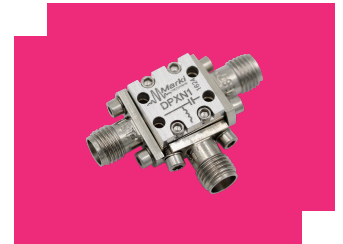


DPXN-1 Diplexer

DEVICE OVERVIEW

General Description

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).



[Download s-parameters here](#)

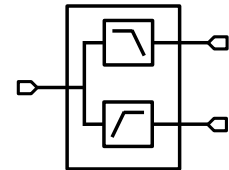
Features

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

Applications

- Reflectionless Filter Applications
- RF Transceivers

Functional Block Diagram



Part Ordering Options

Part Number	Description	Package	Connectors	Green Status	Product Lifecycle	Export Classification
DPXN-1	Diplexer	DPXN	<u>Standard</u>	Non-RoHS	Released	EAR99

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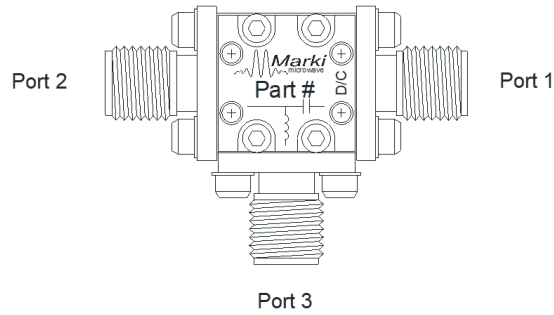
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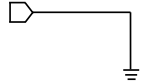
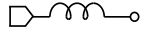


- Outline Drawing

Port Configuration and Functions

Port Diagram



Port Functions

Port	Function	Connector Type	Description	DC Equivalent Circuit
GND	Ground	-	DPXN package ground path is provided through the metal housing and outer coax conductor.	
Port 1	High Pass Filter	-	Port 1 is DC open to Port 2 and Port 3.	
Port 2	Common/Input	-	Port 2 is DC open to Port 1 and short to Port 3.	
Port 3	Low Pass Filter	-	Port 3 is DC open to Port 1 and short to Port 2.	

Specifications

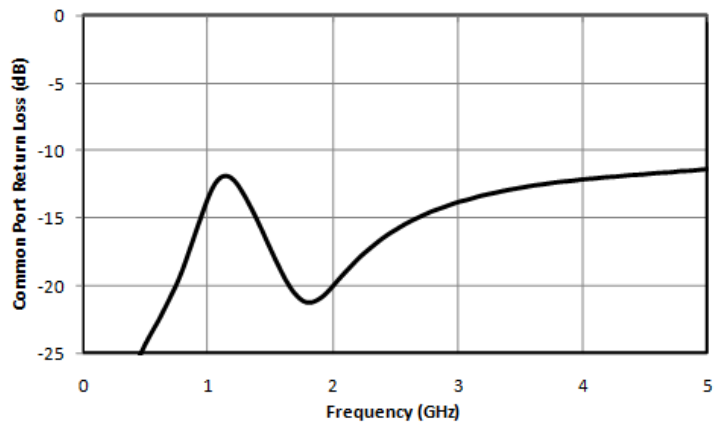
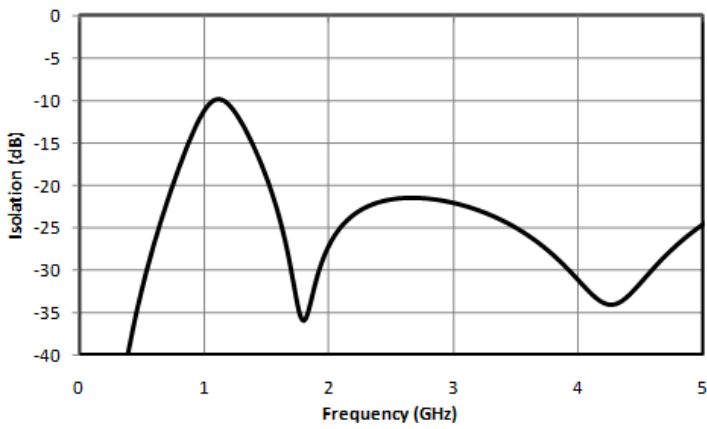
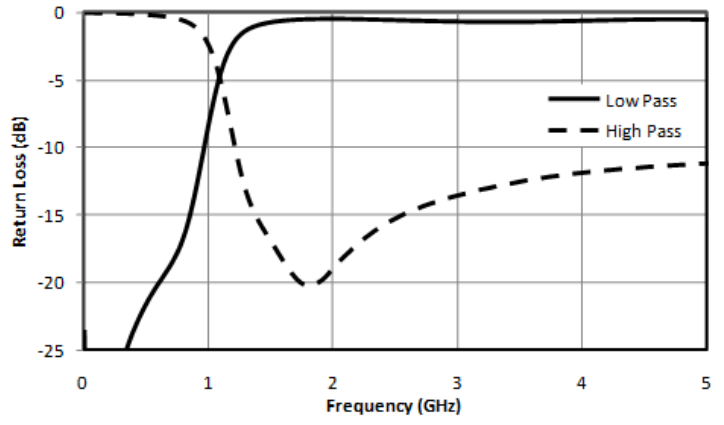
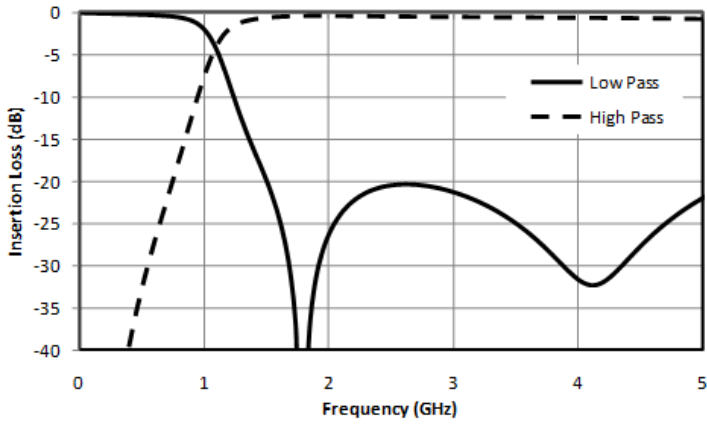
Package Information

