

Engineering Development Model

Power Splitter/Combiner

2 Way-0°

Z99SC-ED11702/1

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.



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

CASE STYLE : F183

ELECTRICAL SPECIFICATIONS 50Ω @ +25°C				
Parameter	Min.	Typ.	Max.	Units
Frequency	.3		600	MHz
Isolation		25		dB
		23		dB
		15		dB
Insertion Loss Above 3.0 dB	.3-3 MHz	0.20		dB
	3-300 MHz	0.30		dB
	300-600 MHz	0.70		dB
Phase Unbalance	.3-3 MHz	0.006		deg.
	3-300 MHz	0.043		deg.
	300-600 MHz	0.221		deg.
Amplitude Unbalance	.3-3 MHz	0.001		dB
	3-300 MHz	0.009		dB
	300-600 MHz	0.049		dB
VSWR	SUM Port	1.18		(:1)
	OUT Ports	1.08		(:1)

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

COAXIAL CONNECTIONS	
SUM PORT	S
PORT 1	1
PORT 2	2

Functional Diagram



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Typical Performance Data

FREQ. (MHz)	TOTAL LOSS ¹ (dB)		AMP. UNBAL. (dB)	ISOLATION (dB)	PHASE UNBAL. (deg.)	FREQ. (MHz)	VSWR (:1)		
	S-1	S-2					S	1	2
0.3	3.19	3.19	0.00	22.86	0.01	0.3	1.21	1.38	1.38
0.4	3.17	3.18	0.00	24.97	0.01	0.4	1.16	1.28	1.28
0.5	3.17	3.17	0.00	26.48	0.01	0.5	1.13	1.22	1.22
0.6	3.17	3.18	0.00	27.59	0.01	0.6	1.12	1.19	1.19
0.7	3.18	3.18	0.00	28.39	0.00	0.7	1.11	1.16	1.17
0.8	3.18	3.18	0.00	29.00	0.01	0.8	1.10	1.15	1.15
0.9	3.18	3.18	0.00	29.47	0.00	0.9	1.09	1.14	1.14
1.0	3.18	3.18	0.00	29.85	0.00	1.0	1.09	1.13	1.13
3.0	3.15	3.15	0.01	33.31	0.00	3.0	1.06	1.07	1.07
5.0	3.13	3.14	0.00	34.47	0.01	5.0	1.06	1.05	1.05
7.0	3.13	3.13	0.01	34.81	0.03	7.0	1.06	1.04	1.04
9.0	3.14	3.14	0.00	34.84	0.02	9.0	1.06	1.04	1.04
10.0	3.15	3.15	0.00	34.82	0.03	10.0	1.06	1.04	1.04
12.0	3.16	3.15	0.00	34.64	0.07	12.0	1.06	1.04	1.03
14.0	3.15	3.15	0.00	34.43	0.05	14.0	1.06	1.03	1.03
14.5	3.15	3.15	0.00	34.36	0.05	14.5	1.06	1.03	1.03
15.0	3.15	3.15	0.00	34.31	0.05	15.0	1.06	1.03	1.03
15.5	3.15	3.15	0.00	34.27	0.05	15.5	1.06	1.03	1.03
16.0	3.15	3.15	0.00	34.19	0.04	16.0	1.06	1.03	1.03
45.0	3.16	3.17	0.01	30.71	0.02	45.0	1.08	1.03	1.03
50.0	3.17	3.18	0.01	30.22	0.01	50.0	1.08	1.03	1.03
55.0	3.18	3.19	0.01	29.74	0.00	55.0	1.09	1.03	1.03
60.0	3.18	3.19	0.01	29.28	0.01	60.0	1.09	1.03	1.03
65.0	3.19	3.20	0.01	28.83	0.01	65.0	1.09	1.03	1.03
70.0	3.20	3.20	0.01	28.43	0.02	70.0	1.10	1.03	1.03
75.0	3.20	3.21	0.01	28.01	0.02	75.0	1.10	1.03	1.03
80.0	3.21	3.21	0.01	27.62	0.03	80.0	1.10	1.03	1.03
85.0	3.21	3.22	0.01	27.23	0.04	85.0	1.11	1.03	1.03
90.0	3.22	3.22	0.01	26.86	0.04	90.0	1.11	1.03	1.03
95.0	3.22	3.23	0.01	26.47	0.04	95.0	1.12	1.03	1.03
100.0	3.22	3.23	0.01	26.12	0.04	100.0	1.12	1.03	1.04
150.0	3.28	3.29	0.02	23.22	0.07	150.0	1.17	1.04	1.04
200.0	3.33	3.35	0.02	21.03	0.11	200.0	1.22	1.04	1.04
250.0	3.39	3.41	0.02	19.27	0.14	250.0	1.28	1.06	1.06
300.0	3.44	3.47	0.03	17.92	0.17	300.0	1.34	1.07	1.06
350.0	3.51	3.54	0.03	16.76	0.21	350.0	1.39	1.08	1.08
400.0	3.58	3.62	0.04	15.76	0.26	400.0	1.46	1.10	1.10
450.0	3.65	3.70	0.05	14.91	0.33	450.0	1.52	1.12	1.11
500.0	3.74	3.82	0.07	14.19	0.23	500.0	1.60	1.14	1.14
550.0	3.82	3.88	0.06	13.49	0.16	550.0	1.66	1.16	1.17
600.0	3.91	3.97	0.06	12.89	0.19	600.0	1.73	1.19	1.19

