

Engineering Development Model

Directional Coupler**

3ZN10DBED12990A1

** 3 Couplers with DIN connectors

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 : 99-01-961

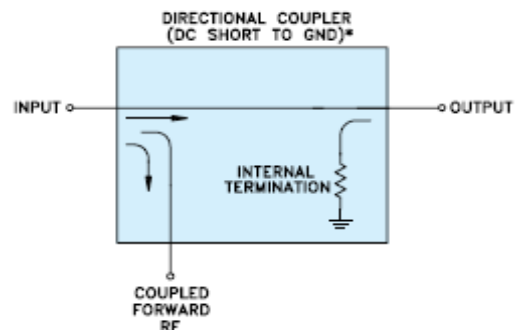
ELECTRICAL SPECIFICATIONS 50Ω @ +25°C				
Parameter		Min.	Typ.	Max. Units
Frequency		525		1075 MHz
Coupling	Nominal		10 ± 1	dB
	Flatness		± 0.70	dB
Mainline Loss ***	525-1075 MHz		0.70	dB
Directivity	525-1075 MHz		23	dB
VSWR	525-1075 MHz		1.11	(:1)
RF Power Input	525-1075 MHz			0.2 W

Note: *** Mainline loss includes theoretical coupled power loss of 0.458 dB at 10 dB coupling.

MAXIMUM RATINGS	
Operating Temperature	-5°C to 85°C
Storage Temperature	-40°C to 85°C

COAXIAL CONNECTIONS	
INPUT 1	J1
OUTPUT 1	J3
COUPLED 1	J2
INPUT 2	J4
OUTPUT 2	J6
COUPLED 2	J5
INPUT 3	J7
OUTPUT 3	J9
COUPLED 3	J8

Electrical Schematic



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

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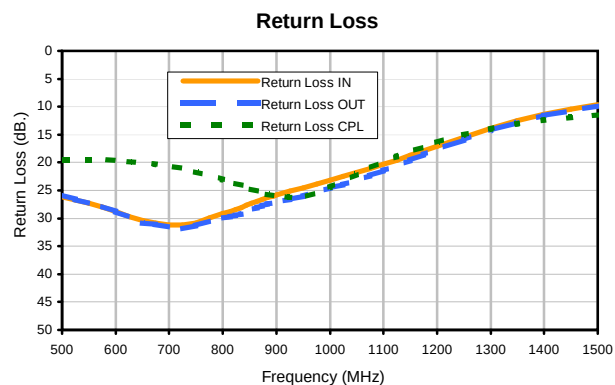
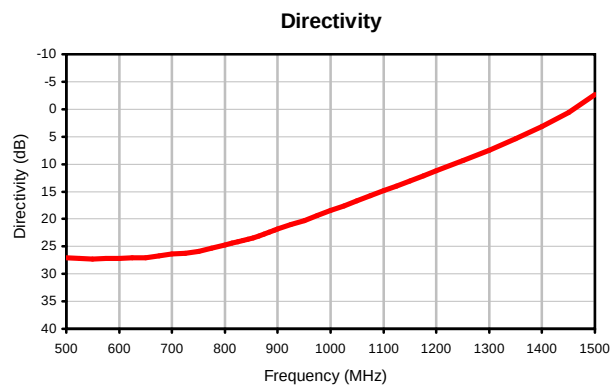
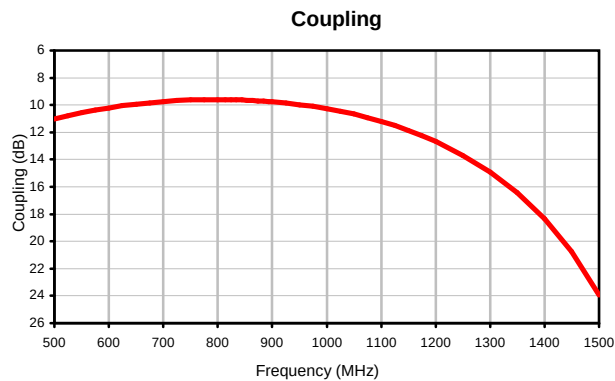
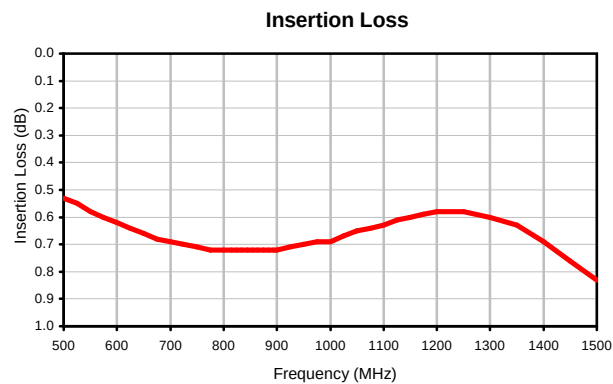
Typical Performance Data

