

2-Way 90° Power Splitter/Combiner

QCH-382+

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
500	-1.69	-5.63	-4.09	1.98	-0.73	-20.91	-17.42	-17.63	-17.79	-17.64
600	-2.08	-4.76	-3.62	1.34	-0.18	-20.52	-18.29	-18.57	-18.70	-18.39
700	-2.45	-4.11	-3.36	0.83	0.28	-20.66	-19.69	-20.01	-20.13	-19.80
800	-2.78	-3.63	-3.23	0.43	0.45	-21.07	-21.19	-21.74	-21.73	-21.27
900	-3.06	-3.30	-3.18	0.12	0.46	-21.52	-22.22	-23.02	-22.72	-22.14
950	-3.19	-3.17	-3.18	0.01	0.40	-21.77	-22.42	-23.58	-22.86	-22.29
1000	-3.29	-3.07	-3.18	0.11	0.33	-22.14	-22.94	-23.74	-23.40	-22.52
1100	-3.44	-2.92	-3.19	0.26	0.10	-22.82	-23.33	-24.21	-24.01	-22.80
1200	-3.54	-2.84	-3.20	0.35	-0.09	-23.62	-23.57	-24.26	-24.30	-23.04
1300	-3.58	-2.81	-3.21	0.39	-0.30	-24.25	-23.74	-24.42	-24.81	-23.40
1400	-3.57	-2.81	-3.21	0.38	-0.46	-25.05	-24.02	-24.81	-25.63	-24.08
1500	-3.53	-2.85	-3.20	0.34	-0.53	-25.86	-24.49	-25.39	-26.75	-24.94
1600	-3.46	-2.92	-3.20	0.27	-0.57	-26.62	-25.08	-26.34	-27.87	-26.04
1700	-3.38	-3.00	-3.19	0.19	-0.57	-27.59	-25.85	-27.62	-28.65	-27.39
1800	-3.29	-3.09	-3.19	0.10	-0.51	-28.87	-27.18	-29.00	-29.53	-28.70
1900	-3.20	-3.18	-3.19	0.01	-0.42	-30.87	-29.03	-31.03	-30.57	-30.35
2000	-3.12	-3.26	-3.19	0.07	-0.35	-33.25	-31.25	-33.54	-31.58	-31.71
2100	-3.07	-3.33	-3.20	0.13	-0.32	-34.66	-33.89	-36.76	-32.77	-32.75
2200	-3.03	-3.38	-3.21	0.18	-0.36	-34.51	-35.60	-39.92	-34.83	-33.79
2250	-3.01	-3.40	-3.21	0.20	-0.39	-34.37	-36.22	-36.18	-35.31	-33.42
2300	-3.01	-3.42	-3.22	0.21	-0.35	-33.36	-35.42	-38.27	-35.33	-34.12
2350	-3.01	-3.42	-3.22	0.21	-0.38	-33.96	-42.45	-35.04	-34.10	-33.51
2400	-3.02	-3.42	-3.22	0.21	-0.32	-31.97	-35.89	-34.52	-34.24	-33.33
2500	-3.06	-3.40	-3.23	0.17	-0.30	-31.39	-37.69	-31.22	-32.81	-32.26
2600	-3.12	-3.35	-3.24	0.12	-0.33	-30.61	-39.29	-28.60	-31.15	-30.86
2700	-3.21	-3.27	-3.24	0.04	-0.33	-29.78	-34.91	-26.23	-29.06	-29.48
2750	-3.26	-3.24	-3.25	0.01	-0.52	-28.32	-30.50	-26.17	-27.16	-28.25
2775	-3.28	-3.22	-3.25	0.02	-0.59	-28.80	-30.02	-25.18	-27.11	-27.98
2800	-3.30	-3.22	-3.26	0.04	-0.63	-28.66	-31.42	-24.56	-26.89	-27.66
2900	-3.39	-3.15	-3.27	0.12	-0.63	-28.15	-27.96	-23.23	-24.68	-26.05
3000	-3.48	-3.07	-3.28	0.21	-0.90	-27.01	-26.35	-23.06	-23.08	-25.44
3100	-3.56	-3.05	-3.31	0.26	-0.91	-26.99	-26.31	-23.34	-21.84	-24.79
3200	-3.59	-2.98	-3.30	0.31	-0.86	-27.01	-28.26	-24.23	-21.49	-24.98
3300	-3.64	-2.97	-3.32	0.34	-0.52	-27.73	-30.32	-24.81	-21.18	-25.22
3400	-3.64	-2.96	-3.31	0.34	-0.33	-28.42	-32.83	-24.50	-21.29	-25.79
3500	-3.63	-2.97	-3.31	0.33	-0.21	-29.34	-32.43	-23.76	-21.54	-25.72
3600	-3.57	-3.03	-3.31	0.27	-0.02	-29.81	-30.22	-22.99	-21.81	-25.90
3700	-3.49	-3.13	-3.31	0.18	-0.08	-29.33	-27.29	-22.25	-21.99	-26.56
3800	-3.33	-3.32	-3.33	0.01	-0.15	-28.46	-25.82	-22.35	-21.74	-27.66
3900	-3.13	-3.56	-3.35	0.22	-0.06	-27.27	-25.16	-22.61	-20.67	-27.46
4000	-2.86	-3.92	-3.42	0.53	-0.25	-26.17	-25.51	-22.78	-20.04	-25.96