¹ Total Loss = Insertion Loss + 3dB Splitter Loss

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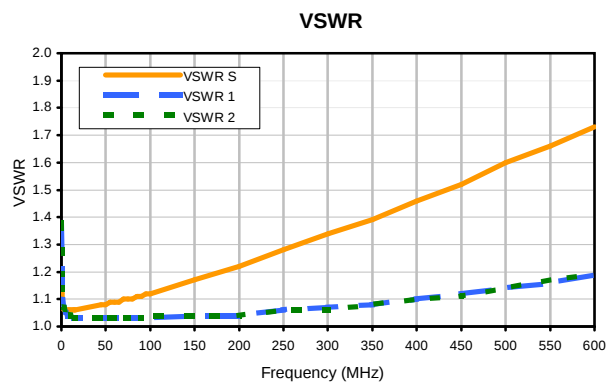
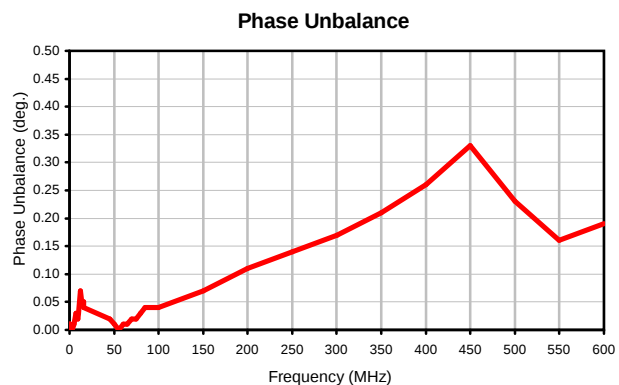
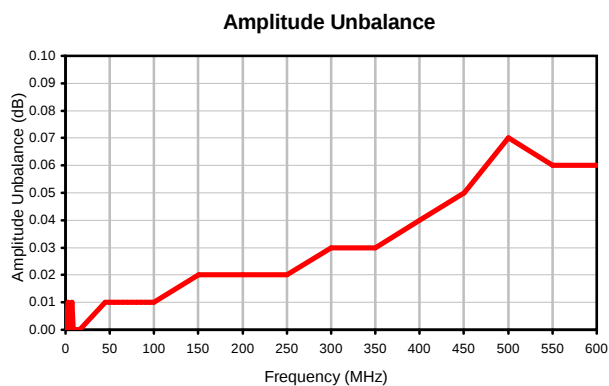
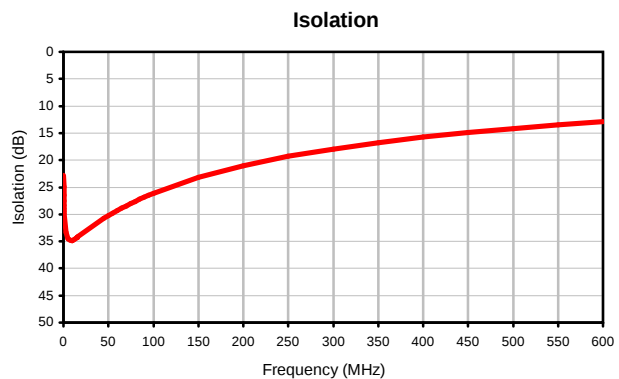
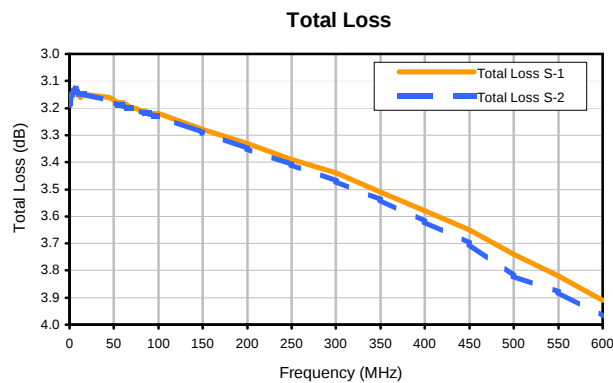
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Typical Performance Curves



