

Xtra Long Life USB RF SPDT Switch

USB-1SPDT-A18

Typical Performance Data

TEST CONDITIONS: @Temperature = 0degC

FREQUENCY (MHz)	INSERTION LOSS ON (dB)		ISOLATION OFF (dB)		VSWR IN (:1)		VSWR ENERGIZED (:1)		VSWR DE-ENERGIZED (:1)	
	COM-1	COM-2	COM-1	COM-2	ON	OFF	1	2	1	2
10	0.02	0.02	92.69	86.49	1.01	1.01	1.00	1.00	1.01	1.01
20	0.02	0.01	86.06	87.87	1.01	1.01	1.00	1.00	1.01	1.01
30	0.03	0.02	78.50	89.42	1.01	1.00	1.00	1.01	1.00	1.01
40	0.03	0.02	87.99	86.57	1.01	1.01	1.00	1.01	1.01	1.01
50	0.00	0.00	85.58	86.20	1.01	1.01	1.00	1.01	1.01	1.01
60	0.01	0.01	88.17	88.75	1.01	1.01	1.00	1.01	1.01	1.01
70	0.01	0.01	111.04	86.47	1.01	1.01	1.00	1.01	1.01	1.01
80	0.01	0.00	93.25	86.40	1.01	1.01	1.01	1.01	1.01	1.01
90	0.01	0.00	84.68	86.35	1.01	1.01	1.01	1.01	1.01	1.02
100	0.01	0.00	91.27	91.27	1.01	1.01	1.01	1.01	1.01	1.02
200	0.01	0.00	91.56	97.21	1.01	1.01	1.02	1.01	1.01	1.03
300	0.00	0.00	94.03	104.54	1.01	1.01	1.02	1.02	1.01	1.03
400	0.01	0.01	95.48	99.11	1.02	1.02	1.02	1.02	1.02	1.03
500	0.01	0.01	103.50	102.97	1.01	1.01	1.02	1.01	1.01	1.02
600	0.01	0.02	96.73	98.55	1.01	1.01	1.01	1.01	1.01	1.02
700	0.02	0.02	99.74	102.52	1.01	1.01	1.02	1.01	1.01	1.02
800	0.02	0.02	105.65	100.78	1.01	1.01	1.02	1.01	1.01	1.02
900	0.02	0.02	99.56	102.99	1.01	1.02	1.02	1.02	1.02	1.03
1000	0.02	0.03	105.33	97.50	1.01	1.01	1.02	1.02	1.02	1.03
1200	0.02	0.03	95.06	104.12	1.01	1.01	1.03	1.01	1.01	1.03
1400	0.02	0.03	104.83	110.41	1.02	1.01	1.03	1.01	1.01	1.03
1600	0.03	0.03	94.89	99.77	1.02	1.02	1.03	1.02	1.02	1.03
1800	0.03	0.03	103.10	103.23	1.02	1.03	1.04	1.02	1.02	1.03
2000	0.03	0.04	103.84	103.70	1.02	1.03	1.04	1.02	1.02	1.04
2200	0.03	0.04	93.08	102.31	1.02	1.02	1.05	1.02	1.02	1.04
2400	0.04	0.05	102.45	104.45	1.03	1.04	1.05	1.03	1.03	1.05
2600	0.04	0.05	111.34	96.36	1.03	1.05	1.06	1.04	1.04	1.06
2800	0.04	0.05	105.47	103.64	1.03	1.04	1.07	1.04	1.04	1.06
3000	0.05	0.05	101.65	98.86	1.03	1.04	1.08	1.04	1.04	1.07
3200	0.05	0.06	97.59	105.83	1.04	1.06	1.08	1.06	1.06	1.08
3400	0.06	0.07	99.40	102.61	1.06	1.09	1.10	1.08	1.09	1.10
3600	0.06	0.06	105.16	112.37	1.07	1.08	1.10	1.08	1.08	1.11
4000	0.07	0.07	100.12	102.42	1.10	1.13	1.12	1.12	1.12	1.13
4500	0.08	0.09	110.61	104.60	1.14	1.14	1.13	1.15	1.15	1.14
5000	0.10	0.12	101.66	99.14	1.19	1.22	1.14	1.23	1.21	1.17
5500	0.12	0.13	104.68	106.94	1.24	1.21	1.13	1.23	1.21	1.15
6000	0.12	0.14	102.68	99.55	1.26	1.23	1.13	1.27	1.23	1.17
6500	0.12	0.14	101.00	95.07	1.26	1.19	1.10	1.24	1.19	1.15
7000	0.12	0.13	97.32	97.36	1.23	1.14	1.08	1.20	1.16	1.13
7500	0.12	0.13	92.52	93.66	1.19	1.13	1.06	1.16	1.12	1.11
8000	0.12	0.13	100.57	96.16	1.17	1.08	1.06	1.13	1.09	1.11
8500	0.15	0.14	95.34	93.74	1.12	1.08	1.07	1.11	1.08	1.11
9000	0.15	0.14	94.67	91.78	1.08	1.06	1.05	1.05	1.04	1.10
9500	0.16	0.15	92.17	93.77	1.06	1.02	1.07	1.10	1.04	1.11
10000	0.17	0.17	92.10	91.45	1.07	1.05	1.08	1.06	1.02	1.11
12000	0.21	0.18	91.26	86.33	1.03	1.06	1.12	1.04	1.07	1.05
13000	0.26	0.20	87.46	84.59	1.06	1.08	1.21	1.06	1.10	1.14
14000	0.29	0.22	87.80	81.01	1.12	1.11	1.27	1.14	1.15	1.25
15000	0.36	0.28	83.73	78.00	1.27	1.25	1.31	1.25	1.25	1.32
16000	0.46	0.34	82.49	75.43	1.19	1.31	1.27	1.23	1.27	1.26
17000	0.38	0.28	81.40	72.40	1.09	1.11	1.22	1.04	1.10	1.12
18000	0.43	0.33	80.97	69.69	1.27	1.08	1.26	1.20	1.05	1.18



