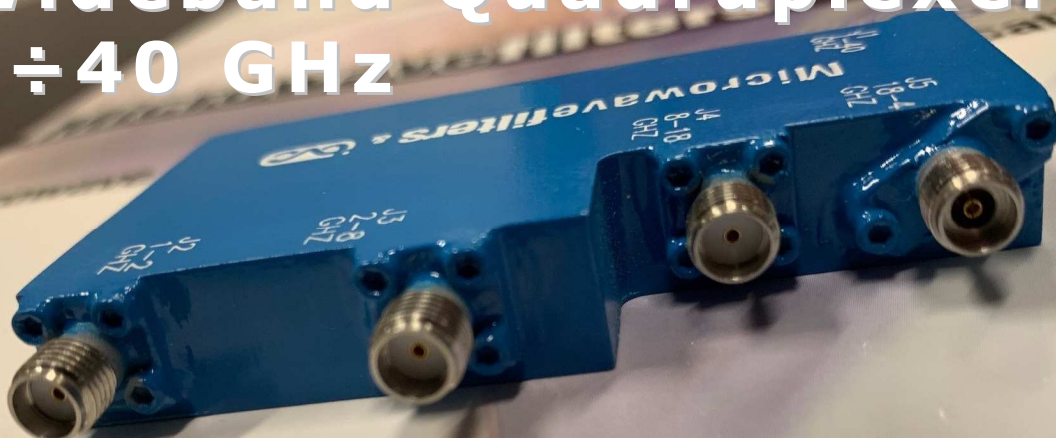


Microwavefilters® &

**Wideband Quadruplexer
1 ÷ 40 GHz**



**IL < 1.2 dB
Rejection > 50 dB**

Microwavefilters & TVC srl

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This new **Quadruplexer** works from 1 GHz to 40 GHz. Its main use is in the defense sector for radar warning receiver (RWR) applications, but it can be used for any application where small-size high-performance multiplexers are needed.

Stopband rejection is **more than 50 dB** between the four bands. Insertion losses are **typically less than 1 dB**.

Quadruplexer QP-D20500-CCCT

Main Characteristics

MECHANICAL & ENVIRONMENTAL SPECIFICATIONS

Connectors: 3 SMA Female Connectors on Filter # 1, 2 & 3 Ports, 2 2.92 (K) Female Connectors on Input Port and Filter # 4 Port

Dimensions: 75 x 40 x 12 mm

Operating Temperature Range: -55 ÷ +85 °C

Humidity: Up to 100% non-condensation, MIL-STD-202F, Method 106G

Mechanical Shock: 20g, 1/2sine, 11mili-sec MIL-STD-202, Method 213B, Test Condition A

Vibration Sinusoidal: 10g peak, sine .06" double amplitude, 10-2000Hz, MIL-STD-202, Method 204D, Test condition C

Thermal Shock: MIL-STD-202, Method 107G, Condition A, 5 cycles -55 to +85 Degrees C

EMI/EMC: Units designed to meet EMI/EMC requirements in accordance with MIL-STD- 461E

