BROADBAND DIPLEXER DPX-1721

The DPX-1721 is a broadband low pass/high pass diplexer capable of multiplexing low frequency (DC-17 GHz) and high frequency (21.5-40 GHz) signals. The novel design offers extremely low insertion loss and high isolation between the low pass and high pass channels. The DPX-1721 is an excellent solution for applications such as high frequency/baseband signal routing (especially following a broadband high frequency mixing stage), low loss power splitting/combination, separation of harmonic tones, and general-purpose lab use.



Features

- Broadband performance
- Low insertion loss
- High isolation between low pass and high pass ports
- Lightweight, compact design

Electrical Specifications – Specifications guaranteed from -55 to +100°C, measured in a 50Ω system.

Parameter	Frequency Range (GHz)	Min	Typ	Max
Low Pass Filter				
Pass Band Insertion Loss (dB)	DC-17		1.2	
Stop Band Rejection (dB)	21.5-40	40	50	
Pass Band Return Loss (dB)	DC-17	12	20	
High Pass Filter				
Pass Band Insertion Loss (dB)	21.5-40		1.5	
Stop Band Rejection (dB)	DC-17	25	40	
Pass Band Return Loss (dB)	21.5-40	8	12	
Common Port Return Loss (dB)	DC-17 21.5-40	12 8	20 12	
Isolation (dB)	DC-17 21.5-40	25 40	40 50	
Impedance (Ω)			50	
RF Power (W)				1
Weight (g)			20	

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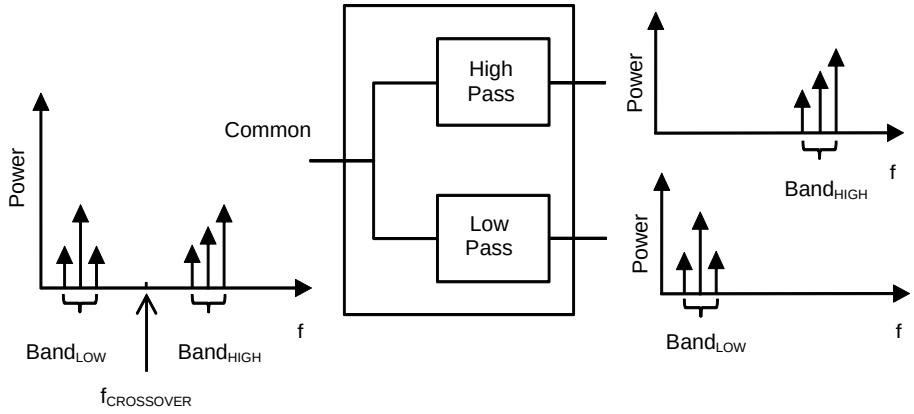


Fig. 1. Schematic Diagram

Typical Performance

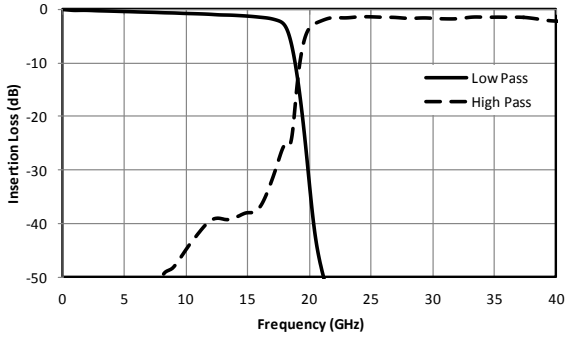


Fig. 2. Insertion loss.

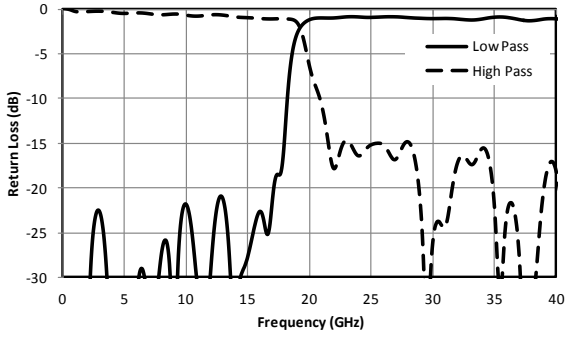


Fig. 3. Return loss.

