



## Filters for UHF band

Model	Short description	Band, MHz
PF8-1U	Bandpass single cavity, 8", N-fem., 300 W, 1/4λ	400-490
PF8-1UL	Bandpass single cavity, 8", N-fem., 300 W, 3/4λ	400-490
PF10-1U	Bandpass single cavity, 10", N-fem., 300 W, 1/4λ	400-490
PF10-2U	Bandpass dual cavity, 10", N-fem., 300 W, 1/4λ	400-490
PF10-1UL	Bandpass single cavity, 10", N-fem., 300 W, 3/4λ	400-490
PF10-2UL	Bandpass dual cavity, 10", N-fem., 300 W, 3/4λ	400-490
RF8-1UL	Bandreject single cavity, 8", N-fem., -30 dB @ Δf BP/BR=250 kHz	400-490
RF8-2UL	Bandreject dual cavity, 8", N-fem., -60 dB @ Δf BP/BR=250 kHz	400-490
RF10-1UL	Bandreject single cavity, 10", N-fem., -13 dB @ Δf BP/BR=200 kHz	400-490
PRF4-1U	Bandpass/bandreject single cavity, 4", N-fem., -35 dB @ Δf BP/BR=5 MHz	400-490
PRF4-2U	Bandpass/bandreject dual cavity, 4", N-fem., -75 dB @ Δf BP/BR=5 MHz	400-490
PRF8-1U	Bandpass/bandreject single cavity, 8", N-fem., -35 dB @ Δf BP/BR=2,6 MHz	400-490
PRF8-2U	Bandpass/bandreject dual cavity, 8", N-fem., -75 dB @ Δf BP/BR=2,6 MHz	400-490



## 400-490 MHz Bandpass filters PF8-1U, PF8-1UL

107497, Moscow Chernicinsky pr-d 7/1  
Tel.: (495) 775-43-19, 462-44-14  
Tel./fax: 462-44-14  
E-mail: radial@radial.ru  
www.radial.ru

PF8-1U



PF8-2U

PF8-1UL

PF8-2UL



### Electrical specifications

Model	PF8-1U	PF8-2U	PF8-1UL	PF8-2UL
Operating frequency band, MHz			400-490	
Insertion loss (adjustable), dB	0,5-3	1-5	0,5-3	1-5
Impedance, Ohm			50	
Attenuation			see fig.	
VSWR, not more than			1,2	
Input power, not more, W			not more than 300	
Temperature range, °C			from -30 to +60	
Cavity electrical length		1/4λ		3/4λ

### Mechanical specifications

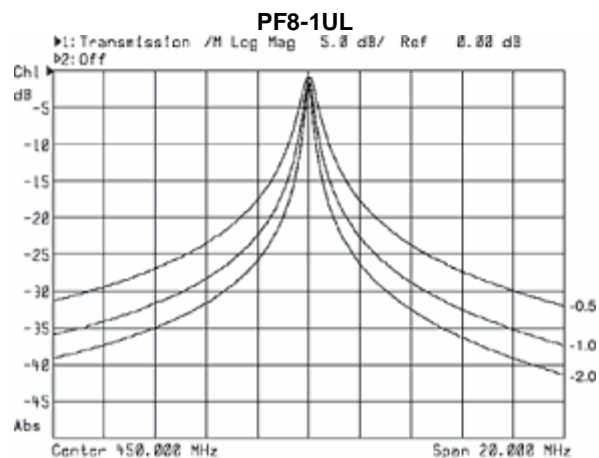
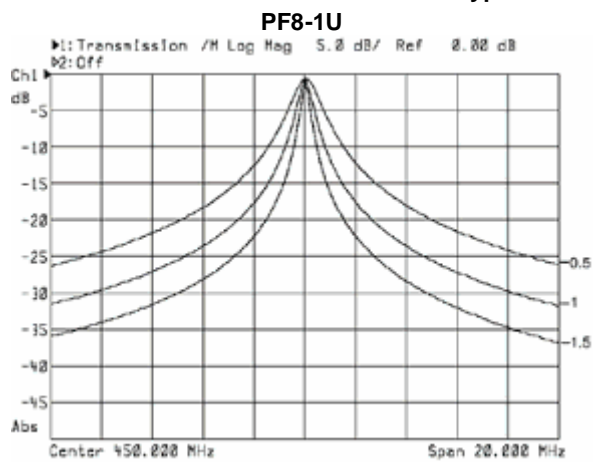
Model	PF8-1U	PF8-2U	PF8-1UL	PF8-2UL
Diameter, mm (ins.)			206 (8")	
Weight, kg	1,7	4,1	3,25	7,2
Connector			N-female	
Mount to 19-inch rack	optional	yes	optional	
Length/Width/Depth, mm	360x206x206	360x480x210	800x206x206	800x480x210

Using PF8-U series filters in antenna section of radio stations and repeaters you will raise selectivity of their receivers, lower influence of out-of-band interference, escape effect of UHF blanking by nearby radio transmitters and desensitization, and eliminate intermodulation interference, also.

