

18 GHz Cavity Diplexer



*Close Spacing (850 MHz)
Compact & Light*

Low Filter 17.8 ÷ 18.6 GHz High Filter 18.8 ÷ 19.3 GHz

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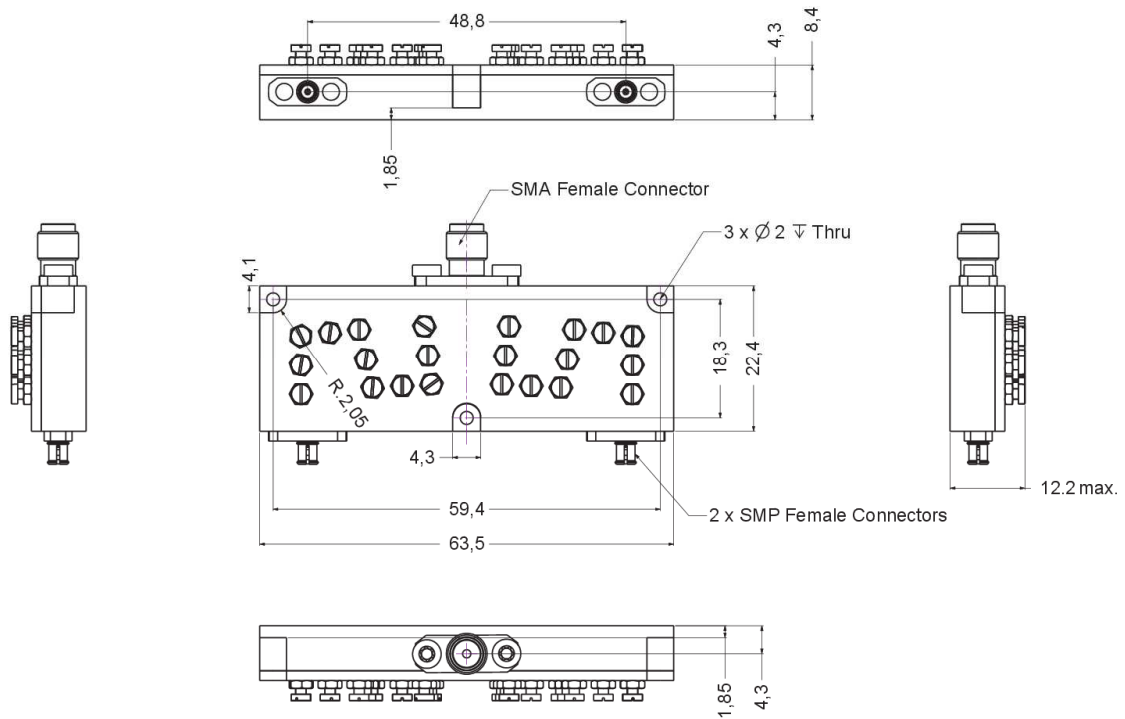
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This 18 GHz diplexer is compact and light, with very close spacing between the low and the high filter (less than 200 MHz between their inner frequency edges). Total height is less than 12.2 mm (0.48"), including tuning screws.

Diplexer Characteristics – P/N MW-D18625-CDDT

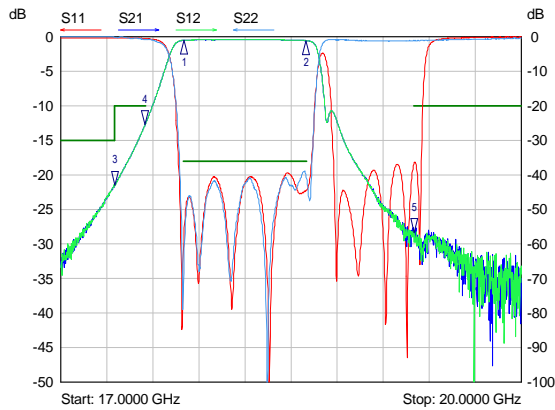
Low Filter Bandwidth	17.8 ÷ 18.6 GHz
High Filter Bandwidth	18.8 ÷ 19.3 GHz
Return Loss	≥ 18 dB
Insertion Loss	≤ 1.5 dB
Low Filter Attenuation	
14.2 ÷ 16 GHz	≥ 40 dB
16 ÷ 17.35 GHz	≥ 30 dB
17.35 ÷ 17.55 GHz	≥ 20 dB
19.3 ÷ 21.4 GHz	≥ 20 dB
21.4 ÷ 26.6 GHz	≥ 40 dB
High Filter Attenuation	
15.2 ÷ 17 GHz	≥ 40 dB
17 ÷ 18.3 GHz	≥ 30 dB
18.3 ÷ 18.425 GHz	≥ 25 dB
19.7 ÷ 21.4 GHz	≥ 23 dB
21.4 ÷ 23.2 GHz	≥ 25 dB
23.2 ÷ 27.8 GHz	≥ 40 dB
Power Handling:	30 dBm CW
Operating Temperature:	-40 ÷ +85 °C
2 nd Harmonic Rejection	≥ 40 dB (both low & high filter)
Temperature Range	-40 °C ÷ +85 °C
Connectors	1 SMA-Female (Common Port) 2 SMP Female (Low & High Filter), with Removable Female-to-Female SMP Adapters
Dimensions	63.5 x 22.4 x 12.2 mm (excluding connectors, including tuning screws)

MECHANICAL OUTLINE



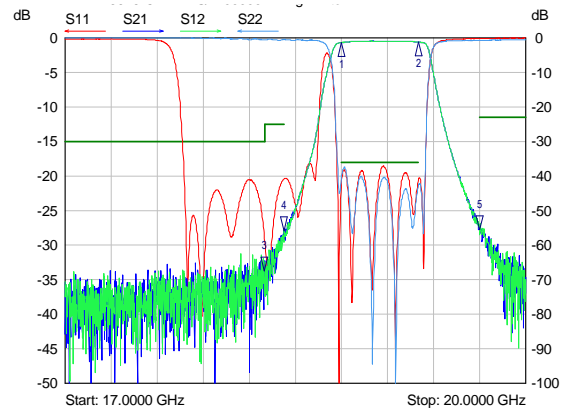
MEASURED FREQUENCY RESPONSES

LOW FILTER



Mkr	Trace	X-Axis	Value	Notes
1 ∇	S21	17.8000 GHz	-1.05 dB	
2 ∇	S21	18.6000 GHz	-1.13 dB	
3 ∇	S21	17.3500 GHz	-43.03 dB	
4 ∇	S21	17.5500 GHz	-25.31 dB	
5 ∇	S21	19.3000 GHz	-56.73 dB	

HIGH FILTER



Mkr	Trace	X-Axis	Value	Notes
1 ∇	S21	18.8000 GHz	-1.28 dB	
2 ∇	S21	19.3000 GHz	-1.17 dB	
3 ∇	S21	18.3000 GHz	-67.57 dB	
4 ∇	S21	18.4250 GHz	-55.84 dB	
5 ∇	S21	19.7000 GHz	-55.49 dB	