

2-Way 90° Power Splitter/Combiner

Typical Performance Data

Test Conditions: Input Power = +5 dbm, Temperature = -55°C.

Freq. (MHz)	Total Loss*			Amp. Unb.	Ph. Unb.	Isolation	Return Loss			
	Sum-Port 1	Sum-Port 2	Average	(±dB) Half P-P	(deg) Rel. to 90°	(dB) Port1-Port2	Sum	Port 1	Port 2	Iso
500	-2.28	-4.51	-3.54	1.12	-2.29	-16.72	-17.33	-17.65	-17.84	-17.29
600	-2.79	-3.82	-3.34	0.53	-2.41	-16.46	-16.73	-17.08	-17.41	-16.80
650	-3.01	-3.56	-3.29	0.28	-2.42	-16.43	-16.63	-16.96	-17.35	-16.69
700	-3.22	-3.34	-3.28	0.06	-2.32	-16.46	-16.68	-16.98	-17.47	-16.60
750	-3.42	-3.15	-3.29	0.13	-2.35	-16.42	-16.53	-16.85	-17.40	-16.46
800	-3.60	-3.00	-3.31	0.30	-2.39	-16.35	-16.41	-16.74	-17.39	-16.26
850	-3.77	-2.87	-3.35	0.45	-2.50	-16.25	-16.23	-16.53	-17.20	-16.06
900	-3.91	-2.78	-3.38	0.56	-2.52	-16.12	-16.13	-16.40	-17.02	-15.85
1000	-4.14	-2.64	-3.45	0.75	-2.81	-15.90	-15.83	-16.06	-16.56	-15.50
1100	-4.30	-2.58	-3.52	0.85	-3.00	-15.63	-15.60	-15.89	-16.02	-15.28
1200	-4.37	-2.57	-3.56	0.90	-3.22	-15.36	-15.40	-15.80	-15.77	-15.17
1300	-4.39	-2.60	-3.59	0.89	-3.40	-15.14	-15.50	-15.60	-15.54	-15.14
1400	-4.35	-2.66	-3.59	0.85	-3.37	-15.01	-15.59	-15.58	-15.42	-15.25
1500	-4.26	-2.75	-3.57	0.75	-3.33	-14.84	-15.69	-15.62	-15.12	-15.40
1600	-4.14	-2.88	-3.56	0.63	-3.17	-14.76	-15.86	-15.49	-14.86	-15.51
1700	-3.99	-3.01	-3.53	0.48	-2.85	-14.69	-15.89	-15.17	-14.82	-15.71
1800	-3.86	-3.16	-3.52	0.34	-2.47	-14.80	-15.76	-14.98	-14.78	-16.05
1900	-3.70	-3.33	-3.52	0.18	-2.07	-14.87	-15.88	-14.81	-14.61	-16.09
2000	-3.55	-3.46	-3.51	0.04	-1.32	-15.18	-16.17	-15.11	-14.59	-16.17
2100	-3.45	-3.55	-3.50	0.05	-0.48	-15.58	-16.78	-15.41	-14.79	-16.57
2200	-3.40	-3.64	-3.52	0.12	0.34	-16.12	-17.43	-15.66	-15.37	-17.75
2300	-3.31	-3.65	-3.48	0.17	0.34	-16.83	-18.01	-15.98	-15.81	-18.21
2400	-3.28	-3.61	-3.45	0.17	0.72	-17.86	-19.22	-17.21	-16.75	-19.23
2500	-3.29	-3.57	-3.43	0.14	0.93	-19.16	-20.90	-18.21	-17.82	-21.11
2600	-3.28	-3.57	-3.43	0.15	1.29	-20.57	-22.76	-19.23	-20.28	-24.47
2700	-3.40	-3.39	-3.40	0.01	0.90	-21.91	-23.86	-19.99	-21.66	-25.32
2800	-3.48	-3.30	-3.39	0.09	0.89	-22.32	-24.94	-21.69	-24.90	-23.96
2900	-3.61	-3.20	-3.41	0.20	0.93	-21.81	-23.92	-22.69	-27.69	-22.52
3000	-3.69	-3.14	-3.42	0.28	0.93	-20.62	-21.77	-22.52	-26.19	-20.73
3100	-3.79	-3.08	-3.45	0.35	0.26	-19.47	-19.74	-21.24	-23.07	-18.99
3200	-3.89	-3.07	-3.50	0.41	0.41	-17.94	-18.65	-19.59	-20.87	-17.36
3300	-4.00	-3.07	-3.56	0.47	-0.20	-16.88	-17.71	-18.09	-18.73	-16.31
3400	-4.00	-3.12	-3.58	0.43	-0.65	-16.15	-17.30	-17.36	-18.18	-15.84
3500	-3.96	-3.23	-3.61	0.37	-1.35	-15.65	-16.99	-16.74	-17.46	-15.56
3600	-3.83	-3.42	-3.63	0.20	-1.70	-15.34	-16.71	-16.81	-17.02	-15.49
3650	-3.73	-3.58	-3.65	0.06	-1.40	-15.24	-16.73	-16.87	-16.45	-15.33
3700	-3.64	-3.69	-3.67	0.03	-1.30	-15.10	-16.71	-16.52	-16.48	-15.18
3750	-3.48	-3.85	-3.67	0.20	-0.93	-14.98	-16.42	-16.62	-16.48	-15.45
3800	-3.40	-4.02	-3.72	0.32	-1.07	-15.10	-16.38	-16.47	-16.38	-15.45
3900	-3.17	-4.73	-4.02	0.80	1.53	-15.92	-15.19	-15.75	-15.54	-15.21
4000	-2.77	-5.17	-4.13	1.21	1.36	-16.05	-16.10	-15.91	-16.29	-15.79

