

SPI-SP10T-63

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

1. Any material and quality control and conditions not specifically stated in this specification document are provided to be reviewed by the customer prior to the production of the assembly.
 2. All electrical parts and materials used in assembly must be of a recognized origin and based on an approved list of parts approved by the manufacturer.
 3. The manufacturer shall be responsible for ensuring that all parts used in assembly are of a recognized origin and based on an approved list of parts approved by the manufacturer.
 4. The manufacturer shall be responsible for ensuring that all parts used in assembly are of a recognized origin and based on an approved list of parts approved by the manufacturer.

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Mini-Circuits®

Solid State SPI RF SP10T Switch

SPI-SP10T-63

Typical Performance Data

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

FREQUENCY (MHz)	Isolation (COM to terminated port)									
	(dB)									
	COM-J1	COM-J2	COM-J3	COM-J4	COM-J5	COM-J6	COM-J7	COM-J8	COM-J9	COM-J10
1	84.55	82.52	89.13	91.92	97.82	93.81	85.75	94.40	97.79	91.04
5	92.89	88.95	95.80	108.60	86.48	100.02	87.72	93.65	104.56	91.58
10	115.16	98.47	103.44	103.84	111.02	100.37	103.79	107.92	100.33	100.16
40	101.84	101.24	100.93	103.47	107.61	104.39	101.51	114.11	102.33	102.48
50	102.98	106.08	98.22	98.51	105.00	101.21	103.37	102.89	109.54	106.51
60	104.13	109.02	96.85	105.16	106.97	104.84	110.05	102.95	103.36	104.91
70	104.75	99.42	94.88	99.27	110.30	97.55	110.23	98.93	101.85	102.33
80	113.21	112.22	94.49	100.83	98.28	100.70	108.75	102.15	101.89	115.90
90	104.30	105.24	96.06	97.36	105.32	100.99	116.80	118.94	101.80	99.61
100	104.10	100.62	99.31	100.54	106.69	99.55	104.49	104.54	106.49	108.81
200	105.35	110.13	97.46	99.94	111.93	101.83	110.63	104.13	100.59	102.49
300	119.29	115.44	95.29	95.30	98.32	99.42	107.43	113.96	105.72	112.33
400	101.47	106.96	92.17	99.62	107.38	98.56	105.35	109.81	101.54	104.10
500	105.21	98.43	93.22	100.70	108.34	104.19	106.43	97.86	103.75	103.97
600	117.90	102.15	96.86	103.81	110.32	100.66	102.23	94.12	98.81	106.67
700	113.79	115.51	93.71	100.26	101.50	96.45	117.75	98.70	95.09	102.32
800	99.58	102.67	91.49	99.27	108.51	101.55	97.61	101.25	95.79	113.36
900	104.43	103.11	92.65	105.11	104.46	102.90	110.66	109.10	96.10	99.97
1000	111.91	103.47	93.86	101.84	113.04	100.82	101.52	99.33	97.99	110.22