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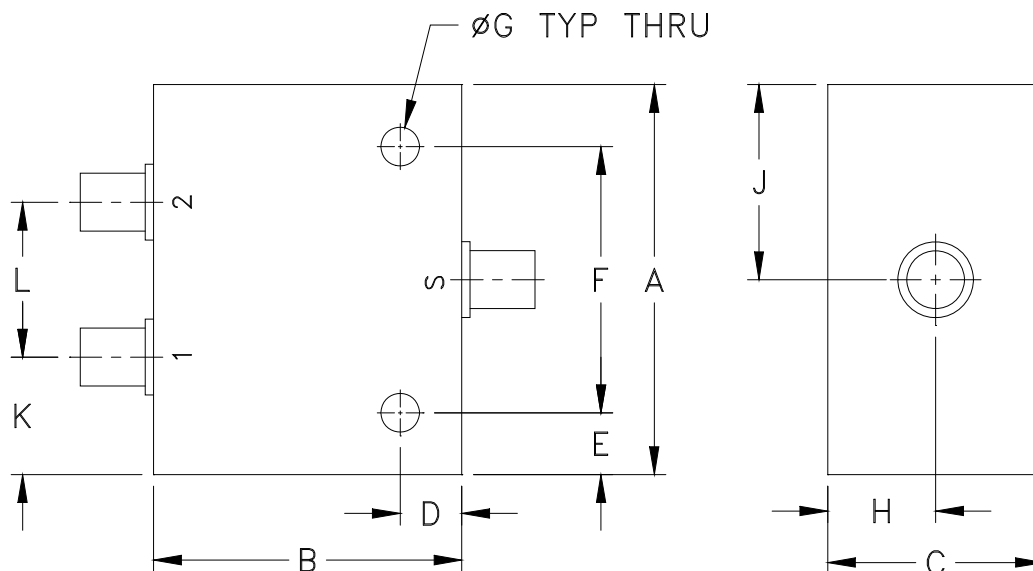
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Outline Dimensions

F183



CASE #	A	B	C	D	E	F	G	H	J	K	L	WT. GRAM
F183	1.26 (32.00)	1.00 (25.40)	.70 (17.78)	.20 (5.08)	.200 (5.08)	.860 (21.84)	.125 (3.18)	.35 (8.89)	.63 (16.00)	.38 (9.65)	.50 (12.70)	24.0

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.



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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