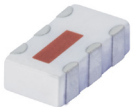
NON-CATALOG

Ultra-Small Ceramic

Power Splitter/Combiner

SCN-3-16

3 Way-0° 50Ω 950 to 1600 MHz



CASE STYLE: FV1206-1

+RoHS Compliant

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

Maximum Ratings

Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C
Power Input (as a splitter)	15W* max.

* Derate linearly to 6W at 100°C ambient.

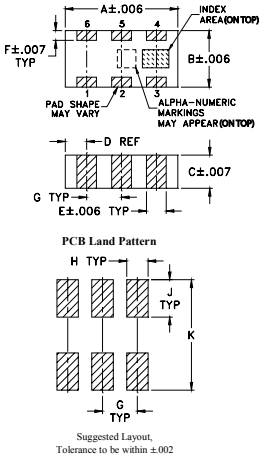
Permanent damage may occur if any of these limits are exceeded.

Pin Connections

SUM PORT	2
PORT 1	6
PORT 2	5
PORT 3	4
GROUND	1,3
PORT 1-2, 2-3	resistor external 124 ohms
PORT 1-3	resistor external 127 ohms

Product Marking: 5S

Outline Drawing

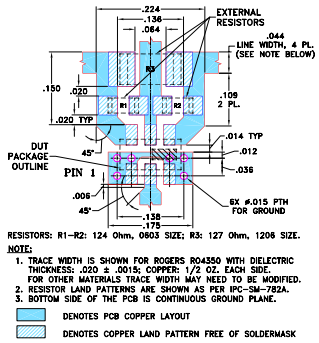


Outline Dimensions (inch / mm)

A	B	C	D	E	F
.126	.063	.035	.024	.022	.011
3.20	1.60	0.89	0.61	0.56	0.28

G	H	J	K	wt
.039	.024	.042	.123	grams
0.99	0.61	1.07	3.12	.020

Demo Board MCL P/N: TB-303
Suggested PCB Layout (PL-171)



Features

- isolation resistors, external
- low insertion loss, 0.6 dB typ.
- excellent amplitude unbalance, 0.2 dB typ.
- very good phase unbalance, 3 deg. typ.
- high isolation, 15 dB typ.
- excellent power handling, 15W as splitter
- small size, 0.12"X0.06"X0.035"
- ESD non-sensitive
- temperature stable LTCC technology
- wrap around, terminations for excellent solderability
- low cost

Applications

- DSS
- WLAN
- satellite communication
- line of sigh communications
- GSM, GPS
- ISM applications
- defense applications

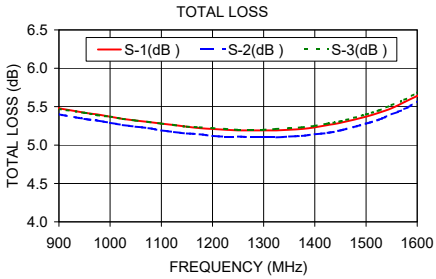
Electrical Specifications

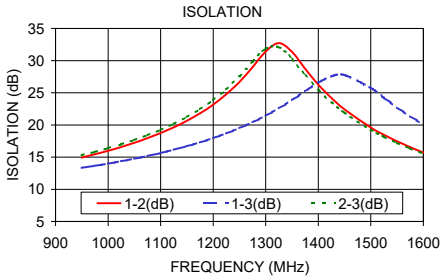
FREQ. RANGE (MHz)	ISOLATION (dB)		INSERTION LOSS (dB) ABOVE 4.8 dB		PHASE UNBALANCE (Degrees)		AMPLITUDE UNBALANCE (dB)		RETURN LOSS (dB)	
f_L-f_U	Typ.	Min.	Typ.	Max.	Typ.	Max.	Typ.	Max.	INPUT Typ.	OUTPUT Typ.
950-1600	**15**	**11**	**0.6**	**1.2**	**3.0**	**5.0**	**0.2**	**0.5**	**14**	**20**
1200-1400	20	14	0.3	0.8	2.0	5.0	0.2	0.4	17	19

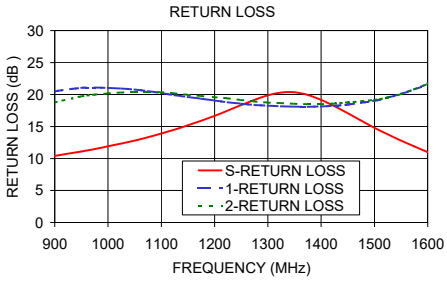
Typical Performance Data

Freq. (MHz)	Total Loss[1] (dB)			Amp. Unbal. (dB)	Isolation (dB)			Phase Unbal. (deg.)	Return Loss (dB)		
	S-1	S-2	S-3		1-2	1-3	2-3		S	1	2
950.00	5.42	5.34	5.42	0.08	14.93	13.32	15.30	1.94	11.10	21.04	19.70
1000.00	5.37	5.29	5.37	0.08	15.99	13.99	16.38	2.02	11.91	21.04	20.18
1050.00	5.32	5.24	5.32	0.08	17.23	14.75	17.66	2.12	12.81	20.79	20.41
1100.00	5.28	5.19	5.28	0.09	18.74	15.64	19.23	2.21	13.90	20.24	20.37
1150.00	5.24	5.15	5.24	0.09	20.65	16.70	21.23	2.32	15.20	19.62	19.96
1200.00	5.21	5.12	5.22	0.09	23.15	17.95	23.86	2.42	16.68	19.07	19.59
1250.00	5.19	5.11	5.20	0.10	26.68	19.50	27.55	2.53	18.37	18.56	19.14
1300.00	5.19	5.10	5.20	0.10	31.40	21.43	31.87	2.61	19.89	18.26	18.75
1350.00	5.20	5.11	5.22	0.11	31.35	23.85	30.21	2.66	20.36	18.11	18.57
1400.00	5.23	5.14	5.25	0.11	26.27	26.57	25.45	2.77	19.18	18.14	18.49
1450.00	5.29	5.19	5.31	0.11	22.42	27.77	21.90	2.89	17.07	18.44	18.78
1500.00	5.37	5.28	5.40	0.12	19.61	25.76	19.26	2.91	14.81	19.03	19.18
1550.00	5.48	5.40	5.52	0.12	17.45	22.72	17.20	2.94	12.80	20.12	20.07
1600.00	5.64	5.56	5.68	0.12	15.72	20.10	15.54	2.99	11.01	21.67	21.69

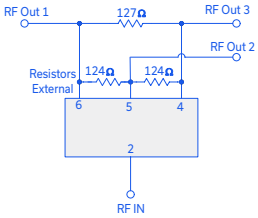
1. Total Loss = Insertion Loss + 4.8dB splitter loss.







electrical schematic



Notes

A. Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.

B. Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.

C. The parts covered by this specification document are subject to Mini-Circuits standard limited warranty and terms and conditions (collectively, "Standard Terms"); Purchasers of this part are entitled to the rights and benefits contained therein. For a full statement of the Standard Terms and the exclusive rights and remedies thereunder, please visit Mini-Circuits' website at www.minicircuits.com/MCLStore/terms.jsp

3 Way-0° Power Splitter/Combiner SCN-3-16

Typical Performance Data

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

FREQ. (MHz)	TOTAL LOSS[1] (dB)			AMP. UNBAL. (dB)	PHASE UNBAL. (deg.)	ISOLATION (dB)			VSWR (:1)			
	S-1	S-2	S-3			1-2	1-3	2-3	S	1	2	3
10	6.09	6.04	6.05	0.05	0.47	6.08	6.10	6.08	3.00	2.92	2.92	2.95
100	6.09	6.08	6.05	0.04	0.92	6.24	6.35	6.26	2.95	2.75	2.75	2.79
200	6.09	6.05	6.06	0.04	1.05	6.67	6.90	6.72	2.91	2.46	2.46	2.54
300	6.07	6.01	6.06	0.06	1.15	7.26	7.60	7.36	2.86	2.14	2.14	2.25
400	6.05	5.96	6.04	0.09	1.32	7.99	8.37	8.13	2.79	1.85	1.85	1.98
500	6.02	5.90	6.00	0.12	1.62	8.83	9.15	8.99	2.70	1.61	1.61	1.74
600	5.97	5.83	5.94	0.14	1.81	9.77	9.97	9.95	2.61	1.42	1.42	1.54
700	5.91	5.75	5.88	0.16	1.94	10.81	10.81	11.01	2.49	1.27	1.27	1.38
800	5.83	5.65	5.79	0.18	2.00	12.03	11.72	12.20	2.35	1.17	1.17	1.26
825	5.81	5.63	5.78	0.18	2.05	12.35	11.97	12.53	2.31	1.15	1.15	1.23
850	5.78	5.60	5.75	0.18	2.08	12.68	12.22	12.87	2.28	1.13	1.13	1.21
875	5.76	5.57	5.73	0.19	2.12	13.04	12.48	13.23	2.24	1.12	1.12	1.19
900	5.73	5.54	5.70	0.19	2.16	13.41	12.76	13.60	2.20	1.11	1.11	1.17
925	5.71	5.51	5.68	0.20	2.16	13.80	13.04	13.99	2.16	1.10	1.10	1.16
950	5.68	5.48	5.66	0.20	2.25	14.22	13.34	14.41	2.11	1.10	1.10	1.14
975	5.66	5.45	5.63	0.21	2.26	14.66	13.64	14.83	2.07	1.11	1.11	1.13
1000	5.63	5.42	5.60	0.21	2.29	15.11	13.98	15.30	2.03	1.11	1.11	1.13
1025	5.61	5.39	5.58	0.22	2.33	15.61	14.33	15.79	1.98	1.12	1.12	1.12
1050	5.57	5.36	5.55	0.21	2.30	16.13	14.68	16.32	1.93	1.13	1.13	1.12
1075	5.54	5.33	5.52	0.21	2.33	16.70	15.07	16.88	1.89	1.14	1.14	1.12
1100	5.51	5.30	5.50	0.21	2.35	17.31	15.48	17.49	1.84	1.16	1.16	1.12
1125	5.49	5.26	5.47	0.23	2.37	17.98	15.92	18.15	1.79	1.17	1.17	1.13
1150	5.46	5.23	5.44	0.23	2.41	18.72	16.39	18.87	1.74	1.18	1.18	1.13
1175	5.43	5.20	5.42	0.23	2.41	19.51	16.90	19.69	1.68	1.19	1.19	1.14
1200	5.40	5.17	5.39	0.23	2.44	20.40	17.43	20.55	1.63	1.20	1.20	1.15
1225	5.37	5.14	5.37	0.23	2.46	21.37	18.02	21.52	1.58	1.21	1.21	1.15
1250	5.35	5.11	5.34	0.24	2.46	22.46	18.65	22.59	1.52	1.21	1.21	1.16
1275	5.32	5.09	5.32	0.23	2.49	23.69	19.32	23.77	1.46	1.22	1.22	1.16
1300	5.30	5.06	5.29	0.24	2.52	25.03	20.06	25.06	1.41	1.23	1.23	1.16
1325	5.28	5.04	5.28	0.24	2.56	26.44	20.84	26.36	1.35	1.23	1.23	1.16
1350	5.26	5.02	5.26	0.24	2.57	27.72	21.66	27.49	1.30	1.23	1.23	1.16
1375	5.25	5.00	5.25	0.25	2.57	28.52	22.49	28.06	1.24	1.24	1.24	1.16
1400	5.23	4.99	5.24	0.25	2.60	28.44	23.32	27.90	1.19	1.24	1.24	1.16
1425	5.23	4.99	5.24	0.25	2.60	27.46	24.04	26.96	1.14	1.24	1.24	1.16
1450	5.23	4.99	5.24	0.25	2.61	26.02	24.54	25.61	1.10	1.24	1.24	1.15
1475	5.24	5.00	5.25	0.25	2.58	24.50	24.73	24.18	1.09	1.24	1.24	1.15
1500	5.25	5.01	5.27	0.26	2.61	23.05	24.53	22.82	1.12	1.24	1.24	1.14
1525	5.28	5.05	5.30	0.25	2.60	21.75	23.97	21.54	1.17	1.24	1.24	1.14
1550	5.32	5.08	5.34	0.26	2.60	20.54	23.16	20.37	1.24	1.24	1.24	1.14
1575	5.36	5.13	5.39	0.26	2.61	19.47	22.22	19.33	1.31	1.25	1.25	1.14
1600	5.42	5.19	5.44	0.25	2.60	18.50	21.26	18.39	1.40	1.26	1.26	1.14
1625	5.48	5.27	5.51	0.25	2.64	17.61	20.33	17.54	1.51	1.27	1.27	1.15
1650	5.56	5.35	5.60	0.25	2.60	16.83	19.43	16.77	1.62	1.29	1.29	1.16
1675	5.66	5.46	5.70	0.24	2.60	16.12	18.58	16.06	1.75	1.31	1.31	1.18
1700	5.78	5.59	5.83	0.24	2.58	15.49	17.80	15.43	1.89	1.34	1.34	1.21
1725	5.91	5.73	5.96	0.23	2.60	14.92	17.12	14.87	2.05	1.37	1.37	1.24
1750	6.06	5.89	6.12	0.23	2.61	14.40	16.49	14.36	2.23	1.40	1.40	1.28
1775	6.23	6.07	6.30	0.23	2.57	13.93	15.90	13.90	2.43	1.45	1.45	1.32
1800	6.43	6.27	6.49	0.22	2.57	13.52	15.38	13.48	2.66	1.49	1.49	1.36
1825	6.64	6.50	6.71	0.21	2.56	13.15	14.92	13.13	2.91	1.55	1.55	1.42
1850	6.86	6.74	6.95	0.21	2.55	12.83	14.50	12.80	3.19	1.60	1.60	1.47
1900	7.38	7.29	7.47	0.18	2.50	12.31	13.83	12.29	3.87	1.73	1.73	1.59
1950	7.98	7.94	8.09	0.15	2.43	11.95	13.30	11.91	4.70	1.88	1.88	1.73
2000	8.64	8.65	8.77	0.13	2.31	11.71	12.94	11.69	5.74	2.03	2.03	1.88

