

2-Way 90° Power Splitter/Combiner

Typical Performance Data

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

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
1500	-1.24	-6.39	-4.54	2.58	-0.06	-53.88	-33.20	-30.34	-33.79	-32.84
1600	-1.38	-5.95	-4.24	2.29	-0.10	-46.31	-37.10	-32.26	-32.64	-30.51
1700	-1.52	-5.56	-3.99	2.02	-0.12	-41.37	-49.05	-35.44	-32.93	-29.51
1800	-1.67	-5.20	-3.78	1.77	-0.16	-38.06	-46.63	-38.59	-33.67	-29.83
1900	-1.83	-4.88	-3.62	1.53	-0.19	-34.88	-38.88	-39.60	-32.42	-29.71
2000	-1.99	-4.58	-3.48	1.30	-0.25	-33.11	-35.59	-38.30	-31.54	-29.41
2100	-2.14	-4.31	-3.36	1.09	-0.34	-32.07	-33.15	-37.94	-31.85	-29.73
2200	-2.30	-4.07	-3.27	0.89	-0.40	-31.32	-31.45	-36.24	-32.70	-29.71
2300	-2.46	-3.85	-3.21	0.70	-0.40	-30.10	-29.94	-34.43	-32.94	-28.64
2400	-2.62	-3.65	-3.17	0.52	-0.49	-29.15	-28.86	-33.72	-31.53	-28.26
2500	-2.77	-3.47	-3.13	0.35	-0.57	-28.75	-28.80	-32.47	-30.34	-28.19
2650	-3.00	-3.22	-3.11	0.11	-0.67	-27.87	-27.70	-29.19	-31.17	-27.43
2800	-3.22	-3.02	-3.12	0.10	-0.75	-26.22	-25.37	-26.43	-30.14	-26.47
2950	-3.43	-2.84	-3.14	0.30	-0.80	-25.19	-24.32	-25.69	-28.31	-24.96
3100	-3.61	-2.69	-3.17	0.46	-0.81	-24.43	-23.17	-24.92	-25.78	-23.57
3250	-3.78	-2.57	-3.22	0.60	-0.76	-24.15	-22.74	-24.75	-23.80	-22.14
3400	-3.90	-2.48	-3.25	0.71	-0.69	-24.43	-22.70	-25.00	-22.74	-22.19
3550	-4.00	-2.41	-3.28	0.80	-0.71	-24.58	-22.83	-25.36	-22.06	-21.98
3700	-4.07	-2.38	-3.31	0.85	-0.80	-24.70	-23.59	-26.57	-21.48	-21.63
3850	-4.10	-2.35	-3.31	0.88	-0.85	-24.67	-24.59	-29.65	-21.38	-21.32
4000	-4.10	-2.36	-3.32	0.88	-1.03	-24.62	-26.65	-33.28	-21.91	-22.19
4150	-4.11	-2.38	-3.33	0.87	-1.53	-24.04	-29.84	-40.21	-22.14	-22.51
4300	-4.06	-2.42	-3.32	0.83	-1.64	-24.40	-32.71	-36.61	-22.02	-22.05
4450	-4.02	-2.46	-3.31	0.78	-2.21	-24.25	-31.90	-29.01	-22.50	-21.32
4600	-3.96	-2.49	-3.29	0.74	-2.22	-23.74	-27.25	-27.28	-22.39	-21.06
4750	-3.88	-2.59	-3.28	0.64	-2.60	-23.16	-23.81	-25.15	-21.10	-20.53
4900	-3.84	-2.71	-3.31	0.56	-2.97	-22.45	-21.26	-23.14	-20.44	-20.42
5050	-3.67	-2.81	-3.26	0.42	-2.47	-21.99	-20.49	-22.84	-20.54	-20.47
5200	-3.58	-2.92	-3.26	0.32	-2.46	-21.70	-19.61	-21.61	-20.17	-20.54
5350	-3.37	-3.12	-3.25	0.12	-2.02	-21.99	-19.92	-21.79	-20.54	-21.96
5500	-3.20	-3.36	-3.28	0.09	-1.81	-21.76	-19.95	-22.06	-19.76	-23.03
5600	-2.97	-3.56	-3.28	0.30	-1.83	-22.00	-20.52	-22.52	-19.78	-22.97
5700	-2.87	-3.68	-3.29	0.41	-1.60	-22.03	-21.07	-21.73	-19.52	-22.94
5800	-2.66	-3.96	-3.36	0.64	-1.87	-22.45	-21.15	-22.07	-18.66	-21.83
5900	-2.56	-4.07	-3.38	0.75	-1.72	-22.53	-21.63	-24.14	-18.48	-21.44
6000	-2.38	-4.44	-3.53	1.02	-2.34	-23.39	-21.90	-23.45	-17.66	-19.09
6100	-2.19	-4.59	-3.55	1.19	-1.97	-22.89	-22.92	-23.57	-17.57	-18.84
6200	-2.01	-4.86	-3.66	1.42	-1.79	-22.80	-23.92	-24.19	-17.00	-18.00
6300	-1.88	-5.24	-3.88	1.68	-2.37	-23.36	-23.46	-24.00	-15.96	-16.70
6400	-1.71	-5.54	-4.03	1.92	-2.30	-23.28	-24.30	-24.99	-15.58	-15.71
6500	-1.54	-5.89	-4.24	2.18	-2.29	-23.41	-24.66	-25.33	-15.29	-15.16

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

2-Way 90° Power Splitter/Combiner

QCH-63+

Typical Performance Data

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

Freq. (MHz)	Total Loss*			Amp. Unb.	Ph. Unb.	Isolation	Return Loss			
	(dB)			(±dB)	(deg)	(dB)	(dB)			
	Sum-Port 1	Sum-Port 2	Average	Half P-P	Rel. to 90°	Port1-Port2	Sum	Port 1	Port 2	Iso
1500	-1.24	-6.41	-4.55	2.59	0.25	-58.55	-32.84	-33.79	-30.34	-33.20
1600	-1.39	-5.97	-4.26	2.29	0.29	-47.77	-30.51	-32.64	-32.26	-37.10
1700	-1.54	-5.58	-4.01	2.02	0.30	-42.54	-29.51	-32.93	-35.44	-49.05
1800	-1.69	-5.22	-3.80	1.76	0.34	-39.02	-29.83	-33.67	-38.59	-46.63
1900	-1.85	-4.90	-3.64	1.52	0.35	-35.41	-29.71	-32.42	-39.60	-38.88
2000	-2.01	-4.60	-3.50	1.30	0.39	-33.25	-29.41	-31.54	-38.30	-35.59
2100	-2.17	-4.33	-3.38	1.08	0.40	-32.08	-29.73	-31.85	-37.94	-33.15
2200	-2.33	-4.08	-3.29	0.88	0.42	-31.03	-29.71	-32.70	-36.24	-31.45
2300	-2.48	-3.86	-3.22	0.69	0.44	-29.68	-28.64	-32.94	-34.43	-29.94
2400	-2.64	-3.66	-3.18	0.51	0.48	-28.64	-28.26	-31.53	-33.72	-28.86
2500	-2.80	-3.48	-3.15	0.34	0.52	-28.21	-28.19	-30.34	-32.47	-28.80
2650	-3.03	-3.24	-3.13	0.11	0.53	-27.40	-27.43	-31.17	-29.19	-27.70
2800	-3.24	-3.03	-3.14	0.11	0.57	-26.19	-26.47	-30.14	-26.43	-25.37
2950	-3.45	-2.85	-3.16	0.30	0.59	-25.30	-24.96	-28.31	-25.69	-24.32
3100	-3.64	-2.71	-3.20	0.47	0.68	-24.77	-23.57	-25.78	-24.92	-23.17
3250	-3.82	-2.59	-3.25	0.62	0.84	-24.40	-22.14	-23.80	-24.75	-22.74
3400	-3.96	-2.49	-3.29	0.74	1.04	-24.42	-22.19	-22.74	-25.00	-22.70
3550	-4.07	-2.43	-3.32	0.83	1.18	-24.43	-21.98	-22.06	-25.36	-22.83
3700	-4.16	-2.39	-3.36	0.89	1.35	-24.45	-21.63	-21.48	-26.57	-23.59
3850	-4.21	-2.37	-3.39	0.92	1.47	-24.48	-21.32	-21.38	-29.65	-24.59
4000	-4.22	-2.37	-3.39	0.93	1.52	-24.67	-22.19	-21.91	-33.28	-26.65
4150	-4.26	-2.39	-3.42	0.93	1.28	-24.16	-22.51	-22.14	-40.21	-29.84
4300	-4.20	-2.45	-3.41	0.87	1.18	-24.47	-22.05	-22.02	-36.61	-32.71
4450	-4.16	-2.51	-3.41	0.82	0.89	-24.42	-21.32	-22.50	-29.01	-31.90
4600	-4.10	-2.55	-3.39	0.77	0.76	-23.83	-21.06	-22.39	-27.28	-27.25
4750	-4.05	-2.65	-3.41	0.70	0.61	-23.12	-20.53	-21.10	-25.15	-23.81
4900	-3.93	-2.74	-3.38	0.60	0.28	-22.38	-20.42	-20.44	-23.14	-21.26
5050	-3.76	-2.87	-3.34	0.45	0.78	-21.71	-20.47	-20.54	-22.84	-20.49
5200	-3.67	-2.98	-3.34	0.35	0.95	-21.47	-20.54	-20.17	-21.61	-19.61
5350	-3.44	-3.15	-3.30	0.15	1.45	-22.06	-21.96	-20.54	-21.79	-19.92
5500	-3.27	-3.39	-3.33	0.05	1.44	-21.94	-23.03	-19.76	-22.06	-19.95
5600	-3.12	-3.58	-3.36	0.23	1.36	-22.50	-22.97	-19.78	-22.52	-20.52
5700	-2.97	-3.71	-3.36	0.37	1.66	-22.53	-22.94	-19.52	-21.73	-21.07
5800	-2.84	-3.97	-3.44	0.57	1.38	-22.81	-21.83	-18.66	-22.07	-21.15
5900	-2.72	-4.09	-3.46	0.69	1.48	-22.79	-21.44	-18.48	-24.14	-21.63
6000	-2.56	-4.45	-3.61	0.95	0.88	-23.39	-19.09	-17.66	-23.45	-21.90
6100	-2.38	-4.64	-3.66	1.14	1.44	-22.61	-18.84	-17.57	-23.57	-22.92
6200	-2.26	-4.92	-3.79	1.35	1.35	-22.34	-18.00	-17.00	-24.19	-23.92
6300	-2.13	-5.29	-3.99	1.58	0.85	-22.83	-16.70	-15.96	-24.00	-23.46
6400	-1.99	-5.62	-4.17	1.83	1.14	-22.63	-15.71	-15.58	-24.99	-24.30
6500	-1.81	-5.98	-4.38	2.09	1.49	-22.75	-15.16	-15.29	-25.33	-24.66

