rating:	watts	450
Temperature Range:	Deg.	-40 C to +60 C
Termination:		Type «N» Female

VSWR is referenced to 50 ohms.
Specify transmit and receive frequencies when ordering.

Mechanical Specifications		PRD-1544
Height:	in. (mm)	32.5 (826)
Width:	in. (mm)	19 (483)
Depth:	in. (mm)	5 (127)
Weight:	lbs. (kg)	41 (18.6)

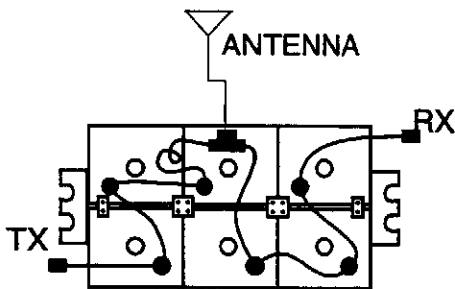
Mounting Information
Duplexers may be rack, wall or floor mounted.





Features

- ◆ Modu-Pak design - High «Q» 4" x 5" cavity for increased isolation in a compact configuration
- ◆ Individually welded cavities to prevent leakage & degradation
- ◆ Unique «W» circuit loop & harness design
- ◆ Tunable over entire range (132-174) with same harness
- ◆ Pseudo band pass characteristic for high Tx to Rx isolation
- ◆ Low loss to maximize system performance
- ◆ Temperature compensated to assure consistent performance
- ◆ Rotatable loops for other selectivity settings
- ◆ Compact & rugged



Compact Pass Reject "W" Circuit Duplexer

PRD-1546

132-174 MHz

This compact duplexer combines three pass-reject cavities in each channel to provide maximum transmitter to receiver protection.

Electrical Specifications

Electrical Specifications		PRD-1546
Frequency Range:	MHz	132-174
Frequency Separation:	MHz	0.5 min.
Insertion Loss:	dB	1.5
Isolation:	dB	90+
VSWR at Resonance:	(max.)	1.5:1
Power Rating:	watts	450
Temperature Range:	Deg.	-40 C to +60 C
Termination:		Type «N» Female

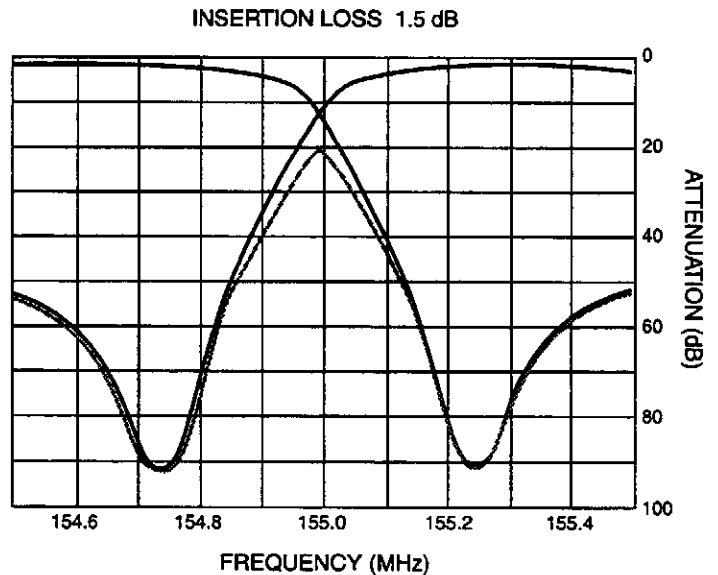
VSWR is referenced to 50 ohms.
Specify transmit and receive frequencies when ordering.

Mechanical Specifications

Mechanical Specifications		PRD-1546
Height:	in. (mm)	32.5 (826)
Width:	in. (mm)	19 (483)
Depth:	in. (mm)	8 (203)
Weight:	lbs. (kg)	62 (28.2)

Mounting Information

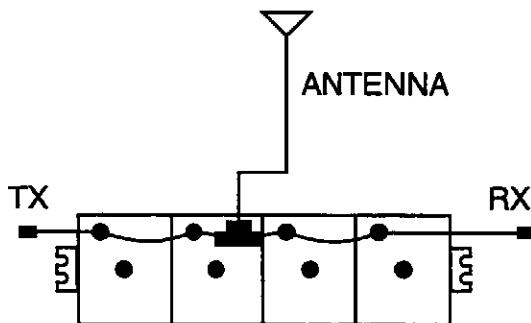
Duplexers may be rack, wall or floor mounted.