[1] Total Loss = Insertion Loss+ 4.8dB Splitter Loss

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3 Way-0° Power Splitter/Combiner SCN-3-16

Typical Performance Data

TEST CONDITIONS: INPUT POWER = 0dBm @Temperature = -55°C

FREQ. (MHz)	TOTAL LOSS[1] (dB)			AMP. UNBAL. (dB)	PHASE UNBAL. (deg.)	ISOLATION (dB)			VSWR (:1)			
	S-1	S-2	S-3			1-2	1-3	2-3	S	1	2	3
10	6.07	6.05	6.04	0.03	0.44	6.06	6.08	6.06	3.01	2.94	2.94	2.97
100	6.02	6.02	6.01	0.01	0.91	6.23	6.34	6.25	2.93	2.79	2.79	2.83
200	6.02	5.98	6.02	0.04	1.12	6.63	6.89	6.68	2.91	2.51	2.51	2.57
300	6.02	5.96	6.02	0.06	1.39	7.17	7.53	7.27	2.90	2.17	2.17	2.27
400	5.98	5.89	5.96	0.09	1.53	7.91	8.29	8.04	2.82	1.88	1.88	2.00
500	5.92	5.83	5.91	0.09	1.69	8.73	9.04	8.89	2.73	1.63	1.63	1.77
600	5.85	5.74	5.85	0.11	2.16	9.66	9.86	9.84	2.63	1.44	1.44	1.56
700	5.79	5.65	5.77	0.14	2.43	10.71	10.71	10.89	2.51	1.28	1.28	1.39
800	5.70	5.55	5.69	0.15	2.63	11.93	11.62	12.10	2.39	1.17	1.17	1.26
825	5.68	5.52	5.67	0.16	2.66	12.25	11.88	12.43	2.35	1.15	1.15	1.23
850	5.65	5.47	5.62	0.18	2.66	12.61	12.15	12.80	2.30	1.14	1.14	1.21
875	5.61	5.44	5.60	0.17	2.75	12.99	12.43	13.18	2.25	1.13	1.13	1.20
900	5.58	5.41	5.56	0.17	2.84	13.36	12.70	13.56	2.21	1.12	1.12	1.18
925	5.55	5.38	5.55	0.17	2.89	13.76	12.99	13.96	2.17	1.11	1.11	1.17
950	5.53	5.35	5.53	0.18	2.95	14.19	13.29	14.39	2.13	1.11	1.11	1.15
975	5.50	5.31	5.49	0.19	2.95	14.65	13.61	14.83	2.08	1.11	1.11	1.14
1000	5.46	5.28	5.45	0.18	2.99	15.14	13.97	15.33	2.03	1.12	1.12	1.14
1025	5.43	5.24	5.42	0.19	3.08	15.64	14.32	15.84	1.98	1.13	1.13	1.14
1050	5.40	5.22	5.40	0.18	3.09	16.17	14.68	16.37	1.94	1.14	1.14	1.14
1075	5.38	5.18	5.37	0.20	3.12	16.76	15.08	16.95	1.89	1.15	1.15	1.14
1100	5.34	5.15	5.34	0.19	3.13	17.40	15.50	17.59	1.84	1.16	1.16	1.14
1125	5.31	5.11	5.30	0.20	3.19	18.14	15.98	18.32	1.78	1.17	1.17	1.15
1150	5.28	5.07	5.27	0.21	3.24	18.92	16.48	19.10	1.73	1.18	1.18	1.16
1175	5.25	5.04	5.25	0.21	3.27	19.77	17.03	19.97	1.68	1.19	1.19	1.16
1200	5.22	5.00	5.21	0.22	3.32	20.72	17.59	20.89	1.63	1.20	1.20	1.16
1225	5.19	4.97	5.19	0.22	3.36	21.82	18.23	22.00	1.57	1.22	1.22	1.17
1250	5.15	4.94	5.16	0.22	3.38	23.10	18.94	23.26	1.51	1.23	1.23	1.18
1275	5.13	4.92	5.14	0.22	3.41	24.58	19.72	24.69	1.45	1.23	1.23	1.18
1300	5.11	4.89	5.11	0.22	3.46	26.24	20.55	26.26	1.40	1.24	1.24	1.18
1325	5.08	4.86	5.09	0.23	3.52	28.03	21.45	27.89	1.34	1.24	1.24	1.18
1350	5.05	4.84	5.07	0.23	3.55	29.59	22.41	29.18	1.27	1.24	1.24	1.18
1375	5.04	4.83	5.06	0.23	3.56	30.19	23.38	29.43	1.21	1.24	1.24	1.18
1400	5.03	4.82	5.05	0.23	3.61	29.25	24.32	28.47	1.16	1.25	1.25	1.18
1425	5.03	4.81	5.04	0.23	3.67	27.50	25.04	26.89	1.11	1.25	1.25	1.17
1450	5.03	4.81	5.05	0.24	3.68	25.65	25.45	25.19	1.07	1.25	1.25	1.16
1475	5.03	4.82	5.06	0.24	3.69	23.96	25.49	23.61	1.06	1.24	1.24	1.15
1500	5.04	4.83	5.08	0.25	3.72	22.39	24.98	22.14	1.11	1.23	1.23	1.15
1525	5.07	4.87	5.11	0.24	3.73	21.02	24.08	20.80	1.18	1.24	1.24	1.14
1550	5.11	4.91	5.15	0.24	3.77	19.78	22.94	19.60	1.26	1.24	1.24	1.14
1575	5.16	4.96	5.21	0.25	3.78	18.72	21.83	18.56	1.35	1.25	1.25	1.13
1600	5.22	5.03	5.27	0.24	3.78	17.74	20.74	17.63	1.45	1.25	1.25	1.13
1625	5.28	5.10	5.34	0.24	3.80	16.88	19.71	16.78	1.56	1.26	1.26	1.15
1650	5.38	5.20	5.43	0.23	3.79	16.10	18.76	16.02	1.69	1.28	1.28	1.17
1675	5.49	5.32	5.55	0.23	3.80	15.41	17.89	15.33	1.84	1.32	1.32	1.19
1700	5.61	5.46	5.69	0.23	3.77	14.79	17.11	14.72	2.01	1.35	1.35	1.22
1725	5.76	5.62	5.84	0.22	3.77	14.24	16.41	14.18	2.19	1.38	1.38	1.26
1750	5.93	5.80	6.00	0.20	3.86	13.74	15.76	13.68	2.40	1.42	1.42	1.31
1775	6.12	6.00	6.20	0.20	3.85	13.30	15.20	13.24	2.64	1.48	1.48	1.36
1800	6.34	6.23	6.43	0.20	3.87	12.91	14.70	12.86	2.93	1.55	1.55	1.42
1825	6.58	6.50	6.68	0.18	3.87	12.59	14.27	12.54	3.25	1.61	1.61	1.49
1850	6.83	6.77	6.94	0.17	3.86	12.29	13.87	12.25	3.59	1.67	1.67	1.55
1900	7.41	7.38	7.52	0.14	3.94	11.83	13.26	11.79	4.43	1.81	1.81	1.70
1950	8.08	8.09	8.22	0.14	3.88	11.55	12.82	11.51	5.55	2.00	2.00	1.86
2000	8.81	8.89	8.97	0.16	3.88	11.38	12.52	11.34	6.94	2.17	2.17	2.04

