

DC Pass

Directional Coupler

NON-CATALOG

ZADC-20-50DC+

50Ω Up to 5W 800 to 1600 MHz

Maximum Ratings

Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C
DC Current	2A

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

Coaxial Connections

INPUT	1
OUTPUT	3
COUPLED	2

Features

- wideband, 800 to 1600 MHz
- low insertion loss, 0.8 dB typ.
- good directivity, 20 dB typ.
- Mainline Loss at 5 to 100 MHz 0.1 dB typ.
- DC current through input to output 2A Max.

Applications

- cellular
- PCS
- labs



SMA version shown
CASE STYLE: CC51-1
Connectors Model
SMA ZADC-20-50DC-S+

+RoHS Compliant

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

Directional Coupler Electrical Specifications

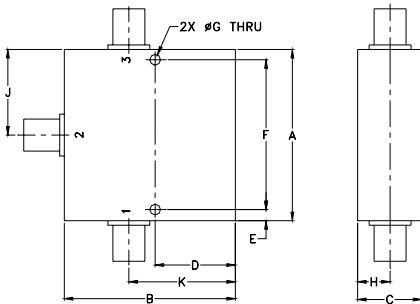
FREQ. RANGE (MHz)	COUPLING (dB)		MAINLINE LOSS ¹		DIRECTIVITY (dB)		VSWR (:1)	POWER INPUT (W)
	Nom.	Flatness	Typ.	Max.	Typ.	Min.	Typ.	Max.
800-1600	20±1	±1.1	0.8	1.0	20	11	1.2	5
800-1000	20.5±1	±0.75	0.7	0.9	24	18	1.2	5
1000-1600	20±1	±0.5	0.8	1.0	18	11	1.2	5

1. Mainline loss includes theoretical power loss at coupled port.

Typical Performance Data

Frequency (MHz)	Mainline Loss (dB)		Coupling (dB) In-Cpl	Directivity (dB)	Return Loss (dB)		
	In-Out	In-Cpl			In	Out	Cpl
800.00	0.59	21.32	25.44	23.23	21.47	44.11	
850.00	0.63	21.02	24.65	23.57	21.59	42.12	
950.00	0.68	20.53	23.21	24.98	22.52	38.12	
1000.00	0.70	20.34	22.41	25.81	23.22	36.36	
1050.00	0.72	20.19	21.69	27.08	24.26	34.54	
1100.00	0.74	20.07	21.00	27.91	25.45	33.19	
1200.00	0.77	19.91	19.55	28.08	29.13	30.57	
1300.00	0.79	19.86	18.11	25.54	34.35	28.04	
1400.00	0.81	19.92	16.65	22.92	33.12	26.05	
1600.00	0.81	20.36	13.68	19.53	26.37	22.15	

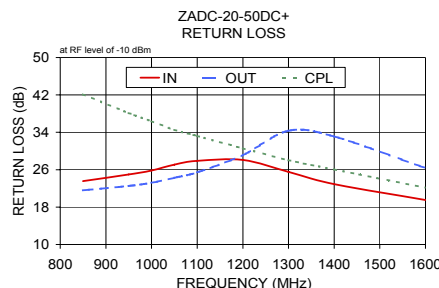
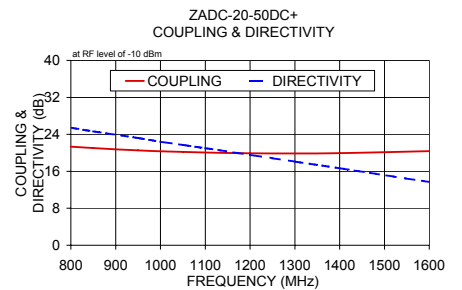
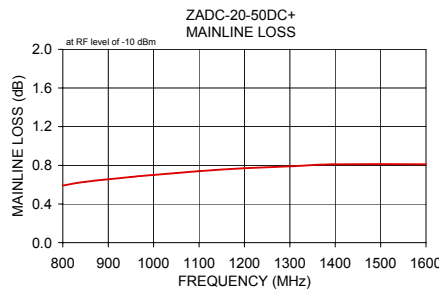
Outline Drawing



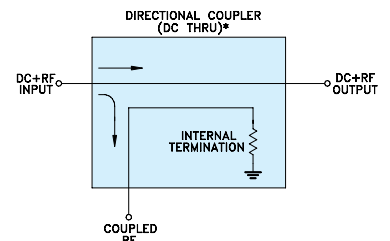
Outline Dimensions (inch/mm)

A	B	C	D	E	F
2.00	2.00	.75	.938	.13	1.750
50.80	50.80	19.05	23.83	3.30	44.45

G	H	J	K	wt
.125	.38	1.00	1.25	grams
3.18	9.65	25.40	31.75	145.0



Electrical Schematic



* ELECTRICAL SCHEMATIC FOR DIRECTIONAL COUPLER THAT IS DESIGNED WITHOUT INTERNAL TRANSFORMERS.

Notes

- 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.
- Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
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