Features

- ◆ Modu-Pak design - High «Q» 4" x 5" cavity for increased isolation in a compact configuration
- ◆ Individually welded cavities to prevent leakage & degradation
- ◆ Unique «W» circuit loop & harness design
- ◆ Tunable over entire range (406-512) with same harness
- ◆ Pseudo band pass characteristic for high Tx to Rx isolation
- ◆ Low loss to maximize system performance
- ◆ Temperature compensated to assure consistent performance
- ◆ Rotatable loops for other selectivity settings
- ◆ Compact & rugged



Compact Pass Reject "W" Circuit Duplexer **PRD-4544**

406-512 MHz

This compact duplexer combines two pass-reject cavities in each channel to maximize its capabilities in suppressing spurious and side band noise at close-spaced duplex frequencies.

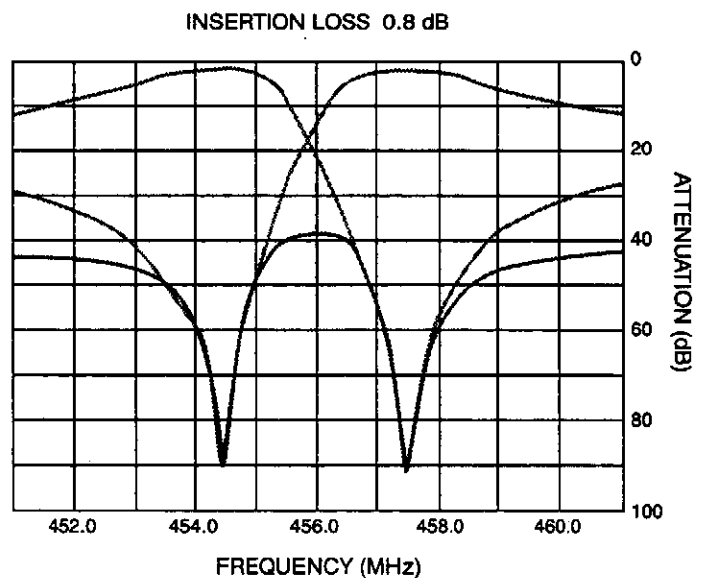
Electrical Specifications		PRD-4544
Frequency Range:	MHz	406-512
Frequency Separation:	MHz	3.0 min.
Insertion Loss:	dB	0.8
Isolation:	dB	85+
VSWR at Resonance:	(max.)	1.5:1
Power Rating:	watts	450
Temperature Range:	Deg.	-40 C to +60 C
Termination:		Type «N» Female

VSWR is referenced to 50 ohms.
Specify transmit and receive frequencies when ordering.

Mechanical Specifications		PRD-4544
Height:	in. (mm)	16.5 (419)
Width:	in. (mm)	19 (483)
Depth:	in. (mm)	5 (127)
Weight:	lbs. (kg)	25 (11.4)

Mounting Information

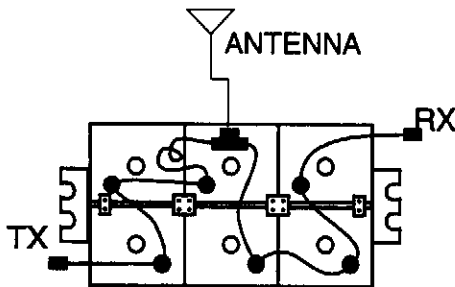
Duplexers may be mounted vertically or horizontally on a 19" rack or on a wall.





Features

- ◆ Modu-Pak design - High «Q» 4" x 5" cavity for increased isolation in a compact configuration
- ◆ Individually welded cavities to prevent leakage & degradation
- ◆ Unique «W» circuit loop & harness design
- ◆ Tunable over entire range (406-512) with same harness
- ◆ Pseudo band pass characteristic for high Tx to Rx isolation
- ◆ Low loss to maximize system performance
- ◆ Temperature compensated to assure consistent performance
- ◆ Rotatable loops for other selectivity settings
- ◆ Compact & rugged



Compact Pass Reject "W" Circuit Duplexer

PRD-4546

406-512 MHz

This compact duplexer combines three pass-reject cavities in each channel to provide maximum transmitter to receiver protection.

