

Power Splitter/Combiner

ADP-2-10W-75+

2 Way-0° 75Ω 5 to 1000 MHz



CASE STYLE: CD636

Maximum Ratings

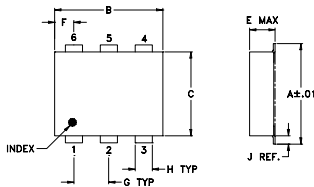
| | |
|-----------------------------|----------------|
| Operating Temperature | -40°C to 85°C |
| Storage Temperature | -55°C to 100°C |
| Power Input (as a splitter) | 0.5W max. |
| Internal Dissipation | 0.125W max. |

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

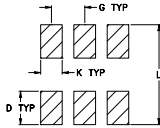
Pin Connections

| | |
|----------|-----|
| SUM PORT | 1 |
| PORT 1 | 3 |
| PORT 2 | 4 |
| GROUND | 6 |
| NOT USED | 2,5 |

Outline Drawing



PCB Land Pattern

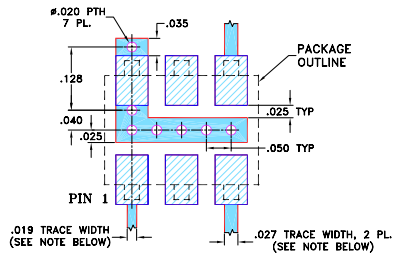


Suggested Layout,
Tolerance to be within ±.002

Outline Dimensions (inch/mm)

| | | | | | | | |
|------|------|------|------|------|------|------|-------|
| A | B | C | D | E | F | G | |
| .272 | .310 | .220 | .100 | .162 | .055 | .100 | |
| 6.91 | 7.87 | 5.59 | 2.54 | 4.11 | 1.40 | 2.54 | |
| H | J | K | L | | | | wt |
| .030 | .026 | .065 | .300 | | | | grams |
| 0.76 | 0.66 | 1.65 | 7.62 | | | | 0.25 |

Demo Board MCL P/N: TB-243 Suggested PCB Layout (PL-141)



- NOTES: 1. TRACE WIDTH IS SHOWN FOR ROGERS RO4350B WITH DIELECTRIC THICKNESS .030" ± .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

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-Circuit's 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-Circuit's website at www.minicircuits.com/MCLStore/terms.jsp

Features

- wideband, 5 to 1000 MHz
- low insertion loss, 0.3 dB typ.
- aqueous washable
- protected under U.S. Patent 6,133,525

Applications

- cellular
- VHF/UHF
- communication systems
- CATV

Electrical Specifications

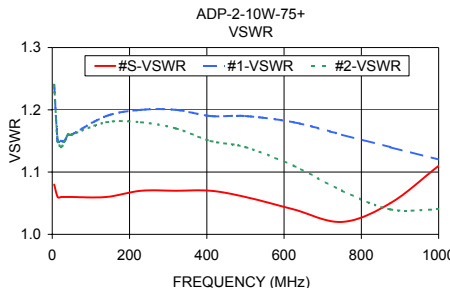
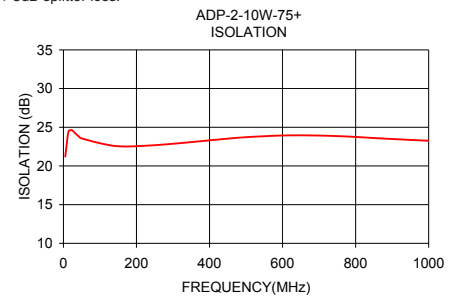
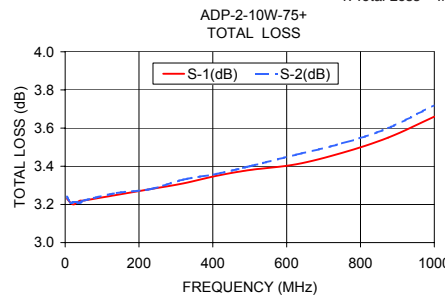
| FREQ. RANGE (MHz) | ISOLATION (dB) | | | INSERTION LOSS (dB) ABOVE 3.0 dB | | | PHASE UNBALANCE (Degrees) | | | AMPLITUDE UNBALANCE (dB) | | | | | | | | |
|-------------------|----------------|-----|------|----------------------------------|------|-----|---------------------------|------|------|--------------------------|------|------|------|------|------|------|------|------|
| | L | M | U | L | M | U | L | M | U | L | M | U | | | | | | |
| f_L - f_U | Typ. | Min | Typ. | Min | Typ. | Min | Typ. | Max. | Typ. | Max. | Typ. | Max. | Typ. | Max. | Typ. | Max. | Typ. | Max. |
| 5-1000 | 24 | 14 | 23 | 18 | 24 | 18 | 0.2 | 0.6 | 0.3 | 0.9 | 0.5 | 1.1 | 1.0 | 3.0 | 5.0 | 0.1 | 0.2 | 0.3 |

L = low range [f_L to $10 f_L$] M = mid range [$10 f_L$ to $f_U/2$] U = upper range [$f_U/2$ to f_U]

