



Preselectors



RF Measurement and Management in Your World

PRESELECTORS

132-890 MHz

- Several models available to match your specific application.
- All filters are factory tuned to meet specific frequency channel requirements.
- Temperature compensation keeps product tuned to specification from -30 to +60° C.

Preselectors/Post Filters

TX RX has designed application-specific multi-cavity filter products for use in limiting the bandwidth in front of a multiple-receiver system (Preselector) or after a multiple-transmitter system (Post Selector). Size and complexity range from a model built from three helically-loaded 1.3-inch rectangular resonators for relatively low-selectivity receive-only applications, where 2 dB of loss can be tolerated, to four 6.625-inch cavities that can handle 400 watts with high selectivity and loss of 1 dB or less. The most popular models are built from four 4-inch cavities, exhibit medium to high selectivity, depending upon the center frequency, and can handle 125 watts of power with 1.2 to 1.8 dB of loss.

The 4 and 6-inch cavity models can be ordered with pass bandwidths ranging from 0.5 to 2 MHz. The typical curves show how different bandwidths affect isolation and insertion loss. Generally, a narrower bandwidth results in a higher insertion loss and selectivity than a wider bandwidth.



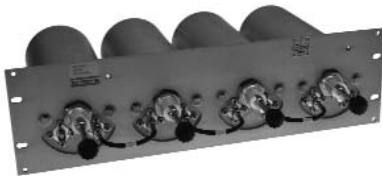
89-37-13A



89-37-06C



89-37-06A



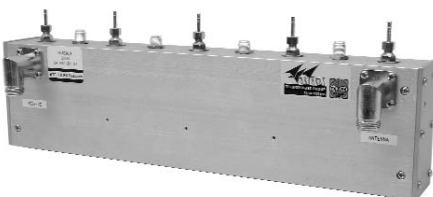
89-70-01A



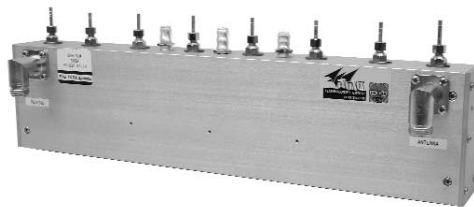
89-56-05A



89-70-27A



89-83F-01-03



89-83F-01-014



PRESELECTORS

Technical Specifications

Model Number	89-36-03A	89-37-01K	89-37-06A	89-37-06C	89-37-13A
Frequency Range (MHz)	132-150	144-174	144-174	144-174	144-174
No. of Cavities/Resonators	4 x 4"	3 x LC	4 x 4"	4 x 4"	4 x 6.625"
Pass Bandwidth (MHz)	0.5 to 2.0	4-10	0.5 to 2.0	0.5 to 2.0	0.5 x 2.0
Specification Bandwidth (MHz)	1.0	1.0	1.0	1.0	1.0
Insertion Loss (dB) @ F ₀ (MHz)	1.2 @ 140	1.5 @ 155	1.4 @ 160	1.4 @ 160	0.7 @ 160
Passband Insertion Loss (dB)	1.6	2.0	1.8	1.8	1.0
Typical Selectivity (dB @ MHz)	58 @ 135	30 @ 140	65 @ 155	65 @ 155	73 @ 155
Typical Selectivity (dB @ MHz)	78 @ 145	20 @ 170	78 @ 165	78 @ 165	76 @ 165
Return Loss, dB (VSWR)	20 (1.22:1)	14 (1.5:1)	20 (1.22:1)	20 (1.22:1)	20 (1.22:1)
RF Power (Watts)	125	Rx only	125	125	400
Temperature Range, °C	-30 to +60	-30 to +60	-30 to +60	-30 to +60	-30 to +60
Connectors, Antenna/Output	BNC	N / BNC	BNC	BNC	N / N
Dimensions, HxWxD (inches)	5.25x19x22	1.5x4.5x2.5	5.25x19x20	9.5x19x10.5	33x19x15
Dimensions, HxWxD (mm)	133x483x559	38x115x64	133x483x508	241x483x267	838x483x381
Mounting	19 ^{**}	Surface	19 ^{**}	19 ^{**}	19 ^{**}
Shipping Weight, lb (kg)	21 (9.5)	3 (1.4)	19 (8.6)	23 (10.4)	50 (22.6)

