

## BROADBAND DIPLEXER

## DPX-9516

The DPX-9516 is a broadband low pass/high pass diplexer capable of multiplexing low frequency (DC-9.5 GHz) and high frequency (16-32 GHz) signals. The novel design offers extremely low insertion loss for both the low pass and high pass channels. The DPX-9516 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 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

Parameter	Frequency Range (GHz)	Min	Typ	Max
<b>Low Pass Filter</b>				
Pass Band Insertion Loss (dB)	DC to 9.5		1.5	
Stop Band Rejection (dB)	16 to 32	30	45	
Pass Band Return Loss (dB)	DC to 8.5	13	17	
<b>High Pass Filter</b>				
Pass Band Insertion Loss (dB)	16 to 32		1.5	
Stop Band Rejection (dB)	DC to 9.5	25	> 30	
Pass Band Return Loss (dB)	18 to 32	8	13	
Common Port Return Loss (dB)	DC to 8.5	13	17	
	16 to 32	8	13	
Isolation (dB)	DC to 9.5	25	> 30	
	16 to 32	30	> 40	
Impedance ( $\Omega$ ) <sup>1</sup>			50	
RF Power (W)				1
Weight (g)			35	

<sup>1</sup>Specifications guaranteed when operated in a 50 $\Omega$  system.

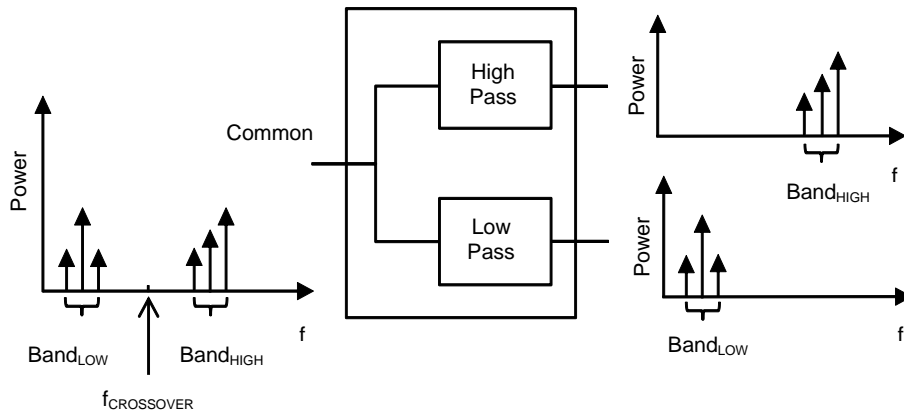


Fig. 1 Diplexer schematic diagram.

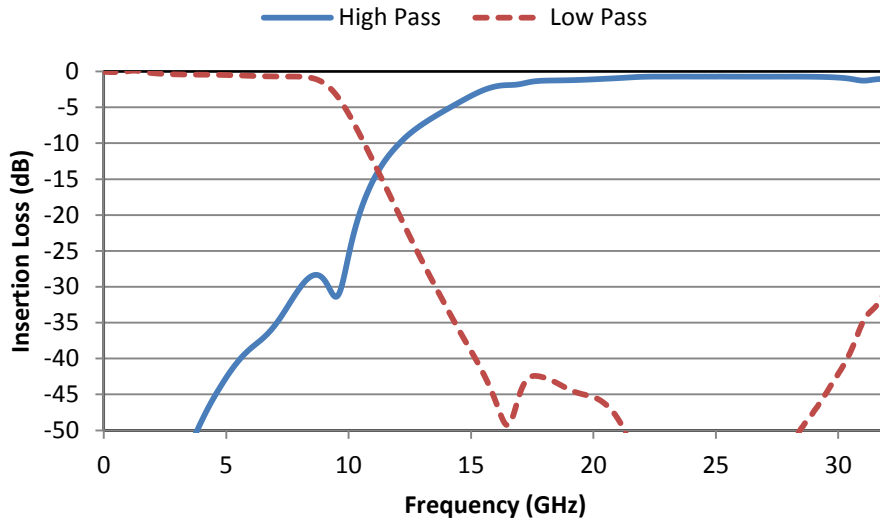


Fig. 2 Insertion Loss at High Pass and Low Pass port for a typical DPX-9516 Diplexer.

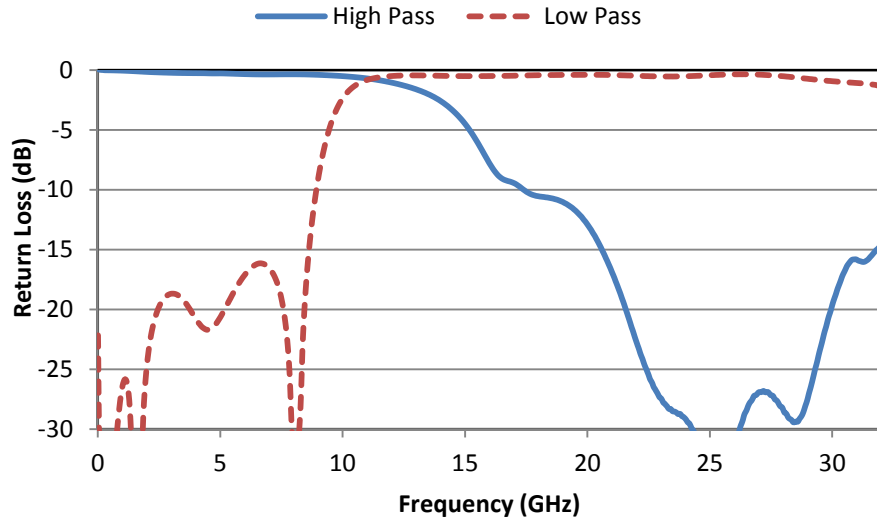


Fig. 3 Return Loss at High Pass and Low Pass port for a typical DPX-9516 Diplexer.

