

RF Switch SPDT

HSWA2-30DR+

Typical Performance Data

FREQ (MHz)	INSERTION LOSS @ Vdd=+3V OVER TEMPERATURE						FREQ (MHz)	ISOLATION @ Vdd=+3V OVER TEMPERATURE														
	RF COM-RF1 (dB)			RF COM-RF2 (dB)				RF COM-RF1 (dB)			RF COM-RF2 (dB)			RF1-RF2 (dB)			RF1-RF2 (dB)			RF1-RF2 (dB)		
	STATE 3*			STATE 2*				STATE 2*			STATE 3*			STATE 3*			STATE 2*			STATE 1*		
	-40°C	+25°C	+85°C	-40°C	+25°C	+85°C		-40°C	+25°C	+85°C	-40°C	+25°C	+85°C	-40°C	+25°C	+85°C	-40°C	+25°C	+85°C	-40°C	+25°C	+85°C
0.03	0.60	0.68	0.81	0.69	0.75	0.88	0.03	86.96	101.14	81.22	83.71	83.39	99.47	108.91	92.36	96.89	81.51	80.78	85.41	90.43	87.46	94.14
0.10	0.62	0.70	0.81	0.64	0.71	0.82	0.10	93.01	91.42	90.61	102.61	95.95	90.16	101.12	90.88	102.87	87.24	94.27	92.95	93.43	90.56	88.32
1.00	0.63	0.71	0.81	0.63	0.70	0.80	1.00	105.35	91.72	98.17	102.82	98.35	105.71	97.14	102.22	99.27	96.14	94.95	95.35	95.72	101.92	110.17
10.00	0.64	0.71	0.80	0.62	0.70	0.79	10.00	103.50	101.51	97.57	101.09	98.64	101.96	104.13	94.21	92.11	95.59	94.83	94.34	103.69	93.52	107.63
50.00	0.66	0.73	0.82	0.64	0.72	0.82	50.00	92.50	96.44	98.14	92.77	100.44	92.30	85.28	84.75	89.07	87.76	85.68	93.73	94.45	100.02	97.80
100.00	0.66	0.73	0.80	0.64	0.72	0.80	100.00	103.43	88.22	92.60	89.11	97.07	91.83	82.23	83.50	81.96	79.77	82.75	81.00	119.37	87.83	92.40
200.00	0.66	0.75	0.81	0.66	0.74	0.79	200.00	87.07	92.18	110.11	89.98	98.20	88.52	76.42	74.34	75.57	76.75	74.33	76.94	87.15	87.59	85.54
300.00	0.65	0.76	0.83	0.64	0.74	0.82	300.00	91.28	88.75	92.66	83.44	89.64	87.20	72.17	71.75	72.41	72.64	72.83	73.94	81.00	81.95	80.82
400.00	0.69	0.79	0.88	0.69	0.79	0.86	400.00	90.91	90.12	91.87	81.76	80.32	87.81	70.09	69.68	70.69	70.65	70.29	70.22	82.71	79.02	80.47
500.00	0.69	0.81	0.88	0.69	0.78	0.87	500.00	84.29	85.17	88.24	79.04	79.49	79.99	68.79	68.33	68.68	68.26	67.91	68.75	76.92	76.11	77.51
600.00	0.69	0.79	0.89	0.67	0.78	0.88	600.00	79.88	81.13	80.84	79.11	76.79	76.55	67.42	66.78	67.82	66.64	67.80	67.46	80.21	76.22	77.97
700.00	0.68	0.79	0.89	0.67	0.77	0.87	700.00	77.18	78.93	79.38	73.92	74.36	73.26	65.65	66.19	65.83	64.96	65.94	65.71	75.38	75.49	75.15
800.00	0.68	0.79	0.90	0.67	0.78	0.88	800.00	75.19	76.35	77.94	70.85	70.73	71.24	65.18	65.63	65.47	65.04	65.71	64.99	75.06	76.01	74.80
900.00	0.67	0.79	0.89	0.65	0.78	0.87	900.00	72.35	73.60	74.05	68.80	68.57	68.82	63.81	64.40	64.31	63.85	64.25	64.19	73.10	72.43	72.80
1000.00	0.67	0.78	0.89	0.65	0.76	0.87	1000.00	70.76	71.58	70.92	67.99	66.78	67.74	62.70	63.58	63.15	63.79	64.08	63.89	73.57	72.54	72.41
1100.00	0.65	0.78	0.90	0.65	0.76	0.88	1100.00	68.34	70.20	70.36	64.72	65.24	64.97	62.78	62.77	62.96	62.50	62.66	63.04	71.67	71.46	73.39