* 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 = -55°C, Configuration C.

Freq. (MHz)	Total Loss* (dB)			Amp. Unb. (±dB)	Ph. Unb. (deg)	Isolation (dB)	Return Loss (dB)			
	Sum-Port 1	Sum-Port 2	Average	Half P-P	Rel. to 90°	Port1-Port2	Sum	Port 1	Port 2	Iso
1500	-1.24	-6.41	-4.55	2.58	0.19	-40.57	-33.79	-32.84	-33.20	-30.34
1600	-1.39	-5.97	-4.26	2.28	0.20	-43.86	-32.64	-30.51	-37.10	-32.26
1700	-1.54	-5.58	-4.01	2.01	0.24	-45.29	-32.93	-29.51	-49.05	-35.44
1800	-1.69	-5.22	-3.80	1.76	0.26	-45.60	-33.67	-29.83	-46.63	-38.59
1900	-1.85	-4.89	-3.63	1.52	0.29	-43.06	-32.42	-29.71	-38.88	-39.60
2000	-2.01	-4.60	-3.50	1.29	0.31	-38.64	-31.54	-29.41	-35.59	-38.30
2100	-2.17	-4.33	-3.38	1.08	0.31	-36.60	-31.85	-29.73	-33.15	-37.94
2200	-2.32	-4.09	-3.29	0.87	0.32	-35.39	-32.70	-29.71	-31.45	-36.24
2300	-2.48	-3.86	-3.22	0.69	0.37	-33.89	-32.94	-28.64	-29.94	-34.43
2400	-2.64	-3.67	-3.19	0.51	0.34	-32.23	-31.53	-28.26	-28.86	-33.72
2500	-2.80	-3.48	-3.15	0.34	0.35	-31.29	-30.34	-28.19	-28.80	-32.47
2650	-3.03	-3.24	-3.13	0.10	0.42	-30.11	-31.17	-27.43	-27.70	-29.19
2800	-3.25	-3.03	-3.14	0.12	0.43	-29.22	-30.14	-26.47	-25.37	-26.43
2950	-3.45	-2.85	-3.16	0.30	0.48	-28.06	-28.31	-24.96	-24.32	-25.69
3100	-3.65	-2.71	-3.21	0.48	0.55	-27.30	-25.78	-23.57	-23.17	-24.92
3250	-3.83	-2.59	-3.25	0.62	0.68	-26.96	-23.80	-22.14	-22.74	-24.75
3400	-3.96	-2.50	-3.29	0.74	0.90	-26.76	-22.74	-22.19	-22.70	-25.00
3550	-4.08	-2.43	-3.33	0.83	1.00	-27.12	-22.06	-21.98	-22.83	-25.36
3700	-4.16	-2.40	-3.37	0.89	1.14	-26.64	-21.48	-21.63	-23.59	-26.57
3850	-4.22	-2.37	-3.39	0.93	1.16	-25.80	-21.38	-21.32	-24.59	-29.65
4000	-4.22	-2.37	-3.39	0.94	1.21	-25.37	-21.91	-22.19	-26.65	-33.28
4150	-4.26	-2.39	-3.42	0.94	0.91	-24.55	-22.14	-22.51	-29.84	-40.21
4300	-4.20	-2.43	-3.40	0.89	0.87	-25.19	-22.02	-22.05	-32.71	-36.61
4450	-4.15	-2.45	-3.38	0.83	0.57	-25.66	-22.50	-21.32	-31.90	-29.01
4600	-4.09	-2.49	-3.36	0.80	0.61	-24.98	-22.39	-21.06	-27.25	-27.28
4750	-4.04	-2.59	-3.38	0.71	0.47	-24.25	-21.10	-20.53	-23.81	-25.15
4900	-3.93	-2.72	-3.37	0.61	0.18	-23.25	-20.44	-20.42	-21.26	-23.14
5050	-3.76	-2.83	-3.32	0.47	0.58	-23.12	-20.54	-20.47	-20.49	-22.84
5200	-3.67	-2.95	-3.32	0.37	0.68	-22.64	-20.17	-20.54	-19.61	-21.61
5350	-3.46	-3.16	-3.31	0.16	1.19	-22.34	-20.54	-21.96	-19.92	-21.79
5500	-3.27	-3.40	-3.34	0.05	0.95	-21.64	-19.76	-23.03	-19.95	-22.06
5600	-3.13	-3.60	-3.37	0.22	0.83	-21.99	-19.78	-22.97	-20.52	-22.52
5700	-2.98	-3.73	-3.37	0.36	1.14	-21.06	-19.52	-22.94	-21.07	-21.73
5800	-2.85	-4.00	-3.46	0.56	0.93	-21.40	-18.66	-21.83	-21.15	-22.07
5900	-2.73	-4.12	-3.48	0.69	0.75	-21.71	-18.48	-21.44	-21.63	-24.14
6000	-2.57	-4.48	-3.63	0.94	0.32	-22.91	-17.66	-19.09	-21.90	-23.45
6100	-2.38	-4.63	-3.65	1.11	0.78	-22.47	-17.57	-18.84	-22.92	-23.57
6200	-2.26	-4.91	-3.78	1.31	0.71	-22.80	-17.00	-18.00	-23.92	-24.19
6300	-2.14	-5.30	-4.00	1.58	0.15	-23.73	-15.96	-16.70	-23.46	-24.00
6400	-1.99	-5.60	-4.16	1.78	0.54	-23.93	-15.58	-15.71	-24.30	-24.99
6500	-1.81	-5.95	-4.36	2.04	0.80	-23.67	-15.29	-15.16	-24.66	-25.33