Typical Performance Data

| Frequency (MHz) | Total Loss ¹ (dB) | | Amplitude Unbalance (dB) | Isolation (dB) | Phase Unbalance (deg.) | VSWR S | VSWR 1 | VSWR 2 |
|-----------------|------------------------------|------|--------------------------|----------------|------------------------|--------|--------|--------|
| | S-1 | S-2 | | | | | | |
| 5.00 | 3.23 | 3.24 | 0.01 | 21.20 | 0.03 | 1.08 | 1.24 | 1.24 |
| 14.00 | 3.21 | 3.21 | 0.00 | 24.46 | 0.01 | 1.06 | 1.15 | 1.15 |
| 23.00 | 3.20 | 3.21 | 0.01 | 24.61 | 0.06 | 1.06 | 1.15 | 1.14 |
| 32.00 | 3.21 | 3.21 | 0.00 | 24.23 | 0.07 | 1.06 | 1.15 | 1.15 |
| 41.00 | 3.22 | 3.21 | 0.00 | 23.86 | 0.16 | 1.06 | 1.16 | 1.16 |
| 50.00 | 3.22 | 3.22 | 0.01 | 23.55 | 0.12 | 1.06 | 1.16 | 1.16 |
| 140.00 | 3.25 | 3.26 | 0.00 | 22.59 | 0.38 | 1.06 | 1.19 | 1.18 |
| 230.00 | 3.28 | 3.28 | 0.00 | 22.63 | 0.64 | 1.07 | 1.20 | 1.18 |
| 320.00 | 3.31 | 3.33 | 0.02 | 22.95 | 0.87 | 1.07 | 1.20 | 1.17 |
| 410.00 | 3.35 | 3.36 | 0.01 | 23.35 | 1.06 | 1.07 | 1.19 | 1.15 |
| 500.00 | 3.38 | 3.40 | 0.02 | 23.72 | 1.27 | 1.06 | 1.19 | 1.14 |
| 625.00 | 3.41 | 3.46 | 0.05 | 23.96 | 1.61 | 1.04 | 1.18 | 1.11 |
| 750.00 | 3.47 | 3.52 | 0.05 | 23.86 | 1.85 | 1.02 | 1.16 | 1.07 |
| 875.00 | 3.55 | 3.60 | 0.06 | 23.54 | 2.10 | 1.05 | 1.14 | 1.04 |
| 1000.00 | 3.66 | 3.72 | 0.06 | 23.25 | 2.21 | 1.11 | 1.12 | 1.04 |

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



electrical schematic



2 Way-0° Power Splitter/Combiner ADP-2-10W-75+

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 | 1 | 2 |
| 5 | 3.22 | 3.22 | 0.00 | 0.01 | 19.38 | 1.07 | 1.29 | 1.29 |
| 10 | 3.20 | 3.20 | 0.00 | 0.00 | 22.20 | 1.06 | 1.20 | 1.20 |
| 15 | 3.20 | 3.21 | 0.01 | 0.03 | 23.09 | 1.06 | 1.17 | 1.17 |
| 20 | 3.20 | 3.21 | 0.01 | 0.06 | 23.38 | 1.06 | 1.16 | 1.16 |
| 25 | 3.21 | 3.21 | 0.00 | 0.05 | 23.38 | 1.06 | 1.16 | 1.16 |
| 50 | 3.23 | 3.23 | 0.00 | 0.13 | 22.88 | 1.05 | 1.17 | 1.17 |
| 75 | 3.24 | 3.25 | 0.01 | 0.21 | 22.60 | 1.06 | 1.18 | 1.17 |
| 100 | 3.26 | 3.26 | 0.00 | 0.23 | 22.50 | 1.06 | 1.18 | 1.18 |
| 125 | 3.27 | 3.28 | 0.01 | 0.31 | 22.39 | 1.06 | 1.18 | 1.18 |
| 150 | 3.29 | 3.29 | 0.00 | 0.44 | 22.45 | 1.06 | 1.18 | 1.18 |
| 175 | 3.30 | 3.31 | 0.01 | 0.45 | 22.44 | 1.07 | 1.19 | 1.18 |
| 200 | 3.31 | 3.31 | 0.00 | 0.52 | 22.52 | 1.07 | 1.19 | 1.17 |
