Engineering Development Model

DC PASS

Bi-Directional Coupler ZABDC20-ED13230

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 : DD477-1

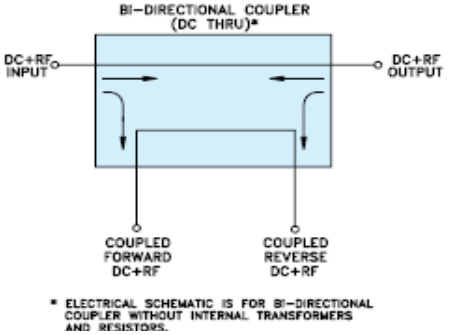
ELECTRICAL SPECIFICATIONS 75 Ω @ +25°C					
Parameter		**Min.**	**Typ.**	**Max.**	**Units**
Frequency		800		2500	MHz
Coupling	**Nominal**		20±1		dB
	Flatness		±.95		dB
Mainline Loss*	**800-2500 MHz**		0.15		dB
Directivity	**800-2500 MHz**		25		dB
VSWR	**800-2500 MHz**		1.08		(:1)
RF Power Input	**800-2500 MHz**			25	W
	800-1000 MHz			100	
	1000-2200 MHz			50	
	2200-2500 MHz			25	

Note: * Mainline loss includes theoretical coupled power loss of 0.044 dB at 20 dB coupling.

MAXIMUM RATINGS	
Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C
DC Current	2.0 A

COAXIAL CONNECTIONS	
INPUT	1
OUTPUT	4
COUPLED FORWARD	2
COUPLED REVERSE	3

Electrical Schematic



* ELECTRICAL SCHEMATIC IS FOR BI-DIRECTIONAL COUPLER WITHOUT INTERNAL TRANSFORMERS AND RESISTORS.