Finish: Epoxy Painting

FILTER #1

Pass Band: 1.2 – 1.8 GHz

Insertion Loss ≤ 1.5 dB

Return Loss ≥ 12 dB

Stopband Rejection DC ÷ 0.8 GHz ≥ 50 dB

Stopband Rejection 2.2 ÷ 40.0 GHz ≥ 50 dB

FILTER # 2

Pass Band: 2.2 – 7.6 GHz

Insertion Loss ≤ 1.2 dB

Return Loss ≥ 12 dB

Stopband Rejection DC ÷ 1.75 GHz ≥ 50 dB

Stopband Rejection 8.9 ÷ 40.0 GHz ≥ 50 dB

FILTER #3

Pass Band: 8.4 – 17.4 GHz

Insertion Loss ≤ 1.2 dB

Return Loss ≥ 12 dB

Stopband Rejection DC ÷ 7.4 GHz ≥ 50 dB

Stopband Rejection 19.2 ÷ 40.0 GHz ≥ 50 dB

FILTER # 4

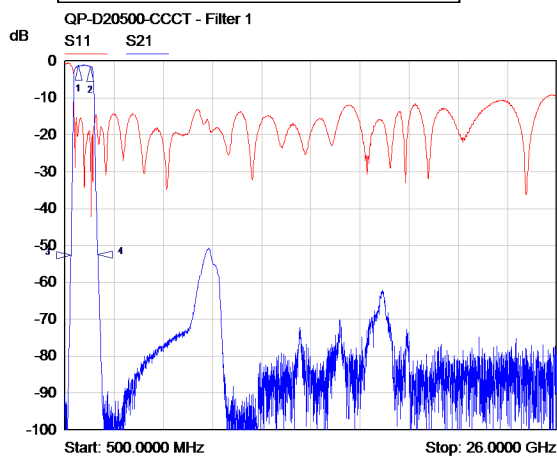
Pass Band: 18.6 – 40.0 GHz

Insertion Loss ≤ 1.2 dB

Return Loss ≥ 12 dB

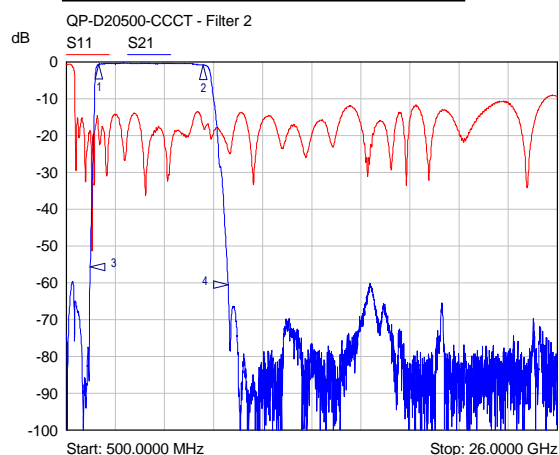
Stopband Rejection DC ÷ 16.8 GHz ≥ 50 dB

Filter # 1: 1.2 – 1.8 GHz



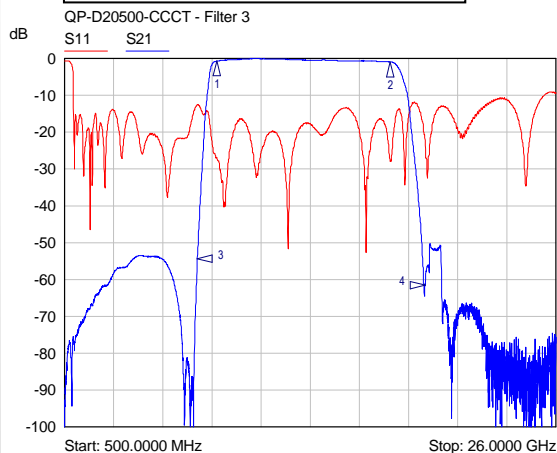
Mkr	Trace	X-Axis	Value	Notes
1	S21	1.2000 GHz	-1.22 dB	
2	S21	1.8000 GHz	-1.41 dB	
3	S21	800.0000 MHz	-52.68 dB	
4	S21	2.2000 GHz	-52.42 dB	

Filter # 2: 2.2 – 7.6 GHz



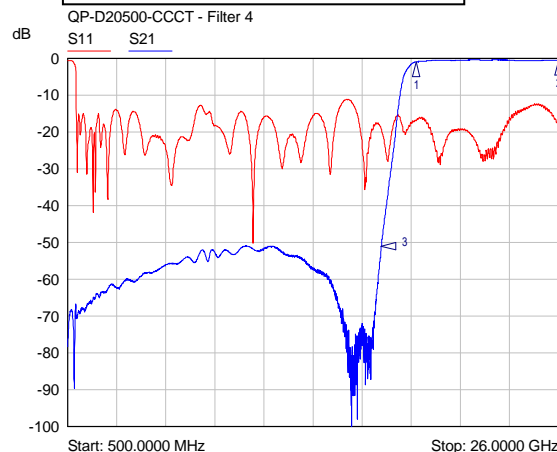
Mkr	Trace	X-Axis	Value	Notes
1	S21	2.2000 GHz	-0.68 dB	
2	S21	7.6000 GHz	-0.84 dB	
3	S21	1.7500 GHz	-55.68 dB	
4	S21	8.9000 GHz	-60.49 dB	

Filter # 3: 8.4 – 17.4 GHz



Mkr	Trace	X-Axis	Value	Notes
1	S21	8.4000 GHz	-0.70 dB	
2	S21	17.4000 GHz	-0.96 dB	
3	S21	7.4000 GHz	-54.26 dB	
4	S21	19.2000 GHz	-61.57 dB	

Filter # 4: 18.6 – 40.0 GHz



Mkr	Trace	X-Axis	Value	Notes
1	S21	18.6000 GHz	-0.98 dB	
2	S21	26.0000 GHz	-0.45 dB	
3	S21	16.8000 GHz	-51.06 dB	