

Solid State USB RF SPDT Switch

USB-1SP2T-673

Typical Performance Data

TEST CONDITIONS: @Temperature = 0°C, Pin = 0 dBm

Frequency (MHz)	Insertion Loss (dB)		VSWR, Active Ports (:1)		
	COM-1	COM-2	COM	J1	J2
50	0.80	0.77	1.18	1.19	1.18
1000	1.00	0.99	1.18	1.19	1.20
2500	1.11	1.10	1.14	1.23	1.26
4000	1.24	1.24	1.10	1.26	1.31
5500	1.29	1.29	1.12	1.19	1.24
7000	1.34	1.33	1.28	1.04	1.09
8500	1.41	1.39	1.34	1.05	1.05
10000	1.47	1.46	1.25	1.15	1.12
11500	1.56	1.49	1.14	1.37	1.27
13000	1.66	1.54	1.22	1.52	1.39
14500	1.64	1.60	1.16	1.40	1.39
16000	1.54	1.59	1.15	1.12	1.32
17500	1.65	1.72	1.23	1.13	1.34
19000	1.81	1.90	1.12	1.26	1.46
20500	1.97	2.08	1.40	1.58	1.75
22000	2.11	2.13	1.67	1.70	1.75
23500	1.93	1.94	1.57	1.48	1.48
25000	1.84	1.90	1.35	1.35	1.39
26500	1.80	1.81	1.24	1.26	1.25
28000	1.80	1.82	1.20	1.11	1.08
28750	1.84	1.87	1.22	1.10	1.12
29500	1.92	1.96	1.29	1.08	1.15
30250	2.04	2.10	1.40	1.14	1.19
31000	2.16	2.30	1.53	1.20	1.32
31750	2.20	2.39	1.64	1.22	1.47
32500	2.26	2.49	1.69	1.27	1.61
33250	2.41	2.65	1.78	1.46	1.81
34000	2.67	2.84	2.00	1.84	2.06
34750	2.90	2.94	2.23	2.19	2.21
35500	2.96	2.83	2.30	2.32	2.11
36250	2.84	2.58	2.10	2.23	1.85
37000	2.66	2.37	1.91	2.09	1.64
37750	2.44	2.21	1.59	1.79	1.40
38500	2.32	2.19	1.43	1.60	1.30
40000	2.16	2.14	1.25	1.25	1.13
41500	2.16	2.16	1.07	1.19	1.14
43000	2.32	2.28	1.15	1.41	1.25
44500	3.02	2.80	1.72	2.12	1.87
46000	3.75	3.33	2.67	3.10	2.61
47500	3.38	2.97	2.55	2.54	2.00
49000	2.85	2.68	1.93	1.83	1.51
50500	2.50	2.60	1.28	1.27	1.20
52000	2.58	2.75	1.33	1.29	1.41
53500	2.81	2.76	1.43	1.61	1.43
55000	2.99	2.79	1.31	1.72	1.31
56500	3.53	3.03	1.78	2.14	1.32
58000	3.57	3.36	1.67	1.74	1.27
59500	3.68	3.68	1.16	1.63	1.49
61000	4.62	4.21	1.89	2.39	1.88
62500	6.29	5.31	2.97	4.42	3.11
64000	7.49	5.57	5.23	6.44	3.46
65500	5.93	4.71	4.33	3.47	1.84
67000	4.64	4.89	2.14	2.04	2.12

Notes

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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 www.minicircuits.com/MCLStore/terms.jsp