1100	98.82	107.21	92.84	99.97	107.73	97.81	105.04	108.00	105.62	104.18
1200	99.73	100.66	94.44	100.68	103.67	98.87	112.61	102.56	99.37	109.50
1300	104.58	97.50	92.54	103.69	103.86	98.97	102.08	103.79	95.82	100.47
1400	107.07	112.46	92.61	94.82	110.44	101.63	112.33	106.42	96.47	118.75
1500	101.30	100.40	91.22	110.48	105.98	96.45	115.12	102.27	96.34	104.31
1600	107.28	100.92	92.48	99.66	108.20	95.58	102.50	114.21	92.70	109.22
1700	107.99	100.07	91.08	100.91	103.10	93.34	119.35	104.24	103.45	104.10
1800	105.56	102.35	91.99	96.69	98.43	97.05	98.06	107.65	95.73	103.37
1900	104.57	97.73	90.76	99.46	107.50	103.04	114.08	98.34	96.95	109.88
2000	100.42	104.47	94.08	99.36	111.00	100.21	107.10	108.98	93.61	99.34
2200	109.01	108.03	93.26	99.64	101.29	99.32	104.70	95.90	94.69	94.54
2400	105.44	113.47	89.11	98.13	107.31	109.97	102.58	97.05	95.36	105.02
2600	104.30	106.76	90.80	114.17	105.61	100.85	102.09	100.77	93.75	102.24
2800	104.26	97.87	92.41	94.65	101.33	106.57	106.24	106.90	95.97	96.06
3000	103.69	119.28	95.36	98.87	99.65	94.02	104.00	99.26	97.94	94.09
3200	120.92	102.33	91.91	96.26	100.79	96.58	101.88	112.22	93.59	92.00
3400	108.54	106.39	91.24	94.32	95.39	101.53	104.58	96.31	91.84	93.00
3600	106.65	105.00	91.67	93.55	99.57	108.06	100.16	97.19	95.17	90.10
3800	109.30	98.71	93.04	97.30	90.11	112.54	98.49	93.24	93.97	88.25
4000	102.48	98.15	90.89	89.36	100.96	107.69	109.74	95.27	93.92	89.20
4200	106.44	107.12	92.08	91.07	101.93	109.56	101.04	91.74	96.76	87.87
4400	101.11	101.50	96.10	88.02	93.11	99.96	108.81	95.64	94.93	87.74
4600	108.82	92.41	93.88	88.56	93.59	101.78	98.72	92.43	94.30	87.40
4800	105.46	95.20	97.72	87.15	89.03	97.05	105.53	89.14	95.74	85.76
5000	103.33	93.06	92.31	86.59	88.94	101.84	106.30	88.71	93.31	85.55
5200	96.04	92.87	92.59	85.29	90.72	97.71	98.12	89.75	105.63	85.08
5400	106.80	90.85	94.94	84.26	85.98	98.46	109.42	89.64	94.26	83.94
5600	97.71	89.81	92.55	83.45	86.41	100.56	100.26	86.85	98.13	83.07
5800	116.48	88.28	93.16	82.38	85.14	96.42	100.45	87.80	96.56	83.83
6000	103.71	86.72	93.38	82.44	84.41	94.69	100.83	86.37	94.96	83.70
6200	98.25	85.85	95.86	82.16	84.56	90.28	103.53	86.63	95.22	82.76
6500	113.29	84.01	88.92	80.36	84.36	90.34	103.17	86.32	91.88	81.77
7000	99.48	81.52	85.34	77.40	79.88	88.96	95.34	83.69	89.46	79.42
7500	106.12	78.46	81.75	74.41	77.09	84.69	94.20	81.17	86.89	75.83
8000	94.87	74.88	80.17	70.84	71.78	83.43	90.56	75.88	80.98	72.77

