

Surface Mount  **Power Splitter/Combiner**

**TRPS2-232-75+**

2 Way-0° 75Ω 5 to 2300 MHz

### The Big Deal

- Wideband, 5 to 2300 MHz
- Good power handling, 0.5W as a splitter
- Low insertion loss, 2.0 dB
- Low unbalance, 0.2 dB, 1.2°
- Supports DOCSIS 4.0 requirement



CASE STYLE: AT3081

### Product Overview

Mini-Circuits' TRPS2-232-75+ is a 75Ω 2-way 0° surface-mount power splitter/combiner covering the 5 to 2300 MHz frequency range, supporting bandwidth requirements for DOCSIS® 4.0 systems and equipment, as well as other broadband applications. This model can handle up to 0.5W RF input power as a splitter, and provides low insertion loss and low phase and amplitude unbalance. It features core and wire construction mounted on a 6-lead plastic base (0.20 x 0.20 x 0.13") with Mini-Circuits' TopHat® feature to improve speed and accuracy of pick and place assembly. This design requires external capacitors, inductors and resistors for impedance matching and cycling isolation between the output signals (refer to electrical schematic).

### Key Features

Feature	Advantages
Wideband, 5 to 2300 MHz	Suitable for many broadband applications including DOCSIS® 4.0, CATV and more.
Low insertion loss, 2.0 dB	The combination of 0.5W power handling and low insertion loss makes it a suitable candidate for distributing signals while maintaining signal power.
Good isolation, 20 dB	Minimizes interference between ports
Low unbalance: <ul style="list-style-type: none"><li>• 0.2 dB amplitude unbalance</li><li>• 1.2° phase unbalance</li></ul>	This model produces nearly equal output signals, making it ideal for use in parallel path /multichannel systems
Top Hat® Feature	Improves speed and accuracy of pick and place assembly and provides clear device marking for visual inspection.

top hat®  
Surface Mount  
**Power Splitter/Combiner**

**TRPS2-232-75+**

2 Way-0° 75Ω 5 to 2300 MHz

**Features**

- low insertion, 2 dB typ.
- excellent amplitude unbalance, 0.2 dB typ.
- very good phase unbalance, 1.2 deg. typ.
- low cost



Generic photo used for illustration purposes only

CASE STYLE: AT3081

**+RoHS Compliant**

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

**Applications**

- CATV
- DOCSIS 4.0
- L-Band

Available Tape and Reel at no extra cost

Reel Size	Devices/Reel
7"	500
13"	2000

**Electrical Specifications at 25°C**

Parameter	Frequency (MHz)	Min.	Typ.	Max.	Unit
Frequency Range		5		2300	MHz
Insertion Loss Above 3.0 dB	5 - 1218	—	1.0	1.5	dB
	1218 - 1800	—	1.5	1.9	
Isolation	1800 - 2300	—	1.9	2.5	dB
	5 - 2300	15	20	—	
Phase Unbalance	5 - 2300	—	1.2	5	Degree
Amplitude Unbalance	5 - 2300	—	0.2	0.6	dB
VSWR (Port S)	5 - 2300	—	1.3	—	:1
VSWR (Port 1-2)	5 - 2300	—	1.3	—	:1

**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.

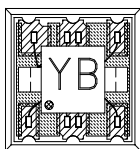
Permanent damage may occur if any of these limits are exceeded.

**Pad Connections<sup>1</sup>**

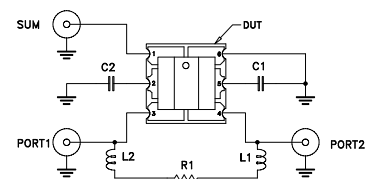
Function	Pad Number
SUM PORT	1
PORT 1	3
PORT 2	4
GROUND	2,5,6
EXT. CAPACITOR 0.6 pF	2
EXT. CAPACITOR 0.5 pF	5
EXT. INDUCTORS 2.2 nH, RESISTOR 221Ω	3,4

1. See PL drawing for external component placement.

**Product Marking**

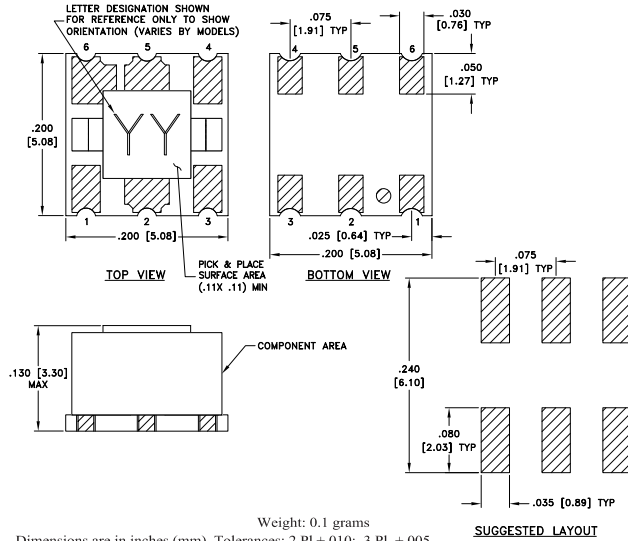


**Electrical Schematic**

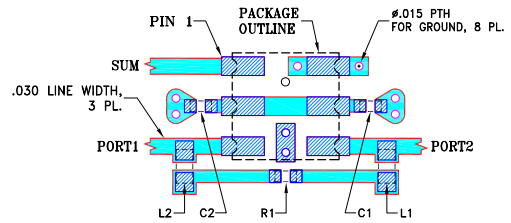


COMPONENT	VALUE/PART NUMBER	SIZE
DUT	TRPS2-232-75+	.200"X.200"
C1	0.6 pF	0402
C2	0.5 pF	0603
L1,L2	2.2 nH	0603
R1	221 Ohm	0402

