

Surface Mount Power Splitter/Combiner

SBTC-2-10-75X+

2 Way-0° 75Ω 10 to 1000 MHz

Features

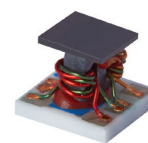
- 75 ohm input, 50 ohm output
- very good isolation, 24 dB typ.
- excellent amplitude unbalance, 0.15 dB typ.
- very good phase unbalance, 1 deg. typ.
- temperature stable base
- small size, 0.15"x0.15"x0.15"
- low cost
- aqueous washable
- protected by US patent 6,963,255

Applications

- impedance matching
- balanced amplifiers

Electrical Specifications

Parameter	Frequency (MHz)	Min.	Typ.	Max.	Unit
Frequency Range		10		1000	MHz
Insertion Loss Above 3.0 dB	10 - 100	—	0.7	1.2	dB
	100 - 500	—	0.6	1.2	
	500 - 1000	—	0.7	1.4	
Isolation	10 - 100	20	35	—	dB
	100 - 500	20	28	—	
	500 - 1000	17	21	—	
Phase Unbalance	10 - 100	—	—	3	Degree
	100 - 500	—	—	3	
	500 - 1000	—	—	5	
Amplitude Unbalance	10 - 100	—	—	0.7	dB
	100 - 500	—	—	0.6	
	500 - 1000	—	—	0.6	



Generic photo used for illustration purposes only

CASE STYLE: AT1667

+RoHS Compliant

The +Suffix identifies RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications

 Available Tape and Reel at no extra cost

Reel Size	Devices/Reel
13"	500

Maximum Ratings

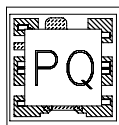
Parameter	Ratings
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
Power Input (as a splitter)	0.5W max.
Internal Dissipation	0.125W max

Permanent damage may occur if any of these limits are exceeded.

Pin Connections

Function	Pin Number
SUM PORT	6
PORT 1	3
PORT 2	4
GROUND	1,2
NOT USED	5

Product Marking



Electrical Schematic



2 Way-0° Power Splitter/Combiner

SBTC-2-10-75X+

Typical Performance Data

TEST CONDITIONS: INPUT POWER =0 dBm @Temperature = +25°C

FREQUENCY (MHz)	TOTAL LOSS ¹ (dB)		AMPLITUDE UNBALANCE (dB)	ISOLATION (dB)	PHASE UNBALANCE (Deg)	FREQUENCY (MHz)	VSWR (:1)		
	S-1	S-2					S	1	2
10.0	3.74	3.43	0.31	38.17	0.40	10.0	1.04	1.33	1.25
20.0	3.74	3.43	0.31	40.42	0.14	20.0	1.01	1.32	1.24
30.0	3.75	3.44	0.31	40.25	0.07	30.0	1.01	1.32	1.24
40.0	3.75	3.44	0.31	39.82	0.04	40.0	1.01	1.31	1.24
50.0	3.76	3.45	0.31	39.20	0.01	50.0	1.02	1.31	1.24
60.0	3.76	3.45	0.31	38.60	0.00	60.0	1.02	1.31	1.24
70.0	3.77	3.46	0.31	38.09	0.04	70.0	1.03	1.31	1.24
80.0	3.77	3.46	0.31	37.71	0.10	80.0	1.04	1.31	1.24
90.0	3.78	3.47	0.31	37.33	0.06	90.0	1.05	1.31	1.24
100.0	3.78	3.47	0.31	36.86	0.09	100.0	1.05	1.31	1.24
