DC Pass, Ultra-Thin

Power Splitter/Combiner ZB3PD-63SMP+

3 Way-0° 50Ω 150 to 6000 MHz

The Big Deal

- Wideband, 150 - 6000 MHz
- Low insertion loss, 1.0 dB
- Good isolation, 20 dB
- Ultra-thin case, 0.43” height (10.92 mm)
- SMP snap-on connectors

CASE STYLE: UU1332-1

Product Overview

Mini-Circuits’ ZB3PD-63SMP+ is a connectorized wideband 3-way 0˚ splitter/combiner supporting a wide variety of applications from 150 to 6000 MHz. This model is capable of handling up to 5W RF input power as a splitter and provides low insertion loss, good isolation and low phase and amplitude unbalance. It comes housed in an ultra-thin aluminum alloy case (2.99 x 5.07 x 0.43”) with SMP snap-on connectors, saving space in crowded system layouts.

Key Features

Feature	Advantages
Wideband, 150 to 6000 MHz	ZB3PD-63SMP+ supports bandwidth requirements for a wide variety of applications.
Ultra-thin case design, 2.99 x 5.07 x 0.43”	Saves space in crowded system layouts.
Blind mate , snap-on SMP connectors	Blind mate SMP connectors enable direct connection to adjacent modules; while facilitating thin overall height.
Power handling up to 5W as a splitter	Supports a wide variety of power requirements.
Low insertion loss, 1.0 dB	Provides excellent transmission of signal power, making this model an excellent candidate for signal distribution applications where low loss is a requirement.
Low unbalance: • Phase unbalance, 4˚ • Amplitude unbalance, 0.5 dB	Produces nearly equal output signals, ideal for parallel path / multichannel systems.
DC passing up to 750mA (250 mA each port, ports 1 – 3)	Supports applications where DC power is needed through the RF line.

Notes
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ZB3PD-63SMP+

3 Way-0° 50Ω 150 to 6000 MHz

Generic photo used for illustration purposes only

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Connectors	Model
SMP(Snap-on)	ZB3PD-63SMP+

+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)	5W max.
Internal Dissipation	1.8W max.
DC Current	750 mA (250 mA for each port)

Permanent damage may occur if any of these limits are exceeded.

Coaxial Connections

SUM PORT	S
PORT 1	1
PORT 2	2
PORT 3	3

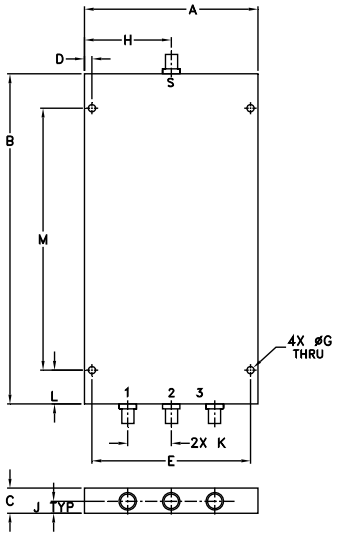
Features

- Ultra-thin package
- Snap-on blind mate SMP connectors
- Wideband, 150 to 6000 MHz
- Low insertion loss, 1 dB typ.
- Good isolation, 20 dB typ.
- Good amplitude unbalance, 0.5 dB typ.

Applications

- Dense Packaging Environment
- Automated Test Systems
- Cellular/ISM/SMG/GSM
- Satellite Distribution
- GPS/L BAND

Outline Drawing



Outline Dimensions (inch / mm)

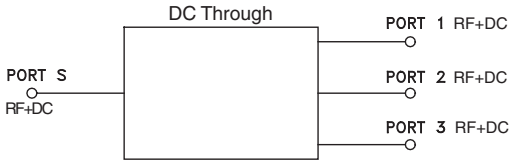
A	B	C	D	E	F	G
2.99	5.67	.43	.13	2.73	_	.125
75.95	144.02	10.92	3.30	69.34	_	3.18

H	J	K	L	M		wt
1.495	.205	.75	0.58	4.5		grams
37.97	5.21	19.05	14.732	114.3		260

Electrical Specifications at 25°C

Parameter	Frequency (MHz)	Min.	Typ.	Max.	Unit
Frequency Range		150		6000	MHz
Insertion Loss Above 4.8 dB	150 - 600	—	1.0	1.5	dB
	600 - 5000	—	1.2	1.8	
	5000 - 6000	—	1.4	1.9	
Isolation	150 - 600	8	12	—	dB
	600 - 5000	16	20	—	
	5000 - 6000	13	15	—	
Phase Unbalance	150-600	—	1	3	Degree
	600 - 5000	—	4	9	
	5000-6000	—	5	9	
Amplitude Unbalance	150-600	—	0.3	0.7	dB
	600 - 5000	—	0.4	0.8	
	5000 - 6000	—	0.5	0.9	
VSWR (Port S)	150 - 600	—	2.0	2.8	:1
	600 - 6000	—	1.4	2.0	
VSWR (Port 1-2)	150 - 600	—	1.6	2.0	:1
	600 - 6000	—	1.6	1.75	