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

2-Way 90° Power Splitter/Combiner

QCH-382+

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			
	Sum-Port 1	Sum-Port 2	Average	(±dB) Half P-P	(deg) Rel. to 90°	(dB) Port1-Port2	(dB)			
	Sum	Port 1	Port 2	Iso						
500	-1.65	-5.61	-4.07	1.98	-0.28	-20.95	-17.64	-17.79	-17.63	-17.42
600	-2.05	-4.74	-3.60	1.35	0.38	-20.61	-18.39	-18.70	-18.57	-18.29
700	-2.42	-4.09	-3.33	0.84	0.89	-20.80	-19.80	-20.13	-20.01	-19.69
800	-2.75	-3.61	-3.20	0.43	1.14	-21.21	-21.27	-21.73	-21.74	-21.19
900	-3.03	-3.27	-3.15	0.12	1.19	-21.64	-22.14	-22.72	-23.02	-22.22
950	-3.16	-3.15	-3.15	0.01	1.15	-21.93	-22.29	-22.86	-23.58	-22.42
1000	-3.25	-3.04	-3.15	0.11	1.10	-22.18	-22.52	-23.40	-23.74	-22.94
1100	-3.41	-2.90	-3.16	0.26	0.93	-22.92	-22.80	-24.01	-24.21	-23.33
1200	-3.50	-2.82	-3.17	0.35	0.81	-23.62	-23.04	-24.30	-24.26	-23.57
1300	-3.54	-2.79	-3.18	0.38	0.67	-24.28	-23.40	-24.81	-24.42	-23.74
1400	-3.53	-2.80	-3.18	0.37	0.57	-24.96	-24.08	-25.63	-24.81	-24.02
1500	-3.49	-2.84	-3.18	0.33	0.56	-25.77	-24.94	-26.75	-25.39	-24.49
1600	-3.42	-2.91	-3.17	0.26	0.59	-26.52	-26.04	-27.87	-26.34	-25.08
1700	-3.34	-2.99	-3.17	0.18	0.64	-27.31	-27.39	-28.65	-27.62	-25.85
1800	-3.25	-3.08	-3.17	0.09	0.73	-28.48	-28.70	-29.53	-29.00	-27.18
1900	-3.16	-3.17	-3.17	0.01	0.84	-30.35	-30.35	-30.57	-31.03	-29.03
2000	-3.09	-3.25	-3.17	0.08	0.91	-32.59	-31.71	-31.58	-33.54	-31.25
2100	-3.04	-3.32	-3.18	0.15	0.98	-34.84	-32.75	-32.77	-36.76	-33.89
2200	-2.99	-3.38	-3.19	0.19	0.95	-35.56	-33.79	-34.83	-39.92	-35.60
2250	-2.98	-3.40	-3.20	0.21	0.89	-35.63	-33.42	-35.31	-36.18	-36.22
2300	-2.98	-3.41	-3.20	0.22	0.92	-34.61	-34.12	-35.33	-38.27	-35.42
2350	-2.97	-3.42	-3.20	0.22	0.88	-35.36	-33.51	-34.10	-35.04	-42.45
2400	-2.98	-3.42	-3.21	0.22	0.96	-32.90	-33.33	-34.24	-34.52	-35.89
2500	-3.02	-3.39	-3.21	0.19	0.97	-31.42	-32.26	-32.81	-31.22	-37.69
2600	-3.08	-3.35	-3.22	0.14	0.98	-30.12	-30.86	-31.15	-28.60	-39.29
2700	-3.16	-3.28	-3.22	0.06	0.97	-29.05	-29.48	-29.06	-26.23	-34.91
2750	-3.21	-3.24	-3.23	0.01	0.85	-27.61	-28.25	-27.16	-26.17	-30.50
2775	-3.24	-3.23	-3.23	0.00	0.81	-27.95	-27.98	-27.11	-25.18	-30.02
2800	-3.26	-3.21	-3.24	0.03	0.82	-27.94	-27.66	-26.89	-24.56	-31.42
2900	-3.35	-3.14	-3.25	0.11	0.95	-27.66	-26.05	-24.68	-23.23	-27.96
3000	-3.44	-3.06	-3.25	0.20	0.55	-26.82	-25.44	-23.08	-23.06	-26.35
3100	-3.52	-3.00	-3.27	0.26	0.59	-27.23	-24.79	-21.84	-23.34	-26.31
3200	-3.56	-2.95	-3.27	0.31	0.68	-27.67	-24.98	-21.49	-24.23	-28.26
3300	-3.61	-2.93	-3.28	0.35	0.83	-28.58	-25.22	-21.18	-24.81	-30.32
3400	-3.62	-2.92	-3.28	0.36	0.96	-29.40	-25.79	-21.29	-24.50	-32.83
3500	-3.61	-2.94	-3.29	0.34	1.06	-29.68	-25.72	-21.54	-23.76	-32.43
3600	-3.54	-3.01	-3.28	0.27	1.19	-29.51	-25.90	-21.81	-22.99	-30.22
3700	-3.43	-3.11	-3.27	0.16	1.44	-28.47	-26.56	-21.99	-22.25	-27.29
3800	-3.27	-3.29	-3.28	0.01	1.60	-27.57	-27.66	-21.74	-22.35	-25.82
3900	-3.10	-3.53	-3.32	0.22	1.67	-26.59	-27.46	-20.67	-22.61	-25.16
4000	-2.83	-3.90	-3.40	0.54	1.80	-25.87	-25.96	-20.04	-22.78	-25.51

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

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QCH-382+

Typical Performance Data

Test Conditions: Input Power = +5 dbm, Temperature = -55°C, Configuration 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	(dB)			
	Sum	Port 1	Port 2				Sum	Port 1	Port 2	Iso
500	-1.69	-5.61	-4.08	1.96	-0.55	-21.35	-17.63	-17.42	-17.64	-17.79
600	-2.09	-4.74	-3.61	1.33	0.04	-21.13	-18.57	-18.29	-18.39	-18.70
700	-2.46	-4.09	-3.35	0.82	0.53	-21.23	-20.01	-19.69	-19.80	-20.13
800	-2.79	-3.61	-3.22	0.41	0.74	-21.79	-21.74	-21.19	-21.27	-21.73
900	-3.07	-3.28	-3.18	0.11	0.77	-22.30	-23.02	-22.22	-22.14	-22.72
950	-3.19	-3.15	-3.17	0.01	0.70	-22.73	-23.58	-22.42	-22.29	-22.86
1000	-3.29	-3.05	-3.17	0.12	0.65	-23.07	-23.74	-22.94	-22.52	-23.40
1100	-3.45	-2.91	-3.19	0.27	0.44	-23.96	-24.21	-23.33	-22.80	-24.01
1200	-3.55	-2.82	-3.20	0.36	0.26	-24.77	-24.26	-23.57	-23.04	-24.30
1300	-3.59	-2.79	-3.21	0.40	0.07	-25.49	-24.42	-23.74	-23.40	-24.81
1400	-3.58	-2.80	-3.21	0.39	-0.07	-26.46	-24.81	-24.02	-24.08	-25.63
1500	-3.54	-2.84	-3.20	0.35	-0.14	-27.36	-25.39	-24.49	-24.94	-26.75
1600	-3.47	-2.91	-3.20	0.28	-0.18	-28.55	-26.34	-25.08	-26.04	-27.87
1700	-3.39	-2.99	-3.19	0.20	-0.14	-29.87	-27.62	-25.85	-27.39	-28.65
1800	-3.29	-3.08	-3.19	0.11	-0.08	-31.51	-29.00	-27.18	-28.70	-29.53
1900	-3.21	-3.17	-3.19	0.02	-0.04	-34.03	-31.03	-29.03	-30.35	-30.57
2000	-3.13	-3.25	-3.19	0.07	-0.02	-37.15	-33.54	-31.25	-31.71	-31.58
2100	-3.08	-3.33	-3.21	0.13	0.01	-41.37	-36.76	-33.89	-32.75	-32.77
2200	-3.03	-3.38	-3.21	0.18	-0.08	-40.84	-39.92	-35.60	-33.79	-34.83
2250	-3.02	-3.40	-3.21	0.20	-0.10	-39.46	-36.18	-36.22	-33.42	-35.31
2300	-3.02	-3.41	-3.22	0.20	-0.09	-36.72	-38.27	-35.42	-34.12	-35.33
2350	-3.02	-3.42	-3.22	0.21	-0.16	-35.09	-35.04	-42.45	-33.51	-34.10
2400	-3.02	-3.42	-3.22	0.20	-0.08	-33.15	-34.52	-35.89	-33.33	-34.24
2500	-3.06	-3.39	-3.23	0.17	-0.14	-31.02	-31.22	-37.69	-32.26	-32.81
2600	-3.12	-3.35	-3.24	0.12	-0.19	-29.09	-28.60	-39.29	-30.86	-31.15
2700	-3.21	-3.28	-3.25	0.04	-0.22	-27.63	-26.23	-34.91	-29.48	-29.06
2750	-3.26	-3.25	-3.25	0.01	-0.38	-26.66	-26.17	-30.50	-28.25	-27.16
2775	-3.28	-3.24	-3.26	0.01	-0.42	-26.73	-25.18	-30.02	-27.98	-27.11
2800	-3.31	-3.22	-3.27	0.05	-0.42	-26.58	-24.56	-31.42	-27.66	-26.89
2900	-3.40	-3.15	-3.28	0.13	-0.39	-25.68	-23.23	-27.96	-26.05	-24.68
3000	-3.49	-3.06	-3.28	0.22	-0.79	-24.74	-23.06	-26.35	-25.44	-23.08
3100	-3.57	-3.01	-3.30	0.28	-0.78	-24.30	-23.34	-26.31	-24.79	-21.84
3200	-3.60	-2.95	-3.29	0.33	-0.71	-23.81	-24.23	-28.26	-24.98	-21.49
3300	-3.65	-2.93	-3.30	0.36	-0.53	-23.58	-24.81	-30.32	-25.22	-21.18
3400	-3.65	-2.92	-3.30	0.37	-0.41	-23.36	-24.50	-32.83	-25.79	-21.29
3500	-3.64	-2.95	-3.31	0.35	-0.33	-23.10	-23.76	-32.43	-25.72	-21.54
3600	-3.58	-3.01	-3.30	0.29	-0.10	-22.79	-22.99	-30.22	-25.90	-21.81
3700	-3.50	-3.11	-3.31	0.19	-0.01	-22.11	-22.25	-27.29	-26.56	-21.99
3800	-3.33	-3.29	-3.31	0.02	-0.04	-21.88	-22.35	-25.82	-27.66	-21.74
3900	-3.14	-3.54	-3.34	0.20	0.03	-21.44	-22.61	-25.16	-27.46	-20.67
4000	-2.87	-3.91	-3.42	0.52	0.04	-21.26	-22.78	-25.51	-25.96	-20.04