| 250 | 3.33 | 3.33 | 0.00 | 0.62 | 22.72 | 1.08 | 1.19 | 1.17 |
| 300 | 3.34 | 3.36 | 0.02 | 0.76 | 22.94 | 1.08 | 1.20 | 1.16 |
| 350 | 3.37 | 3.39 | 0.02 | 0.87 | 23.18 | 1.08 | 1.20 | 1.16 |
| 400 | 3.38 | 3.41 | 0.03 | 0.98 | 23.47 | 1.09 | 1.20 | 1.15 |
| 450 | 3.40 | 3.44 | 0.04 | 1.09 | 23.68 | 1.09 | 1.20 | 1.14 |
| 500 | 3.43 | 3.47 | 0.04 | 1.23 | 23.87 | 1.08 | 1.20 | 1.14 |
| 550 | 3.45 | 3.50 | 0.05 | 1.39 | 24.05 | 1.07 | 1.20 | 1.12 |
| 600 | 3.48 | 3.52 | 0.04 | 1.47 | 24.17 | 1.06 | 1.19 | 1.11 |
| 650 | 3.50 | 3.55 | 0.05 | 1.58 | 24.34 | 1.05 | 1.18 | 1.10 |
| 700 | 3.54 | 3.58 | 0.04 | 1.66 | 24.36 | 1.03 | 1.17 | 1.09 |
| 750 | 3.57 | 3.61 | 0.04 | 1.72 | 24.06 | 1.03 | 1.16 | 1.08 |
| 800 | 3.60 | 3.65 | 0.05 | 1.69 | 23.71 | 1.05 | 1.15 | 1.06 |
| 850 | 3.62 | 3.69 | 0.07 | 1.73 | 23.27 | 1.07 | 1.13 | 1.06 |
| 900 | 3.65 | 3.74 | 0.09 | 1.71 | 22.70 | 1.10 | 1.11 | 1.05 |
| 925 | 3.67 | 3.75 | 0.08 | 1.85 | 22.36 | 1.11 | 1.11 | 1.05 |
| 950 | 3.69 | 3.79 | 0.10 | 1.74 | 22.09 | 1.13 | 1.10 | 1.06 |
| 975 | 3.71 | 3.80 | 0.09 | 1.85 | 21.51 | 1.14 | 1.09 | 1.06 |
| 1000 | 3.73 | 3.84 | 0.11 | 1.78 | 21.34 | 1.16 | 1.08 | 1.06 |
| 1025 | 3.76 | 3.86 | 0.10 | 1.74 | 20.97 | 1.17 | 1.08 | 1.07 |
| 1050 | 3.79 | 3.89 | 0.10 | 1.69 | 20.48 | 1.19 | 1.07 | 1.08 |
| 1075 | 3.82 | 3.91 | 0.09 | 1.67 | 20.51 | 1.20 | 1.06 | 1.08 |
| 1100 | 3.84 | 3.95 | 0.11 | 1.66 | 19.96 | 1.22 | 1.06 | 1.09 |
| 1150 | 3.90 | 4.00 | 0.10 | 1.57 | 19.66 | 1.24 | 1.05 | 1.10 |
| 1200 | 3.96 | 4.06 | 0.10 | 1.49 | 19.54 | 1.26 | 1.04 | 1.11 |
| 1250 | 4.04 | 4.12 | 0.08 | 1.42 | 19.78 | 1.27 | 1.04 | 1.12 |
| 1300 | 4.10 | 4.16 | 0.06 | 1.38 | 20.20 | 1.29 | 1.04 | 1.13 |
| 1350 | 4.17 | 4.20 | 0.03 | 1.32 | 20.78 | 1.29 | 1.04 | 1.14 |
| 1400 | 4.25 | 4.24 | 0.01 | 1.25 | 21.80 | 1.28 | 1.05 | 1.15 |
| 1450 | 4.32 | 4.28 | 0.04 | 1.28 | 23.19 | 1.27 | 1.06 | 1.16 |
| 1500 | 4.41 | 4.34 | 0.07 | 1.35 | 25.10 | 1.25 | 1.07 | 1.16 |
| 1600 | 4.66 | 4.56 | 0.10 | 1.67 | 27.90 | 1.18 | 1.12 | 1.18 |
| 1700 | 5.05 | 4.98 | 0.07 | 2.13 | 22.83 | 1.09 | 1.18 | 1.22 |
| 1800 | 5.61 | 5.66 | 0.05 | 2.87 | 18.63 | 1.08 | 1.27 | 1.30 |
| 1900 | 6.38 | 6.56 | 0.18 | 3.78 | 16.05 | 1.20 | 1.40 | 1.41 |
| 2000 | 7.50 | 7.90 | 0.40 | 4.37 | 13.11 | 1.38 | 1.57 | 1.58 |