1200.00	0.66	0.79	0.91	0.66	0.78	0.90	1200.00	67.34	67.54	67.30	63.83	63.09	63.58	61.74	62.28	62.63	61.87	62.79	62.89	71.83	71.04	73.62
1300.00	0.65	0.80	0.92	0.65	0.78	0.90	1300.00	66.04	66.53	66.59	61.90	61.71	61.21	61.50	62.06	62.51	62.12	61.93	62.60	72.68	70.84	71.69
1400.00	0.67	0.81	0.91	0.66	0.79	0.91	1400.00	65.72	65.42	65.44	60.73	60.65	60.72	61.40	61.78	61.82	61.90	62.02	61.98	70.66	72.25	72.34
1500.00	0.67	0.81	0.91	0.66	0.80	0.90	1500.00	63.30	63.86	63.01	59.24	59.03	59.59	61.31	61.59	62.14	61.80	61.62	61.87	71.20	71.77	71.98
1600.00	0.7	0.84	0.94	0.69	0.82	0.92	1600.00	60.67	60.36	60.42	58.25	58.25	58.27	60.89	61.10	61.63	61.40	61.44	61.94	71.74	73.31	73.00
1700.00	0.72	0.86	0.95	0.69	0.84	0.94	1700.00	60.15	60.01	59.91	56.82	57.16	56.98	59.64	60.09	60.88	59.63	59.90	60.32	70.69	70.95	69.86
1800.00	0.73	0.87	0.97	0.71	0.85	0.95	1800.00	59.78	59.48	59.28	55.71	56.17	55.64	59.69	60.52	60.66	59.65	59.75	60.16	70.97	70.92	70.96
1900.00	0.74	0.88	0.97	0.71	0.85	0.95	1900.00	58.16	57.65	57.02	54.73	54.64	54.56	60.39	60.40	60.25	61.04	61.01	60.37	70.82	69.83	70.25
2000.00	0.77	0.91	1.01	0.75	0.90	0.98	2000.00	57.17	56.78	56.95	53.21	52.82	54.15	59.32	57.63	59.68	59.39	59.13	60.49	71.82	69.49	71.45
2100.00	0.79	0.94	1.02	0.77	0.91	1.01	2100.00	54.44	53.75	53.64	52.70	52.13	52.20	61.07	59.98	60.14	62.08	60.66	59.61	79.05	76.39	74.50
2200.00	0.81	0.96	1.05	0.80	0.95	1.03	2200.00	53.69	52.85	52.56	54.46	54.43	53.22	56.85	56.72	56.70	55.77	55.17	56.24	66.88	66.28	65.69
2300.00	0.85	0.98	1.07	0.84	0.98	1.07	2300.00	49.62	48.91	48.94	52.00	53.91	57.00	52.30	53.43	53.11	53.42	53.17	53.57	61.27	61.82	61.63
2400.00	0.85	0.97	1.06	0.85	0.99	1.07	2400.00	47.62	48.25	49.12	55.80	56.38	59.42	53.37	54.23	55.40	53.03	53.18	54.29	63.23	63.56	64.60
2500.00	0.81	0.94	1.03	0.81	0.93	1.03	2500.00	51.33	51.50	51.35	53.70	52.35	52.98	56.96	57.15	56.32	52.10	55.06	55.38	67.48	72.66	67.99
2600.00	0.83	0.95	1.04	0.82	0.95	1.04	2600.00	50.47	49.82	49.29	49.90	49.44	49.07	55.63	56.12	55.89	55.62	54.91	55.75	67.61	69.59	70.31
2700.00	0.81	0.95	1.04	0.81	0.95	1.04	2700.00	49.38	49.27	48.53	48.68	48.03	47.92	56.81	55.95	55.38	56.39	56.08	55.27	71.50	73.65	71.21
2800.00	0.84	0.98	1.08	0.85	0.98	1.07	2800.00	48.23	47.52	47.19	47.35	46.71	46.32	57.48	56.55	54.68	57.51	55.67	54.95	80.91	104.96	74.54
2900.00	0.84	0.97	1.06	0.84	0.97	1.08	2900.00	48.82	48.06	47.22	45.60	45.81	45.84	53.36	51.79	52.86	53.98	52.23	53.14	68.95	67.10	69.88
3000.00	0.89	1.02	1.12	0.90	1.04	1.15	3000.00	46.26	45.83	45.70	45.22	44.57	44.38	54.48	52.34	51.48	54.26	52.00	51.25	74.83	68.87	66.11