Filters, installed in transmitters circuit, lower stray emission level and prevent intermodulation products occurrence. Recommended to use if equipment is installed in locations with high density of transmitting devices.

PF8-2U and PF5-3U filter represents two and three PF8-1U filters connected in series and combined by metal brackets. They have higher characteristics at corresponding loss.

### Typical selectivity characteristics





## 400-490 MHz Bandpass filters PF10-1U, PF10-1UL

107497, Moscow Chernicinsky pr-d 7/1  
Tel.: (495) 775-43-19, 462-44-14  
Tel./fax: 462-44-14  
E-mail: radial@radial.ru  
www.radial.ru

PF10-1U



PF10-2U



PF10-1UL



PF10-2UL



### Electrical specifications

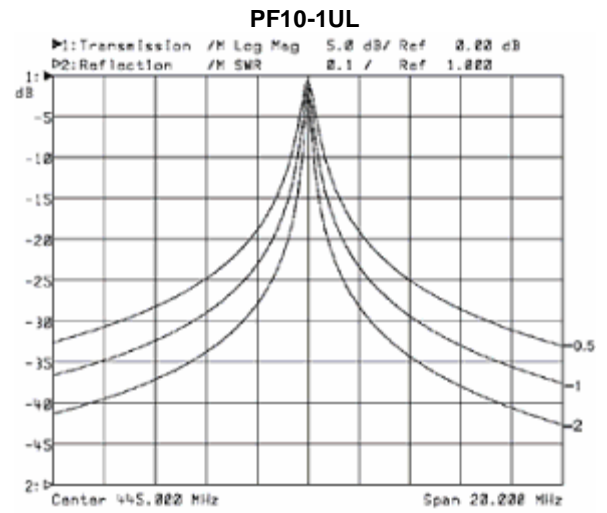
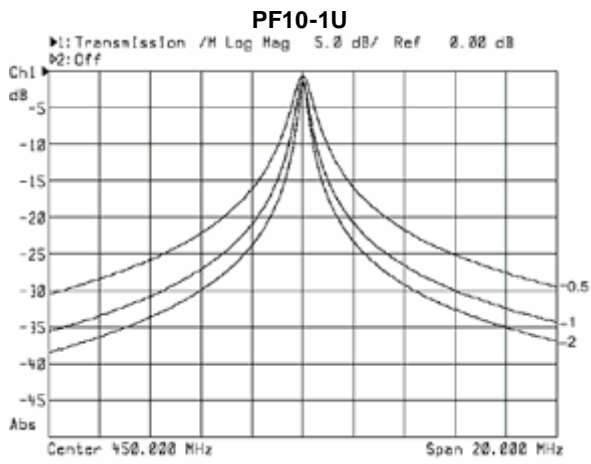
Model	PF10-1U	PF10-2U	PF10-1UL	PF10-2UL
Operating Frequency band, MHz			400-490	
Insertion loss (adjustable), dB	0,5-3	1-5	0,5-3	1-5
Impedance, Ohm			50	
Attenuation			see fig.	
VSWR, not more than			1,2	
Input power, not more, W			not more than 300	
Temperature range, °C			from -30 to +60	
Cavity electrical length		1/4λ		3/4λ

### Mechanical specifications

Model	PF10-1U	PF10-2U	PF10-1UL	PF10-2UL
Diameter, mm (ins.)		257 (10")		257 (10")
Weight, kg	2,1	4,9	3,85	8,4
Connector			N-female	
Mount to rack	optional	24"	optional	24"
Length/Width/Depth, mm	360x257x257	360x630x264	800x257x257	800x630x264

Using PF10-U series filters in antenna section of radio stations and repeaters you will raise their receivers' selectivity, lower influence of out-of-band interference, escape effect of UHF blanking by nearby radio transmitters and desensitization, and eliminate intermodulation interference, also. PF10-U series filter has higher Q-factor, then 8-inch filters.

