




Pass/reject duplexers

Model	Short description	Band, MHz	Price, EUR
DPR4-4LB(L)	4 cavities diam. 4", separat. 800 kHz, -1,5 dB, -75 dB, 200 W	30-40	2011
DPR4-4LB(H)	4 cavities diam. 4", separat. 800 kHz, -1,5 dB, -75 dB, 200 W	38-48	1626
DPR8-4LB(L)	4 cavities diam. 8", separat. 600 kHz, -1,5 dB, -75 dB, 200 W	30-40	2423
DPR8-4LB(H)	4 cavities diam. 8", separat. 600 kHz, -1,5 dB, -75 dB, 200 W	38-48	2038
DPRE4-4LB-6M	4 cavities diam. 4", separat. 500 kHz, -1,5 dB, -80 dB, 300 W	50,5-55	1626
DPR5-4V	4 cavities diam. 5", separat. 600 kHz, -1,5 dB, -75 dB, 200 W	140-174	861
DPR5-6V	6 cavities diam. 5", separat. 400 kHz, -2 dB, -95 dB, 200 W	140-174	1269
DPR4Q-4V	4 cavities 4"x4", separat. 800 kHz, -1,5 dB, -75 dB, 200 W	140-174	841
DPR4Q-6V	6 cavities 4"x4", separat. 600 kHz, -2 dB, -95 dB, 200 W	140-174	1250
DPR8-4V	4 cavities diam. 8", separat. 500 kHz, -1,5 dB, -85 dB, 250 W	140-174	1152
DPR8-6V	6 cavities diam. 8", separat. 275 kHz, -2,2 dB, -100 dB, 250 W	140-174	1711
DPR4-4U	4 cavities diam. 4", separat. 1,6 MHz, -2 dB, -75 dB, 200 W	400-490	850
DPR8-4U	4 cavities diam. 8", separat. 1,5 MHz, -1,5 dB, -75 dB, 200 W	400-490	1111
DPRE4-6VL 	econom., 6 cavities diam. 4", separat. 400 kHz, -1.3 dB, -97 dB, 300 W	144-148	1294
DPRE5-4VL	econom., 4 cavities diam. 5", separat. 600 kHz, -1,45 dB, -78 dB, 300 W	140-160	784
DPRE5-4VH	econom., 4 cavities diam. 5", separat. 600 kHz, -1,45 dB, -78 dB, 300 W	152-174	784
DPRE5-6VL	econom., 6 cavities diam. 5", separat. 400 kHz, -1.7 dB, -97 dB, 300 W	140-160	1176
DPRE5-6VH	econom., 6 cavities diam. 5", separat. 400 kHz, -1.7 dB, -97 dB, 300 W	152-174	1176
DPRE4-4UL	econom., 4 cavities diam. 4", separat. 2 MHz, -1,5 dB, -75 dB, 300 W	400-440	773
DPRE4-4UM	econom., 4 cavities diam. 4", separat. 2 MHz, -1,5 dB, -75 dB, 300 W	430-470	773
DPRE4-4UH	econom., 4 cavities diam. 4", separat. 2 MHz, -1,5 dB, -75 dB, 300 W	470-490	773
DPRE4-6UL	econom., 6 cavities diam. 4", separat. 1.6 MHz, -2 dB, -90 dB, 300 W	400-440	1370
DPRE4-6UM	econom., 6 cavities diam. 4", separat. 1.6 MHz, -2 dB, -90 dB, 300 W	430-470	1370
DPRE4-6UH	econom., 6 cavities diam. 4", separat. 1.6 MHz, -2 dB, -90 dB, 300 W	470-490	1370



