

# Coaxial Diplexer

## ZDPL-2025-75-F+

75Ω DC to 1700 MHz  
(DC - 204, 258-1700 MHz)



Generic photo used for illustration purposes only  
CASE STYLE: F2239

### The Big Deal

- Low insertion loss, 1dB typical
- High rejection
- High crossover isolation
- Excellent return loss, 24dB typical
- 75Ω Impedance
- Used in DOCSIS 3.1 standard test systems with extended range

### Product Overview

ZDPL-2025-75-F+ is a high performance diplexer with the lowpass port at DC - 204 MHz and highpass port at 258-1700 MHz. Excellent return loss over extended frequency combined with high out of channel rejection makes it a ideal component in DOCSIS 3.1 test equipments, cable TV and multiband radio systems.

### Key Features

Feature	Advantages
Low passband insertion loss	Passband insertion loss 1 dB ensures low signal loss through the both channels.
Excellent stopband rejection	Co-channel rejection of 50 dB typical ensures unwanted spurious are eliminated
Excellent return loss at DC-204 and 258-1700 MHz	This makes signal transmission with less reflections and well- matched with the adjacent component used in the system.

#### Notes

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### Maximum Ratings

Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
RF Power Input	30 dBm Max.
Permanent damage may occur if any of these limits are exceeded.	

### Coaxial Connections

HIGH PASS PORT	3
LOW PASS PORT	2
COMMON PORT	1

### Features

- Low insertion loss
- Excellent return loss
- High rejection
- High cross over isolation
- 75Ω impedance

### Applications

- Cable TV and Multiband radio systems
- DOCSIS 3.1 test system with extended range



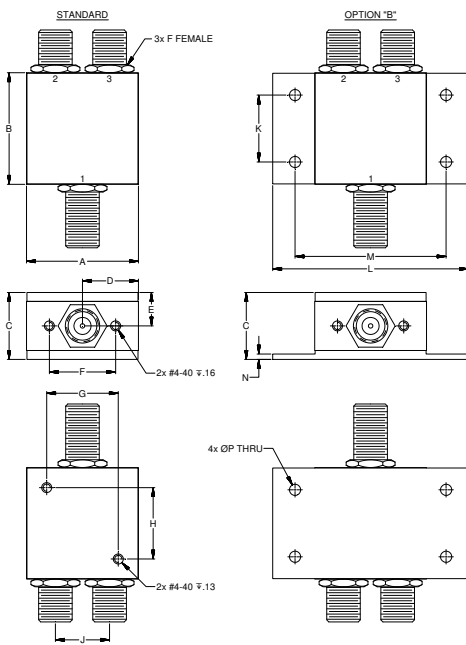
Generic photo used for illustration purposes only

CASE STYLE: F2239  
 Connectors Model  
 F-Female ZDPL-2025-75-F+  
 BRACKET (OPTION "B")

### +RoHS Compliant

The +Suffix identifies RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications

### Outline Drawing



### Outline Dimensions (inch/mm)

A	B	C	D	E	F	G	H
1.25	1.25	.75	.63	.38	.74	.80	.80
31.75	31.75	19.05	15.88	9.53	18.80	20.32	20.32
J	K	L	M	N	P	Wt.	
.61	.75	2.19	1.69	.06	.125	grams	
15.37	19.05	55.58	42.88	1.52	3.18	85	

Note: Please refer to case style drawing for details

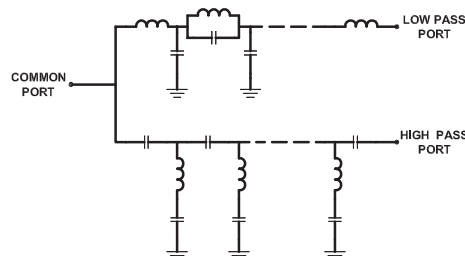
### Electrical Specifications at 25°C

Parameter	Port	Frequency (MHz)	Min.	Typ.	Max.	Unit	
Pass Band	Insertion Loss	Low Pass	DC-204	-	1	1.5	dB
		High Pass	258-1700	-	1	1.5	
	Return Loss	Low Pass	DC-204	20	24	-	dB
		High Pass	258-1400	18	23	-	
		High Pass	1400-1700	15	20	-	
		Common	DC-204	20	24	-	
Stop Band Isolation	Low Pass	258-1700	45	65	-	dB	
	High Pass	DC-204	42	50	-		
Cross Over Isolation	LP-HP	204-258	33	37	-	dB	

### Typical Performance Data at 25°C

FREQUENCY (GHz)	INSERTION LOSS (dB)			RETURN LOSS (dB)	
	Low Pass Port	High Pass Port	Common Port	Low Pass Port	High Pass Port
1	0.02	91.75	51.55	51.27	0.01
10	0.06	81.26	40.90	41.37	0.00
50	0.14	70.19	32.68	36.85	0.02
100	0.24	67.37	29.74	30.10	0.08
204	0.96	47.79	33.08	30.67	0.60
206	1.03	47.05	36.03	35.22	0.62
219	3.06	42.34	8.00	7.28	0.80
225	8.07	30.57	3.36	2.49	0.97
226	9.17	28.41	3.03	2.14	1.00
230	14.18	20.75	2.35	1.30	1.21
234	20.07	14.24	2.39	0.95	1.66
240	30.36	7.07	4.01	0.74	3.50
241	33.89	5.62	5.01	0.71	4.50
245	44.01	3.03	9.29	0.65	8.62
250	50.80	1.73	18.37	0.60	16.30
258	56.49	1.16	29.49	0.53	24.91
300	58.15	0.58	22.91	0.37	23.76
500	85.33	0.31	28.36	0.17	28.82
1000	71.22	0.37	24.53	0.24	24.07
1400	64.53	0.42	30.37	0.36	29.77
1600	63.97	0.45	26.63	0.48	31.39
1700	63.05	0.50	21.71	0.58	24.22

