

Typical Performance Data

RF FREQ (MHz)	INSERTION LOSS (dB)						RF FREQ (MHz)	ISOLATION (dB) (ENABLE-HIGH*)											
	VDD=+2.3V		VDD=+3V		VDD=+4.8V			VDD=+2.3V		VDD=+3V		VDD=+4.8V		VDD=+2.3V		VDD=+3V		VDD=+4.8V	
	RF COM-RF1	RF COM-RF2	RF COM-RF1	RF COM-RF2	RF COM-RF1	RF COM-RF2		RF COM-RF1	RF COM-RF2	RF COM-RF1	RF COM-RF2	RF COM-RF1	RF COM-RF2	RF1-RF2 Control LOW*	RF1-RF2 Control HIGH*	RF1-RF2 Control LOW*	RF1-RF2 Control HIGH*	RF1-RF2 Control LOW*	RF1-RF2 Control HIGH*
5	0.17	0.16	0.16	0.16	0.17	0.16	5	71.21	73.97	72.38	80.94	70.08	73.43	73.35	76.09	73.28	88.70	75.72	75.28
6	0.17	0.17	0.17	0.17	0.17	0.17	6	76.48	77.34	72.51	74.80	71.89	78.79	73.29	75.21	72.56	81.73	72.99	76.35
7	0.17	0.17	0.17	0.17	0.17	0.17	7	73.97	76.20	70.95	75.00	74.48	78.23	80.50	72.35	72.97	76.41	72.94	75.23
8	0.18	0.17	0.17	0.17	0.17	0.17	8	73.06	72.17	87.04	75.68	72.08	82.58	71.42	93.62	75.51	75.34	73.77	71.42
9	0.18	0.18	0.17	0.18	0.18	0.17	9	70.56	77.74	77.77	72.45	71.58	80.39	76.05	78.96	73.87	75.67	73.46	74.99
10	0.18	0.18	0.18	0.18	0.18	0.18	10	78.89	75.61	90.57	71.81	76.91	73.88	79.90	71.04	74.70	72.79	92.53	73.49
20	0.18	0.18	0.18	0.18	0.18	0.18	20	74.37	71.65	74.56	73.61	70.64	80.68	78.62	81.41	76.91	75.05	78.68	72.63
30	0.19	0.18	0.18	0.18	0.19	0.18	30	72.79	70.45	72.57	70.00	70.07	72.79	74.31	76.86	75.60	72.91	75.22	85.94
40	0.19	0.19	0.19	0.19	0.19	0.19	40	70.81	68.70	67.12	67.53	71.47	68.71	72.93	75.78	73.07	73.06	74.85	77.44
50	0.19	0.19	0.19	0.19	0.19	0.19	50	66.77	69.95	67.91	67.21	66.16	66.86	70.64	74.09	70.64	74.75	66.86	70.63
60	0.19	0.19	0.19	0.19	0.19	0.19	60	66.77	66.72	66.22	67.40	66.09	66.91	70.61	70.49	71.30	71.80	70.86	71.57
70	0.19	0.19	0.19	0.19	0.19	0.19	70	65.48	65.08	65.62	65.16	65.11	65.41	68.59	69.91	70.22	70.21	68.82	69.28
80	0.20	0.19	0.19	0.19	0.19	0.19	80	64.31	64.50	64.52	64.43	63.91	64.07	67.75	68.63	69.19	68.73	68.13	68.37
90	0.20	0.19	0.19	0.19	0.19	0.19	90	62.73	63.16	63.20	62.99	63.15	64.09	67.23	67.58	67.58	67.48	67.48	67.77
100	0.20	0.20	0.20	0.19	0.20	0.19	100	61.95	62.25	62.52	62.22	62.07	62.03	66.78	66.66	66.77	66.83	66.42	66.30
200	0.21	0.21	0.21	0.20	0.21	0.20	200	55.94	56.09	56.03	56.26	56.14	56.24	60.30	60.62	60.47	60.83	60.54	60.59
250	0.22	0.21	0.21	0.21	0.21	0.21	250	54.09	54.16	54.16	54.39	54.25	54.46	58.26	58.37	58.53	58.81	58.52	58.79
300	0.22	0.22	0.22	0.22	0.22	0.22	300	52.48	52.54	52.58	52.69	52.55	52.71	56.68	56.98	56.90	57.03	56.83	57.23
350	0.23	0.23	0.23	0.23	0.23	0.23	350	51.10	51.13	51.38	51.35	51.24	51.33	55.40	55.52	55.42	55.92	55.69	55.82
400	0.24	0.24	0.24	0.24	0.24	0.24	400	49.91	50.01	50.09	50.20	50.11	50.15	54.12	54.48	54.56	54.68	54.44	54.63
450	0.25	0.24	0.25	0.24	0.25	0.24	450	48.96	49.01	49.03	49.10	49.13	49.15	53.17	53.30	53.33	53.59	53.35	53.65
500	0.25	0.25	0.25	0.25	0.25	0.25	500	47.97	48.11	48.11	48.20	48.16	48.16	52.24	52.35	52.30	52.75	52.53	52.72
550	0.26	0.26	0.26	0.26	0.26	0.26	550	47.10	47.20	47.31	47.36	47.29	47.36	51.21	51.65	51.51	51.79	51.44	51.77
600	0.27	0.26	0.27	0.26	0.27	0.26	600	46.36	46.47	46.60	46.63	46.56	46.60	50.44	50.76	50.71	50.97	50.68	51.01