## Outline Drawing



## Demo Board MCL P/N: TB-TRPS2-23275+ Suggested PCB Layout (PL-673)



COMPONENT	SIZE
C1,C2	0402
L1,L2	0603
P1	0402_

### NOTES:

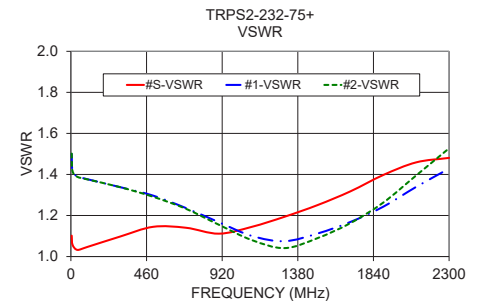
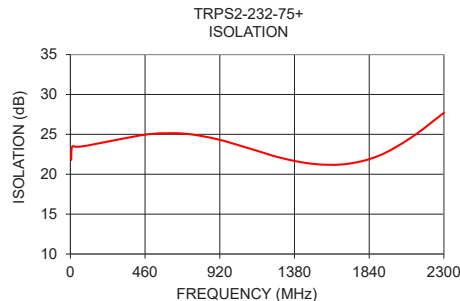
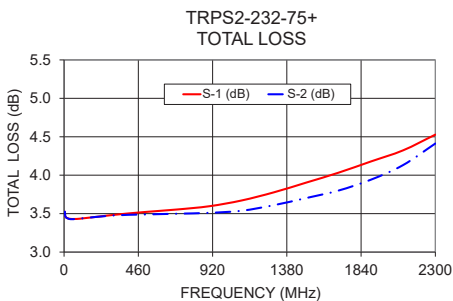
- LINE WIDTH IS SHOWN FOR ROGERS R04350B WITH DIELECTRIC THICKNESS .030±.002"; COPPER: 1/2 OZ. FOR OTHER MATERIALS LINE WIDTH MAY NEED TO BE MODIFIED.
- CHIP COMPONENT FOOT PRINTS SHOWN FOR REFERENCE. FOR COMPONENT VALUES REFER TO TB-1126+.
- BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.

- DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER).
- DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK.

## Typical Performance Data

Frequency (MHz)	Total Loss <sup>1</sup> (dB)		Amplitude Unbalance (dB)	Isolation (dB)	Phase Unbalance (deg.)	VSWR S	VSWR 1	VSWR 2
	S-1	S-2						
5	3.53	3.53	0.00	21.80	0.01	1.10	1.50	1.50
10	3.46	3.46	0.00	23.40	0.00	1.06	1.41	1.42
40	3.43	3.43	0.00	23.44	0.06	1.03	1.39	1.39
100	3.43	3.44	0.00	23.57	0.09	1.05	1.38	1.38
300	3.48	3.48	0.01	24.37	0.28	1.10	1.34	1.34
500	3.52	3.49	0.03	25.05	0.43	1.14	1.30	1.29
700	3.55	3.50	0.05	25.09	0.55	1.14	1.24	1.23
900	3.60	3.51	0.09	24.41	0.55	1.11	1.17	1.15
1100	3.67	3.54	0.13	23.25	0.46	1.14	1.10	1.08
1300	3.78	3.61	0.17	22.03	0.31	1.19	1.08	1.04
1500	3.90	3.70	0.20	21.29	0.02	1.25	1.11	1.09
1700	4.03	3.80	0.23	21.28	0.36	1.32	1.17	1.16
1900	4.18	3.94	0.24	22.32	0.89	1.40	1.24	1.26
2100	4.32	4.13	0.19	24.61	1.40	1.46	1.34	1.40
2300	4.53	4.41	0.12	27.69	1.91	1.48	1.43	1.53

1. Total Loss = Insertion Loss + 3dB splitter loss.



### Additional Notes

- 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.
- Electrical specifications and performance data contained in this specification document are based on Mini-Circuits' applicable established test performance criteria and measurement instructions.
- 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](http://www.minicircuits.com/MCLStore/terms.jsp)