Parameter	Details	Rating
Dimensions	-	11.94 x 11.94 mm

Electrical Specifications

Parameter	Test Conditions	Minimum Frequency (GHz)	Maximum Frequency (GHz)	Min	Typ	Max	Unit
30 dBc Low Pass Rejection Point	<0.6 GHz	-	0.6	24	30	-	dB
30 dBc Low Pass Rejection Point	<0.85 GHz	-	0.85	-	18	-	dB
Common Port Return Loss	<0.85 GHz	-	0.85	-	20	-	dB
Common Port Return Loss	1.4 to 5 GHz	1.4	5	-	15	-	dB
Cross Over Frequency	1.1 GHz	1.1	1.1	-	5	-	%
High Pass Filter, Pass Band Insertion Loss	1.4 to 5 GHz	1.4	5	-	0.6	1.2	dB
High Pass Filter, Pass Band Return Loss	1.4 to 5 GHz	1.4	5	-	15	-	dB
Isolation	<0.75 GHz	-	0.75	14	24	-	dB
Isolation	1.5 to 5 GHz	1.5	5	14	24	-	dB
Low Pass Filter, Pass Band Insertion Loss	DC to 0.85 GHz	0	0.85	-	0.5	1	dB
Low Pass Filter, Pass Band Return Loss	<0.85 GHz	-	0.85	-	20	-	dB
Low Pass Filter, Stop Band Rejection	1.4 to 3.3 GHz	1.4	3.3	-	18	-	dB
Low Pass Filter, Stop Band Rejection	3.3 to 5 GHz	3.3	5	18	22	-	dB
RF Power	-	-	-	-	-	1	W
1 dBc High Passband	-	-	-	1.4	-	5	GHz
1 dBc Low Passband	-	-	-	0	-	0.85	GHz

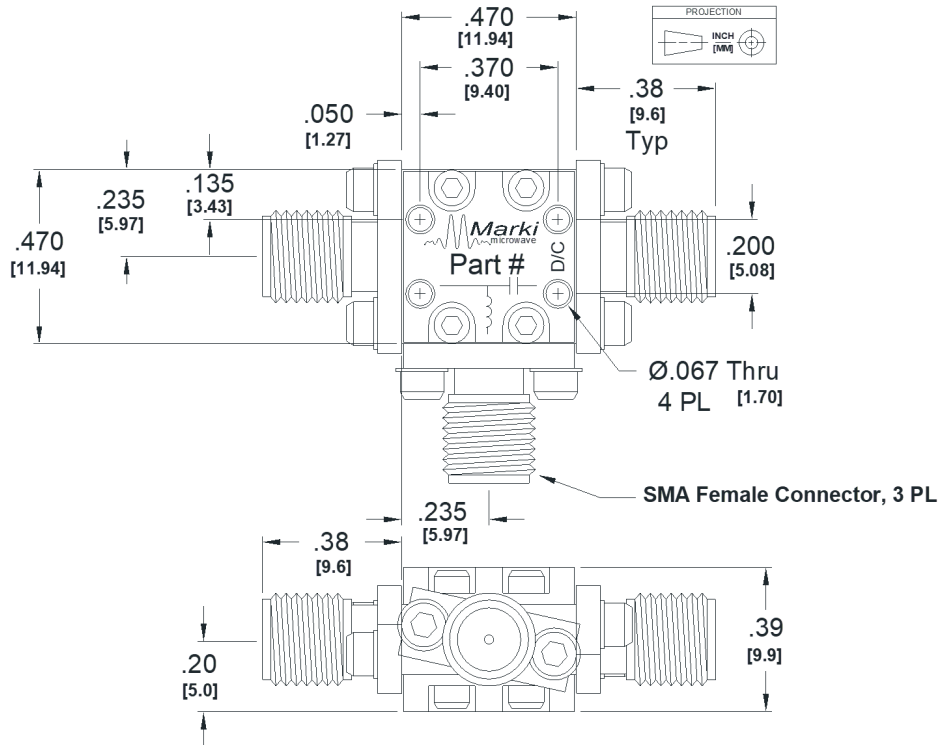
Typical Performance



Mechanical Data

Outline Drawing

Download : [Outline 2D Drawing](#) | [Outline 3D Drawing](#) | [Outline 3D STP](#)



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