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

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QCH-382+

Typical Performance Data

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

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	(dB)			
	Sum	Port 1	Port 2				Sum	Port 1	Port 2	Iso
500	-1.66	-5.64	-4.09	1.99	-0.43	-21.32	-17.79	-17.64	-17.42	-17.63
600	-2.05	-4.76	-3.61	1.36	0.17	-21.11	-18.70	-18.39	-18.29	-18.57
700	-2.42	-4.12	-3.35	0.85	0.66	-21.13	-20.13	-19.80	-19.69	-20.01
800	-2.75	-3.64	-3.22	0.44	0.87	-21.65	-21.73	-21.27	-21.19	-21.74
900	-3.03	-3.30	-3.17	0.14	0.88	-22.18	-22.72	-22.14	-22.22	-23.02
950	-3.16	-3.18	-3.17	0.01	0.84	-22.55	-22.86	-22.29	-22.42	-23.58
1000	-3.26	-3.08	-3.17	0.10	0.78	-22.95	-23.40	-22.52	-22.94	-23.74
1100	-3.42	-2.93	-3.18	0.25	0.60	-23.85	-24.01	-22.80	-23.33	-24.21
1200	-3.51	-2.84	-3.19	0.34	0.44	-24.61	-24.30	-23.04	-23.57	-24.26
1300	-3.55	-2.81	-3.20	0.37	0.29	-25.33	-24.81	-23.40	-23.74	-24.42
1400	-3.54	-2.82	-3.19	0.36	0.17	-26.33	-25.63	-24.08	-24.02	-24.81
1500	-3.49	-2.86	-3.19	0.32	0.15	-27.26	-26.75	-24.94	-24.49	-25.39
1600	-3.42	-2.93	-3.18	0.25	0.17	-28.58	-27.87	-26.04	-25.08	-26.34
1700	-3.34	-3.01	-3.18	0.17	0.19	-30.04	-28.65	-27.39	-25.85	-27.62
1800	-3.25	-3.10	-3.18	0.08	0.29	-31.91	-29.53	-28.70	-27.18	-29.00
1900	-3.16	-3.19	-3.18	0.01	0.43	-34.93	-30.57	-30.35	-29.03	-31.03
2000	-3.09	-3.26	-3.18	0.09	0.55	-38.45	-31.58	-31.71	-31.25	-33.54
2100	-3.04	-3.34	-3.19	0.15	0.63	-43.43	-32.77	-32.75	-33.89	-36.76
2200	-3.00	-3.39	-3.20	0.20	0.65	-41.37	-34.83	-33.79	-35.60	-39.92
2250	-2.98	-3.41	-3.20	0.21	0.60	-39.66	-35.31	-33.42	-36.22	-36.18
2300	-2.98	-3.42	-3.21	0.22	0.65	-37.08	-35.33	-34.12	-35.42	-38.27
2350	-2.98	-3.43	-3.21	0.22	0.66	-35.52	-34.10	-33.51	-42.45	-35.04
2400	-2.98	-3.43	-3.21	0.22	0.70	-33.88	-34.24	-33.33	-35.89	-34.52
2500	-3.02	-3.41	-3.22	0.19	0.78	-31.97	-32.81	-32.26	-37.69	-31.22
2600	-3.09	-3.36	-3.23	0.14	0.80	-30.17	-31.15	-30.86	-39.29	-28.60
2700	-3.17	-3.28	-3.23	0.06	0.83	-28.56	-29.06	-29.48	-34.91	-26.23
2750	-3.22	-3.25	-3.23	0.01	0.71	-27.49	-27.16	-28.25	-30.50	-26.17
2775	-3.25	-3.23	-3.24	0.01	0.63	-27.44	-27.11	-27.98	-30.02	-25.18
2800	-3.27	-3.23	-3.25	0.02	0.56	-27.16	-26.89	-27.66	-31.42	-24.56
2900	-3.37	-3.16	-3.27	0.10	0.65	-25.96	-24.68	-26.05	-27.96	-23.23
3000	-3.46	-3.08	-3.27	0.19	0.39	-24.73	-23.08	-25.44	-26.35	-23.06
3100	-3.53	-3.06	-3.30	0.24	0.44	-24.06	-21.84	-24.79	-26.31	-23.34
3200	-3.57	-2.99	-3.29	0.29	0.49	-23.41	-21.49	-24.98	-28.26	-24.23
3300	-3.62	-2.98	-3.31	0.33	0.81	-23.08	-21.18	-25.22	-30.32	-24.81
3400	-3.63	-2.97	-3.31	0.34	1.02	-22.91	-21.29	-25.79	-32.83	-24.50
3500	-3.62	-2.98	-3.31	0.32	1.14	-22.84	-21.54	-25.72	-32.43	-23.76
3600	-3.55	-3.03	-3.30	0.26	1.25	-22.72	-21.81	-25.90	-30.22	-22.99
3700	-3.44	-3.13	-3.29	0.15	1.34	-22.31	-21.99	-26.56	-27.29	-22.25
3800	-3.28	-3.33	-3.31	0.03	1.44	-22.17	-21.74	-27.66	-25.82	-22.35
3900	-3.11	-3.57	-3.35	0.23	1.59	-21.85	-20.67	-27.46	-25.16	-22.61
4000	-2.84	-3.92	-3.41	0.55	1.49	-21.60	-20.04	-25.96	-25.51	-22.78