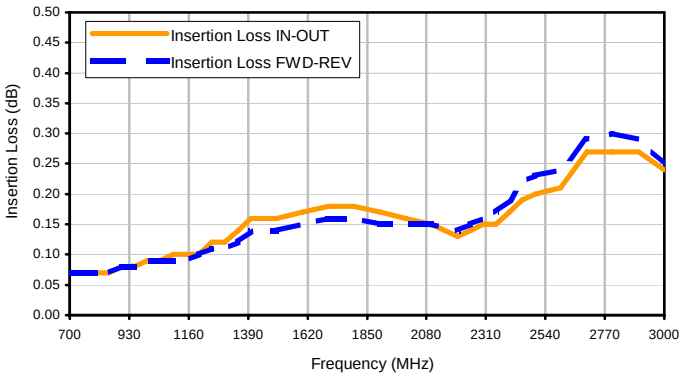
Bi-Directional Coupler ZABDC20-ED13230

Typical Performance Data

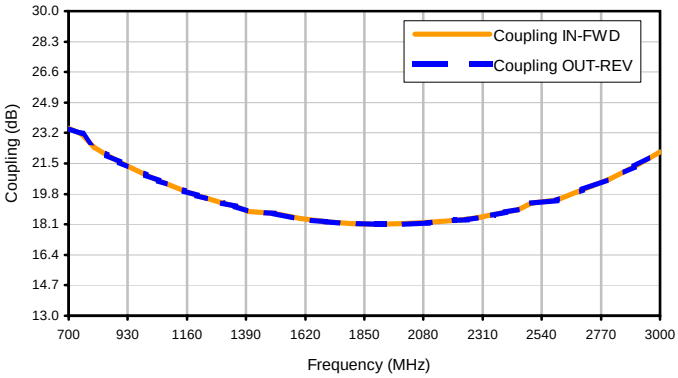
FREQ. (MHz)	INSERTION LOSS (dB)		COUPLING (dB)		DIRECTIVITY (dB)		RETURN LOSS (dB)			
	IN-OUT	FWD-REV	IN-FWD	OUT-REV	IN-REV	OUT-FWD	IN	OUT	FWD	REV
700.0	0.07	0.07	23.45	23.45	27.50	27.55	34.81	34.65	33.64	33.85
750.0	0.07	0.07	23.13	23.13	27.43	27.49	34.11	33.80	32.73	33.02
800.0	0.07	0.07	22.41	22.41	27.33	27.34	32.60	32.55	31.58	31.93
850.0	0.07	0.07	21.97	21.97	27.27	27.18	31.98	32.42	31.29	31.70
900.0	0.08	0.08	21.56	21.57	27.24	27.05	31.56	31.30	30.84	30.62
950.0	0.08	0.08	21.20	21.20	27.26	26.96	30.09	30.68	29.16	29.71
1000.0	0.09	0.09	20.85	20.86	27.33	26.91	29.85	29.89	29.17	29.13
1050.0	0.09	0.09	20.54	20.54	27.38	26.86	28.93	29.19	28.22	28.51
1100.0	0.10	0.09	20.24	20.25	27.44	26.77	29.14	29.39	28.78	28.99
1150.0	0.10	0.09	19.97	19.98	27.54	26.70	28.73	28.89	28.59	28.74
1200.0	0.10	0.10	19.72	19.73	27.68	26.70	28.60	28.85	28.47	28.78
1250.0	0.12	0.11	19.50	19.50	27.82	26.69	28.51	28.44	28.26	28.35
1300.0	0.12	0.11	19.29	19.29	27.95	26.66	28.17	28.04	27.88	28.11
1350.0	0.14	0.12	19.10	19.09	28.15	26.68	28.67	28.46	28.65	28.79
1400.0	0.16	0.14	18.81	18.81	28.56	26.83	28.79	28.67	29.44	29.83
1500.0	0.16	0.14	18.72	18.71	28.73	26.90	29.02	29.00	30.31	30.70
1600.0	0.17	0.15	18.42	18.41	29.34	27.22	30.08	30.43	33.54	33.96
1700.0	0.18	0.16	18.26	18.24	29.85	27.53	31.79	32.85	40.91	40.80
1800.0	0.18	0.16	18.15	18.14	29.94	27.63	33.93	35.78	43.45	41.26
1900.0	0.17	0.15	18.11	18.09	29.26	27.19	37.77	41.02	37.26	35.39
2000.0	0.16	0.15	18.13	18.11	27.79	26.08	41.10	43.50	31.19	30.29
2100.0	0.15	0.15	18.20	18.19	25.89	24.49	39.36	38.88	27.35	27.13
2200.0	0.13	0.14	18.33	18.32	23.99	22.74	33.31	33.65	24.74	24.89
2250.0	0.14	0.15	18.38	18.37	23.46	22.25	32.78	32.98	24.40	24.61
2300.0	0.15	0.16	18.51	18.50	22.27	21.22	31.52	31.72	24.04	24.24
2350.0	0.15	0.17	18.63	18.62	21.56	20.50	29.56	29.79	23.32	23.46
2400.0	0.17	0.19	18.78	18.77	20.91	19.90	28.86	29.55	23.06	23.48
2450.0	0.19	0.22	18.93	18.93	20.33	19.36	28.67	29.03	23.31	23.62
2500.0	0.20	0.23	19.29	19.29	19.52	18.56	27.08	27.97	22.95	23.50
2600.0	0.21	0.24	19.45	19.44	19.25	18.28	27.07	28.02	23.16	23.77
2700.0	0.27	0.29	20.03	20.03	18.41	17.48	27.43	28.39	23.94	24.61
2800.0	0.27	0.30	20.62	20.62	17.81	16.98	27.87	29.03	24.75	25.65
2900.0	0.27	0.29	21.32	21.32	17.07	16.42	29.58	31.11	26.54	28.02
3000.0	0.24	0.25	22.15	22.16	15.92	15.53	32.78	34.88	29.25	31.32