# 2 Way-0° Power Splitter/Combiner

# TRPS2-232-75+

## Typical Performance Data

TEST CONDITIONS: INPUT POWER = -10 dBm @ Temperature = +25°C

FREQ. (MHz)	TOTAL LOSS <sup>(1)</sup> (dB)		AMP. UNBAL. (dB)	ISOLATION (dB)	PHASE UNBAL. (deg.)	FREQ. (MHz)	VSWR (:1)		
	S-1	S-2					S	1	2
3	3.55	3.56	0.01	16.88	0.04	3	1.10	1.69	1.70
5	3.49	3.49	0.00	18.99	0.05	5	1.07	1.54	1.55
7	3.46	3.46	0.00	20.09	0.03	7	1.06	1.49	1.49
10	3.44	3.44	0.00	20.95	0.05	10	1.05	1.45	1.46
30	3.44	3.45	0.01	21.66	0.07	30	1.05	1.42	1.43
50	3.46	3.47	0.00	21.72	0.13	50	1.05	1.42	1.43
70	3.47	3.48	0.01	21.80	0.15	70	1.05	1.41	1.42
90	3.47	3.48	0.01	21.84	0.19	90	1.05	1.41	1.42
100	3.48	3.49	0.01	21.89	0.21	100	1.06	1.41	1.41
150	3.49	3.51	0.02	22.07	0.27	150	1.07	1.41	1.39
200	3.50	3.52	0.03	22.24	0.33	200	1.10	1.38	1.38
250	3.50	3.53	0.03	22.48	0.36	250	1.11	1.39	1.38
300	3.51	3.54	0.03	22.72	0.38	300	1.13	1.37	1.35
400	3.53	3.55	0.03	23.23	0.40	400	1.17	1.35	1.32
500	3.54	3.56	0.02	23.79	0.45	500	1.19	1.35	1.32
600	3.56	3.57	0.00	24.08	0.45	600	1.20	1.31	1.30
700	3.58	3.58	0.00	24.51	0.50	700	1.20	1.29	1.26
800	3.60	3.58	0.02	24.75	0.51	800	1.18	1.23	1.23
900	3.62	3.58	0.04	24.70	0.51	900	1.13	1.18	1.17
1000	3.64	3.59	0.05	24.47	0.60	1000	1.11	1.13	1.14
1100	3.68	3.62	0.06	24.18	0.65	1100	1.12	1.12	1.10
1200	3.73	3.68	0.05	23.97	0.74	1200	1.12	1.10	1.08
1218	3.73	3.69	0.04	23.88	0.72	1218	1.12	1.12	1.07
1230	3.74	3.70	0.04	23.82	0.65	1230	1.13	1.12	1.07
1250	3.75	3.71	0.05	23.75	0.74	1250	1.13	1.11	1.08
1300	3.77	3.75	0.02	23.70	0.62	1300	1.14	1.11	1.08
1350	3.80	3.79	0.00	23.68	0.58	1350	1.15	1.09	1.10
1400	3.82	3.83	0.01	23.78	0.40	1400	1.16	1.14	1.11
1450	3.85	3.87	0.01	23.98	0.25	1450	1.17	1.10	1.12
1500	3.87	3.89	0.02	24.25	0.02	1500	1.18	1.14	1.13
1550	3.89	3.92	0.03	24.61	0.10	1550	1.20	1.12	1.14
1600	3.91	3.92	0.02	24.71	0.29	1600	1.21	1.13	1.15
1650	3.93	3.94	0.01	25.16	0.42	1650	1.25	1.13	1.16
1700	3.93	3.95	0.02	25.50	0.69	1700	1.26	1.13	1.18
1750	3.96	3.95	0.00	26.04	0.72	1750	1.29	1.17	1.16
1800	3.98	3.97	0.01	26.65	1.04	1800	1.29	1.13	1.17
1850	4.01	3.99	0.03	27.51	1.11	1850	1.33	1.18	1.18
1900	4.06	4.02	0.05	28.86	1.41	1900	1.34	1.16	1.23
1950	4.10	4.05	0.05	29.88	1.39	1950	1.34	1.22	1.22
2000	4.14	4.09	0.05	32.17	1.62	2000	1.36	1.23	1.26
2050	4.22	4.14	0.08	34.77	1.53	2050	1.38	1.20	1.26
2100	4.24	4.19	0.05	39.07	1.63	2100	1.40	1.28	1.32
2150	4.32	4.24	0.08	42.78	1.62	2150	1.39	1.22	1.31
2200	4.31	4.29	0.03	39.29	1.62	2200	1.40	1.30	1.37
2250	4.36	4.34	0.03	35.66	1.61	2250	1.42	1.25	1.36
2300	4.38	4.40	0.02	32.85	1.33	2300	1.43	1.27	1.39
2350	4.38	4.44	0.07	30.22	1.40	2350	1.42	1.29	1.37
2400	4.35	4.48	0.13	28.90	1.17	2400	1.36	1.26	1.34
2500	4.37	4.60	0.23	26.28	0.71	2500	1.28	1.25	1.32

<sup>(1)</sup> Total Loss = Insertion Loss + 3dB splitter loss.



REV. OR  
TRPS2-232-75+  
12/11/2020  
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# 2 Way-0° Power Splitter/Combiner