* Total loss is the loss from Sum to each coupled port including the 3 dB theoretical split.

2-Way 90° Power Splitter/Combiner

Typical Performance Data

Test Conditions: Input Power = +5 dbm, Temperature = +25°C.

Freq. (MHz)	Total Loss*			Amp. Unb.	Ph. Unb.	Isolation	Return Loss			
	Sum-Port 1	Sum-Port 2	Average	(±dB) Half P-P	(deg) Rel. to 90°	(dB) Port1-Port2	Sum	Port 1	Port 2	Iso
500	-2.25	-4.54	-3.54	1.15	-2.17	-17.18	-17.91	-18.20	-18.43	-17.81
600	-2.77	-3.84	-3.34	0.54	-2.33	-16.79	-17.23	-17.62	-17.93	-17.12
650	-3.00	-3.57	-3.29	0.29	-2.42	-16.65	-16.99	-17.36	-17.68	-16.85
700	-3.22	-3.36	-3.29	0.07	-2.42	-16.56	-16.86	-17.21	-17.54	-16.60
750	-3.41	-3.18	-3.30	0.12	-2.51	-16.44	-16.59	-17.00	-17.32	-16.40
800	-3.59	-3.03	-3.32	0.28	-2.60	-16.35	-16.40	-16.86	-17.18	-16.20
850	-3.75	-2.91	-3.35	0.42	-2.69	-16.28	-16.28	-16.65	-16.98	-16.02
900	-3.90	-2.82	-3.39	0.54	-2.71	-16.17	-16.17	-16.50	-16.81	-15.86
1000	-4.13	-2.68	-3.47	0.72	-2.97	-15.97	-15.89	-16.20	-16.55	-15.60
1100	-4.28	-2.61	-3.52	0.83	-3.13	-15.77	-15.77	-15.98	-16.25	-15.38
1200	-4.36	-2.59	-3.56	0.89	-3.40	-15.53	-15.63	-15.76	-16.00	-15.25
1300	-4.39	-2.61	-3.59	0.88	-3.61	-15.27	-15.54	-15.63	-15.73	-15.22
1400	-4.35	-2.68	-3.59	0.84	-3.70	-15.05	-15.52	-15.53	-15.49	-15.22
1500	-4.27	-2.78	-3.59	0.74	-3.82	-14.83	-15.56	-15.39	-15.23	-15.29
1600	-4.14	-2.91	-3.57	0.61	-3.71	-14.68	-15.62	-15.27	-14.96	-15.38
1700	-3.99	-3.07	-3.55	0.46	-3.55	-14.59	-15.74	-15.18	-14.77	-15.45
1800	-3.83	-3.22	-3.54	0.30	-3.04	-14.65	-15.75	-15.08	-14.55	-15.57
1900	-3.69	-3.39	-3.54	0.14	-2.58	-14.75	-15.82	-14.90	-14.43	-15.71
2000	-3.54	-3.54	-3.54	0.01	-1.84	-15.04	-15.91	-14.91	-14.39	-15.95
2100	-3.44	-3.65	-3.55	0.11	-1.06	-15.44	-16.34	-14.99	-14.61	-16.32
2200	-3.36	-3.70	-3.53	0.17	-0.44	-16.11	-16.84	-15.24	-15.04	-17.13
2300	-3.29	-3.73	-3.52	0.22	0.06	-16.88	-17.85	-15.85	-15.75	-18.16
2400	-3.26	-3.69	-3.48	0.22	0.40	-18.06	-19.03	-16.76	-16.81	-19.75
2500	-3.27	-3.64	-3.46	0.18	0.51	-19.33	-20.80	-17.85	-18.02	-21.88
2600	-3.30	-3.55	-3.43	0.13	0.56	-20.85	-22.67	-19.26	-19.87	-24.49
2700	-3.37	-3.45	-3.41	0.04	0.33	-22.12	-24.21	-21.13	-22.14	-26.01
2800	-3.45	-3.40	-3.43	0.03	0.36	-22.32	-25.39	-22.94	-25.01	-24.80
2900	-3.57	-3.27	-3.42	0.15	0.36	-21.77	-24.49	-23.33	-26.41	-22.41
3000	-3.67	-3.18	-3.43	0.25	0.08	-20.61	-22.59	-22.30	-25.97	-20.12
3100	-3.77	-3.13	-3.46	0.32	-0.30	-19.26	-20.60	-20.66	-24.04	-18.36
3200	-3.89	-3.10	-3.51	0.39	-0.54	-17.88	-19.12	-19.11	-21.93	-17.04
3300	-3.96	-3.10	-3.55	0.43	-0.99	-16.94	-18.04	-18.13	-20.46	-16.18
3400	-3.99	-3.15	-3.59	0.41	-1.40	-16.15	-17.50	-17.32	-19.44	-15.63
3500	-3.96	-3.27	-3.63	0.35	-2.01	-15.59	-17.10	-17.07	-18.44	-15.39
3600	-3.84	-3.45	-3.65	0.19	-2.39	-15.31	-16.77	-17.05	-17.67	-15.44
3650	-3.75	-3.58	-3.67	0.08	-2.37	-15.15	-16.75	-17.04	-17.28	-15.53
3700	-3.66	-3.72	-3.69	0.04	-1.99	-15.11	-16.52	-17.04	-16.82	-15.48
3750	-3.55	-3.86	-3.71	0.17	-1.87	-15.11	-16.53	-17.11	-16.54	-15.53
3800	-3.43	-4.07	-3.76	0.33	-1.71	-15.17	-16.44	-16.95	-16.35	-15.66
3900	-3.13	-4.58	-3.92	0.74	-0.61	-15.47	-16.00	-16.84	-15.95	-15.71
4000	-2.81	-5.20	-4.17	1.20	0.68	-16.23	-16.31	-16.74	-15.82	-15.99