*Note:

STATE	CONTROL INPUT		RF Com to RF1	RF Com to RF2
	Control 1	Control 2		
1	Low	Low	OFF	OFF
2	Low	High	OFF	ON
3	High	Low	ON	OFF



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 The Design Engineers Search Engine Provides ACTUAL Data Instantly From MINI-CIRCUITS At: www.minicircuits.com



Typical Performance Data

FREQ (MHz)	VSWR @ Vdd=+3V OVER TEMPERATURE																												
	RF COM (:1)			RF COM (:1)			RF1 (:1)			RF1 (:1)			RF2 (:1)			RF2 (:1)			RF COM (:1)			RF1 (:1)			RF2 (:1)				
	STATE 3*			STATE 2*			STATE 3*			STATE 2*			STATE 3*			STATE 2*			STATE 1*			STATE 1*			STATE 1*				
	-40°C	+25°C	+85°C	-40°C	+25°C	+85°C	-40°C	+25°C	+85°C	-40°C	+25°C	+85°C	-40°C	+25°C	+85°C	-40°C	+25°C	+85°C	-40°C	+25°C	+85°C	-40°C	+25°C	+85°C	-40°C	+25°C	+85°C	-40°C	+25°C
0.03	1.14	1.17	1.19	1.14	1.16	1.19	1.15	1.17	1.19	1.28	1.33	1.38	1.29	1.33	1.39	1.15	1.17	1.20	1.27	1.32	1.37	1.28	1.33	1.38	1.29	1.33	1.39		
0.10	1.14	1.17	1.19	1.14	1.17	1.19	1.15	1.17	1.19	1.28	1.33	1.38	1.29	1.33	1.38	1.15	1.17	1.19	1.28	1.33	1.37	1.28	1.33	1.38	1.29	1.33	1.39		
1.00	1.15	1.17	1.19	1.15	1.17	1.19	1.15	1.17	1.19	1.28	1.33	1.38	1.29	1.33	1.38	1.15	1.17	1.19	1.28	1.33	1.38	1.28	1.33	1.38	1.28	1.33	1.38		
10.00	1.15	1.17	1.19	1.15	1.17	1.19	1.15	1.17	1.19	1.28	1.33	1.38	1.29	1.33	1.38	1.15	1.17	1.19	1.28	1.33	1.38	1.28	1.33	1.38	1.29	1.33	1.38		
50.00	1.15	1.17	1.19	1.15	1.17	1.19	1.15	1.17	1.19	1.29	1.33	1.37	1.29	1.33	1.38	1.15	1.17	1.19	1.29	1.33	1.37	1.28	1.33	1.37	1.29	1.33	1.38		
100.00	1.15	1.17	1.19	1.16	1.17	1.18	1.16	1.17	1.19	1.30	1.33	1.36	1.30	1.33	1.37	1.15	1.17	1.19	1.30	1.33	1.36	1.30	1.33	1.36	1.30	1.33	1.37		
200.00	1.16	1.17	1.19	1.17	1.17	1.17	1.15	1.17	1.18	1.30	1.33	1.35	1.31	1.33	1.35	1.16	1.17	1.18	1.30	1.33	1.35	1.30	1.33	1.35	1.31	1.33	1.35		
300.00	1.16	1.17	1.19	1.15	1.17	1.18	1.15	1.17	1.19	1.28	1.32	1.36	1.29	1.33	1.36	1.15	1.17	1.19	1.28	1.32	1.36	1.28	1.33	1.36	1.29	1.33	1.36		