Solid State USB RF SPDT Switch

USB-1SP2T-673

Typical Performance Data

TEST CONDITIONS: @Temperature = 0°C, Pin = 0 dBm

Frequency (MHz)	Isolation @ Active states (dB)		
	COM-1	COM-2	J2-J1
50	73.97	83.28	79.17
1000	69.56	69.19	67.28
2500	62.03	61.99	59.62
4000	58.27	58.22	55.65
5500	54.68	54.79	52.94
7000	53.35	53.40	51.79
8500	52.51	52.64	51.14
10000	51.77	52.51	50.56
11500	51.28	51.02	49.74
13000	53.62	51.75	49.21
14500	48.45	49.12	46.58
16000	49.48	48.81	47.05
17500	50.11	49.37	47.25
19000	48.42	49.03	46.77
20500	46.77	47.87	46.64
22000	45.34	49.85	45.71
23500	46.25	46.93	46.18
25000	43.78	41.72	46.15
26500	44.79	45.10	46.65
28000	48.28	48.95	47.21
28750	47.07	47.11	46.37
29500	46.57	47.43	45.92
30250	46.66	48.38	46.56
31000	44.75	44.54	46.02
31750	46.56	45.36	44.79
32500	48.09	46.92	45.51
33250	49.10	48.46	46.01
34000	49.17	49.75	46.42
34750	47.89	51.80	46.31
35500	48.21	57.99	45.34
36250	45.19	52.90	45.30
37000	42.95	47.56	44.50
37750	41.57	44.22	43.26
38500	39.61	40.64	41.02
40000	40.25	41.10	41.54
41500	41.47	41.42	44.43
43000	43.56	41.70	44.06
44500	42.23	42.23	40.75
46000	38.59	41.82	36.75
47500	32.63	33.53	34.35
49000	29.67	29.75	30.52
50500	28.66	28.40	28.21
52000	29.37	28.89	30.39
53500	30.72	29.95	32.31
55000	31.44	30.79	33.40
56500	30.36	29.98	33.35
58000	27.39	26.83	29.69
59500	26.71	25.71	27.59
61000	28.23	26.81	28.75
62500	29.43	29.06	30.31
64000	33.97	31.89	34.11
65500	33.46	31.73	33.84
67000	30.84	31.44	32.30

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Solid State USB RF SPDT Switch

USB-1SP2T-673

Typical Performance Data

TEST CONDITIONS: @Temperature = +25°C, Pin = 0 dBm

Frequency (MHz)	Insertion Loss (dB)		VSWR, Active Ports (:1)		
	COM-1	COM-2	COM	J1	J2
50	0.85	0.84	1.20	1.20	1.19
1000	1.10	1.08	1.20	1.21	1.21
2500	1.22	1.22	1.15	1.23	1.27
4000	1.37	1.37	1.10	1.27	1.32
5500	1.45	1.44	1.12	1.20	1.25
7000	1.51	1.51	1.28	1.05	1.10
8500	1.59	1.58	1.35	1.07	1.06
10000	1.67	1.67	1.25	1.18	1.15
11500	1.77	1.70	1.14	1.36	1.27
13000	1.88	1.76	1.19	1.45	1.34
14500	1.91	1.88	1.16	1.46	1.45
16000	1.80	1.86	1.15	1.17	1.33
17500	1.93	2.00	1.25	1.13	1.31
19000	2.12	2.21	1.15	1.31	1.49
20500	2.28	2.39	1.39	1.61	1.77
22000	2.40	2.41	1.61	1.62	1.65
23500	2.26	2.28	1.52	1.45	1.46
25000	2.20	2.26	1.36	1.39	1.41
26500	2.16	2.17	1.22	1.23	1.22
28000	2.19	2.21	1.17	1.11	1.11
28750	2.25	2.27	1.23	1.09	1.11
29500	2.34	2.37	1.28	1.13	1.18
30250	2.47	2.53	1.46	1.15	1.22
31000	2.61	2.75	1.60	1.22	1.31
31750	2.66	2.85	1.68	1.27	1.50
32500	2.73	2.97	1.71	1.30	1.63
33250	2.85	3.07	1.76	1.45	1.76
34000	3.07	3.22	1.83	1.76	1.96
34750	3.30	3.32	2.07	2.13	2.15
35500	3.45	3.29	2.23	2.33	2.10
36250	3.34	3.04	2.10	2.21	1.84
37000	3.11	2.79	1.76	2.11	1.64
37750	2.87	2.65	1.52	1.69	1.33
38500	2.80	2.64	1.41	1.60	1.29
40000	2.64	2.61	1.26	1.19	1.14
41500	2.68	2.67	1.07	1.15	1.18
43000	2.88	2.81	1.10	1.38	1.25
44500	3.51	3.27	1.65	2.03	1.83
46000	4.27	3.84	2.34	3.12	2.65
47500	4.02	3.56	2.42	2.41	1.89
49000	3.44	3.19	1.66	1.71	1.42
50500	3.12	3.17	1.26	1.32	1.18
52000	3.20	3.34	1.27	1.25	1.35
53500	3.53	3.40	1.33	1.71	1.53
55000	3.73	3.44	1.31	1.70	1.29
56500	4.15	3.69	1.60	1.92	1.22
58000	4.34	4.13	1.60	1.53	1.25
59500	4.43	4.38	1.14	1.63	1.47
61000	5.47	5.06	1.74	2.33	1.86
62500	7.28	6.33	2.93	4.26	3.01
64000	8.03	6.30	4.22	5.39	3.04
65500	6.77	5.60	3.16	3.54	2.08
67000	5.51	5.75	2.04	2.00	1.80

