

Directional Coupler

ZADC-ED10172/1

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.

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CASE STYLE : FM587

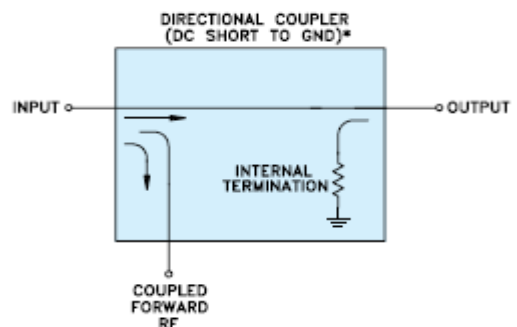
ELECTRICAL SPECIFICATIONS 50Ω @ +25°C					
Parameter		Min.	Typ.	Max.	Units
Frequency		300		2300	MHz
Coupling	Nominal		15.0 ± 1.0		dB
	Flatness		± 0.2		dB
Mainline Loss **	300-2300 MHz		0.70		dB
Directivity	300-2300 MHz		22		dB
VSWR	300-2300 MHz		1.3		(:1)
RF Power Input	300-2300 MHz			1.0	W

Note: ** Mainline loss includes theoretical coupled power loss of 0.140 dB at 15 dB coupling.

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

COAXIAL CONNECTIONS	
INPUT	1
OUTPUT	2
COUPLED FORWARD	3

Electrical Schematic



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

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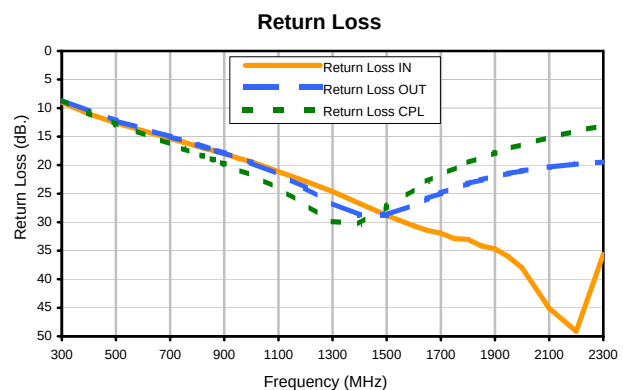
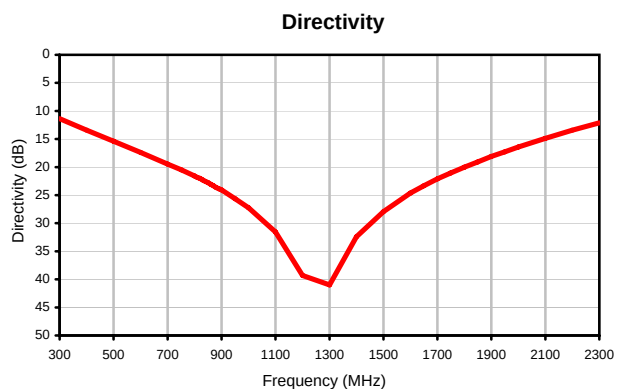
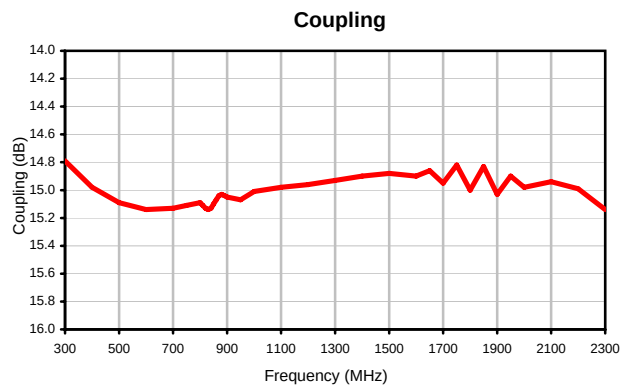
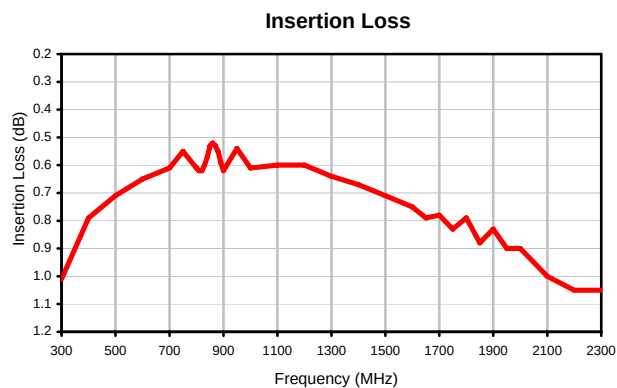
Typical Performance Data