400.00	1.15	1.17	1.19	1.14	1.17	1.19	1.16	1.17	1.19	1.28	1.32	1.37	1.28	1.33	1.37	1.15	1.16	1.19	1.26	1.32	1.37	1.28	1.32	1.37	1.28	1.32	1.37		
500.00	1.15	1.17	1.19	1.14	1.17	1.19	1.15	1.17	1.18	1.27	1.32	1.36	1.28	1.32	1.37	1.15	1.16	1.19	1.26	1.32	1.37	1.27	1.32	1.36	1.28	1.32	1.37		
600.00	1.15	1.17	1.20	1.14	1.16	1.19	1.15	1.17	1.18	1.27	1.32	1.36	1.27	1.32	1.36	1.15	1.16	1.19	1.26	1.32	1.37	1.27	1.32	1.36	1.27	1.32	1.37		
700.00	1.15	1.17	1.20	1.14	1.17	1.19	1.15	1.17	1.19	1.27	1.32	1.36	1.28	1.32	1.36	1.15	1.16	1.19	1.26	1.32	1.37	1.27	1.32	1.36	1.27	1.32	1.36		
800.00	1.16	1.18	1.21	1.15	1.17	1.20	1.15	1.16	1.19	1.27	1.32	1.36	1.28	1.32	1.37	1.15	1.16	1.19	1.26	1.32	1.38	1.27	1.32	1.36	1.28	1.32	1.37		
900.00	1.16	1.18	1.21	1.15	1.17	1.20	1.15	1.17	1.19	1.27	1.31	1.37	1.28	1.32	1.37	1.15	1.17	1.19	1.26	1.32	1.38	1.27	1.31	1.37	1.28	1.32	1.37		
1000.00	1.16	1.18	1.21	1.14	1.17	1.21	1.16	1.17	1.19	1.28	1.31	1.36	1.28	1.32	1.37	1.16	1.17	1.19	1.26	1.32	1.39	1.28	1.31	1.37	1.28	1.31	1.37		
1100.00	1.17	1.19	1.22	1.15	1.17	1.21	1.15	1.17	1.19	1.28	1.31	1.37	1.28	1.31	1.37	1.15	1.17	1.19	1.26	1.32	1.39	1.28	1.31	1.37	1.28	1.31	1.37		
1200.00	1.17	1.19	1.22	1.15	1.18	1.21	1.15	1.17	1.19	1.28	1.31	1.37	1.28	1.31	1.37	1.15	1.17	1.19	1.26	1.32	1.39	1.27	1.31	1.37	1.28	1.31	1.37		
1300.00	1.17	1.20	1.23	1.15	1.18	1.22	1.15	1.17	1.19	1.28	1.31	1.37	1.28	1.31	1.37	1.15	1.17	1.19	1.26	1.32	1.40	1.28	1.31	1.37	1.28	1.31	1.37		
1400.00	1.17	1.21	1.23	1.15	1.19	1.22	1.14	1.17	1.19	1.27	1.31	1.37	1.28	1.31	1.37	1.14	1.17	1.19	1.26	1.33	1.40	1.27	1.31	1.37	1.28	1.31	1.37		
1500.00	1.18	1.21	1.23	1.16	1.20	1.22	1.15	1.17	1.19	1.27	1.31	1.36	1.28	1.31	1.36	1.14	1.17	1.19	1.26	1.33	1.40	1.27	1.31	1.37	1.28	1.31	1.37		
1600.00	1.19	1.22	1.24	1.17	1.21	1.23	1.15	1.18	1.20	1.27	1.31	1.36	1.27	1.30	1.36	1.14	1.17	1.19	1.26	1.34	1.40	1.27	1.31	1.36	1.27	1.30	1.36		
1700.00	1.20	1.23	1.25	1.18	1.22	1.24	1.15	1.18	1.20	1.27	1.31	1.36	1.27	1.30	1.35	1.14	1.18	1.19	1.27	1.34	1.41	1.27	1.31	1.36	1.27	1.30	1.36		