Notes

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Solid State USB RF SPDT Switch

USB-1SP2T-673

Typical Performance Data

TEST CONDITIONS: @Temperature = +25°C, Pin = 0 dBm

Frequency (MHz)	Isolation @ Active states (dB)		
	COM-1	COM-2	J2-J1
50	84.53	83.87	93.66
1000	68.57	68.80	66.35
2500	61.24	61.22	59.21
4000	57.36	57.40	55.25
5500	54.03	54.09	52.49
7000	52.67	52.72	51.40
8500	51.78	51.94	50.58
10000	50.89	51.53	49.88
11500	50.55	50.38	49.17
13000	52.30	51.09	48.63
14500	48.62	48.66	46.05
16000	48.81	48.34	46.57
17500	49.79	48.80	46.60
19000	48.32	48.68	46.25
20500	46.72	47.83	46.06
22000	45.30	49.66	45.18
23500	46.23	46.70	45.58
25000	43.75	42.06	45.85
26500	44.66	44.72	46.01
28000	47.85	48.01	46.43
28750	46.82	46.73	45.67
29500	46.24	46.77	45.47
30250	46.47	47.82	46.10
31000	44.77	44.28	45.39
31750	46.30	44.86	44.54
32500	48.15	46.39	44.96
33250	49.20	47.74	45.42
34000	48.04	49.13	45.67
34750	46.73	50.71	45.65
35500	46.12	54.96	44.92
36250	43.82	51.32	44.89
37000	41.97	46.71	43.92
37750	41.13	43.39	42.82
38500	39.42	39.93	40.44
40000	39.57	40.27	41.25
41500	40.82	40.77	43.71
43000	43.04	40.85	43.30
44500	42.15	41.69	40.16
46000	38.66	42.44	36.31
47500	32.82	33.86	34.37
49000	29.94	30.10	30.21
50500	28.69	28.46	27.84
52000	29.71	28.85	30.06
53500	31.06	30.18	31.95
55000	31.24	31.01	33.04
56500	30.64	30.08	33.21
58000	27.79	27.36	29.72
59500	27.02	26.15	27.69
61000	28.44	27.15	28.95
62500	29.89	29.47	30.62
64000	34.21	31.87	33.81
65500	33.73	32.14	34.11
67000	30.64	31.92	32.83

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Solid State USB RF SPDT Switch