# TRPS2-232-75+

## Typical Performance Data

TEST CONDITIONS: INPUT POWER = -10 dBm @ Temperature = -40°C

FREQ. (MHz)	TOTAL LOSS <sup>(1)</sup> (dB)		AMP. UNBAL. (dB)	ISOLATION (dB)	PHASE UNBAL. (deg.)	FREQ. (MHz)	VSWR (:1)		
	S-1	S-2					S	1	2
3	3.73	3.74	0.01	11.69	0.08	3	1.20	2.36	2.37
5	3.54	3.55	0.01	12.62	0.05	5	1.15	2.10	2.10
7	3.44	3.44	0.01	13.62	0.02	7	1.13	1.90	1.90
10	3.37	3.38	0.00	15.17	0.06	10	1.11	1.71	1.70
30	3.31	3.32	0.01	22.12	0.10	30	1.09	1.32	1.31
50	3.31	3.33	0.01	25.16	0.12	50	1.09	1.25	1.23
70	3.32	3.34	0.01	26.86	0.17	70	1.10	1.22	1.22
90	3.33	3.34	0.02	27.78	0.20	90	1.11	1.20	1.22
100	3.33	3.35	0.02	28.14	0.22	100	1.11	1.20	1.23
150	3.34	3.36	0.02	29.09	0.24	150	1.12	1.23	1.23
200	3.34	3.36	0.02	29.49	0.34	200	1.12	1.24	1.21
250	3.35	3.37	0.02	29.77	0.38	250	1.10	1.25	1.26
300	3.35	3.36	0.01	29.99	0.44	300	1.11	1.23	1.23
400	3.36	3.37	0.00	30.75	0.53	400	1.17	1.28	1.26
500	3.38	3.36	0.02	31.83	0.68	500	1.21	1.28	1.25
600	3.39	3.35	0.05	32.50	0.85	600	1.24	1.28	1.22
700	3.40	3.34	0.06	33.20	0.92	700	1.24	1.25	1.17
800	3.41	3.33	0.08	32.41	1.02	800	1.18	1.18	1.14
900	3.44	3.33	0.11	30.91	1.22	900	1.09	1.13	1.10
1000	3.45	3.33	0.12	29.81	1.30	1000	1.07	1.10	1.08
1100	3.49	3.36	0.13	29.04	1.46	1100	1.10	1.09	1.06
1200	3.53	3.40	0.13	28.71	1.67	1200	1.15	1.12	1.10
1218	3.53	3.41	0.12	28.67	1.50	1218	1.16	1.14	1.10
1230	3.54	3.41	0.12	28.66	1.56	1230	1.16	1.15	1.09
1250	3.55	3.42	0.13	28.74	1.69	1250	1.16	1.15	1.12
1300	3.57	3.46	0.11	28.71	1.60	1300	1.18	1.17	1.15
1350	3.59	3.50	0.09	28.95	1.51	1350	1.17	1.18	1.17
1400	3.62	3.53	0.09	29.49	1.44	1400	1.17	1.26	1.19
1450	3.64	3.56	0.08	30.00	1.09	1450	1.17	1.23	1.21
1500	3.67	3.58	0.09	30.58	1.11	1500	1.16	1.28	1.22
1550	3.69	3.60	0.09	31.42	1.01	1550	1.15	1.25	1.25
1600	3.70	3.60	0.10	31.54	0.94	1600	1.15	1.26	1.25
1650	3.72	3.60	0.12	32.17	0.80	1650	1.17	1.21	1.25
1700	3.73	3.61	0.12	32.72	0.34	1700	1.18	1.21	1.27
1750	3.75	3.61	0.14	32.73	0.51	1750	1.22	1.20	1.23
1800	3.77	3.61	0.16	33.57	0.31	1800	1.24	1.16	1.21
1850	3.83	3.63	0.20	33.11	0.22	1850	1.28	1.18	1.21
1900	3.87	3.65	0.22	33.36	0.05	1900	1.31	1.12	1.23
1950	3.93	3.68	0.25	33.35	0.21	1950	1.32	1.18	1.20
2000	3.95	3.72	0.23	31.77	0.17	2000	1.36	1.20	1.22
2050	4.03	3.77	0.26	30.60	0.03	2050	1.40	1.19	1.20
2100	4.08	3.81	0.27	28.98	0.31	2100	1.44	1.30	1.25
2150	4.14	3.86	0.27	28.00	0.06	2150	1.42	1.28	1.27
2200	4.17	3.90	0.27	26.60	0.44	2200	1.43	1.38	1.36
2250	4.22	3.95	0.27	25.89	0.13	2250	1.40	1.36	1.37
2300	4.25	3.99	0.26	25.39	0.40	2300	1.36	1.42	1.45
2350	4.27	4.04	0.23	24.66	0.19	2350	1.29	1.48	1.50
2400	4.26	4.09	0.17	24.63	0.45	2400	1.19	1.51	1.52
2500	4.42	4.23	0.19	24.49	0.93	2500	1.07	1.59	1.61

<sup>(1)</sup> Total Loss = Insertion Loss + 3dB splitter loss.



# 2 Way-0° Power Splitter/Combiner

# TRPS2-232-75+

## Typical Performance Data

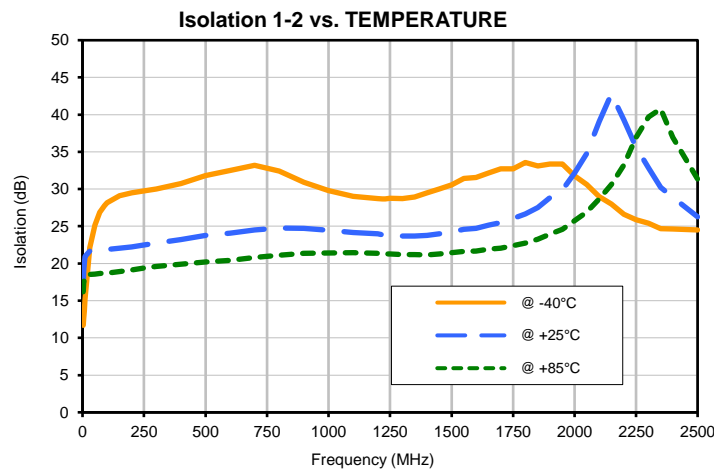
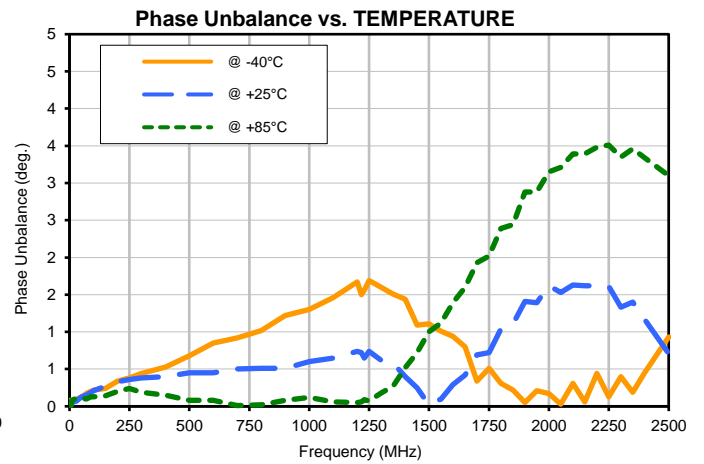
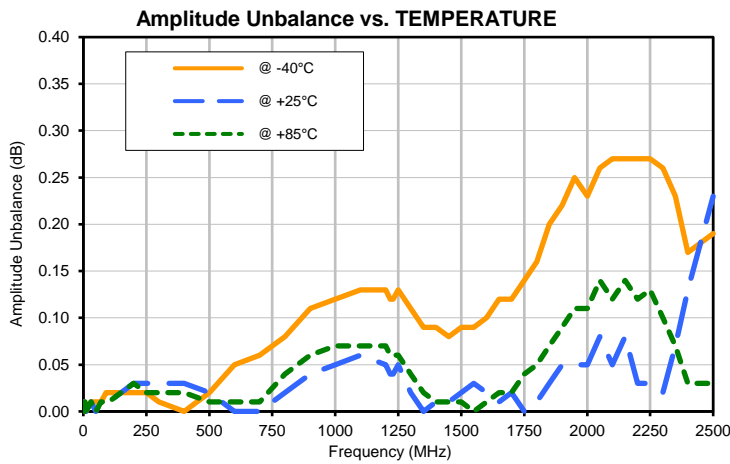
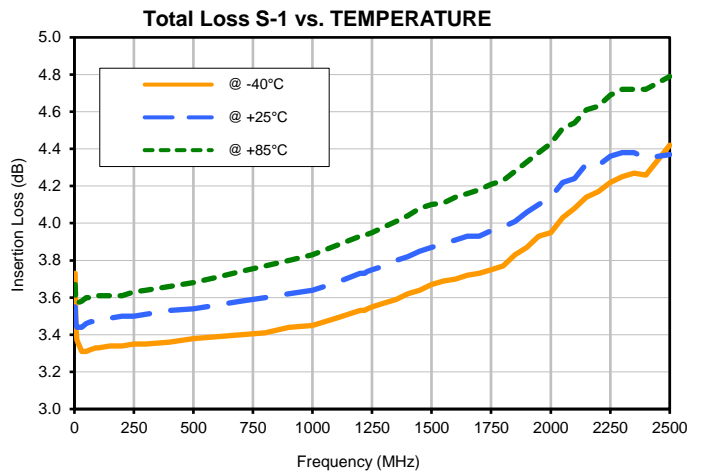
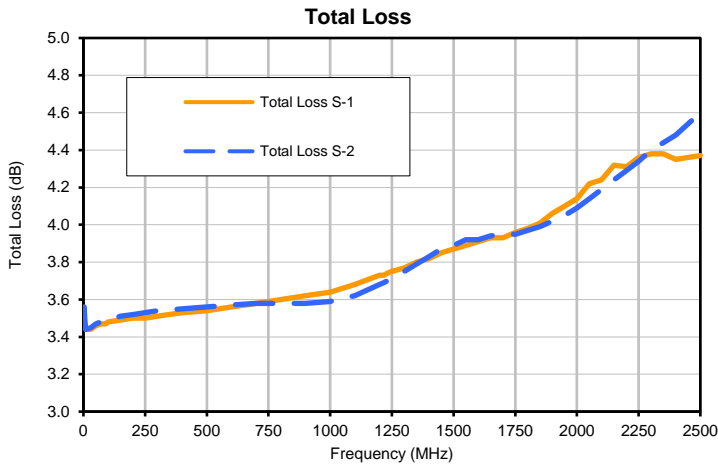
TEST CONDITIONS: INPUT POWER = -10 dBm @ Temperature = +85 °C