Electrical Specifications

		PRD-4546
Frequency Range:	MHz	406-512
Frequency Separation:	MHz	3.0 min.
Insertion Loss:	dB	1.2
Isolation:	dB	100+
VSWR at Resonance:	(max.)	1.5:1
Power Rating:	watts	450
Temperature Range:	Deg.	-40 C to +60 C
Termination:		Type «N» Female

VSWR is referenced to 50 ohms.
Specify transmit and receive frequencies when ordering.

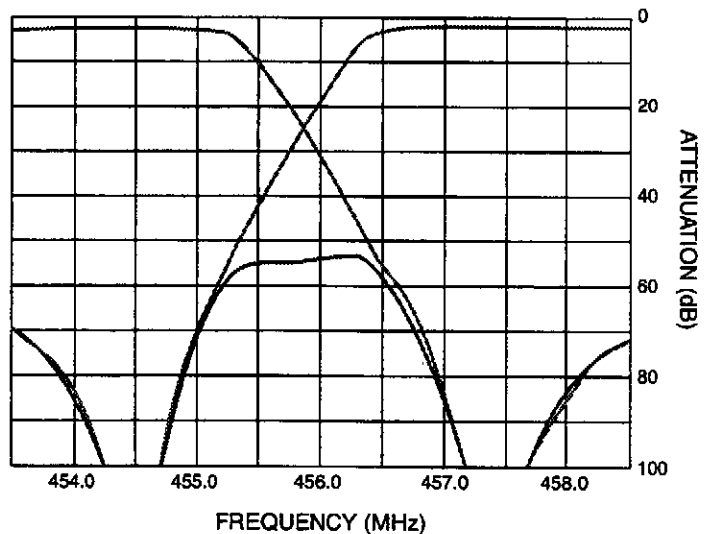
Mechanical Specifications

		PRD-4546
Height:	in. (mm)	16.5 (419)
Width:	in. (mm)	19 (483)
Depth:	in. (mm)	8 (203)
Weight:	lbs. (kg)	37 (16.8)

Mounting Information

Duplexers may be mounted vertically or horizontally on a 19" rack or on a wall.

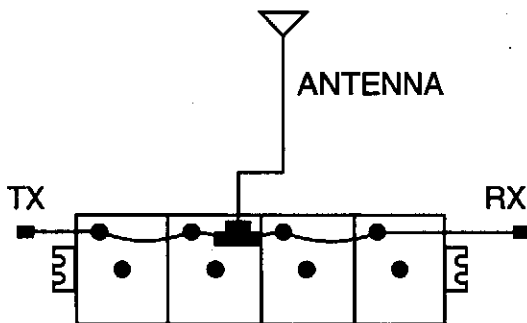
INSERTION LOSS 1.2 dB





Features

- ◆ Modu-Pak design - High «Q» 4" x 5" cavity for increased isolation in a compact configuration
- ◆ Individually welded cavities to prevent leakage & degradation
- ◆ Unique «W» circuit loop & harness design
- ◆ Tunable over entire range (806-960) with same harness
- ◆ Pseudo band pass characteristic for high Tx to Rx isolation
- ◆ Low loss to maximize system performance
- ◆ Temperature compensated to assure consistent performance
- ◆ Rotatable loops for other selectivity settings
- ◆ Compact & rugged



Compact Pass Reject "W" Circuit Duplexer **PRD-8044**

806-960 MHz

This compact duplexer combines two pass-reject cavities in each channel to maximize its capabilities in suppressing spurious and side band noise at close-spaced duplex frequencies.

Electrical Specifications		PRD-8044
Frequency Range:	MHz	806-960
Frequency Separation:	MHz	45
Insertion Loss:	dB	0.5
Isolation:	dB	90+
VSWR at Resonance:	(max.)	1.5:1
Power Rating:	watts	350
Temperature Range:	Deg.	-40 C to +60 C
Termination:		Type «N» Female

VSWR is referenced to 50 ohms.
Specify transmit and receive frequencies when ordering.

Mechanical Specifications		PRD-8044
Height:	in. (mm)	5 (127)
Width:	in. (mm)	19 (483)
Depth:	in. (mm)	10 (254)
Weight:	lbs. (kg)	11 (5)

Mounting Information
Duplexers may be mounted vertically or horizontally on a 19" rack or on a wall.

