

# Coaxial Directional Coupler

50Ω

10 to 1800 MHz

ZFDC-10-182+



Generic photo used for illustration purposes only

CASE STYLE: K18

Connectors	Model
BNC	ZFDC-10-182+
SMA	ZFDC-10-182-S+
N-TYPE	ZFDC-10-182-N+
BRACKET (OPTION "B")	

**+RoHS Compliant**

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

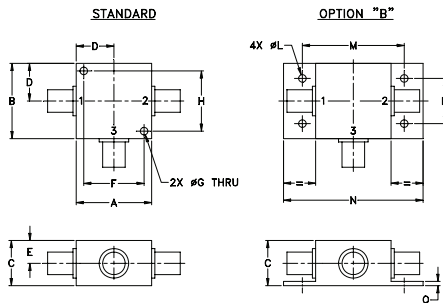
## Maximum Ratings

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

## Coaxial Connections

INPUT	1
OUTPUT	2
COUPLED	3

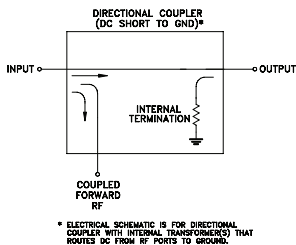
## Outline Drawing



## 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, 10 to 1800 MHz
- excellent directivity, 25 dB typ.
- rugged shielded case

## Applications

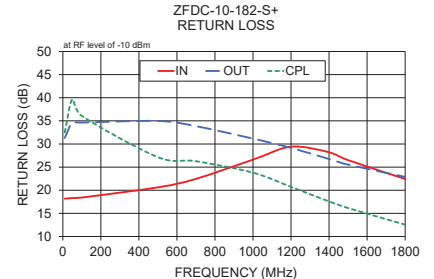
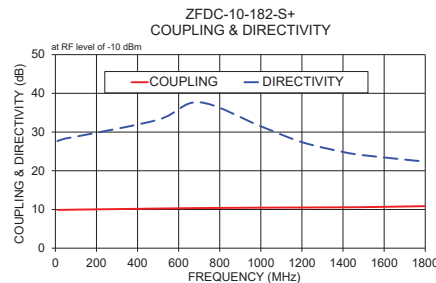
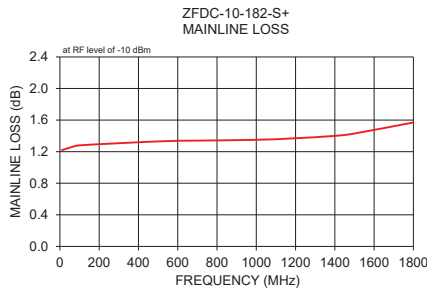
- cellular
- instrumentation
- communication receivers & transmitters
- GPS

## Electrical Specifications at 25°C

Parameter	Condition (MHz)	Min.	Typ.	Max.	Unit
<b>Frequency Range</b>		10	—	1800	MHz
<b>Mainline Loss</b> (above theoretical 0.46 dB)	10	—	0.8	1.4	dB
	700	—	1.0	1.7	
	1800	—	1.4	2.4	
<b>Coupling</b>	10-1800	10.4	9.9	10.2	dB
	10	9.7	9.9	10.2	
	700	9.8	10.5	11.2	
<b>Coupling Flatness(±)</b>	10-700	—	0.3	0.5	dB
	700-1800	—	0.3	0.5	
	1800	9.4	10.8	11.9	
<b>Directivity</b>	10	22.0	27.0	—	dB
	700	22.0	31.7	—	
	1800	18.0	24.1	—	
<b>Return Loss (Input)</b>	10	15.0	18.2	—	dB
	700	18.0	22.6	—	
	1800	15.0	20.0	—	
<b>Return Loss (Output)</b>	10	22.0	29.7	—	dB
	700	20.0	29.1	—	
	1800	15.0	19.3	—	
<b>Return Loss (Coupling)</b>	10	22.0	30.0	—	dB
	700	18.0	22.4	—	
	1800	10.0	12.5	—	
<b>Input Power</b>	10-1800	—	—	0.5	W

## Typical Performance Data

Frequency (MHz)	Mainline Loss (dB) In-Out	Coupling (dB) In-Cpl	Directivity (dB)	Return Loss (dB)		
				In	Out	Cpl
10.00	1.22	9.89	27.67	18.18	31.31	32.50
50.00	1.25	9.92	28.35	18.31	34.64	39.67
100.00	1.28	9.96	28.81	18.43	34.63	36.08
500.00	1.33	10.24	33.19	20.63	34.98	27.15
700.00	1.34	10.36	37.70	22.46	33.85	26.28
1000.00	1.35	10.47	31.47	26.62	31.16	23.80
1200.00	1.37	10.51	27.39	29.41	29.15	20.72
1400.00	1.40	10.56	24.85	28.21	26.75	17.58
1500.00	1.43	10.60	24.01	26.51	25.54	16.16
1800.00	1.57	10.86	22.35	22.44	22.89	12.56



## 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.
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