



## 5G C-Band Bandpass Filters

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With the introduction of 5G networks, C-Band frequencies will now be shared with a wider range of services. The resulting interference signals can be powerful enough to saturate the sensitive C-Band satellite receiving systems which may result in total loss of service.

Alga Microwave has designed a filter that will clear portions of the C-Band spectrum to mitigate disruption and interference of existing services due to the reallocation of the spectrum to 5G transmissions. Available in either the "Blue" or the "Red" bandpass option, they can be used in both single and multi-feed receive antenna applications, are environmentally sealed, moisture resistant and are easily installed between the C-Band feedhorn and the LNA or LNB

Use these bandpass filters with Rainier's Norsat 3120 PLL LNB for the best overall solution.

# C-Band 5G Filters Specifications

5G Red Interference Filter, 3.82-4.2 GHz   Part # 210031802I		
ELECTRICAL PROPERTIES		
GROUP G FILTER	PASSBAND	3900 - 4200 MHz
	GROUP DELAY VARIATION	1.45 nSec MAX Within 0.5 +-MHz
	INSERTION LOSS	1.3 dB MAX
	REJECTION	50 dB MIN AT 3880 MHz 25 dB MIN AT 4230 MHz
	RETURN LOSS	19 dB MIN
GROUP H FILTER	PASSBAND	3780 - 4200 MHz
	GROUP DELAY VARIATION	1.45 nSec MAX Within 0.5 MHz
	INSERTION LOSS	1.3 dB MAX
	REJECTION	60 dB MIN AT 3760 MHz 25 dB MIN AT 4230 MHz
	RETURN LOSS	19 dB MIN
GROUP I FILTER	PASSBAND	3820 - 4200 MHz
	GROUP DELAY VARIATION	1.45 nSec MAX Within 0.5 MHz
	INSERTION LOSS	1.3 dB MAX
	REJECTION	70 dB MIN BELOW 3700 MHz 60 dB MIN AT 3800 MHz 50 dB MIN AT 3803 MHz (temp drift) 25 db MIN ABOVE 4230 MHz
	RETURN LOSS	20 dB MIN
MECHANICAL PROPERTIES		
INTERFACES	FLANGE: UDR40 CPR-229 FLAT FLANGE: PDR40 CPR-229 GROOVED	
MATERIAL	ALUMINUM 6061	
FINISH	FLANGES: CHEMICAL CONVERSION WAVEGUIDE: SILVER PLATE EXTERIOR: MATTE WHITE PAINT	
WEIGHT	2.2 Lbs [998g]	
ENVIRONMENTAL PROPERTIES		
OPERATING TEMP	0°C TO +50°C	

5G Blue Interference Filter, 4.0-4.2 GHz   Part # 210031803K		
ELECTRICAL PROPERTIES		
GROUP J FILTER	PASSBAND	4020 - 4200 MHz
	GROUP DELAY VARIATION	1.45 nSec MAX Within +-0.5 MHz
	INSERTION LOSS	1.3 dB MAX
	REJECTION	60 dB MIN AT 4000 MHz 25 dB MIN AT 4230 MHz
	RETURN LOSS	19 dB MIN
GROUP K FILTER	PASSBAND	4000 - 4200 MHz
	GROUP DELAY VARIATION	1.45 nSec MAX Within +-0.5 MHz
	INSERTION LOSS	1.3 dB MAX
	REJECTION	70 dB MIN BELOW 3900 MHz 60 dB MIN AT 3980 MHz 50 dB MIN AT 3983MHz (temp drift) 25 dB MIN ABOVE 4230 MHz
	RETURN LOSS	20 dB MIN
MECHANICAL PROPERTIES		
INTERFACES GROOVED	FLANGE: UDR40 CPR-229 FLAT FLANGE: PDR40 CPR-229	
MATERIAL	ALUMINUM 6061	
FINISH	FLANGES: CHEMICAL CONVERSION WAVEGUIDE: SILVER PLATE EXTERIOR: MATTE WHITE PAINT	
WEIGHT	2.2 Lbs [998g]	
ENVIRONMENTAL PROPERTIES		
OPERATING TEMP	0°C TO +50°C	