150.0	3.80	3.49	0.31	35.41	0.16	150.0	1.08	1.30	1.22
200.0	3.81	3.51	0.30	34.69	0.23	200.0	1.11	1.28	1.23
250.0	3.82	3.52	0.30	33.78	0.33	250.0	1.14	1.27	1.25
300.0	3.83	3.54	0.29	31.91	0.42	300.0	1.16	1.26	1.25
350.0	3.83	3.57	0.26	30.17	0.52	350.0	1.18	1.25	1.23
400.0	3.84	3.59	0.25	29.14	0.62	400.0	1.19	1.24	1.24
450.0	3.86	3.61	0.25	28.73	0.69	450.0	1.20	1.23	1.26
475.0	3.89	3.62	0.27	28.37	0.76	475.0	1.20	1.23	1.27
500.0	3.88	3.64	0.24	28.42	0.77	500.0	1.21	1.22	1.27
550.0	3.90	3.66	0.24	27.43	0.84	550.0	1.21	1.22	1.25
600.0	3.93	3.70	0.23	26.12	0.91	600.0	1.22	1.22	1.25
650.0	3.96	3.73	0.23	25.28	1.01	650.0	1.22	1.21	1.26
700.0	3.99	3.75	0.24	24.90	1.12	700.0	1.21	1.22	1.28
750.0	4.02	3.77	0.25	24.43	1.27	750.0	1.20	1.22	1.27
800.0	4.04	3.81	0.23	23.64	1.42	800.0	1.17	1.22	1.25
850.0	4.05	3.83	0.22	22.66	1.50	850.0	1.16	1.23	1.25
900.0	4.08	3.87	0.21	21.80	1.55	900.0	1.14	1.24	1.26
925.0	4.11	3.88	0.23	21.56	1.37	925.0	1.13	1.25	1.26
950.0	4.11	3.90	0.21	21.36	1.53	950.0	1.12	1.26	1.26
975.0	4.14	3.91	0.23	21.01	1.44	975.0	1.10	1.26	1.25
1000.0	4.14	3.93	0.21	20.93	1.51	1000.0	1.09	1.27	1.24
1025.0	4.17	3.94	0.23	20.67	1.49	1025.0	1.08	1.28	1.24
1050.0	4.17	3.96	0.21	20.27	1.40	1050.0	1.07	1.29	1.24
1075.0	4.19	3.97	0.22	20.21	1.42	1075.0	1.06	1.30	1.24
1100.0	4.20	4.00	0.20	19.64	1.36	1100.0	1.05	1.30	1.24
1200.0	4.25	4.07	0.18	19.05	1.17	1200.0	1.00	1.34	1.26
1300.0	4.31	4.16	0.16	19.18	1.02	1300.0	1.02	1.38	1.29
1400.0	4.37	4.23	0.14	19.44	1.15	1400.0	1.04	1.42	1.32
1500.0	4.41	4.32	0.08	20.37	1.37	1500.0	1.04	1.46	1.34
1600.0	4.49	4.47	0.02	22.35	1.65	1600.0	1.06	1.50	1.36
1700.0	4.68	4.68	0.00	24.09	1.87	1700.0	1.07	1.55	1.39
1800.0	4.99	4.95	0.04	23.16	1.95	1800.0	1.09	1.61	1.44
1900.0	5.27	5.12	0.15	21.07	1.44	1900.0	1.11	1.68	1.52
2000.0	5.47	5.13	0.34	19.25	1.42	2000.0	1.15	1.77	1.63
2100.0	5.42	5.10	0.33	18.21	1.14	2100.0	1.19	1.87	1.77
2200.0	5.32	4.95	0.37	17.84	0.90	2200.0	1.20	1.95	1.87
2300.0	5.31	4.90	0.42	17.92	1.42	2300.0	1.19	2.01	1.94
2400.0	5.33	5.09	0.25	17.27	1.29	2400.0	1.16	2.04	1.93
2500.0	5.72	5.67	0.06	15.76	0.76	2500.0	1.16	2.07	1.92
2600.0	6.26	6.20	0.06	14.03	0.39	2600.0	1.17	2.09	1.84
2700.0	7.25	6.85	0.40	12.30	2.05	2700.0	1.19	2.09	1.76
2800.0	8.14	7.49	0.65	11.31	5.41	2800.0	1.23	2.08	1.68
2900.0	8.80	7.68	1.12	10.84	5.96	2900.0	1.25	2.09	1.65
3000.0	9.09	7.36	1.73	10.47	5.76	3000.0	1.28	2.08	1.64

