DC Pass, High Power

Power Splitter/Combiner ZC2PD-K0244+

2 Way-0° 50Ω 2000 to 40000 MHz

The Big Deal

- Super wideband, 2 to 40 GHz
- Low insertion loss, 0.8 dB typ. at 22 GHz
- High Isolation, 32 dB typ. at 22 GHz
- 20W power handling
- Low amplitude unbalance, 0.04 dB typ. at 22 GHz

CASE STYLE: UU2623

Product Overview

Mini-Circuits' ZC2PD-K0244+ is a super wideband 2-way 0˚ splitter/combiner providing coverage from 2 to 40 GHz, supporting a wide range of applications including 5G, Ku-Band, K-Band, instrumentation and many more. This model provides 20W power handling as a splitter and very low insertion loss across the entire operating frequency range, minimizing power dissipation and delivering excellent signal power transmission from input to output. The ZC2PD-K0244+ comes housed in a case measuring 1.04 x 1.79 x 0.5".

Key Features

Feature	Advantages
Ultra-wideband, 2 to 40 GHz	Extremely wide frequency range supports many broadband applications in a single model. Ideal for use in widebnad instrumentation
Low insertion loss, 0.8 dB typ. at 22 GHz	The combination of 20W power handling and low insertion loss makes this model a suitable candidate for distributing signals while maintaining excellent transmission of signal power.
High isolation, 32 dB typ. at 22 GHz	Minimizes interference between ports.
High power handling: • 20W as a splitter at 25°C • 0.45W as a combiner	The ZC2PD-K0244+ is suitable for systems with a wide range of power requirements.
Low amplitude unbalance, 0.04 dB at 22 GHz	Produces nearly equal output signals, ideal for parallel path and multichannel systems.
DC Passing, 440mA	Supports applications where DC power is needed to pass through the RF line.

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Generic photo used for illustration purposes only

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Connectors	Model
2.92mm-Fem	ZC2PD-K0244+

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

Maximum Ratings

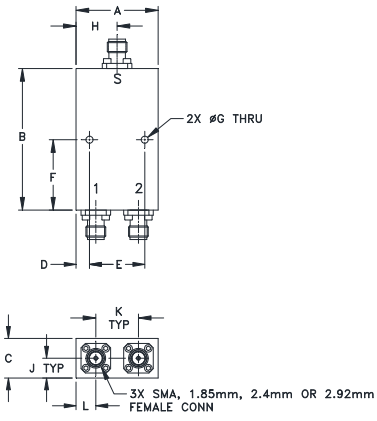
Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C
Power Input (as a splitter)	20W* max.
Internal Dissipation	0.45W max.
DC Current	440 mA

Permanent damage may occur if any of these limits are exceeded.
* Derate linearly to 10W at 100°C

Coaxial Connections

Sum Port	S
Port 1	1
Port 2	2

Outline Drawing

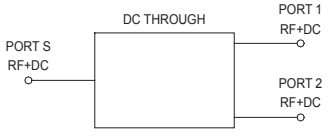


Outline Dimensions (inch / mm)

A	B	C	D	E	F	G
1.04	1.79	.50	.17	.700	.89	.090
26.42	45.47	12.70	4.32	17.78	22.61	2.29

H	J	K	L	wt
.52	.25	.540	.25	grams
13.21	6.35	13.72	6.35	60

Electrical Schematic



Features

- Super wideband, 2000 - 40000 MHz
- Low insertion loss, 0.8 dB typ.
- Low amplitude unbalance, 0.04 dB typ.
- Excellent VSWR, 1.13:1 typ.
- High isolation, 32 dB typ.