Notes:

- Performance and quality characteristics will vary with operating conditions. All specifications are typical values and are not guaranteed.
- Actual operating conditions and performance may vary with operating conditions. All specifications are typical values and are not guaranteed.
- Isolation is measured by the ratio of the input power to the output power. The input power is measured at the input of the device and the output power is measured at the output of the device. The input power is measured at the input of the device and the output power is measured at the output of the device.



SPI-SP10T-63

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

FREQUENCY (MHz)	Isolation (port to port)									
	(dB)									
	J1-J2	J2-J3	J3-J4	J4-J5	J5-J6	J6-J7	J7-J8	J8-J9	J9-J10	J1-J10
1	94.14	86.46	92.36	106.11	104.59	87.18	93.61	92.75	84.92	93.37
5	97.62	82.88	86.89	91.33	87.40	93.03	88.53	97.45	83.80	93.71
10	113.34	105.15	110.26	105.09	111.48	102.11	102.80	119.73	105.74	103.49
40	113.18	105.61	104.75	128.98	114.34	99.64	92.55	95.47	109.26	105.82
50	102.88	111.17	115.90	111.64	104.83	102.90	97.55	96.00	96.65	105.43
60	99.55	106.73	108.33	103.48	107.51	101.83	95.63	93.80	107.11	100.98
70	99.98	100.69	109.35	105.76	107.32	102.72	94.80	91.92	106.25	108.78
80	103.97	110.37	106.97	104.35	102.67	109.48	94.41	91.96	107.55	104.50
90	108.09	102.30	107.32	118.45	105.36	110.98	93.96	92.32	107.28	110.29
100	100.12	103.59	102.59	106.27	99.84	101.92	91.94	91.88	104.21	105.04
200	110.11	105.67	98.94	104.97	107.21	112.02	89.03	89.75	101.28	104.73
300	108.28	105.24	98.74	104.17	103.79	97.65	86.48	86.53	110.74	106.05
400	111.12	98.26	98.68	124.18	96.17	103.75	83.87	84.18	96.45	102.25
500	107.86	101.70	96.79	109.63	102.14	99.88	82.54	82.90	97.29	102.09
600	107.04	100.35	96.11	98.70	92.30	96.17	80.66	80.16	97.66	103.84
700	101.76	110.76	95.70	100.43	94.60	96.54	81.73	79.64	104.83	114.20
800	104.08	98.96	95.78	102.45	92.12	87.46	81.14	82.41	111.37	103.15
900	101.86	96.18	94.51	118.98	91.60	93.83	79.67	79.99	105.73	100.97
1000	106.00	97.16	91.73	98.35	92.57	88.15	79.48	77.34	96.20	110.98
1100	103.29	97.82	91.51	97.93	93.63	87.10	79.16	76.60	99.39	107.77
1200	101.24	97.23	89.84	103.34	96.48	83.17	78.58	77.13	98.64	104.01
1300	100.33	94.27	96.41	101.84	90.06	88.73	77.42	75.88	108.80	105.78
1400	106.75	92.36	93.43	99.63	88.30	89.55	77.66	74.99	99.03	102.26
1500	100.25	91.12	91.16	100.50	87.59	84.46	77.39	74.47	99.81	107.82
1600	110.75	92.38	93.21	97.20	87.22	86.95	76.84	73.96	98.45	111.64
1700	107.64	98.97	94.24	112.88	90.13	86.70	77.56	73.78	102.30	104.02
1800	104.24	91.69	91.83	106.76	89.57	88.32	77.19	73.80	101.07	105.09
1900	106.45	92.03	91.68	104.20	90.01	91.19	77.27	74.05	100.19	106.69
2000	106.45	94.52	92.28	99.01	86.84	93.76	77.58	74.80	118.39	105.88
2200	104.22	91.92	93.60	98.15	89.96	85.36	76.89	78.88	97.76	111.04
2400	103.71	93.63	91.07	103.43	89.06	80.52	75.57	74.08	93.86	120.11
2600	98.17	98.33	85.43	103.16	86.95	80.31	74.94	72.10	88.79	105.57
2800	99.86	92.07	85.06	100.10	87.26	79.45	73.93	71.78	90.27	99.42
3000	97.31	94.79	85.51	101.30	84.89	81.07	73.25	70.73	88.75	109.00
3200	97.92	94.02	85.32	114.19	82.67	81.28	72.69	69.91	91.23	103.70
3400	95.64	89.71	85.24	96.84	83.05	83.12	71.99	68.85	91.29	109.28
3600	95.37	86.65	85.95	93.10	81.33	81.55	72.32	68.32	94.81	106.73
3800	93.51	85.02	84.86	98.47	80.90	82.38	72.81	68.53	97.98	113.81
4000	96.46	85.00	83.77	97.08	80.89	81.51	72.51	69.86	98.66	101.56
4200	94.67	83.60	85.82	100.46	80.07	78.27	71.24	70.71	103.84	126.13
4400	93.00	82.77	85.55	96.50	80.88	74.49	71.96	70.58	92.84	102.72
4600	99.69	83.54	84.51	95.46	81.09	73.86	71.70	71.37	91.76	104.98
4800	96.97	83.87	84.98	96.86	83.52	72.99	71.16	69.70	88.11	103.95
5000	94.68	82.70	82.46	96.35	85.62	71.58	71.86	68.05	89.04	118.21
5200	92.97	85.18	83.35	90.16	88.35	70.94	71.27	68.50	89.74	105.45
5400	95.19	87.22	84.11	92.11	88.71	71.57	71.14	67.76	86.00	103.31
5600	90.39	90.77	83.80	91.27	86.57	73.20	72.22	66.16	85.85	104.78
5800	88.99	98.89	82.50	90.37	84.26	73.62	71.64	66.25	86.07	99.14
6000	89.22	96.81	82.12	96.99	81.52	74.16	70.49	67.46	88.60	111.27