650	0.26	0.26	0.26	0.26	0.26	0.26	650	45.59	45.75	45.82	45.87	45.83	45.89	49.71	50.08	49.93	50.33	49.94	50.29
700	0.27	0.27	0.27	0.26	0.26	0.26	700	45.00	45.09	45.15	45.26	45.12	45.21	49.04	49.37	49.21	49.62	49.18	49.56
750	0.27	0.27	0.27	0.27	0.26	0.27	750	44.36	44.45	44.52	44.62	44.50	44.64	48.32	48.72	48.53	48.95	48.62	48.91
800	0.28	0.28	0.28	0.28	0.28	0.28	800	43.78	43.90	43.95	44.08	43.91	44.04	47.72	48.05	47.97	48.30	47.94	48.33
850	0.29	0.28	0.28	0.28	0.28	0.28	850	43.23	43.36	43.37	43.49	43.33	43.52	47.17	47.51	47.40	47.74	47.37	47.69
900	0.29	0.29	0.29	0.29	0.29	0.29	900	42.71	42.87	42.83	42.99	42.86	43.01	46.62	46.91	46.77	47.15	46.80	47.12
950	0.31	0.30	0.31	0.30	0.31	0.30	950	42.23	42.41	42.36	42.50	42.35	42.53	46.03	46.45	46.26	46.66	46.20	46.65
1000	0.32	0.32	0.32	0.32	0.32	0.31	1000	41.77	41.92	41.91	42.05	41.91	42.04	45.56	45.97	45.75	46.21	45.75	46.20
1100	0.34	0.34	0.34	0.34	0.34	0.33	1100	40.88	41.05	41.00	41.15	41.01	41.18	44.60	45.04	44.85	45.27	44.80	45.28
1200	0.36	0.35	0.36	0.35	0.36	0.35	1200	40.06	40.24	40.21	40.37	40.20	40.38	43.80	44.26	43.95	44.44	44.00	44.46
1300	0.38	0.38	0.38	0.38	0.38	0.38	1300	39.31	39.50	39.45	39.63	39.43	39.65	43.02	43.53	43.20	43.71	43.21	43.70
1400	0.40	0.40	0.39	0.40	0.39	0.40	1400	38.61	38.83	38.75	38.93	38.74	38.95	42.29	42.77	42.43	42.96	42.45	42.98
1500	0.41	0.41	0.41	0.41	0.41	0.41	1500	37.95	38.15	38.07	38.26	38.10	38.28	41.56	42.06	41.73	42.25	41.70	42.27
1600	0.43	0.44	0.43	0.43	0.43	0.43	1600	37.34	37.52	37.46	37.65	37.46	37.64	40.84	41.41	41.01	41.57	41.01	41.62
1700	0.46	0.46	0.46	0.46	0.46	0.46	1700	36.76	36.96	36.87	37.08	36.87	37.08	40.14	40.71	40.28	40.87	40.30	40.89
1800	0.47	0.47	0.47	0.47	0.47	0.47	1800	36.22	36.39	36.32	36.50	36.32	36.51	39.52	40.11	39.63	40.26	39.65	40.29
1900	0.47	0.46	0.47	0.46	0.47	0.46	1900	35.66	35.84	35.75	35.95	35.77	35.96	38.87	39.55	39.03	39.69	39.03	39.68
2000	0.46	0.45	0.45	0.45	0.45	0.45	2000	35.10	35.32	35.22	35.43	35.21	35.42	38.34	39.02	38.47	39.16	38.47	39.16
2100	0.45	0.45	0.45	0.44	0.45	0.44	2100	34.60	34.80	34.71	34.92	34.71	34.92	37.80	38.51	37.91	38.65	37.91	38.68
2200	0.47	0.46	0.47	0.45	0.46	0.45	2200	34.14	34.36	34.24	34.44	34.24	34.46	37.27	38.00	37.36	38.15	37.38	38.17
2300	0.49	0.47	0.49	0.47	0.49	0.47	2300	33.72	33.92	33.80	34.03	33.82	34.03	36.66	37.45	36.78	37.61	36.77	37.61
2400	0.51	0.49	0.51	0.48	0.51	0.48	2400	33.28	33.52	33.38	33.60	33.37	33.62	36.05	36.87	36.16	37.01	36.14	37.00
2500	0.50	0.47	0.50	0.47	0.50	0.47	2500	32.84	33.09	32.93	33.18	32.93	33.19	35.42	36.28	35.51	36.41	35.51	36.41
2600	0.46	0.44	0.46	0.44	0.46	0.44	2600	32.40	32.67	32.48	32.76	32.49	32.77	34.83	35.74	34.92	35.85	34.92	35.87
2700	0.43	0.41	0.43	0.41	0.43	0.41	2700	31.96	32.26	32.04	32.36	32.04	32.36	34.30	35.24	34.39	35.35	34.37	35.35
2800	0.43	0.41	0.43	0.41	0.43	0.41	2800	31.55	31.90	31.62	31.98	31.63	31.99	33.80	34.80	33.87	34.89	33.87	34.89
2900	0.45	0.44	0.45	0.43	0.45	0.43	2900	31.17	31.56	31.24	31.65	31.26	31.65	33.32	34.35	33.40	34.44	33.41	34.45
3000	0.48	0.47	0.48	0.46	0.48	0.46	3000	30.80	31.23	30.88	31.32	30.88	31.33	32.79	33.87	32.86	33.97	32.87	33.96

