

Engineering Development Model

Directional Coupler

ZHDC-ED20010801

Important Note

This model has been designed, built and tested in our engineering department. Performance data represents model capability. At present it is a non-catalog model. On request, we can supply a final specification sheet, part number and price/delivery information.



Please click "Back", and then click "Contact Us" for Applications support.

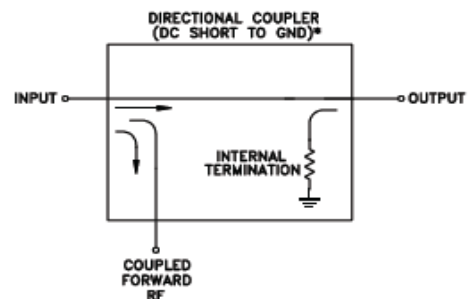
CASE STYLE : FM1918

ELECTRICAL SPECIFICATIONS 50 Ω @ +25°C					
Parameter		Min.	Typ.	Max.	Units
Frequency		5		9000	MHz
Coupling	Nominal		10.9 $\pm$ 0.9		dB
	Flatness		0.4		dB
Mainline Loss	5-6000 MHz		4.00		dB
	6000-9000 MHz		5.50		dB
Directivity	5 MHz		27		dB
	2000 MHz		30		dB
	3000 MHz		25		dB
	6000 MHz		23		dB
	8400 MHz		21		dB
	9000 MHz		20		dB
Input Return Loss	5-8400 MHz		18		dB
Output Return Loss	5-8400 MHz		14		dB
Coupling Return Loss	5-8400 MHz		14		dB
RF Power Input	5-8400 MHz			1	W

MAXIMUM RATINGS	
Operating Temperature	-40°C to +85°C
Storage Temperature	-55°C to 100°C

COAXIAL CONNECTIONS	
INPUT	1
OUTPUT	2
COUPLED	3

Electrical Schematic



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



P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 • Fax (718) 332-4661 For detailed performance specs & shopping online see Mini-Circuits web site
The Design Engineers Search Engine Provides ACTUAL Data Instantly From MINI-CIRCUITS At: www.minicircuits.com



IF/RF MICROWAVE COMPONENTS



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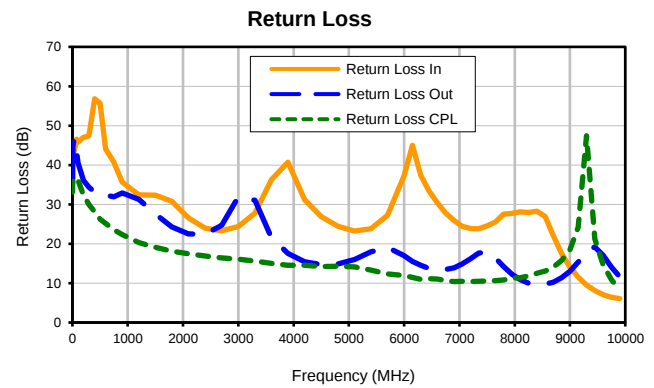
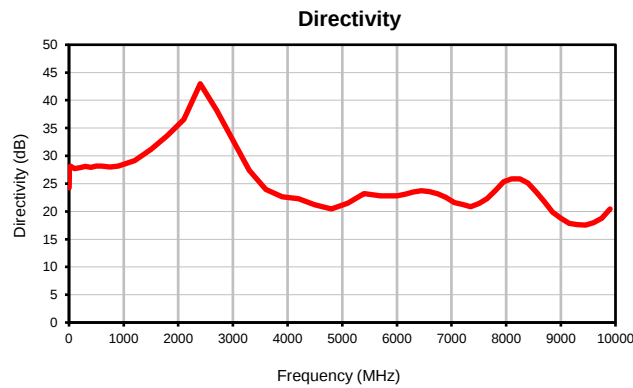
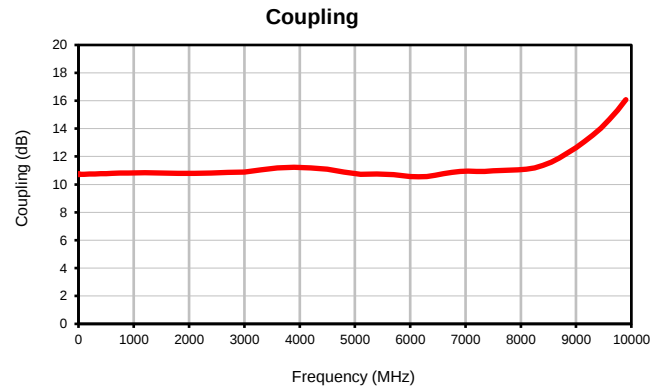
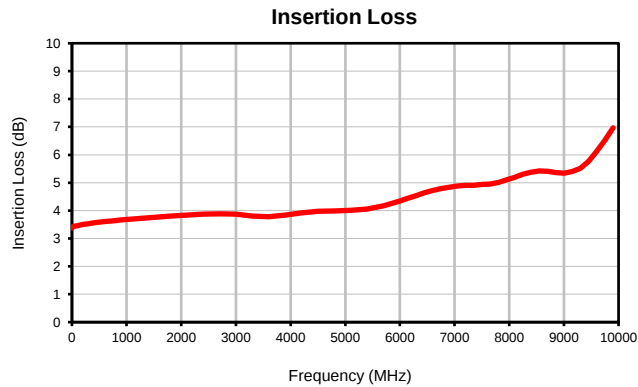
Typical Performance Data

