

Directional Coupler

ZADC-ED11942/2

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 : F1110

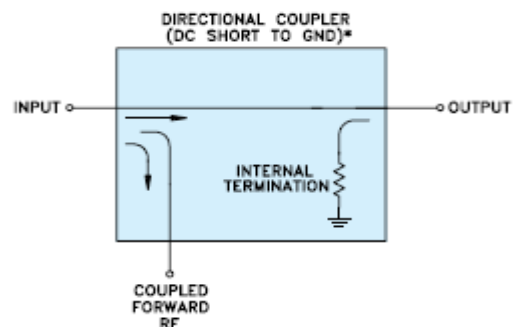
ELECTRICAL SPECIFICATIONS 50Ω @ +25°C				
Parameter		Min.	Typ.	Max. Units
Frequency		1		600 MHz
Coupling	Nominal		13.3±0.5	dB
	Flatness		±0.56	dB
Mainline Loss **	1-10 MHz		0.40	dB
	10-300 MHz		0.40	dB
	300-600 MHz		0.60	dB
Directivity	1-10 MHz		21	dB
	10-300 MHz		24	dB
	300-600 MHz		30	dB
VSWR	1-600 MHz		1.10	(:1)
RF Power Input	1-600 MHz			12 W

Note: **Mainline loss includes theoretical coupled power loss of 0.208 dB at 13.3 dB coupling.

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

COAXIAL CONNECTIONS	
INPUT	1
OUTPUT	S
COUPLED FORWARD	2

Electrical Schematic



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

Directional Coupler

ZADC-ED11942/2

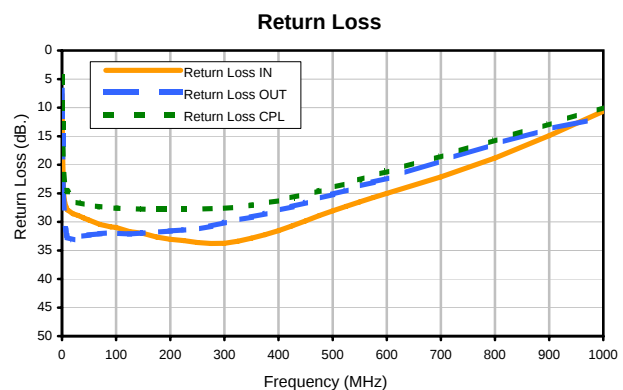
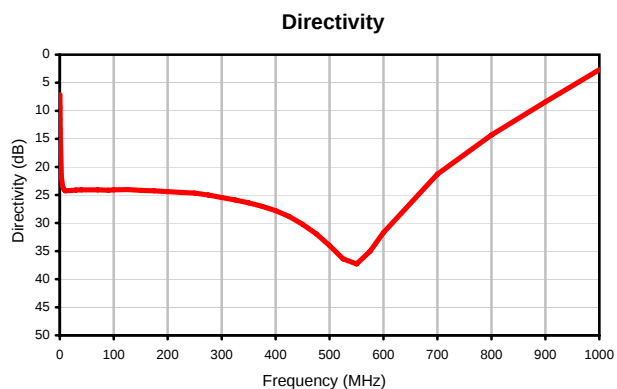
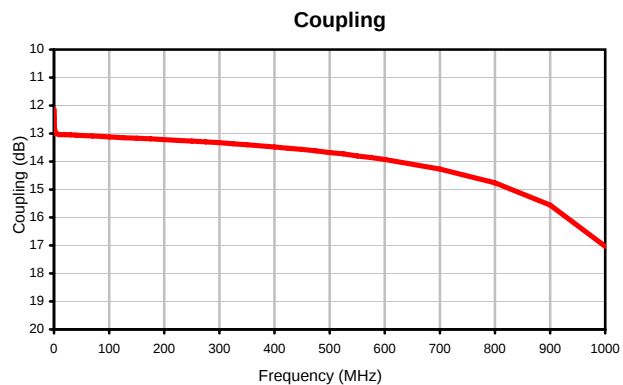
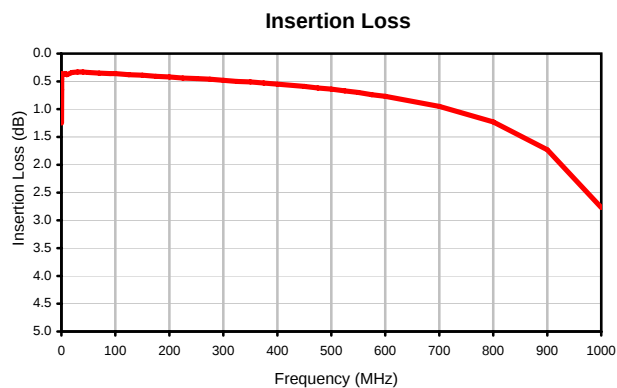
Typical Performance Data