¹Total Loss = Insertion Loss + 3dB Splitter Loss

REV. X2
ADP-2-10W-75+
100623
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2 Way-0° Power Splitter/Combiner ADP-2-10W-75+

Typical Performance Data

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

| FREQ. (MHz) | TOTAL LOSS ¹ (dB) | | AMP. UNBAL. (dB) | PHASE UNBAL. (deg.) | ISOLATION (dB) | VSWR (:1) | | |
|----------------|---------------------------------|------|------------------------|---------------------------|-------------------|--------------|------|------|
| | S-1 | S-2 | | | | S | 1 | 2 |
| 5 | 3.25 | 3.26 | 0.01 | 0.01 | 19.23 | 1.09 | 1.32 | 1.32 |
| 10 | 3.19 | 3.19 | 0.00 | 0.01 | 23.66 | 1.06 | 1.18 | 1.17 |
| 15 | 3.17 | 3.17 | 0.00 | 0.04 | 25.54 | 1.05 | 1.13 | 1.12 |
| 20 | 3.16 | 3.16 | 0.00 | 0.07 | 26.06 | 1.04 | 1.12 | 1.10 |
| 25 | 3.16 | 3.16 | 0.00 | 0.07 | 26.07 | 1.04 | 1.11 | 1.09 |
| 50 | 3.17 | 3.17 | 0.00 | 0.20 | 25.52 | 1.02 | 1.11 | 1.08 |
| 75 | 3.18 | 3.19 | 0.01 | 0.33 | 25.15 | 1.02 | 1.11 | 1.09 |
| 100 | 3.20 | 3.19 | 0.01 | 0.42 | 25.00 | 1.04 | 1.11 | 1.11 |
| 125 | 3.20 | 3.20 | 0.00 | 0.55 | 24.89 | 1.04 | 1.11 | 1.11 |
| 150 | 3.21 | 3.20 | 0.01 | 0.72 | 24.99 | 1.04 | 1.11 | 1.10 |
| 175 | 3.22 | 3.22 | 0.00 | 0.80 | 24.99 | 1.03 | 1.11 | 1.10 |
| 200 | 3.23 | 3.22 | 0.01 | 0.95 | 25.04 | 1.04 | 1.12 | 1.11 |
| 250 | 3.24 | 3.23 | 0.01 | 1.17 | 25.26 | 1.07 | 1.13 | 1.12 |
| 300 | 3.25 | 3.25 | 0.00 | 1.43 | 25.43 | 1.06 | 1.15 | 1.12 |
| 350 | 3.27 | 3.26 | 0.01 | 1.67 | 25.61 | 1.07 | 1.16 | 1.14 |
| 400 | 3.28 | 3.27 | 0.01 | 1.91 | 25.86 | 1.08 | 1.18 | 1.13 |
| 450 | 3.29 | 3.29 | 0.00 | 2.19 | 26.00 | 1.10 | 1.19 | 1.14 |
| 500 | 3.31 | 3.31 | 0.00 | 2.45 | 26.14 | 1.10 | 1.19 | 1.14 |
| 550 | 3.33 | 3.33 | 0.00 | 2.74 | 26.25 | 1.08 | 1.19 | 1.14 |
| 600 | 3.35 | 3.34 | 0.01 | 2.97 | 26.15 | 1.08 | 1.19 | 1.14 |
| 650 | 3.37 | 3.36 | 0.01 | 3.19 | 26.09 | 1.08 | 1.19 | 1.12 |
| 700 | 3.40 | 3.38 | 0.02 | 3.41 | 25.76 | 1.06 | 1.18 | 1.10 |
| 750 | 3.42 | 3.41 | 0.01 | 3.60 | 25.01 | 1.06 | 1.17 | 1.11 |
| 800 | 3.45 | 3.43 | 0.02 | 3.74 | 24.15 | 1.08 | 1.15 | 1.11 |
| 850 | 3.46 | 3.47 | 0.01 | 3.93 | 23.24 | 1.10 | 1.13 | 1.11 |
| 900 | 3.49 | 3.51 | 0.02 | 4.13 | 22.32 | 1.14 | 1.11 | 1.12 |
| 925 | 3.51 | 3.51 | 0.00 | 4.33 | 21.95 | 1.17 | 1.10 | 1.13 |
| 950 | 3.52 | 3.55 | 0.03 | 4.34 | 21.53 | 1.19 | 1.09 | 1.13 |
| 975 | 3.55 | 3.55 | 0.00 | 4.50 | 20.93 | 1.21 | 1.08 | 1.13 |
| 1000 | 3.56 | 3.59 | 0.03 | 4.53 | 20.70 | 1.22 | 1.07 | 1.13 |
| 1025 | 3.59 | 3.60 | 0.01 | 4.53 | 20.26 | 1.24 | 1.06 | 1.13 |
| 1050 | 3.61 | 3.63 | 0.02 | 4.62 | 19.79 | 1.27 | 1.05 | 1.13 |
| 1075 | 3.63 | 3.65 | 0.02 | 4.63 | 19.75 | 1.29 | 1.04 | 1.13 |
| 1100 | 3.66 | 3.69 | 0.03 | 4.73 | 19.23 | 1.30 | 1.04 | 1.14 |
| 1150 | 3.71 | 3.74 | 0.03 | 4.81 | 18.90 | 1.32 | 1.03 | 1.14 |
| 1200 | 3.77 | 3.78 | 0.01 | 4.90 | 18.81 | 1.32 | 1.03 | 1.13 |
| 1250 | 3.83 | 3.82 | 0.01 | 4.98 | 19.15 | 1.31 | 1.02 | 1.12 |
| 1300 | 3.88 | 3.85 | 0.03 | 5.10 | 19.66 | 1.29 | 1.02 | 1.11 |
| 1350 | 3.93 | 3.87 | 0.06 | 5.20 | 20.42 | 1.26 | 1.03 | 1.10 |
| 1400 | 3.97 | 3.88 | 0.09 | 5.35 | 21.70 | 1.20 | 1.05 | 1.11 |
| 1450 | 4.02 | 3.90 | 0.12 | 5.59 | 23.35 | 1.16 | 1.08 | 1.16 |
| 1500 | 4.10 | 3.94 | 0.16 | 5.79 | 25.45 | 1.15 | 1.11 | 1.24 |
| 1600 | 4.31 | 4.14 | 0.17 | 6.36 | 25.95 | 1.13 | 1.18 | 1.31 |
| 1700 | 4.69 | 4.56 | 0.14 | 7.07 | 20.63 | 1.13 | 1.26 | 1.46 |
| 1800 | 5.20 | 5.20 | 0.00 | 8.01 | 17.01 | 1.07 | 1.33 | 1.50 |
| 1900 | 5.88 | 6.02 | 0.14 | 9.50 | 14.90 | 1.25 | 1.39 | 1.58 |
| 2000 | 6.84 | 7.15 | 0.31 | 10.19 | 12.41 | 1.77 | 1.52 | 1.47 |