FREQUENCY (MHz)	INSERTION LOSS (dB)	COUPLING (dB)	DIRECTIVITY (dB)	RETURN LOSS		
				IN	OUT	CPL
300.0	1.01	14.79	11.36	8.99	8.54	8.59
400.0	0.79	14.98	13.42	11.01	10.56	10.89
500.0	0.71	15.09	15.38	12.60	12.19	12.86
600.0	0.65	15.14	17.39	14.00	13.62	14.63
700.0	0.61	15.13	19.46	15.37	15.03	16.33
750.0	0.55	15.11	20.48	15.98	15.70	17.12
800.0	0.61	15.09	21.57	16.69	16.44	18.01
810.0	0.62	15.11	21.85	16.82	16.57	18.19
820.0	0.62	15.13	22.02	16.96	16.71	18.38
830.0	0.60	15.14	22.30	17.09	16.89	18.55
840.0	0.57	15.13	22.56	17.21	17.02	18.71
850.0	0.53	15.10	22.78	17.33	17.15	18.88
860.0	0.52	15.07	23.05	17.44	17.31	19.05
870.0	0.53	15.04	23.31	17.56	17.47	19.21
880.0	0.55	15.03	23.62	17.71	17.64	19.40
890.0	0.59	15.04	23.85	17.83	17.77	19.57
900.0	0.62	15.05	24.06	17.96	17.87	19.78
950.0	0.54	15.07	25.63	18.78	18.75	20.77
1000.0	0.61	15.01	27.25	19.40	19.58	21.77
1100.0	0.60	14.98	31.55	21.15	21.65	24.11
1200.0	0.60	14.96	39.31	22.84	24.00	26.89
1300.0	0.64	14.93	41.00	24.63	26.71	29.88
1400.0	0.67	14.90	32.41	26.73	28.77	30.25
1500.0	0.71	14.88	27.95	28.79	28.75	27.25
1600.0	0.75	14.90	24.64	30.65	26.94	24.22
1650.0	0.79	14.86	23.33	31.43	25.87	22.82
1700.0	0.78	14.95	22.08	31.94	24.91	21.64
1750.0	0.83	14.82	21.04	32.87	24.01	20.53
1800.0	0.79	15.00	20.01	33.04	23.26	19.57
1850.0	0.88	14.83	19.06	34.15	22.57	18.68
1900.0	0.83	15.03	18.11	34.70	21.97	17.86
1950.0	0.90	14.90	17.27	36.06	21.47	17.08
2000.0	0.90	14.98	16.42	37.99	21.00	16.41
2100.0	1.00	14.94	14.89	45.10	20.37	15.14
2200.0	1.05	14.99	13.44	49.13	19.81	14.03
2300.0	1.05	15.14	12.11	35.66	19.45	13.09

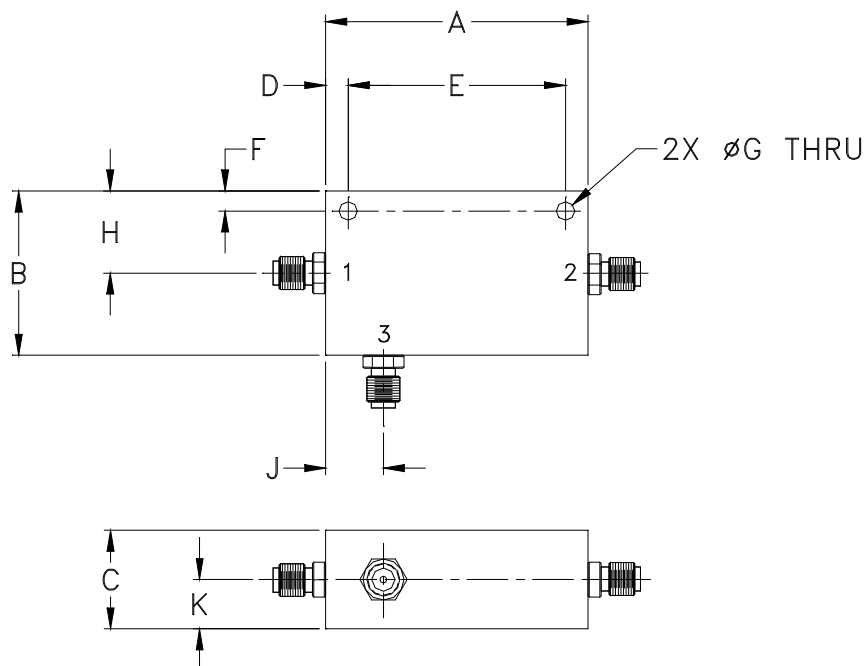
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Typical Performance Curves

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Outline Dimensions



CASE #.	A	B	C	D	E	F	G	H	J	K	WT, GRAM
FM587	2.00 (50.80)	1.24 (31.50)	.75 (19.05)	.17 (4.32)	1.656 (42.06)	.15 (3.81)	.140 (3.56)	.62 (15.75)	.44 (11.18)	.38 (9.65)	57

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.



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



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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	-55° to 85°C Ambient Environment	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