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

2-Way 90° Power Splitter/Combiner

QCH-382+

Typical Performance Data

Test Conditions: Input Power = +5 dbm, Temperature = +25°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	(dB)			
	Sum	Port 1	Port 2	Iso						
500	-1.67	-5.61	-4.07	1.97	-0.54	-21.62	-18.10	-18.22	-18.40	-18.33
600	-2.06	-4.73	-3.60	1.34	-0.10	-21.32	-19.10	-19.21	-19.41	-19.24
700	-2.43	-4.09	-3.34	0.83	0.27	-21.31	-20.35	-20.53	-20.75	-20.39
800	-2.76	-3.63	-3.22	0.44	0.49	-21.45	-21.62	-21.84	-22.04	-21.41
900	-3.05	-3.30	-3.18	0.13	0.55	-21.73	-22.43	-22.87	-22.95	-22.08
950	-3.17	-3.18	-3.17	0.01	0.54	-21.87	-22.63	-23.20	-23.16	-22.30
1000	-3.27	-3.07	-3.17	0.10	0.46	-22.17	-22.77	-23.40	-23.34	-22.39
1100	-3.43	-2.93	-3.19	0.26	0.29	-22.68	-22.84	-23.68	-23.52	-22.55
1200	-3.53	-2.85	-3.20	0.34	0.07	-23.39	-22.94	-24.03	-23.86	-22.87
1300	-3.57	-2.81	-3.21	0.38	-0.11	-24.14	-23.29	-24.68	-24.45	-23.44
1400	-3.56	-2.83	-3.21	0.37	-0.28	-25.09	-23.77	-25.69	-25.41	-24.29
1500	-3.51	-2.86	-3.20	0.33	-0.30	-26.13	-24.55	-26.97	-26.77	-25.50
1600	-3.44	-2.93	-3.19	0.26	-0.27	-27.29	-25.50	-28.47	-28.54	-26.83
1700	-3.36	-3.00	-3.18	0.18	-0.21	-28.62	-26.41	-29.98	-30.46	-28.40
1800	-3.27	-3.10	-3.19	0.09	-0.17	-30.37	-27.58	-31.61	-32.64	-30.04
1900	-3.18	-3.19	-3.19	0.00	-0.11	-32.28	-28.98	-33.32	-35.15	-31.92
2000	-3.11	-3.27	-3.19	0.09	-0.05	-34.15	-30.68	-34.97	-37.15	-33.99
2100	-3.05	-3.34	-3.20	0.15	0.00	-34.92	-32.88	-36.20	-37.44	-35.45
2200	-3.02	-3.40	-3.21	0.20	-0.02	-34.02	-35.91	-35.01	-35.72	-35.65
2250	-3.00	-3.42	-3.22	0.21	-0.03	-33.41	-38.01	-34.53	-34.25	-35.08
2300	-2.99	-3.43	-3.22	0.22	-0.03	-33.01	-38.91	-33.52	-33.15	-33.86
2350	-2.99	-3.43	-3.22	0.23	0.01	-32.49	-39.57	-32.58	-32.43	-33.53
2400	-3.00	-3.44	-3.23	0.22	0.13	-31.88	-40.08	-31.02	-31.77	-33.32
2500	-3.05	-3.41	-3.23	0.19	0.20	-30.80	-37.08	-28.88	-29.99	-31.68
2600	-3.10	-3.35	-3.23	0.13	0.08	-30.06	-33.90	-27.81	-28.31	-31.11
2700	-3.17	-3.29	-3.23	0.07	-0.04	-29.35	-32.06	-26.14	-26.84	-30.29
2750	-3.23	-3.26	-3.24	0.02	-0.04	-29.14	-30.94	-25.55	-25.90	-29.37
2775	-3.26	-3.25	-3.26	0.00	0.04	-29.55	-30.38	-25.28	-25.37	-28.98
2800	-3.30	-3.23	-3.27	0.04	0.06	-28.80	-29.62	-24.93	-25.01	-28.59
2900	-3.36	-3.13	-3.25	0.11	-0.29	-28.28	-28.66	-24.27	-24.09	-27.35
3000	-3.47	-3.08	-3.28	0.20	-0.42	-28.14	-28.11	-23.90	-22.97	-26.38
3100	-3.52	-3.02	-3.28	0.25	-0.56	-27.84	-28.35	-24.13	-22.40	-26.29
3200	-3.58	-3.00	-3.30	0.29	-0.46	-28.04	-28.52	-24.32	-21.70	-25.94
3300	-3.59	-2.96	-3.29	0.32	-0.23	-28.00	-29.80	-24.22	-21.69	-25.58
3400	-3.60	-2.96	-3.29	0.32	0.13	-28.56	-30.12	-24.39	-21.36	-25.31
3500	-3.60	-2.99	-3.31	0.30	0.50	-29.36	-29.61	-24.43	-21.18	-26.19
3600	-3.54	-3.04	-3.30	0.25	0.44	-29.28	-28.05	-23.72	-21.21	-26.33
3700	-3.45	-3.15	-3.30	0.15	0.46	-29.44	-26.83	-23.31	-21.15	-26.44
3800	-3.30	-3.31	-3.31	0.01	0.41	-29.00	-26.28	-23.07	-21.48	-27.60
3900	-3.08	-3.57	-3.33	0.25	0.65	-28.26	-26.74	-23.20	-21.84	-28.35
4000	-2.82	-3.90	-3.39	0.54	0.70	-27.09	-27.09	-22.92	-21.73	-27.26

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

2-Way 90° Power Splitter/Combiner

QCH-382+

Typical Performance Data

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

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	(dB)			
	Sum	Port 1	Port 2				Sum	Port 1	Port 2	Iso
500	-1.65	-5.58	-4.05	1.97	-0.29	-21.68	-18.33	-18.40	-18.22	-18.10
600	-2.05	-4.71	-3.58	1.33	0.21	-21.42	-19.24	-19.41	-19.21	-19.10
700	-2.42	-4.07	-3.32	0.83	0.63	-21.44	-20.39	-20.75	-20.53	-20.35
800	-2.75	-3.61	-3.20	0.43	0.91	-21.60	-21.41	-22.04	-21.84	-21.62
900	-3.04	-3.28	-3.16	0.12	1.02	-21.86	-22.08	-22.95	-22.87	-22.43
950	-3.16	-3.16	-3.16	0.00	1.00	-22.03	-22.30	-23.16	-23.20	-22.63
1000	-3.26	-3.05	-3.16	0.11	0.96	-22.22	-22.39	-23.34	-23.40	-22.77
1100	-3.42	-2.90	-3.17	0.26	0.81	-22.77	-22.55	-23.52	-23.68	-22.84
1200	-3.52	-2.82	-3.18	0.35	0.63	-23.37	-22.87	-23.86	-24.03	-22.94
1300	-3.56	-2.79	-3.19	0.39	0.48	-24.15	-23.44	-24.45	-24.68	-23.29
1400	-3.54	-2.80	-3.19	0.38	0.34	-24.98	-24.29	-25.41	-25.69	-23.77
1500	-3.49	-2.84	-3.18	0.33	0.34	-26.01	-25.50	-26.77	-26.97	-24.55
1600	-3.42	-2.90	-3.17	0.26	0.35	-27.13	-26.83	-28.54	-28.47	-25.50
1700	-3.34	-2.98	-3.16	0.18	0.44	-28.29	-28.40	-30.46	-29.98	-26.41
1800	-3.25	-3.08	-3.17	0.09	0.52	-29.90	-30.04	-32.64	-31.61	-27.58
1900	-3.17	-3.16	-3.17	0.01	0.59	-31.83	-31.92	-35.15	-33.32	-28.98
2000	-3.09	-3.25	-3.17	0.08	0.61	-33.88	-33.99	-37.15	-34.97	-30.68
2100	-3.04	-3.33	-3.19	0.15	0.58	-35.82	-35.45	-37.44	-36.20	-32.88
2200	-3.00	-3.39	-3.20	0.20	0.60	-35.40	-35.65	-35.72	-35.01	-35.91
2250	-2.99	-3.40	-3.20	0.21	0.64	-34.64	-35.08	-34.25	-34.53	-38.01
2300	-2.98	-3.40	-3.20	0.21	0.56	-33.96	-33.86	-33.15	-33.52	-38.91
2350	-2.97	-3.41	-3.20	0.22	0.52	-33.26	-33.53	-32.43	-32.58	-39.57
2400	-2.98	-3.42	-3.21	0.22	0.64	-32.25	-33.32	-31.77	-31.02	-40.08
2500	-3.04	-3.39	-3.22	0.17	0.71	-30.38	-31.68	-29.99	-28.88	-37.08
2600	-3.09	-3.33	-3.21	0.12	0.44	-29.29	-31.11	-28.31	-27.81	-33.90
2700	-3.15	-3.28	-3.22	0.06	0.40	-28.58	-30.29	-26.84	-26.14	-32.06
2750	-3.21	-3.26	-3.23	0.02	0.43	-28.34	-29.37	-25.90	-25.55	-30.94
2775	-3.24	-3.24	-3.24	0.00	0.48	-28.61	-28.98	-25.37	-25.28	-30.38
2800	-3.27	-3.21	-3.24	0.04	0.52	-28.12	-28.59	-25.01	-24.93	-29.62
2900	-3.35	-3.13	-3.24	0.12	0.17	-27.95	-27.35	-24.09	-24.27	-28.66
3000	-3.46	-3.05	-3.26	0.21	0.18	-28.08	-26.38	-22.97	-23.90	-28.11
3100	-3.51	-2.98	-3.25	0.27	-0.08	-28.25	-26.29	-22.40	-24.13	-28.35
3200	-3.59	-2.93	-3.27	0.33	0.03	-28.86	-25.94	-21.70	-24.32	-28.52
3300	-3.60	-2.94	-3.28	0.33	0.09	-28.84	-25.58	-21.69	-24.22	-29.80
3400	-3.63	-2.94	-3.30	0.34	0.49	-29.40	-25.31	-21.36	-24.39	-30.12
3500	-3.61	-2.95	-3.29	0.33	0.77	-29.59	-26.19	-21.18	-24.43	-29.61
3600	-3.55	-2.99	-3.28	0.29	1.08	-28.90	-26.33	-21.21	-23.72	-28.05
3700	-3.47	-3.10	-3.29	0.19	0.91	-28.53	-26.44	-21.15	-23.31	-26.83
3800	-3.29	-3.27	-3.28	0.01	0.78	-28.07	-27.60	-21.48	-23.07	-26.28
3900	-3.07	-3.54	-3.31	0.23	1.29	-27.61	-28.35	-21.84	-23.20	-26.74
4000	-2.82	-3.88	-3.38	0.53	1.30	-26.88	-27.26	-21.73	-22.92	-27.09

