



MICROWAVE ENGINEERING CORPORATION
FILTERS
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DATA SHEET
No. B002f

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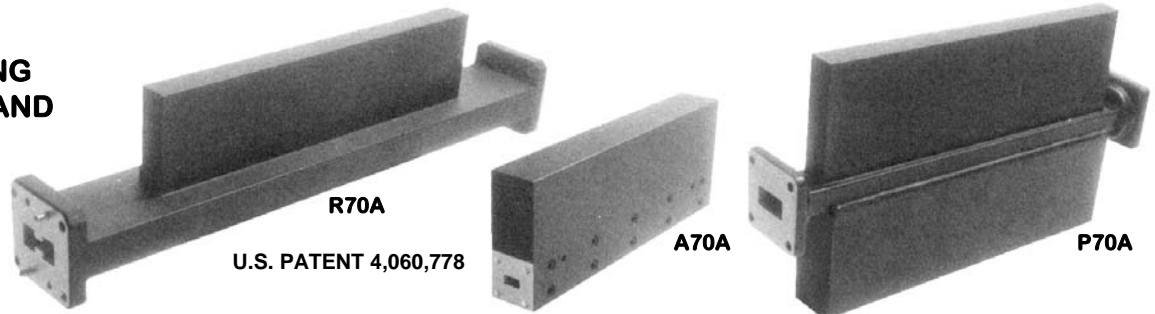


WAVEGUIDE HARMONIC ABSORPTION FILTERS

70A SERIES R70A SERIES

**DATA
SHEET
No. T41C**

- HIGH POWER
- NON-REFLECTING
- BROAD STOP BAND
- SHARP CUTOFF
- LOW LOSS



DESCRIPTION

These patented low pass filters transmit energy in the dominant TE₁₀ mode with minimal loss and absorb internally the next few higher order harmonics while maintaining low VSWR across their passband and stopband. They are ideally suited at the output of high power waveguide transmitters and harmonic-rich broadband sweep oscillators.

By filtering the harmonics out of the fundamental signal, they increase accuracy of power and frequency measurements, condition the signal for further processing and clean the spectral output of the transmitter with many EMI and EMC benefits. These filters also prolong transmitter life by reducing standing waves in the transmission path caused by trapped higher order modes.

The 70A and R70A series cover rectangular and double-ridge waveguide bands respectively. Both may be designed to pass from a narrow communication band up to the full bandwidth of the waveguide used. Their absorptive stopband normally covers the 1st and 2nd harmonics of the passband which contain most of the energy to be filtered. Other than bandwidth, the available options include folded or compact designs and extended stopband up to the 3rd harmonic.

Material is aluminum, flange type is optional, finish is chromate conversion per MIL-C-5541, Class 3 and paint is high-temperature black epoxy enamel.

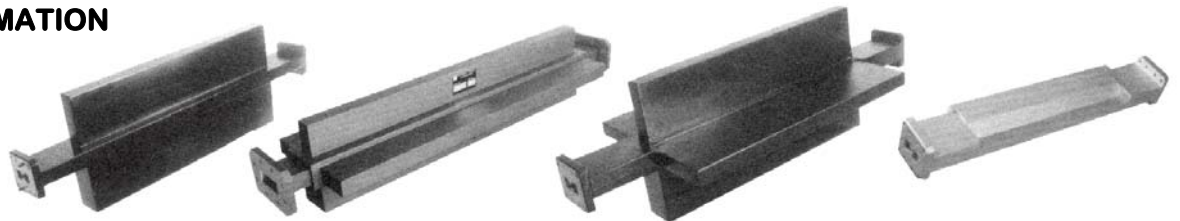
SPECIFICATIONS

MODEL NUMBER	WAVEGUIDE SIZE	PASS BAND CHARACTERISTICS			STOP BAND CHARACTERISTICS			POWER		LENGTH (INCHES)
		FREQUENCY (GHz)	INS. LOSS MAX (dB)	VSWR MAX	FREQUENCY (GHz)	ATTEN. MIN (dB)	VSWR MAX	CW (W)	PEAK* (KW)	
70A SERIES RECTANGULAR WAVEGUIDE HARMONIC ABSORPTION FILTERS										
S70A	WR-284	2.60 – 3.95	.15	1.10	5.20 – 11.85	40	2.5	1,500	20	28.0
G70A	WR-187	3.95 – 5.85	.2	1.10	7.90 – 17.55	40	2.5	1,000	10	20.0
J70A	WR-137	5.85 – 8.20	.2	1.10	11.70 – 24.60	40	2.5	800	8	18.0
H70A	WR-112	7.05 – 10.0	.3	1.10	14.10 – 30.0	40	2.5	800	8	12.0
W70A	WR-102	7.0 – 11.0	.3	1.10	14.0 – 33.0	40	2.5	800	8	12.0
X70A	WR-90	8.2 – 12.4	.3	1.10	16.4 – 37.2	40	2.5	500	5	12.0
M70A	WR-75	10.0 – 15.0	.3	1.10	20.0 – 45.0	40	2.5	500	5	9.0
P70A	WR-62	12.4 – 18.0	.4	1.20	24.8 – 54.0	40	2.5	500	5	7.5
K70A	WR-42	18.0 – 26.5	.5	1.20	36.0 – 79.5	40	2.5	200	2	6.0
A70A	WR-28	26.5 – 40.0	.7	1.20	53.0 – 90.0	40	2.5	200	2	6.0
R70A SERIES DOUBLE-RIDGE WAVEGUIDE HARMONIC ABSORPTION FILTERS										
R75A	WRD-180C24	18.0 – 40.0	.7	1.40	46.0 – 90.0	40	2.5	200	2	6.0
R76A	WRD-110C24	11.0 – 26.5	.6	1.40	30.5 – 79.5	40	2.5	200	2	7.5
R70A	WRD-750D24	7.5 – 18.0	.4	1.25	20.7 – 40.0	40	2.5	500	5	9.0
R77A	WRD-650D28	6.5 – 18.0	.4	1.25	20.7 – 40.0	40	2.5	500	5	12.0
R78A	WRD-580D28	5.8 – 16.0	.4	1.25	18.0 – 40.0	40	2.5	500	5	12.0
R71A	WRD-475D24	4.75 – 11.0	.4	1.20	12.6 – 33.0	40	2.5	800	8	14.0
R79A	DR-19	4.8 – 11.0	.4	1.20	12.6 – 33.0	40	2.5	800	8	14.0
R72A	WRD-350D24	3.5 – 8.2	.4	1.15	9.4 – 24.6	40	2.5	1,000	10	18.0

*Sea Level Pressure

ORDERING INFORMATION

Select model number and specify passband frequencies, stopband attenuation desired.