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Xtra Long Life USB RF SPDT Switch

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Typical Performance Data

TEST CONDITIONS: @Temperature = +25degC

FREQUENCY (MHz)	INSERTION LOSS ON (dB)		ISOLATION OFF (dB)		VSWR IN (:1)		VSWR ENERGIZED (:1)		VSWR DE-ENERGIZED (:1)	
	COM-1	COM-2	COM-1	COM-2	ON	OFF	1	2	1	2
10	0.00	0.00	86.43	93.17	1.00	1.00	1.00	1.02	1.02	1.01
20	0.02	0.02	87.42	90.43	1.00	1.00	1.00	1.01	1.01	1.01
30	0.02	0.02	89.26	93.81	1.00	1.00	1.00	1.00	1.00	1.01
40	0.03	0.03	91.18	87.61	1.00	1.01	1.00	1.00	1.00	1.01
50	0.00	0.00	91.95	88.50	1.00	1.00	1.00	1.00	1.00	1.01
60	0.00	0.00	92.97	88.43	1.00	1.00	1.00	1.00	1.00	1.01
70	0.01	0.01	88.69	88.95	1.00	1.00	1.00	1.00	1.00	1.01
80	0.01	0.01	106.34	86.65	1.00	1.00	1.00	1.00	1.00	1.01
90	0.01	0.00	89.91	98.42	1.00	1.00	1.00	1.00	1.00	1.01
100	0.00	0.01	92.71	86.88	1.00	1.00	1.00	1.00	1.00	1.01
200	0.01	0.01	94.79	97.05	1.00	1.00	1.01	1.01	1.01	1.01
300	0.02	0.02	109.88	90.43	1.00	1.00	1.01	1.01	1.01	1.01
400	0.02	0.02	102.23	99.10	1.01	1.01	1.01	1.01	1.01	1.01
500	0.02	0.02	97.52	101.30	1.01	1.00	1.01	1.01	1.01	1.01
600	0.03	0.03	100.41	100.25	1.01	1.00	1.01	1.01	1.01	1.01
700	0.03	0.03	98.46	100.26	1.01	1.01	1.01	1.01	1.01	1.01
800	0.03	0.03	107.02	108.08	1.01	1.01	1.01	1.01	1.01	1.01
900	0.03	0.03	98.13	102.59	1.01	1.01	1.02	1.01	1.01	1.01
1000	0.03	0.04	106.26	108.06	1.01	1.01	1.02	1.01	1.01	1.02
1200	0.04	0.04	105.64	118.05	1.01	1.01	1.02	1.00	1.01	1.02
1400	0.04	0.04	113.89	108.14	1.01	1.01	1.03	1.00	1.01	1.02
1600	0.05	0.05	109.89	113.36	1.01	1.01	1.03	1.01	1.01	1.02
1800	0.04	0.05	101.11	105.12	1.02	1.02	1.04	1.01	1.01	1.03
2000	0.05	0.06	98.50	108.08	1.03	1.02	1.04	1.01	1.01	1.03