1800.00	1.20	1.24	1.25	1.18	1.23	1.25	1.16	1.19	1.20	1.27	1.30	1.36	1.27	1.30	1.35	1.14	1.18	1.19	1.26	1.35	1.41	1.27	1.31	1.36	1.27	1.30	1.35		
1900.00	1.21	1.25	1.26	1.19	1.24	1.26	1.16	1.19	1.20	1.27	1.30	1.35	1.26	1.29	1.34	1.15	1.19	1.20	1.27	1.36	1.42	1.27	1.30	1.35	1.26	1.29	1.34		
2000.00	1.23	1.26	1.27	1.22	1.26	1.27	1.18	1.20	1.21	1.26	1.30	1.35	1.25	1.29	1.34	1.16	1.19	1.20	1.28	1.37	1.43	1.26	1.30	1.35	1.25	1.29	1.34		
2100.00	1.25	1.27	1.28	1.24	1.27	1.28	1.19	1.21	1.22	1.26	1.30	1.35	1.24	1.28	1.33	1.18	1.20	1.20	1.30	1.38	1.44	1.26	1.30	1.35	1.24	1.28	1.33		
2200.00	1.26	1.28	1.29	1.25	1.29	1.30	1.21	1.22	1.22	1.25	1.30	1.34	1.24	1.28	1.32	1.20	1.21	1.21	1.31	1.39	1.45	1.25	1.30	1.35	1.23	1.27	1.32		
2300.00	1.28	1.29	1.29	1.29	1.31	1.32	1.24	1.24	1.24	1.25	1.29	1.34	1.23	1.27	1.32	1.23	1.22	1.21	1.33	1.41	1.46	1.25	1.29	1.34	1.23	1.27	1.32		
2400.00	1.31	1.31	1.32	1.32	1.33	1.32	1.26	1.24	1.24	1.25	1.29	1.34	1.22	1.27	1.31	1.25	1.24	1.23	1.36	1.42	1.47	1.24	1.29	1.34	1.22	1.27	1.31		
2500.00	1.33	1.33	1.33	1.34	1.35	1.34	1.27	1.26	1.25	1.25	1.28	1.33	1.22	1.26	1.30	1.28	1.27	1.26	1.38	1.44	1.48	1.24	1.28	1.33	1.22	1.26	1.31		
2600.00	1.35	1.35	1.35	1.37	1.37	1.36	1.29	1.27	1.26	1.25	1.28	1.33	1.22	1.25	1.30	1.31	1.29	1.28	1.40	1.45	1.49	1.24	1.28	1.33	1.22	1.25	1.30		
2700.00	1.37	1.37	1.36	1.40	1.40	1.39	1.31	1.29	1.27	1.24	1.28	1.32	1.21	1.24	1.29	1.33	1.32	1.29	1.42	1.47	1.51	1.24	1.28	1.32	1.21	1.24	1.29		
2800.00	1.40	1.39	1.38	1.43	1.43	1.41	1.34	1.31	1.29	1.24	1.27	1.32	1.20	1.23	1.28	1.36	1.34	1.32	1.44	1.49	1.53	1.23	1.27	1.31	1.20	1.23	1.28		
2900.00	1.42	1.42	1.41	1.46	1.46	1.44	1.36	1.33	1.31	1.23	1.26	1.31	1.20	1.23	1.27	1.38	1.37	1.34	1.47	1.52	1.55	1.23	1.26	1.31	1.20	1.23	1.28		
3000.00	1.45	1.45	1.43	1.51	1.51	1.48	1.38	1.36	1.33	1.23	1.26	1.30	1.19	1.22	1.27	1.41	1.40	1.36	1.49	1.55	1.57	1.22	1.26	1.30	1.19	1.22	1.27		