[1] Total Loss = Insertion Loss+ 4.8dB Splitter Loss

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3 Way-0° Power Splitter/Combiner SCN-3-16

Typical Performance Data

TEST CONDITIONS: INPUT POWER = 0dBm @Temperature = +100°C

FREQ. (MHz)	TOTAL LOSS[1] (dB)			AMP. UNBAL. (dB)	PHASE UNBAL. (deg.)	ISOLATION (dB)			VSWR (:1)			
	S-1	S-2	S-3			1-2	1-3	2-3	S	1	2	3
10	6.10	6.05	6.06	0.05	0.45	6.10	6.13	6.10	2.98	2.89	2.89	2.93
100	6.14	6.14	6.11	0.03	1.01	6.24	6.33	6.24	3.00	2.72	2.72	2.76
200	6.12	6.10	6.09	0.03	0.76	6.70	6.90	6.73	2.91	2.44	2.44	2.53
300	6.09	6.03	6.07	0.06	0.78	7.31	7.64	7.39	2.82	2.13	2.13	2.25
400	6.11	6.00	6.10	0.11	1.11	8.00	8.40	8.14	2.80	1.83	1.83	1.95
500	6.08	5.95	6.07	0.13	1.34	8.86	9.21	9.02	2.71	1.59	1.59	1.71
600	6.03	5.89	6.01	0.14	1.36	9.83	10.04	10.02	2.61	1.40	1.40	1.52
700	5.98	5.82	5.95	0.16	1.46	10.90	10.89	11.08	2.49	1.26	1.26	1.36
800	5.89	5.71	5.87	0.18	1.45	12.13	11.84	12.31	2.34	1.15	1.15	1.24
825	5.87	5.69	5.85	0.18	1.45	12.46	12.09	12.63	2.30	1.13	1.13	1.21
850	5.85	5.66	5.82	0.19	1.45	12.79	12.34	12.98	2.27	1.11	1.11	1.19
875	5.83	5.63	5.80	0.20	1.46	13.15	12.60	13.34	2.23	1.10	1.10	1.17
900	5.80	5.60	5.77	0.20	1.51	13.52	12.87	13.71	2.19	1.09	1.09	1.15
925	5.77	5.57	5.75	0.20	1.49	13.91	13.16	14.09	2.14	1.08	1.08	1.14
950	5.75	5.54	5.73	0.21	1.55	14.33	13.44	14.51	2.10	1.08	1.08	1.12
975	5.72	5.51	5.70	0.21	1.52	14.76	13.75	14.93	2.05	1.09	1.09	1.11
1000	5.70	5.48	5.68	0.22	1.51	15.21	14.07	15.40	2.01	1.09	1.09	1.11
1025	5.68	5.45	5.66	0.23	1.51	15.70	14.42	15.88	1.96	1.10	1.10	1.10
1050	5.65	5.42	5.63	0.23	1.47	16.21	14.76	16.39	1.92	1.11	1.11	1.10
1075	5.62	5.39	5.60	0.23	1.46	16.78	15.15	16.96	1.86	1.12	1.12	1.10
1100	5.59	5.36	5.58	0.23	1.40	17.36	15.54	17.55	1.82	1.14	1.14	1.10
1125	5.57	5.33	5.55	0.24	1.40	18.03	15.97	18.19	1.76	1.15	1.15	1.10
1150	5.54	5.30	5.53	0.24	1.42	18.71	16.41	18.87	1.71	1.16	1.16	1.10
1175	5.51	5.27	5.50	0.24	1.38	19.47	16.90	19.63	1.66	1.16	1.16	1.11
1200	5.48	5.24	5.47	0.24	1.39	20.29	17.39	20.43	1.61	1.17	1.17	1.11
1225	5.46	5.22	5.46	0.24	1.34	21.20	17.94	21.33	1.56	1.18	1.18	1.12
1250	5.43	5.19	5.43	0.24	1.32	22.19	18.54	22.31	1.50	1.19	1.19	1.12
1275	5.41	5.17	5.41	0.24	1.35	23.27	19.15	23.33	1.45	1.20	1.20	1.12
1300	5.39	5.15	5.39	0.24	1.29	24.41	19.80	24.40	1.40	1.20	1.20	1.13
1325	5.38	5.13	5.38	0.25	1.31	25.53	20.48	25.44	1.34	1.21	1.21	1.13
1350	5.36	5.12	5.36	0.24	1.32	26.51	21.19	26.31	1.29	1.21	1.21	1.13
1375	5.35	5.10	5.35	0.25	1.27	27.16	21.89	26.81	1.25	1.21	1.21	1.13
1400	5.34	5.10	5.35	0.25	1.25	27.22	22.59	26.82	1.20	1.22	1.22	1.13
1425	5.34	5.09	5.35	0.26	1.23	26.62	23.21	26.26	1.16	1.22	1.22	1.13
1450	5.35	5.10	5.36	0.26	1.21	25.57	23.65	25.23	1.13	1.22	1.22	1.12
1475	5.36	5.11	5.37	0.26	1.19	24.38	23.85	24.09	1.13	1.22	1.22	1.12
1500	5.37	5.13	5.39	0.26	1.16	23.13	23.78	22.90	1.16	1.23	1.23	1.12
1525	5.40	5.17	5.42	0.25	1.12	21.96	23.42	21.77	1.20	1.23	1.23	1.12
1550	5.44	5.21	5.46	0.25	1.12	20.83	22.85	20.69	1.26	1.23	1.23	1.12
1575	5.48	5.25	5.51	0.26	1.09	19.83	22.13	19.71	1.33	1.24	1.24	1.12
1600	5.54	5.31	5.56	0.26	1.05	18.89	21.35	18.80	1.41	1.25	1.25	1.13
1625	5.60	5.38	5.63	0.26	1.01	18.06	20.56	18.00	1.50	1.27	1.27	1.14
1650	5.68	5.46	5.71	0.25	0.96	17.30	19.76	17.24	1.61	1.28	1.28	1.15
1675	5.77	5.56	5.81	0.25	0.91	16.61	18.98	16.54	1.72	1.30	1.30	1.17
1700	5.88	5.68	5.93	0.25	0.89	15.97	18.25	15.91	1.85	1.32	1.32	1.20
1725	6.00	5.80	6.05	0.25	0.88	15.39	17.59	15.36	1.99	1.35	1.35	1.22
1750	6.14	5.95	6.19	0.24	0.85	14.87	16.98	14.84	2.15	1.39	1.39	1.26
1775	6.29	6.12	6.35	0.23	0.81	14.39	16.41	14.37	2.33	1.43	1.43	1.29
1800	6.46	6.30	6.53	0.23	0.78	13.96	15.88	13.94	2.52	1.46	1.46	1.33
1825	6.65	6.50	6.72	0.22	0.72	13.57	15.41	13.56	2.74	1.51	1.51	1.37
1850	6.86	6.72	6.93	0.21	0.70	13.23	14.98	13.21	2.97	1.56	1.56	1.42
1900	7.32	7.22	7.41	0.19	0.60	12.68	14.27	12.66	3.54	1.67	1.67	1.52
1950	7.86	7.80	7.96	0.16	0.46	12.24	13.68	12.22	4.23	1.79	1.79	1.64
2000	8.46	8.45	8.59	0.14	0.35	11.94	13.25	11.93	5.07	1.93	1.93	1.76