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

2-Way 90° Power Splitter/Combiner

QCH-63+

Typical Performance Data

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

Freq. (MHz)	Total Loss* (dB)			Amp. Unb. (±dB)	Ph. Unb. (deg)	Isolation (dB)	Return Loss (dB)			
	Sum-Port 1	Sum-Port 2	Average	Half P-P	Rel. to 90°	Port1-Port2	Sum	Port 1	Port 2	Iso
1500	-1.24	-6.41	-4.55	2.59	0.01	-40.82	-30.34	-33.20	-32.84	-33.79
1600	-1.39	-5.97	-4.26	2.30	-0.02	-44.75	-32.26	-37.10	-30.51	-32.64
1700	-1.54	-5.58	-4.01	2.03	-0.07	-45.56	-35.44	-49.05	-29.51	-32.93
1800	-1.69	-5.22	-3.80	1.78	-0.10	-45.05	-38.59	-46.63	-29.83	-33.67
1900	-1.84	-4.89	-3.63	1.54	-0.14	-42.50	-39.60	-38.88	-29.71	-32.42
2000	-2.00	-4.60	-3.49	1.31	-0.20	-38.79	-38.30	-35.59	-29.41	-31.54
2100	-2.16	-4.33	-3.38	1.10	-0.26	-37.05	-37.94	-33.15	-29.73	-31.85
2200	-2.32	-4.08	-3.29	0.89	-0.31	-36.05	-36.24	-31.45	-29.71	-32.70
2300	-2.48	-3.86	-3.22	0.70	-0.36	-34.43	-34.43	-29.94	-28.64	-32.94
2400	-2.63	-3.66	-3.18	0.52	-0.38	-32.70	-33.72	-28.86	-28.26	-31.53
2500	-2.79	-3.48	-3.15	0.36	-0.41	-31.46	-32.47	-28.80	-28.19	-30.34
2650	-3.02	-3.24	-3.13	0.12	-0.59	-30.11	-29.19	-27.70	-27.43	-31.17
2800	-3.24	-3.03	-3.14	0.10	-0.65	-29.02	-26.43	-25.37	-26.47	-30.14
2950	-3.44	-2.85	-3.16	0.29	-0.70	-28.05	-25.69	-24.32	-24.96	-28.31
3100	-3.63	-2.71	-3.19	0.46	-0.69	-27.20	-24.92	-23.17	-23.57	-25.78
3250	-3.80	-2.59	-3.23	0.61	-0.59	-26.69	-24.75	-22.74	-22.14	-23.80
3400	-3.92	-2.50	-3.27	0.70	-0.54	-26.66	-25.00	-22.70	-22.19	-22.74
3550	-4.02	-2.43	-3.30	0.81	-0.52	-26.80	-25.36	-22.83	-21.98	-22.06
3700	-4.09	-2.39	-3.32	0.84	-0.55	-26.66	-26.57	-23.59	-21.63	-21.48
3850	-4.12	-2.37	-3.33	0.89	-0.55	-26.17	-29.65	-24.59	-21.32	-21.38
4000	-4.12	-2.37	-3.33	0.87	-0.72	-25.58	-33.28	-26.65	-22.19	-21.91
4150	-4.14	-2.40	-3.35	0.89	-1.16	-24.93	-40.21	-29.84	-22.51	-22.14
4300	-4.08	-2.46	-3.35	0.81	-1.38	-25.11	-36.61	-32.71	-22.05	-22.02
4450	-4.02	-2.51	-3.33	0.79	-1.95	-25.14	-29.01	-31.90	-21.32	-22.50
4600	-3.96	-2.55	-3.31	0.71	-2.04	-24.78	-27.28	-27.25	-21.06	-22.39
4750	-3.88	-2.65	-3.31	0.65	-2.48	-23.90	-25.15	-23.81	-20.53	-21.10
4900	-3.83	-2.74	-3.32	0.55	-2.90	-23.41	-23.14	-21.26	-20.42	-20.44
5050	-3.67	-2.86	-3.29	0.43	-2.31	-23.41	-22.84	-20.49	-20.47	-20.54
5200	-3.58	-2.98	-3.29	0.30	-2.14	-22.65	-21.61	-19.61	-20.54	-20.17
5350	-3.40	-3.16	-3.28	0.13	-1.79	-22.55	-21.79	-19.92	-21.96	-20.54
5500	-3.23	-3.39	-3.31	0.06	-1.34	-21.51	-22.06	-19.95	-23.03	-19.76
5600	-3.01	-3.59	-3.31	0.31	-1.36	-21.86	-22.52	-20.52	-22.97	-19.78
5700	-2.91	-3.72	-3.33	0.42	-1.18	-20.96	-21.73	-21.07	-22.94	-19.52
5800	-2.72	-3.98	-3.40	0.66	-1.46	-21.36	-22.07	-21.15	-21.83	-18.66
5900	-2.62	-4.10	-3.42	0.69	-0.96	-21.73	-24.14	-21.63	-21.44	-18.48
6000	-2.44	-4.48	-3.58	1.04	-1.77	-22.86	-23.45	-21.90	-19.09	-17.66
6100	-2.25	-4.66	-3.62	1.22	-1.19	-22.28	-23.57	-22.92	-18.84	-17.57
6200	-2.07	-4.95	-3.74	1.46	-1.01	-22.53	-24.19	-23.92	-18.00	-17.00
6300	-1.94	-5.31	-3.94	1.59	-1.55	-23.46	-24.00	-23.46	-16.70	-15.96
6400	-1.77	-5.63	-4.12	1.96	-1.55	-23.71	-24.99	-24.30	-15.71	-15.58
6500	-1.60	-5.99	-4.33	2.23	-1.45	-23.61	-25.33	-24.66	-15.16	-15.29

* 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, Configuration A.

Freq. (MHz)	Total Loss* (dB)			Amp. Unb. (±dB)	Ph. Unb. (deg)	Isolation (dB)	Return Loss (dB)			
	Sum-Port 1	Sum-Port 2	Average	Half P-P	Rel. to 90°	Port1-Port2	Sum	Port 1	Port 2	Iso
1500	-1.23	-6.41	-4.55	2.59	0.26	-38.47	-29.73	-28.46	-39.33	-38.17
1600	-1.38	-5.98	-4.26	2.30	0.24	-39.79	-30.95	-28.96	-40.43	-36.73
1700	-1.52	-5.58	-4.01	2.03	0.23	-40.65	-32.61	-29.91	-41.85	-36.03
1800	-1.68	-5.22	-3.80	1.78	0.20	-40.62	-34.42	-31.05	-43.44	-35.46
1900	-1.82	-4.89	-3.62	1.54	0.21	-40.41	-35.68	-32.47	-45.83	-34.89
2000	-1.98	-4.60	-3.48	1.31	0.18	-39.16	-37.27	-34.63	-48.12	-34.54
2100	-2.14	-4.33	-3.37	1.10	0.11	-38.19	-38.23	-37.30	-47.35	-34.43
2200	-2.29	-4.08	-3.28	0.89	0.10	-37.66	-37.81	-38.97	-47.08	-33.88
2300	-2.44	-3.85	-3.20	0.71	0.13	-36.93	-38.42	-40.31	-48.24	-33.58
2400	-2.60	-3.65	-3.16	0.53	0.05	-35.74	-37.32	-40.77	-45.89	-33.85
2500	-2.75	-3.47	-3.12	0.36	-0.03	-35.05	-35.60	-39.27	-43.82	-33.12
2650	-2.97	-3.22	-3.10	0.12	-0.06	-33.71	-33.37	-36.20	-44.67	-31.90
2800	-3.18	-3.02	-3.10	0.08	-0.12	-33.29	-31.85	-32.15	-37.77	-30.90
2950	-3.37	-2.83	-3.11	0.27	-0.23	-32.91	-31.31	-31.53	-35.66	-31.24
3100	-3.54	-2.68	-3.13	0.43	-0.27	-32.91	-30.46	-30.71	-34.06	-31.29
3250	-3.71	-2.56	-3.17	0.57	-0.37	-32.61	-30.96	-30.21	-32.58	-29.67
3400	-3.83	-2.46	-3.20	0.69	-0.45	-34.13	-30.87	-28.53	-30.98	-29.21
3550	-3.94	-2.39	-3.23	0.78	-0.53	-34.92	-28.26	-27.48	-29.48	-28.62
3700	-4.03	-2.35	-3.27	0.85	-0.71	-34.78	-28.57	-27.80	-28.52	-27.51
3850	-4.08	-2.31	-3.28	0.90	-0.73	-33.97	-29.72	-27.65	-28.31	-28.19
4000	-4.10	-2.31	-3.30	0.92	-0.87	-34.45	-29.47	-28.66	-27.37	-29.19
4150	-4.12	-2.34	-3.32	0.92	-0.94	-37.44	-32.82	-31.68	-27.26	-29.27
4300	-4.12	-2.37	-3.33	0.90	-1.08	-36.50	-30.48	-30.47	-27.64	-28.10
4450	-4.07	-2.43	-3.33	0.84	-0.95	-37.46	-32.65	-31.31	-26.58	-26.69
4600	-4.01	-2.50	-3.32	0.76	-1.07	-35.26	-36.09	-32.82	-26.94	-28.94
4750	-3.94	-2.58	-3.31	0.67	-1.26	-34.27	-50.69	-36.38	-27.81	-30.57
4900	-3.84	-2.67	-3.29	0.57	-1.60	-32.81	-36.41	-44.06	-27.87	-27.73
5050	-3.67	-2.78	-3.25	0.42	-1.38	-32.61	-32.94	-40.03	-27.26	-27.21
5200	-3.52	-2.93	-3.24	0.28	-1.66	-31.10	-27.77	-34.17	-26.60	-28.03
5350	-3.34	-3.09	-3.22	0.11	-1.67	-30.48	-27.99	-32.68	-26.94	-29.09
5500	-3.15	-3.29	-3.22	0.08	-1.51	-27.51	-27.20	-32.97	-25.89	-26.93
5600	-2.98	-3.46	-3.23	0.24	-1.44	-27.00	-26.43	-33.64	-26.09	-26.75
5700	-2.85	-3.62	-3.25	0.39	-1.60	-26.13	-25.39	-30.40	-25.54	-26.40
5800	-2.70	-3.78	-3.27	0.54	-1.52	-25.03	-25.04	-27.36	-25.79	-26.04
5900	-2.54	-3.96	-3.31	0.70	-1.28	-24.24	-24.95	-26.03	-25.73	-25.18
6000	-2.37	-4.20	-3.38	0.91	-1.19	-24.51	-25.01	-25.24	-25.08	-24.22
6100	-2.23	-4.45	-3.48	1.10	-1.29	-24.59	-24.63	-24.58	-23.50	-23.25
6200	-2.06	-4.71	-3.58	1.32	-0.79	-24.33	-25.37	-24.71	-22.70	-22.77
6300	-1.90	-5.00	-3.72	1.54	-0.54	-24.07	-25.18	-24.52	-21.61	-22.48
6400	-1.75	-5.32	-3.89	1.78	-0.35	-23.81	-25.44	-24.09	-20.78	-21.68
6500	-1.58	-5.72	-4.13	2.06	-0.09	-23.40	-25.51	-23.77	-19.57	-19.82