¹Total Loss = Insertion Loss + 3dB Splitter Loss



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



IF/RF MICROWAVE COMPONENTS

REV. OR
 SBTC-2-10-75X+
 6/4/2012
 Page 1 of 3

2 Way-0° Power Splitter/Combiner

SBTC-2-10-75X+

Typical Performance Data

TEST CONDITIONS: INPUT POWER =0 dBm @Temperature = -40°C

FREQUENCY (MHz)	TOTAL LOSS ¹ (dB)		AMPLITUDE UNBALANCE (dB)	ISOLATION (dB)	PHASE UNBALANCE (Deg)	FREQUENCY (MHz)	VSWR (:1)		
	S-1	S-2					S	1	2
10.0	3.59	3.36	0.23	32.58	1.51	10.0	1.08	1.33	1.24
20.0	3.53	3.33	0.20	39.16	0.73	20.0	1.05	1.26	1.20
30.0	3.52	3.32	0.20	44.50	0.45	30.0	1.05	1.24	1.18
40.0	3.52	3.33	0.19	50.02	0.33	40.0	1.05	1.23	1.17
50.0	3.53	3.33	0.20	54.11	0.24	50.0	1.06	1.23	1.16
60.0	3.53	3.33	0.20	52.55	0.23	60.0	1.07	1.22	1.16
70.0	3.53	3.33	0.20	48.97	0.19	70.0	1.07	1.22	1.15
80.0	3.53	3.33	0.20	46.41	0.13	80.0	1.07	1.22	1.16
90.0	3.54	3.34	0.20	44.29	0.17	90.0	1.06	1.21	1.16
100.0	3.54	3.34	0.20	42.54	0.12	100.0	1.06	1.21	1.16
150.0	3.56	3.36	0.20	38.32	0.09	150.0	1.08	1.20	1.18
200.0	3.57	3.36	0.21	36.49	0.09	200.0	1.10	1.20	1.17
250.0	3.58	3.38	0.20	35.13	0.07	250.0	1.11	1.21	1.21
300.0	3.59	3.39	0.20	33.05	0.08	300.0	1.14	1.22	1.22
350.0	3.60	3.41	0.19	30.81	0.09	350.0	1.16	1.24	1.21
400.0	3.61	3.43	0.18	29.35	0.11	400.0	1.17	1.25	1.23
450.0	3.63	3.44	0.19	28.71	0.17	450.0	1.20	1.25	1.27
475.0	3.65	3.45	0.20	28.30	0.15	475.0	1.21	1.26	1.28
500.0	3.64	3.46	0.18	28.43	0.22	500.0	1.21	1.26	1.29
550.0	3.66	3.48	0.18	27.50	0.29	550.0	1.24	1.26	1.28
600.0	3.68	3.50	0.18	26.04	0.35	600.0	1.24	1.27	1.27
650.0	3.70	3.52	0.18	24.95	0.38	650.0	1.25	1.27	1.30
700.0	3.74	3.54	0.20	24.30	0.37	700.0	1.25	1.27	1.31
750.0	3.75	3.55	0.20	23.71	0.34	750.0	1.22	1.28	1.30
800.0	3.76	3.58	0.18	22.91	0.30	800.0	1.19	1.28	1.28
850.0	3.77	3.60	0.17	21.80	0.32	850.0	1.15	1.28	1.27
900.0	3.79	3.63	0.16	20.82	0.43	900.0	1.12	1.28	1.27
925.0	3.82	3.63	0.19	20.57	0.68	925.0	1.11	1.28	1.26
950.0	3.81	3.65	0.16	20.29	0.57	950.0	1.09	1.28	1.25
975.0	3.84	3.65	0.19	19.91	0.73	975.0	1.07	1.28	1.24
1000.0	3.84	3.67	0.17	19.82	0.76	1000.0	1.05	1.28	1.22
1025.0	3.87	3.68	0.19	19.58	0.81	1025.0	1.03	1.28	1.21
1050.0	3.87	3.69	0.18	19.21	0.98	1050.0	1.02	1.28	1.20
1075.0	3.89	3.70	0.19	19.14	0.98	1075.0	1.02	1.29	1.19
1100.0	3.90	3.72	0.18	18.60	1.13	1100.0	1.03	1.29	1.19
1200.0	3.95	3.79	0.16	18.04	1.58	1200.0	1.09	1.31	1.18
1300.0	4.01	3.86	0.15	18.26	2.05	1300.0	1.1	1.33	1.21
1400.0	4.05	3.92	0.13	18.67	2.31	1400.0	1.09	1.38	1.28
1500.0	4.06	3.99	0.07	19.81	2.45	1500.0	1.06	1.47	1.39
1600.0	4.13	4.12	0.01	22.10	2.45	1600.0	1.02	1.58	1.52
1700.0	4.31	4.33	0.02	24.23	2.42	1700.0	1.02	1.69	1.64
1800.0	4.65	4.66	0.01	22.90	2.63	1800.0	1.02	1.79	1.71
1900.0	4.92	4.78	0.14	20.52	3.48	1900.0	1.04	1.84	1.73
2000.0	5.09	4.75	0.35	18.74	3.63	2000.0	1.06	1.87	1.69
2100.0	5.00	4.65	0.35	17.87	4.37	2100.0	1.14	1.88	1.64
2200.0	4.89	4.46	0.43	17.83	6.68	2200.0	1.24	1.91	1.59
2300.0	4.89	4.46	0.43	18.20	7.81	2300.0	1.3	1.94	1.63
2400.0	4.88	4.61	0.28	17.35	8.29	2400.0	1.36	1.99	1.75
2500.0	5.27	5.21	0.06	15.03	7.63	2500.0	1.37	2.1	1.99
2600.0	5.87	5.92	0.05	12.92	7.90	2600.0	1.39	2.25	2.26
2700.0	6.99	6.66	0.33	11.17	5.86	2700.0	1.3	2.33	2.48
2800.0	7.93	7.38	0.55	10.21	2.37	2800.0	1.17	2.37	2.5
2900.0	8.43	7.51	0.92	9.87	2.21	2900.0	1.05	2.34	2.35
3000.0	8.56	6.98	1.58	9.60	2.82	3000.0	1.23	2.25	2.16