30-48 MHz Pass/reject duplexers DPR4- 4LB, DPR8-4LB

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Electrical specifications

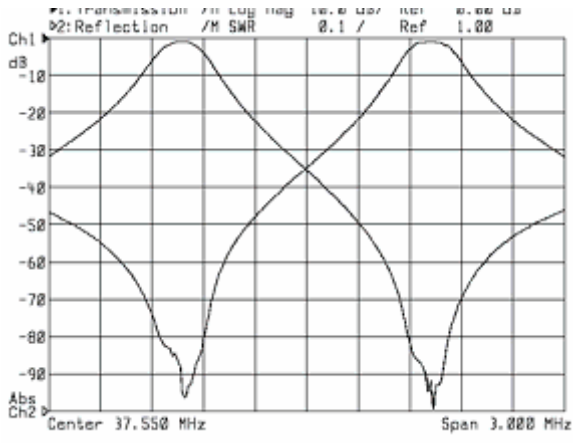
Model	DPR4-4LB(L)	DPR4-4LB(H)	DPR8-4LB(L)	DPR8-4LB(H)
Operating frequency band, MHz	30-40	38-48	30-40	38-48
Insertion loss (adjustable) not more, dB			1,5	
Frequency separation TX/RX (min), MHz	0,8	0.8	0.6	0.6
Impedance, Ohm	50	50	50	50
Isolation, not less, dB	75	75	75	75
VSWR, not more than	1,5	1.5	1.5	1.5
Input power, not more, W			not more than 200	
Temperature range, °C			from -30 to +60	
Cavity electrical length			1/4λ	

Mechanical specifications

Model	DPR4-4LB(L)	DPR4-4LB(H)	DPR8-4LB(L)	DPR8-4LB(H)
Diameter, mm (ins.)	116 (4")	116 (4")	200x200(8"x8")	200x200(8"x8")
Weight, kg	38	34	67.5	61
Connector			N-female	
Mount to 19-inch rack			yes	
Length/Width/Depth, mm	250x460x2780	250x460x2480	400x480x2780	400x480x2480

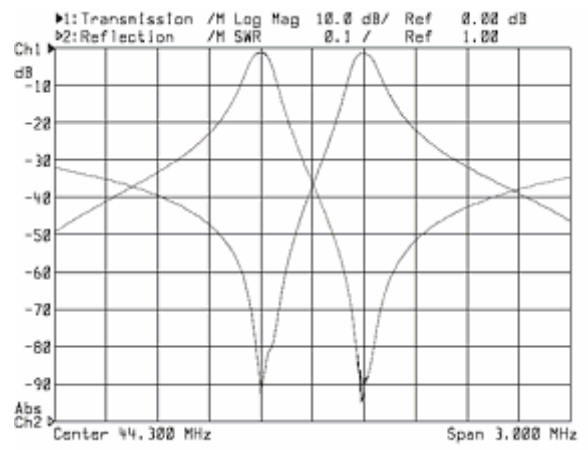
Activity in wrongly forgotten, due to outdated communication equipment, "LOW BAND" range encouraged us to develop highly effective filters and duplexers for this range. And now we are ready to suggest you our new product band pass-reject duplex filter. It is assembled from full-size quarter-wave 4" diameter cavities. This enables to use it in repeaters with various frequency separation TX/RX. It retains steady characteristics at any temperature disturbance thanks to thermostable design. Faintly defined band pass characteristic will protect repeater from interference influence, especially from 27 MHz and at distant radiopropagation.

Typical duplexer response curves



DPR4-4LB

2009



DPR8-4LB



Duplexer for 6 m amateur repeaters

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This full-size duplex filter is made according to all the instructions for the manufacturing of such kind of equipment. An aluminum case is welded in to minimize the losses. The cavity is made of high-quality copper for ensuring the high selective properties (Q-factor). The regulating screw is made of invar for good thermal stability. The absence of connector couplings decreases both the cost of duplexer and the losses in electrical contacts. All the contacts are soldered.

Our duplexer will make it possible to construct an amateur repeater with one common receiving-transmitting antenna and one feeder.