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

2-Way 90° Power Splitter/Combiner

QCH-63+

Typical Performance Data

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

Freq. (MHz)	Total Loss* (dB)			Amp. Unb. (±dB)	Ph. Unb. (deg)	Isolation (dB)	Return Loss (dB)			
	Sum-Port 1	Sum-Port 2	Average	Half P-P	Rel. to 90°	Port1-Port2	Sum	Port 1	Port 2	Iso
1500	-1.22	-6.43	-4.56	2.60	0.05	-38.80	-38.17	-39.33	-28.46	-29.73
1600	-1.37	-6.00	-4.27	2.31	0.06	-39.85	-36.73	-40.43	-28.96	-30.95
1700	-1.52	-5.60	-4.02	2.04	0.05	-40.36	-36.03	-41.85	-29.91	-32.61
1800	-1.67	-5.24	-3.81	1.79	0.05	-40.06	-35.46	-43.44	-31.05	-34.42
1900	-1.82	-4.91	-3.63	1.55	0.03	-39.61	-34.89	-45.83	-32.47	-35.68
2000	-1.98	-4.61	-3.49	1.32	0.05	-38.43	-34.54	-48.12	-34.63	-37.27
2100	-2.14	-4.34	-3.38	1.10	0.09	-37.16	-34.43	-47.35	-37.30	-38.23
2200	-2.30	-4.09	-3.29	0.90	0.10	-36.51	-33.88	-47.08	-38.97	-37.81
2300	-2.45	-3.87	-3.22	0.71	0.06	-35.83	-33.58	-48.24	-40.31	-38.42
2400	-2.61	-3.66	-3.17	0.53	0.14	-34.72	-33.85	-45.89	-40.77	-37.32
2500	-2.76	-3.48	-3.13	0.36	0.24	-34.22	-33.12	-43.82	-39.27	-35.60
2650	-2.99	-3.24	-3.11	0.13	0.21	-33.57	-31.90	-44.67	-36.20	-33.37
2800	-3.19	-3.03	-3.11	0.09	0.26	-33.76	-30.90	-37.77	-32.15	-31.85
2950	-3.39	-2.85	-3.13	0.27	0.32	-33.54	-31.24	-35.66	-31.53	-31.31
3100	-3.57	-2.70	-3.16	0.44	0.36	-33.91	-31.29	-34.06	-30.71	-30.46
3250	-3.73	-2.58	-3.19	0.57	0.41	-33.11	-29.67	-32.58	-30.21	-30.96
3400	-3.86	-2.48	-3.22	0.69	0.49	-33.87	-29.21	-30.98	-28.53	-30.87
3550	-3.98	-2.41	-3.26	0.78	0.56	-34.36	-28.62	-29.48	-27.48	-28.26
3700	-4.07	-2.36	-3.30	0.85	0.58	-34.02	-27.51	-28.52	-27.80	-28.57
3850	-4.13	-2.33	-3.32	0.89	0.69	-33.57	-28.19	-28.31	-27.65	-29.72
4000	-4.18	-2.33	-3.35	0.90	0.65	-34.82	-29.19	-27.37	-28.66	-29.47
4150	-4.19	-2.34	-3.36	0.91	0.59	-38.21	-29.27	-27.26	-31.68	-32.82
4300	-4.18	-2.38	-3.37	0.88	0.40	-36.76	-28.10	-27.64	-30.47	-30.48
4450	-4.11	-2.44	-3.35	0.83	0.45	-38.10	-26.69	-26.58	-31.31	-32.65
4600	-4.03	-2.52	-3.34	0.75	0.38	-35.43	-28.94	-26.94	-32.82	-36.09
4750	-3.92	-2.61	-3.31	0.67	0.35	-33.91	-30.57	-27.81	-36.38	-50.69
4900	-3.79	-2.73	-3.29	0.55	0.15	-32.58	-27.73	-27.87	-44.06	-36.41
5050	-3.61	-2.86	-3.25	0.41	0.27	-31.80	-27.21	-27.26	-40.03	-32.94
5200	-3.47	-3.02	-3.25	0.25	0.01	-30.56	-28.03	-26.60	-34.17	-27.77
5350	-3.29	-3.19	-3.24	0.09	-0.19	-30.70	-29.09	-26.94	-32.68	-27.99
5500	-3.13	-3.38	-3.26	0.08	-0.46	-27.98	-26.93	-25.89	-32.97	-27.20
5600	-3.00	-3.54	-3.28	0.27	-0.68	-27.93	-26.75	-26.09	-33.64	-26.43
5700	-2.89	-3.69	-3.31	0.40	-0.79	-26.99	-26.40	-25.54	-30.40	-25.39
5800	-2.75	-3.84	-3.33	0.56	-0.82	-25.49	-26.04	-25.79	-27.36	-25.04
5900	-2.59	-4.02	-3.36	0.71	-0.77	-24.35	-25.18	-25.73	-26.03	-24.95
6000	-2.45	-4.25	-3.44	0.92	-0.83	-24.22	-24.22	-25.08	-25.24	-25.01
6100	-2.33	-4.51	-3.56	1.10	-1.07	-23.93	-23.25	-23.50	-24.58	-24.63
6200	-2.16	-4.77	-3.66	1.32	-0.79	-23.53	-22.77	-22.70	-24.71	-25.37
6300	-2.01	-5.05	-3.79	1.54	-0.76	-23.40	-22.48	-21.61	-24.52	-25.18
6400	-1.87	-5.37	-3.96	1.76	-0.60	-23.10	-21.68	-20.78	-24.09	-25.44
6500	-1.73	-5.77	-4.20	2.03	-0.61	-22.88	-19.82	-19.57	-23.77	-25.51