2200	0.05	0.06	109.01	102.61	1.04	1.02	1.05	1.02	1.02	1.04
2400	0.06	0.06	97.17	103.88	1.05	1.03	1.05	1.02	1.02	1.04
2600	0.06	0.07	102.67	99.87	1.06	1.03	1.06	1.03	1.03	1.05
2800	0.06	0.07	102.17	101.90	1.07	1.04	1.07	1.03	1.04	1.06
3000	0.06	0.07	102.72	102.95	1.08	1.04	1.08	1.04	1.04	1.06
3200	0.06	0.07	108.07	100.45	1.08	1.06	1.09	1.05	1.06	1.07
3400	0.07	0.08	101.22	103.70	1.09	1.07	1.09	1.06	1.07	1.08
3600	0.08	0.08	106.01	102.58	1.09	1.09	1.10	1.08	1.08	1.09
4000	0.09	0.09	105.56	107.81	1.10	1.11	1.11	1.11	1.11	1.10
4500	0.10	0.11	96.22	96.80	1.11	1.15	1.13	1.15	1.15	1.12
5000	0.12	0.13	98.62	100.46	1.15	1.18	1.13	1.18	1.18	1.14
5500	0.13	0.14	105.56	102.08	1.21	1.20	1.13	1.22	1.20	1.15
6000	0.14	0.16	96.57	94.10	1.26	1.20	1.12	1.23	1.21	1.15
6500	0.14	0.16	96.21	107.68	1.27	1.19	1.11	1.23	1.19	1.15
7000	0.13	0.16	99.56	100.96	1.24	1.16	1.10	1.21	1.17	1.14
7500	0.15	0.17	94.50	101.70	1.18	1.14	1.08	1.20	1.15	1.13
8000	0.14	0.16	93.06	95.68	1.12	1.13	1.07	1.17	1.13	1.12
8500	0.15	0.16	92.44	95.29	1.06	1.09	1.07	1.13	1.09	1.12
9000	0.14	0.16	92.53	92.00	1.06	1.06	1.06	1.09	1.06	1.10
9500	0.14	0.16	90.69	98.64	1.09	1.04	1.06	1.07	1.03	1.10
10000	0.14	0.16	90.46	93.90	1.10	1.02	1.07	1.06	1.03	1.10
12000	0.16	0.17	86.14	90.83	1.12	1.10	1.14	1.04	1.10	1.08
13000	0.17	0.19	82.24	89.32	1.10	1.13	1.19	1.07	1.15	1.14
14000	0.18	0.20	77.92	83.48	1.22	1.15	1.25	1.10	1.18	1.24
15000	0.21	0.22	74.68	81.86	1.33	1.19	1.27	1.14	1.19	1.30
16000	0.22	0.24	71.05	79.37	1.20	1.19	1.25	1.13	1.19	1.28
17000	0.19	0.21	67.00	78.15	1.18	1.11	1.23	1.09	1.14	1.17
18000	0.17	0.21	64.13	77.52	1.20	1.13	1.27	1.06	1.14	1.17



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Xtra Long Life USB RF SPDT Switch