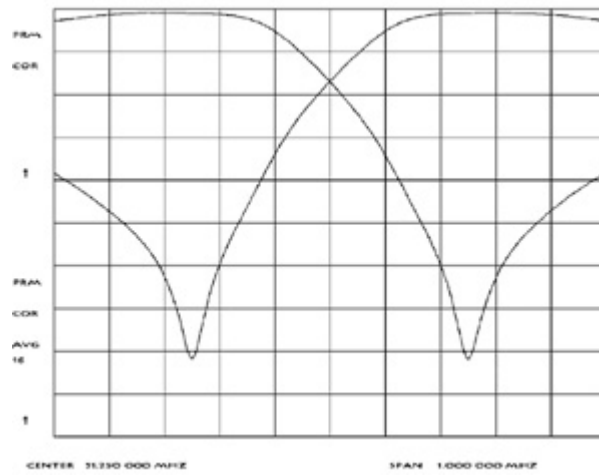
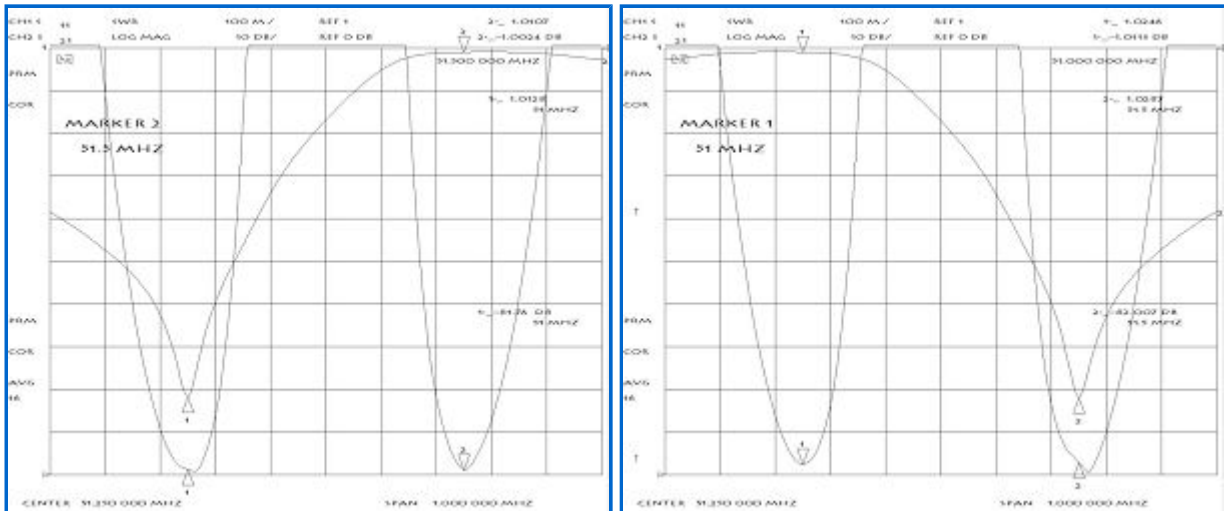
Electrical specifications

Model	DPRE4-4LB-6M
Operating Frequency band, MHz	50,5-55
Insertion loss (adjustable) not more, dB	1.5
Frequency separation TX/RX (min), MHz	0.5
Impedance, Ohm	50
Isolation, not less, dB	80
VSWR, not more than	1.3
Input power, not more than, W	300
Temperature Range, ° C	from -30 to +60
Cavity electrical length	1/4 λ

Mechanical specifications

Model	DPRE4-4LB-6M
Diameter, mm (ins.)	116 (4")
Mass, kg	29
Connector	N-female
Length/Width/Depth, mm	1900x280x230

Typical duplexers response curves





140-174 MHz Pass/reject duplexer DPR5-4V, DPR5-6V

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DPR5-4V



DPR5-6V



Electrical specifications

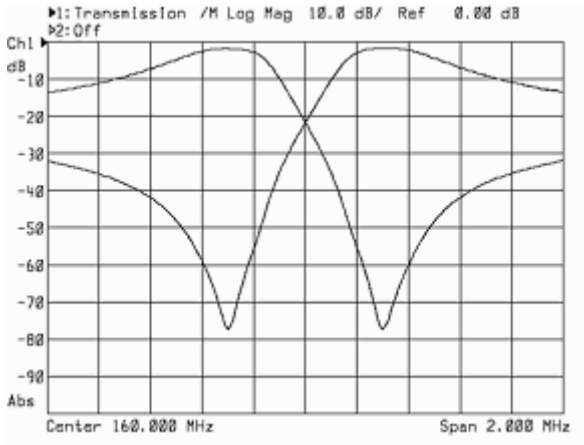
Model	DPR5-4V	DPR5-6V
Operating Frequency band, MHz		140-174
Insertion loss (adjustable) not more, dB	1,5	2
Frequency separation TX/RX (min), MHz	0,6	0,4
Impedance, Ohm		50
Isolation, not less, dB	75	80
VSWR, not more than		1,5
Input power, not more, W		not more than 300
Temperature range, °C		from -30 to +60
Cavity electrical length		1/4λ