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

2-Way 90° Power Splitter/Combiner

QCH-63+

Typical Performance Data

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

Freq. (MHz)	Total Loss* (dB)			Amp. Unb. (±dB)	Ph. Unb. (deg)	Isolation (dB)	Return Loss (dB)			
	Sum-Port 1	Sum-Port 2	Average	Half P-P	Rel. to 90°	Port1-Port2	Sum	Port 1	Port 2	Iso
1500	-1.23	-6.46	-4.59	2.60	-0.40	-35.16	-39.33	-38.17	-29.73	-28.46
1600	-1.37	-6.03	-4.30	2.31	-0.46	-35.72	-40.43	-36.73	-30.95	-28.96
1700	-1.52	-5.63	-4.04	2.03	-0.46	-36.47	-41.85	-36.03	-32.61	-29.91
1800	-1.67	-5.27	-3.83	1.78	-0.50	-37.46	-43.44	-35.46	-34.42	-31.05
1900	-1.83	-4.94	-3.66	1.54	-0.51	-39.02	-45.83	-34.89	-35.68	-32.47
2000	-1.99	-4.65	-3.52	1.31	-0.54	-41.17	-48.12	-34.54	-37.27	-34.63
2100	-2.15	-4.38	-3.41	1.10	-0.59	-44.05	-47.35	-34.43	-38.23	-37.30
2200	-2.30	-4.13	-3.31	0.89	-0.59	-47.83	-47.08	-33.88	-37.81	-38.97
2300	-2.46	-3.91	-3.25	0.70	-0.57	-48.50	-48.24	-33.58	-38.42	-40.31
2400	-2.62	-3.72	-3.20	0.53	-0.61	-45.21	-45.89	-33.85	-37.32	-40.77
2500	-2.77	-3.53	-3.17	0.35	-0.64	-43.78	-43.82	-33.12	-35.60	-39.27
2650	-2.99	-3.28	-3.14	0.12	-0.61	-41.11	-44.67	-31.90	-33.37	-36.20
2800	-3.21	-3.08	-3.15	0.09	-0.66	-38.94	-37.77	-30.90	-31.85	-32.15
2950	-3.39	-2.89	-3.15	0.28	-0.69	-35.43	-35.66	-31.24	-31.31	-31.53
3100	-3.58	-2.74	-3.18	0.45	-0.65	-34.18	-34.06	-31.29	-30.46	-30.71
3250	-3.74	-2.63	-3.22	0.58	-0.70	-33.70	-32.58	-29.67	-30.96	-30.21
3400	-3.87	-2.52	-3.25	0.70	-0.67	-33.31	-30.98	-29.21	-30.87	-28.53
3550	-3.99	-2.45	-3.29	0.79	-0.66	-33.32	-29.48	-28.62	-28.26	-27.48
3700	-4.08	-2.41	-3.32	0.86	-0.74	-32.58	-28.52	-27.51	-28.57	-27.80
3850	-4.14	-2.36	-3.34	0.90	-0.73	-30.83	-28.31	-28.19	-29.72	-27.65
4000	-4.17	-2.36	-3.36	0.94	-0.73	-30.64	-27.37	-29.19	-29.47	-28.66
4150	-4.17	-2.37	-3.36	0.92	-0.78	-30.79	-27.26	-29.27	-32.82	-31.68
4300	-4.16	-2.39	-3.36	0.90	-0.93	-31.68	-27.64	-28.10	-30.48	-30.47
4450	-4.08	-2.42	-3.33	0.84	-0.86	-33.22	-26.58	-26.69	-32.65	-31.31
4600	-4.00	-2.50	-3.31	0.76	-1.05	-31.27	-26.94	-28.94	-36.09	-32.82
4750	-3.92	-2.59	-3.30	0.67	-1.17	-31.42	-27.81	-30.57	-50.69	-36.38
4900	-3.81	-2.71	-3.29	0.56	-1.62	-31.13	-27.87	-27.73	-36.41	-44.06
5050	-3.65	-2.85	-3.27	0.42	-1.66	-31.73	-27.26	-27.21	-32.94	-40.03
5200	-3.51	-3.03	-3.28	0.28	-2.02	-31.43	-26.60	-28.03	-27.77	-34.17
5350	-3.33	-3.21	-3.27	0.11	-2.19	-28.91	-26.94	-29.09	-27.99	-32.68
5500	-3.16	-3.42	-3.29	0.08	-2.38	-27.42	-25.89	-26.93	-27.20	-32.97
5600	-3.02	-3.60	-3.32	0.23	-2.48	-27.55	-26.09	-26.75	-26.43	-33.64
5700	-2.91	-3.77	-3.36	0.37	-2.59	-26.58	-25.54	-26.40	-25.39	-30.40
5800	-2.76	-3.95	-3.40	0.52	-2.69	-25.73	-25.79	-26.04	-25.04	-27.36
5900	-2.61	-4.13	-3.44	0.70	-2.60	-25.04	-25.73	-25.18	-24.95	-26.03
6000	-2.46	-4.38	-3.53	0.88	-2.77	-24.89	-25.08	-24.22	-25.01	-25.24
6100	-2.34	-4.64	-3.64	1.06	-3.07	-24.42	-23.50	-23.25	-24.63	-24.58
6200	-2.17	-4.90	-3.75	1.28	-2.79	-23.84	-22.70	-22.77	-25.37	-24.71
6300	-2.02	-5.19	-3.89	1.54	-2.74	-23.24	-21.61	-22.48	-25.18	-24.52
6400	-1.88	-5.52	-4.07	1.73	-2.61	-22.73	-20.78	-21.68	-25.44	-24.09
6500	-1.73	-5.92	-4.31	2.00	-2.59	-22.45	-19.57	-19.82	-25.51	-23.77

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

2-Way 90° Power Splitter/Combiner

QCH-63+

Typical Performance Data

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

Freq. (MHz)	Total Loss*			Amp. Unb.	Ph. Unb.	Isolation	Return Loss			
	(dB)			(±dB)	(deg)	(dB)	(dB)			
	Sum-Port 1	Sum-Port 2	Average	Half P-P	Rel. to 90°	Port1-Port2	Sum	Port 1	Port 2	Iso
1500	-1.28	-6.43	-4.58	2.60	0.71	-35.33	-28.46	-29.73	-38.17	-39.33
1600	-1.42	-6.00	-4.29	2.31	0.75	-36.20	-28.96	-30.95	-36.73	-40.43
1700	-1.58	-5.60	-4.04	2.04	0.75	-37.01	-29.91	-32.61	-36.03	-41.85
1800	-1.73	-5.24	-3.83	1.78	0.75	-38.32	-31.05	-34.42	-35.46	-43.44
1900	-1.88	-4.92	-3.66	1.55	0.76	-39.84	-32.47	-35.68	-34.89	-45.83
2000	-2.03	-4.62	-3.52	1.32	0.76	-41.90	-34.63	-37.27	-34.54	-48.12
2100	-2.19	-4.35	-3.40	1.10	0.78	-45.03	-37.30	-38.23	-34.43	-47.35
2200	-2.35	-4.10	-3.31	0.90	0.80	-49.20	-38.97	-37.81	-33.88	-47.08
2300	-2.51	-3.88	-3.25	0.71	0.76	-52.15	-40.31	-38.42	-33.58	-48.24
2400	-2.66	-3.67	-3.19	0.53	0.79	-47.59	-40.77	-37.32	-33.85	-45.89
2500	-2.81	-3.49	-3.16	0.37	0.84	-44.65	-39.27	-35.60	-33.12	-43.82
2650	-3.03	-3.25	-3.14	0.13	0.76	-40.94	-36.20	-33.37	-31.90	-44.67
2800	-3.24	-3.04	-3.14	0.08	0.77	-38.37	-32.15	-31.85	-30.90	-37.77
2950	-3.43	-2.86	-3.15	0.27	0.79	-35.44	-31.53	-31.31	-31.24	-35.66
3100	-3.61	-2.71	-3.18	0.42	0.75	-33.95	-30.71	-30.46	-31.29	-34.06
3250	-3.77	-2.59	-3.22	0.57	0.74	-33.12	-30.21	-30.96	-29.67	-32.58
3400	-3.90	-2.50	-3.26	0.68	0.74	-33.09	-28.53	-30.87	-29.21	-30.98
3550	-4.01	-2.43	-3.29	0.77	0.69	-32.68	-27.48	-28.26	-28.62	-29.48
3700	-4.10	-2.39	-3.33	0.84	0.66	-32.43	-27.80	-28.57	-27.51	-28.52
3850	-4.16	-2.36	-3.35	0.89	0.69	-31.39	-27.65	-29.72	-28.19	-28.31
4000	-4.19	-2.37	-3.37	0.89	0.52	-31.03	-28.66	-29.47	-29.19	-27.37
4150	-4.21	-2.38	-3.39	0.91	0.44	-31.66	-31.68	-32.82	-29.27	-27.26
4300	-4.19	-2.41	-3.39	0.87	0.26	-32.14	-30.47	-30.48	-28.10	-27.64
4450	-4.11	-2.45	-3.36	0.83	0.34	-32.44	-31.31	-32.65	-26.69	-26.58
4600	-4.02	-2.51	-3.33	0.75	0.34	-30.97	-32.82	-36.09	-28.94	-26.94
4750	-3.93	-2.59	-3.31	0.67	0.28	-30.49	-36.38	-50.69	-30.57	-27.81
4900	-3.84	-2.71	-3.31	0.56	0.14	-31.21	-44.06	-36.41	-27.73	-27.87
5050	-3.69	-2.85	-3.29	0.41	0.54	-32.58	-40.03	-32.94	-27.21	-27.26
5200	-3.58	-3.02	-3.31	0.25	0.32	-31.42	-34.17	-27.77	-28.03	-26.60
5350	-3.44	-3.20	-3.32	0.10	0.38	-29.41	-32.68	-27.99	-29.09	-26.94
5500	-3.27	-3.40	-3.34	0.08	0.33	-27.18	-32.97	-27.20	-26.93	-25.89
5600	-3.12	-3.56	-3.35	0.28	0.34	-27.37	-33.64	-26.43	-26.75	-26.09
5700	-3.01	-3.71	-3.37	0.42	0.24	-26.45	-30.40	-25.39	-26.40	-25.54
5800	-2.87	-3.87	-3.40	0.58	0.44	-25.68	-27.36	-25.04	-26.04	-25.79
5900	-2.73	-4.06	-3.45	0.71	0.65	-25.03	-26.03	-24.95	-25.18	-25.73
6000	-2.57	-4.29	-3.51	0.94	0.76	-24.70	-25.24	-25.01	-24.22	-25.08
6100	-2.43	-4.55	-3.62	1.14	0.64	-24.06	-24.58	-24.63	-23.25	-23.50
6200	-2.26	-4.80	-3.71	1.36	1.09	-23.43	-24.71	-25.37	-22.77	-22.70
6300	-2.11	-5.08	-3.84	1.54	1.38	-22.91	-24.52	-25.18	-22.48	-21.61
6400	-1.96	-5.40	-4.01	1.81	1.62	-22.51	-24.09	-25.44	-21.68	-20.78
6500	-1.79	-5.79	-4.24	2.10	1.83	-22.35	-23.77	-25.51	-19.82	-19.57