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

2-Way 90° Power Splitter/Combiner

QCH-382+

Typical Performance Data

Test Conditions: Input Power = +5 dbm, Temperature = +25°C, Configuration 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	(dB)			
	Sum	Port 1	Port 2	Iso						
500	-1.67	-5.58	-4.05	1.96	-0.49	-21.81	-18.22	-18.10	-18.33	-18.40
600	-2.06	-4.71	-3.58	1.33	-0.07	-21.64	-19.21	-19.10	-19.24	-19.41
700	-2.43	-4.07	-3.33	0.82	0.32	-21.78	-20.53	-20.35	-20.39	-20.75
800	-2.77	-3.61	-3.21	0.42	0.54	-22.07	-21.84	-21.62	-21.41	-22.04
900	-3.05	-3.28	-3.17	0.12	0.62	-22.45	-22.87	-22.43	-22.08	-22.95
950	-3.17	-3.16	-3.16	0.00	0.60	-22.72	-23.20	-22.63	-22.30	-23.16
1000	-3.27	-3.05	-3.16	0.11	0.54	-23.01	-23.40	-22.77	-22.39	-23.34
1100	-3.44	-2.90	-3.18	0.27	0.35	-23.67	-23.68	-22.84	-22.55	-23.52
1200	-3.53	-2.82	-3.19	0.36	0.13	-24.58	-24.03	-22.94	-22.87	-23.86
1300	-3.57	-2.79	-3.20	0.39	-0.05	-25.56	-24.68	-23.29	-23.44	-24.45
1400	-3.56	-2.80	-3.20	0.38	-0.24	-26.75	-25.69	-23.77	-24.29	-25.41
1500	-3.51	-2.84	-3.19	0.34	-0.28	-28.14	-26.97	-24.55	-25.50	-26.77
1600	-3.44	-2.90	-3.18	0.27	-0.32	-29.87	-28.47	-25.50	-26.83	-28.54
1700	-3.36	-2.98	-3.17	0.19	-0.29	-32.02	-29.98	-26.41	-28.40	-30.46
1800	-3.27	-3.07	-3.17	0.10	-0.24	-35.06	-31.61	-27.58	-30.04	-32.64
1900	-3.18	-3.16	-3.17	0.02	-0.25	-38.91	-33.32	-28.98	-31.92	-35.15
2000	-3.10	-3.25	-3.18	0.07	-0.27	-42.51	-34.97	-30.68	-33.99	-37.15
2100	-3.05	-3.33	-3.19	0.14	-0.33	-40.76	-36.20	-32.88	-35.45	-37.44
2200	-3.01	-3.39	-3.20	0.19	-0.37	-36.53	-35.01	-35.91	-35.65	-35.72
2250	-3.00	-3.40	-3.20	0.21	-0.38	-34.40	-34.53	-38.01	-35.08	-34.25
2300	-2.99	-3.40	-3.20	0.21	-0.41	-32.84	-33.52	-38.91	-33.86	-33.15
2350	-2.98	-3.41	-3.20	0.22	-0.45	-31.77	-32.58	-39.57	-33.53	-32.43
2400	-3.00	-3.43	-3.22	0.21	-0.36	-30.64	-31.02	-40.08	-33.32	-31.77
2500	-3.04	-3.39	-3.22	0.17	-0.39	-28.72	-28.88	-37.08	-31.68	-29.99
2600	-3.10	-3.34	-3.22	0.12	-0.61	-27.42	-27.81	-33.90	-31.11	-28.31
2700	-3.17	-3.28	-3.23	0.06	-0.75	-26.67	-26.14	-32.06	-30.29	-26.84
2750	-3.22	-3.26	-3.24	0.02	-0.71	-26.58	-25.55	-30.94	-29.37	-25.90
2775	-3.25	-3.24	-3.25	0.00	-0.66	-26.73	-25.28	-30.38	-28.98	-25.37
2800	-3.30	-3.21	-3.26	0.05	-0.66	-26.45	-24.93	-29.62	-28.59	-25.01
2900	-3.36	-3.13	-3.25	0.12	-1.06	-25.67	-24.27	-28.66	-27.35	-24.09
3000	-3.47	-3.05	-3.27	0.21	-1.12	-25.41	-23.90	-28.11	-26.38	-22.97
3100	-3.52	-2.98	-3.26	0.27	-1.49	-24.86	-24.13	-28.35	-26.29	-22.40
3200	-3.58	-2.93	-3.27	0.33	-1.41	-24.60	-24.32	-28.52	-25.94	-21.70
3300	-3.59	-2.94	-3.28	0.33	-1.38	-23.92	-24.22	-29.80	-25.58	-21.69
3400	-3.60	-2.94	-3.28	0.33	-0.88	-23.56	-24.39	-30.12	-25.31	-21.36
3500	-3.60	-2.95	-3.29	0.33	-0.41	-23.08	-24.43	-29.61	-26.19	-21.18
3600	-3.54	-2.99	-3.27	0.28	-0.40	-22.68	-23.72	-28.05	-26.33	-21.21
3700	-3.44	-3.10	-3.27	0.18	-0.61	-22.49	-23.31	-26.83	-26.44	-21.15
3800	-3.30	-3.28	-3.29	0.02	-0.67	-22.29	-23.07	-26.28	-27.60	-21.48
3900	-3.07	-3.54	-3.31	0.23	-0.43	-22.22	-23.20	-26.74	-28.35	-21.84
4000	-2.82	-3.88	-3.38	0.53	-0.30	-22.10	-22.92	-27.09	-27.26	-21.73