[1] Total Loss = Insertion Loss+ 4.8dB Splitter Loss

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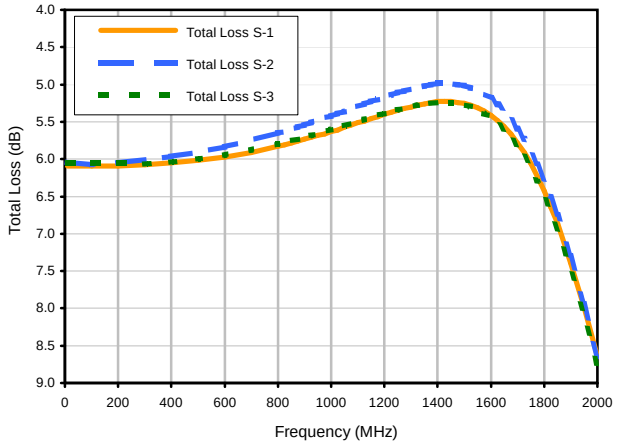
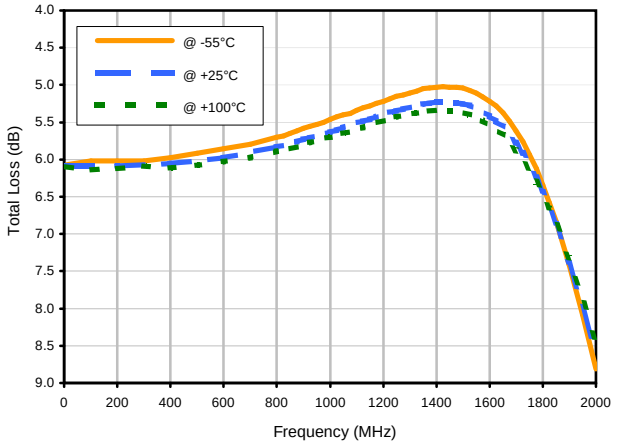
3 Way-0° Power Splitter/Combiner SCN-3-16