REV. OR

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Solid State

SPI RF SP10T Switch

SPI-SP10T-63

Typical Performance Data

TEST CONDITIONS: @Temperature = -35/+25/+85°C, Power in=0 dBm

FREQUENCY (MHz)	INSERTION LOSS			VSWR (Active Port)			VSWR (Com port)			VSWR (Terminated port)		
	(dB)			(:1)			(:1)			(:1)		
	@-35°C	@+25°C	@+85°C	@-35°C	@+25°C	@+85°C	@-35°C	@+25°C	@+85°C	@-35°C	@+25°C	@+85°C
1	2.18	2.28	2.42	1.52	1.55	1.58	1.53	1.56	1.59	1.16	1.05	1.05
5	2.18	2.29	2.42	1.51	1.54	1.57	1.52	1.55	1.59	1.15	1.02	1.03
10	2.18	2.29	2.43	1.51	1.54	1.57	1.52	1.55	1.59	1.15	1.02	1.03
40	2.21	2.32	2.45	1.51	1.54	1.57	1.53	1.55	1.59	1.15	1.02	1.03
50	2.22	2.33	2.46	1.51	1.54	1.57	1.53	1.55	1.59	1.14	1.02	1.03
60	2.23	2.34	2.47	1.51	1.54	1.57	1.53	1.55	1.58	1.14	1.02	1.03
70	2.24	2.35	2.48	1.51	1.54	1.57	1.53	1.55	1.58	1.14	1.02	1.03
80	2.25	2.36	2.49	1.51	1.54	1.56	1.53	1.55	1.58	1.13	1.02	1.03
90	2.27	2.37	2.50	1.51	1.54	1.56	1.53	1.54	1.58	1.13	1.02	1.03
100	2.27	2.38	2.50	1.50	1.53	1.56	1.53	1.54	1.57	1.13	1.02	1.03
200	2.33	2.49	2.62	1.47	1.49	1.51	1.47	1.48	1.50	1.14	1.02	1.02
300	2.42	2.62	2.78	1.40	1.42	1.45	1.37	1.38	1.40	1.15	1.03	1.03
400	2.54	2.75	2.92	1.34	1.35	1.37	1.27	1.27	1.30	1.15	1.03	1.03
500	2.65	2.87	3.04	1.28	1.27	1.27	1.16	1.17	1.19	1.15	1.03	1.03
600	2.75	2.97	3.15	1.20	1.19	1.19	1.09	1.08	1.11	1.15	1.03	1.04
700	2.81	3.05	3.23	1.11	1.10	1.10	1.06	1.05	1.08	1.15	1.03	1.04
800	2.86	3.10	3.29	1.04	1.05	1.05	1.06	1.07	1.09	1.15	1.03	1.04
900	2.90	3.15	3.34	1.07	1.10	1.10	1.08	1.08	1.10	1.13	1.03	1.04
1000	2.94	3.20	3.39	1.14	1.19	1.18	1.08	1.08	1.11	1.14	1.03	1.04
1100	2.98	3.25	3.45	1.21	1.27	1.26	1.06	1.07	1.09	1.14	1.03	1.04
1200	3.03	3.29	3.50	1.28	1.31	1.31	1.03	1.06	1.07	1.14	1.03	1.04
1300	3.07	3.33	3.55	1.33	1.33	1.34	1.02	1.04	1.05	1.15	1.03	1.04
1400	3.10	3.37	3.59	1.32	1.31	1.33	1.01	1.01	1.02	1.15	1.03	1.04
1500	3.12	3.41	3.63	1.30	1.27	1.29	1.03	1.04	1.03	1.15	1.02	1.04
1600	3.13	3.44	3.66	1.26	1.23	1.25	1.09	1.10	1.09	1.15	1.02	1.04
1700	3.15	3.47	3.68	1.22	1.21	1.21	1.16	1.17	1.18	1.15	1.02	1.04
1800	3.14	3.49	3.69	1.20	1.20	1.19	1.25	1.26	1.28	1.14	1.02	1.04
1900	3.14	3.50	3.70	1.19	1.21	1.19	1.35	1.35	1.38	1.14	1.01	1.04
2000	3.14	3.52	3.71	1.20	1.23	1.21	1.44	1.42	1.47	1.14	1.02	1.04
2200	3.24	3.63	3.83	1.30	1.35	1.35	1.48	1.47	1.51	1.14	1.02	1.05