Mechanical specifications

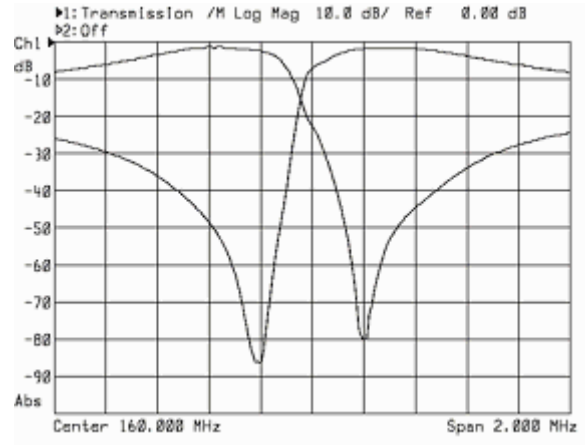
Model	DPR5-4V	DPR5-6V
Diameter, mm (ins.)		128 (5")
Weight, kg	8,7	12,7
Connector		N-female
Mount to 19-inch rack		yes
Length/Width/Depth, mm		800x480x265

Duplexer DPR5-4V is assembled from common 5" cavities by band pass-reject scheme, enabling to use this duplexer in variety of installations, whether it is full duplex repeater or two radio stations operating with one antenna. Three adjustment levels provide opportunity for precise pass and rejection frequency tuning, and VSWR, loss level and gain slope tuning, also. Implemented temperature compensating techniques enable to use the device in not heated locations (garrets, television and radio towers top decks, etc.). Duplexer attachment points enable to mount it into standard 19-inch repeater wrack. Duplexer DPR5-6V has higher characteristics at corresponding loss.

Typical duplexers response curves



DPR5-4V



DPR5-6V

2009



140-174 MHz Pass/reject duplexer DPR4Q-4V, DPR4Q-6V DPRE4Q-4V, DPRE4Q-6V

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DPR4Q-4V



DPRE4Q-6V



Electrical specifications

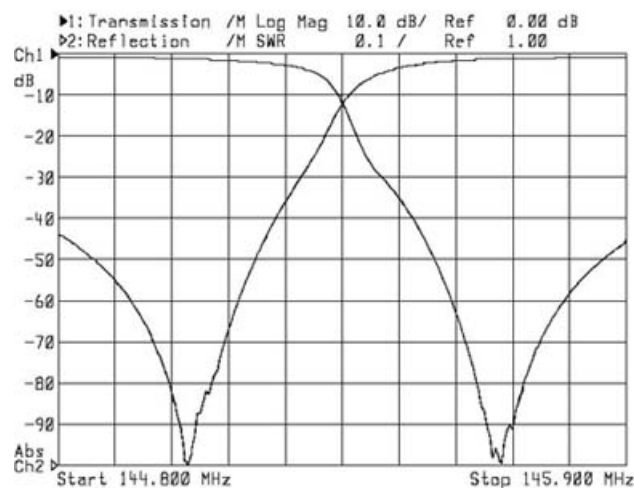
Model	DPR4Q-4V	DPR4Q-6V	DPRE4Q-4V	DPRE4Q-6V
Operating Frequency band, MHz	140-174	140-174	140-174	140-174
Insertion loss (adjustable) not more, dB	1.5	2	1.5	2
Frequency separation TX/RX (min), MHz	0.8	0.6	0.8	0.6
Impedance, Ohm	50	50	50	50
Isolation, not less, dB	75	80	75	80
VSWR, not more than	1.5	1,5	1.5	1.5
Input power, not more, W			not more than 200	
Temperature range, °C			from -30 to +60	
Cavity electrical length	1/4λ	1/4λ	1/4λ	1/4λ