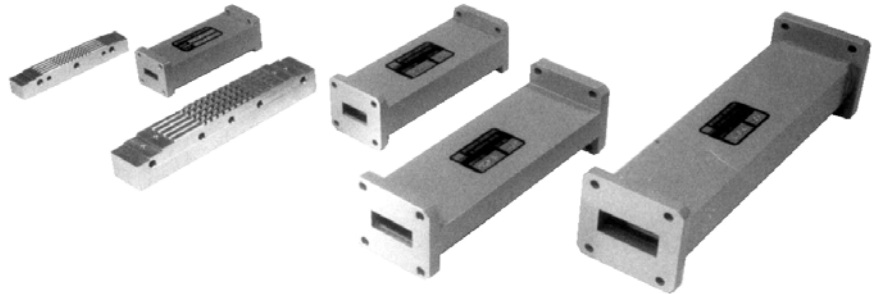
RECTANGULAR WAVEGUIDE LOW PASS FILTERS & MULTIPLEXERS

70-L SERIES 470 SERIES

**DATA SHEET
No. T18E**

BROAD STOP BAND

- NO SPURIOUS MODES
- HIGH REJECTION
- LOW VSWR & LOSS
- SMALL SIZE



DESCRIPTION

MEC 70-L Series Low Pass Filters consist of corrugated or waffle-iron multi-section designs with integral impedance transformers. The internal corrugations provide low pass band loss and high spurious-free rejection of second and third harmonics of the pass band frequencies even in modes other than the fundamental TE₁₀. These characteristics make them ideal for precision test set-ups where they eliminate significant errors due to the high harmonic content of broadband sources.

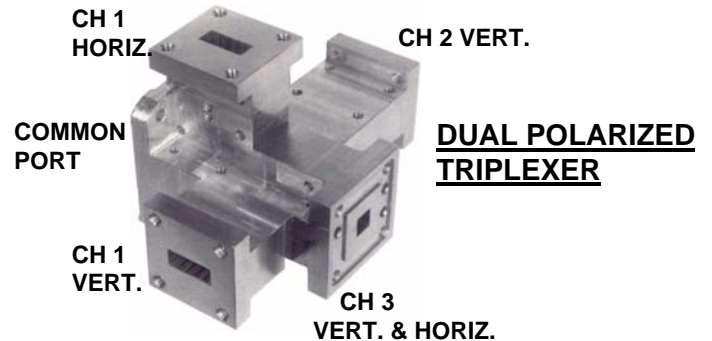
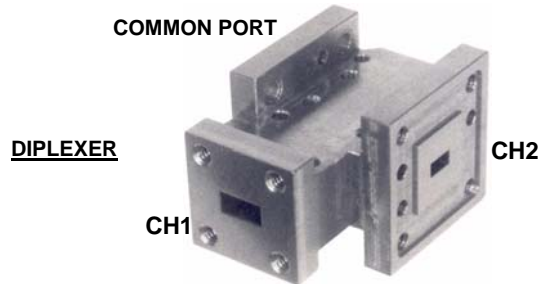
Multiplexers, 470 Series, separate or combine 2 or more frequency channels into a common port and are made by integrating 70-L lowpass filters with highpass, bandpass and band-reject filters into complex networks used in spaceborne radiometry and other multi-band applications. Two such examples are the diplexer and triplexer shown below. MEC has refined this technology and applied it up to millimeter ranges, with as many as 8 separate channels, compactly packaged, with single or dual polarization.

The 70-L models listed below cover only the most common rectangular waveguide bandwidths. They are also available in other bands and may be customized and/or combined to your specifications.

Filter plate-sections are CNC-machined in Aluminum 6061 with heavy external walls for added ruggedness. Flanges are cover type with tapped holes, finish is chromate conversion per MIL-C-5541, Class 3 and paint is gray epoxy enamel.

SPECIFICATIONS

MODEL NO.	WAVE-GUIDE SIZE	PASS BAND			STOP BAND		POWER		LENGTH (IN. ± .03)
		FREQUENCY (GHz)	INSERTION LOSS (dB, MAX)	VSWR (MAX)	FREQUENCY (GHz)	REJECTION (dB, MIN)	AVERAGE (W)	PEAK (KW)	
J70-L	WR137	5.85 – 8.20	0.2	1.3	11 - 26	50	200	5	8.4
H70-L	WR112	7.05 – 10.0	0.3	1.3	14 – 32	50	200	5	6.8
W70-L	WR102	7.0 – 11.0	0.3	1.3	14 – 35	50	100	5	6.15
X70-L	WR90	8.0 – 12.4	0.3	1.3	16 – 40	50	100	5	5.0
M70-L	WR75	10.0 – 15.5	0.3	1.3	19 – 47	50	100	3	4.5
P70-L	WR62	12.4 – 18.0	0.4	1.3	23 – 56	50	50	2	3.78
K70-L	WR42	18.0 – 26.5	0.4	1.4	31 – 80	45	35	1	2.5
A70-L	WR28	26.5 – 40.0	0.5	1.5	47 - 120	40	20	1	1.75