Typical Performance Curves

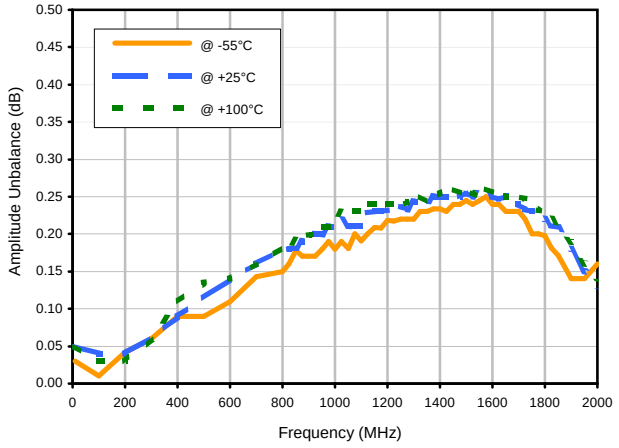
Total Loss



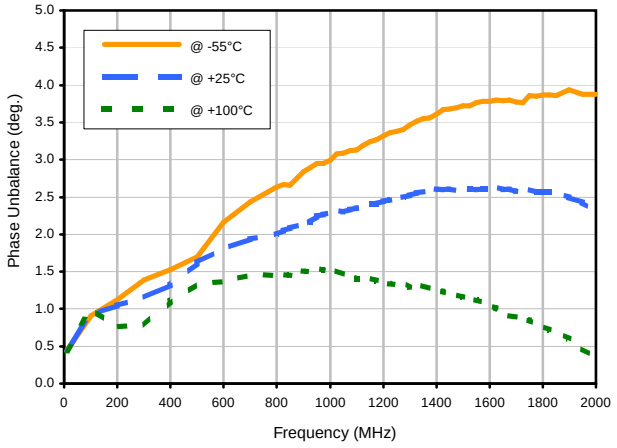
Total Loss S-1 vs. TEMPERATURE



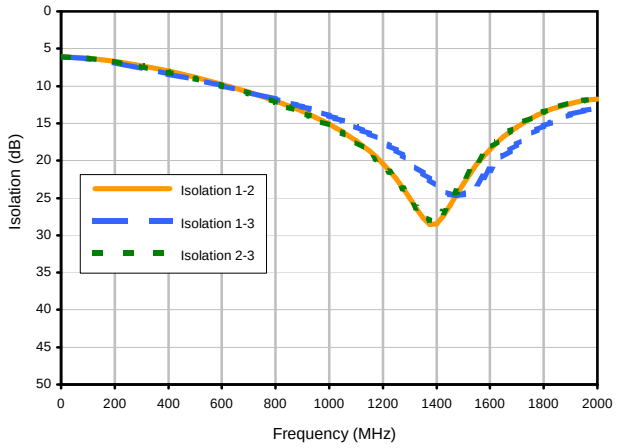
Amplitude Unbalance vs. TEMPERATURE



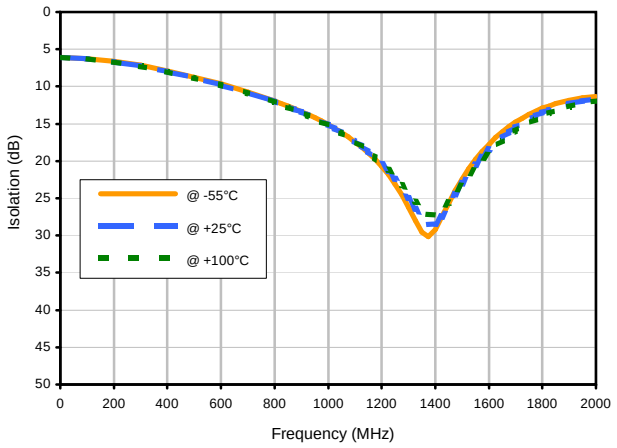
Phase Unbalance vs. TEMPERATURE



Isolation



Isolation 1-2 vs. TEMPERATURE



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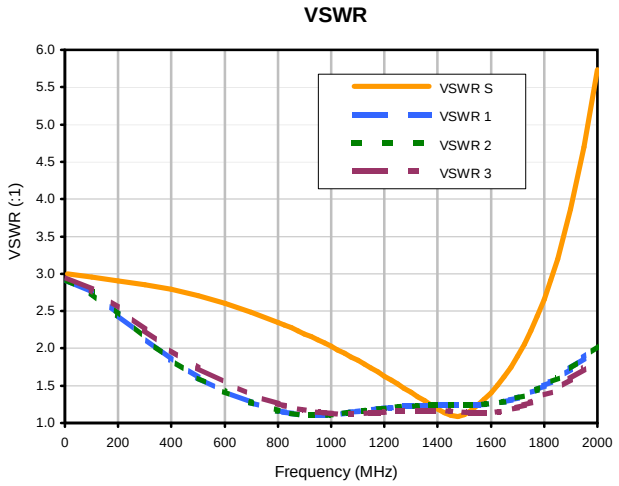
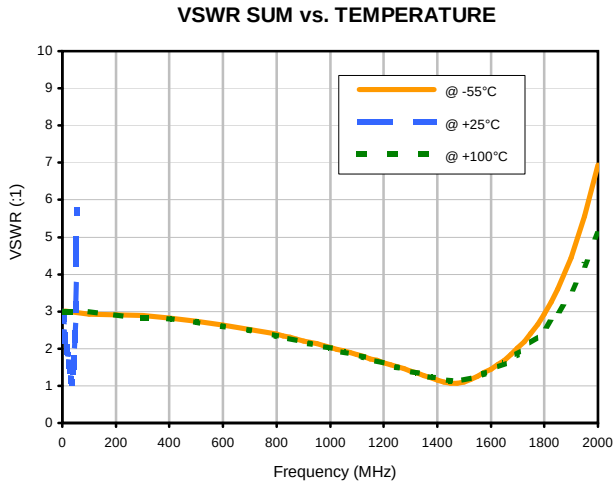
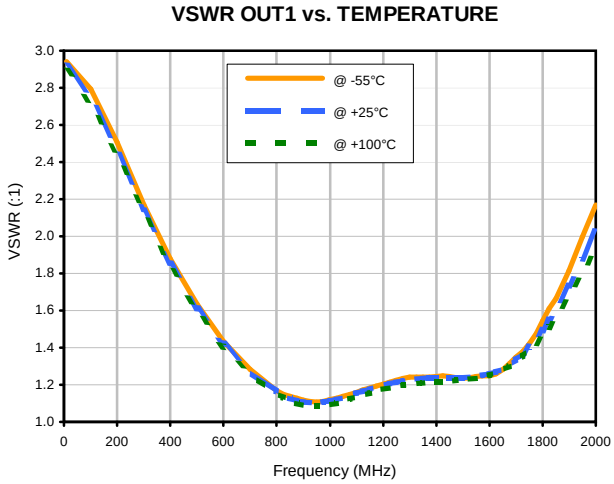
Typical Performance Curves







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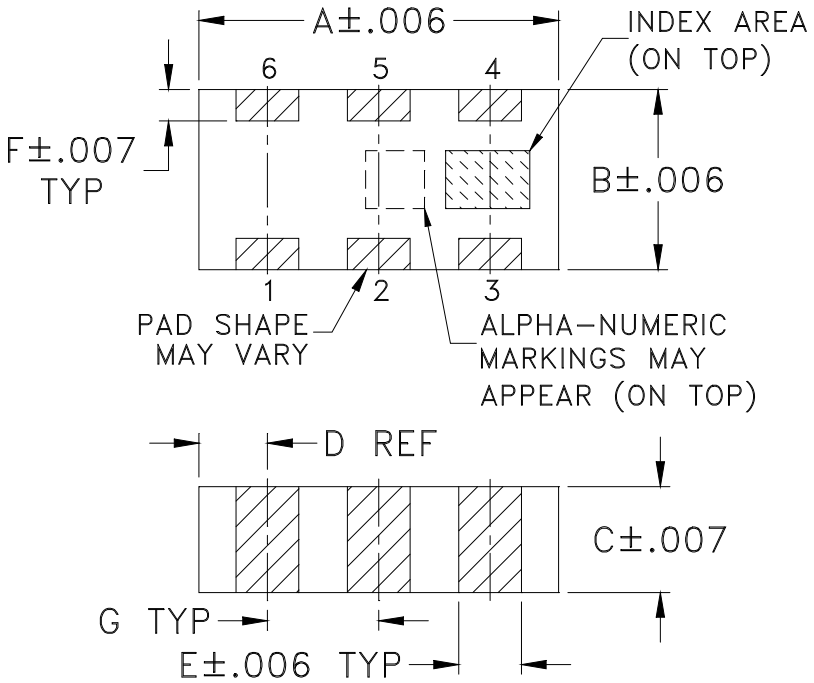
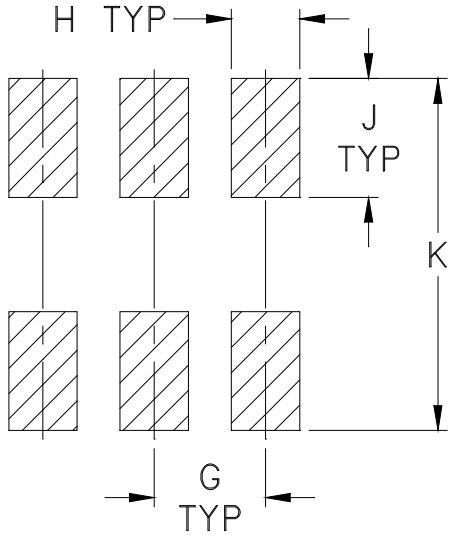
Case Style FV