FREQ. (MHz)	TOTAL LOSS <sup>(1)</sup> (dB)		AMP. UNBAL. (dB)	ISOLATION (dB)	PHASE UNBAL. (deg.)	FREQ. (MHz)	VSWR (:1)		
	S-1	S-2					S	1	2
3	3.67	3.67	0.00	16.20	0.04	3	1.10	1.77	1.79
5	3.60	3.60	0.00	17.35	0.01	5	1.06	1.66	1.67
7	3.58	3.58	0.01	17.88	0.03	7	1.05	1.61	1.63
10	3.57	3.57	0.00	18.25	0.08	10	1.03	1.59	1.60
30	3.58	3.59	0.01	18.53	0.11	30	1.02	1.57	1.60
50	3.60	3.60	0.00	18.58	0.11	50	1.02	1.58	1.62
70	3.60	3.61	0.01	18.64	0.10	70	1.02	1.59	1.62
90	3.61	3.61	0.01	18.68	0.13	90	1.02	1.59	1.60
100	3.61	3.62	0.01	18.71	0.13	100	1.03	1.59	1.58
150	3.61	3.63	0.02	18.92	0.14	150	1.06	1.57	1.53
200	3.61	3.64	0.03	19.15	0.20	200	1.10	1.49	1.53
250	3.63	3.65	0.02	19.38	0.24	250	1.12	1.49	1.49
300	3.64	3.65	0.02	19.59	0.19	300	1.14	1.47	1.44
400	3.66	3.68	0.02	19.89	0.15	400	1.16	1.43	1.39
500	3.68	3.69	0.01	20.21	0.08	500	1.16	1.43	1.41
600	3.71	3.71	0.01	20.41	0.08	600	1.17	1.40	1.40
700	3.74	3.72	0.01	20.81	0.01	700	1.19	1.38	1.38
800	3.77	3.74	0.04	21.12	0.02	800	1.20	1.32	1.35
900	3.80	3.75	0.06	21.35	0.08	900	1.18	1.26	1.27
1000	3.83	3.77	0.07	21.42	0.12	1000	1.16	1.20	1.20
1100	3.88	3.81	0.07	21.45	0.06	1100	1.13	1.16	1.11
1200	3.93	3.86	0.07	21.37	0.05	1200	1.11	1.12	1.05
1218	3.94	3.88	0.06	21.27	0.06	1218	1.11	1.12	1.04
1230	3.94	3.88	0.06	21.29	0.09	1230	1.11	1.12	1.03
1250	3.95	3.89	0.06	21.26	0.07	1250	1.11	1.09	1.04
1300	3.98	3.94	0.04	21.20	0.18	1300	1.13	1.09	1.01
1350	4.01	3.98	0.02	21.20	0.27	1350	1.14	1.05	1.02
1400	4.04	4.02	0.01	21.17	0.52	1400	1.17	1.09	1.02
1450	4.08	4.06	0.01	21.26	0.72	1450	1.19	1.04	1.01
1500	4.10	4.09	0.01	21.43	1.00	1500	1.22	1.08	1.03
1550	4.11	4.12	0.00	21.63	1.12	1550	1.24	1.07	1.06
1600	4.14	4.13	0.01	21.66	1.39	1600	1.26	1.07	1.07
1650	4.16	4.14	0.02	21.91	1.60	1650	1.29	1.10	1.11
1700	4.18	4.16	0.02	22.05	1.93	1700	1.30	1.09	1.16
1750	4.21	4.17	0.04	22.40	2.02	1750	1.33	1.14	1.17
1800	4.23	4.19	0.05	22.72	2.39	1800	1.33	1.11	1.19
1850	4.28	4.21	0.07	23.24	2.44	1850	1.36	1.16	1.21
1900	4.33	4.24	0.09	23.96	2.88	1900	1.36	1.18	1.24
1950	4.38	4.27	0.11	24.61	2.88	1950	1.34	1.23	1.23
2000	4.43	4.32	0.11	25.77	3.15	2000	1.35	1.23	1.23
2050	4.51	4.37	0.14	26.90	3.21	2050	1.35	1.20	1.21
2100	4.54	4.42	0.12	28.69	3.39	2100	1.37	1.27	1.23
2150	4.61	4.47	0.14	30.60	3.39	2150	1.34	1.20	1.20
2200	4.63	4.51	0.12	33.22	3.48	2200	1.36	1.27	1.22
2250	4.69	4.56	0.13	36.95	3.51	2250	1.38	1.19	1.22
2300	4.72	4.62	0.10	39.70	3.35	2300	1.41	1.21	1.25
2350	4.72	4.66	0.07	40.78	3.46	2350	1.40	1.18	1.23
2400	4.72	4.68	0.03	36.92	3.34	2400	1.38	1.15	1.23
2500	4.79	4.76	0.03	31.35	3.10	2500	1.35	1.12	1.26