Applications

- 5G
- Fixed satellite
- Space research
- Mobile

Electrical Specifications at 25°C

Parameter	Frequency (MHz)	Min.	Typ.	Max.	Unit
Frequency Range		2000		40000	MHz
Insertion Loss Above 3.0 dB	2000 - 8000		0.3	0.9	dB
	8000 - 18000		0.5	1.2	
	18000 - 26500		0.8	1.5	
	26500 - 40000		1.1	1.8	
Isolation	2000 - 8000	18	29		dB
	8000 - 18000	18	31		
	18000 - 26500	18	32		
	26500 - 40000	18	33		
Phase Unbalance (±)[1]	2000 - 8000		0.1	2	Degree
	8000 - 18000		0.3	2	
	18000 - 26500		0.5	3	
	26500 - 40000		0.9	4	
Amplitude Unbalance (±)[1]	2000 - 8000		0.02	0.2	dB
	8000 - 18000		0.03	0.2	
	18000 - 26500		0.04	0.3	
	26500 - 40000		0.07	0.3	
VSWR (Port S)	2000 - 8000		1.16	1.4	:1
	8000 - 18000		1.15	1.5	
	18000 - 26500		1.13	1.5	
	26500 - 40000		1.13	1.6	
VSWR (Port 1-2)	2000 - 8000		1.15	1.5	:1
	8000 - 18000		1.14	1.4	
	18000 - 26500		1.11	1.5	
	26500 - 40000		1.12	1.6	

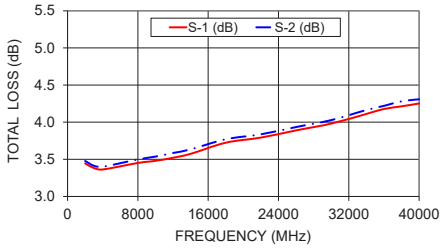
1. With reference to average.

Typical Performance Data

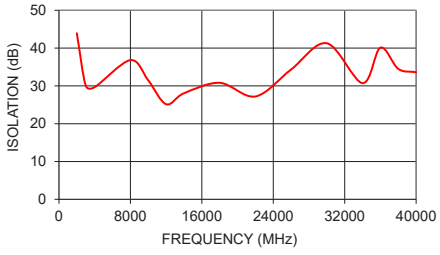
Frequency (MHz)	Total Loss[1] (dB)		Amplitude Unbalance (dB)	Isolation (dB)	Phase Unbalance (deg.)	VSWR S	VSWR 1	VSWR 2
	S-1	S-2						
2000	3.45	3.48	0.03	43.93	0.17	1.28	1.25	1.26
3000	3.38	3.41	0.03	30.08	0.00	1.15	1.16	1.15
4000	3.36	3.40	0.04	29.67	0.11	1.06	1.07	1.06
8000	3.45	3.50	0.05	36.81	0.28	1.10	1.12	1.12
10000	3.48	3.54	0.06	31.47	0.45	1.07	1.03	1.02
12000	3.52	3.59	0.06	25.16	0.59	1.05	1.13	1.15
14000	3.57	3.63	0.06	28.06	0.75	1.11	1.20	1.22
18000	3.72	3.77	0.05	30.81	0.98	1.20	1.14	1.13
22000	3.79	3.84	0.04	27.20	1.24	1.17	1.09	1.10
26000	3.89	3.93	0.04	34.34	1.47	1.11	1.19	1.18
30000	3.98	4.03	0.05	41.28	1.57	1.01	1.09	1.06
34000	4.11	4.16	0.05	30.73	1.71	1.09	1.23	1.23
36000	4.18	4.22	0.04	40.11	1.79	1.04	1.21	1.19
38000	4.21	4.28	0.07	34.50	1.86	1.13	1.14	1.16
40000	4.25	4.31	0.06	33.62	2.10	1.16	1.15	1.15

1. Total Loss = Insertion Loss + 3dB splitter theoretical loss.

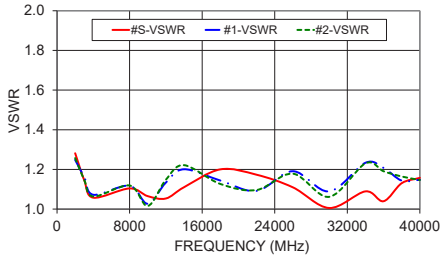
ZC2PD-K0244+
TOTAL LOSS



ZC2PD-K0244+
ISOLATION



ZC2PD-K0244+
VSWR



Notes

A. Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.
B. Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
C. The parts covered by this specification document are subject to Mini-Circuits standard limited warranty and terms and conditions (collectively, "Standard Terms"); Purchasers of this part are entitled to the rights and benefits contained therein. For a full statement of the Standard Terms and the exclusive rights and remedies thereunder, please visit Mini-Circuits' website at www.minicircuits.com/MCLStore/terms.jsp