

35dB DC Pass

# High Power Directional Coupler

ZGDC35-93HP+

50Ω Up to 250W 900 to 9000 MHz

## Maximum Ratings

Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C
DC Current	3A

Permanent damage may occur if any of these limits are exceeded

## Coaxial Connections

INPUT	IN(N-Type)
OUTPUT	OUT(N-Type)
COUPLED (FORWARD)	CPL(FWD)(SMA)
COUPLED (REVERSE)	TERM(SMA)

## Features

- wide frequency range can be used for 0.8-12.4 GHz
- good coupling flatness, ±0.8 dB typ. over 1050-8000 MHz
- high directivity, 25 dB typ.
- very good VSWR, 1.10:1 typ.
- high power, up to 250W
- DC current pass through input to output

## Applications

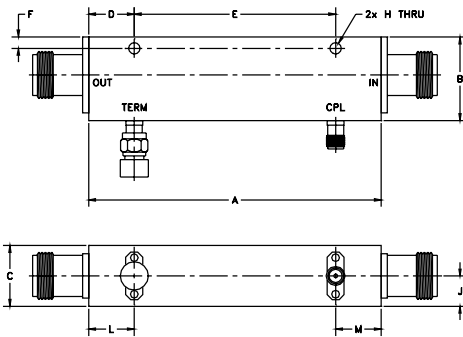
- cellular
- lab use
- WiMAX
- ISM
- PCN
- GSM



CASE STYLE: HT1633  
Connectors Model  
N-Type/SMA ZGDC35-93HP+

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

## Outline Drawing



## Outline Dimensions (inch/mm)

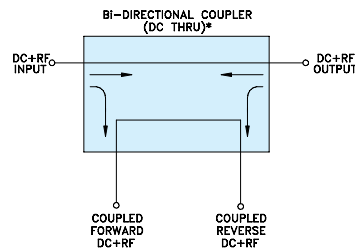
A	B	C	D	E	F	G
3.85	1.10	.80	.60	2.650	.15	—
97.79	27.94	20.32	15.24	67.31	3.81	—
H	J	K	L	M		wt
.150	.40	.50	.60	.60		grams
3.81	10.16	12.70	15.24	15.24		200.0

## Electrical Specifications at 25°C

Parameter	Condition (MHz)	Min.	Typ.	Max.	Unit
<b>Frequency Range</b>		900		9000	MHz
<b>Mainline Loss</b> (above theoretical 0.0015 dB)	900	—	0.03	0.2	dB
	6000	—	0.10	0.25	
	9000	—	0.18	0.3	
<b>Coupling Flatness(±)</b>	900 - 1050	—	±0.5	±0.8	dB
	1050 - 8000	—	±0.8	±1.3	
	8000 - 9000	—	±0.6	±0.95	
<b>Coupling</b>	900 - 1050	34.0	35.4	37.8	dB
	1050 - 8000	32.5	35	37.5	
	8000 - 9000	32.4	34.3	36.4	
<b>Directivity</b>	900	22	26	—	dB
	3000	20	25	—	
	6000	14	19	—	
	8000	12	16	—	
	9000	8	11	—	
<b>Return Loss (Input)</b>	900 - 6000	16	19	—	dB
	6000 - 9000	14	17	—	
<b>Return Loss (Output)</b>	900 - 6000	16	19	—	dB
	6000 - 9000	14	18	—	
<b>Return Loss (Coupling)</b>	900 - 6000	17	22	—	dB
	6000 - 9000	14	18	—	
<b>Input Power<sup>1</sup></b>	900 - 6000	—	—	250	W

1. At 25°C with no DC current. Derate linearly to 200W (900-9000 MHz) and to 100W (600-9000 MHz) from 25°C to 100°C. Output load VSWR 2.0:1 max.

## Electrical Schematic



\* ELECTRICAL SCHEMATIC IS FOR BI-DIRECTIONAL COUPLER WITHOUT INTERNAL TRANSFORMERS AND RESISTORS.

## 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.
- 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](http://www.minicircuits.com/MCLStore/terms.jsp)

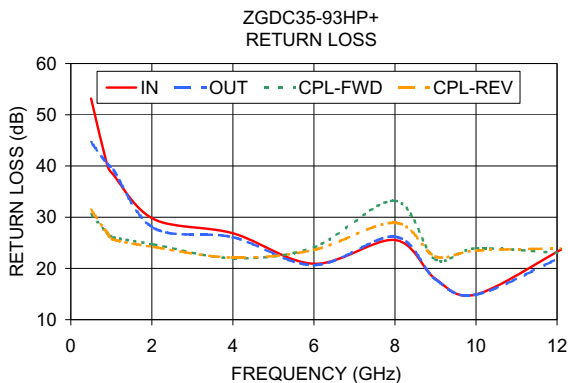
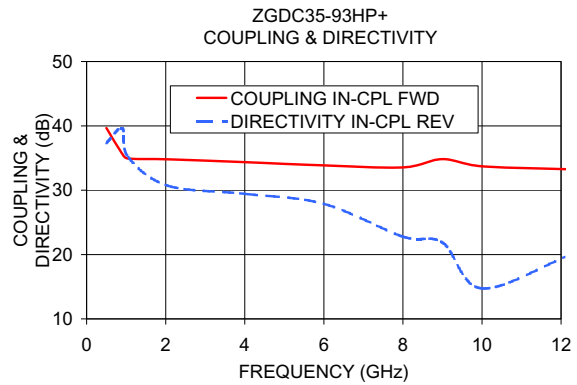
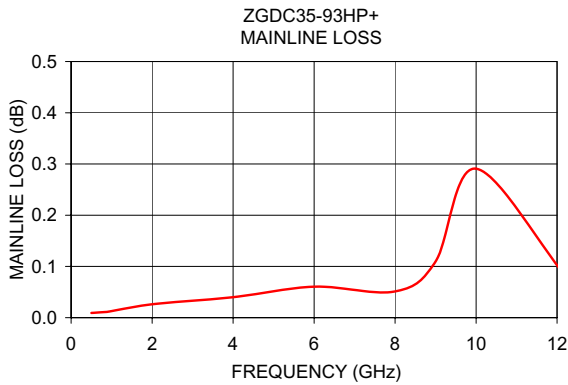


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M156327  
ZGDC35-93HP+  
AV/CP/AM  
160510  
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## Typical Performance Data

Frequency (GHz)	Mainline Loss (dB)	Coupling (dB)		Directivity (dB)		Return Loss (dB)			
	In-Out	In-Cpl Fwd	Out-Cpl Rev	Out-Cpl Fwd	In-Cpl Rev	In	Out	Cpl Fwd	Cpl Rev
0.50	0.01	39.67	39.65	32.09	37.34	53.17	44.63	30.52	31.43
0.90	0.01	35.66	35.68	27.52	39.60	40.19	40.41	26.91	26.92
1.05	0.01	34.93	34.95	27.19	35.15	38.28	39.24	26.08	25.64
2.05	0.03	34.81	34.90	25.04	30.70	29.63	27.89	24.67	24.19
4.00	0.04	34.36	34.44	15.74	29.43	26.87	26.10	22.01	22.11
6.00	0.06	33.85	33.92	18.98	27.88	20.90	20.66	24.12	23.62
8.00	0.05	33.55	33.61	17.80	22.78	25.55	26.20	33.19	28.92
9.00	0.11	34.83	34.91	13.32	21.86	17.93	17.86	21.76	22.31
10.00	0.29	33.72	33.81	18.42	14.74	14.92	14.88	23.92	23.49
12.30	0.07	33.23	33.31	13.69	20.13	24.55	22.91	22.88	23.95



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