¹Total Loss = Insertion Loss + 3dB Splitter Loss



2 Way-0° Power Splitter/Combiner ADP-2-10W-75+

Typical Performance Data

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

| FREQ. (MHz) | TOTAL LOSS ¹ (dB) | | AMP. UNBAL. (dB) | PHASE UNBAL. (deg.) | ISOLATION (dB) | VSWR (:1) | | |
|----------------|---------------------------------|------|------------------------|---------------------------|-------------------|--------------|------|------|
| | S-1 | S-2 | | | | S | 1 | 2 |
| 5 | 3.29 | 3.30 | 0.01 | 0.00 | 18.49 | 1.08 | 1.32 | 1.32 |
| 10 | 3.28 | 3.29 | 0.01 | 0.01 | 20.55 | 1.07 | 1.25 | 1.25 |
| 15 | 3.28 | 3.30 | 0.02 | 0.02 | 21.15 | 1.08 | 1.23 | 1.23 |
| 20 | 3.29 | 3.30 | 0.01 | 0.06 | 21.28 | 1.08 | 1.22 | 1.23 |
| 25 | 3.29 | 3.30 | 0.01 | 0.05 | 21.24 | 1.08 | 1.22 | 1.24 |
| 50 | 3.31 | 3.33 | 0.02 | 0.10 | 20.84 | 1.10 | 1.23 | 1.27 |
| 75 | 3.33 | 3.35 | 0.02 | 0.16 | 20.65 | 1.10 | 1.24 | 1.27 |
| 100 | 3.36 | 3.37 | 0.01 | 0.20 | 20.62 | 1.08 | 1.25 | 1.24 |
| 125 | 3.37 | 3.39 | 0.02 | 0.26 | 20.56 | 1.07 | 1.25 | 1.23 |
| 150 | 3.38 | 3.40 | 0.02 | 0.42 | 20.62 | 1.08 | 1.26 | 1.24 |
| 175 | 3.39 | 3.42 | 0.03 | 0.40 | 20.63 | 1.10 | 1.25 | 1.25 |
| 200 | 3.41 | 3.43 | 0.02 | 0.47 | 20.76 | 1.11 | 1.25 | 1.24 |
| 250 | 3.43 | 3.46 | 0.03 | 0.55 | 21.01 | 1.09 | 1.24 | 1.20 |
| 300 | 3.45 | 3.50 | 0.05 | 0.65 | 21.21 | 1.09 | 1.23 | 1.20 |
| 350 | 3.48 | 3.53 | 0.05 | 0.72 | 21.45 | 1.09 | 1.22 | 1.17 |
| 400 | 3.50 | 3.56 | 0.06 | 0.80 | 21.68 | 1.08 | 1.21 | 1.16 |
| 450 | 3.52 | 3.61 | 0.09 | 0.88 | 21.90 | 1.08 | 1.21 | 1.15 |
| 500 | 3.55 | 3.65 | 0.10 | 0.96 | 22.09 | 1.06 | 1.20 | 1.13 |
| 550 | 3.58 | 3.68 | 0.10 | 1.06 | 22.33 | 1.05 | 1.20 | 1.12 |
| 600 | 3.62 | 3.72 | 0.10 | 1.10 | 22.56 | 1.04 | 1.19 | 1.11 |
| 650 | 3.64 | 3.76 | 0.12 | 1.14 | 22.83 | 1.02 | 1.19 | 1.10 |
| 700 | 3.69 | 3.80 | 0.12 | 1.18 | 23.10 | 1.01 | 1.18 | 1.09 |
| 750 | 3.72 | 3.84 | 0.12 | 1.19 | 23.15 | 1.01 | 1.18 | 1.08 |
| 800 | 3.76 | 3.88 | 0.12 | 1.11 | 23.13 | 1.02 | 1.17 | 1.07 |
| 850 | 3.80 | 3.93 | 0.13 | 1.08 | 23.16 | 1.04 | 1.17 | 1.06 |
| 900 | 3.84 | 3.98 | 0.14 | 0.99 | 22.92 | 1.07 | 1.16 | 1.05 |
| 925 | 3.85 | 4.01 | 0.16 | 1.09 | 22.67 | 1.08 | 1.15 | 1.04 |
| 950 | 3.88 | 4.04 | 0.16 | 0.93 | 22.56 | 1.09 | 1.14 | 1.04 |
| 975 | 3.91 | 4.07 | 0.16 | 1.06 | 22.10 | 1.09 | 1.14 | 1.04 |
| 1000 | 3.93 | 4.10 | 0.17 | 0.90 | 22.01 | 1.11 | 1.13 | 1.04 |
| 1025 | 3.96 | 4.13 | 0.17 | 0.86 | 21.72 | 1.13 | 1.12 | 1.05 |
| 1050 | 3.98 | 4.16 | 0.18 | 0.75 | 21.26 | 1.15 | 1.11 | 1.05 |
| 1075 | 4.02 | 4.19 | 0.17 | 0.74 | 21.35 | 1.16 | 1.10 | 1.06 |
| 1100 | 4.05 | 4.22 | 0.17 | 0.66 | 20.83 | 1.17 | 1.09 | 1.07 |
| 1150 | 4.11 | 4.29 | 0.18 | 0.55 | 20.60 | 1.22 | 1.08 | 1.08 |
| 1200 | 4.18 | 4.35 | 0.17 | 0.41 | 20.48 | 1.24 | 1.06 | 1.10 |
| 1250 | 4.26 | 4.41 | 0.15 | 0.30 | 20.71 | 1.26 | 1.05 | 1.12 |
| 1300 | 4.34 | 4.47 | 0.13 | 0.25 | 21.12 | 1.29 | 1.04 | 1.13 |
| 1350 | 4.43 | 4.52 | 0.09 | 0.14 | 21.63 | 1.30 | 1.03 | 1.14 |
| 1400 | 4.52 | 4.58 | 0.06 | 0.06 | 22.61 | 1.30 | 1.02 | 1.14 |
| 1450 | 4.61 | 4.64 | 0.03 | 0.09 | 24.03 | 1.30 | 1.02 | 1.13 |
| 1500 | 4.71 | 4.72 | 0.01 | 0.12 | 26.07 | 1.28 | 1.03 | 1.13 |
| 1600 | 4.99 | 4.97 | 0.02 | 0.35 | 30.33 | 1.21 | 1.08 | 1.10 |
| 1700 | 5.38 | 5.38 | 0.00 | 0.67 | 24.42 | 1.10 | 1.16 | 1.11 |
| 1800 | 5.94 | 6.04 | 0.10 | 1.17 | 19.57 | 1.12 | 1.28 | 1.21 |
| 1900 | 6.71 | 6.94 | 0.23 | 1.80 | 16.60 | 1.20 | 1.43 | 1.38 |
| 2000 | 7.79 | 8.20 | 0.41 | 2.28 | 13.70 | 1.24 | 1.64 | 1.61 |

¹Total Loss = Insertion Loss + 3dB Splitter Loss

REV. X2
ADP-2-10W-75+
100623
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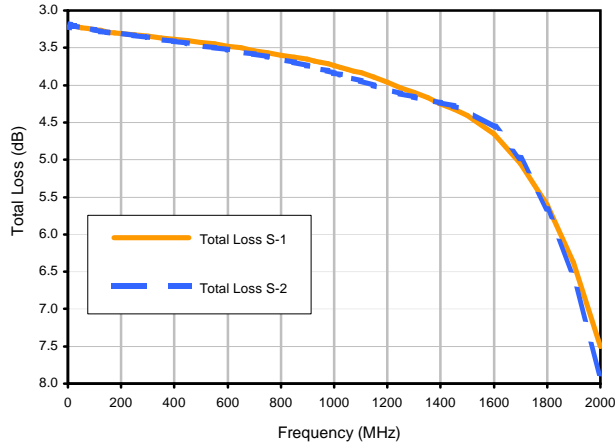


