

Engineering Development Model

Bi-Directional Coupler**

2ZCOUP-ED12393

**2 Couplers

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.



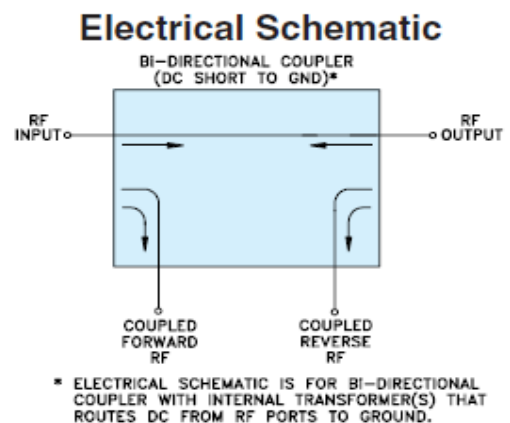
Please click "Back", and then click "Contact Us" for Applications support.

CASE STYLE : 99-01-1175

ELECTRICAL SPECIFICATIONS 50Ω @ +25°C				
Parameter		Min.	Typ.	Max. Units
Frequency		800		1550 MHz
Coupling	Nominal		21.00	dB
	Flatness		± 1.51	dB
Mainline Loss ***	800-1550 MHz		0.25	dB
Directivity	800-1550 MHz		22	dB
VSWR	800-1550 MHz		1.28	(:1)
RF Power Input	800-1550 MHz			100 mW

Note: *** Mainline loss includes theoretical coupled power loss of 0.035dB at 21dB coupling.

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



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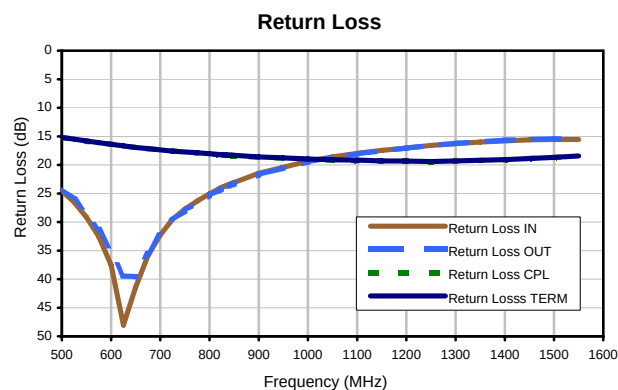
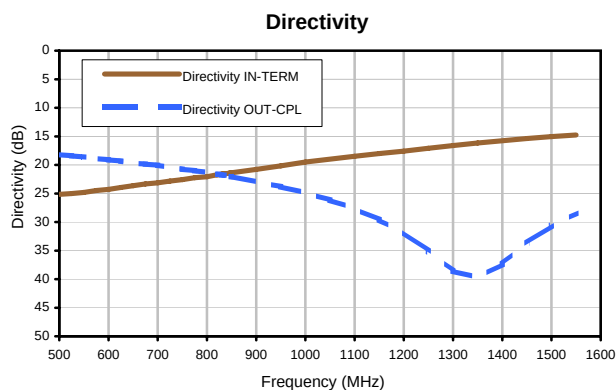
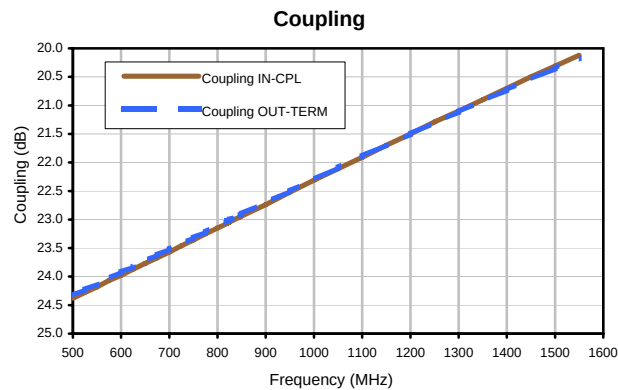
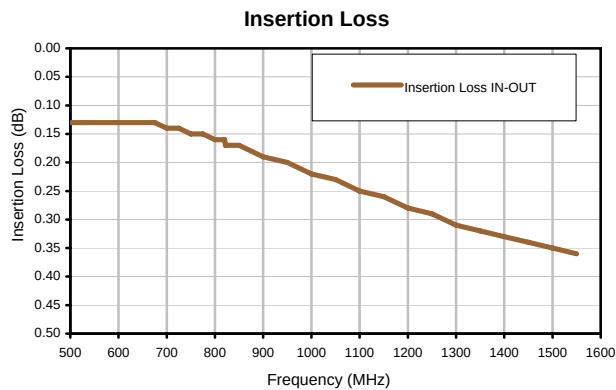
Typical Performance Data