*Note:

STATE	CONTROL INPUT		RF Com to RF1	RF Com to RF2
	Control 1	Control 2		
1	Low	Low	OFF	OFF
2	Low	High	OFF	ON
3	High	Low	ON	OFF



Typical Performance Data

FREQ (MHz)	INPUT IP3 @ Vdd=+3V OVER TEMPERATURE						FREQ (MHz)	INPUT 1dB COMPRESSION @ Vdd=+3V OVER TEMPERATURE					
	RF COM-RF1 (dBm)			RF COM-RF2 (dBm)				RF COM-RF1 (dBm)			RF COM-RF2 (dBm)		
	STATE 3*			STATE 2*				STATE 3*			STATE 2*		
	-40°C	+25°C	+85°C	-40°C	+25°C	+85°C		-40°C	+25°C	+85°C	-40°C	+25°C	+85°C
10.00	53.78	53.75	53.67	53.72	53.61	53.58	1.00	31.10	30.87	30.70	31.22	30.81	30.94
20.00	57.08	56.98	57.15	57.09	57.09	56.94	5.00	32.64	32.00	31.81	32.70	32.20	31.91
50.00	65.36	63.62	62.16	65.48	64.30	63.36	10.00	32.47	31.83	31.62	32.51	31.99	31.66
100.00	58.10	57.79	57.38	58.14	58.05	57.74	20.00	32.29	31.64	31.39	32.35	31.79	31.49
200.00	63.99	62.37	60.65	64.45	62.91	61.42	50.00	33.60	33.12	32.68	33.70	33.02	32.79
300.00	63.70	65.38	64.59	63.29	64.80	64.86	100.00	32.83	32.23	31.89	32.85	32.11	32.03
400.00	58.78	59.20	58.73	58.65	58.83	58.98	200.00	33.18	32.72	32.31	33.18	32.52	32.40
500.00	57.59	57.70	57.13	57.60	57.63	57.46	300.00	33.61	33.10	32.81	33.67	33.11	32.85
600.00	55.92	55.92	55.08	55.93	55.87	55.48	400.00	33.38	33.19	33.06	33.48	33.25	33.22
700.00	57.60	57.56	57.79	57.52	57.55	57.15	500.00	32.38	31.78	31.60	32.46	31.84	31.57
800.00	59.23	59.88	60.00	59.37	59.56	61.69	600.00	32.55	32.01	31.72	32.64	32.08	31.82
900.00	56.35	56.56	56.06	56.38	56.35	56.42	700.00	32.53	31.96	31.72	32.58	32.05	31.78
1000.00	54.71	54.68	54.18	55.01	54.77	54.63	800.00	32.22	31.72	31.51	32.28	31.76	31.51
1200.00	53.68	53.53	53.06	54.01	53.75	53.38	900.00	31.90	31.42	31.31	32.00	31.49	31.31
1400.00	54.77	54.57	53.76	54.92	54.63	54.23	1000.00	32.42	31.91	31.77	32.53	32.07	31.86
1600.00	55.32	55.36	54.61	55.48	55.73	55.29							
1800.00	53.75	53.81	53.40	54.13	54.08	53.79							
2000.00	52.61	52.56	52.21	52.84	52.88	52.63							
2200.00	52.11	52.20	51.77	52.34	52.60	51.97							
2400.00	51.79	51.21	50.81	52.84	53.30	52.15							
2600.00	51.63	51.68	51.24	51.85	51.88	51.46							
2800.00	51.61	51.51	50.94	51.95	51.81	51.34							
3000.00	51.91	51.49	50.90	52.12	51.77	51.21							

*Note:

STATE	CONTROL INPUT		RF Com to RF1	RF Com to RF2
	Control 1	Control 2		
1	Low	Low	OFF	OFF
2	Low	High	OFF	ON
3	High	Low	ON	OFF