DC Pass

Power Splitter/Combiner ZAPD-2DC+

2 Way-0° 50Ω 950 to 2150 MHz

The Big Deal

- Excellent for GPS and satellite distribution
- DC pass through, 500 mA, 25V
- L Band coverage: 950 to 2150 MHz
- Low insertion loss: 0.25 dB Typ

N-Type version shown
Case Style F14

SMA version shown
Case Style F1164

Product Overview

The ZAPD-2DC+ 2way power splitter/combiner offers excellent RF performance in a small package. The DC pass through feeds DC on the coaxial center conductor from Port 1 to the Sum to support remote amplifier power. Built in a rugged shielded case, the ZAPD-2DC+ is available with three connector options: BNC, SMA and N-Type.

The ZAPD-2DC+ is well suited tower mounted amplifiers, GPS and satellite distribution or any other application where a high performance splitter with DC pass through is required.

Key Features

Feature	Advantages
DC Pass through	Enables remote powering of antenna mounted amplifiers while splitting the RF signal. Eliminates additional cable runs. Designed to handle up to ½ Amp at 25 Volts, the ZAPD-2DC+ can support a wide variety of remotely powered RF equipment.
Wide bandwidth	Operating over the 950 to 2150 MHz Band, the ZAPD-2DC+ is ideally suited for L- Band Satellite Communications Applications. In addition, this broadband coverage supports additional applications such as GPS, Cellular PCS and DCS
Low Insertion Loss	With 0.25 dB typical Insertion Loss, the ZAPD-2DC+ can be used in sensitive receive paths with minimized concern for additional Signal to Noise Ratio degradation.
Excellent Phase and Amplitude Balance	Industry leading Phase and Amplitude balance enables this power splitter to be an ideal candidate for phase and amplitude matched or tracked systems.

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

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ZAPD-2DC+

2 Way-0° 50Ω 950 to 2150 MHz

N-Type version shown
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SMA version shown
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Connectors	Model
BNC	ZAPD-2DC+
N-TYPE	ZAPD-2DC-N+
SMA	ZAPD-2DC-S+

Maximum Ratings

Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
Power Input (as a splitter)	10W max.
Internal Dissipation	0.125W max.
DC Voltage	25V max.
DC Current	500mA max.

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

Coaxial Connections

SUM PORT	S (RF+DC)
PORT 1	1 (RF+DC)
PORT 2	2 (RF)

Features

- low insertion loss, 0.25 dB typ.
- good isolation, 25 dB typ.
- dc pass, 500mA current
- excellent amplitude unbalance, 0.1 dB typ.
- good phase unbalance, 2 deg. typ.
- excellent VSWR, 1.1:1 typ.
- rugged shielded case

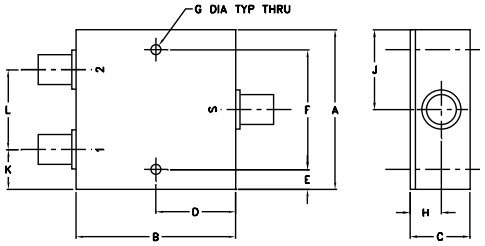
Applications

- GPS
- satellite distribution
- PCS/DCS
- communications systems

+RoHS Compliant

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

Outline Drawing



Case Style F14

Outline Dimensions (inch / mm)