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

2-Way 90° Power Splitter/Combiner

QCH-382+

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			
	Sum-Port 1	Sum-Port 2	Average	(±dB) Half P-P	(deg) Rel. to 90°	(dB) Port1-Port2	(dB)			
							Sum	Port 1	Port 2	Iso
500	-1.65	-5.61	-4.07	1.98	-0.30	-21.76	-18.40	-18.33	-18.10	-18.22
600	-2.05	-4.73	-3.59	1.34	0.18	-21.61	-19.41	-19.24	-19.10	-19.21
700	-2.42	-4.09	-3.33	0.84	0.61	-21.67	-20.75	-20.39	-20.35	-20.53
800	-2.75	-3.63	-3.21	0.44	0.86	-21.93	-22.04	-21.41	-21.62	-21.84
900	-3.04	-3.30	-3.17	0.13	0.95	-22.32	-22.95	-22.08	-22.43	-22.87
950	-3.16	-3.18	-3.17	0.01	0.94	-22.54	-23.16	-22.30	-22.63	-23.20
1000	-3.26	-3.07	-3.17	0.10	0.90	-22.90	-23.34	-22.39	-22.77	-23.40
1100	-3.42	-2.93	-3.18	0.25	0.75	-23.57	-23.52	-22.55	-22.84	-23.68
1200	-3.52	-2.85	-3.20	0.34	0.56	-24.43	-23.86	-22.87	-22.94	-24.03
1300	-3.56	-2.81	-3.20	0.37	0.41	-25.43	-24.45	-23.44	-23.29	-24.68
1400	-3.54	-2.83	-3.20	0.36	0.30	-26.67	-25.41	-24.29	-23.77	-25.69
1500	-3.49	-2.86	-3.19	0.32	0.32	-28.10	-26.77	-25.50	-24.55	-26.97
1600	-3.42	-2.93	-3.18	0.25	0.39	-29.99	-28.54	-26.83	-25.50	-28.47
1700	-3.34	-3.01	-3.18	0.17	0.51	-32.38	-30.46	-28.40	-26.41	-29.98
1800	-3.25	-3.10	-3.18	0.08	0.59	-35.80	-32.64	-30.04	-27.58	-31.61
1900	-3.17	-3.19	-3.18	0.01	0.73	-40.55	-35.15	-31.92	-28.98	-33.32
2000	-3.09	-3.27	-3.18	0.09	0.82	-43.95	-37.15	-33.99	-30.68	-34.97
2100	-3.04	-3.34	-3.19	0.16	0.90	-40.82	-37.44	-35.45	-32.88	-36.20
2200	-3.00	-3.40	-3.20	0.20	0.94	-36.69	-35.72	-35.65	-35.91	-35.01
2250	-3.00	-3.42	-3.21	0.21	1.01	-34.52	-34.25	-35.08	-38.01	-34.53
2300	-2.98	-3.43	-3.21	0.23	0.96	-33.34	-33.15	-33.86	-38.91	-33.52
2350	-2.98	-3.44	-3.22	0.23	0.99	-32.23	-32.43	-33.53	-39.57	-32.58
2400	-2.99	-3.44	-3.22	0.23	1.12	-31.39	-31.77	-33.32	-40.08	-31.02
2500	-3.04	-3.41	-3.23	0.19	1.28	-29.57	-29.99	-31.68	-37.08	-28.88
2600	-3.10	-3.35	-3.23	0.13	1.10	-28.32	-28.31	-31.11	-33.90	-27.81
2700	-3.16	-3.29	-3.23	0.07	1.08	-27.35	-26.84	-30.29	-32.06	-26.14
2750	-3.22	-3.26	-3.24	0.03	1.13	-27.18	-25.90	-29.37	-30.94	-25.55
2775	-3.25	-3.26	-3.25	0.00	1.20	-27.30	-25.37	-28.98	-30.38	-25.28
2800	-3.28	-3.23	-3.26	0.03	1.22	-26.79	-25.01	-28.59	-29.62	-24.93
2900	-3.36	-3.13	-3.25	0.11	0.91	-25.72	-24.09	-27.35	-28.66	-24.27
3000	-3.46	-3.08	-3.27	0.19	0.83	-25.22	-22.97	-26.38	-28.11	-23.90
3100	-3.52	-3.02	-3.28	0.25	0.85	-24.45	-22.40	-26.29	-28.35	-24.13
3200	-3.59	-3.00	-3.31	0.30	0.96	-24.06	-21.70	-25.94	-28.52	-24.32
3300	-3.60	-2.96	-3.29	0.32	1.23	-23.44	-21.69	-25.58	-29.80	-24.22
3400	-3.63	-2.96	-3.31	0.34	1.48	-23.23	-21.36	-25.31	-30.12	-24.39
3500	-3.61	-2.99	-3.31	0.31	1.67	-22.99	-21.18	-26.19	-29.61	-24.43
3600	-3.55	-3.04	-3.30	0.26	1.93	-22.80	-21.21	-26.33	-28.05	-23.72
3700	-3.47	-3.15	-3.31	0.16	1.97	-22.85	-21.15	-26.44	-26.83	-23.31
3800	-3.29	-3.31	-3.30	0.01	1.87	-22.70	-21.48	-27.60	-26.28	-23.07
3900	-3.08	-3.57	-3.33	0.25	2.36	-22.69	-21.84	-28.35	-26.74	-23.20
4000	-2.82	-3.90	-3.39	0.54	2.29	-22.42	-21.73	-27.26	-27.09	-22.92

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

2-Way 90° Power Splitter/Combiner

QCH-382+

Typical Performance Data

Test Conditions: Input Power = +5 dbm, Temperature = +105°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	(dB)			
							Sum	Port 1	Port 2	Iso
500	-1.66	-5.61	-4.07	1.98	-0.52	-21.53	-17.89	-18.03	-18.10	-18.00
600	-2.05	-4.72	-3.59	1.33	-0.09	-21.43	-19.21	-19.28	-19.41	-19.22
700	-2.43	-4.07	-3.33	0.82	0.18	-21.55	-20.75	-21.12	-21.17	-20.57
800	-2.76	-3.61	-3.21	0.43	0.28	-21.86	-21.97	-22.78	-22.64	-21.74
900	-3.04	-3.28	-3.16	0.12	0.24	-22.33	-22.64	-23.89	-23.55	-22.60
950	-3.16	-3.16	-3.16	0.01	0.18	-22.55	-22.78	-23.71	-23.52	-22.62
1000	-3.26	-3.06	-3.16	0.10	0.08	-22.98	-22.95	-24.65	-24.07	-23.10
1100	-3.42	-2.92	-3.18	0.25	-0.12	-23.69	-23.14	-25.36	-24.53	-23.48
1200	-3.51	-2.85	-3.19	0.33	-0.28	-24.64	-23.61	-25.91	-25.21	-23.97
1300	-3.54	-2.82	-3.19	0.36	-0.42	-25.64	-24.37	-26.83	-26.32	-24.66
1400	-3.54	-2.82	-3.19	0.36	-0.50	-26.86	-25.25	-28.11	-27.85	-25.53
1500	-3.50	-2.86	-3.19	0.32	-0.53	-28.23	-26.37	-29.43	-29.87	-26.59
1600	-3.43	-2.93	-3.19	0.25	-0.55	-29.73	-27.42	-30.91	-32.35	-28.15
1700	-3.35	-3.01	-3.18	0.17	-0.54	-31.51	-28.30	-32.38	-34.94	-30.07
1800	-3.27	-3.11	-3.19	0.08	-0.51	-33.72	-29.46	-33.83	-37.11	-32.22
1900	-3.19	-3.19	-3.19	0.01	-0.49	-35.73	-30.54	-35.79	-37.99	-34.62
2000	-3.11	-3.29	-3.20	0.10	-0.47	-37.50	-32.47	-36.70	-36.33	-36.17
2100	-3.05	-3.37	-3.21	0.16	-0.51	-36.60	-35.55	-36.70	-34.05	-35.43
2200	-3.03	-3.45	-3.25	0.22	-0.70	-34.75	-42.23	-34.87	-32.43	-34.25
2250	-2.99	-3.45	-3.23	0.23	-0.53	-33.03	-38.70	-34.45	-32.55	-33.89
2300	-3.00	-3.47	-3.24	0.24	-0.35	-33.46	-43.47	-32.72	-30.47	-32.59
2350	-3.01	-3.47	-3.24	0.24	-0.34	-32.33	-40.12	-32.55	-31.36	-33.22
2400	-3.00	-3.46	-3.24	0.23	-0.49	-31.82	-38.38	-30.49	-29.46	-31.41
2500	-3.08	-3.41	-3.25	0.17	-0.19	-30.50	-32.83	-28.22	-28.29	-29.82
2600	-3.11	-3.38	-3.25	0.14	-0.47	-29.58	-31.73	-26.76	-27.46	-30.50
2700	-3.19	-3.33	-3.26	0.08	-0.44	-29.33	-30.33	-25.42	-25.62	-28.86
2750	-3.26	-3.27	-3.26	0.01	-0.88	-28.22	-30.65	-25.09	-25.81	-28.30
2775	-3.27	-3.25	-3.26	0.01	-0.89	-28.53	-30.28	-25.12	-25.31	-28.61
2800	-3.28	-3.23	-3.26	0.02	-1.00	-27.92	-29.59	-24.44	-24.89	-26.92
2900	-3.36	-3.18	-3.27	0.09	-0.84	-27.65	-28.50	-24.25	-23.28	-26.02
3000	-3.47	-3.12	-3.30	0.18	-1.08	-27.53	-28.23	-24.15	-22.37	-25.32
3100	-3.54	-3.07	-3.31	0.24	-1.12	-28.02	-28.59	-24.02	-21.46	-24.81
3200	-3.57	-3.02	-3.30	0.27	-1.07	-28.20	-28.94	-24.28	-21.12	-25.17
3300	-3.67	-3.04	-3.37	0.31	-1.20	-28.78	-27.96	-23.45	-20.87	-24.58
3400	-3.61	-3.02	-3.33	0.29	-0.58	-28.65	-29.20	-23.73	-21.42	-25.17
3500	-3.59	-3.04	-3.32	0.28	-0.14	-28.74	-28.43	-23.85	-21.61	-26.04
3600	-3.61	-3.06	-3.34	0.27	-0.17	-29.39	-26.77	-22.92	-21.52	-25.27
3700	-3.44	-3.23	-3.34	0.10	0.07	-29.56	-27.16	-23.21	-21.16	-26.08
3800	-3.31	-3.36	-3.34	0.03	-0.32	-29.01	-26.74	-23.29	-22.15	-28.46
3900	-3.13	-3.62	-3.38	0.25	-0.30	-28.37	-26.37	-23.77	-21.69	-28.83
4000	-2.86	-3.99	-3.46	0.57	-0.02	-28.06	-26.97	-24.51	-21.69	-27.42