ORDERING INFORMATION

1. For multiplexers, contact factory.
2. Other waveguide bands, flanges, and mounting provisions available upon request.





COAXIAL HARMONIC ABSORPTIVE FILTERS C70-A SERIES

**DATA
SHEET
No. T82A**

- LOW REFLECTION STOP BAND
- ULTRA SHARP CUTOFF
- UP TO 90 dB ATTENUATION

DESCRIPTION

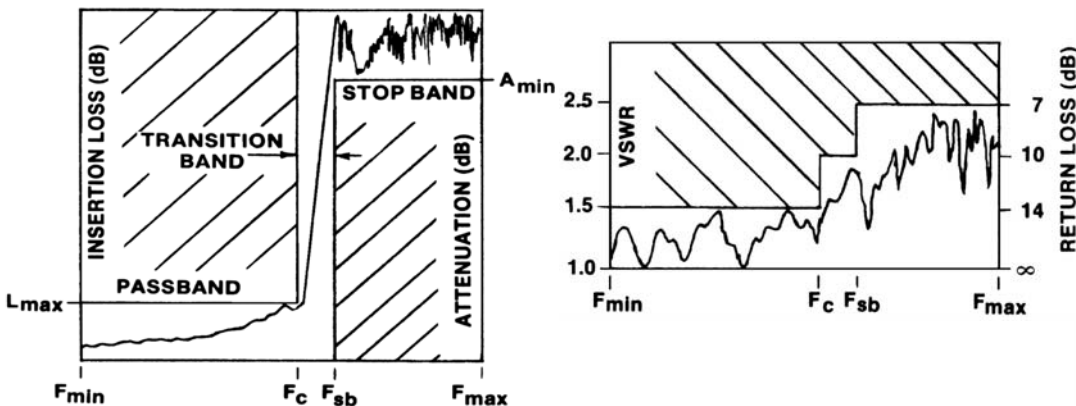
MEC's C70-A Series of coaxial harmonic absorption filters have a low pass characteristic distinguished by an ultra sharp cutoff skirt going from under 1dB passband loss to as high as 90dB attenuation in a transition band no wider than 10% of F_c . Their pass-band extends from DC to the specified F_c in the 2-18 GHz range and the stop band from $F_c + .1 F_c$ to over $3 F_c$.

Unlike the more common C70-L series, these C70-A filters do not reflect harmonic energy back to the transmitter but absorb it internally while maintaining low input VSWR over transition and stop bands. This feature makes them indispensable in today's ECM systems to condition signals and protect TWT's from harmonics and other harmful reflections which would otherwise cause overheating, premature burnout, higher EMI, and greater detection vulnerability

Other notable features include low passband loss from .3 to 1 dB; VSWR under 1.5:1; compact size typically 5" x 7" x 1" and weight under 2 pounds for a cutoff in X-band. Power handling over pass and stop bands is in the hundreds of watts CW, and several kilowatts peak, under non-conditioned temperature/altitude and vibration environments of MIL-E-5400. Exact figures depend on the frequencies, attenuation and connectors required.

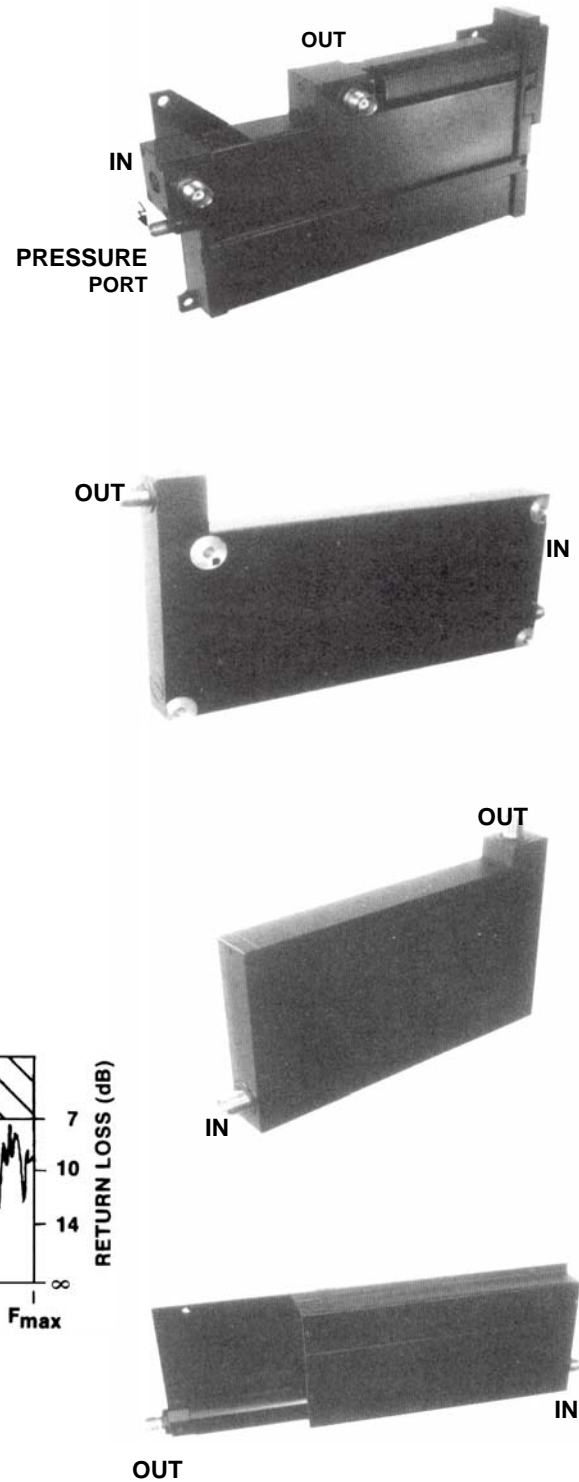
The body is made of aluminum plates with rugged dip-brazed construction. Internal absorbers, connectors and all other materials are especially selected to withstand prolonged high temperature operation without external cooling or thermal mounting. Finish is chromate conversion per MIL-C-5541, Class 3, with high emissivity black epoxy enamel paint.

SPECIFICATIONS & TYPICAL DATA



ORDERING INFORMATION

- (1) Specify F_{min} , F_c , F_{sb} , F_{max} , L_{max} (insertion loss), A_{min} (attenuation), Power (CW & Peak) and connectors (TNC, N, SC, MLT, LC, EIA series).
- (2) Size and configuration determined by above specifications and may be tailored to suit customer preferences.