USB-1SP2T-673

Typical Performance Data

TEST CONDITIONS: @Temperature = +50°C, Pin = 0 dBm

Frequency (MHz)	Insertion Loss (dB)		VSWR, Active Ports (:1)		
	COM-1	COM-2	COM	J1	J2
50	0.91	0.90	1.20	1.21	1.20
1000	1.16	1.14	1.21	1.22	1.22
2500	1.28	1.28	1.16	1.25	1.28
4000	1.43	1.43	1.11	1.28	1.33
5500	1.51	1.51	1.14	1.22	1.26
7000	1.59	1.58	1.30	1.07	1.12
8500	1.66	1.65	1.37	1.07	1.07
10000	1.75	1.73	1.26	1.19	1.15
11500	1.85	1.79	1.16	1.35	1.26
13000	1.96	1.86	1.20	1.49	1.38
14500	1.99	1.96	1.16	1.44	1.43
16000	1.88	1.96	1.14	1.17	1.37
17500	2.01	2.10	1.26	1.14	1.34
19000	2.21	2.31	1.14	1.31	1.49
20500	2.35	2.45	1.37	1.54	1.69
22000	2.47	2.50	1.60	1.61	1.66
23500	2.35	2.37	1.52	1.44	1.46
25000	2.30	2.35	1.37	1.38	1.39
26500	2.25	2.27	1.23	1.24	1.23
28000	2.27	2.31	1.19	1.13	1.13
28750	2.32	2.37	1.23	1.10	1.14
29500	2.43	2.48	1.32	1.11	1.17
30250	2.56	2.64	1.44	1.13	1.21
31000	2.69	2.85	1.58	1.19	1.31
31750	2.72	2.93	1.65	1.23	1.46
32500	2.79	3.03	1.68	1.26	1.55
33250	2.94	3.18	1.75	1.44	1.74
34000	3.20	3.37	1.93	1.78	1.96
34750	3.40	3.45	2.09	2.12	2.11
35500	3.49	3.36	2.14	2.25	2.06
36250	3.39	3.15	1.98	2.17	1.84
37000	3.19	2.92	1.81	2.02	1.61
37750	2.96	2.76	1.55	1.70	1.35
38500	2.84	2.73	1.38	1.51	1.21
40000	2.71	2.72	1.21	1.14	1.10
41500	2.75	2.78	1.08	1.14	1.13
43000	2.96	2.94	1.14	1.37	1.25
44500	3.55	3.34	1.60	2.06	1.82
46000	4.28	3.88	2.31	2.92	2.43
47500	4.14	3.73	2.37	2.48	1.98
49000	3.56	3.35	1.84	1.77	1.45
50500	3.26	3.39	1.34	1.25	1.20
52000	3.30	3.51	1.31	1.25	1.35
53500	3.57	3.53	1.40	1.60	1.45
55000	3.79	3.58	1.33	1.70	1.32
56500	4.19	3.79	1.57	1.81	1.16
58000	4.36	4.20	1.54	1.50	1.22
59500	4.57	4.53	1.17	1.57	1.36
61000	5.58	5.29	1.76	2.26	1.83
62500	7.22	6.37	2.85	3.93	2.79
64000	8.28	6.62	3.83	5.06	2.97
65500	7.10	5.98	3.57	3.23	1.94
67000	5.69	5.89	2.22	1.96	1.76

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USB-1SP2T-673

Typical Performance Data

TEST CONDITIONS: @Temperature = +50°C, Pin = 0 dBm

Frequency (MHz)	Isolation @ Active states (dB)		
	COM-1	COM-2	J2-J1
50	79.10	77.97	83.63
1000	67.77	68.49	66.66
2500	60.58	60.63	59.09
4000	56.52	56.67	54.98
5500	53.24	53.41	52.22
7000	51.79	51.95	51.11
8500	50.89	51.08	50.31
10000	49.99	50.55	49.49
11500	49.57	49.89	48.71
13000	51.01	50.15	48.09
14500	47.65	48.32	45.98
16000	48.24	47.49	46.20
17500	48.76	47.93	46.30
19000	47.48	47.96	45.79
20500	46.16	47.27	45.61
22000	44.97	48.90	44.80
23500	45.47	46.62	45.07
25000	43.52	41.86	45.29
26500	43.98	44.05	45.35
28000	46.84	46.91	46.15
28750	46.02	46.08	45.30
29500	45.42	46.07	45.04
30250	45.59	46.96	45.83
31000	43.63	43.53	45.23
31750	44.96	44.15	44.26
32500	46.23	45.19	44.64
33250	47.11	46.92	45.09
34000	47.18	48.21	45.61
34750	46.14	49.48	45.35
35500	45.96	52.21	44.57
36250	43.29	49.15	44.52
37000	41.50	45.38	43.52
37750	40.22	42.50	42.23
38500	38.42	39.31	40.03
40000	38.83	39.21	40.91
41500	39.82	39.59	43.42
43000	41.23	39.69	42.82
44500	41.61	40.61	39.48
46000	39.16	42.82	36.19
47500	33.10	34.04	34.08
49000	29.85	30.10	30.01
50500	28.43	28.34	27.64
52000	28.98	28.54	29.39
53500	30.58	30.03	31.79
55000	31.17	30.95	32.85
56500	30.07	29.98	32.76
58000	27.49	27.30	29.63
59500	26.93	25.96	27.70
61000	28.34	26.93	29.02
62500	29.85	28.86	30.35
64000	33.55	31.55	33.63
65500	33.49	31.94	34.03
67000	31.51	31.82	32.68

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