Electrical Schematic



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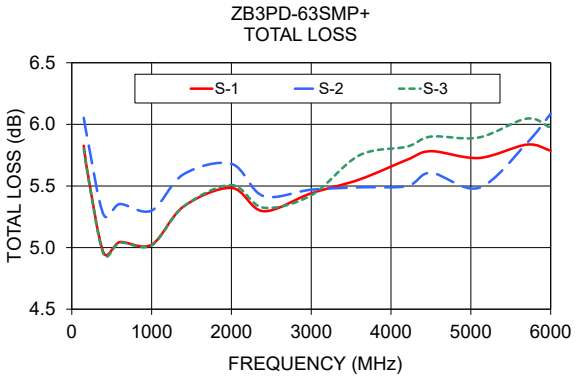
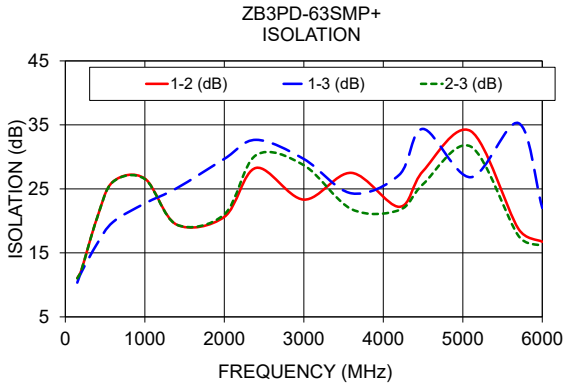
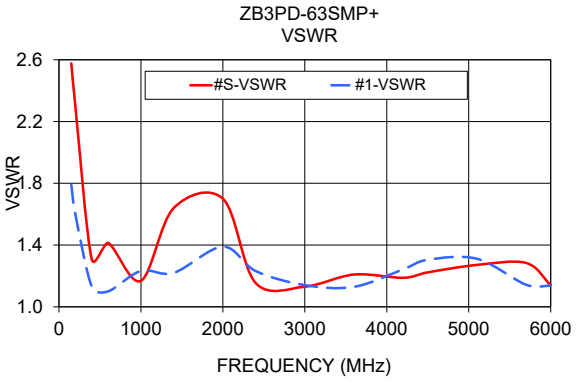
Typical Performance Data

Freq. (MHz)	Total Loss[1] (dB)			Amp. Unbal. (dB)	Isolation (dB)			Phase Unbal. (deg.)	VSWR S	VSWR 1	VSWR 2	VSWR 3
	S-1	S-2	S-3		1-2	1-3	2-3					
150	5.83	6.05	5.80	0.25	11.05	10.35	11.01	0.88	2.58	1.79	1.37	1.79
200	5.60	5.87	5.59	0.28	12.23	11.92	12.20	0.74	2.30	1.60	1.25	1.60
400	4.96	5.27	4.94	0.32	20.48	16.43	20.49	0.41	1.31	1.13	1.23	1.13
600	5.04	5.35	5.04	0.31	26.14	19.82	26.10	0.20	1.41	1.10	1.20	1.10
1000	5.02	5.30	5.02	0.28	26.61	22.73	26.53	0.34	1.17	1.23	1.20	1.22
1400	5.33	5.60	5.33	0.26	19.41	25.09	19.41	0.46	1.64	1.22	1.06	1.22
2000	5.48	5.68	5.51	0.20	20.62	29.69	21.01	0.66	1.70	1.39	1.23	1.38
2400	5.30	5.42	5.32	0.12	28.28	32.66	30.28	0.88	1.15	1.23	1.27	1.23
3000	5.44	5.47	5.42	0.05	23.32	29.67	28.70	1.03	1.13	1.14	1.33	1.13
3600	5.55	5.49	5.75	0.26	27.50	24.30	21.83	1.30	1.21	1.13	1.23	1.18
4200	5.71	5.50	5.82	0.32	22.19	27.18	21.68	2.14	1.19	1.24	1.17	1.27
4500	5.78	5.61	5.90	0.29	27.78	34.37	25.73	2.37	1.22	1.30	1.20	1.31
5100	5.73	5.48	5.89	0.41	34.02	26.82	31.61	4.00	1.27	1.31	1.12	1.28
5700	5.84	5.85	6.05	0.21	18.75	35.27	17.66	4.51	1.28	1.14	1.31	1.19
6000	5.79	6.09	5.97	0.30	16.73	22.01	16.11	3.26	1.14	1.14	1.62	1.17

1. Total Loss = Insertion Loss + 4.8dB splitter loss.







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