COAXIAL LOW PASS FILTERS

C70L SERIES C70LH SERIES

DATA SHEET
No. T25C

- HIGH POWER
- HIGH REJECTION
- LOW VSWR
- LOW LOSS



DESCRIPTION

MEC C70L Series are tubular low pass filters of Chebyshev equi-ripple design. They consist of stepped-impedance, semi-lumped elements in a low-loss air or dielectric transmission line. The number of elements determines the sharpness of the skirt and rejection level. However, more elements also increase passband insertion loss and filter length.

The stop band is reflective and extends from the cutoff frequency f_c to an upper frequency limit beyond which the transmission line becomes over-moded allowing possible spikes or holes in the rejection response.

MEC C70LH filters are high power versions of the C70L series and are limited only by the power capability of the coaxial connectors used.

The low and high power models listed below represent a practical compromise between selectivity, loss, length and upper frequency limit for general laboratory use, although other combinations of characteristics may just as easily be made to fit your exact requirements.

Low pass filters are recommended at the output of broadband RF sources and in test set-ups to eliminate undesired harmonics and other spurious outputs for increased measurement accuracy. They are also used in signal processing, individually and in more complex assemblies, to separate various frequencies.

Filter housing is aluminum with chromate conversion finish per MIL-C-5541, Class 3. Connector shells are passivated stainless steel. Paint is gray epoxy enamel for the C70L series and high-temperature black for the C70LH series.

SPECIFICATIONS

LOW POWER C70L SERIES		f_c (GHz)	PASSBAND (DC- f_c)		MINIMUM REJECTION (GHz)			MAX. LENGTH* (INCHES)	HIGH POWER C70LH SERIES			
MODEL NUMBER	AVERAGE POWER † (W)		VSWR (MAX)	INSERTION LOSS (dB Max)	20 dB @	50 dB			MODEL NUMBER	POWER †		
					FROM	TO			AVERAGE (W)	PEAK (kW)		
C70L-.75	60	0.75	1.2	0.2	0.9	1.0	10	10.5	C70LH-.75	800	8	
C70L-1.5		1.50			1.8	2.0	10	9.0	C70LH-1.5			
C70L-2		2.0			2.4	2.7	10	8.0	C70LH-2			
C70L-3		3.0			3.6	3.4	10	7.0	C70LH-3			
C70L-4	40	4.0	1.25	0.3	4.8	5.3	13	4.5	C70LH-4	600	6	
C70L-5		5.0			6.0	6.6	14		6.0			C70LH-5
C70L-6		6.0			7.2	8.0	16		4.5			C70LH-6
C70L-7		7.0			8.4	9.3	18		3.9			C70LH-7
C70L-8	8.0	9.6	10.6	19	C70LH-8							
C70L-9	9.0	10.8	12.0	19	C70LH-9							
C70L-10	10.0	12.0	13.3	19	C70LH-10							
C70L-11	20	11.0	1.3	0.4	13.2	14.6	22	3.7	C70LH-11	500	5	
C70L-12		12.0			14.4	16.0	24		C70LH-12			
C70L-13		13.0			15.6	17.3	26		C70LH-13			
C70L-14		14.0			16.8	18.6	30		C70LH-14			
C70L-17		17.0			20.4	22.6	34		C70LH-17	100	1	

*Including 1 male and 1 female type N connectors.

† Consistent with connector.

ORDERING INFORMATION

To specify connectors, add suffixes to model number from table below. Also note maximum frequency and power limits shown.

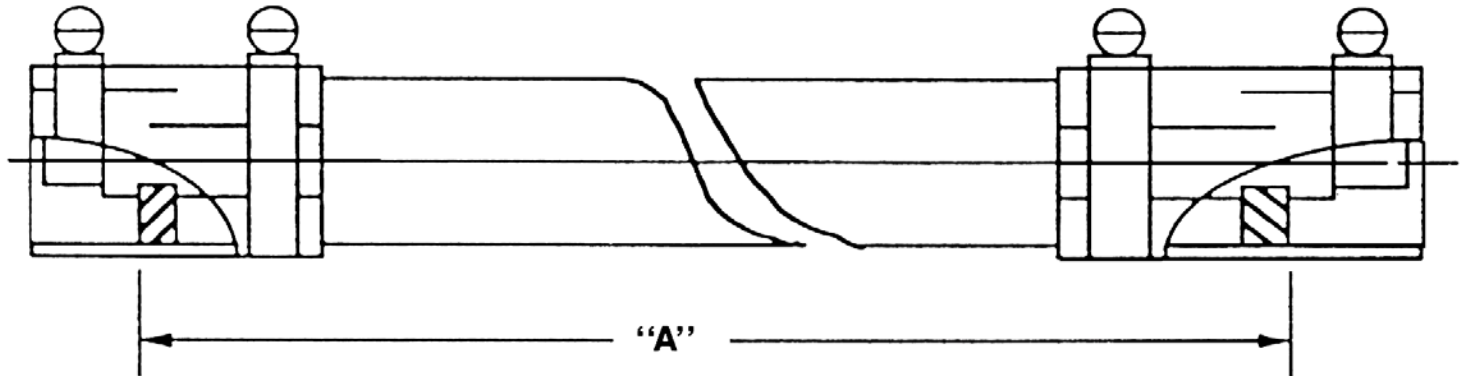
CONNECTOR TYPE	FEMALE SUFFIX	MALE SUFFIX	MAXIMUM FREQUENCY (GHz)	POWER (W) AT MAXIMUM FREQUENCY
SC	-SC	-SCM	8	800
TNC	-T	-TM	18	400
N	-N	-NM	18	200
SMA	-3	-3M	26	50
APC-7		-7	18	10





**LOW PASS FILTER FOR
LOW BAND VHF
CF320 & CF321 SERIES**

**DATA
SHEET
No. T90A**



PART NO.	HARRIS EQUIPMENT	CHANNEL NO.	"A" DIM.
CF320	484-0103-000	2&3, E2-E4	132.00"
CF321	484-0104-000	4, 5,6	110.00"

- Notes: 1. Reference Harris Specification 827-7917-001
2. Electrical equivalent only, see outline above.