The Design Engineers Search Engine finds the model you need, Instantly • For detailed performance specs & shopping online see

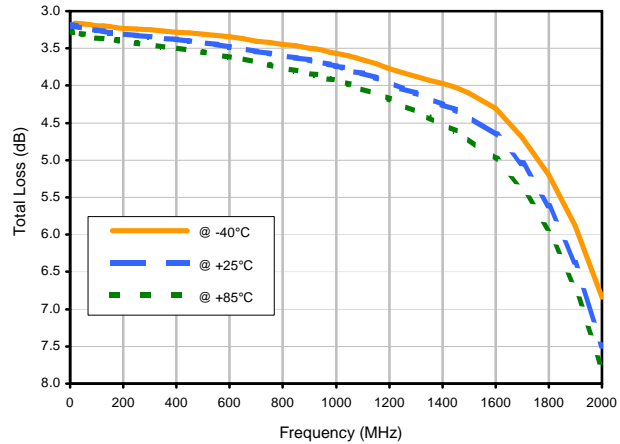


Typical Performance Curves

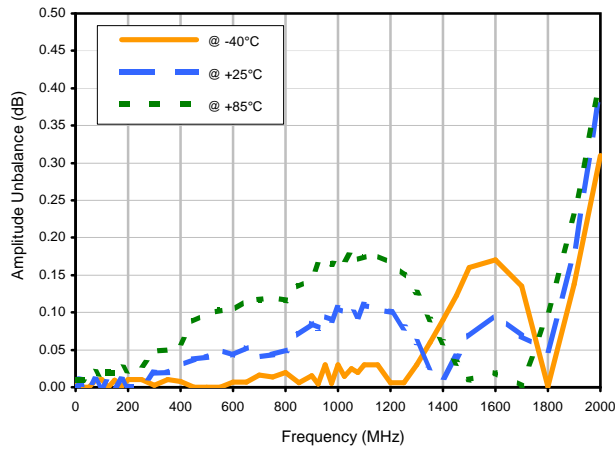
Total Loss



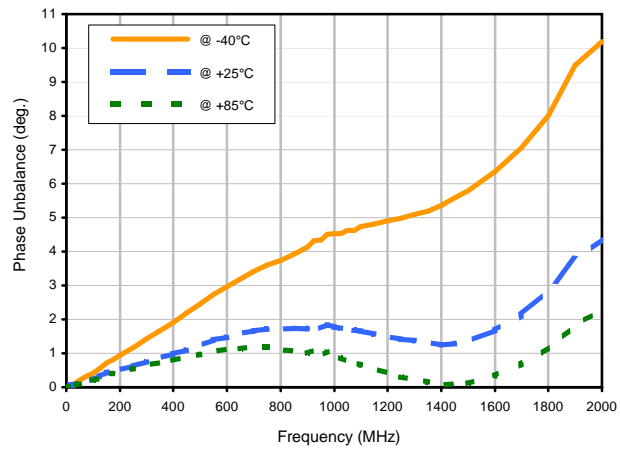
Total Loss S-1 vs. TEMPERATURE



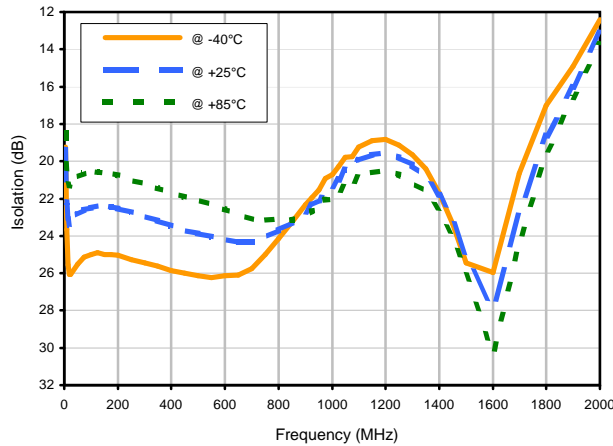
Amplitude Unbalance vs. TEMPERATURE



Phase Unbalance vs. TEMPERATURE



Isolation 1-2 vs. TEMPERATURE

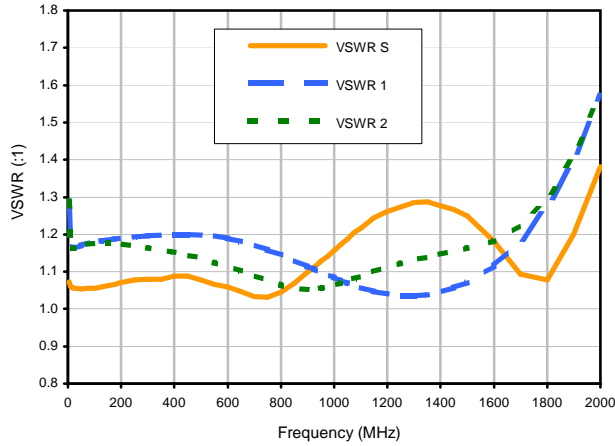


2 Way-0° Power Splitter/Combiner

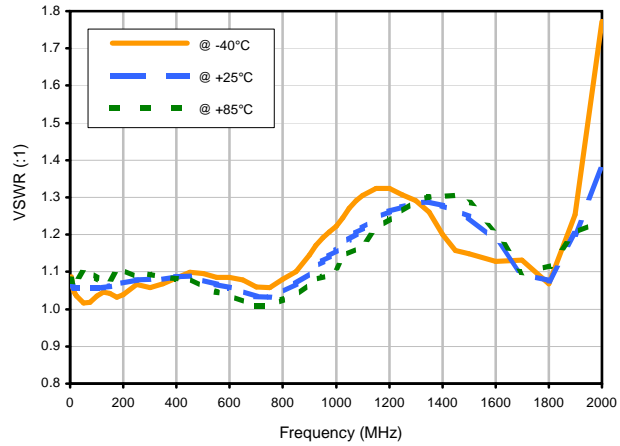
ADP-2-10W-75+

Typical Performance Curves

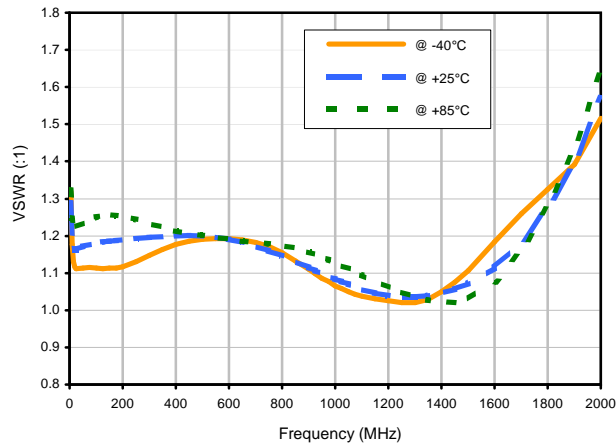
VSWR



VSWR SUM vs. TEMPERATURE



VSWR OUT1 vs. TEMPERATURE



REV. X2
ADP-2-10W-75+
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Page 2 of 2



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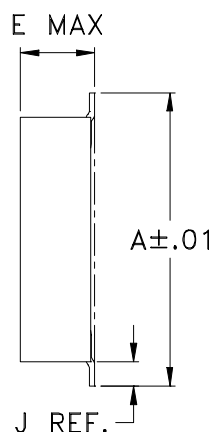
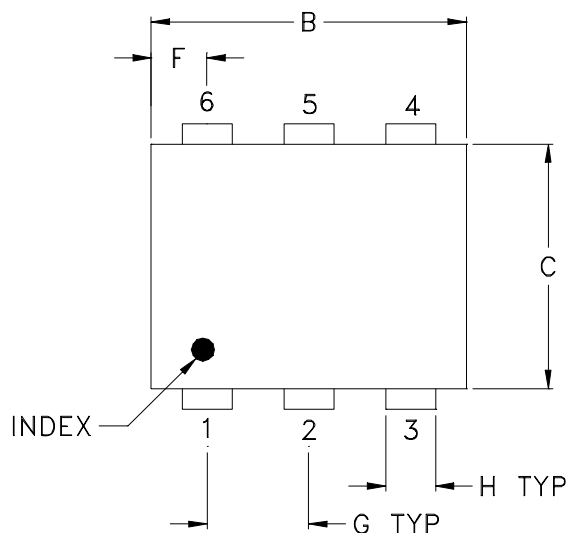


Case Style

CD

CD541
CD542
CD636
CD637

Outline Dimensions



PCB Land Pattern



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

| CASE# | A | B | C | D | E | F | G | H | J | K | L | WT, GRAM |
|-------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------|
