

Radar Filter for C-Band

Radar Signal Elimination & Tx Reject Filter

Type: FI-03-CRT-08

for C-Band

Can be designed and developed as per customer' specifications

Frequency Range (Passband)	3.400 to 4.200 GHz
Insertion Loss (Midband)	0.15 dB max
Insertion Loss (Edges)	0.30 dB max
Return Loss	← 18 dB
Radar Rejection Stopband Isolation (at 4.25 GHz and higher)	-24.5 dB
Radar Rejection Stopband Isolation (at 3.575 GHz and lower)	-24.5 dB
Stopband Isolation from 5.85 to 6.425 GHz	-50 dB min.
Waveguide Size	R40 (WR229)
Flanges	UBR 40 with M6 threads and Ø6.53 mm through holes
Material	Aluminium with Silver Coating
Finish	Black Paint (standard)
Operating Temperature	-10° C to 40° C
Operation Pressure	max. 10 kPa (100 mbar)
Dimensions (mm)	Length x Width x Height 300 x 92 x 100
Weight	Appr. 1.2 kg
Filter Design	12 Resonator Waveguide Bandpass Filter
Application	Elimination of radar interfering signals below and above Passband, caused by navigation communications of commercial and military aircraft, marine vessels and coastal installations.
Additional Feature	Able to substitute standard Transmit Reject Filter; which may be important in case of limited space for accommodation
Unique Selling Point	Dual purpose = Radar Filter + Transmit Reject Filter → unique on the market - can be customized depending on the frequency of the radar distortion signals

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Figure: Radar Signal Elimination & Transmit Reject Filter

Theoretical Basis and Realization of the Filter have been published in the professional journal "Frequenz 59 (2005)" under the Title
„Design and Realization of a Compact Multi- Resonator Bandpass Filter for C-Band Earth Station Antennas“