¹Total Loss = Insertion Loss + 3dB Splitter Loss



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



IF/RF MICROWAVE COMPONENTS

REV. OR
 SBTC-2-10-75X+
 6/4/2012
 Page 2 of 3

2 Way-0° Power Splitter/Combiner

SBTC-2-10-75X+

Typical Performance Data

TEST CONDITIONS: INPUT POWER =0 dBm @Temperature = +85°C

FREQUENCY (MHz)	TOTAL LOSS ¹ (dB)		AMPLITUDE UNBALANCE (dB)	ISOLATION (dB)	PHASE UNBALANCE (Deg)	FREQUENCY (MHz)	VSWR (:1)		
	S-1	S-2					S	1	2
10.0	3.86	3.51	0.35	35.73	0.40	10.0	1.05	1.38	1.28
20.0	3.86	3.50	0.36	36.56	0.16	20.0	1.04	1.36	1.27
30.0	3.88	3.52	0.36	36.31	0.10	30.0	1.04	1.36	1.28
40.0	3.88	3.53	0.35	35.98	0.07	40.0	1.04	1.36	1.29
50.0	3.88	3.53	0.35	35.59	0.02	50.0	1.05	1.36	1.30
60.0	3.89	3.54	0.35	35.31	0.05	60.0	1.06	1.36	1.30
70.0	3.89	3.54	0.35	35.03	0.01	70.0	1.06	1.36	1.30
80.0	3.90	3.54	0.36	34.82	0.06	80.0	1.07	1.36	1.30
90.0	3.91	3.55	0.36	34.71	0.01	90.0	1.08	1.36	1.30
100.0	3.91	3.56	0.35	34.51	0.06	100.0	1.08	1.35	1.29
150.0	3.92	3.58	0.34	33.74	0.10	150.0	1.09	1.34	1.25
200.0	3.92	3.59	0.33	33.30	0.18	200.0	1.11	1.32	1.26
250.0	3.93	3.62	0.31	32.61	0.29	250.0	1.15	1.30	1.27
300.0	3.94	3.64	0.30	30.96	0.41	300.0	1.17	1.27	1.25
350.0	3.95	3.66	0.29	29.46	0.52	350.0	1.17	1.25	1.24
400.0	3.96	3.69	0.27	28.68	0.64	400.0	1.19	1.24	1.25
450.0	3.98	3.72	0.26	28.39	0.73	450.0	1.19	1.22	1.26
475.0	4.01	3.72	0.29	28.05	0.78	475.0	1.19	1.22	1.26
500.0	4.01	3.75	0.26	28.06	0.81	500.0	1.19	1.21	1.26
550.0	4.03	3.78	0.25	27.15	0.92	550.0	1.20	1.20	1.25
600.0	4.06	3.82	0.24	26.03	0.99	600.0	1.20	1.20	1.24
650.0	4.08	3.85	0.23	25.37	1.11	650.0	1.20	1.20	1.25
700.0	4.12	3.87	0.24	25.11	1.24	700.0	1.20	1.20	1.27
750.0	4.14	3.90	0.24	24.72	1.39	750.0	1.19	1.20	1.25
800.0	4.17	3.94	0.23	24.01	1.59	800.0	1.17	1.21	1.24
850.0	4.18	3.97	0.21	23.09	1.70	850.0	1.17	1.22	1.25
900.0	4.21	4.01	0.20	22.26	1.79	900.0	1.16	1.23	1.27
925.0	4.24	4.02	0.22	22.03	1.61	925.0	1.15	1.24	1.27
950.0	4.24	4.04	0.20	21.85	1.81	950.0	1.14	1.25	1.26
975.0	4.26	4.05	0.21	21.48	1.69	975.0	1.13	1.26	1.25
1000.0	4.27	4.08	0.19	21.41	1.77	1000.0	1.12	1.27	1.25
1025.0	4.30	4.09	0.21	21.16	1.77	1025.0	1.11	1.28	1.25
1050.0	4.30	4.11	0.19	20.73	1.74	1050.0	1.11	1.29	1.25
1075.0	4.32	4.12	0.20	20.66	1.77	1075.0	1.1	1.3	1.26
1100.0	4.32	4.15	0.17	20.08	1.75	1100.0	1.09	1.31	1.26
1200.0	4.37	4.23	0.14	19.47	1.64	1200.0	1.03	1.35	1.28
1300.0	4.44	4.31	0.13	19.54	1.57	1300.0	1.02	1.39	1.3
1400.0	4.50	4.39	0.11	19.72	1.82	1400.0	1.01	1.42	1.33
1500.0	4.55	4.49	0.05	20.60	2.08	1500.0	1.03	1.45	1.32
1600.0	4.64	4.64	0.00	22.49	2.42	1600.0	1.06	1.47	1.33
1700.0	4.83	4.85	0.02	24.10	2.70	1700.0	1.09	1.5	1.33
1800.0	5.13	5.11	0.02	23.29	2.89	1800.0	1.13	1.54	1.38
1900.0	5.41	5.28	0.13	21.29	2.48	1900.0	1.17	1.62	1.47
2000.0	5.61	5.30	0.31	19.50	2.45	2000.0	1.22	1.72	1.61
2100.0	5.57	5.27	0.31	18.44	2.37	2100.0	1.27	1.83	1.8
2200.0	5.47	5.15	0.32	18.10	0.69	2200.0	1.27	1.94	1.93
2300.0	5.48	5.12	0.37	18.22	0.12	2300.0	1.24	2.01	2
2400.0	5.50	5.32	0.19	17.65	0.24	2400.0	1.18	2.03	1.96
2500.0	5.87	5.89	0.01	16.27	0.68	2500.0	1.15	2.05	1.9
2600.0	6.39	6.39	0.00	14.59	1.30	2600.0	1.17	2.05	1.75
2700.0	7.33	7.01	0.32	12.82	3.88	2700.0	1.24	2.03	1.64
2800.0	8.19	7.60	0.59	11.80	7.32	2800.0	1.3	2.02	1.57
2900.0	8.83	7.75	1.08	11.30	8.20	2900.0	1.34	2.04	1.58
3000.0	9.13	7.44	1.69	10.89	8.11	3000.0	1.35	2.06	1.63