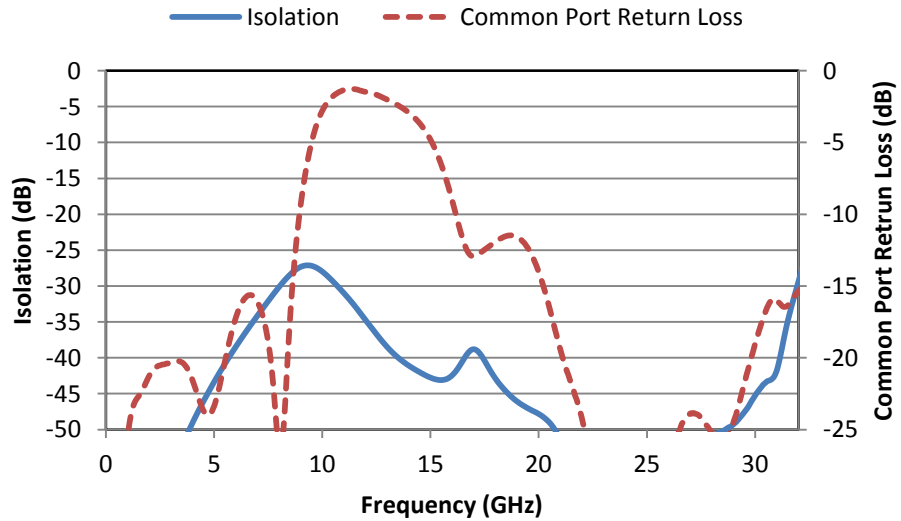
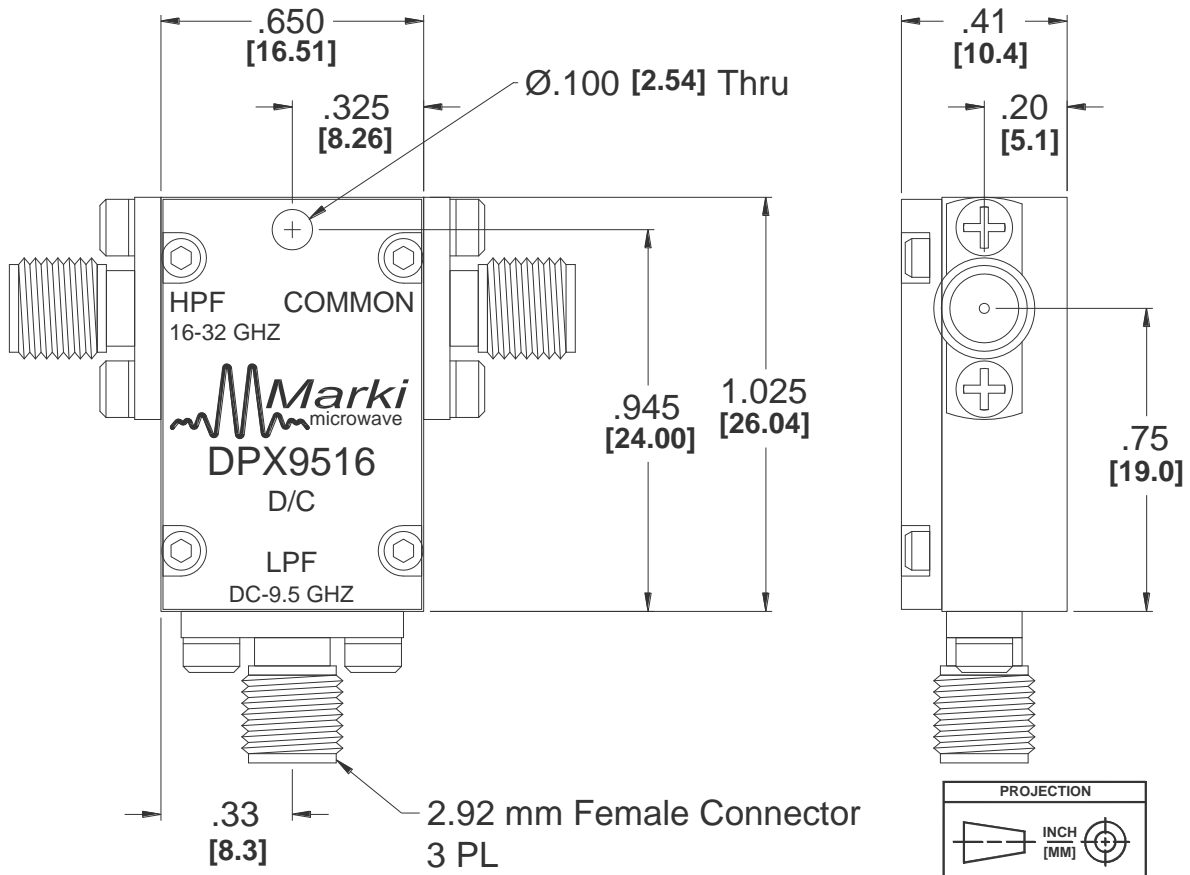


Fig. 4 Isolation and Common Port return loss for a typical DPX-9516 Diplexer.

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Model Number	Description
DPX-9516	DC – 9.5 GHz Low Pass, 16 – 32 GHz High Pass P1- High Pass, P2- Common, P3- Low Pass with 2.92 Female connectors <sup>1</sup>

<sup>1</sup>Default is 2.92 female connectors. Contact factory for other connector options.

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