

# Coaxial Directional Coupler

## ZEDC-15-2B

50Ω

1 to 1000 MHz



CASE STYLE: V37

Connectors	Model	Price	Qty.
SMA	ZEDC-15-2B	\$64.95 ea.	(1-9)

### Maximum Ratings

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

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

### Coaxial Connections

INPUT	1
OUTPUT	2
COUPLED	3

### Features

- wideband, 1 to 1000 MHz
- excellent mainline loss, 0.8 dB typ.
- excellent directivity, 30 dB typ.
- rugged shielded case

### Applications

- VHF/UHF
- instrumentation
- communication receivers & transmitters
- cellular

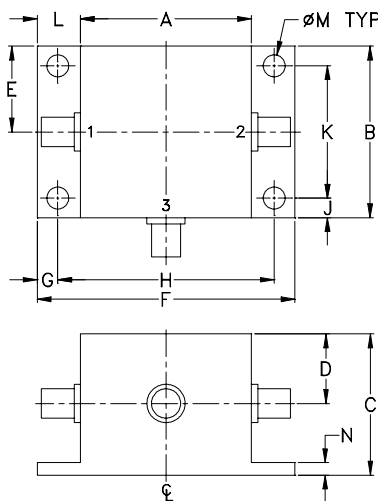
### Directional Coupler Electrical Specifications

FREQ. RANGE (MHz)	COUPLING (dB)		MAINLINE LOSS <sup>1</sup> (dB)						DIRECTIVITY (dB)						VSWR (:1)	POWER INPUT (W)	
			L		M		U		L		M		U				
	Nom.	Flatness	Typ.	Max.	Typ.	Max.	Typ.	Max.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Max.	Max.
$f_L$ - $f_U$	15±0.5	±0.5	0.5	1.4	0.8	1.2	1.0	1.4	35	30	30	20	25	15	1.15	1.5	3.0
1-1000																	

L = low range [ $f_L$  to  $10 f_L$ ] M = mid range [ $10 f_L$  to  $f_U/2$ ] U = upper range [ $f_U/2$  to  $f_U$ ]

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

### Outline Drawing



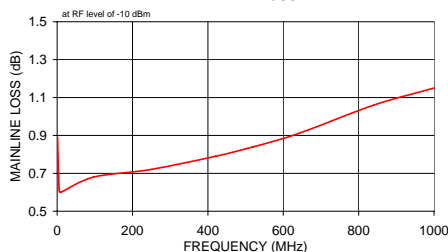
### Outline Dimensions (inch/mm)

A	B	C	D	E	F	G
.83	.83	.75	.37	.42	1.25	.10
21.08	21.08	19.05	9.40	10.67	31.75	2.54
H	J	K	L	M	N	wt
1.050	.10	.640	.21	.106	.06	grams
26.67	2.54	16.26	5.33	2.69	1.52	22.0

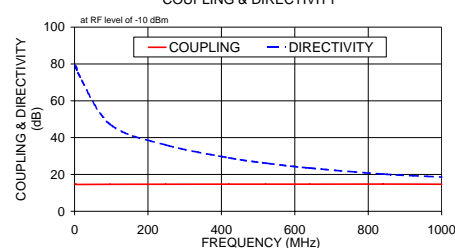
### Typical Performance Data

Frequency (MHz)	Mainline Loss (dB) In-Out	Coupling (dB) In-Cpl	Directivity (dB)	Return Loss (dB)		Cpl
				In	Out	
1.00	0.89	14.88	79.23	20.86	18.52	18.59
5.00	0.62	14.60	77.98	28.31	22.92	22.83
9.00	0.60	14.58	75.18	30.07	23.46	23.42
96.00	0.68	14.64	47.38	28.75	22.70	22.81
248.00	0.72	14.68	36.05	27.13	22.32	22.74
420.00	0.79	14.71	29.08	25.36	21.07	22.68
520.00	0.84	14.73	26.18	24.45	19.92	22.58
640.00	0.91	14.73	23.49	23.56	18.30	22.45
840.00	1.06	14.76	20.21	22.53	15.42	22.17
1000.00	1.15	14.70	18.59	22.05	13.20	21.93

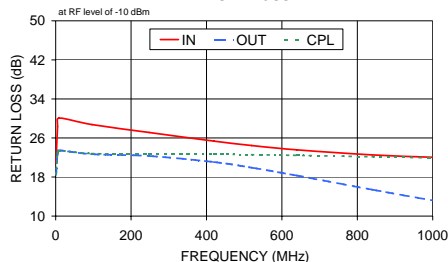
ZEDC-15-2B MAINLINE LOSS



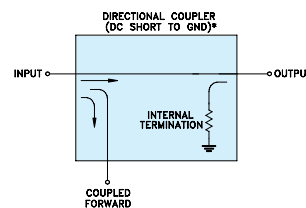
ZEDC-15-2B COUPLING & DIRECTIVITY



ZEDC-15-2B RETURN LOSS



### Electrical Schematic



\* ELECTRICAL SCHEMATIC IS FOR DIRECTIONAL COUPLER WITH INTERNAL TRANSFORMER(S) THAT ROUTES DC FROM RF PORTS TO GROUND.

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IF/RF MICROWAVE COMPONENTS

REV. A  
M119986  
ZEDC-15-2B  
WZ/TD/CP/AM  
090407