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

2-Way 90° Power Splitter/Combiner

QCH-63+

Typical Performance Data

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

Freq. (MHz)	Total Loss* (dB)			Amp. Unb. (±dB)	Ph. Unb. (deg)	Isolation (dB)	Return Loss (dB)			
	Sum-Port 1	Sum-Port 2	Average	Half P-P	Rel. to 90°	Port1-Port2	Sum	Port 1	Port 2	Iso
1500	-1.26	-6.42	-4.57	2.58	-0.27	-40.90	-35.82	-32.00	-31.03	-30.53
1600	-1.41	-5.98	-4.27	2.29	-0.33	-39.65	-38.61	-32.33	-30.86	-30.10
1700	-1.55	-5.59	-4.02	2.02	-0.40	-37.35	-43.14	-32.78	-30.98	-29.50
1800	-1.71	-5.23	-3.82	1.77	-0.46	-35.55	-46.55	-33.19	-31.40	-29.23
1900	-1.86	-4.90	-3.64	1.52	-0.49	-34.38	-41.78	-33.06	-31.81	-29.30
2000	-2.01	-4.61	-3.50	1.30	-0.54	-32.74	-38.29	-33.03	-32.66	-29.08
2100	-2.18	-4.34	-3.39	1.08	-0.66	-31.73	-34.72	-33.37	-33.89	-29.54
2200	-2.33	-4.09	-3.30	0.88	-0.71	-31.32	-32.65	-33.30	-33.74	-29.76
2300	-2.49	-3.87	-3.23	0.69	-0.70	-30.77	-31.68	-32.68	-33.52	-29.42
2400	-2.65	-3.67	-3.19	0.52	-0.78	-30.17	-30.71	-32.44	-33.43	-29.23
2500	-2.80	-3.48	-3.15	0.35	-0.88	-29.71	-29.65	-32.50	-32.49	-29.03
2650	-3.02	-3.24	-3.13	0.11	-0.92	-28.98	-30.95	-34.02	-38.00	-29.82
2800	-3.24	-3.04	-3.14	0.10	-1.00	-28.81	-27.96	-31.41	-28.63	-27.18
2950	-3.43	-2.86	-3.15	0.28	-1.12	-29.37	-29.40	-31.82	-31.39	-29.13
3100	-3.60	-2.72	-3.18	0.44	-1.22	-30.07	-28.05	-32.79	-26.29	-27.52
3250	-3.76	-2.61	-3.22	0.57	-1.31	-29.96	-29.56	-32.54	-29.09	-28.13
3400	-3.88	-2.51	-3.25	0.69	-1.54	-30.83	-28.42	-34.26	-24.42	-25.31
3550	-3.98	-2.43	-3.27	0.78	-1.75	-32.30	-28.13	-30.32	-26.92	-26.42
3700	-4.07	-2.40	-3.31	0.84	-1.96	-32.25	-29.27	-33.47	-24.45	-23.81
3850	-4.13	-2.37	-3.34	0.89	-2.20	-30.87	-31.06	-29.53	-26.33	-26.17
4000	-4.16	-2.36	-3.35	0.92	-2.39	-31.17	-33.65	-30.26	-24.34	-24.46
4150	-4.20	-2.39	-3.39	0.93	-2.59	-34.30	-34.07	-31.36	-26.22	-26.69
4300	-4.20	-2.44	-3.41	0.90	-2.66	-35.57	-31.28	-28.82	-25.20	-23.41
4450	-4.15	-2.48	-3.39	0.85	-2.59	-32.06	-31.82	-29.07	-25.61	-24.71
4600	-4.09	-2.53	-3.38	0.78	-2.47	-30.96	-29.33	-25.57	-25.81	-23.73
4750	-3.99	-2.62	-3.36	0.67	-2.57	-30.29	-39.35	-32.17	-26.83	-27.68
4900	-3.88	-2.71	-3.33	0.56	-2.76	-29.58	-24.87	-27.99	-25.64	-26.34
5050	-3.68	-2.85	-3.28	0.39	-2.65	-28.98	-28.77	-34.30	-26.65	-27.35
5200	-3.57	-2.95	-3.27	0.28	-3.11	-27.61	-23.02	-28.45	-24.45	-26.71
5350	-3.34	-3.15	-3.25	0.08	-2.91	-26.65	-25.56	-30.55	-25.95	-27.47
5500	-3.17	-3.40	-3.29	0.13	-3.16	-24.97	-27.20	-32.97	-25.89	-26.93
5600	-2.98	-3.60	-3.30	0.32	-3.58	-24.85	-23.03	-30.98	-23.58	-23.14
5700	-2.85	-3.69	-3.29	0.42	-3.11	-23.66	-23.09	-32.94	-23.61	-21.94
5800	-2.68	-3.93	-3.35	0.63	-3.27	-23.84	-23.70	-32.28	-22.16	-19.96
5900	-2.56	-4.08	-3.39	0.76	-3.43	-23.25	-24.95	-26.03	-25.73	-25.18
6000	-2.34	-4.44	-3.52	1.05	-3.53	-23.73	-23.20	-28.02	-20.33	-18.14
6100	-2.22	-4.60	-3.57	1.19	-3.37	-23.57	-23.28	-28.07	-20.08	-18.25
6200	-2.05	-4.84	-3.67	1.40	-2.95	-23.49	-24.55	-28.98	-19.47	-17.88
6300	-1.94	-5.18	-3.86	1.63	-3.28	-24.31	-25.18	-24.52	-21.61	-22.48
6400	-1.76	-5.51	-4.03	1.88	-3.08	-24.48	-26.57	-28.01	-18.29	-17.68
6500	-1.59	-5.89	-4.25	2.16	-3.05	-23.96	-27.07	-28.33	-17.90	-17.40

* 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-Circuit's 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>