FREQUENCY (MHz)	INSERTION LOSS (dB)	COUPLING (dB)	DIRECTIVITY (dB)	RETURN LOSS (dB)		
				IN	OUT	CPL
3	3.38	10.78	24.25	35.17	36.47	33.13
5	3.40	10.73	26.48	38.05	39.91	34.98
7	3.41	10.71	27.45	39.96	42.22	35.83
10	3.42	10.71	27.96	41.84	44.79	36.39
30	3.43	10.72	28.14	43.66	46.80	36.76
50	3.44	10.73	27.97	44.64	44.74	36.77
70	3.45	10.73	27.86	46.58	43.61	36.66
100	3.46	10.74	27.71	45.79	40.54	36.12
200	3.50	10.75	27.87	47.01	36.04	32.33
300	3.53	10.76	28.10	47.34	34.38	29.98
400	3.56	10.77	27.94	56.82	33.11	28.11
500	3.59	10.78	28.18	55.66	32.17	26.23
600	3.61	10.79	28.17	44.13	32.37	25.17
750	3.64	10.81	27.97	40.70	31.92	23.57
900	3.66	10.82	28.18	35.67	32.91	22.34
1200	3.71	10.83	29.13	32.42	31.32	20.35
1500	3.76	10.81	31.15	32.37	27.55	19.07
1800	3.80	10.80	33.64	30.79	24.28	18.11
2100	3.84	10.80	36.59	26.55	22.47	17.46
2400	3.87	10.83	42.98	23.97	22.41	16.88
2700	3.89	10.85	38.26	23.29	24.74	16.45
3000	3.87	10.89	32.81	24.37	31.93	16.06
3300	3.80	11.05	27.39	27.80	31.00	15.60
3600	3.78	11.19	23.97	36.24	21.61	15.03
3900	3.84	11.23	22.63	40.74	17.53	14.56
4200	3.92	11.19	22.26	31.22	15.47	14.54
4500	3.97	11.08	21.18	26.86	14.68	14.22
4800	3.99	10.89	20.42	24.48	14.87	14.34
5100	4.01	10.73	21.46	23.24	16.04	14.12
5400	4.05	10.75	23.20	23.84	17.99	13.30
5700	4.17	10.70	22.81	27.26	19.08	12.34
6000	4.34	10.57	22.79	37.31	16.94	11.93
6150	4.45	10.55	23.11	45.01	15.55	11.44
6300	4.54	10.56	23.52	37.34	14.50	10.99
6450	4.64	10.65	23.73	33.40	13.75	11.16
6600	4.72	10.76	23.57	30.42	13.41	11.07
6750	4.79	10.87	23.18	27.81	13.51	10.65
6900	4.84	10.93	22.54	25.93	13.93	10.39
7050	4.88	10.94	21.61	24.43	14.89	10.45
7200	4.90	10.93	21.23	23.90	16.17	10.38
7350	4.91	10.93	20.85	23.80	17.66	10.45
7500	4.94	10.97	21.42	24.57	17.96	10.54
7650	4.95	11.00	22.27	25.51	16.42	10.60
7800	5.01	11.02	23.73	27.57	14.24	10.78
7950	5.10	11.05	25.33	27.72	12.24	11.29
8100	5.20	11.10	25.88	28.12	10.90	11.39
8250	5.31	11.20	25.84	27.95	10.01	11.85
8400	5.38	11.36	25.11	28.27	9.65	12.48
8550	5.42	11.60	23.50	26.89	9.72	13.10
8700	5.41	11.90	21.71	22.10	10.25	14.05
8850	5.37	12.27	19.89	17.58	11.34	15.72
9000	5.35	12.64	18.76	14.09	12.99	18.48
9150	5.39	13.07	17.83	11.56	15.34	24.21
9300	5.52	13.52	17.62	9.46	18.22	47.43
9450	5.77	14.04	17.54	8.16	19.17	21.17
9600	6.13	14.65	17.95	7.10	17.02	14.62
9750	6.52	15.32	18.77	6.44	14.06	10.86
9900	6.97	16.08	20.45	6.06	11.59	8.23