FREQUENCY (MHz)	INSERTION LOSS (dB)	COUPLING (dB)	DIRECTIVITY (dB)	RETURN LOSS		
				IN	OUT	CPL
0.3	1.25	12.14	7.14	7.69	6.98	4.68
0.5	0.65	12.43	9.48	11.55	10.63	7.91
0.7	0.46	12.65	11.54	14.28	13.30	10.43
0.9	0.39	12.77	13.26	16.40	15.41	12.46
1.0	0.36	12.81	14.03	17.31	16.33	13.35
3.0	0.37	13.00	21.72	25.06	26.32	21.34
5.0	0.37	13.01	23.41	26.58	29.75	23.08
7.0	0.36	13.02	23.89	27.28	31.44	23.94
9.0	0.37	13.03	24.13	27.72	32.41	24.52
10.0	0.38	13.04	24.26	27.89	32.73	24.74
20.0	0.34	13.04	24.20	28.57	33.14	26.05
30.0	0.33	13.05	24.12	28.89	32.79	26.60
40.0	0.33	13.06	24.10	29.29	32.49	26.91
50.0	0.34	13.07	24.08	29.70	32.31	27.12
70.0	0.35	13.09	24.09	30.45	32.07	27.38
90.0	0.36	13.11	24.15	30.86	31.87	27.54
100.0	0.36	13.12	24.10	30.97	31.98	27.60
125.0	0.38	13.15	24.03	31.72	32.14	27.71
150.0	0.39	13.17	24.17	32.01	31.92	27.79
175.0	0.41	13.19	24.27	32.66	31.81	27.80
200.0	0.42	13.22	24.41	33.05	31.59	27.79
225.0	0.44	13.25	24.53	33.27	31.41	27.79
250.0	0.45	13.27	24.65	33.60	31.28	27.75
275.0	0.46	13.30	24.99	33.77	30.77	27.68
300.0	0.48	13.33	25.46	33.76	30.11	27.63
325.0	0.50	13.37	25.89	33.39	29.67	27.42
350.0	0.51	13.40	26.40	32.87	29.16	27.10
375.0	0.53	13.44	27.02	32.25	28.57	26.72
400.0	0.55	13.48	27.78	31.53	27.97	26.27
425.0	0.57	13.53	28.82	30.70	27.35	25.75
450.0	0.59	13.57	30.22	29.82	26.63	25.19
475.0	0.62	13.62	31.91	28.90	25.90	24.60
500.0	0.64	13.68	34.02	28.08	25.17	23.96
525.0	0.67	13.73	36.37	27.28	24.45	23.31
550.0	0.70	13.80	37.29	26.51	23.73	22.63
575.0	0.74	13.86	35.03	25.73	23.05	21.89
600.0	0.77	13.93	31.71	25.02	22.36	21.19
700.0	0.95	14.27	21.28	22.14	19.33	18.45
800.0	1.23	14.76	14.32	18.82	16.37	15.66
900.0	1.73	15.56	8.40	14.91	13.72	12.84
1000.0	2.77	17.03	2.68	10.65	11.72	9.98

Directional Coupler

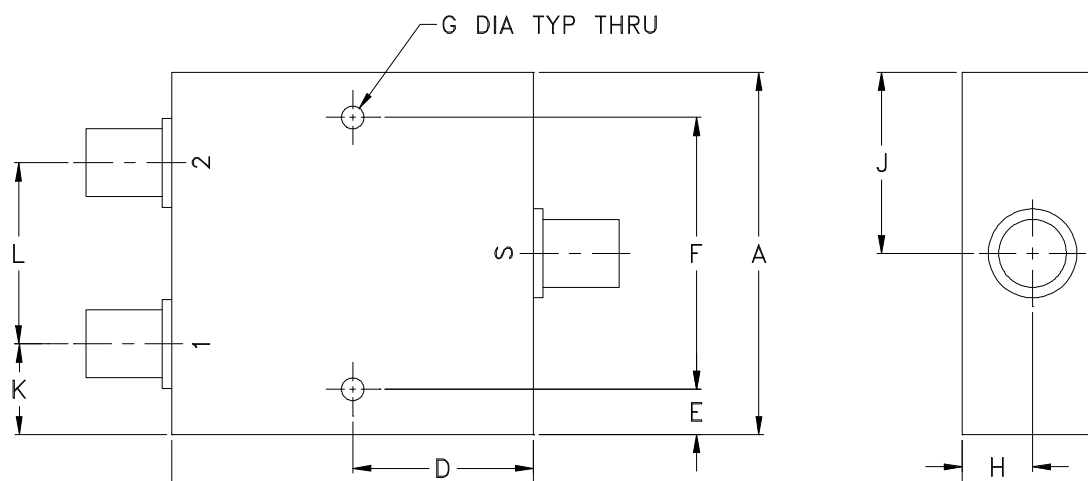
Typical Performance Curves

ZADC-ED11942/2



Outline Dimensions

F1110



CASE #	A	B	C	D	E	F	G	H	J	K	L	WT. GRAM
F1110	2.00 (50.80)	2.00 (50.80)	1.18 (29.97)	1.00 (25.40)	.25 (6.35)	1.500 (38.10)	.125 (3.18)	.67 (17.02)	1.00 (25.40)	.50 (12.70)	1.00 (25.40)	215.0

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.
- Refer to the individual model data sheet for the type of connectors available.



INTERNET <http://www.minicircuits.com>

P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661

Distribution Centers NORTH AMERICA 800-654-7949 • 417-335-5935 • Fax 417-335-5945 • EUROPE 44-1252-832600 • Fax 44-1252-837010

Mini-Circuits ISO 9001 & ISO 14001 Certified



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