Mechanical specifications

Model	DPR4Q-4V	DPR4Q-6V	DPRE4Q-4V	DPRE4Q-6V
Diameter, mm (ins.)	4"x4"	4"x4"	4"x4"	4"x4"
Weight, kg	15.2	23	14.9	22.7
Connector	N-female	N-female	N-female	N-female
Mount to 19-inch rack	yes	yes	yes	yes
Length/Width/Depth, mm	800x480x315	800x480x315	800x480x350	800x480x350

Typical duplexers response curves

DPR4Q-6V





140-174 MHz Pass/reject duplexer DPR8-4V, DPR8-6V

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DPR8-4V



DPR8-6V



Electrical specifications

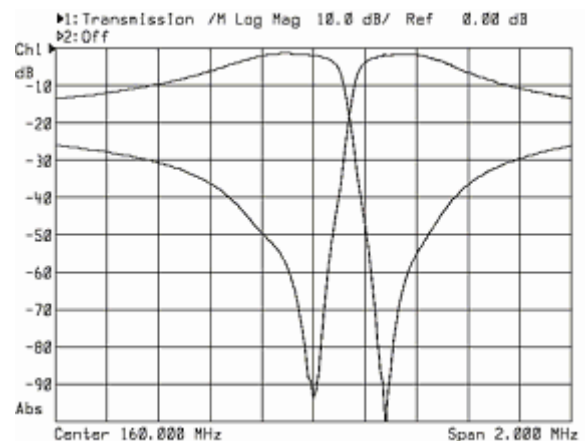
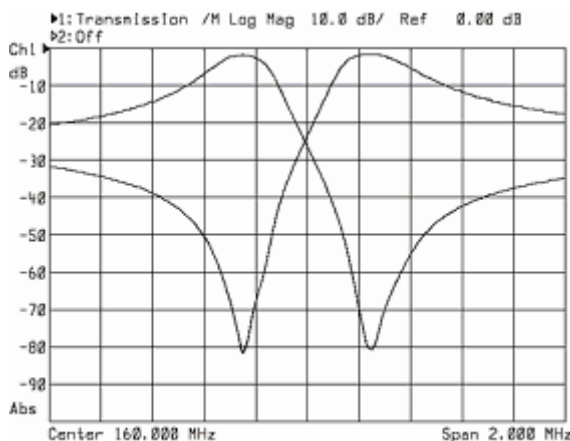
Model	DPR8-4V	DPR8-6V
Operating Frequency band, MHz		140-174
Insertion loss (adjustable) not more, dB	1,5	2,2
Frequency separation TX/RX (min), MHz	0,5	0,275
Impedance, Ohm		50
Isolation, not less, dB	80	95
VSWR, not more than		1,5
Input power, not more, W		not more than 300
Temperature Range, °C		from -30 to +60
Cavity electrical length		1/4λ

Mechanical specifications

Model	DPR8-4V	DPR8-6V
Diameter, mm (ins.)		206 (8")
Weight, kg	14,2	21,7
Connector		N-female
Mount to rack	yes	yes
Length/Width/Depth, mm	800x480x420	1600x480x420

Duplexer DPR8-4V assembled from high-Q 8-inch diameter cavities by band pass-reject scheme. It has three level of adjustment: frequency, separation TX/RX value, rejection and pass level. It's designed to provide full-duplex operation for one antenna of repeater or radio station with high power output. Used commonly under nonstandard frequency separation conditions. Implemented temperature compensating (thermostable) techniques enable to use the device in not heated locations. Duplexer attachment points enable to mount it into standard 19-inch repeater rack. DPR8-4(6)V provides duplex operation at lower frequency separation, unlike duplexers assembled on 5-inch cavities

