



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.

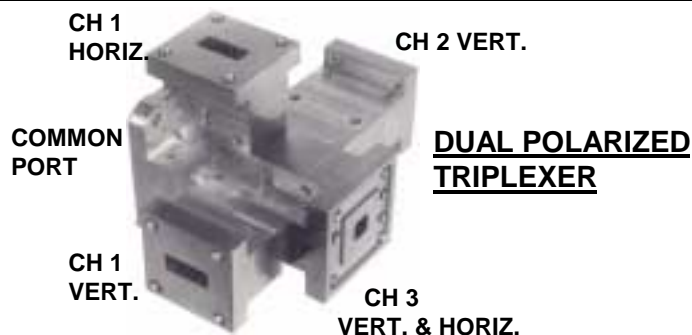
Multiplexers, 470 Series, separate or combine 2 or more frequency channels into a common port and are made by integrating 70-L lowpass filters with highpass, bandpass and band-reject filters into complex networks used in spaceborne radiometry and other multi-band applications. Two such examples are the 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.	WAVEGUIDE 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

Data subject to change without notice



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