Engineering Development Model

Power Splitter/Combiner* 2RACK-2-ED13184/3

*2 Splitters

2 Way-0°

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.

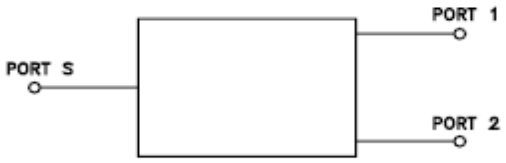
CASE STYLE :99-01-1314

ELECTRICAL SPECIFICATIONS 50Ω @ +25°C					
Parameter		**Min.**	**Typ.**	**Max.**	**Units**
Frequency		500		1300	MHz
Isolation	**500-1300 MHz**		25		dB
Insertion Loss Above 3.0 dB	**500-1300 MHz**		0.20		dB
Phase Unbalance	**500-1300 MHz**		0.15		deg.
Amplitude Unbalance	**500-1300 MHz**		0.05		dB
VSWR	**SUM Port**		1.21		(:1)
	OUT Ports		1.06		(:1)

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

COAXIAL CONNECTIONS	
SUM PORT (LOW POWER)	J1
PORT 1 (LOW POWER)	J2
PORT 2 (LOW POWER)	J3
SUM PORT (HIGH POWER)	J4
PORT 1 (HIGH POWER)	J5
PORT 2 (HIGH POWER)	J6

Functional Diagram



2 Way-0° Power Splitter/Combiner 2RACK-2-ED13184/3

Typical Performance Data

FREQ.	Low Power Splitter Section					High Power Combiner Section				
	TOTAL LOSS[1]		AMPL. UNBAL.	ISOL.	PHASE UNBAL.	TOTAL LOSS[1]		AMPL. UNBAL.	ISOL.	PHASE UNBAL.
(MHz)	(dB)		(dB)	(dB)	(deg.)	(dB)		(dB)	(dB)	(deg.)
	J1-J2	J1-J3		J2-J3		J4-J5	J4-J6		J5-J6	
500.0	3.33	3.32	0.01	11.86	0.04	3.22	3.20	0.03	5.23	1.09
550.0	3.29	3.30	0.01	13.06	0.03	3.18	3.19	0.00	5.39	0.97
600.0	3.26	3.27	0.01	14.40	0.00	3.17	3.15	0.03	5.51	1.01
650.0	3.23	3.24	0.01	15.97	0.10	3.14	3.14	0.00	5.60	0.90
700.0	3.19	3.21	0.01	17.96	0.22	3.12	3.11	0.01	5.69	0.70
725.0	3.18	3.19	0.02	19.10	0.18	3.09	3.12	0.03	5.71	0.76
750.0	3.17	3.19	0.01	20.40	0.17	3.09	3.12	0.03	5.73	1.18
775.0	3.17	3.17	0.01	22.00	0.19	3.09	3.11	0.03	5.75	1.19
800.0	3.16	3.16	0.01	24.00	0.09	3.07	3.12	0.05	5.76	1.03
825.0	3.16	3.16	0.01	26.60	0.08	3.05	3.12	0.07	5.76	1.12
850.0	3.15	3.16	0.01	30.04	0.10	3.06	3.12	0.06	5.77	1.23
855.0	3.15	3.16	0.01	30.86	0.09	3.06	3.12	0.06	5.77	1.22
860.0	3.15	3.16	0.01	31.74	0.08	3.06	3.12	0.06	5.77	1.21
865.0	3.15	3.16	0.01	32.66	0.07	3.06	3.12	0.06	5.76	1.19
870.0	3.15	3.16	0.01	33.62	0.04	3.06	3.12	0.06	5.76	1.16
875.0	3.15	3.16	0.01	34.59	0.01	3.06	3.12	0.06	5.75	1.12
880.0	3.15	3.16	0.01	35.51	0.03	3.05	3.12	0.06	5.75	1.07
885.0	3.15	3.16	0.01	36.29	0.08	3.05	3.12	0.07	5.74	1.02
890.0	3.15	3.16	0.01	36.77	0.13	3.05	3.12	0.07	5.74	0.98
895.0	3.15	3.16	0.01	36.85	0.18	3.04	3.12	0.08	5.73	0.94
900.0	3.15	3.16	0.01	36.47	0.23	3.04	3.12	0.09	5.73	0.91
925.0	3.16	3.17	0.01	31.84	0.36	3.03	3.13	0.10	5.71	0.92
950.0	3.16	3.17	0.01	27.83	0.22	3.03	3.14	0.11	5.69	1.15
975.0	3.16	3.18	0.01	25.00	0.00	3.02	3.16	0.13	5.66	1.43
1000.0	3.17	3.19	0.02	22.87	0.15	3.02	3.17	0.14	5.62	1.71
1100.0	3.22	3.23	0.01	17.30	0.17	3.05	3.21	0.16	5.45	1.92
1200.0	3.29	3.28	0.01	13.96	0.18	3.10	3.28	0.19	5.18	2.14
1300.0	3.37	3.35	0.02	11.51	0.06	3.14	3.37	0.23	4.91	2.44