* 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-382+

Typical Performance Data

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

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	(dB)			
	Sum	Port 1	Port 2				Sum	Port 1	Port 2	Iso
500	-1.65	-5.58	-4.05	1.97	-0.04	-21.61	-18.00	-18.10	-18.03	-17.89
600	-2.04	-4.69	-3.56	1.33	0.50	-21.54	-19.22	-19.41	-19.28	-19.21
700	-2.42	-4.04	-3.31	0.82	0.89	-21.70	-20.57	-21.17	-21.12	-20.75
800	-2.75	-3.58	-3.18	0.42	1.10	-22.01	-21.74	-22.64	-22.78	-21.97
900	-3.03	-3.25	-3.14	0.11	1.12	-22.47	-22.60	-23.55	-23.89	-22.64
950	-3.15	-3.13	-3.14	0.01	1.10	-22.71	-22.62	-23.52	-23.71	-22.78
1000	-3.25	-3.03	-3.14	0.11	1.06	-23.01	-23.10	-24.07	-24.65	-22.95
1100	-3.40	-2.89	-3.15	0.26	0.92	-23.76	-23.48	-24.53	-25.36	-23.14
1200	-3.49	-2.81	-3.16	0.34	0.83	-24.59	-23.97	-25.21	-25.91	-23.61
1300	-3.53	-2.78	-3.17	0.38	0.76	-25.61	-24.66	-26.32	-26.83	-24.37
1400	-3.52	-2.80	-3.17	0.37	0.76	-26.71	-25.53	-27.85	-28.11	-25.25
1500	-3.48	-2.84	-3.17	0.32	0.79	-28.05	-26.59	-29.87	-29.43	-26.37
1600	-3.42	-2.90	-3.17	0.26	0.87	-29.49	-28.15	-32.35	-30.91	-27.42
1700	-3.34	-2.98	-3.16	0.18	0.91	-31.06	-30.07	-34.94	-32.38	-28.30
1800	-3.25	-3.08	-3.17	0.09	1.02	-33.08	-32.22	-37.11	-33.83	-29.46
1900	-3.17	-3.16	-3.17	0.01	1.03	-35.27	-34.62	-37.99	-35.79	-30.54
2000	-3.09	-3.26	-3.18	0.09	1.05	-37.64	-36.17	-36.33	-36.70	-32.47
2100	-3.04	-3.34	-3.19	0.15	1.11	-38.21	-35.43	-34.05	-36.70	-35.55
2200	-3.01	-3.41	-3.21	0.21	1.09	-36.24	-34.25	-32.43	-34.87	-42.23
2250	-2.99	-3.42	-3.21	0.23	1.12	-33.94	-33.89	-32.55	-34.45	-38.70
2300	-3.00	-3.44	-3.23	0.22	1.17	-33.97	-32.59	-30.47	-32.72	-43.47
2350	-2.99	-3.45	-3.22	0.23	1.17	-32.76	-33.22	-31.36	-32.55	-40.12
2400	-2.99	-3.43	-3.22	0.22	1.11	-31.72	-31.41	-29.46	-30.49	-38.38
2500	-3.07	-3.39	-3.23	0.16	1.18	-29.86	-29.82	-28.29	-28.22	-32.83
2600	-3.10	-3.37	-3.24	0.13	1.13	-28.76	-30.50	-27.46	-26.76	-31.73
2700	-3.19	-3.33	-3.26	0.07	1.09	-28.58	-28.86	-25.62	-25.42	-30.33
2750	-3.24	-3.26	-3.25	0.01	0.89	-27.54	-28.30	-25.81	-25.09	-30.65
2775	-3.24	-3.23	-3.24	0.01	0.85	-27.72	-28.61	-25.31	-25.12	-30.28
2800	-3.27	-3.21	-3.24	0.03	0.84	-27.40	-26.92	-24.89	-24.44	-29.59
2900	-3.37	-3.15	-3.26	0.11	0.66	-27.49	-26.02	-23.28	-24.25	-28.50
3000	-3.46	-3.06	-3.26	0.20	0.56	-27.66	-25.32	-22.37	-24.15	-28.23
3100	-3.55	-3.02	-3.29	0.27	0.87	-28.56	-24.81	-21.46	-24.02	-28.59
3200	-3.59	-2.98	-3.30	0.31	0.71	-29.11	-25.17	-21.12	-24.28	-28.94
3300	-3.64	-3.05	-3.36	0.30	0.63	-29.62	-24.58	-20.87	-23.45	-27.96
3400	-3.63	-3.00	-3.33	0.32	1.13	-29.24	-25.17	-21.42	-23.73	-29.20
3500	-3.60	-3.01	-3.32	0.30	1.96	-28.63	-26.04	-21.61	-23.85	-28.43
3600	-3.62	-3.05	-3.34	0.29	1.91	-28.70	-25.27	-21.52	-22.92	-26.77
3700	-3.52	-3.22	-3.37	0.16	2.11	-28.59	-26.08	-21.16	-23.21	-27.16
3800	-3.28	-3.30	-3.29	0.01	1.88	-28.16	-28.46	-22.15	-23.29	-26.74
3900	-3.13	-3.57	-3.36	0.22	2.28	-27.90	-28.83	-21.69	-23.77	-26.37
4000	-2.85	-3.96	-3.44	0.56	2.59	-28.06	-27.42	-21.69	-24.51	-26.97