** EIA rack mount

^^ Cross Mount

Model Number	89-56-05A	89-65-01A	89-65-12A	89-66-02A	89-70-01A	89-70-24A	89-70-27A	89-70-28A
Frequency Range (MHz)	380-420	406-430	406-430	430-450	450-470	450-470	450-470	456-460/466-470
No. of Cavities/Resonators	6	4 x 4"	3 x 2"	3 x 2"	4 x 4"	3 x 2"	8-Resonator	Dual 8-Resonator
Pass Bandwidth (MHz)	5	0.5 to 2.0	1.0	1.0	0.5 x 2.0	1.0	4	4/4
Specification Bandwidth (MHz)	5	1.0	1.0	1.0	1.0	1.0	4	4/4
Typical Insertion Loss (dB)	1.5	1.6	2.5	2.7	1.6	2.5	2.5	4.0
Max Ins Loss @ Passband Edge (dB)	1.5	2.0	3.0	3.5	2.0	3.1	4	5.6
Typical Selectivity (dB @ MHz)	80 @ Paired Tx	60 @ ±4.5	45 @ ±5.0	45 @ ±5.0	60 @ ±4.5	45 @ ±5.0	40 @ ±3.0	40 @ ±3.0
Return Loss, dB	18	17	17	17	17	17	12	12
RF Power (Watts)	Receive Only	200	Receive Only	Receive Only	200	Receive Only	Receive Only	Receive Only
Temperature Range, °C	-30 to +60	-30 to +60	-30 to +60	-30 to +60	-30 to +60	-30 to +60	-30 to +60	-30 to +60
Connectors	N	BNC	BNC	BNC	BNC	BNC	N	N
Dimensions, HxWxD (inches)	3.5x19x8	4x19x10.5	2x19x9	2x19x8	9.5x19x10.5	2x19x8.75	7x19x10	14x19x10
Dimensions, HxWxD (mm)	80x483x203	102x483x267	51x483x229	51x483x203	241x483x267	51x483x222	178x483x254	356x483x254
Mounting	19 ^{**}	19 ^{**}	19 ^{**}	19 ^{**}	19 ^{**}	19 ^{**}	19 ^{**}	19 ^{**}
Shipping Weight, lb (kg)	10 (4.5)	6 (2.7)	3 (1.4)	3 (1.4)	14 (6.3)	3 (1.4)	13 (5.9)	27 (12.2)

** EIA rack mount

^^ Cross Mount

Model Number	89-83C-01-32	89-86A-20-03	89-86A-20-05	89-86A-20-10	89-86A-20-15
Frequency Range (MHz)	792-824	806-824	806-824	806-824	806-824
No. of Cavities/Resonators	2	5	6	8	8
Pass Bandwidth (MHz)	32	3	5	10	15
Specification Bandwidth (MHz)	32	3	5	10	15
Typical Insertion Loss (dB)	1.5	2.0	1.3	1.0	1.0
Max Ins Loss @ Passband Edge (dB)	1.5	2.0	1.3	1.0	1.0
Typical Selectivity (dB @ MHz)	110 @ 766 & 851	100 @ 851	100 @ 851	100 @ 851	72 @ 851
VSWR max.	1.5:1	1.5:1	1.5:1	1.5:1	1.5:1
RF Power (Watts)	Rx only	Rx only	Rx only	Rx only	Rx only
Temperature Range, °C	-30 to +60	-30 to +60	-30 to +60	-30 to +60	-30 to +60
Connectors	N	N	N	N	N
Dimensions, HxWxD (inches)	3.5 x 19 x 7	3.5 x 19 x 5	3.5 x 19 x 5	3.5 x 19 x 5	3.5 x 19 x 5
Dimensions, HxWxD (mm)	89 x 483 x 178	89 x 483 x 127	89 x 483 x 127	89 x 483 x 127	89 x 483 x 127
Mounting	19 ^{**}	19 ^{**}	19 ^{**}	19 ^{**}	19 ^{**}
Shipping Weight, lb (kg)	8 (3.6)	6 (2.7)	6 (2.7)	6 (2.7)	6 (2.7)