| CD541 | | | | | .082 (2.08) | | | | | | | .15 |
| CD542 | .272 (6.91) | .310 (7.87) | .220 (5.58) | .100 (2.54) | .112 (2.84) | .055 (1.40) | .100 (2.54) | .030 (0.76) | .026 (0.66) | .065 (1.65) | .300 (7.62) | .20 |
| CD636 | | | | | .162 (4.11) | | | | | | | .25 |
| CD637 | | | | | .206 (5.23) | | | | | | | .40 |

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

Notes:

- Case material: Plastic.
- Termination finish:
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-F34



| Tape Width, mm | Device Cavity Pitch, mm | Reel Size, inches | Devices per Reel see note | |
|----------------|-------------------------|-------------------|------------------------------------|------|
| 16 | 12 | 7 | Small quantity standard (see note) | 20 |
| | | | | 50 |
| | | | | 100 |
| | | | | 200 |
| | | 13 | Standard | 500 |
| | | | | 1000 |

Note: Availability of small reel quantity varies by model.
Refer to pricing and availability on individual model dashboard.

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



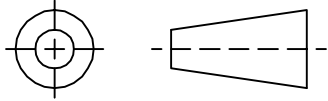
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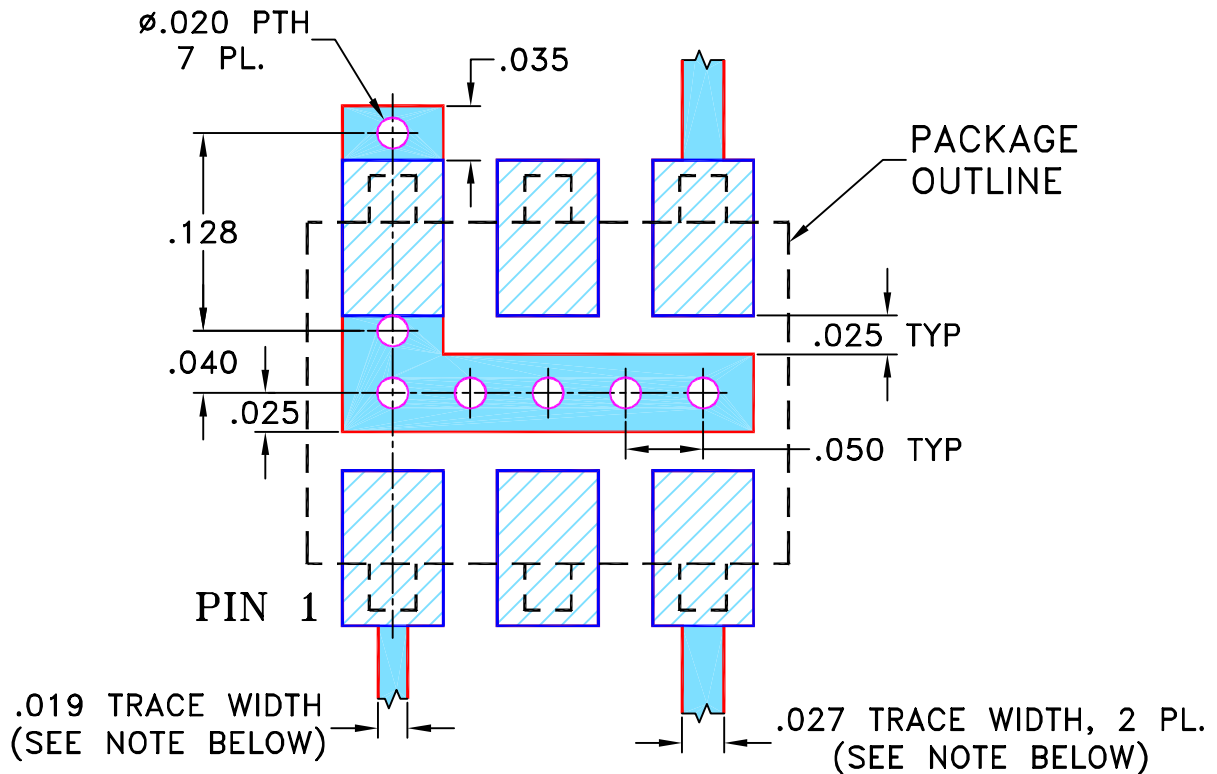
THIRD ANGLE PROJECTION