* 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-382+

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
500	-1.65	-5.59	-4.05	1.96	-0.40	-21.77	-18.03	-17.89	-18.00	-18.10
600	-2.05	-4.70	-3.57	1.32	0.07	-21.73	-19.28	-19.21	-19.22	-19.41
700	-2.42	-4.05	-3.31	0.81	0.38	-22.26	-21.12	-20.75	-20.57	-21.17
800	-2.75	-3.58	-3.18	0.41	0.53	-22.81	-22.78	-21.97	-21.74	-22.64
900	-3.04	-3.25	-3.15	0.11	0.52	-23.33	-23.89	-22.64	-22.60	-23.55
950	-3.16	-3.14	-3.15	0.01	0.46	-23.74	-23.71	-22.78	-22.62	-23.52
1000	-3.26	-3.03	-3.15	0.12	0.38	-24.20	-24.65	-22.95	-23.10	-24.07
1100	-3.41	-2.89	-3.16	0.27	0.17	-25.19	-25.36	-23.14	-23.48	-24.53
1200	-3.50	-2.82	-3.17	0.35	0.02	-26.40	-25.91	-23.61	-23.97	-25.21
1300	-3.54	-2.79	-3.18	0.38	-0.12	-27.73	-26.83	-24.37	-24.66	-26.32
1400	-3.53	-2.80	-3.18	0.37	-0.20	-29.26	-28.11	-25.25	-25.53	-27.85
1500	-3.49	-2.84	-3.18	0.33	-0.22	-30.85	-29.43	-26.37	-26.59	-29.87
1600	-3.42	-2.90	-3.17	0.27	-0.24	-32.86	-30.91	-27.42	-28.15	-32.35
1700	-3.34	-2.99	-3.17	0.19	-0.24	-35.05	-32.38	-28.30	-30.07	-34.94
1800	-3.26	-3.08	-3.17	0.10	-0.25	-37.12	-33.83	-29.46	-32.22	-37.11
1900	-3.18	-3.16	-3.17	0.02	-0.28	-38.61	-35.79	-30.54	-34.62	-37.99
2000	-3.10	-3.26	-3.18	0.08	-0.35	-37.54	-36.70	-32.47	-36.17	-36.33
2100	-3.04	-3.35	-3.20	0.15	-0.36	-35.92	-36.70	-35.55	-35.43	-34.05
2200	-3.02	-3.42	-3.22	0.20	-0.62	-34.37	-34.87	-42.23	-34.25	-32.43
2250	-2.98	-3.43	-3.21	0.23	-0.45	-32.39	-34.45	-38.70	-33.89	-32.55
2300	-2.99	-3.44	-3.22	0.22	-0.37	-31.82	-32.72	-43.47	-32.59	-30.47
2350	-2.99	-3.45	-3.22	0.23	-0.40	-30.62	-32.55	-40.12	-33.22	-31.36
2400	-2.99	-3.43	-3.22	0.22	-0.51	-29.66	-30.49	-38.38	-31.41	-29.46
2500	-3.06	-3.40	-3.23	0.16	-0.43	-27.56	-28.22	-32.83	-29.82	-28.29
2600	-3.10	-3.38	-3.24	0.13	-0.72	-27.51	-26.76	-31.73	-30.50	-27.46
2700	-3.18	-3.34	-3.26	0.07	-0.86	-26.69	-25.42	-30.33	-28.86	-25.62
2750	-3.24	-3.26	-3.25	0.01	-0.91	-26.09	-25.09	-30.65	-28.30	-25.81
2775	-3.26	-3.23	-3.24	0.01	-0.98	-26.30	-25.12	-30.28	-28.61	-25.31
2800	-3.27	-3.21	-3.24	0.04	-1.06	-25.94	-24.44	-29.59	-26.92	-24.89
2900	-3.35	-3.15	-3.25	0.11	-1.37	-25.93	-24.25	-28.50	-26.02	-23.28
3000	-3.46	-3.06	-3.26	0.20	-1.43	-25.53	-24.15	-28.23	-25.32	-22.37
3100	-3.53	-3.02	-3.28	0.26	-1.38	-25.29	-24.02	-28.59	-24.81	-21.46
3200	-3.56	-2.98	-3.28	0.30	-1.61	-24.47	-24.28	-28.94	-25.17	-21.12
3300	-3.65	-3.05	-3.36	0.31	-1.76	-24.20	-23.45	-27.96	-24.58	-20.87
3400	-3.60	-3.00	-3.31	0.31	-1.04	-23.71	-23.73	-29.20	-25.17	-21.42
3500	-3.58	-3.01	-3.30	0.29	-0.40	-23.08	-23.85	-28.43	-26.04	-21.61
3600	-3.60	-3.05	-3.33	0.28	-0.27	-22.49	-22.92	-26.77	-25.27	-21.52
3700	-3.43	-3.22	-3.33	0.12	-0.05	-22.97	-23.21	-27.16	-26.08	-21.16
3800	-3.30	-3.31	-3.31	0.01	-0.42	-22.45	-23.29	-26.74	-28.46	-22.15
3900	-3.13	-3.58	-3.36	0.22	-0.34	-22.75	-23.77	-26.37	-28.83	-21.69
4000	-2.85	-3.97	-3.45	0.55	0.00	-22.95	-24.51	-26.97	-27.42	-21.69

* 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-382+

Typical Performance Data

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

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	(dB)			
	Sum	Port 1	Port 2	Iso						
500	-1.65	-5.61	-4.07	1.98	-0.15	-21.69	-18.10	-18.00	-17.89	-18.03
600	-2.05	-4.71	-3.58	1.34	0.36	-21.67	-19.41	-19.22	-19.21	-19.28
700	-2.42	-4.06	-3.32	0.83	0.70	-22.12	-21.17	-20.57	-20.75	-21.12
800	-2.75	-3.60	-3.20	0.43	0.86	-22.64	-22.64	-21.74	-21.97	-22.78
900	-3.03	-3.28	-3.16	0.13	0.85	-23.19	-23.55	-22.60	-22.64	-23.89
950	-3.16	-3.16	-3.16	0.01	0.81	-23.54	-23.52	-22.62	-22.78	-23.71
1000	-3.25	-3.06	-3.16	0.10	0.76	-24.06	-24.07	-23.10	-22.95	-24.65
1100	-3.41	-2.92	-3.17	0.24	0.63	-25.07	-24.53	-23.48	-23.14	-25.36
1200	-3.50	-2.84	-3.18	0.33	0.53	-26.20	-25.21	-23.97	-23.61	-25.91
1300	-3.53	-2.81	-3.18	0.36	0.46	-27.56	-26.32	-24.66	-24.37	-26.83
1400	-3.53	-2.82	-3.19	0.35	0.45	-29.16	-27.85	-25.53	-25.25	-28.11
1500	-3.48	-2.86	-3.18	0.31	0.48	-30.76	-29.87	-26.59	-26.37	-29.43
1600	-3.42	-2.92	-3.18	0.25	0.56	-32.96	-32.35	-28.15	-27.42	-30.91
1700	-3.34	-3.00	-3.17	0.17	0.60	-35.35	-34.94	-30.07	-28.30	-32.38
1800	-3.26	-3.10	-3.18	0.07	0.75	-37.62	-37.11	-32.22	-29.46	-33.83
1900	-3.18	-3.19	-3.19	0.01	0.81	-39.34	-37.99	-34.62	-30.54	-35.79
2000	-3.10	-3.28	-3.19	0.10	0.91	-37.97	-36.33	-36.17	-32.47	-36.70
2100	-3.04	-3.36	-3.20	0.17	0.96	-36.24	-34.05	-35.43	-35.55	-36.70
2200	-3.01	-3.44	-3.23	0.23	1.01	-34.93	-32.43	-34.25	-42.23	-34.87
2250	-2.99	-3.45	-3.22	0.23	1.05	-32.84	-32.55	-33.89	-38.70	-34.45
2300	-3.00	-3.46	-3.24	0.24	1.19	-32.59	-30.47	-32.59	-43.47	-32.72
2350	-2.99	-3.46	-3.23	0.24	1.24	-31.26	-31.36	-33.22	-40.12	-32.55
2400	-3.00	-3.45	-3.23	0.24	1.12	-30.54	-29.46	-31.41	-38.38	-30.49
2500	-3.07	-3.41	-3.24	0.18	1.41	-28.36	-28.29	-29.82	-32.83	-28.22
2600	-3.11	-3.38	-3.25	0.14	1.36	-28.29	-27.46	-30.50	-31.73	-26.76
2700	-3.20	-3.33	-3.27	0.07	1.50	-27.21	-25.62	-28.86	-30.33	-25.42
2750	-3.25	-3.26	-3.26	0.02	0.94	-26.41	-25.81	-28.30	-30.65	-25.09
2775	-3.25	-3.24	-3.25	0.01	0.97	-26.56	-25.31	-28.61	-30.28	-25.12
2800	-3.27	-3.23	-3.25	0.02	0.89	-26.05	-24.89	-26.92	-29.59	-24.44
2900	-3.37	-3.18	-3.28	0.09	1.17	-25.74	-23.28	-26.02	-28.50	-24.25
3000	-3.46	-3.11	-3.29	0.18	0.88	-25.21	-22.37	-25.32	-28.23	-24.15
3100	-3.55	-3.06	-3.31	0.24	1.11	-24.76	-21.46	-24.81	-28.59	-24.02
3200	-3.59	-3.02	-3.31	0.28	1.25	-23.97	-21.12	-25.17	-28.94	-24.28
3300	-3.65	-3.03	-3.35	0.31	1.20	-23.76	-20.87	-24.58	-27.96	-23.45
3400	-3.63	-3.02	-3.34	0.31	1.58	-23.48	-21.42	-25.17	-29.20	-23.73
3500	-3.61	-3.03	-3.33	0.28	2.21	-23.13	-21.61	-26.04	-28.43	-23.85
3600	-3.63	-3.05	-3.35	0.28	2.04	-22.74	-21.52	-25.27	-26.77	-22.92
3700	-3.52	-3.23	-3.38	0.14	2.23	-23.39	-21.16	-26.08	-27.16	-23.21
3800	-3.29	-3.36	-3.33	0.04	1.96	-22.89	-22.15	-28.46	-26.74	-23.29
3900	-3.14	-3.62	-3.39	0.25	2.28	-23.19	-21.69	-28.83	-26.37	-23.77
4000	-2.86	-3.98	-3.46	0.57	2.51	-23.16	-21.69	-27.42	-26.97	-24.51

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

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