Typical duplexers response curves





400-490 MHz Pass/reject duplexer DPR4-4U, DPR8-4U

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DPR4-4U



DPR8-4U



Electrical specifications

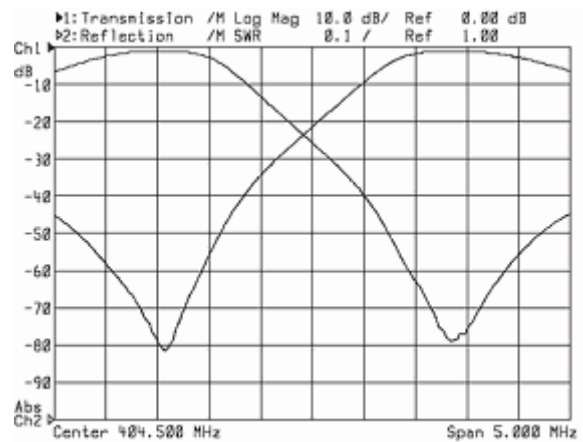
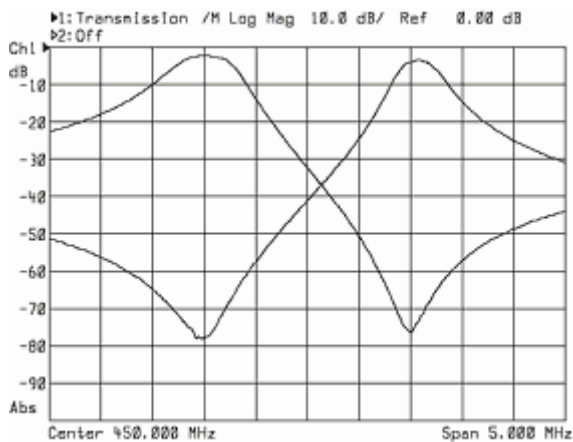
Model	DPR4-4U	DPR8-4U
Operating Frequency band, MHz		400-490
Insertion loss (adjustable) not more, dB		1,5
Frequency separation TX/RX (min), MHz	1,6	1,5
Impedance, Ohm		50
Isolation, not less, dB		75
VSWR, not more than		1,5
Input power, not more, W		not more than 200
Temperature range, °C		from -30 to +60
Cavity electrical length		1/4λ

Mechanical specifications

Model	DPR4-4U	DPR8-4U
Diameter, mm (ins.)	110 (4")	206 (8")
Weight, kg	6	8,3
Connector		N-female
Mount to 19-inch rack		yes
Length/Width/Depth, mm	360x480x150	360x480x420

DPR4-4U is a classical band pass-reject duplexer for manufacture of single-channel UHF, separation between receiving and transmission frequency here is 5-10 MHz, repeater. Duplexer narrowband characteristic provides higher selectivity of repeater receiving section and attenuates transmitter out-of-band radiation better, than in common mobile duplexer case.

Typical duplexers response curves





144-148 MHz Economic pass/reject duplexer DPRE4-6VL

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DPRE4-6VL



Electrical specifications

Model	DPRE4-6VL
Operating frequency band, MHz	144-148
Insertion loss (adjustable) not more, dB	1.3
Frequency separation TX/RX (min), MHz	0.4
Impedance, Ohm	50
Isolation, not less, dB	97
VSWR, not more than	1.5
Input power, not more, W	300
Temperature range, °C	from -30 to +60
Cavity electrical length	1/4λ

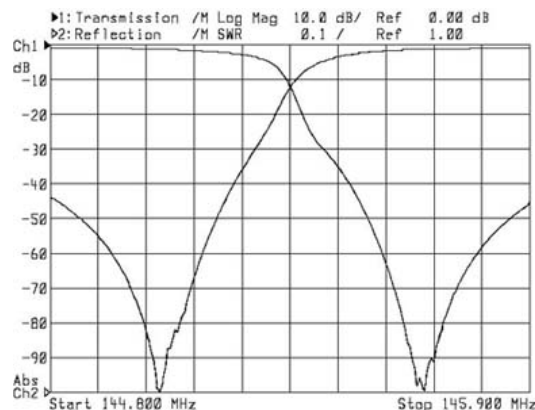
Mechanical specifications

Model	DPRE4-6VL
Diameter, mm (ins.)	105x105 (4")
Weight, kg	24
Connector	N-female
Mount to 19-inch rack	present
Length/Width/Depth, mm	700x480x215

These new economic models distinguish from the traditional band reject duplexers as the coaxial tripling elements are changed by the whole-soldered nodes. The filter has a construction that ensures a high thermo-stability due to Invar alloy. A high quality-factor of each cavity is provided by means of application of the pure electro-technical copper and by the silvering of the contacting parts. An adjusting is being implemented on the modern network spectrum analyzers manufactured by Agilent Technologies and Rohde&Schwartz.