¹Total Loss = Insertion Loss + 3dB Splitter Loss



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

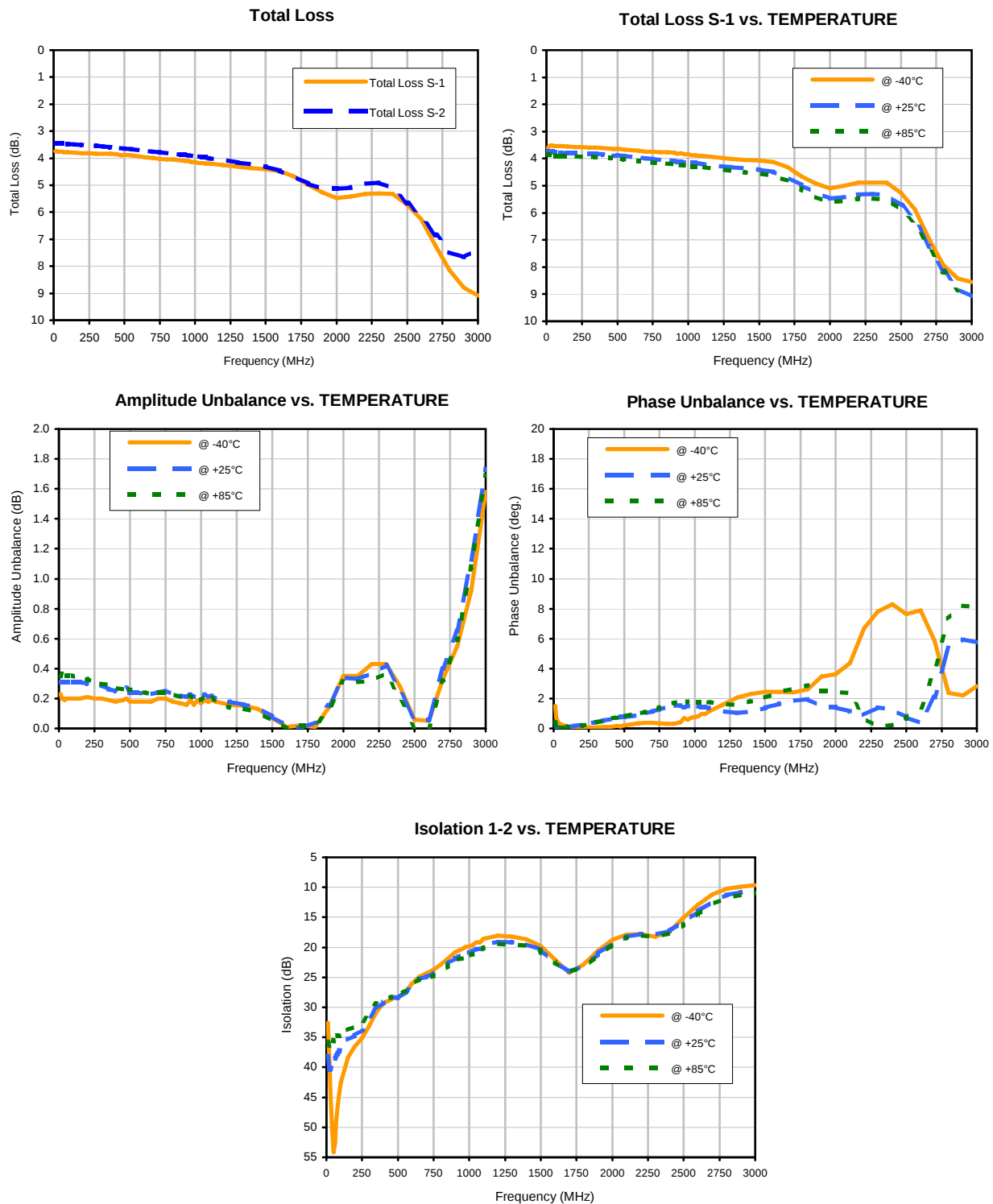
IF/RF MICROWAVE COMPONENTS

REV. OR
SBTC-2-10-75X+
6/4/2012
Page 3 of 3

2 Way-0° Power Splitter/Combiner

SBTC-2-10-75X+

Typical Performance Curves



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



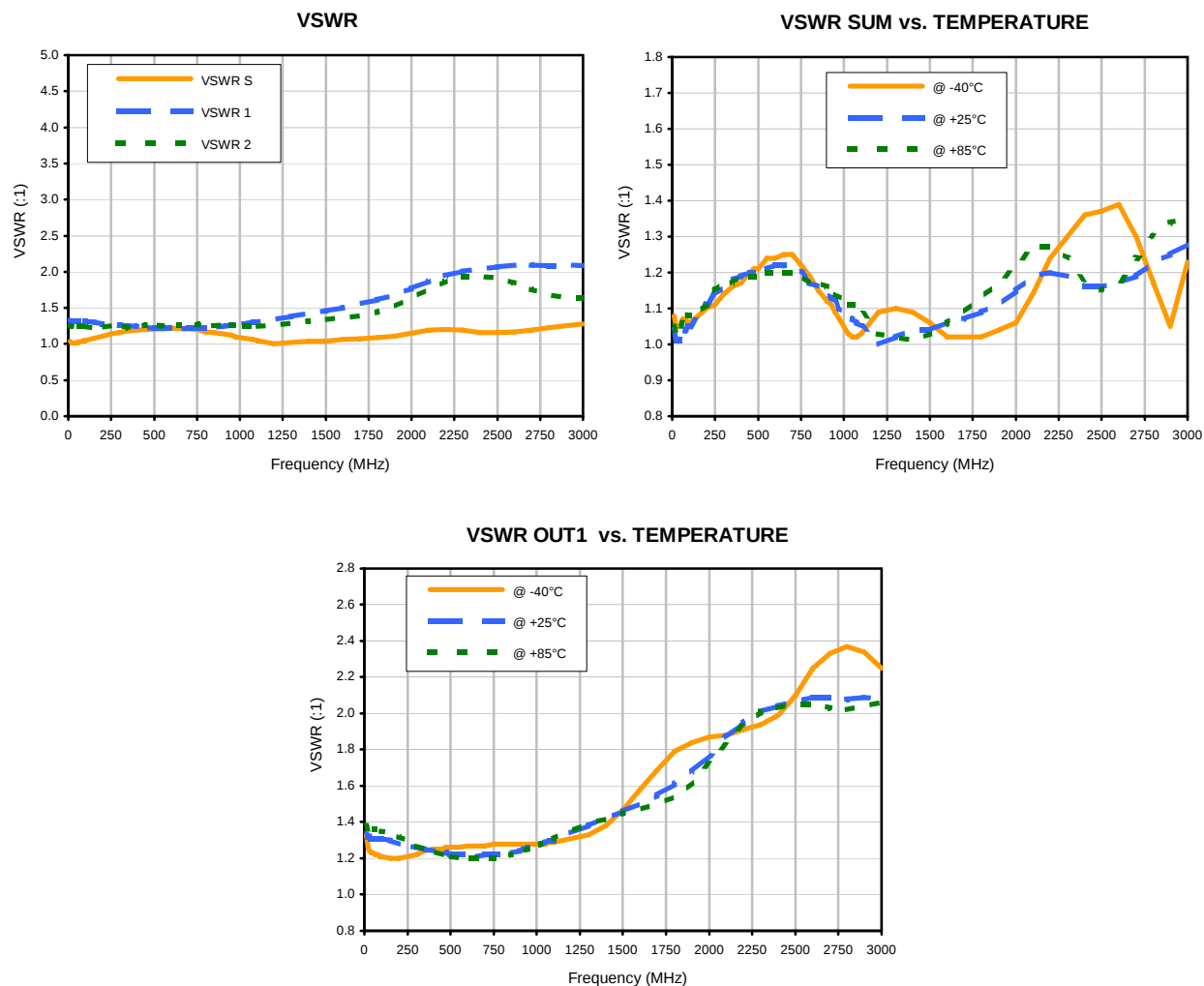
IF/RF MICROWAVE COMPONENTS

REV. OR
 SBTC-2-10-75X+
 6/4/2012
 Page 1 of 2

2 Way-0° Power Splitter/Combiner

SBTC-2-10-75X+

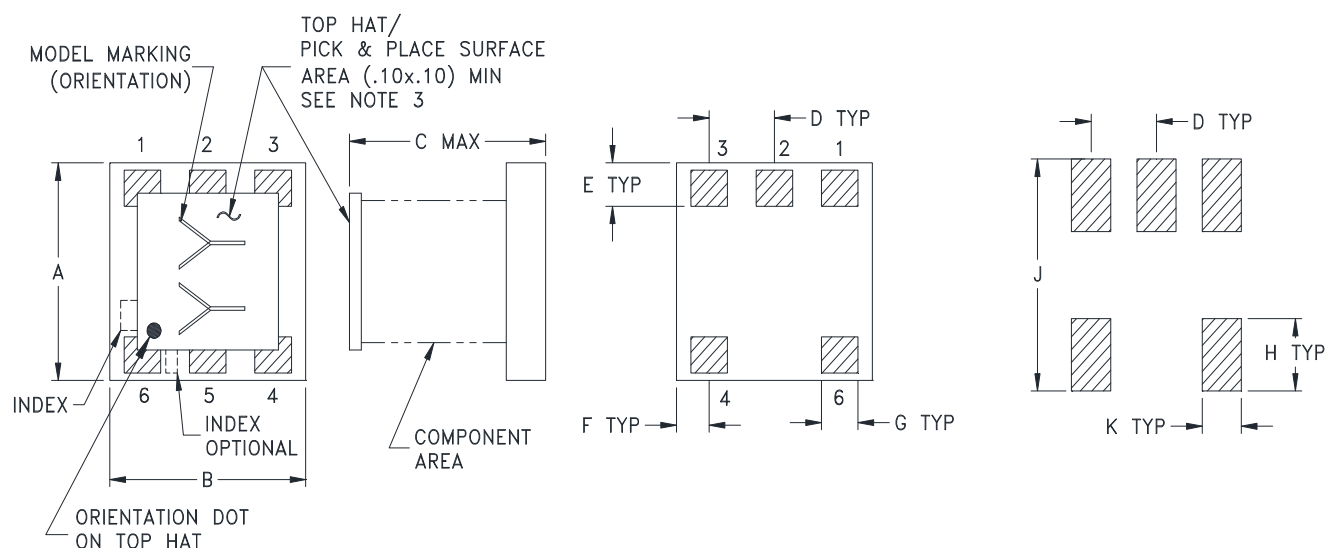
Typical Performance Curves



Outline Dimensions

AT1667

PCB Land Pattern



Suggested Layout,
Tolerance to be within $\pm .002$

CASE #	A	B	C	D	E	F	G	H	J	K	L	WT. GRAMS
AT1667	.150 (3.81)	.150 (3.81)	.150 (3.81)	.050 (1.27)	.030 (0.76)	.025 (0.64)	.028 (0.71)	.050 (1.27)	.160 (4.06)	.030 (0.76)	-- --	.10

Dimensions are in inches (mm). Tolerances: 2 Pl. $\pm .01$; 3 Pl. $\pm .005$

Notes:

1. Open style, Ceramic base.
2. Termination finish: Palladium Silver.
3. Top-hat total thickness: .013 inches MAX.
4. Orientation Dot on Top Hat & Marking on the Substrate both refers to Pin #6 of the Unit.



P.O. Box 350186, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661 For detailed performance specs & shopping online see Mini-Circuits web site

