DIPLEXER DPX-4

Available in either a connectorized or miniature surface mount package (0.240 inch x 0.150 inch), the DPX-4 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 1.4 dB with rejection typically exceeding 25 dB. Besides being ideal for transmitter/receiver applications, the DPX-4 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	4.1		±5 %	
Low Pass Filter				
Pass Band Insertion Loss (dB)	DC to 2.8		0.8	1.6
Stop Band Rejection (dB)	5.5 to 6		20	
	6 to 12	15	25	
Pass Band Return Loss (dB)	<2.7		12	
High Pass Filter				
Pass Band Insertion Loss (dB)	5.5 to 12		1.2	2.4
Stop Band Rejection (dB)	<2	30	40	
	<2.8		25	
Pass Band Return Loss (dB)	5.5 to 12		12	
Common Port Return Loss (dB)	<2.8		12	
	5.5 to 12		12	
Isolation (dB)	<2.8	20	30	
	5.5 to 12	15	25	
RF Power (W)				1

Part Number Options

Package Style(s)[1]	Example	S-Parameters[2]
DPX (Surface Mount)	DPX-4-1	DPX-4.S3P
DPXN (Connectorized)	DPXN-4	

[1]For surface mount package, specify port configuration by adding –1 or –2 suffix to model number. Default is –2 configuration when not specified.
[2]S-Parameters include test fixture.

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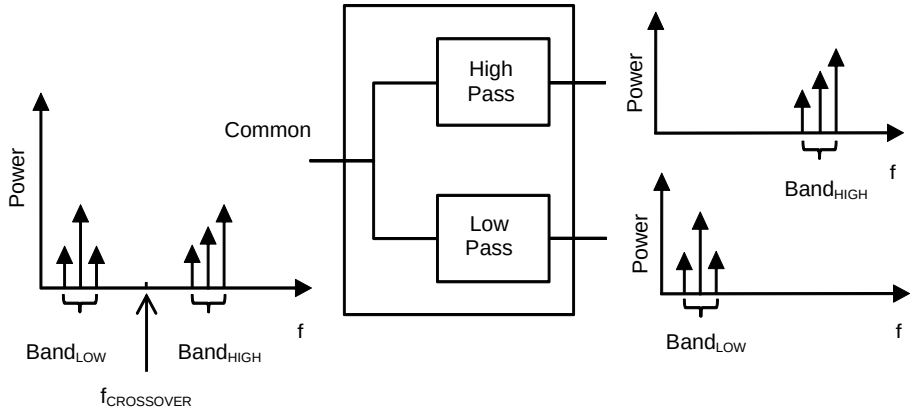


Fig. 1. Schematic Diagram

Typical Performance

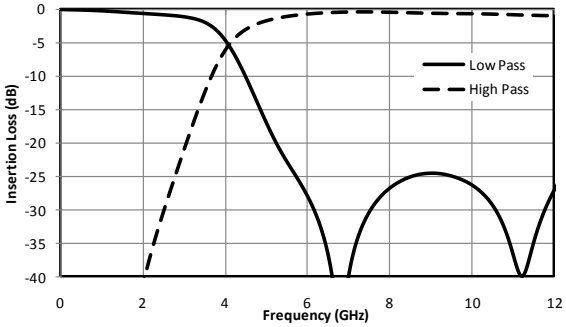


Fig. 2. Insertion loss.

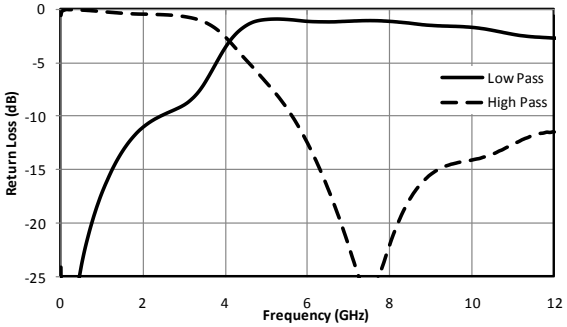


Fig. 3. Return loss.

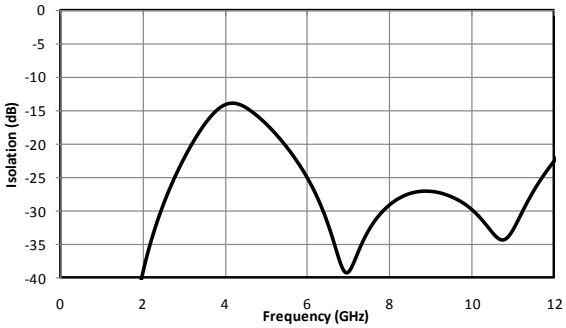


Fig. 4. Isolation.

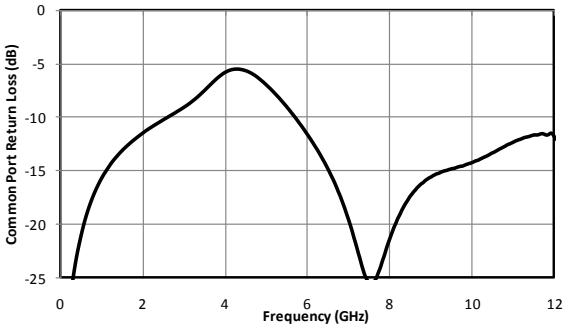


Fig. 5. Common port return loss.

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