** EIA rack mount

^^ Cross Mount

-20- Preselectors are supplied with 24" RG-142B/u N(M) to SMA(M) cable

PRESELECTORS

Technical Specifications

Model Numbers	89-83F-01-03	89-83F-01-06	89-83F-01-09	89-83F-01-14
Frequency Range	792-806 MHz	792-806 MHz	792-806 MHz	792-806 MHz
Pass Bandwidth	3 MHz	6 MHz	9 MHz	14 MHz
Typical Insertion Loss	2.0 dB	1.5 dB	1.0 dB	1.0 dB
Max. Insertion Loss @ Passband Edge	3.0 dB	2.0 dB	1.5 dB	1.5 dB
Typical Selectivity (dB @ MHz)	100 @ 766 & 851	100 @ 766 & 851	90 @ 766 & 851	80 @ 766 & 851
VSWR max.	1.5:1	1.5:1	1.5:1	1.5:1
RF Power	Rx only	Rx only	Rx only	Rx only
Temperature Range	-30° to +60° C	-30° to +60° C	-30° to +60° C	-30° to +60° C
Connectors	N(F)	N(F)	N(F)	N(F)
Mechanical	19" Rack Mount	19" Rack Mount	19" Rack Mount	19" Rack Mount

Model Number	89-86A-20-18	89-86A-21-03	89-86A-21-05	89-86A-21-10	89-86A-21-15
Frequency Range (MHz)	806-824	806-824	806-824	806-824	806-824
No. of Cavities/Resonators	10	5	6	8	8
Pass Bandwidth (MHz)	18	3	5	10	15
Specification Bandwidth (MHz)	18	3	5	10	15
Typical Insertion Loss (dB)	1.0	2.0	1.3	1.0	1.0
Max Ins Loss @ Passband Edge (dB)	1.0	2.0	1.3	1.0	1.0
Typical Selectivity (dB @ MHz)	100 @ 851	100 @ 851	100 @ 851	100 @ 851	72 @ 851
VSWR max.	1.5:1	1.5:1	1.5:1	1.5:1	1.5:1
RF Power (Watts)	Rx only	Rx only	Rx only	Rx only	Rx only
Temperature Range, °C	-30 to +60	-30 to +60	-30 to +60	-30 to +60	-30 to +60
Connectors	N	N	N	N	N
Dimensions, HxWxD (inches)	3.5 x 19 x 5	3.5 x 19 x 5	3.5 x 19 x 5	3.5 x 19 x 5	3.5 x 19 x 5
Dimensions, HxWxD (mm)	89 x 483 x 127	89 x 483 x 127	89 x 483 x 127	89 x 483 x 127	89 x 483 x 127
Mounting	19" **	19" **	19" **	19" **	19" **
Shipping Weight, lb (kg)	6 (2.7)	6 (2.7)	6 (2.7)	6 (2.7)	6 (2.7)

** EIA rack mount

^^ Cross Mount

-20- Preselectors are supplied with 24" RG-142B/u N(M) to SMA(M) cable

Model Number	89-86A-21-18	89-87-05P	89-87A-05P	89-92-01P	89-93-02P
Frequency Range (MHz)	806-824	851-866	851-869	825-845	870-890
No. of Cavities/Resonators	10	4	4	6	6
Pass Bandwidth (MHz)	18	15	18	10	10
Specification Bandwidth (MHz)	18	15	18	10	10
Typical Insertion Loss (dB)	1.0	0.3	0.5	0.6	0.6
Max Ins Loss @ Passband Edge (dB)	1.0	0.35	0.5	1.0	1.0
Typical Selectivity (dB @ MHz)	100 @ 851	40 @ 821	30 @ 824	95 @ 870	85 @ 835
VSWR max.	1.5:1	1.2:1	1.2:1	1.5:1	1.5:1
RF Power (Watts)	Rx only	600	600	Rx only	Rx only
Temperature Range, °C	-30 to +60	-30 to +60	-30 to +60	-30 to +60	-30 to +60
Connectors	N	N	N	N	N
Dimensions, HxWxD (inches)	3.5 x 19 x 5	5.25 x 19 x 2	5.25 x 19 x 2	5.25 x 19 x 2.5	5.25 x 19 x 2.5
Dimensions, HxWxD (mm)	89 x 483 x 127	135 x 483 x 51	135 x 483 x 51	133 x 483 x 64	133 x 483 x 64
Mounting	19" **	19" **	19" **	19" **	19" **
Shipping Weight, lb (kg)	6 (2.7)	8.3 (3.8)	8.3 (3.8)	6.8 (3.1)	6.8 (3.1)