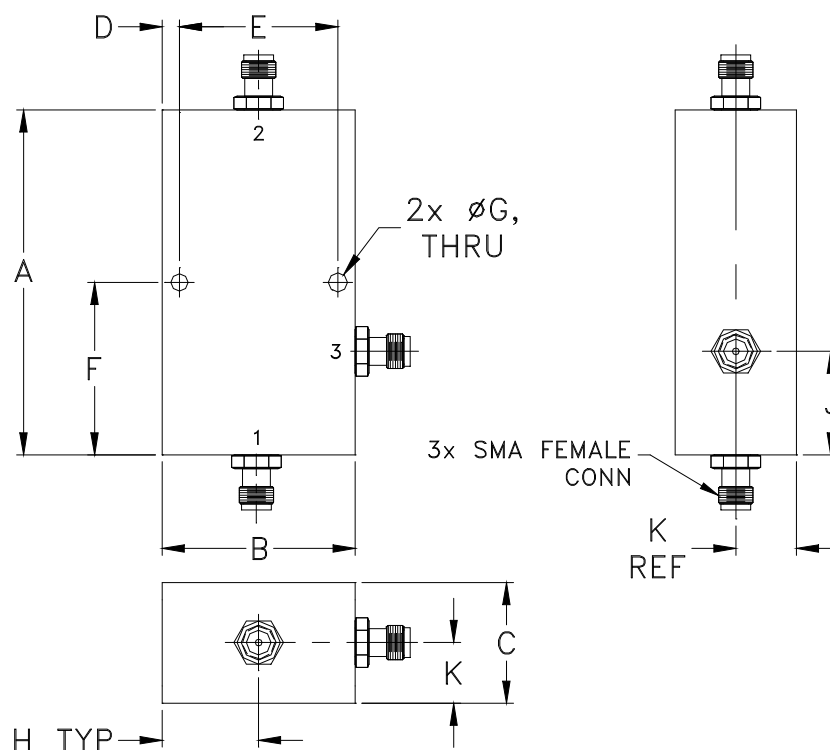
Directional Coupler

Typical Performance Curves

ZHDC-ED20010801



Outline Dimensions



CASE #.	A	B	C	D	E	F	G	H	J	K	WT, GRAM
FM1918	2.50 (63.50)	1.40 (35.56)	.88 (22.35)	.13 (3.30)	1.150 (29.21)	1.25 (31.75)	.125 (3.175)	.70 (17.78)	.75 (19.05)	.44 (11.18)	100

Dimensions are in inches (mm). Tolerances: 2Pl. $\pm .03$; 3Pl. $\pm .015$

Notes:

- Case material: Aluminum alloy.
- Case finish:
For RoHS Case Styles: Clear chemical conversion coating, non-chrome or trivalent chrome based.



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RF/IF MICROWAVE COMPONENTS



All Mini-Circuits products are manufactured under exacting quality assurance and control standards, and are capable of meeting published specifications after being subjected to any or all of the following physical and environmental test.

Specification	Test/Inspection Condition	Reference/Spec
Operating Temperature	-40° to 85°C	Individual Model Data Sheet
Storage Temperature	-55° to 100° C Ambient Environment	Individual Model Data Sheet
Barometric Pressure	100,000 Feet	MIL-STD-202, Method 105, Condition D
Humidity	90% RH, 65°C Units may require bake-out after humidity to restore full performance.	MIL-STD-202, Method 103
Thermal Shock	-65° to 125°C, 5 cycles	MIL-STD-202, Method 107, Condition B
Vibration (High Frequency)	20g peak, 10-2000 Hz, 12 times in each of three perpendicular directions (total 36)	MIL-STD-202, Method 204, Condition D
Mechanical Shock	100g, 6ms sawtooth, 3 shocks each direction 3 axes (total 18)	MIL-STD-202, Method 213, Condition I