*Note:

State of:		RF Common to	
Control Voltage	Enable	RF1	RF2
HIGH	HIGH	ON	OFF
LOW	HIGH	OFF	ON
LOW/HIGH	LOW	Shutdown	
ON - Low insertion loss state			
OFF - Isolation state			



Typical Performance Data

RF FREQ (MHz)	VSWR (1)-ON STATE (ENABLE-HIGH)*												RF FREQ (MHz)	VSWR (1)- OFF STATE (ENABLE-HIGH)*					
	VDD=+2.3V				VDD=+3V				VDD=+4.8V					VDD=+2.3V		VDD=+3V		VDD=+4.8V	
	RF COM		RF1	RF2	RF COM		RF1	RF2	RF COM		RF1	RF2		RF1	RF2	RF1	RF2	RF1	RF2
	Control LOW*	Control HIGH*	Control HIGH*	Control LOW*	Control LOW*	Control HIGH*	Control HIGH*	Control LOW*	Control LOW*	Control HIGH*	Control HIGH*	Control LOW*		Control LOW*	Control HIGH*	Control HIGH*	Control LOW*	Control LOW*	Control HIGH*
5	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	5	5.54	5.58	5.66	5.72	5.66	5.72
6	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	6	5.54	5.58	5.66	5.72	5.66	5.72
7	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	7	5.52	5.58	5.66	5.70	5.66	5.72
8	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	8	5.52	5.58	5.66	5.70	5.66	5.72
9	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	9	5.52	5.58	5.66	5.70	5.66	5.72
10	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	10	5.52	5.58	5.66	5.72	5.66	5.72
20	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	20	5.52	5.58	5.66	5.70	5.66	5.70
30	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	30	5.52	5.58	5.65	5.70	5.66	5.72
40	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	40	5.52	5.58	5.65	5.72	5.66	5.72
50	1.03	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	50	5.52	5.58	5.65	5.72	5.65	5.72
60	1.03	1.03	1.02	1.02	1.02	1.03	1.02	1.02	1.03	1.03	1.02	1.02	60	5.51	5.58	5.65	5.70	5.65	5.72
70	1.03	1.03	1.03	1.03	1.03	1.03	1.02	1.02	1.03	1.03	1.02	1.02	70	5.51	5.58	5.65	5.70	5.65	5.72
80	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	80	5.51	5.56	5.65	5.70	5.65	5.70
90	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	90	5.51	5.56	5.63	5.68	5.65	5.70
100	1.03	1.04	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	100	5.51	5.54	5.63	5.68	5.63	5.68
200	1.06	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	200	5.49	5.52	5.61	5.65	5.61	5.66
250	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	250	5.44	5.46	5.56	5.59	5.56	5.59
300	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	300	5.42	5.46	5.56	5.58	5.56	5.58
350	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	350	5.39	5.39	5.51	5.51	5.52	5.51
400	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	400	5.34	5.39	5.46	5.51	5.47	5.51
450	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	450	5.33	5.36	5.46	5.47	5.46	5.49
500	1.13	1.13	1.12	1.12	1.12	1.13	1.12	1.12	1.13	1.12	1.12	1.12	500	5.28	5.38	5.39	5.49	5.41	5.49
550	1.14	1.14	1.13	1.14	1.14	1.14	1.13	1.14	1.14	1.14	1.13	1.14	550	5.27	5.31	5.39	5.42	5.39	5.44