FV1206-1

Outline Dimensions



PCB Land Pattern



Suggested Layout,
Tolerance to be within ±.002

CASE #	A	B	C	D	E	F	G	H	J	K	L	M	N	P	WT. GRAM
FV1206-1	.126 (3.20)	.063 (1.60)	.035 (0.89)	.024 (0.61)	.022 (0.56)	.011 (0.28)	.039 (0.99)	.024 (0.61)	.042 (1.07)	.123 (3.12)	-- --	-- --	-- --	-- --	.020

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

Notes:

1. Open style, ceramic base.
2. Termination finish: **as shown below or indicated on Data Sheet.**
   For RoHS Case Styles: Tin plate over Nickel plate. All models, (+) suffix.
   For RoHS-5 Case Styles: Tin-Lead plate. All models, no (+) suffix.

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Tape & Reel Packaging TR-F75

DEVICE ORIENTATION IN T&R

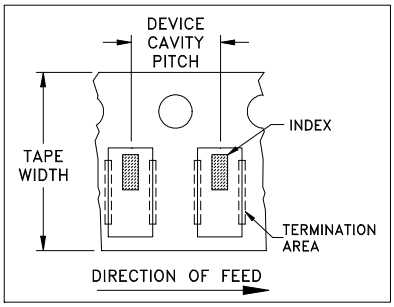

ILLUSTRATION 1

Applicable Case Styles
FV1206-1 FV1206-3

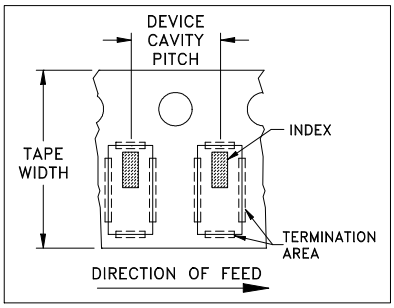

ILLUSTRATION 2

Applicable Case Styles
FV1206-4 FV1206-5 FV1206-6 FV1206-7 FV1206-9

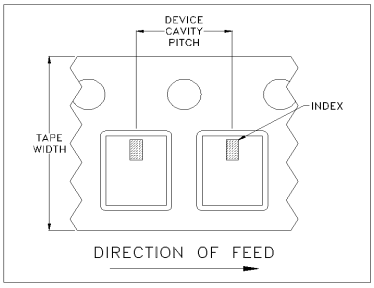

ILLUSTRATION 3

Applicable Case Styles
FV1206-11 FV1206-12 GE0805C-18 NL1008C-6 NL1008C-7 NL1008C-9 NL1008C-10 NL1008C-12

Tape Width, mm	Device Cavity Pitch, mm	Reel Size, inches	Devices per Reel	
8	4	7	Small quantity standards (see note)	20
				50
				100
				200
				500
				1000
			Standard	3000

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

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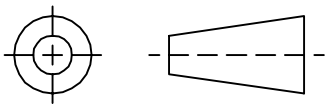
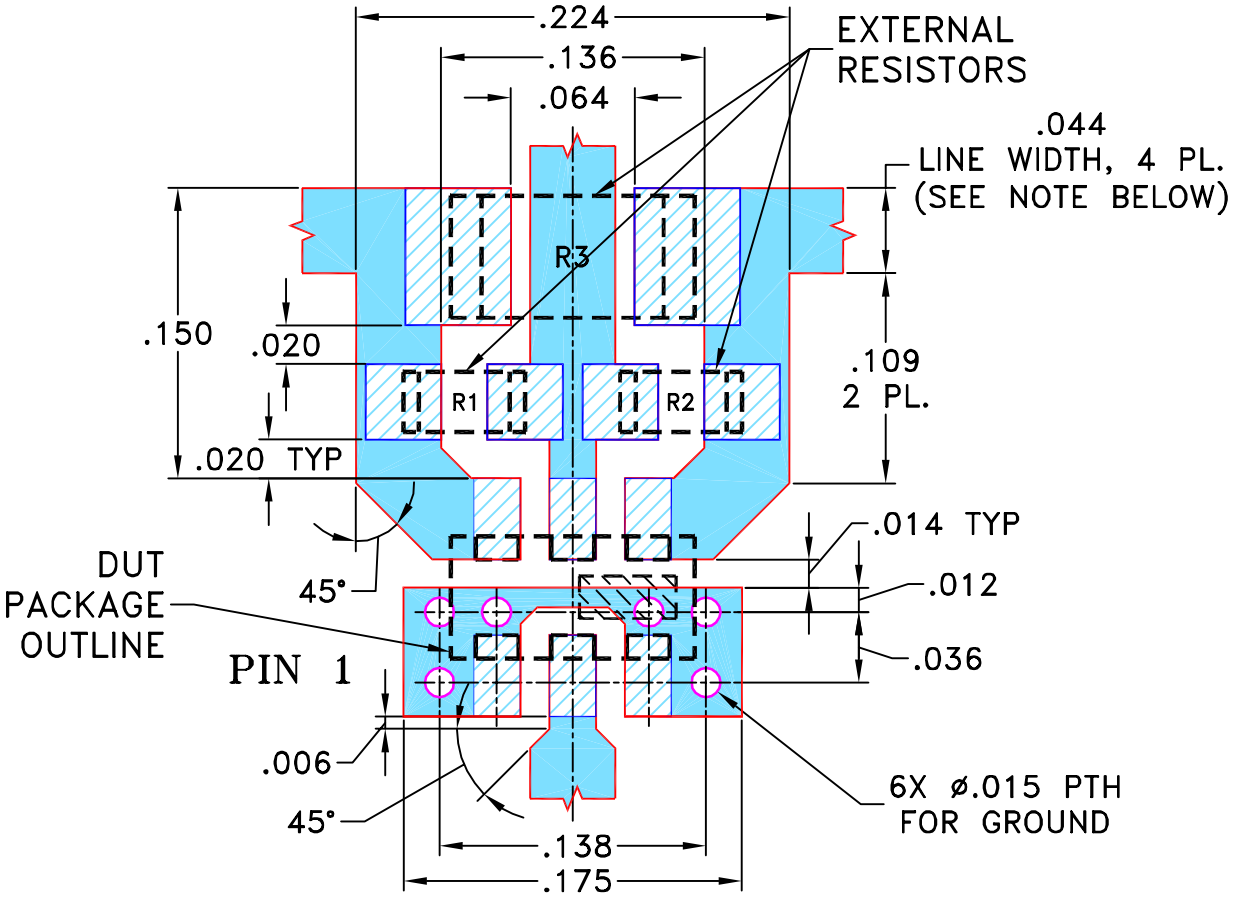
THIRD ANGLE PROJECTION