FREQ. (MHz)	INSERTION LOSS (dB) IN-OUT	COUPLING (dB)		DIRECTIVITY (dB)		RETURN LOSS (dB)			
		IN-CPL	OUT-TERM	IN-TERM	OUT-CPL	IN	OUT	CPL	TERM
500.0	0.13	24.38	24.33	25.16	18.21	24.53	24.14	15.20	15.19
525.0	0.13	24.28	24.23	25.02	18.40	26.52	26.03	15.52	15.50
550.0	0.13	24.18	24.13	24.81	18.62	29.16	28.40	15.85	15.81
575.0	0.13	24.07	24.03	24.48	18.89	32.56	31.29	16.15	16.11
600.0	0.13	23.98	23.92	24.29	19.10	37.53	34.93	16.40	16.38
625.0	0.13	23.87	23.83	23.95	19.34	48.03	39.45	16.68	16.68
650.0	0.13	23.77	23.72	23.64	19.70	41.44	39.54	16.96	16.94
675.0	0.13	23.67	23.62	23.33	19.86	35.89	35.55	17.18	17.15
700.0	0.14	23.57	23.52	23.13	20.06	32.28	32.14	17.38	17.36
725.0	0.14	23.46	23.42	22.84	20.41	29.52	29.66	17.57	17.58
750.0	0.15	23.36	23.32	22.57	20.75	27.73	28.02	17.73	17.73
775.0	0.15	23.25	23.22	22.25	21.00	26.34	26.68	17.89	17.86
800.0	0.16	23.15	23.10	22.08	21.30	25.03	25.32	18.09	18.04
820.0	0.16	23.07	23.02	21.73	21.59	24.15	24.42	18.24	18.17
822.0	0.17	23.06	23.02	21.70	21.65	24.05	24.34	18.25	18.19
824.0	0.17	23.05	23.01	21.71	21.67	23.96	24.25	18.26	18.20
825.0	0.17	23.04	23.00	21.69	21.65	23.95	24.21	18.27	18.21
830.0	0.17	23.02	22.99	21.61	21.77	23.74	24.01	18.30	18.24
835.0	0.17	23.00	22.96	21.54	21.78	23.59	23.83	18.32	18.27
840.0	0.17	22.98	22.94	21.50	21.89	23.40	23.65	18.35	18.29
845.0	0.17	22.96	22.93	21.46	21.96	23.26	23.47	18.38	18.30
847.0	0.17	22.95	22.92	21.39	22.03	23.19	23.42	18.39	18.31
849.0	0.17	22.94	22.91	21.35	22.06	23.12	23.34	18.40	18.32
850.0	0.17	22.94	22.90	21.38	22.03	23.09	23.31	18.41	18.32
900.0	0.19	22.74	22.70	20.78	22.96	21.46	21.71	18.67	18.59
950.0	0.20	22.52	22.50	20.18	23.81	20.42	20.53	18.81	18.78
1000.0	0.22	22.31	22.30	19.50	24.91	19.36	19.48	19.00	18.95
1050.0	0.23	22.11	22.09	18.98	26.17	18.61	18.66	19.22	19.11
1100.0	0.25	21.91	21.89	18.49	27.66	17.99	18.07	19.27	19.16
1150.0	0.26	21.70	21.69	18.01	29.61	17.46	17.50	19.33	19.29
1200.0	0.28	21.50	21.50	17.60	31.78	17.07	17.07	19.36	19.32
1250.0	0.29	21.29	21.30	17.10	35.11	16.57	16.57	19.42	19.40
1300.0	0.31	21.10	21.11	16.60	38.59	16.27	16.23	19.35	19.31
1350.0	0.32	20.90	20.92	16.16	39.68	15.99	15.94	19.22	19.20
1400.0	0.33	20.70	20.73	15.76	37.37	15.79	15.67	19.09	19.07
1450.0	0.34	20.50	20.54	15.37	33.68	15.59	15.52	18.87	18.87
1500.0	0.35	20.31	20.35	15.04	30.62	15.54	15.43	18.70	18.68
1550.0	0.36	20.12	20.17	14.76	28.43	15.56	15.37	18.43	18.43

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Typical Performance Curves

2ZCOUP-ED12393





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 100°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