2400	3.44	3.82	4.06	1.41	1.44	1.46	1.38	1.39	1.40	1.13	1.04	1.05
2600	3.59	3.99	4.26	1.39	1.38	1.39	1.32	1.31	1.32	1.13	1.05	1.06
2800	3.67	4.11	4.39	1.22	1.18	1.15	1.31	1.27	1.29	1.14	1.06	1.07
3000	3.74	4.21	4.51	1.03	1.09	1.12	1.21	1.23	1.24	1.16	1.07	1.08
3200	3.81	4.31	4.60	1.26	1.29	1.30	1.21	1.26	1.28	1.17	1.07	1.08
3400	3.79	4.35	4.61	1.37	1.35	1.33	1.32	1.33	1.34	1.17	1.07	1.09
3600	3.73	4.36	4.65	1.29	1.26	1.26	1.26	1.26	1.25	1.17	1.08	1.10
3800	3.88	4.50	4.83	1.30	1.29	1.30	1.03	1.04	1.06	1.18	1.08	1.10
4000	4.16	4.73	5.10	1.39	1.44	1.40	1.20	1.23	1.23	1.18	1.09	1.10
4200	4.37	4.92	5.30	1.42	1.45	1.42	1.35	1.41	1.40	1.15	1.10	1.11
4400	4.46	5.02	5.37	1.38	1.34	1.36	1.35	1.42	1.42	1.12	1.13	1.12
4600	4.49	5.08	5.39	1.31	1.29	1.30	1.45	1.49	1.52	1.09	1.16	1.14
4800	4.53	5.15	5.41	1.24	1.30	1.28	1.64	1.66	1.68	1.08	1.20	1.15
5000	4.55	5.18	5.41	1.28	1.26	1.26	1.54	1.61	1.59	1.08	1.23	1.17
5200	4.63	5.23	5.47	1.22	1.21	1.21	1.43	1.49	1.49	1.12	1.27	1.19
5400	4.75	5.29	5.56	1.19	1.22	1.16	1.67	1.69	1.70	1.16	1.31	1.21
5600	4.79	5.29	5.60	1.22	1.21	1.21	1.68	1.75	1.73	1.20	1.34	1.23
5800	4.89	5.39	5.72	1.36	1.44	1.46	1.37	1.46	1.43	1.26	1.37	1.25
6000	5.02	5.60	5.87	1.67	1.75	1.73	1.27	1.38	1.33	1.30	1.39	1.26
6200	4.95	5.59	5.82	1.69	1.60	1.62	1.32	1.40	1.34	1.33	1.40	1.28
6500	4.95	5.65	5.92	1.02	1.17	1.11	1.31	1.38	1.36	1.36	1.41	1.28
7000	5.41	5.96	6.30	1.49	1.41	1.38	1.41	1.38	1.42	1.37	1.39	1.28
7500	5.64	6.37	6.66	2.02	1.85	1.97	1.61	1.62	1.63	1.40	1.36	1.28
8000	5.42	6.18	6.45	1.34	1.21	1.24	1.21	1.12	1.14	1.44	1.34	1.31

Notes:

- Performance and quality data for this device will only be provided when it is used within the conditions specified in the test conditions and test conditions of the applicable documents.
- Electrical specifications and performance data are provided for this device when it is used within the conditions specified in the test conditions and test conditions of the applicable documents.
- Performance data for this device will only be provided when it is used within the conditions specified in the test conditions and test conditions of the applicable documents.

The highest performance is achieved when the device is used within the conditions specified in the test conditions and test conditions of the applicable documents.