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Typical Performance Data

TEST CONDITIONS: @Temperature = +45degC

FREQUENCY (MHz)	INSERTION LOSS ON (dB)		ISOLATION OFF (dB)		VSWR IN (:1)		VSWR ENERGIZED (:1)		VSWR DE-ENERGIZED (:1)	
	COM-1	COM-2	COM-1	COM-2	ON	OFF	1	2	1	2
10	0.01	0.01	93.16	86.04	1.00	1.01	1.00	1.03	1.03	1.01
20	0.02	0.01	86.95	87.71	1.00	1.01	1.00	1.01	1.01	1.01
30	0.01	0.01	87.55	86.33	1.00	1.00	1.00	1.01	1.01	1.01
40	0.01	0.02	86.27	85.48	1.01	1.01	1.00	1.01	1.01	1.01
50	0.04	0.04	99.67	97.07	1.00	1.01	1.00	1.01	1.01	1.01
60	0.04	0.04	90.09	91.49	1.00	1.00	1.00	1.00	1.00	1.01
70	0.03	0.03	96.24	90.53	1.01	1.00	1.00	1.00	1.00	1.01
80	0.03	0.03	89.09	87.33	1.01	1.00	1.00	1.00	1.00	1.01
90	0.04	0.03	87.46	90.96	1.01	1.01	1.00	1.01	1.00	1.01
100	0.04	0.03	108.00	93.23	1.01	1.01	1.00	1.01	1.01	1.01
200	0.04	0.03	91.04	110.98	1.00	1.00	1.00	1.01	1.00	1.01
300	0.02	0.02	112.96	96.74	1.01	1.00	1.00	1.00	1.01	1.01
400	0.02	0.01	93.21	101.96	1.01	1.01	1.00	1.01	1.01	1.01
500	0.02	0.01	101.11	107.60	1.01	1.01	1.01	1.01	1.01	1.01
600	0.01	0.00	98.77	102.27	1.01	1.01	1.01	1.01	1.01	1.01
700	0.00	0.00	100.18	99.09	1.01	1.01	1.01	1.01	1.01	1.01
800	0.00	0.00	106.15	102.47	1.01	1.01	1.01	1.00	1.01	1.01
900	0.00	0.00	99.25	102.98	1.01	1.01	1.01	1.00	1.01	1.01
1000	0.00	0.01	99.90	105.39	1.01	1.01	1.02	1.01	1.01	1.02
1200	0.01	0.01	100.12	107.89	1.01	1.00	1.02	1.01	1.01	1.02
1400	0.01	0.02	100.50	102.06	1.01	1.01	1.02	1.00	1.01	1.02
1600	0.01	0.02	99.87	117.53	1.01	1.01	1.03	1.01	1.00	1.03
1800	0.01	0.02	102.17	97.27	1.01	1.01	1.04	1.01	1.01	1.04
2000	0.02	0.02	96.89	109.32	1.02	1.02	1.05	1.01	1.02	1.04
2200	0.02	0.03	102.64	101.47	1.02	1.02	1.05	1.01	1.01	1.04
2400	0.03	0.04	101.33	93.50	1.03	1.03	1.05	1.03	1.03	1.04
2600	0.03	0.04	106.77	100.51	1.03	1.04	1.07	1.04	1.04	1.06
2800	0.03	0.04	112.14	102.63	1.03	1.05	1.08	1.05	1.05	1.07
3000	0.03	0.04	113.00	99.01	1.04	1.06	1.08	1.05	1.05	1.07
3200	0.04	0.04	107.61	105.71	1.05	1.07	1.08	1.06	1.07	1.07
3400	0.05	0.06	107.98	114.40	1.07	1.09	1.09	1.08	1.09	1.08
3600	0.05	0.06	114.87	100.87	1.08	1.11	1.10	1.10	1.11	1.10
4000	0.06	0.07	98.83	101.56	1.11	1.13	1.11	1.11	1.13	1.10
4500	0.08	0.09	104.39	112.46	1.15	1.18	1.13	1.17	1.18	1.13
5000	0.09	0.10	97.43	101.23	1.19	1.19	1.12	1.18	1.18	1.13
5500	0.10	0.12	105.16	97.84	1.22	1.20	1.13	1.21	1.20	1.16
6000	0.10	0.12	99.05	98.10	1.24	1.19	1.12	1.21	1.19	1.15
6500	0.10	0.13	101.27	95.61	1.23	1.17	1.11	1.21	1.17	1.16
7000	0.10	0.14	95.68	94.61	1.22	1.15	1.11	1.20	1.15	1.16
7500	0.12	0.15	95.39	101.97	1.19	1.14	1.07	1.19	1.13	1.13
8000	0.12	0.15	93.75	92.47	1.16	1.14	1.08	1.20	1.14	1.15
8500	0.12	0.15	93.50	94.53	1.13	1.09	1.06	1.13	1.09	1.11
9000	0.12	0.15	95.48	90.98	1.08	1.08	1.05	1.11	1.08	1.11
9500	0.12	0.14	93.48	91.28	1.04	1.06	1.06	1.06	1.03	1.11
10000	0.13	0.15	93.06	92.02	1.03	1.06	1.05	1.03	1.05	1.09
12000	0.15	0.17	87.31	85.88	1.08	1.13	1.14	1.06	1.13	1.06
13000	0.18	0.21	86.93	83.67	1.12	1.18	1.21	1.10	1.19	1.11
14000	0.18	0.22	85.23	79.47	1.12	1.16	1.26	1.12	1.15	1.19
15000	0.17	0.22	81.58	75.73	1.11	1.07	1.24	1.07	1.06	1.24
16000	0.17	0.25	80.35	72.22	1.06	1.06	1.22	1.11	1.10	1.22
17000	0.16	0.24	78.82	68.49	1.04	1.09	1.30	1.14	1.15	1.19
18000	0.23	0.24	76.92	66.23	1.06	1.35	1.38	1.17	1.37	1.22



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