** EIA rack mount

^^ Cross Mount

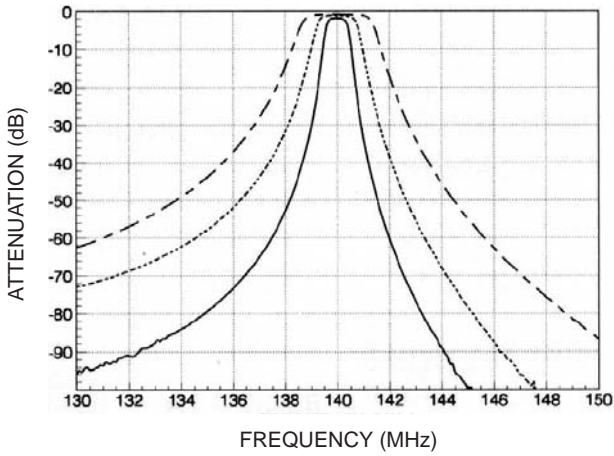
-20- Preselectors are supplied with 24" RG-142B/u N(M) to SMA(M) cable



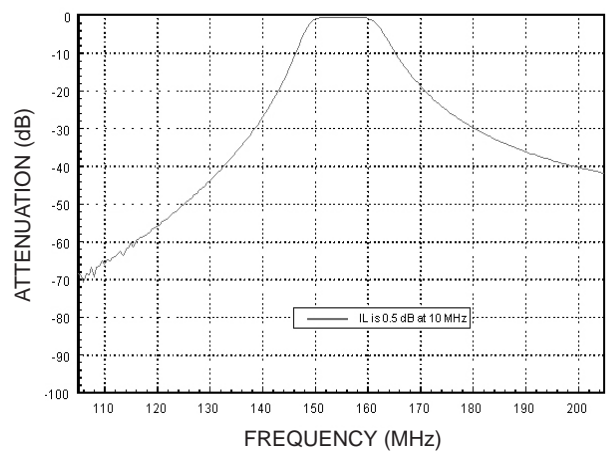
PRESELECTORS

Technical Specifications

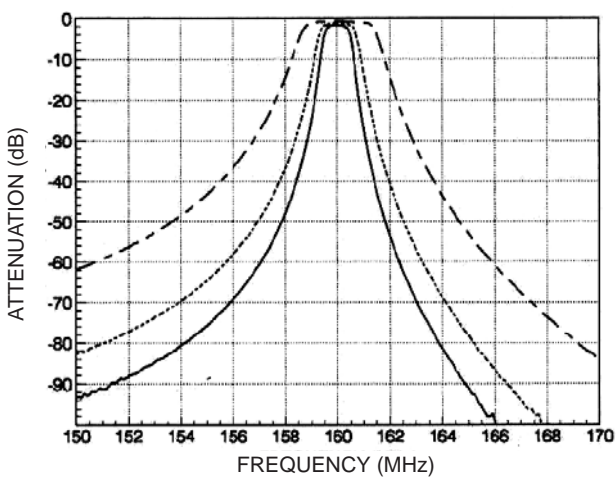
Models 89-36-03A (0.5, 1.0, 2.0 MHz BW)