* Total loss is the loss from Sum to each coupled port including the 3 dB theoretical split.

2-Way 90° Power Splitter/Combiner

Typical Performance Data

Test Conditions: Input Power = +5 dbm, Temperature = +105°C.

Freq. (MHz)	Total Loss*			Amp. Unb. (±dB) Half P-P	Ph. Unb. (deg) Rel. to 90°	Isolation (dB) Port1-Port2	Return Loss (dB)			
	Sum-Port 1	Sum-Port 2	Average				Sum	Port 1	Port 2	Iso
500	-2.21	-4.56	-3.54	1.17	-1.99	-17.59	-18.26	-18.36	-18.65	-18.13
600	-2.73	-3.84	-3.32	0.56	-2.10	-17.16	-17.61	-17.94	-18.38	-17.45
650	-2.95	-3.57	-3.27	0.31	-2.14	-17.04	-17.15	-17.53	-17.91	-16.98
700	-3.17	-3.35	-3.26	0.09	-2.12	-16.93	-17.23	-17.76	-18.22	-17.00
750	-3.38	-3.17	-3.28	0.11	-2.21	-16.80	-16.97	-17.55	-17.98	-16.80
800	-3.56	-3.02	-3.30	0.27	-2.30	-16.70	-16.66	-17.32	-17.67	-16.59
850	-3.72	-2.90	-3.33	0.42	-2.41	-16.58	-16.46	-16.93	-17.26	-16.24
900	-3.87	-2.80	-3.37	0.54	-2.44	-16.46	-16.33	-16.82	-17.06	-16.17
1000	-4.11	-2.66	-3.45	0.73	-2.74	-16.16	-15.94	-16.39	-16.66	-15.75
1100	-4.28	-2.59	-3.52	0.84	-2.99	-15.83	-15.73	-15.98	-16.22	-15.38
1200	-4.37	-2.58	-3.57	0.90	-3.37	-15.47	-15.36	-15.58	-15.73	-15.09
1300	-4.40	-2.62	-3.60	0.89	-3.75	-15.09	-15.31	-15.43	-15.48	-15.06
1400	-4.35	-2.69	-3.60	0.84	-3.88	-14.80	-15.12	-15.16	-15.08	-14.89
1500	-4.26	-2.80	-3.59	0.73	-4.02	-14.55	-15.22	-15.01	-14.79	-14.92
1600	-4.13	-2.95	-3.58	0.59	-3.91	-14.42	-15.37	-14.84	-14.54	-15.01
1700	-3.96	-3.10	-3.55	0.43	-3.56	-14.37	-15.67	-15.01	-14.63	-15.32
1800	-3.80	-3.26	-3.54	0.28	-2.92	-14.51	-15.55	-14.62	-14.17	-15.22
1900	-3.64	-3.42	-3.53	0.11	-2.31	-14.68	-15.70	-14.67	-14.20	-15.50
2000	-3.49	-3.57	-3.53	0.03	-1.49	-15.07	-15.77	-14.66	-14.18	-15.74
2100	-3.41	-3.65	-3.53	0.12	-0.59	-15.57	-16.28	-14.82	-14.45	-16.22
2200	-3.35	-3.70	-3.53	0.17	0.20	-16.23	-16.90	-15.36	-15.13	-17.23
2300	-3.25	-3.71	-3.49	0.23	0.36	-17.15	-17.91	-16.00	-15.88	-18.29
2400	-3.23	-3.67	-3.46	0.21	0.61	-18.37	-19.14	-17.07	-17.24	-20.04
