

# Coaxial Directional Coupler

50Ω

20 to 2000 MHz

ZFDC-6-23-S+



Generic photo used for illustration purposes only

CASE STYLE: K18

Connectors	Model
SMA	ZFDC-6-23-S+
BRACKET (OPTION "B")	

**+RoHS Compliant**

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

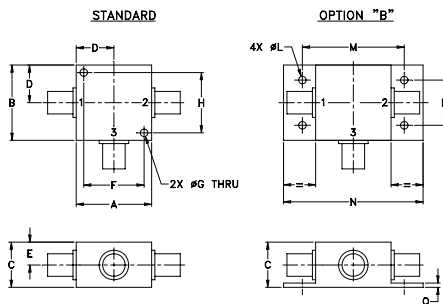
## Maximum Ratings

Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C

## Coaxial Connections

INPUT	3
OUTPUT	1
COUPLED	2

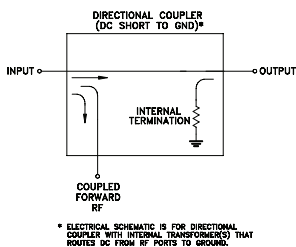
## Outline Drawing



## Outline Dimensions (inch/mm)

A	B	C	D	E	F	G	H
1.25	1.25	.75	.63	.38	1.00	.125	1.000
31.75	31.75	19.05	16.00	9.65	25.40	3.18	25.40
J	K	L	M	N	P	Q	wt
--	--	.125	1.688	2.18	.75	.07	grams
--	--	3.18	42.88	55.37	19.05	1.78	70.0

## Electrical Schematic



## Features

- very wideband, 20 to 2000 MHz
- good directivity, 17 dB typ.
- can be used for unbalance 2 way splitter
- rugged shielded case

## Applications

- cellular
- instrumentation
- communication receivers & transmitters
- GPS

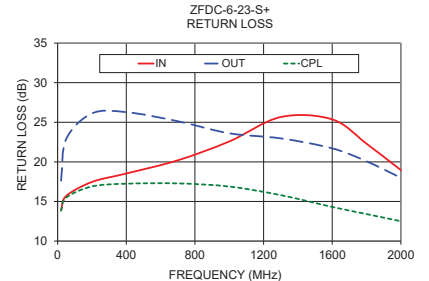
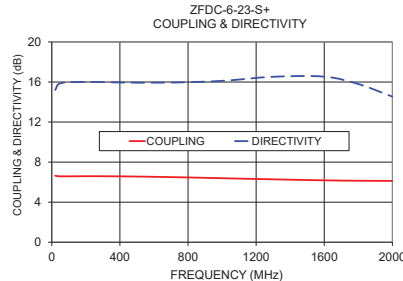
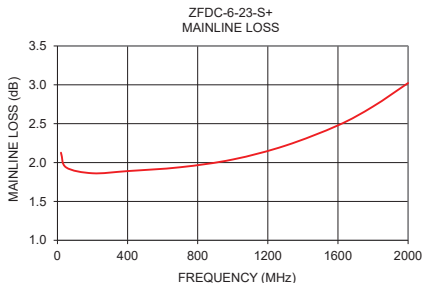
## Electrical Specifications at 25°C

Parameter	Condition (MHz)	Min.	Typ.	Max.	Unit
<b>Frequency Range</b>		20		2000	MHz
<b>Mainline Loss<sup>1</sup></b>	20-1300	—	2.0	2.8	dB
	1300-2000	—	2.7	3.5	
<b>Nominal Coupling</b>	20-2000	—	6.4±0.5	—	dB
<b>Coupling Flatness(±)</b>	20-2000	—	0.3	0.7	dB
<b>Directivity</b>	20-2000	11	18	—	dB
<b>Return Loss (Input)</b>	20-700	11	16	—	dB
	700-1600	15	22	—	
	1600-2000	12	18	—	
<b>Return Loss (Output)</b>	20-700	14	22	—	dB
	700-1600	17	24	—	
	1600-2000	14	22	—	
<b>Return Loss (Coupling)</b>	20-700	11	16	—	dB
	700-1600	10	15	—	
	1600-2000	10	14	V	
<b>Input Power</b>	20-2000			0.5	W

1. Include coupling loss.

## Typical Performance Data

Frequency (MHz)	Mainline Loss (dB) In-Out	Coupling (dB) In-Cpl	Directivity (dB)	Return Loss (dB)		
				In	Out	Cpl
20	2.13	6.64	15.21	13.94	17.62	13.81
50	1.94	6.58	15.87	15.69	22.88	15.49
200	1.86	6.59	16.01	17.46	26.12	16.89
400	1.89	6.58	15.95	18.53	26.28	17.24
700	1.94	6.50	15.95	20.19	25.13	17.28
1000	2.04	6.39	16.12	22.58	23.61	16.88
1300	2.22	6.28	16.52	25.66	22.97	15.80
1600	2.48	6.18	16.54	25.36	21.71	14.31
1800	2.72	6.14	15.80	22.29	20.07	13.41
2000	3.02	6.12	14.54	18.96	17.99	12.50



### 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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