REVISIONS					
REV	ECN No.	DESCRIPTION	DATE	DR	AUTH
OR	M94644	NEW RELEASE	10/12/04	MMG	ABD
A	M102713	ADDED "...WITH SMOBC", REMOVED NOTE 2	01/20/06	GT	IL

SUGGESTED MOUNTING CONFIGURATION FOR FV1206-1 CASE STYLE, "qc" PIN CONNECTION.



RESISTORS: R1-R2: 124 Ohm, 0603 SIZE; R3: 127 Ohm, 1206 SIZE.

NOTES:
1. TRACE WIDTH IS SHOWN FOR ROGERS RO4350B WITH DIELECTRIC THICKNESS: .020" ± .0015"; 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	MMG	10/04/04
TOLERANCES ON:	CHECKED	AV	10/12/04
2 PL DECIMALS ±	APPROVED	ABD	10/12/04
3 PL DECIMALS ± .005			
ANGLES ±			
FRACTIONS ±			

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

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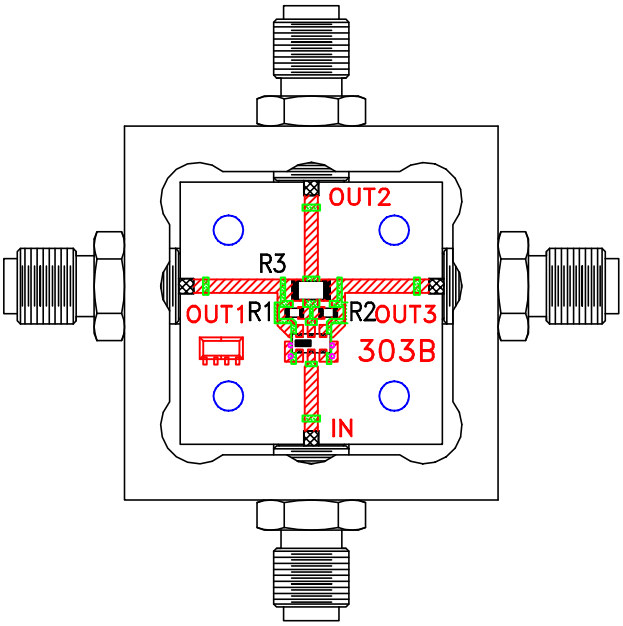
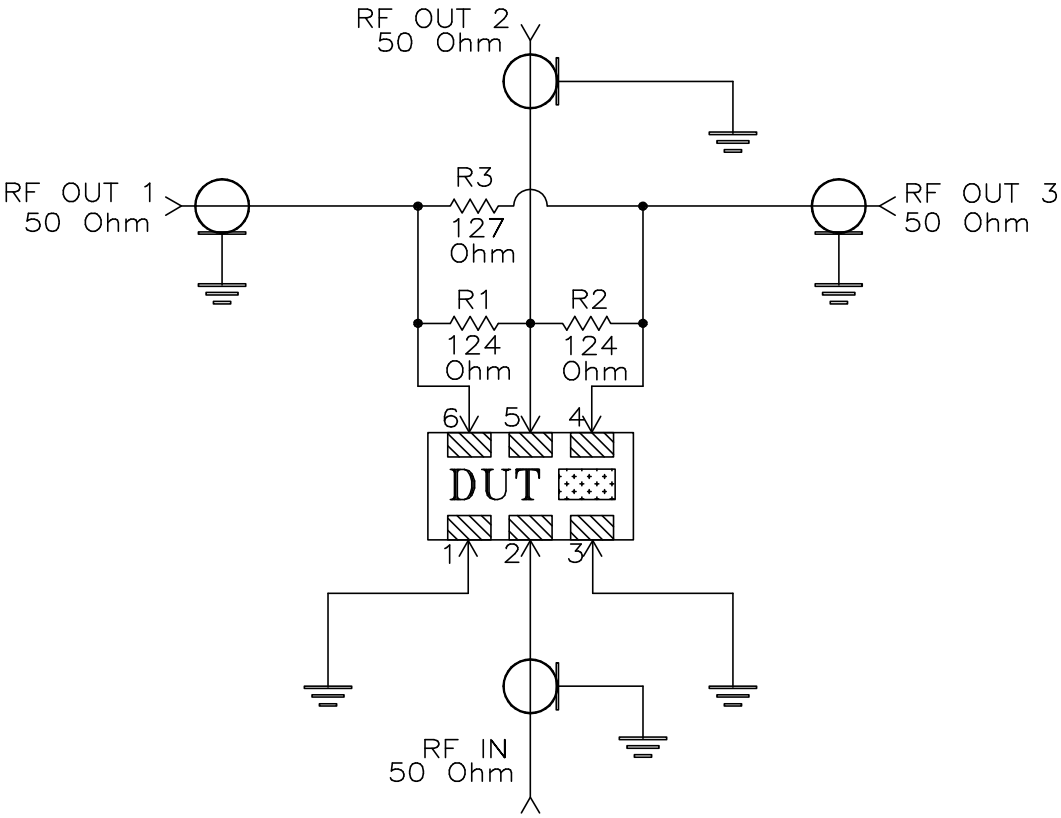
PL, qc, FV1206-1, SCN-3, TB-303

SIZE	CODE IDENT	DRAWING NO:	REV:
A	15542	98-PL-171	A
FILE: 98PL171	SCALE: 10:1	SHEET: 1 OF 1	

Evaluation Board and Circuit



TB-303



Schematic Diagram

Notes:

1. SMA Female connectors.
2. PCB Material: Rogers RO4350 or equivalent, Dielectric Constant=3.5, Thickness=.020 inch.

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Environmental Specifications ENV06

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	-55° to 100°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
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, Para 4.2.5, Test S, 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

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