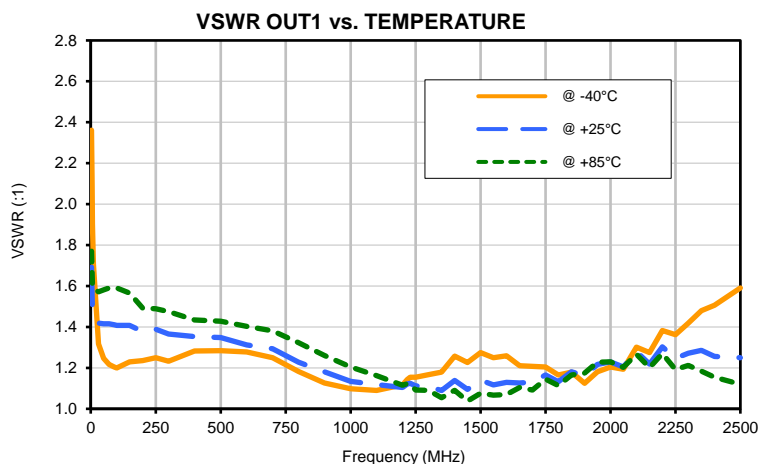
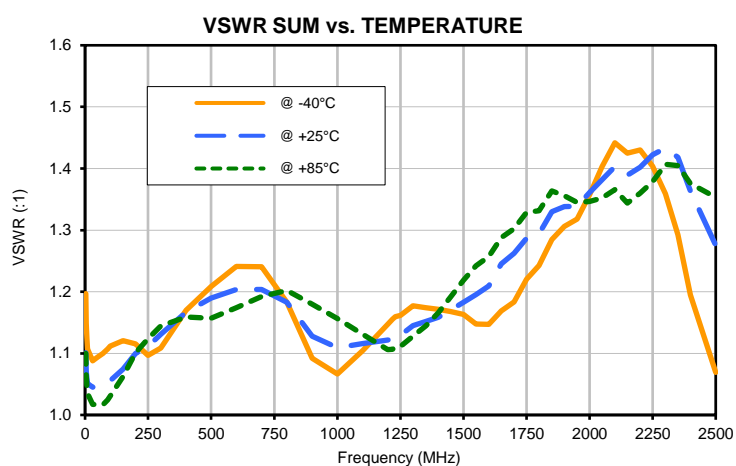
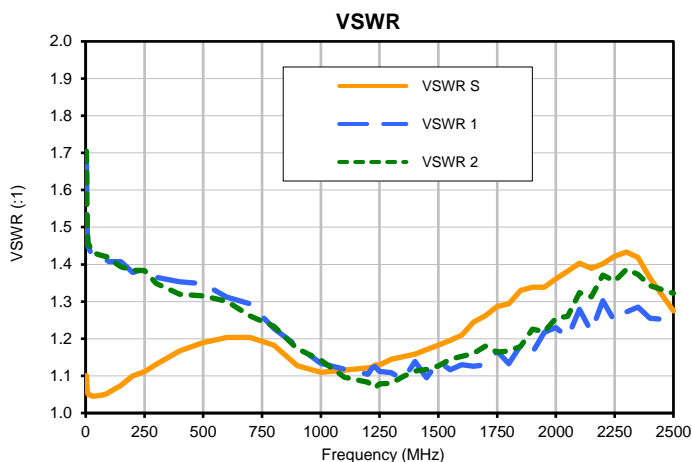
<sup>(1)</sup> Total Loss = Insertion Loss + 3dB splitter loss.