2-Way 90° Power Splitter/Combiner

Typical Performance Data

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

Freq. (MHz)	Total Loss* (dB)			Amp. Unb. (±dB)	Ph. Unb. (deg)	Isolation (dB)	Return Loss (dB)			
	Sum-Port 1	Sum-Port 2	Average	Half P-P	Rel. to 90°	Port1-Port2	Sum	Port 1	Port 2	Iso
1500	-1.25	-6.46	-4.59	2.60	0.61	-41.75	-30.53	-31.03	-32.00	-35.82
1600	-1.40	-6.02	-4.30	2.31	0.67	-40.26	-30.10	-30.86	-32.33	-38.61
1700	-1.55	-5.63	-4.05	2.04	0.69	-37.67	-29.50	-30.98	-32.78	-43.14
1800	-1.71	-5.27	-3.84	1.79	0.75	-35.66	-29.23	-31.40	-33.19	-46.55
1900	-1.86	-4.95	-3.67	1.55	0.76	-34.23	-29.30	-31.81	-33.06	-41.78
2000	-2.01	-4.65	-3.53	1.32	0.80	-32.46	-29.08	-32.66	-33.03	-38.29
2100	-2.18	-4.37	-3.41	1.10	0.88	-31.22	-29.54	-33.89	-33.37	-34.72
2200	-2.34	-4.13	-3.33	0.90	0.91	-30.70	-29.76	-33.74	-33.30	-32.65
2300	-2.49	-3.91	-3.26	0.71	0.94	-30.20	-29.42	-33.52	-32.68	-31.68
2400	-2.65	-3.70	-3.21	0.53	1.02	-29.69	-29.23	-33.43	-32.44	-30.71
2500	-2.81	-3.53	-3.18	0.36	1.16	-29.41	-29.03	-32.49	-32.50	-29.65
2650	-3.04	-3.29	-3.16	0.12	1.20	-29.16	-29.82	-38.00	-34.02	-30.95
2800	-3.25	-3.08	-3.17	0.09	1.33	-29.19	-27.18	-28.63	-31.41	-27.96
2950	-3.45	-2.91	-3.18	0.28	1.48	-29.86	-29.13	-31.39	-31.82	-29.40
3100	-3.63	-2.76	-3.22	0.43	1.57	-30.65	-27.52	-26.29	-32.79	-28.05
3250	-3.80	-2.66	-3.26	0.57	1.71	-30.06	-28.13	-29.09	-32.54	-29.56
3400	-3.94	-2.59	-3.32	0.68	1.77	-30.30	-25.31	-24.42	-34.26	-28.42
3550	-4.05	-2.53	-3.36	0.77	1.90	-31.67	-26.42	-26.92	-30.32	-28.13
3700	-4.15	-2.51	-3.41	0.84	2.01	-32.29	-23.81	-24.45	-33.47	-29.27
3850	-4.22	-2.52	-3.45	0.89	2.20	-30.76	-26.17	-26.33	-29.53	-31.06
4000	-4.25	-2.51	-3.47	0.89	2.53	-31.39	-24.46	-24.34	-30.26	-33.65
4150	-4.28	-2.50	-3.48	0.90	2.28	-35.10	-26.69	-26.22	-31.36	-34.07
4300	-4.23	-2.55	-3.47	0.82	2.01	-35.78	-23.41	-25.20	-28.82	-31.28
4450	-4.16	-2.60	-3.44	0.81	1.86	-31.94	-24.71	-25.61	-29.07	-31.82
4600	-4.07	-2.64	-3.41	0.72	1.79	-30.84	-23.73	-25.81	-25.57	-29.33
4750	-3.98	-2.72	-3.40	0.65	1.63	-29.92	-27.68	-26.83	-32.17	-39.35
4900	-3.82	-2.79	-3.34	0.54	1.40	-29.33	-26.34	-25.64	-27.99	-24.87
5050	-3.65	-2.92	-3.30	0.39	1.75	-28.66	-27.35	-26.65	-34.30	-28.77
5200	-3.56	-3.04	-3.31	0.28	1.81	-27.56	-26.71	-24.45	-28.45	-23.02
5350	-3.33	-3.24	-3.29	0.07	2.14	-27.27	-27.47	-25.95	-30.55	-25.56
5500	-3.19	-3.47	-3.33	0.12	1.79	-25.49	-26.93	-25.89	-32.97	-27.20
5600	-3.09	-3.68	-3.40	0.29	1.37	-25.50	-23.14	-23.58	-30.98	-23.03
5700	-2.94	-3.78	-3.38	0.41	2.08	-24.00	-21.94	-23.61	-32.94	-23.09
5800	-2.82	-4.03	-3.47	0.60	1.87	-23.77	-19.96	-22.16	-32.28	-23.70
5900	-2.70	-4.20	-3.51	0.75	1.93	-22.96	-25.18	-25.73	-26.03	-24.95
6000	-2.51	-4.58	-3.67	1.04	1.79	-23.10	-18.14	-20.33	-28.02	-23.20
6100	-2.38	-4.73	-3.71	1.17	1.91	-22.83	-18.25	-20.08	-28.07	-23.28
6200	-2.25	-4.99	-3.83	1.37	1.98	-22.79	-17.88	-19.47	-28.98	-24.55
6300	-2.11	-5.29	-3.98	1.63	1.79	-23.80	-22.48	-21.61	-24.52	-25.18
6400	-1.95	-5.64	-4.18	1.84	1.86	-24.02	-17.68	-18.29	-28.01	-26.57
6500	-1.78	-6.02	-4.40	2.12	2.25	-23.82	-17.40	-17.90	-28.33	-27.07

* 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-Circuit's 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>



2-Way 90° Power Splitter/Combiner

QCH-63+

Typical Performance Data

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

Freq. (MHz)	Total Loss* (dB)			Amp. Unb. (±dB)	Ph. Unb. (deg)	Isolation (dB)	Return Loss (dB)			
	Sum-Port 1	Sum-Port 2	Average	Half P-P	Rel. to 90°	Port1-Port2	Sum	Port 1	Port 2	Iso
1500	-1.25	-6.46	-4.59	2.58	0.31	-37.60	-31.03	-30.53	-35.82	-32.00
1600	-1.40	-6.03	-4.30	2.29	0.30	-36.76	-30.86	-30.10	-38.61	-32.33
1700	-1.55	-5.63	-4.05	2.02	0.32	-36.01	-30.98	-29.50	-43.14	-32.78
1800	-1.70	-5.28	-3.85	1.77	0.35	-35.41	-31.40	-29.23	-46.55	-33.19
1900	-1.85	-4.94	-3.66	1.52	0.39	-34.90	-31.81	-29.30	-41.78	-33.06
2000	-2.01	-4.65	-3.53	1.30	0.45	-34.25	-32.66	-29.08	-38.29	-33.03
2100	-2.17	-4.38	-3.41	1.08	0.43	-34.00	-33.89	-29.54	-34.72	-33.37
2200	-2.33	-4.14	-3.33	0.88	0.44	-34.05	-33.74	-29.76	-32.65	-33.30
2300	-2.49	-3.92	-3.26	0.69	0.53	-33.94	-33.52	-29.42	-31.68	-32.68
2400	-2.65	-3.72	-3.22	0.51	0.55	-33.86	-33.43	-29.23	-30.71	-32.44
2500	-2.80	-3.53	-3.18	0.34	0.56	-33.44	-32.49	-29.03	-29.65	-32.50
2650	-3.03	-3.29	-3.16	0.11	0.71	-32.88	-38.00	-29.82	-30.95	-34.02
2800	-3.25	-3.09	-3.17	0.11	0.76	-32.56	-28.63	-27.18	-27.96	-31.41
2950	-3.44	-2.91	-3.18	0.29	0.81	-31.72	-31.39	-29.13	-29.40	-31.82
3100	-3.63	-2.77	-3.22	0.46	0.89	-32.23	-26.29	-27.52	-28.05	-32.79
3250	-3.80	-2.67	-3.27	0.58	0.95	-32.35	-29.09	-28.13	-29.56	-32.54
3400	-3.95	-2.57	-3.31	0.72	0.99	-32.93	-24.42	-25.31	-28.42	-34.26
3550	-4.07	-2.49	-3.35	0.79	1.09	-34.10	-26.92	-26.42	-28.13	-30.32
3700	-4.17	-2.45	-3.39	0.88	1.21	-33.11	-24.45	-23.81	-29.27	-33.47
3850	-4.26	-2.41	-3.43	0.91	1.17	-33.02	-26.33	-26.17	-31.06	-29.53
4000	-4.27	-2.40	-3.43	0.94	1.33	-34.01	-24.34	-24.46	-33.65	-30.26
4150	-4.26	-2.41	-3.43	0.94	1.33	-34.95	-26.22	-26.69	-34.07	-31.36
4300	-4.20	-2.46	-3.42	0.90	1.34	-38.71	-25.20	-23.41	-31.28	-28.82
4450	-4.13	-2.48	-3.38	0.84	1.30	-36.47	-25.61	-24.71	-31.82	-29.07
4600	-4.05	-2.53	-3.36	0.78	1.32	-32.79	-25.81	-23.73	-29.33	-25.57
4750	-3.97	-2.63	-3.36	0.68	1.23	-30.41	-26.83	-27.68	-39.35	-32.17
4900	-3.83	-2.76	-3.33	0.56	0.91	-30.68	-25.64	-26.34	-24.87	-27.99
5050	-3.67	-2.91	-3.30	0.39	0.89	-33.33	-26.65	-27.35	-28.77	-34.30
5200	-3.58	-3.04	-3.32	0.30	0.49	-30.47	-24.45	-26.71	-23.02	-28.45
5350	-3.36	-3.26	-3.31	0.09	1.00	-29.49	-25.95	-27.47	-25.56	-30.55
5500	-3.22	-3.51	-3.37	0.12	0.34	-28.49	-25.89	-26.93	-27.20	-32.97
5600	-3.11	-3.72	-3.43	0.26	-0.03	-30.85	-23.58	-23.14	-23.03	-30.98
5700	-2.96	-3.81	-3.41	0.38	0.70	-28.92	-23.61	-21.94	-23.09	-32.94
5800	-2.83	-4.07	-3.49	0.56	0.62	-28.77	-22.16	-19.96	-23.70	-32.28
5900	-2.71	-4.23	-3.54	0.75	0.45	-27.55	-25.73	-25.18	-24.95	-26.03
6000	-2.52	-4.60	-3.68	0.97	0.34	-28.01	-20.33	-18.14	-23.20	-28.02
6100	-2.40	-4.76	-3.74	1.11	0.54	-26.58	-20.08	-18.25	-23.28	-28.07
6200	-2.26	-5.01	-3.85	1.30	0.70	-25.57	-19.47	-17.88	-24.55	-28.98
6300	-2.13	-5.36	-4.04	1.63	0.42	-25.67	-21.61	-22.48	-25.18	-24.52
6400	-1.96	-5.69	-4.21	1.78	0.65	-25.18	-18.29	-17.68	-26.57	-28.01
6500	-1.79	-6.07	-4.44	2.06	0.75	-24.79	-17.90	-17.40	-27.07	-28.33