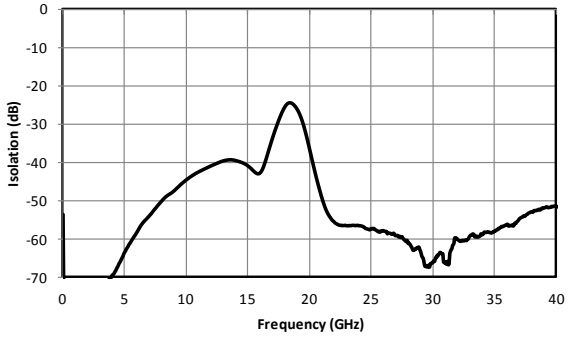


Fig. 4. Isolation.

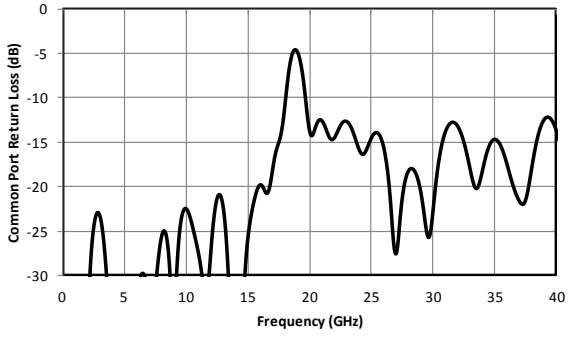
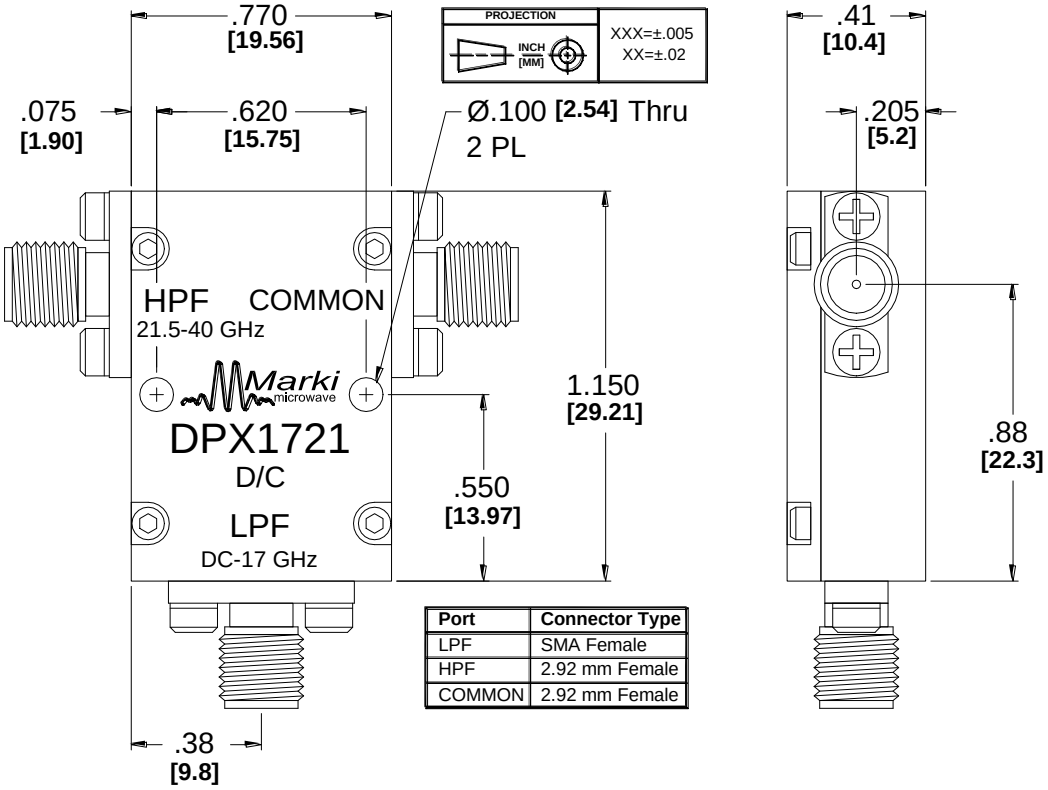


Fig. 5. Common port return loss.



Port	Connector Type
LPF	SMA Female
HPF	2.92 mm Female
COMMON	2.92 mm Female

Model Number	Description	S-Parameters
DPX-1721	DC–17 GHz Low Pass, 21.5–40 GHz High Pass P1- High Pass, P2- Common, P3- Low Pass with 2.92 mm connectors[1] on P1 and P2, and SMA Female connector[1] on P3	DPX-1721.S3P

[1]Contact factory for other connector options.

NOTE:
Specifications are subject to change without notice. Contact Marki Microwave for the most recent specifications and data sheets.

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