APECIFICATIONS

The intent of this specification is to define a coaxial harmonic filter (low pass) to be used with 3 1/8" coaxial line components at the output of a low band VHF television transmitter:

POWER HANDLING	50.0 KW peak 37.0 KW ave.
IMPEDANCE:	50 ohms
FREQUENCY RANGE:	Channels 2 thru 6
VSWR:	1.05:1 in two hands
INSERTION LOSS:	0.1 dB maximum
ATTENUATION:	40 dB minimum 2 nd thru 5 th harmonics
CONSTRUCTION:	Copper outer conductor Copper and brass inner conductor Teflon support insulators
FLANGES:	3 1/8" Harris style sleeve couplings
LABELING:	Harris part number and channel numbers





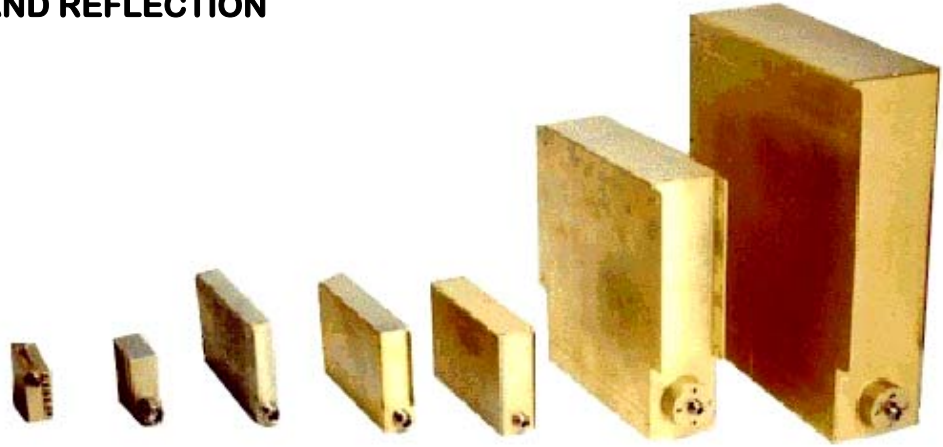
HARMONIC ABSORPTIVE FILTERS C70A SERIES

DATA SHEET
No. B152
1 of 2

- **HIGH POWER**
- **LOW LOSS**
- **LOW PASS AND STOP BAND REFLECTION**

DESCRIPTION

MEC's 70A series of Harmonic Absorptive filters are low pass filters, which absorb the rejected power instead of reflecting it back to the transmitter, thereby protecting TWT's from harmonic and other harmful reflections. They feature high power handling capability, low pass band loss, low VSWR over the pass and stop bands, sharp cutoff skirt and high attenuation.



MEC offers a complete line of Harmonic Absorptive filters, which cover full TWTA bands of either 1-18 GHz or 2-18 GHz. Refer to the tables below for suggested model groupings to cover these bands. The lower part of the band is covered with coaxial models (C70A Series) and the upper part of the band is usually in waveguide (70A Series for rectangular waveguide and R70A Series for double ridge waveguide).

OPTION 1

BAND	PASS BAND FREQUENCY (GHz)	STOP BAND FREQUENCY (GHz)	INTERFACE
1	1.00-1.78	2.00-3.56	Type N
2	1.78-3.20	3.56-6.40	Type N
3	3.20-5.70	6.40-11.40	Type N
4	5.70-10.10	11.40-20.20	WRD475
5	10.10-18.00	20.20-36.00	WRD750

OPTION 2

BAND	PASS BAND FREQUENCY (GHz)	STOP BAND FREQUENCY (GHz)	INTERFACE
1	1.00-1.65	2.00-3.30	Type N
2	1.65-2.70	3.30-5.40	Type N
3	2.70-4.47	5.40-8.94	Type N
4	4.47-7.50	8.94-15.20	Type N
5	7.50-11.60	15.00-23.20	WRD750
6	11.60-18.00	23.20-36.00	WRD750

ORDERING INFORMATION

Refer to the following pages for model number listings and specifications.

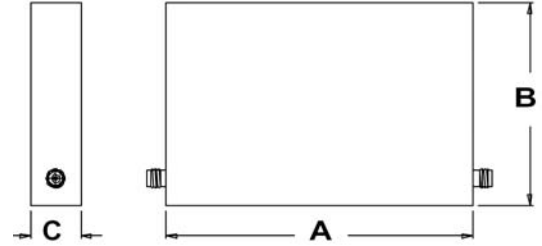




HARMONIC ABSORPTIVE FILTERS COAXIAL, C70A SERIES

DATA SHEET
No. B152
2 of 2

The table below is a representative sample of MEC's available designs of Coax Harmonic Absorptive Filters. Contact MEC with your specific requirements. Our engineering staff will be glad to discuss your needs.