## Typical Performance Curves



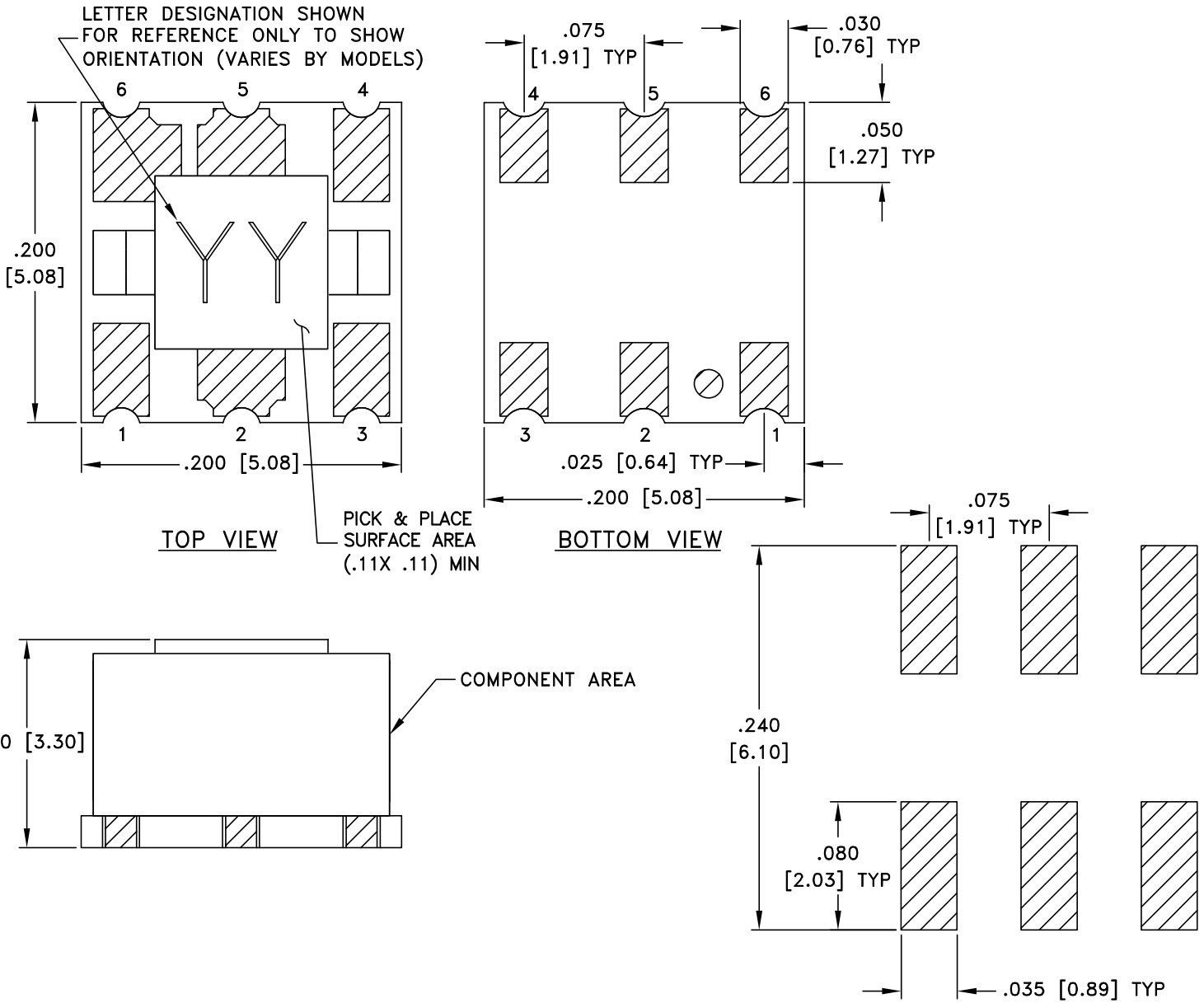
## Typical Performance Curves





## Outline Dimensions

AT3081



Weight: 0.1 grams

Dimensions are in inches (mm). Tolerances: 2 Pl. ±.010; 3 Pl. ±.005

Notes:

1. Base material: Printed wiring laminate.
2. Termination finish:  
 For RoHS Case Style: 3-5 μ inch (.08-.13 microns) Gold over 120-240 μ inch (3.05-6.10 microns) Nickel plate.  
 For RoHS-5 Case Style: Tin-Lead plate. All models, no (+) suffix.



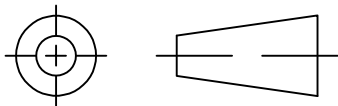
P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661 For detailed performance specs & shopping online see Mini-Circuits web site

The Design Engineers Search Engine Provides ACTUAL Data Instantly From MINI-CIRCUITS At: [www.minicircuits.com](http://www.minicircuits.com)



RF/IF MICROWAVE COMPONENTS

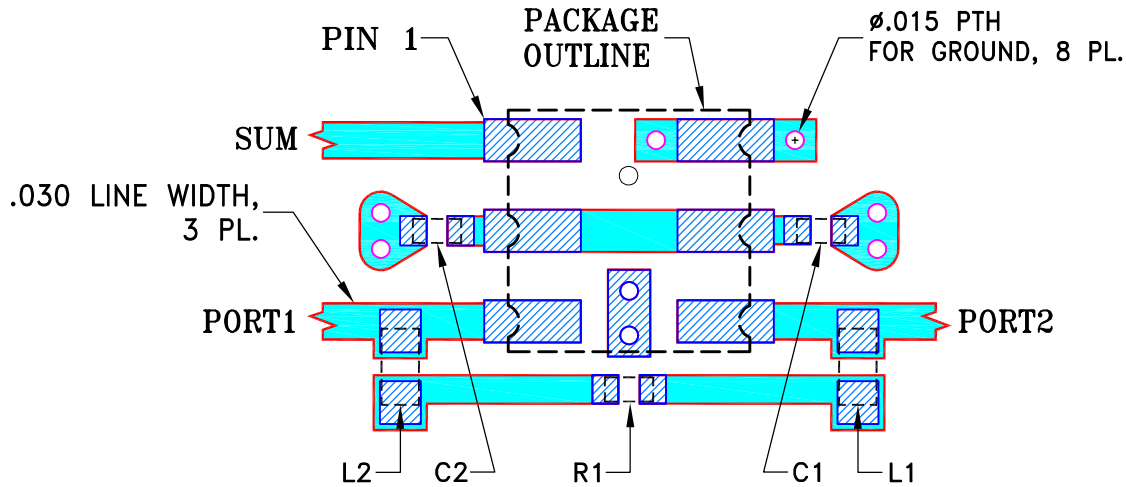
THIRD ANGLE PROJECTION



REVISIONS

REV	ECN No.	DESCRIPTION	DATE	DR	AUTH
OR	ECO-003221	NEW RELEASE	07/15/20	ITG	AG

SUGGESTED MOUNTING CONFIGURATION  
FOR AT3081 CASE STYLE



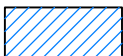
COMPONENT	SIZE
C1,C2	0402
L1,L2	0603
R1	0402