A	B	C	D	E	F	G
2.00	2.00	0.75	1.00	0.25	1.500	0.125
50.80	50.80	19.05	25.40	6.35	38.10	3.18

H	J	K	L	wt
0.39	1.00	0.50	1.00	grams
9.91	25.40	12.70	25.40	170.0

Case Style F1164

A	B	C	D	E	F	G
2.00	1.75	0.75	0.875	0.13	1.750	0.125
50.80	44.45	19.05	22.23	3.30	44.45	3.18

H	J	K	L	wt
0.38	1.00	0.50	1.00	grams
9.65	25.40	12.70	25.40	65.0

Electrical Specifications

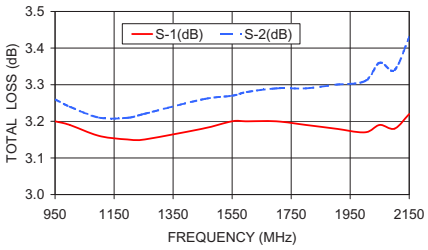
FREQ. RANGE (MHz)	ISOLATION (dB)		INSERTION LOSS (dB) ABOVE 3.0 dB		PHASE UNBALANCE (Degrees)	AMPLITUDE UNBALANCE (dB)	VSWR (:1)			
							S		OUT	
f_L-f_U	Typ.	Min.	Typ.	Max.	Max.	Max.	Typ.	Max.	Typ.	Max.
950-2150	22	18	0.3	0.7	5	0.3	1.3	—	1.15	—
1000-2000	25	19	0.25	0.6	4	0.25	1.15	—	1.1	—
1200-1600	25	20	0.25	0.6	4	0.2	1.1	—	1.1	—

Typical Performance Data

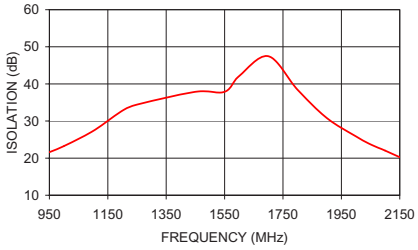
Frequency (MHz)	Total Loss[1] (dB)		Amplitude Unbalance (dB)	Isolation (dB)	Phase Unbalance (deg.)	VSWR S	VSWR 1	VSWR 2
	S-1	S-2						
950.00	3.20	3.26	0.05	21.61	1.27	1.37	1.13	1.20
1000.00	3.19	3.24	0.05	23.27	1.34	1.32	1.13	1.20
1100.00	3.16	3.21	0.05	27.33	1.43	1.25	1.12	1.20
1200.00	3.15	3.21	0.06	32.79	1.51	1.20	1.12	1.19
1250.00	3.15	3.22	0.08	34.43	1.66	1.19	1.12	1.19
1450.00	3.18	3.26	0.08	37.88	1.88	1.18	1.11	1.18
1550.00	3.20	3.27	0.08	37.87	2.01	1.17	1.10	1.18
1600.00	3.20	3.28	0.08	42.11	1.97	1.17	1.10	1.17
1700.00	3.20	3.29	0.09	47.46	2.18	1.13	1.08	1.16
1800.00	3.19	3.29	0.10	38.43	2.41	1.09	1.05	1.14
1900.00	3.18	3.30	0.11	30.82	2.65	1.03	1.01	1.14
2000.00	3.17	3.31	0.14	25.87	2.82	1.05	1.03	1.15
2050.00	3.19	3.36	0.16	23.70	2.79	1.09	1.06	1.17
2100.00	3.18	3.34	0.16	22.04	2.92	1.13	1.08	1.20
2150.00	3.22	3.43	0.21	20.26	2.98	1.17	1.11	1.23

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

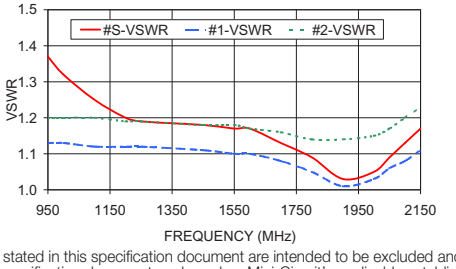
ZAPD-2DC+
TOTAL LOSS



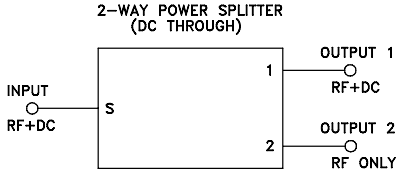
ZAPD-2DC+
ISOLATION



ZAPD-2DC+
VSWR



electrical schematic



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