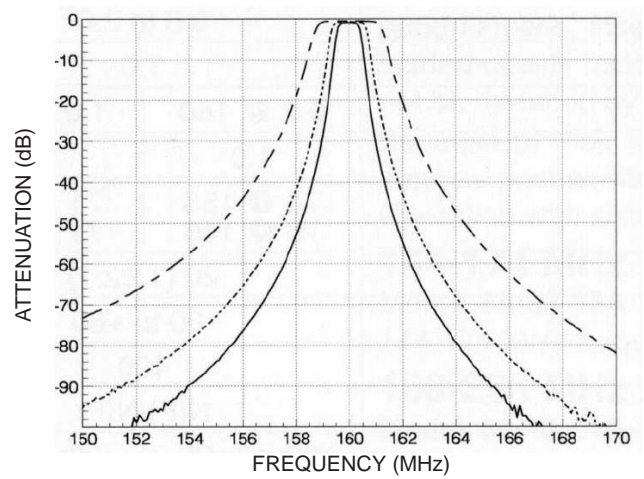
Models 89-37-01K



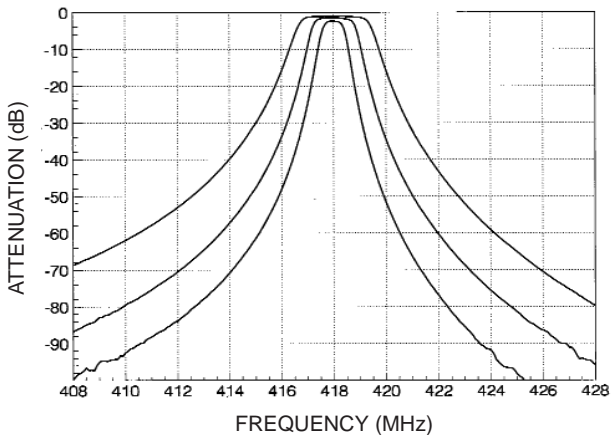
Models 89-37-06A, -06C (0.5, 1.0, 2.0 MHz BW)



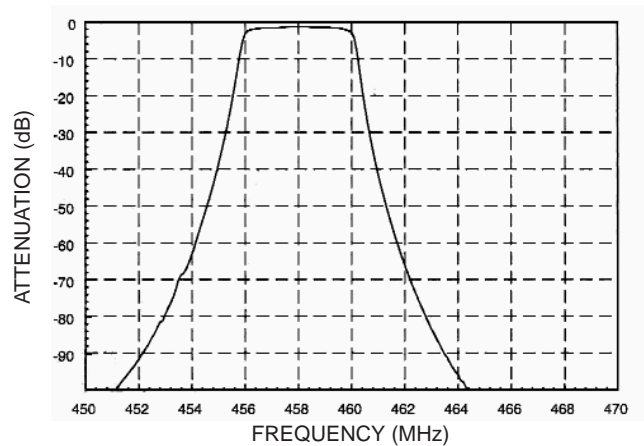
Models 89-37-13A (0.5, 1.0, 2.0 MHz BW)



Model 89-65-01A
(Fo=418 MHz, 0.5 - 2 MHz BW)