MODEL NUMBER	PASS BAND			STOP BAND			A (Inch)	B (Inch)	C (Inch)
	CUTOFF FREQUENCY (GHz)	PASS BAND I. L. Max (dB)	PASS BAND VSWR Max	FREQUENCY (GHz)	ATTENUATION Min (dB)	VSWR Max			
C70A-337	0.4-0.9	1.0	1.5:1	1.0-1.776	50	3.0:1	22.1	21.3	5.2
C70-247	1.0-1.5	0.6	1.5:1	3-4.5 & 4.51-10	60 & 30	2.5:1	14.0	4.7	1.67
C70A-409	1.0-1.5	0.3	1.2:1	2.2-4.0	25	2.5:1	6.0	6.0	4.0
C70A-413	1.0-1.6	0.3	1.5:1	1.9-4.0	25	2.0:1	115	13.6	3.6
C70A-429	1.0-1.6	0.2	1.13:1	2-3.2 & 3.21-18	25	2 :1 & 3:1	9.5	11.5	3.6
C70A-435	1.0-1.7	0.3	1.17:1	2.0-7.0	30	2.0:1	9.5	11.5	3.6
C70A-463	1.0-2.0	0.3	1.3:1	2.35-8.0	40	2.0:1	9.5	11.5	3.1
C70A-436	1.5-2.0	0.2	1.2:1	2.5-8.0	30	2.0:1	9.5	11.5	3.1
C70A-471	1.6-2.5	0.3	1.3:1	3.2-10.0	35	2.0:1	10.0	6.8	2.3
C70A-428	1.6-2.7	0.4	1.35:1	3.2-8.4	35	2.5:1	10.0	6.8	2.3
C70A-447	1.0-2.8	0.4	1.5:1	3.2-6.0	25	2.0:1	10.0	9.0	2.5
C70A-417	2.8-3.2	0.5	1.4:1	5.6-6.4	40	2.5:1	7.2	4.7	1.8
C70A-437	2.0-3.5	0.3	1.2:1	3.9-9.0	30	2.0:1	7.2	4.7	1.9
C70A-452	3.0-3.5	0.2	1.5:1	6.0-7.0	30	2.0:1	7.2	4.7	1.7
C70A-411	2.2-3.6	0.3	1.3:1	4.3-7.5	25	2.5:1	5.0	5.0	3.0
C70A-433	2.0-4.0	0.35	1.2:1	4.5-10.0	30	1.5:1	7.2	4.7	1.7
C70A-423	2.0-4.0	0.4	1.5:1	4.6-12.0	30	2.5:1	7.2	4.7	1.6
C70A-438	3.0-4.0	0.3	1.2:1	4.5-10.0	30	2.0:1	7.2	4.7	1.7
C70A-414	2.0-4.8	0.4	1.5:1	5.6-8.0	25	2.0:1	5.6	4.7	1.4
C70A-482	2.8-4.8	0.25	1.3:1	5.6-10.0	33	1.6:1	7.2	4.7	1.4
C70A-472	3.0-4.8	0.3	1.3:1	6.0-18.0	38	2.5:1	7.2	4.7	1.4
C70A-332	3.5-6.0	0.3	1.5:1	7-12	50	1.5:1	8.2	4.7	1.2
C70A-439	4.0-7.0	0.2	1.2:1	7.7-14.0	35	2.0:1	7.2	4.7	1.1
C70A-434	4.8-7.5	0.25	1.35:1	9.6-18	35	2.0:1	7.2	4.7	1.0
C70A-424	4.0-8.0	0.4	1.5:1	9.4-16.0	30	2.0:1	7.2	3.7	0.8
C70A-440	6.0-8.0	0.3	1.2:1	8.8-14.0	30	2.0:1	7.2	4.7	1.0
C70A-474	6.4-8.0	0.35	1.2:1	12.4-18	45	2.0:1	7.2	4.7	1.0
C70A-449	6.5-11.0	0.75	1.5:1	13.0-22.0	45	2.5:1	8.4	3.9	0.8
C70A-129	8.0-12.4	0.45	1.35:1	16-24.8	35	2.5:1	3.5	2.5	1.2

ORDERING INFORMATION

Choose from models listed above, or specify pass band and stop band frequency, IL, VSWR, attenuation, power connectors and any other requirements.

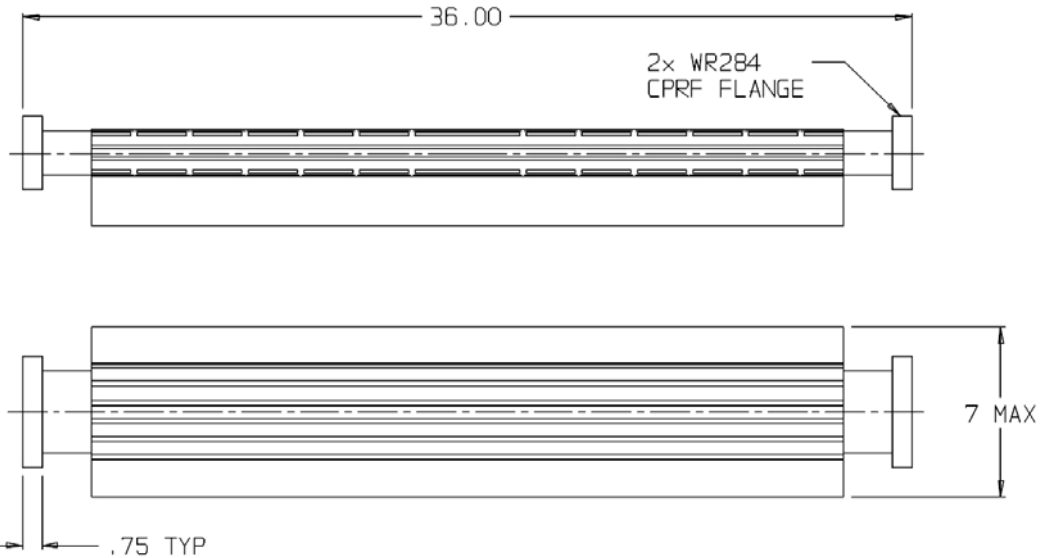




EXTRA HIGH POWER LOW PASS FILTER (S70L-501)