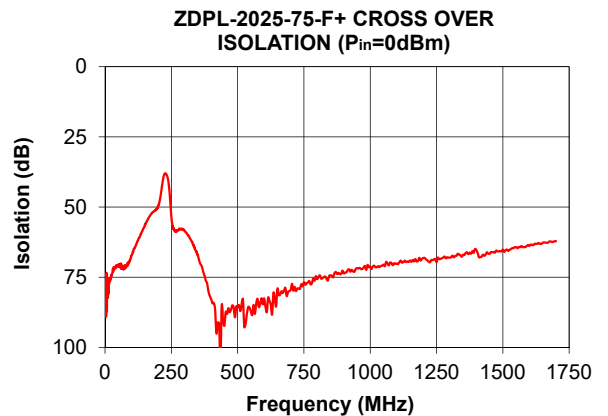
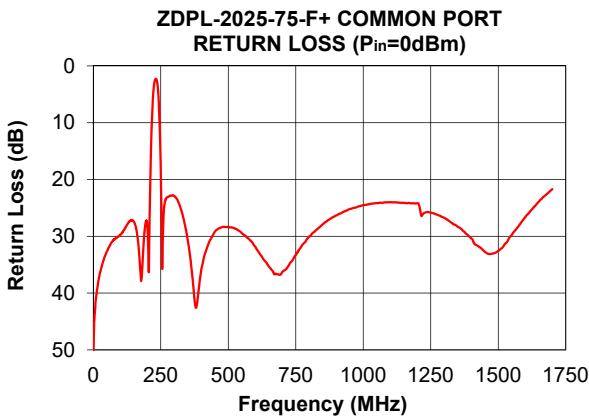
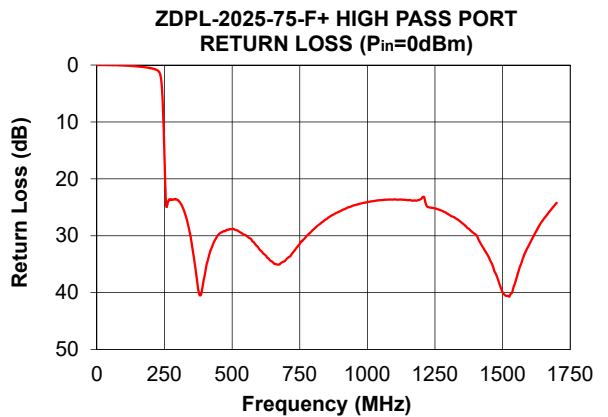
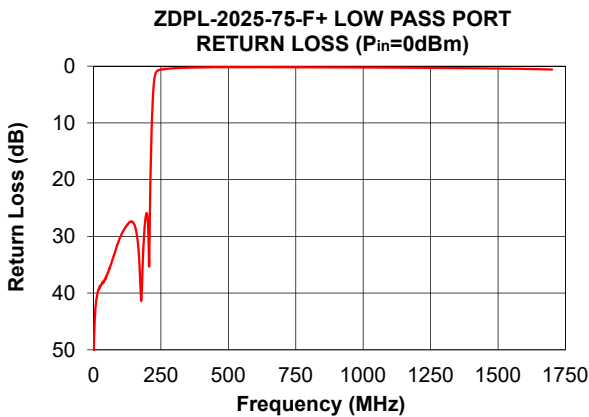
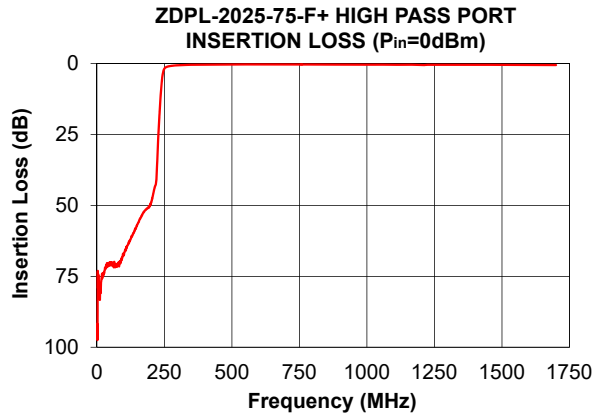
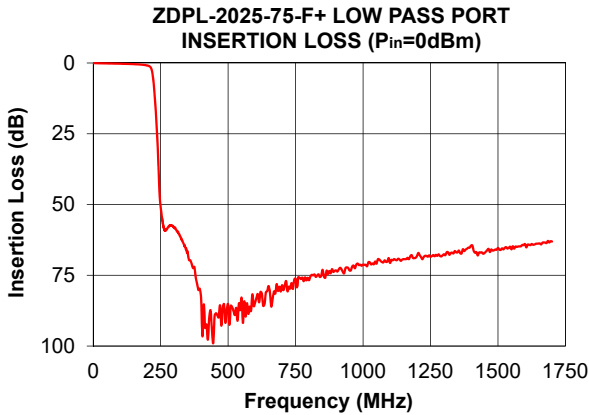
### Functional Schematic



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