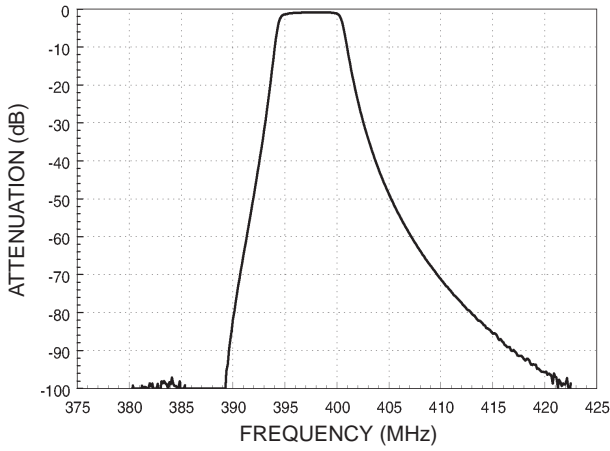
Model 89-70-27A



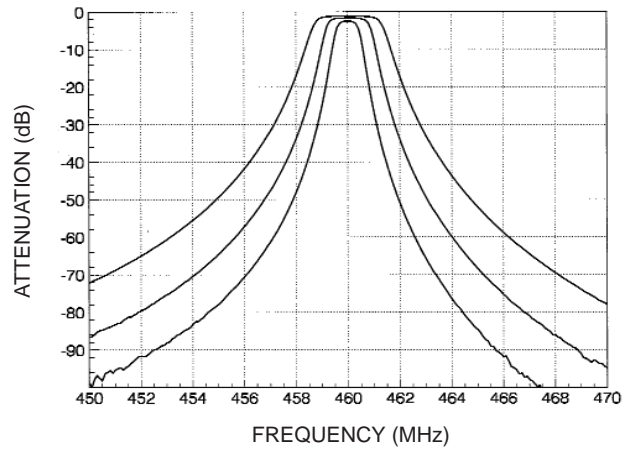
PRESELECTORS

Technical Specifications

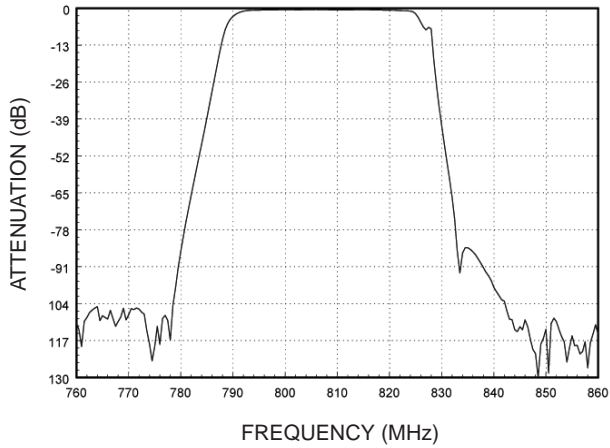
Preselector Model 89-56-05A



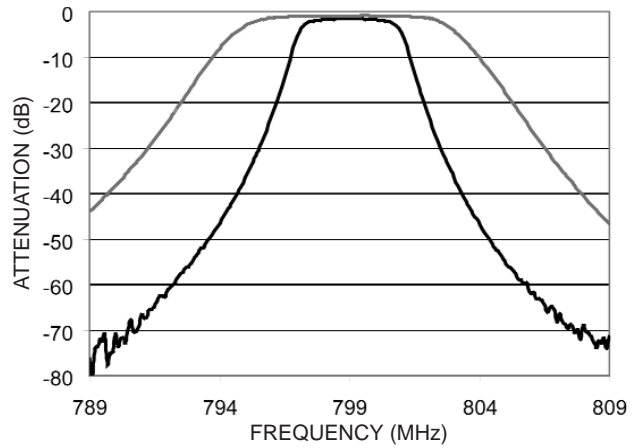
Model 89-70-01A
($F_o=460$ MHz, 0.5, 1.0, 2.0 MHz BW)



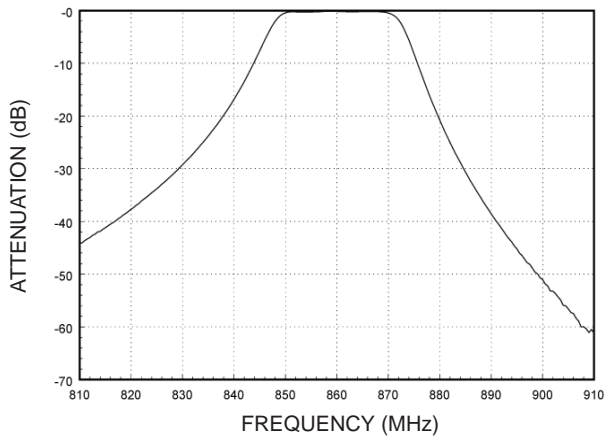
Model 89-83C-01-32



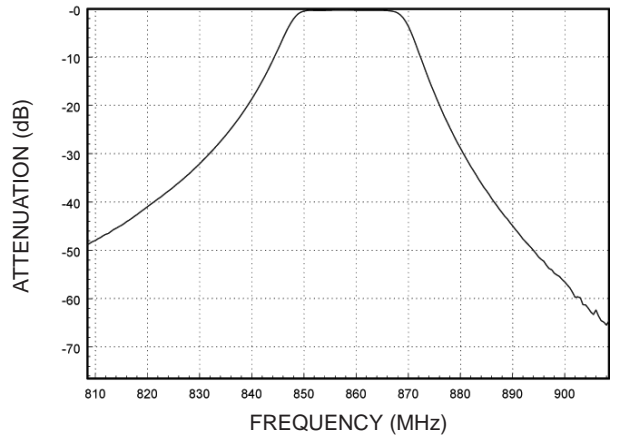
Model 89-83F-01-3 and 89-83F-01-06



Model 89-87A-05P



Model 89-87-05P





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