DATA SHEET
No. T147

- EXTRA HIGH POWER
- LOW LOSS
- HIGH REJECTION
- COOL OPERATING TEMPERATURE
- HIGH EFFICIENCY FINS
- RUGGED CONSTRUCTION



DESCRIPTION

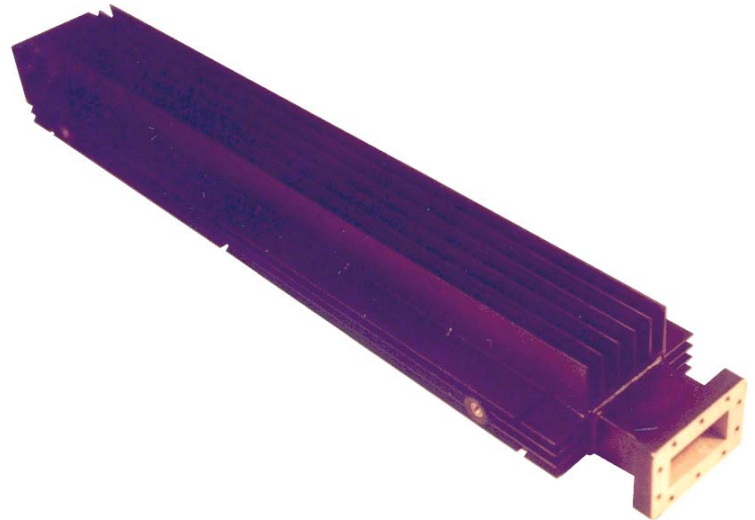
MEC's S70L-501 is a WR284 Extra High Power Low Pass Filter. It operates at S-band and handles 3 MW peak, 20 KW average. High conductivity aluminum alloy material is used which helps lower the insertion loss (typically 0.1 dB). The low loss, high precision machining, and high efficiency cooling fins all aid in lowering the operating temperatures. Temperature rise is less than 70 degrees F above ambient at 20 KW average input power. All above factors contribute towards problem free operation at the extremely high power levels.

This filter is machined using a carefully controlled process. Its rugged construction makes it suitable for extreme shipboard environments. This field proven design has been operational for many years, failure free, in numerous installations.

Contact MEC with your specific requirements. Our engineering staff will be glad to discuss your high power filter needs.

SPECIFICATIONS:

Model Number	S70L-501
Frequency	2.9-3.1 GHz
VSWR	1.2:1 Max
Insertion Loss	0.1 dB Max.
Stop Band Frequency	3.7-4.2 GHz
Rejection	60 dB Min (80 dB Typ.)
Peak Power	3 MW
Average Power	20 KW
Case Temperature	70° Max above ambient @20 KW average power
Pressure	37.5 PSIG Max
Input/Output Ports	WR284





SUPER HIGH POWER BALANCED LOW PASS FILTER (S70L-345)

**DATA
SHEET
No. T148**

- **SUPER HIGH POWER**
- **LOW LOSS**
- **HIGH REJECTION**
- **RUGGED CONSTRUCTION**

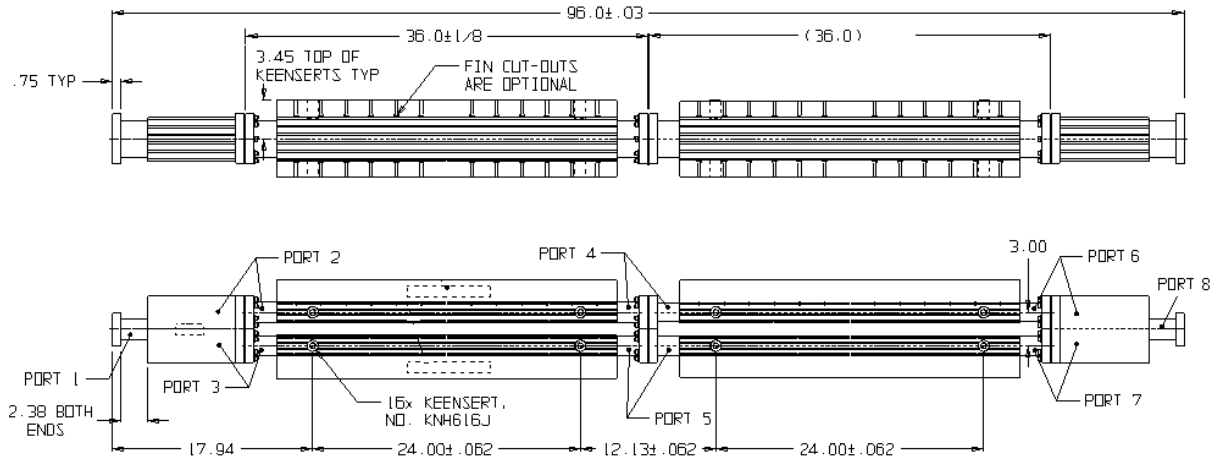
DESCRIPTION

MEC's S70L-345 is a WR284 Super High Power Low Pass Filter. It operates at S-band and handles 5 MW peak, 40 KW average. Two filters are used for this application. The signal is divided, passed through both balanced filters and then recombined at the output. High

conductivity aluminum alloy material helps lower the insertion loss (typically 0.2 dB). The low loss, high precision machining, and high efficiency cooling fins all aid in achieving a temperature rise is less than 70° F above ambient at 35 KW average input power. All above factors contribute towards problem free operation at the extremely high power levels.

This filter is machined and brazed using a carefully controlled process. Its rugged construction makes it suitable for extreme shipboard environments. This field proven design has been operational for many years, failure free, in numerous installations.

Contact MEC with your specific requirements. Our engineering staff will be glad to discuss your high power filter needs.



SPECIFICATIONS:

Model Number	S70L-345
Frequency	2.9-3.1 GHz
Peak Power	5 MW
Average Power	40 KW
VSWR	1.2:1 Max
Insertion Loss	0.3 dB Max, (0.2 dB Typ)
Stop Band Frequency	3.7-4.2 GHz
Rejection	60 dB Min, (80 dB Typ)
Case Temperature	70° Max above ambient @35 KW average power
Pressure	37.5 PSIG Max
Input/Output Ports	WR284
Weight	



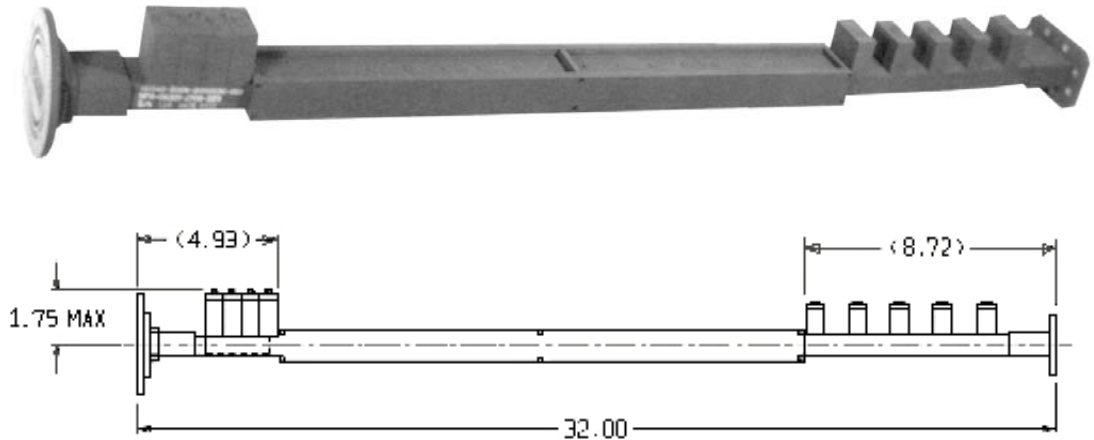


BAND PASS FILTER (J70B-529)

