



C-Band Waveguide Notch Filters

Model : Configuration :	3966-1 (1 Cavity)	3966-2 (2 Cavity)	3966-3 (3 Cavity)	3966-4 (4 Cavity)	3966-5 (5 Cavity)	3966-6 (6 Cavity)
# of Interfering Carriers	Notch Depth (dB)	Notch Depth (dB)	Notch Depth (dB)	Notch Depth (dB)	Notch Depth (dB)	Notch Depth (dB)
<u>1 carrier</u>	15	30	40	50	60	70
<u>2 carriers</u> (option A) (option B) (option C)	_____	15 15	15 30	30 30 15 40	15 50 30 40	15 60 30 50 40 40
<u>3 carriers</u> (option A) (option B) (option C)	_____	_____	15 15 15	15 15 30	15 15 40 15 30 30	30 30 30 15 15 50 15 30 40
<u>4 carriers</u> (option A) (option B)	_____	_____	_____	15 15 15 15	15 15 15 30	15 15 30 30 15 15 15 40
<u>5 carriers</u>	_____	_____	_____	_____	15 15 15 15 15	15 15 15 15 30
<u>6 carriers</u>	_____	_____	_____	_____	_____	15 15 15 15 15 15

The model 3966 notch filter

is used to remove undesired (in-band) carriers that disrupt C-band reception between (3.4-4.2) GHz.

A good example of undesired carriers are WIMAX signals that operate between (3.4-3.8) GHz :

Where operators are forced to sacrifice the lower portion of the super-extended C-band (3.4-4.2 GHz) by installing a narrower bandpass filter. While the bandpass filter removes the WIMAX, it also removes the remaining C-band (3.4-3.6 GHz or 3.4-3.7 GHz), limiting their operation to (3.6-4.2) GHz or (3.7-4.2) GHz. In many instances, the model 3966 notch filter will allow the user to recover much of the lower C-band, since it will notch (remove) only the undesired signals (carriers) from their C-band feed, while allowing all other frequencies through. This versatile notch filter can be configured to remove from (1-6) interfering carriers at notch depths from (15-70) dB, depending upon the signal strength of each interfering carrier.



3966F Series

Additional Specifications:

Model	3 dB BW (Approx.)	1 dB BW (Approx.)	Length (Approx.)
3966-1	5 MHz	10 MHz	15.2 cm (6")
3966-2	5 MHz	10 MHz	22.8 cm (9")
3966-3	5 MHz	10 MHz	30.4 cm (12")
3966-4	5 MHz	10 MHz	38.1 cm (15")
3966-5	5 MHz	10 MHz	45.7 cm (18")
3966-6	5 MHz	10 MHz	53.3 cm (21")

Notch frequencies available between (3.4-4.2) GHz

Example:

An operator wants to receive (3.4-4.2) GHz, but there are (3) three interfering WIMAX carriers (in-band) identified as 3.41, 3.51 and 3.57 GHz with the strongest interference coming from the 3.57 GHz carrier. If the operator determines that 15 dB notch loss will adequately remove the 3.41 & 3.51 GHz carriers and more notch loss is required to remove the 3.57 GHz carrier (30 dB ?), then the recommended filter would be to use a 4-cavity notch filter to remove the (3) interfering carriers..... specifically, a model 3966F-4-3-A. This model filter would provide 15 dB notches at 3.41 GHz and at 3.51 GHz and a 30 dB notch at 3.57 GHz.

Ordering Information:

3966(A)-(B)-(C)-(D)

(A) = Connector Type.....Cover Flange (F) or N-Connector (C)....other connector types available upon request

(B) = # of Cavities.....(1), (2), (3), (4), (5) or (6).....see chart

(C) = # of Interfering Carriers.....(1), (2), (3), (4), (5) or (6).....see chart

(D) = Option.....(A), (B) or (C).....see chart

Note : When ordering, it is necessary to provide the frequencies of the carriers to be notched.

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