600	1.16	1.16	1.14	1.14	1.14	1.16	1.14	1.14	1.16	1.14	1.14	1.14	600	5.23	5.27	5.34	5.39	5.34	5.39
650	1.17	1.17	1.16	1.16	1.17	1.17	1.16	1.16	1.17	1.17	1.16	1.16	650	5.23	5.25	5.36	5.38	5.36	5.38
700	1.18	1.18	1.17	1.17	1.18	1.17	1.17	1.17	1.18	1.17	1.17	1.17	700	5.20	5.22	5.31	5.33	5.33	5.34
750	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19	750	5.17	5.22	5.30	5.34	5.30	5.34
800	1.19	1.19	1.20	1.20	1.19	1.19	1.20	1.20	1.19	1.19	1.20	1.20	800	5.14	5.16	5.25	5.28	5.27	5.28
850	1.21	1.20	1.21	1.22	1.21	1.20	1.21	1.22	1.21	1.20	1.21	1.22	850	5.10	5.19	5.22	5.31	5.22	5.31
900	1.21	1.20	1.22	1.23	1.21	1.20	1.22	1.23	1.21	1.20	1.22	1.23	900	5.06	5.06	5.17	5.17	5.19	5.17
950	1.22	1.21	1.23	1.23	1.22	1.21	1.23	1.23	1.22	1.21	1.23	1.23	950	5.00	5.07	5.12	5.17	5.12	5.19
1000	1.23	1.23	1.24	1.24	1.23	1.22	1.24	1.24	1.23	1.22	1.24	1.24	1000	4.98	4.99	5.09	5.10	5.09	5.10
1100	1.26	1.25	1.25	1.26	1.26	1.25	1.25	1.26	1.26	1.25	1.25	1.26	1100	4.89	5.02	5.00	5.13	5.00	5.14
1200	1.29	1.27	1.26	1.29	1.29	1.27	1.26	1.29	1.29	1.27	1.26	1.29	1200	4.83	4.93	4.92	5.04	4.93	5.04
1300	1.29	1.28	1.27	1.29	1.29	1.28	1.27	1.29	1.29	1.28	1.27	1.29	1300	4.75	4.82	4.86	4.92	4.87	4.93
1400	1.30	1.28	1.29	1.31	1.30	1.28	1.29	1.31	1.30	1.28	1.29	1.31	1400	4.72	4.82	4.82	4.92	4.82	4.93
1500	1.31	1.29	1.30	1.33	1.31	1.29	1.30	1.33	1.31	1.29	1.30	1.33	1500	4.68	4.73	4.78	4.83	4.79	4.84
1600	1.33	1.31	1.31	1.33	1.33	1.31	1.31	1.33	1.33	1.31	1.31	1.33	1600	4.67	4.63	4.77	4.73	4.77	4.73
1700	1.33	1.31	1.31	1.33	1.33	1.31	1.31	1.33	1.33	1.31	1.31	1.33	1700	4.66	4.60	4.75	4.69	4.75	4.69
1800	1.32	1.31	1.30	1.32	1.32	1.31	1.30	1.32	1.32	1.31	1.30	1.32	1800	4.63	4.48	4.73	4.59	4.74	4.59
1900	1.29	1.29	1.29	1.29	1.29	1.29	1.29	1.29	1.29	1.29	1.29	1.29	1900	4.61	4.43	4.70	4.52	4.70	4.52
2000	1.27	1.27	1.27	1.28	1.27	1.27	1.27	1.28	1.27	1.27	1.27	1.28	2000	4.57	4.41	4.67	4.50	4.68	4.50
2100	1.25	1.25	1.26	1.27	1.25	1.25	1.26	1.27	1.25	1.25	1.26	1.27	2100	4.53	4.34	4.63	4.43	4.63	4.44
2200	1.24	1.24	1.25	1.25	1.24	1.24	1.25	1.25	1.24	1.24	1.25	1.25	2200	4.50	4.34	4.60	4.43	4.60	4.44
2300	1.22	1.22	1.24	1.24	1.22	1.24	1.24	1.22	1.22	1.24	1.24	1.24	2300	4.47	4.39	4.57	4.48	4.57	4.50
2400	1.18	1.19	1.21	1.21	1.18	1.19	1.21	1.21	1.18	1.19	1.21	1.21	2400	4.47	4.40	4.57	4.50	4.59	4.51
2500	1.14	1.15	1.17	1.16	1.14	1.15	1.17	1.16	1.14	1.15	1.17	1.16	2500	4.51	4.46	4.61	4.56	4.62	4.57
2600	1.11	1.12	1.12	1.11	1.11	1.12	1.12	1.11	1.11	1.12	1.12	1.11	2600	4.57	4.54	4.67	4.64	4.68	4.66
2700	1.09	1.10	1.09	1.06	1.09	1.10	1.09	1.06	1.09	1.10	1.09	1.06	2700	4.66	4.57	4.75	4.68	4.77	4.68
2800	1.08	1.08	1.07	1.02	1.08	1.08	1.07	1.02	1.08	1.08	1.07	1.02	2800	4.73	4.61	4.83	4.72	4.84	4.73
2900	1.07	1.07	1.07	1.01	1.07	1.07	1.07	1.01	1.07	1.07	1.07	1.01	2900	4.78	4.67	4.88	4.77	4.89	4.78
3000	1.06	1.05	1.06	1.02	1.06	1.05	1.07	1.02	1.06	1.05	1.07	1.02	3000	4.80	4.69	4.92	4.80	4.92	4.80