DATA SHEET
No. T155

- **LOW LOSS**
- **HIGH REJECTION**
- **RUGGED CONSTRUCTION**

MEC model J70B-529 is a WR137 Band Pass Filter with finite transmission zeros. It covers one of the communication tri-bands commonly used for satellite up-link and down-link communications.



This design features copper construction which helps to minimize losses – the insertion loss is just 0.5 dB. Flanges are aluminum to avoid incompatibility of dissimilar metals in an aluminum waveguide system installation. The filter has external aluminum support brackets to aid mechanical rigidity. There are two reject bands with ultra sharp rejection skirts and high attenuation. Two notch filters are used to achieve out of band rejection of 100 dB @ $F_c+2\%$.

SPECIFICATIONS:

Model Number	J70B-529
Pass Band Frequency	7.25-7.75 GHz
VSWR	1.2:1 Max
Insertion Loss	0.50 dB Max 7.30 - 7.75 GHz
	0.54 dB Max 7.25 - 7.30 GHz
Amplitude ripple	± 0.10 dB over any 40 MHz segment in the frequency range
Non linearity	$\pm 3^\circ$ over any 30 MHz segment
	$\pm 4^\circ$ over any 40 MHz segment
Stop Bands	<7.1 GHz & 7.9 to 9.6 GHz
Attenuation	100 dB Min at ≤ 7.10 GHz and 7.90-9.60 GHz
Power	6 KW Pk, 360 W Ave
Input/Output Ports	WR137



POINT TO POINT RADIO BAND PASS FILTERS (RF 70 Series)

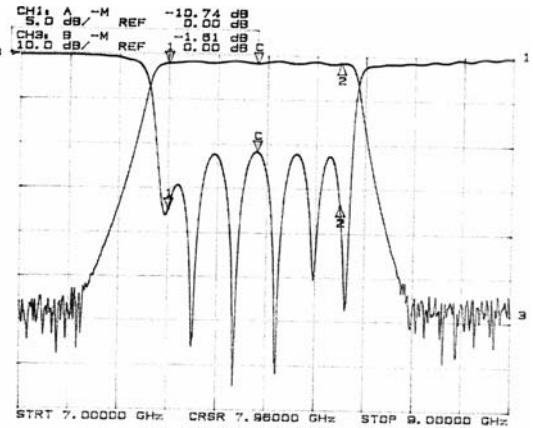
**DATA SHEET
No. T176**

RF70-002 C-Band Wide bandwidth Combine bandpass filter

- ULTRA COMPACT
- AIR CAVITY
- LOW INSERTION LOSS
- MODERATE VSWR
- LOW POWER



SMA"F" x 2

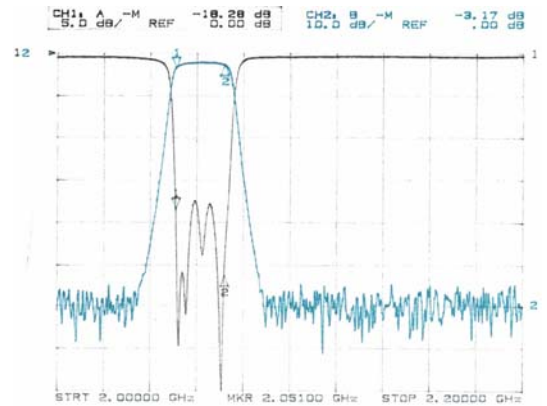


RF70-004 L-Band Round Rod Narrow band Interdigital bandpass filter

- COMPACT SIZE
- LOW INSERTION LOSS
- LOW VSWR



SMA"F x 2

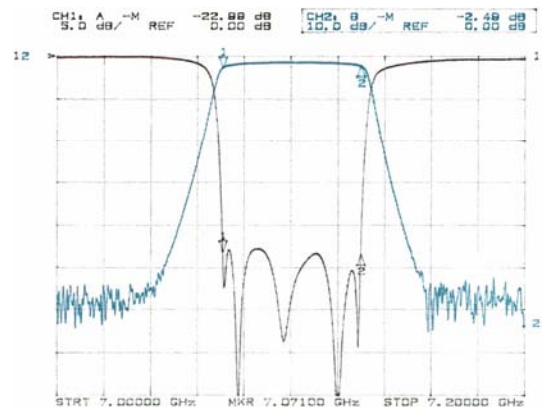


RF70-005 C-Band Narrow bandwidth bandpass filter

- HIGH Q CAVITY
- VERY LOW INSERTION LOSS
- VERY LOW VSWR
- HIGH POWER
- SMA OR WG INTERFACE



SMA"F" x 2



MODEL NUMBER	PASS BAND			STOP BAND			A (Inch)	B (Inch)	C (Inch)
	CENTER FREQUENCY (GHz)	PASS BAND I. L. Max (dB)	PASS BAND VSWR Max	FREQUENCY (GHz)	ATTENUATION Min (dB)	VSWR Max			
RF70-002	8.00	-1.6	1.80	7.6-8.4	-60	1.85	2.68	0.75	0.5
RF70-004	2.06	-3.0	1.30	2.04-2.08	-60	1.40	7.55	1.75	1.0
RF70-005	7.07	-2.50	1.10	7.04-7.1	-60	1.20	9.43	2.00	1.2