2500	-3.24	-3.62	-3.43	0.18	0.65	-19.65	-20.91	-18.26	-18.76	-22.57
2600	-3.27	-3.65	-3.46	0.19	1.79	-20.51	-24.35	-21.03	-21.68	-26.71
2700	-3.33	-3.44	-3.39	0.05	0.28	-22.17	-24.58	-21.87	-22.78	-26.44
2800	-3.42	-3.37	-3.40	0.04	0.25	-22.31	-25.36	-23.10	-25.01	-24.61
2900	-3.54	-3.26	-3.40	0.15	0.16	-21.51	-23.98	-22.87	-25.82	-21.99
3000	-3.64	-3.20	-3.43	0.23	0.09	-20.15	-22.04	-21.65	-24.55	-19.80
3100	-3.74	-3.16	-3.46	0.31	-0.49	-18.82	-20.00	-20.30	-22.52	-18.18
3200	-3.84	-3.12	-3.49	0.37	-0.44	-17.54	-19.04	-19.02	-21.66	-16.67
3300	-3.94	-3.13	-3.55	0.42	-1.02	-16.63	-18.05	-18.08	-20.46	-15.87
3400	-3.93	-3.15	-3.56	0.40	-1.40	-16.04	-17.49	-17.48	-19.66	-15.43
3500	-3.91	-3.26	-3.60	0.34	-1.92	-15.61	-17.03	-17.15	-18.91	-15.46
3600	-3.77	-3.46	-3.62	0.17	-2.09	-15.38	-16.65	-17.25	-18.04	-15.48
3650	-3.69	-3.60	-3.65	0.05	-1.73	-15.31	-16.74	-17.10	-17.40	-15.48
3700	-3.62	-3.70	-3.66	0.03	-1.63	-15.21	-16.49	-17.06	-17.37	-15.45
3750	-3.47	-3.88	-3.68	0.20	-1.23	-15.21	-16.53	-17.11	-16.54	-15.53
3800	-3.40	-4.01	-3.72	0.30	-1.45	-15.29	-16.47	-17.38	-17.00	-15.70
3900	-3.12	-4.65	-3.95	0.77	0.44	-15.89	-15.77	-17.08	-15.87	-15.81
4000	-2.76	-5.12	-4.10	1.18	0.83	-16.21	-16.92	-16.97	-16.26	-16.45

* Total loss is the loss from Sum to each coupled port including the 3 dB theoretical split.

NOTES:

- A. Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.
- B. Electrical specifications and performance data contained in this specification document are based on Mini-Circuits' applicable established test performance criteria and measurement instructions.
- C. The parts covered by this specification document are subject to Mini-Circuits standard limited warranty and terms and conditions (collectively, "Standard Terms"); Purchasers of this part are entitled to the rights and benefits contained therein. For a full statement of the Standard Terms and the exclusive rights and remedies thereunder, please visit Mini-Circuits' website at <https://www.minicircuits.com/terms/viewterm.html>