REVISIONS

| REV | ECN No. | DESCRIPTION | DATE | DR | AUTH |
|-----|---------|-----------------------|----------|-----|------|
| OR | M88803 | NEW RELEASE | 10/20/03 | GF | HY |
| A | M102713 | ADDED "...WITH SMOBC" | 01/17/06 | MMG | IL |
| | | | | | |

SUGGESTED MOUNTING CONFIGURATION
FOR CD542 CASE STYLE, "hv" PIN CONNECTION



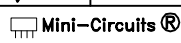
- NOTES:** 1. TRACE WIDTH IS SHOWN FOR ROGERS RO4350B WITH DIELECTRIC THICKNESS .030" ± .002". COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH MAY NEED TO BE MODIFIED.
2. BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.

-  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 TOLERANCES ON: 2 PL DECIMALS ± 3 PL DECIMALS ± .005 ANGLES ± FRACTIONS ± | DRAWN | GF | 09/18/03 |
| | CHECKED | IL | 10/20/03 |
| | APPROVED | HY | 10/20/03 |

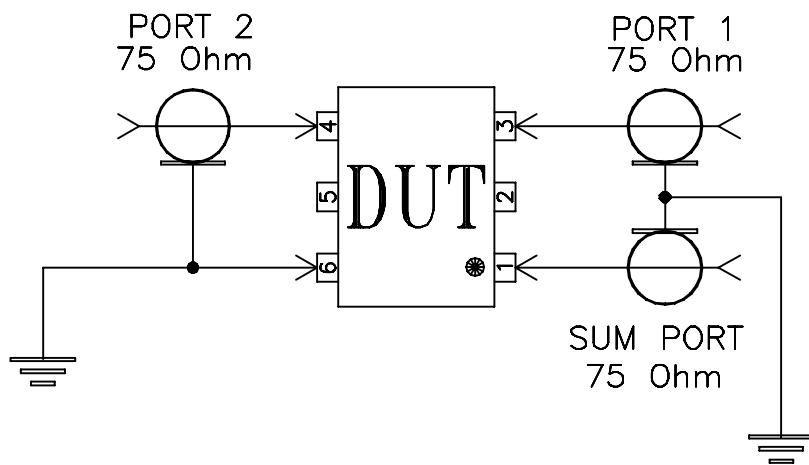
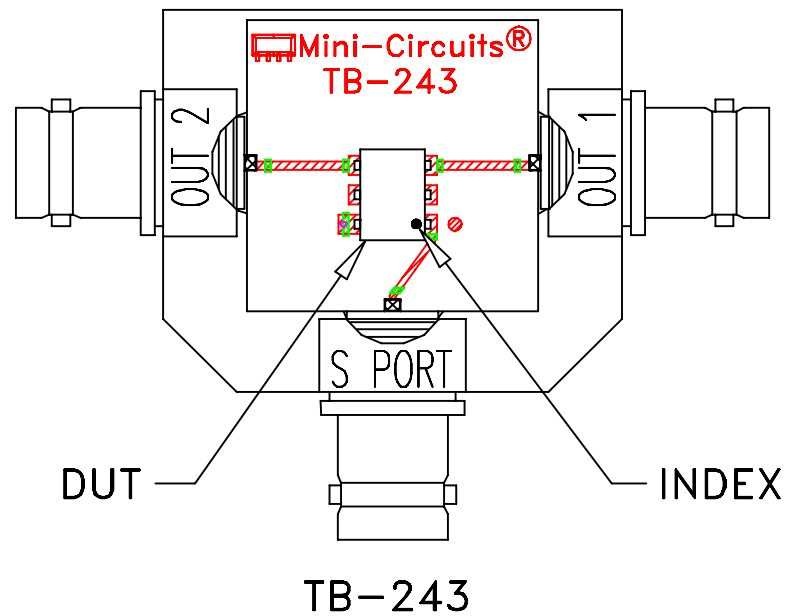
 **Mini-Circuits®** 13 Neptune Avenue
Brooklyn NY 11235

PL, hv, 75, CD542, ADP, TB-243

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| | | | |
|------------------|---------------------|--------------------------|-----------|
| SIZE A | CODE IDENT 15542 | DRAWING NO: 98-PL-141 | REV: A |
| FILE: 98PL141 | SCALE: 8:1 | SHEET: 1 OF 1 | |


Evaluation Board and Circuit



Schematic Diagram

Notes:

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

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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 |