### Typical selectivity characteristics





# 400-490 MHz Bandreject filters RF8-1UL, RF10-1UL

107497, Moscow Chernicinsky pr-d 7/1  
Tel.: (495) 775-43-19, 462-44-14  
Tel./fax: 462-44-14  
E-mail: radial@radial.ru  
www.radial.ru



### Electrical specifications

Model	RF8-1UL	RF8-2UL	RF10-1UL
Operating Frequency band, MHz		400-490	
Insertion loss (adjustable), dB	0,5-3	1-3	0,5-3
Impedance, Ohm		50	
Attenuation (see fig.n) $\Delta f$ BP/BR=200 kHz, dB	18	35	13
VSWR, not more than		1,5	
Input power, not more, W		not more than 300	
Temperature Range with garanted stabilization, °C		from -30 to +60	
Cavity electrical length		3/4 $\lambda$	

### Mechanical specifications

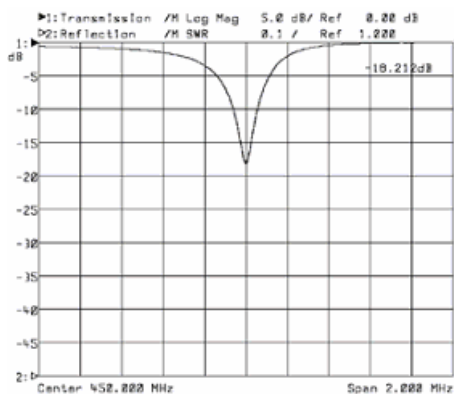
Model	RF8-1UL	RF8-2UL	RF10-1UL
Diameter, mm (ins.)	206 (8")		257 (10")
Weight, kg	3,3	4,2	3,9
Connector		N-female	
Mount to rack	optional	19" or	24"
Length/Width/Depth, mm	800x206x206	800x480x210	800x257x257

Bandreject filters RF8-UL have found themselves in radio stations and repeaters receiving section operating closely to powerful transmitter, operating at known neighboring frequency. Bandreject filter enables to effectively eliminate interference at significantly lower frequency separation, unlike bandpass filter.

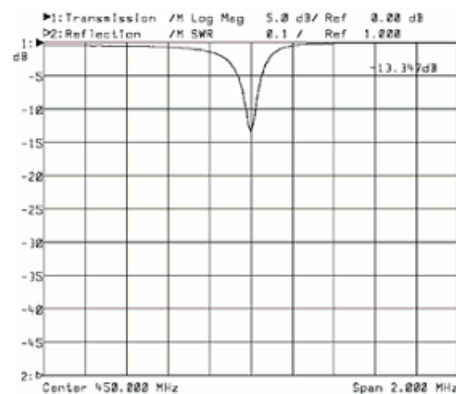
Presence of 3/4-wave cavity in bandreject filter will save your transmitters from persistent signals of paging transmitters or telemetry systems, located closely to your antennas.

Careful selection of cable junction in RF8-2UL and RF8-3UL filters provides maximum convergence of pass and reject frequency preserving low loss.

### Typical selectivity characteristics



RF8-1UL



RF10-1UL



## 400-490 MHz Bandpass/bandreject filters PRF4-1U, PRF8-1U

107497, Moscow Chernicinsky pr-d 7/1  
Tel.: (495) 775-43-19, 462-44-14  
Tel./fax: 462-44-14  
E-mail: radial@radial.ru  
www.radial.ru

PRF4-1U



PRF4-2U



PRF8-1U



PRF8-2U



### Electrical specifications

Model	PRF4-1U	PRF4-2U	PRF8-1U	PRF8-2U
Operating Frequency band, MHz			400-490	
Insertion loss (adjustable), dB	0,5-3	1-3	0,5-3	1-3
Impedance, Ohm			50	
Rejection level $\Delta f$ BP/BR=5MHz, dB	30	70	30	70
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			1/4 $\lambda$	

### Mechanical specifications

Model	PRF4-1U	PRF4-2U	PRF8-1U	PRF8-2U
Diameter, mm (ins.)		116 (4")		206 (8")
Weight, kg	1,25	3,2	1,75	4,2
Connector			N-female	
Mount to 19-inch rack	optional	yes	optional	yes
Length/Width/Depth, mm	360x110x110	360x480x115	360x206x206	360x480x212

Band pass-reject filter PRF4-1U is tuned to pass specific frequency and to reject another specific frequency simultaneously.

Filter PRF4-1U with band pass-reject feature is essential if nearby interference is present. Install this filter in receiver antenna

section and tune rejection in to interfering signal, and you will appreciably improve receiving conditions attenuating interference by 38 dB. Filter PRF4-2U has higher characteristics at corresponding loss Band pass-reject filter PRF8-1U is tuned so as to pass specific frequency and to reject interference frequency simultaneously. If single filter will help you to eliminate strong nearby interference, then dual will enable to produce duplex repeater with separate receiving and transmitting antenna. PRF8-2V installed in these sections will provide complete isolation from transmitter carrier frequency and its noise for any antenna spacing.

**Typical selectivity characteristics**

