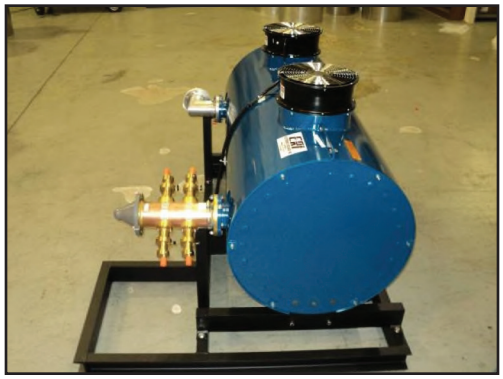
UF10k Series UHF Band Pass Filters

The UF10k Series dual-mode UHF band pass filters are ERI's most efficient filter design allowing 10 kW average power without any additional cooling, higher power levels can be obtained adding forced air cooling. ERI developed the first dual-mode cavity filter for UHF broadcast in 1992 and is the standard for high power transmission systems. Silver plated Invar cavities provide exceptional temperature stability and efficiency. Multiple cross couplings are provided to increase rejection of transmitter out-of-band emissions. Six, eight, ten, twelve and fourteen pole designs for 8-VSB and COFDM applications and can be provided in either reflective or constant impedance configurations. Input and output connections, either coaxial or waveguide, are as specified per customer requirements. Aluminum frame is provided for floor or ceiling mount.



ERI Model UF10k UHF Band Pass Filter. Shown with optional four port directional coupler at output and forced air cooling.

Features:

ATSC, DVB-T and ISDB-T
6, 7, or 8MHz channels
Waveguide or Coaxial I/O's
Non-Critical and Critical Masks
Air and Liquid Cooled Options for Increased Power
Temperature Compensated
Ceiling or Floor-Mount Frame

Options:

Fine-Matchers to optimize system performance
Directional Couplers to monitor system performance
Output Switching/Patching to test system performance
Low Pass Harmonic Filters

Typical Specifications

UF10k Series													
Application	ATSC						ISDB-T						
Power*	10 kW Ave, 4dB Crest Factor						10 kW Ave, 13dB Crest Factor						
CH Bandwidth	**6MHz**												
Passband (Extended)	+/-2.69MHz						+/- 2.79MHz						
Poles		**6**		**8**				**6**		**8**			
P/N		**UF10k-6X-01**		**UF10k-8X-01**				**UF10k-6X-02**		**UF10k-8X-02**			
VSWR (Passband)		1.08		1.10				1.13		1.13			
Loss													
Fc		0.15 dB		0.20 dB				0.15 dB		0.25 dB			
Passband		0.25 dB		0.60 dB				0.35 dB		0.90 dB			
Rejection	**+/- 3.25MHz**	N/A		> 18 dB			**+/- 3.15MHz**	> 0 dB		> 15 dB			
	+/- 3.5MHz	> 0 dB		> 23 dB			**+/- 4.5MHz**	> 20 dB		> 30 dB			
	+/-9.0MHz	> 64 dB		> 64 dB			**+/-9.0MHz**	> 55 dB		> 65 dB			
Delay		< 150 ns		< 400 ns				< 250 ns		< 700 ns			
Connectors (X in P/N)	3 = 3-1/8inch 4 = 4-1/16 inch 6 = 6-1/8 inch												
Size		Length	Width	Height	Length	Width	Height		Length	Width	Height	Length	Width	Height
	Inches	43	24	35	57	24	35	Inches	43	24	35	57	24	35
	Millimeters	1092	610	889	1448	610	889	Millimeters	1092	610	889	1448	610	889

UF10k Series																							
Application	DVB-T																						
Power*	6 kW Ave, 13dB Crest Factor																						
CH Bandwidth	**8MHz**						**7MHz**						**6MHz**										
Passband (Extended)	+/-3.885MHz						+/- 3.33MHz						+/- 2.855MHz										
Poles		**6**		**8**				**6**		**8**				**6**		**8**							
P/N		**UF10k-6X-03**		**UF10k-8X-03**				**UF10k-6X-03**		**UF10k-8X-03**				**UF10k-6X-03**		**UF10k-8X-03**							
VSWR (Passband)		1.15		1.15				1.12		1.12				1.12		1.12							
Loss																							
Fc		1.00 dB		1.20 dB				1.00 dB		1.20 dB				1.00 dB		1.30 dB							
Passband		2.00 dB		4.40 dB				2.40 dB		4.80 dB				2.90 dB		4.90 dB							
Rejection	**+/- 4.2MHz**	> 4 dB		> 15 dB			**+/- 3.7MHz**	> 4 dB		> 15 dB			**+/- 3.2MHz**	> 4 dB		> 15 dB							
	+/- 6.0MHz	> 20 dB		> 40 dB			**+/- 5.25MHz**	> 18 dB		> 28 dB			**+/- 5.0MHz**	> 20 dB		> 40 dB							
	+/-12.0MHz	> 40 dB		> 55 dB			**+/-10.5MHz**	> 43 dB		> 53 dB			**+/-9.0MHz**	> 40 dB		> 55 dB							
Delay		< 350 ns		< 700 ns				< 300 ns		< 650 ns				< 320 ns		< 700 ns							
Connectors (X in P/N)	3 = 3-1/8inch 4 = 4-1/16 inch 6 = 6-1/8 inch																						
Size		Length	Width	Height	Length	Width	Height		Length	Width	Height	Length	Width	Height		Length	Width	Height	Length	Width	Height		
	Inches	43	24	35	57	24	35	Inches	43	24	35	57	24	35	Inches	43	24	35	57	24	35		
	Millimeters	1092	610	889	1448	610	889	Millimeters	1092	610	889	1448	610	889	Millimeters	1092	610	889	1448	610	889		

* Power rating for convection cooled filter. Forced air cooling allows for high power levels