FREQ.	VSWR					
	(:1)					
(MHz)	J1	J2	J3	J4	J5	J6
500.0	1.64	1.04	1.05	1.54	2.76	2.79
550.0	1.56	1.02	1.02	1.46	2.80	2.81
600.0	1.48	1.02	1.02	1.40	2.83	2.82
650.0	1.39	1.03	1.02	1.34	2.82	2.82
700.0	1.30	1.02	1.02	1.27	2.83	2.84
725.0	1.26	1.02	1.02	1.24	2.84	2.85
750.0	1.22	1.02	1.02	1.21	2.83	2.85
775.0	1.18	1.03	1.03	1.18	2.81	2.84
800.0	1.14	1.03	1.03	1.15	2.81	2.84
825.0	1.11	1.04	1.04	1.13	2.81	2.85
850.0	1.09	1.05	1.05	1.10	2.81	2.86
855.0	1.09	1.05	1.05	1.10	2.81	2.86
860.0	1.08	1.05	1.05	1.09	2.81	2.86
865.0	1.08	1.05	1.05	1.09	2.81	2.86
870.0	1.08	1.05	1.05	1.09	2.80	2.86
875.0	1.08	1.05	1.06	1.09	2.80	2.86
880.0	1.08	1.06	1.06	1.08	2.80	2.86
885.0	1.08	1.06	1.06	1.08	2.80	2.86
890.0	1.08	1.06	1.06	1.08	2.80	2.86
895.0	1.08	1.06	1.06	1.08	2.79	2.86
900.0	1.09	1.06	1.06	1.08	2.79	2.85
925.0	1.10	1.07	1.07	1.08	2.78	2.85
950.0	1.12	1.07	1.07	1.09	2.76	2.85
975.0	1.15	1.07	1.07	1.11	2.75	2.85
1000.0	1.17	1.07	1.07	1.13	2.73	2.85
1100.0	1.27	1.06	1.06	1.25	2.65	2.80
1200.0	1.37	1.12	1.12	1.35	2.53	2.71
1300.0	1.48	1.26	1.25	1.46	2.39	2.59

[1]Total Loss = Insertion Loss + 3dB Splitter Loss

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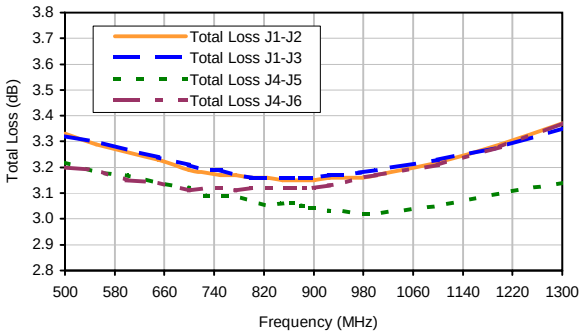
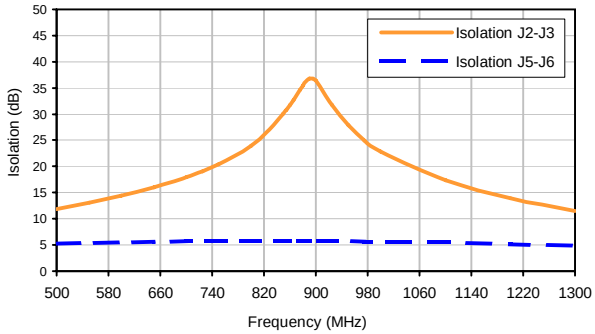
Typical Performance Curves