DPRE4-6VL

Typical duplexers response curves





140-174 MHz Economic pass/reject duplexers

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DPRE5-4VL, DPRE5-4VH, DPRE5-6VL, DPRE5-6VH

DPRE5-4V



DPRE5-6V



Electrical specifications

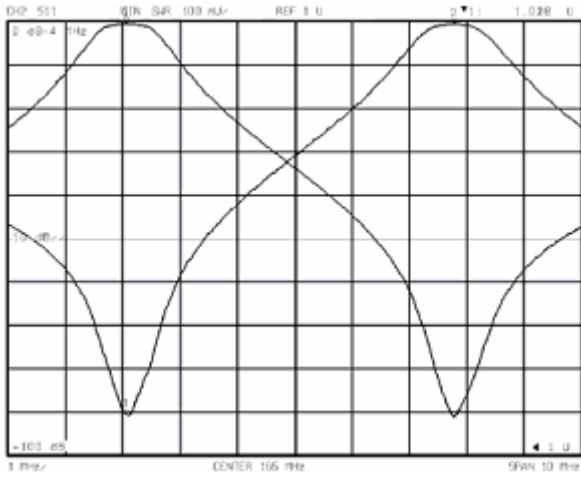
Model	DPRE5-4VL	DPRE5-4VH	DPRE5-6VL	DPRE5-6VH
Operating Frequency band, MHz	140-160	152-174	140-160	152-174
Insertion loss (adjustable) not more, dB	1.45	1.45	1.7	1.7
Frequency separation TX/RX (min), MHz	0.6	0.6	0.4	0.4
Impedance, Ohm	50	50	50	50
Isolation, not less, dB	78	78	97	97
VSWR, not more than	1.5	1,5	1.5	1.5
Input power, not more than, W	300	300	300	300
Temperature Range, °C	from -30 to +60	from -30 to +60	from -30 to +60	from -30 to +60
Cavity electrical length	1/4 λ	1/4 λ	1/4 λ	1/4 λ

Mechanical specifications

Model	DPRE5-4VL	DPRE5-4VH	DPRE5-6VL	DPRE5-6VH
Diameter, mm (ins.)	128 (5")	128 (5")	128 (5")	128 (5")
Weight, kg	8.5	8.5	12.2	12.2
Connector	N-female	N-female	N-female	N-female
Mount to 19-inch rack	present	present	present	present
Length/Width/Depth, mm	800x480x265	800x480x265	800x480x265	800x480x265

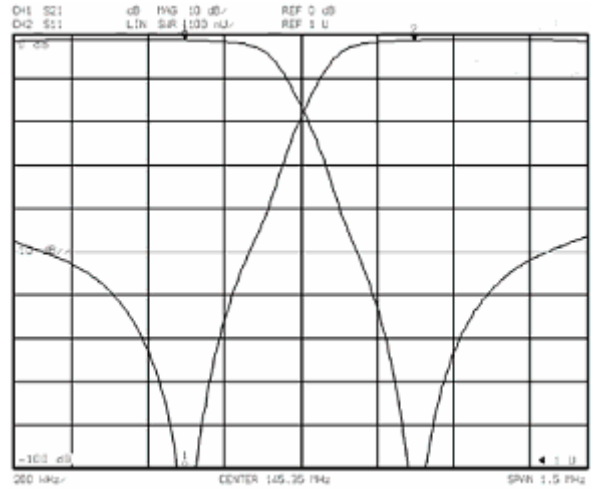
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Typical duplexers response curves