FREQUENCY (MHz)	INSERTION LOSS (dB)	COUPLING (dB)	DIRECTIVITY (dB)	RETURN LOSS		
				IN	OUT	CPL
500.0	0.53	11.03	27.03	26.16	25.85	19.53
525.0	0.55	10.79	27.20	26.73	26.58	19.47
550.0	0.58	10.57	27.24	27.28	27.24	19.47
575.0	0.60	10.38	27.19	27.93	27.90	19.50
600.0	0.62	10.21	27.13	28.79	28.78	19.61
625.0	0.64	10.06	27.11	29.70	29.82	19.79
650.0	0.66	9.94	27.05	30.35	30.80	20.02
675.0	0.68	9.84	26.77	30.84	31.11	20.30
700.0	0.69	9.75	26.39	31.16	31.51	20.66
725.0	0.70	9.68	26.21	31.23	31.87	21.12
750.0	0.71	9.63	25.88	30.80	31.30	21.67
775.0	0.72	9.61	25.36	29.93	30.54	22.30
800.0	0.72	9.60	24.77	29.16	29.93	23.02
814.0	0.72	9.60	24.44	28.75	29.66	23.47
824.0	0.72	9.61	24.18	28.42	29.43	23.79
834.0	0.72	9.62	23.92	28.06	29.19	24.13
844.0	0.72	9.63	23.68	27.69	28.86	24.47
854.0	0.72	9.65	23.41	27.35	28.46	24.80
864.0	0.72	9.67	23.12	26.99	28.07	25.12
874.0	0.72	9.69	22.79	26.61	27.70	25.41
884.0	0.72	9.71	22.44	26.31	27.43	25.68
894.0	0.72	9.74	22.07	26.01	27.17	25.91
900.0	0.72	9.76	21.87	25.83	27.08	26.03
925.0	0.71	9.85	21.04	25.17	26.63	26.31
950.0	0.70	9.97	20.27	24.50	26.05	26.11
975.0	0.69	10.10	19.41	23.85	25.23	25.45
1000.0	0.69	10.26	18.48	23.17	24.52	24.43
1025.0	0.67	10.45	17.57	22.49	24.00	23.27
1050.0	0.65	10.67	16.70	21.81	23.26	22.09
1075.0	0.64	10.91	15.80	21.08	22.32	20.96
1100.0	0.63	11.19	14.86	20.33	21.39	19.89
1125.0	0.61	11.50	13.96	19.56	20.50	18.91
1150.0	0.60	11.85	13.06	18.73	19.57	18.01
1175.0	0.59	12.24	12.17	17.90	18.60	17.18
1200.0	0.58	12.67	11.23	17.06	17.64	16.42
1250.0	0.58	13.68	9.37	15.43	15.89	15.08
1300.0	0.60	14.92	7.46	13.87	14.21	14.00
1350.0	0.63	16.44	5.42	12.53	12.88	13.10
1400.0	0.69	18.34	3.19	11.31	11.61	12.40
1450.0	0.76	20.75	0.59	10.38	10.66	11.87
1500.0	0.83	23.93	-2.60	9.61	9.87	11.50

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Typical Performance Curves





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	-5° to 85° C Ambient Environment	Individual Model Data Sheet
Storage Temperature	-40° to 85° C Ambient Environment	Individual Model Data Sheet
Thermal Shock	-55° to 100°C, 100 cycles	MIL-STD-202, Method 107, Condition A-3, except +100°C
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