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

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- 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>



2-Way 90° Power Splitter/Combiner

QCH-63+

Typical Performance Data

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

Freq. (MHz)	Total Loss* (dB)			Amp. Unb. (±dB)	Ph. Unb. (deg)	Isolation (dB)	Return Loss (dB)			
	Sum-Port 1	Sum-Port 2	Average	Half P-P	Rel. to 90°	Port1-Port2	Sum	Port 1	Port 2	Iso
1500	-1.30	-6.45	-4.60	2.60	0.02	-37.40	-32.00	-35.82	-30.53	-31.03
1600	-1.44	-6.02	-4.31	2.31	0.00	-36.81	-32.33	-38.61	-30.10	-30.86
1700	-1.60	-5.63	-4.07	2.04	-0.06	-36.10	-32.78	-43.14	-29.50	-30.98
1800	-1.75	-5.27	-3.86	1.79	-0.08	-35.56	-33.19	-46.55	-29.23	-31.40
1900	-1.90	-4.94	-3.68	1.55	-0.14	-35.13	-33.06	-41.78	-29.30	-31.81
2000	-2.06	-4.64	-3.54	1.32	-0.21	-34.59	-33.03	-38.29	-29.08	-32.66
2100	-2.22	-4.37	-3.43	1.10	-0.24	-34.44	-33.37	-34.72	-29.54	-33.89
2200	-2.38	-4.13	-3.34	0.90	-0.27	-34.43	-33.30	-32.65	-29.76	-33.74
2300	-2.54	-3.91	-3.28	0.71	-0.31	-34.26	-32.68	-31.68	-29.42	-33.52
2400	-2.69	-3.70	-3.22	0.53	-0.34	-34.01	-32.44	-30.71	-29.23	-33.43
2500	-2.85	-3.52	-3.20	0.37	-0.31	-33.48	-32.50	-29.65	-29.03	-32.49
2650	-3.08	-3.29	-3.18	0.12	-0.45	-32.58	-34.02	-30.95	-29.82	-38.00
2800	-3.29	-3.08	-3.19	0.08	-0.46	-32.25	-31.41	-27.96	-27.18	-28.63
2950	-3.48	-2.91	-3.20	0.27	-0.43	-31.77	-31.82	-29.40	-29.13	-31.39
3100	-3.65	-2.77	-3.23	0.42	-0.48	-31.86	-32.79	-28.05	-27.52	-26.29
3250	-3.81	-2.66	-3.27	0.56	-0.44	-32.29	-32.54	-29.56	-28.13	-29.09
3400	-3.94	-2.59	-3.32	0.65	-0.53	-33.14	-34.26	-28.42	-25.31	-24.42
3550	-4.04	-2.52	-3.35	0.75	-0.74	-34.22	-30.32	-28.13	-26.42	-26.92
3700	-4.13	-2.49	-3.39	0.79	-0.93	-34.32	-33.47	-29.27	-23.81	-24.45
3850	-4.20	-2.49	-3.42	0.85	-1.18	-33.74	-29.53	-31.06	-26.17	-26.33
4000	-4.23	-2.50	-3.45	0.83	-1.74	-33.96	-30.26	-33.65	-24.46	-24.34
4150	-4.27	-2.52	-3.48	0.89	-2.11	-34.36	-31.36	-34.07	-26.69	-26.22
4300	-4.25	-2.57	-3.49	0.83	-2.22	-36.27	-28.82	-31.28	-23.41	-25.20
4450	-4.17	-2.59	-3.45	0.81	-2.22	-36.41	-29.07	-31.82	-24.71	-25.61
4600	-4.09	-2.61	-3.41	0.73	-2.15	-32.69	-25.57	-29.33	-23.73	-25.81
4750	-3.99	-2.69	-3.39	0.65	-2.25	-31.03	-32.17	-39.35	-27.68	-26.83
4900	-3.88	-2.76	-3.36	0.55	-2.41	-31.71	-27.99	-24.87	-26.34	-25.64
5050	-3.69	-2.89	-3.31	0.39	-1.92	-32.86	-34.30	-28.77	-27.35	-26.65
5200	-3.61	-3.02	-3.33	0.27	-2.00	-30.40	-28.45	-23.02	-26.71	-24.45
5350	-3.41	-3.23	-3.32	0.06	-1.89	-29.19	-30.55	-25.56	-27.47	-25.95
5500	-3.26	-3.46	-3.36	0.13	-1.94	-27.97	-32.97	-27.20	-26.93	-25.89
5600	-3.09	-3.68	-3.40	0.35	-2.31	-30.02	-30.98	-23.03	-23.14	-23.58
5700	-2.98	-3.78	-3.40	0.46	-1.82	-28.22	-32.94	-23.09	-21.94	-23.61
5800	-2.82	-4.04	-3.47	0.68	-2.08	-28.46	-32.28	-23.70	-19.96	-22.16
5900	-2.72	-4.21	-3.53	0.76	-1.99	-27.47	-26.03	-24.95	-25.18	-25.73
6000	-2.49	-4.59	-3.67	1.12	-2.13	-28.30	-28.02	-23.20	-18.14	-20.33
6100	-2.38	-4.74	-3.72	1.25	-2.15	-27.01	-28.07	-23.28	-18.25	-20.08
6200	-2.21	-4.99	-3.82	1.47	-1.83	-26.02	-28.98	-24.55	-17.88	-19.47
6300	-2.10	-5.30	-3.99	1.63	-2.02	-26.23	-24.52	-25.18	-22.48	-21.61
6400	-1.93	-5.64	-4.17	1.94	-2.00	-25.66	-28.01	-26.57	-17.68	-18.29
6500	-1.75	-6.02	-4.39	2.22	-1.74	-25.19	-28.33	-27.07	-17.40	-17.90

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

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