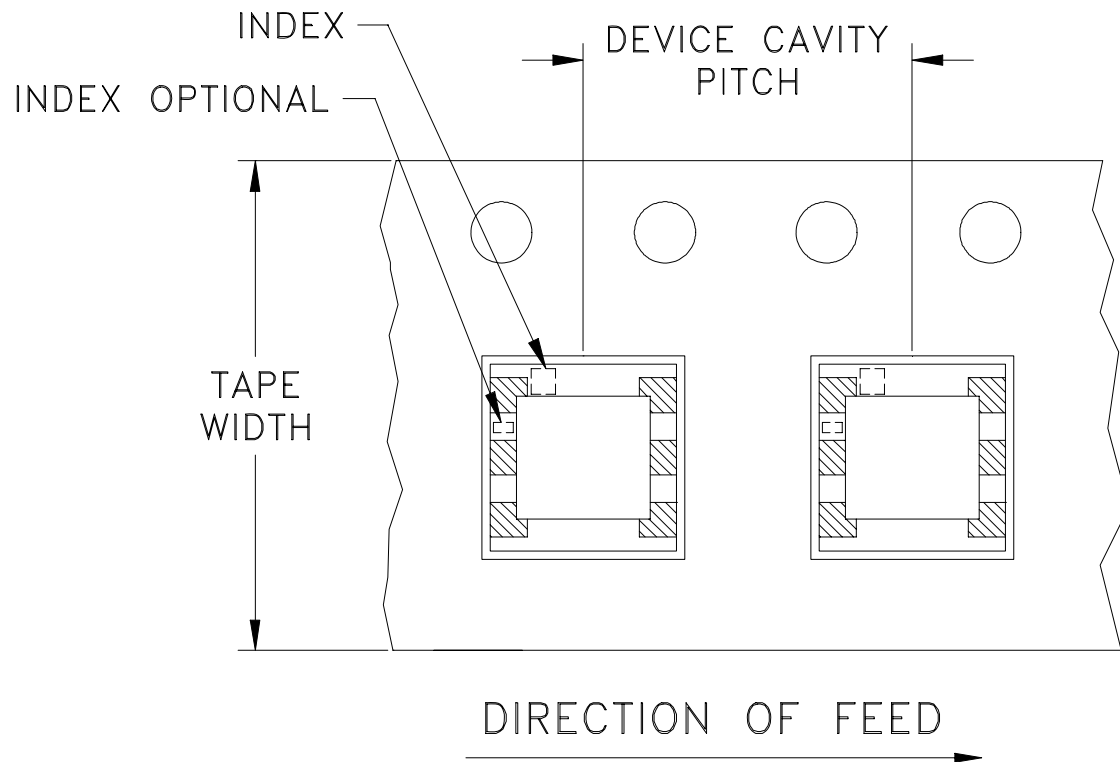


Provides ACTUAL Data Instantly From MINI-CIRCUITS At: www.minicircuits.com

RF/IF MICROWAVE COMPONENTS

Tape & Reel Packaging TR-F15

DEVICE ORIENTATION IN T&R



Tape Width, mm	Device Cavity Pitch, mm	Reel Size, inches	Devices per Reel
12	8	7	20
			50
			100
			200
		13	500
			1000
			2000

Note: Please consult individual model data sheet to determine device per reel availability.

Mini-Circuits carrier tape materials provide protection from ESD (Electro-Static Discharge) during handling and transportation. Tapes are static dissipative and comply with industry standards EIA-481/EIA-541.

Go to: www.minicircuits.com/pages/pdfs/tape.pdf



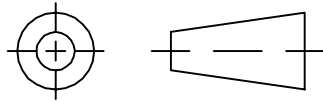
Distribution Centers NORTH AMERICA 800-654-7949 • 417-335-5935 • Fax 417-335-5945 • EUROPE 44-1252-832600 • Fax 44-1252-837010

Mini-Circuits ISO 9001 & ISO 14001 Certified

INTERNET <http://www.minicircuits.com>

P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661

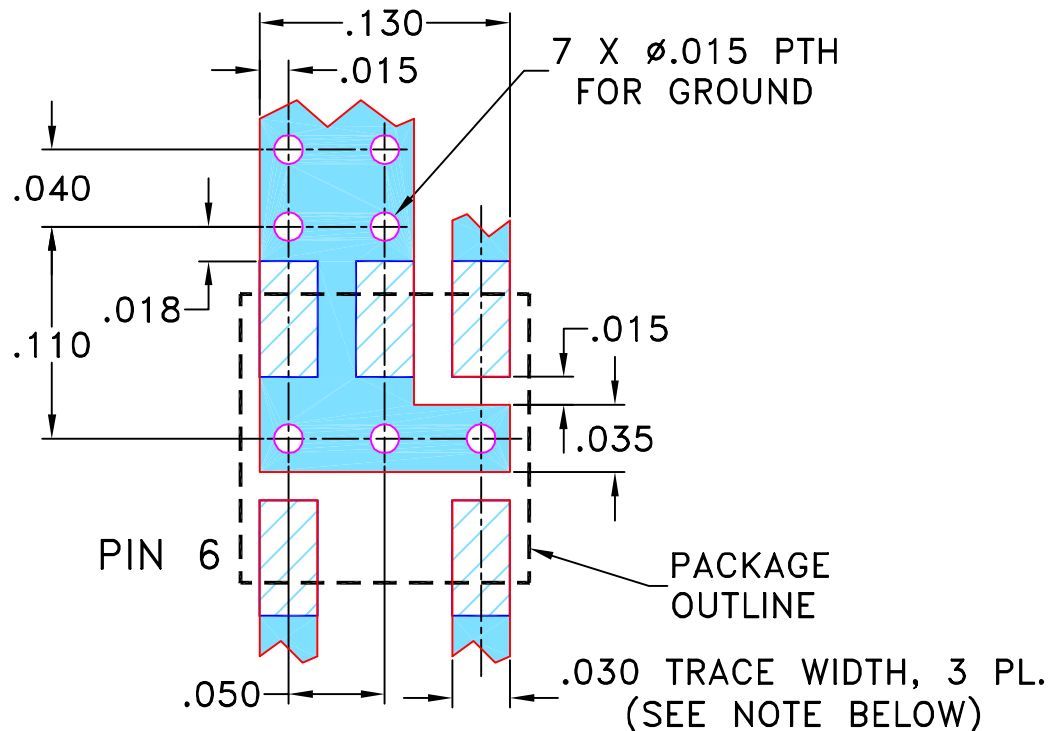
THIRD ANGLE PROJECTION



REVISIONS

REV	ECN No.	DESCRIPTION	DATE	DR	AUTH
OR	M90457	NEW RELEASE	01/16/04	AV	WP
A	M102713	ADDED "...WITH SMOBC"	01/12/06	GF	IL

SUGGESTED MOUNTING CONFIGURATION FOR
AT1029 CASE STYLE, "nc" PIN CONNECTION

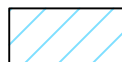


NOTE: 1. TRACE WIDTH IS SHOWN FOR ROGERS R04350B WITH DIELECTRIC THICKNESS 0.030" $\pm$ 0.002"; COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH MAY NEED TO BE MODIFIED.

2. BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.



DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER)



DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK

UNLESS OTHERWISE SPECIFIED

INITIALS

DATE

DIMENSIONS ARE IN INCHES

DRAWN

AV

01/07/04

TOLERANCES ON:

CHECKED

IL

01/16/04

2 PL DECIMALS $\pm$

APPROVED

WP

01/16/04

3 PL DECIMALS $\pm$.005ANGLES $\pm$ FRACTIONS $\pm$

Mini-Circuits®

THIS DOCUMENT AND ITS CONTENTS ARE THE PROPERTY OF MINI-CIRCUITS. EXCEPT FOR USE EXPRESSLY GRANTED, IN WRITING, TO ITS VENDORS, VENDEE AND THE UNITED STATES GOVERNMENT, MINI-CIRCUITS RESERVES ALL PROPRIETARY DESIGN, USE, MANUFACTURING AND REPRODUCTION RIGHTS THERETO. THESE CONTENTS SHALL NOT BE USED, DUPLICATED OR DISCLOSED TO ANY OUTSIDE PARTY, IN WHOLE OR IN PART, WITHOUT WRITTEN PERMISSION OF MINI-CIRCUITS.

ASHEETA1.DWG REV:A DATE:01/12/95



Mini-Circuits® 13 Neptune Avenue
Brooklyn NY 11235

PL, nc, 75, AT1029, SBTC, TB-277

SIZE
A

CODE IDENT
15542

DRAWING NO:
98-PL-153

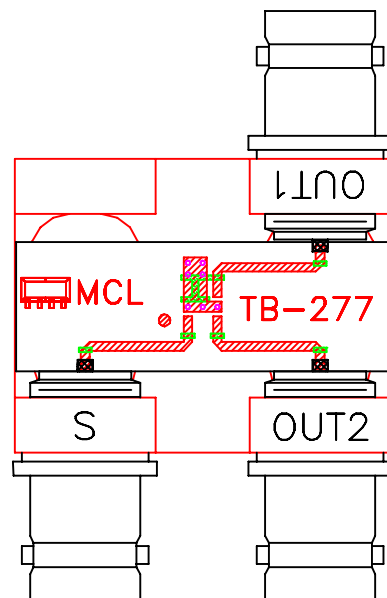
REV:
A

FILE: 98PL153

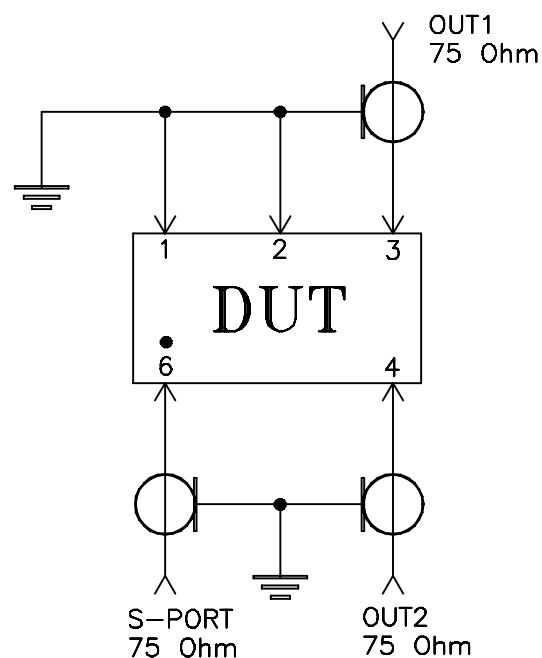
SCALE: 10:1

SHEET: 1 OF 1

Evaluation Board and Circuit



TB-277



Schematic Diagram

Notes:

1. 75 Ohm BNC Female connectors.
2. PCB Material: Rogers R04350 or equivalent,
Dielectric Constant=3.5, Thickness=.030 inch.

 **Mini-Circuits®**



All Mini-Circuits products are manufactured under exacting quality assurance and control standards, and are capable of meeting published specifications after being subjected to any or all of the following physical and environmental test.

Specification	Test/Inspection Condition	Reference/Spec
Operating Temperature	-40° to 85°C Ambient Environment	Individual Model Data Sheet
Storage Temperature	-55° to 100° C Ambient Environment	Individual Model Data Sheet
Humidity	90 to 95% RH, 240 hours, 50°C	MIL-STD-202, Method 103, Condition A, Except 50°C and end-point electrical test done within 12 hours
Thermal Shock	-55° to 100°C, 100 cycles	MIL-STD-202, Method 107, Condition A-3, except +100°C
Solder Reflow Heat	Sn-Pb Eutetic Process: 225°C peak Pb-Free Process 245° - 250°C peak	J-STD-020, Table 4-1, 4-2 and 5-2, Figure 5-1
Solderability	10X Magnification	J-STD-002, 95% Coverage
Vibration (High Frequency)	20g peak, 10-2000 Hz, 12 times in each of three perpendicular directions (total 36)	MIL-STD-202, Method 204, Condition D
Mechanical Shock	50g, 11 ms, 1/2-sine, 18 shocks: 3 each direction, each of 3 axes	MIL-STD-202, Method 213, Condition A
Marking Resistance to Solvents	Isopropyl alcohol + mineral spirits at 25°C; terpene defluxer at 25°C; distilled water + proylene glycol monomethyl ether + monoethanolamine at 63°C to 70°C	MIL-STD-202, Method 215