

## DIPLEXER

## DPX-1

Available in either a connectorized or miniature surface mount package (0.240 inch x 0.150 inch), the DPX-1 is a low cost, high performance diplexer. The unique design offers high pass/low pass signal routing/multiplexing with excellent isolation. Passband insertion loss is less than 1 dB with rejection typically exceeding 25 dB. Besides being ideal for transmitter/receiver applications, the DPX-1 can also be used as an excellent non-reflective low pass (or high pass) filter for systems requiring broadband 50Ω impedance match (such as mixers).



### Features

- Low Insertion Loss
- Superior Repeatability
- Low Profile Miniaturized, Reflow Solderable Package Option
- User defined cross over frequencies available

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

Parameter	Frequency Range (GHz)	Min	Typ	Max
Cross Over Frequency	1.1		±5 %	
<b>Low Pass Filter</b>				
Pass Band Insertion Loss (dB)	DC to 0.85		0.5	1
Stop Band Rejection (dB)	1.4 to 3.3		18	
	3.3 to 5	18	22	
Pass Band Return Loss (dB)	<0.85		20	
<b>High Pass Filter</b>				
Pass Band Insertion Loss (dB)	1.4 to 5		0.6	1.2
Stop Band Rejection (dB)	<0.6	24	30	
	<0.85		18	
Pass Band Return Loss (dB)	1.4 to 5		15	
Common Port Return Loss (dB)	<0.85		20	
	1.4 to 5		15	
Isolation (dB)	<0.75	14	24	
	1.5 to 5	14	24	
RF Power (W)				1

### Part Number Options

Package Style(s) <sup>1</sup>	Example	S-Parameters <sup>2</sup>
<a href="#">DPX</a> (Surface Mount)	DPX-1-1	<a href="#">DPX-1.S3P</a>
<a href="#">DPXN</a> (Connectorized)	DPXN-1	

<sup>1</sup>For surface mount package, specify port configuration by adding -1 or -2 suffix to model number. Default is -2 configuration when not specified.

<sup>2</sup>S-Parameters include test fixture.

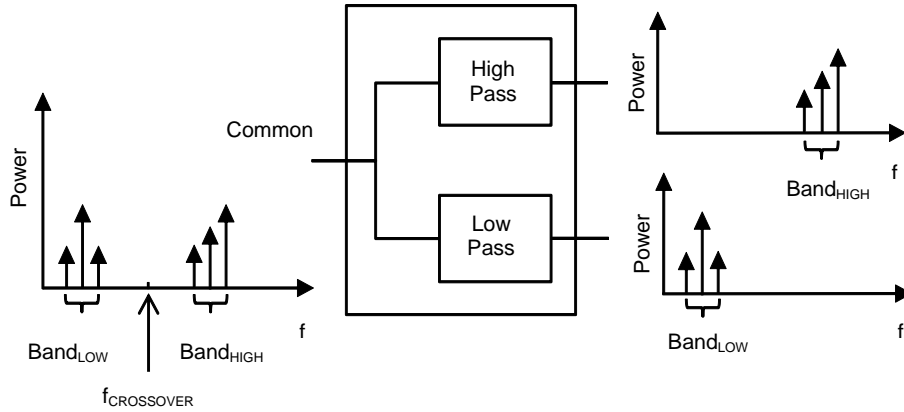


Fig. 1. Schematic Diagram

Typical Performance

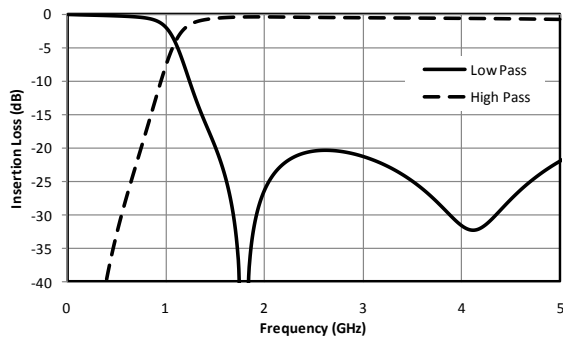


Fig. 2. Insertion loss.

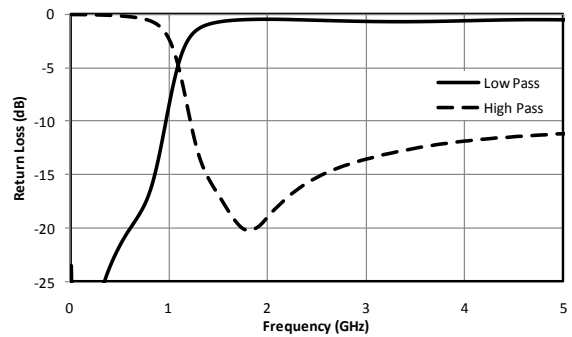


Fig. 3. Return loss.

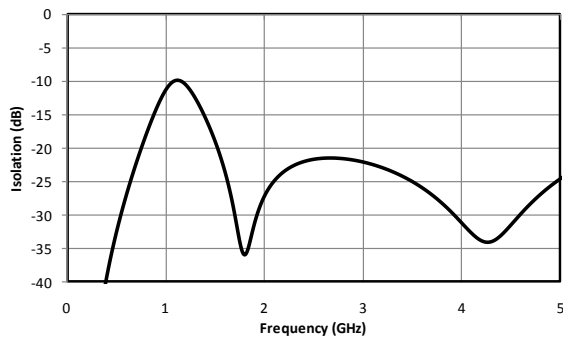


Fig. 4. Isolation.

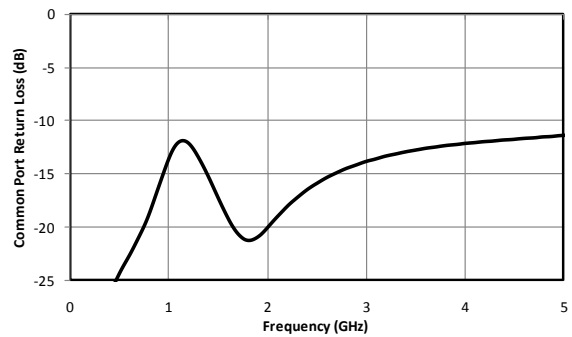


Fig. 5. Common port return loss.

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