*Note:

State of:		RF Common to	
Control Voltage	Enable	RF1	RF2
HIGH	HIGH	ON	OFF
LOW	HIGH	OFF	ON
LOW/HIGH	LOW	Shutdown	

ON - Low insertion loss state
OFF - Isolation state



P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 • Fax (718) 332-4661 For detailed performance specs & shopping online see Mini-Circuits web site
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IF/RF MICROWAVE COMPONENTS

RF Switch SPDT JSW2-33HDR-75+

Typical Performance Data

RF FREQ (MHz)	INPUT IP3 (dBm)		RF FREQ (MHz)	COMPRESSION (dB) @ FIXED POWER FOR PIN=34.5dBm	
	VDD=+3V			VDD=+3V	
	RF COM-RF1	RF COM-RF2		RF COM-RF1	RF COM-RF2
154.6	70.37	70.46	200.0	0.00	0.00
1747.5	73.11	72.96	300.0	0.00	0.00
			400.0	0.00	0.00
			500.0	0.00	0.01
			600.0	-0.02	-0.01
			700.0	-0.01	-0.01
			800.0	-0.02	-0.02
			900.0	-0.01	-0.02
			1000.0	-0.03	-0.02
			1200.0	-0.02	-0.02
			1400.0	-0.05	-0.03
			1600.0	-0.05	-0.05
			1800.0	-0.06	-0.06
			2000.0	-0.08	-0.06
			2200.0	-0.08	-0.07
			2400.0	-0.08	-0.07
			2600.0	0.02	0.00
			2800.0	0.02	0.00
			3000.0	0.02	0.02