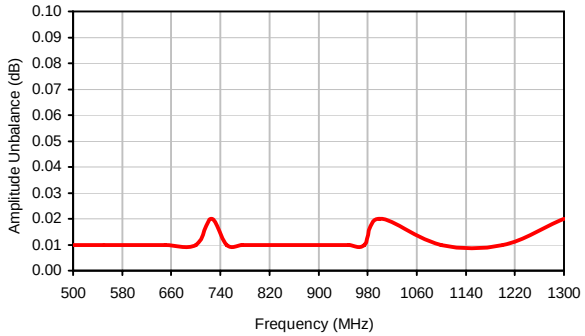
Total Loss



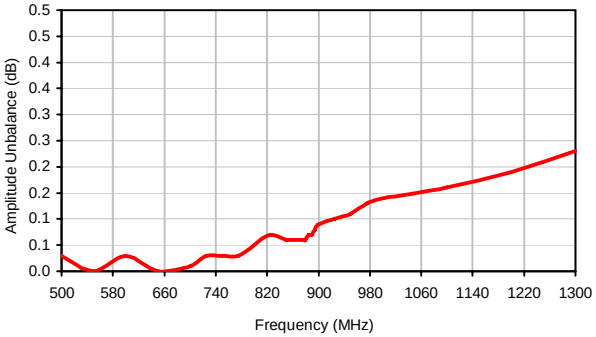
Isolation



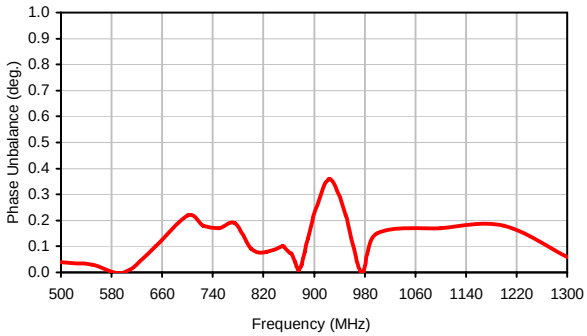
Amplitude Unbal @ Low Power Splitter



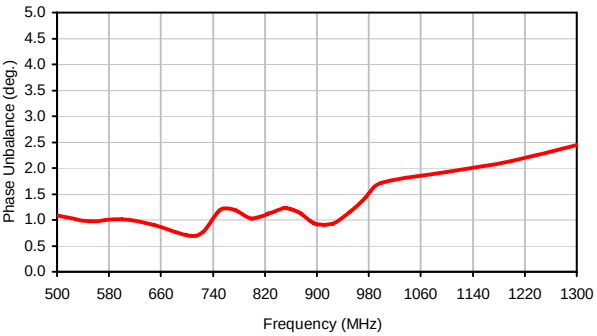
Amplitude Unbal @ High Power Combiner



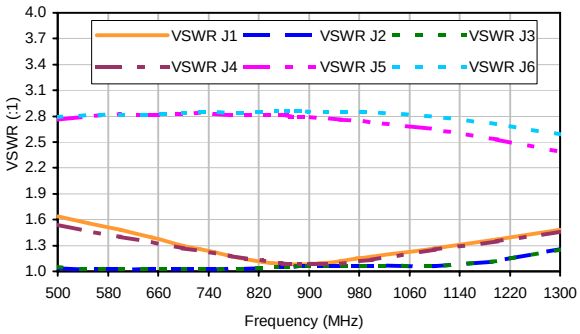
Phase Unbalance @ Low Power Splitter



Phase Unbalance @ High Power Combiner



VSWR



Mini-Circuits

Environmental Specifications ENV42

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