NOTES:

1. LINE WIDTH IS SHOWN FOR ROGERS R04350B WITH DIELECTRIC THICKNESS  $.030 \pm .002$ ";  
COPPER: 1/2 OZ. FOR OTHER MATERIALS LINE WIDTH MAY NEED TO BE MODIFIED.
2. CHIP COMPONENT FOOT PRINTS SHOWN FOR REFERENCE. FOR COMPONENT VALUES REFER TO TB-1126+.
3. 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	ITG	07/14/20
TOLERANCES ON:	GF	07/14/20
2 PL DECIMALS ±	AG	07/14/20
3 PL DECIMALS ± .005		
ANGLES ±		
FRACTIONS ±		



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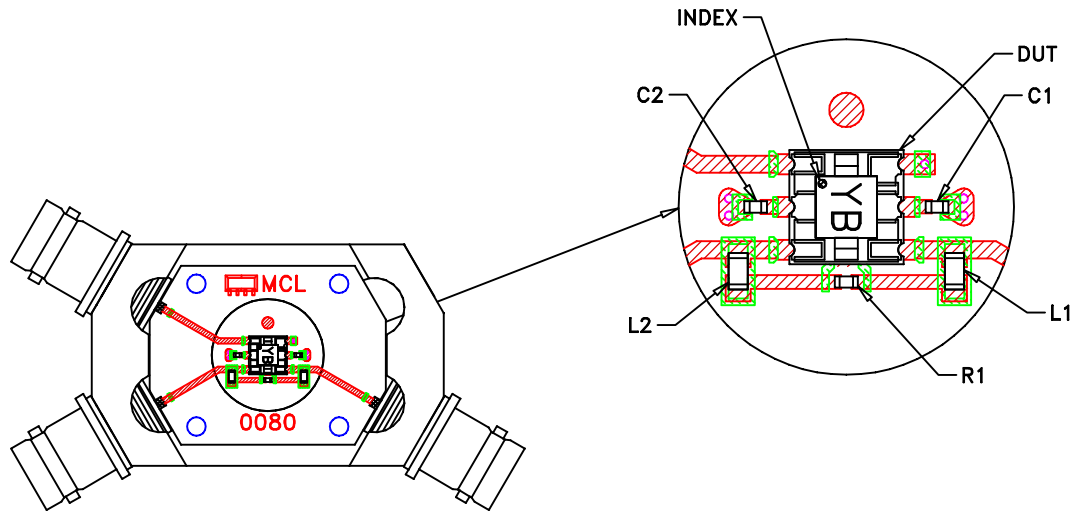
13 Neptune Avenue  
Brooklyn NY 11235

PL, AT3081, TB-1126+

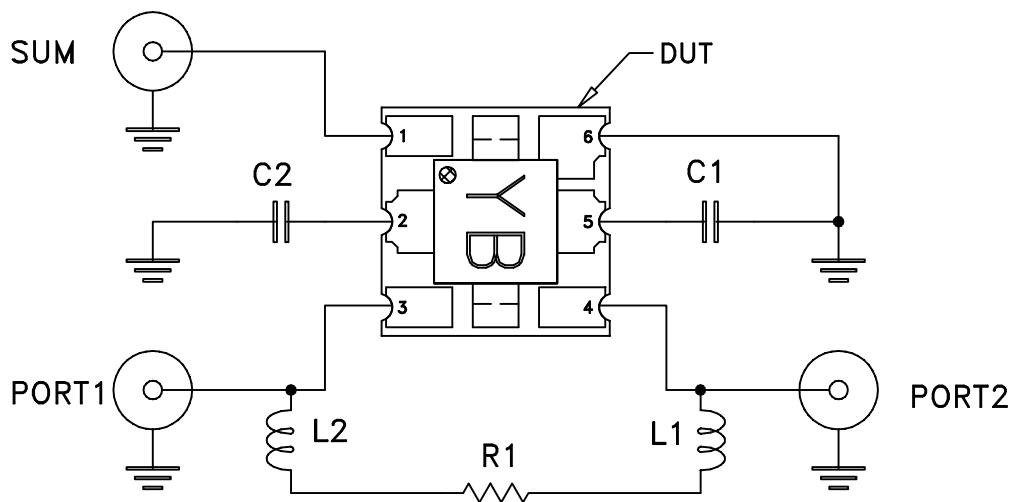
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SIZE	CODE IDENT	DRAWING NO:	REV:
A	15542	98-PL-673	OR
FILE:	98PL673	SCALE: 6:1	SHEET: 1 OF 1

# Evaluation Board and Circuit



TB-TRPS2-23275+



COMPONENT	VALUE/PART NUMBER	SIZE
DUT	TRPS2-232-75+	.200"X.200"
C1	0.6 pF	0402
C2	0.5 pF	
L1,L2	2.2 nH	0603
R1	221 Ohm	0402

Schematic Diagram

## Notes:

1. 75 Ohm BNC female connectors.
2. PCB Material: 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