DPRE5-4VH

2009



DPRE5-6VL



400-490 MHz
Economic pass/reject duplexers
DPRE4-4UL, DPRE4-4UM,
DPRE4-4UH
DPRE4-6UL, DPRE4-6UM,
DPRE4-6UH

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DPRE4-4U



DPRE4-6U



Electrical specifications

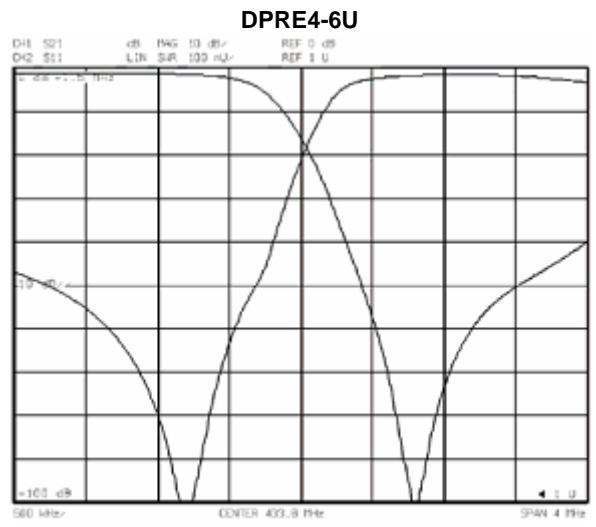
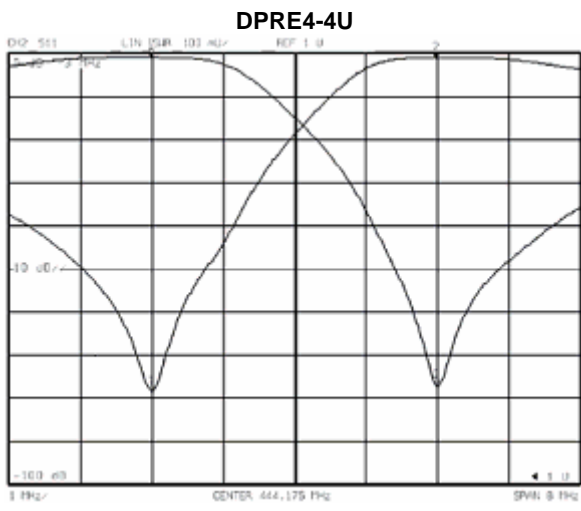
Model	DPRE4-4UL	DPRE4-4UM	DPRE4-4UH	DPRE4-6UL	DPRE4-6UM	DPRE4-6UH
Operating frequency band, MHz	400-440	430-470	470-490	400-440	430-470	470-490
Insertion loss (adjustable) not more, dB	1.5	1.5	1.5	2	2	2
Frequency separation TX/RX (min), MHz	2	2	2	1.6	1.6	1.6
Impedance, Ohm	50	50	50	50	50	50
Isolation, not less, dB	75	75	75	90	90	90
VSWR, not more than	1.5	1.5	1.5	1.5	1.5	1.5
Input power, not more, W	300	300	300	300	300	300
Temperature range, °C				from -30 to +60		
Cavity electrical length	1/4λ	1/4λ	1/4λ	1/4λ	1/4λ	

Mechanical specifications

Model	DPRE4-4UL	DPRE4-4UM	DPRE4-4UH	DPRE4-6UL	DPRE4-6UM	DPRE4-6UH
Diameter, mm (ins.)	116 (4")	116 (4")	116 (4")	116 (4")	116 (4")	116 (4")
Weight, kg	5.8	5.8	5.8	8.1	8.1	8.1
Connector				N-female		
Mount to 19-inch rack				present		
Length/Width/Depth, mm				800x480x265		

These new economic models distinguish from the traditional band reject duplexers as the coaxial tripling elements are changed by the whole-soldered nodes. The filter has a construction that ensures a high thermo-stability due to Invar alloy. A high quality-factor of each cavity is provided by means of application of the pure electro-technical copper and by the silvering of the contacting parts. An adjusting is being implemented on the modern network spectrum analyzers manufactured by Agilent Technologies and Rohde&Schwartz.

Typical duplexers response curves



2009