Typical Performance Curves

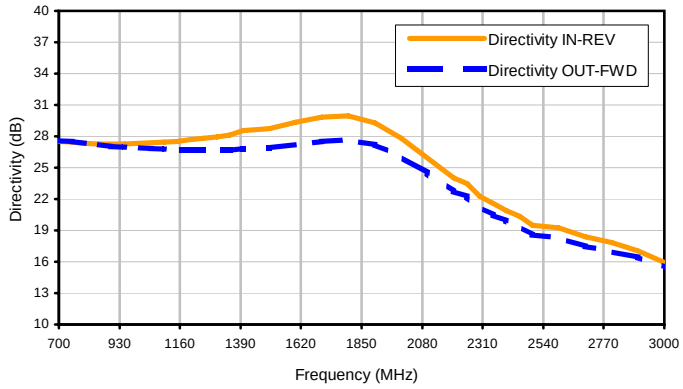
Insertion Loss



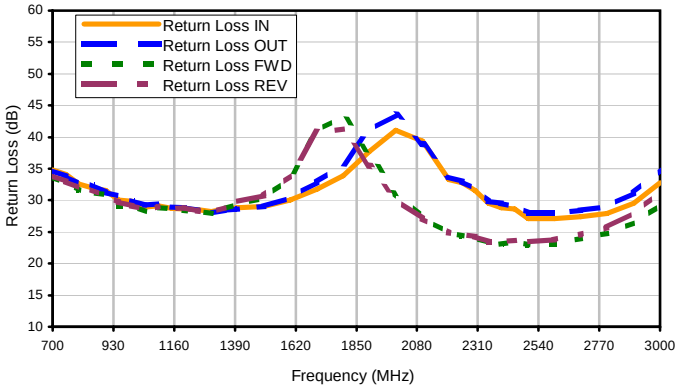
Coupling



Directivity



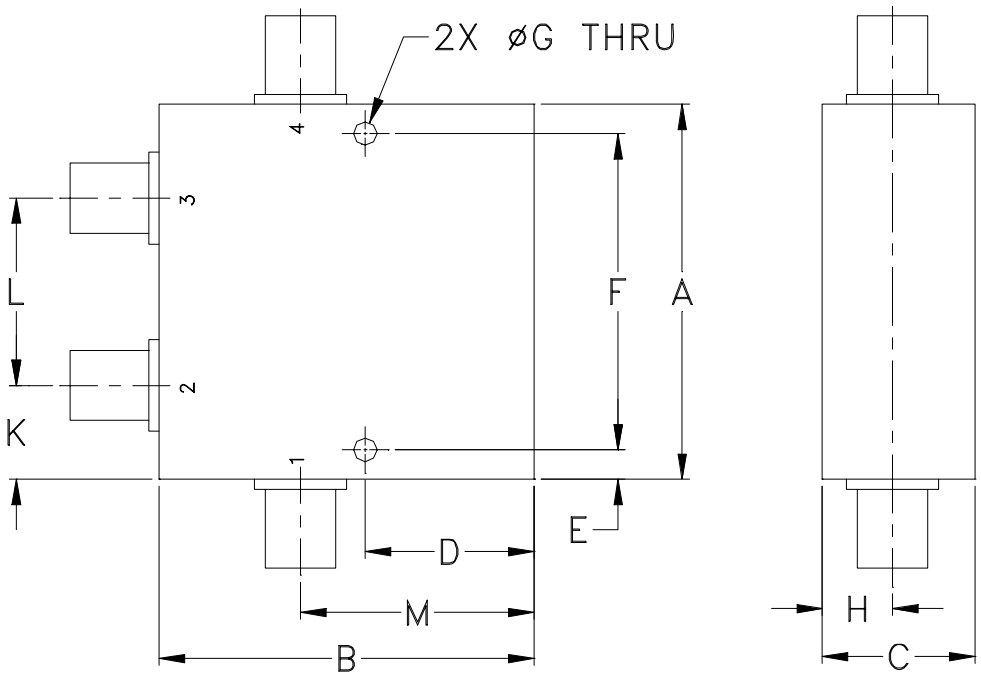
Return Loss



Case Style DD

DD477-1

Outline Dimensions



CASE#	A	B	C	D	E	F	G	H	J	K	L	M	WT, GRAM
DD477-1	2.00 (50.80)	2.00 (50.80)	.88 (22.35)	.90 (22.86)	.156 (3.96)	1.688 (42.88)	.125 (3.18)	.38 (9.65)	-- --	.50 (12.70)	1.00 (25.40)	1.25 (31.75)	225

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

Notes:

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

Mini-Circuits®
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Environmental Specifications ENV28

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