WERLATONE

Model H2977
180° Hybrids Connectorized



**PRODUCT DATA SHEET** **H2977**

**Werlatone®** High Power 180° RF Hybrid Combiners/Dividers balance traditional technologies with disruptive microwave techniques. The outcome is a microwave component which provides an order of magnitude improvement over current capabilities. Our newest line of high power, patented 180° RF Hybrid Combiners/Dividers provides an incredible 5:1 bandwidth, while exhibiting exceptionally low loss and superior port-to-port isolation.

**Features:**

High Power  Wide Bandwidths  Small Size  Excellent Amplitude Balance

**Electrical Specifications:**

| | |
|---|---|
| Frequency: | 20 - 150 MHz |
| Power: | 200 W CW |
| Insertion Loss: | 0.5 dB Max. |
| VSWR: | 1.30:1 Max. |
| Phase Balance: | 180° ± 5° Max. |
| Amplitude Balance: | ± 0.2 dB Max. |
| Isolation: | 20 dB Min. |

**Mechanical Specifications:**

| | |
|---|---|
| Type: | Connectorized |
| Material: | Aluminum 6061-T6 |
| Surface Finish: | Chem. Film Per MIL-DTL-5541F Type I Class 3 (Yellow Iridite) RoHS Compliant Available |
| Operating Temperature: | -55°C to +75°C |
| Storage Temperature: | -60°C to +85°C |
| Weight: | 1 lb. 8 oz. |
| Size: | 3.0 x 5.0 x 2.25'' |

**Connector Configurations:**

| **Model** | **Sum Port (J1)** | **Diff. Port (J2)** | **Inputs (J3,J4)** |
|---|---|---|---|
| H2977-10 | N Female | N Female | N Female |
| H2977-102 | SMA | SMA | SMA |
| H2977-300 | TNC Female | TNC Female | TNC Female |

**Werlatone's** standard line of High Power 180° RF Hybrid Combiners/Dividers covers multiple octaves within a microwave device. Low frequency 180° Hybrid Combiner/Dividers employ proprietary ferrite transmission line techniques, similar to our 0° Combiners/Dividers. Insertion loss in both sum and difference ports is minimal, allowing the hybrid to handle high power over its frequency range. Custom requirements are welcome.

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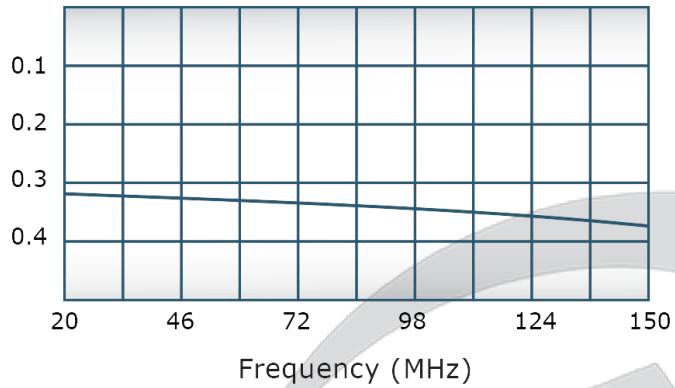
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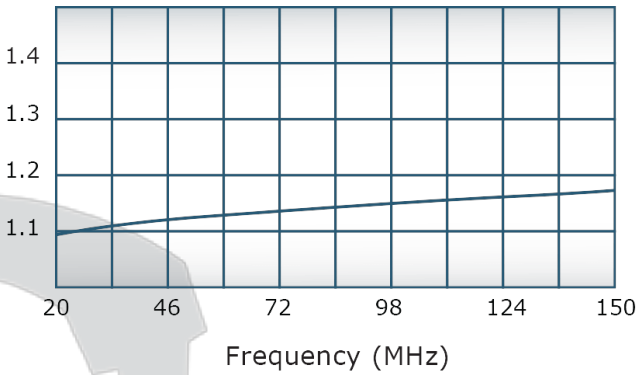
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## Performance Data (Specifications subject to change without notice):

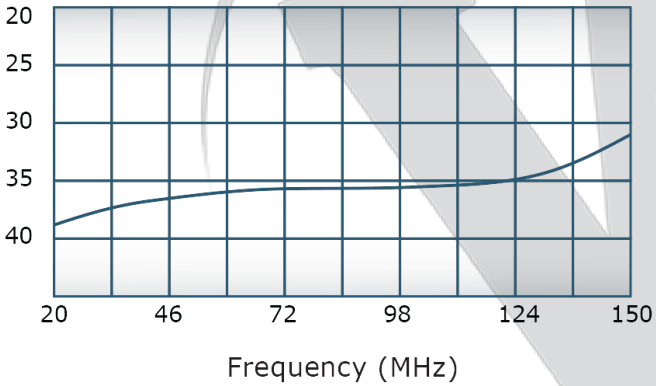
Insertion Loss:



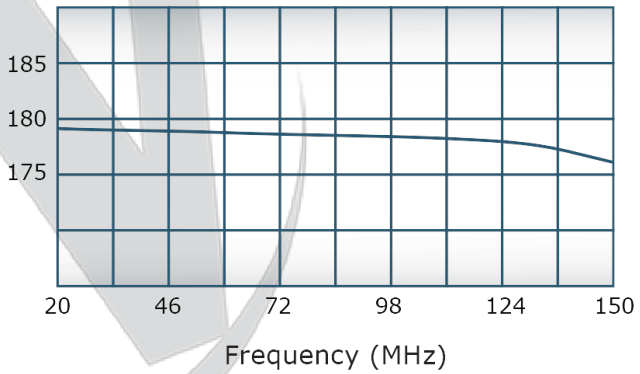

VSWR:




Isolation:

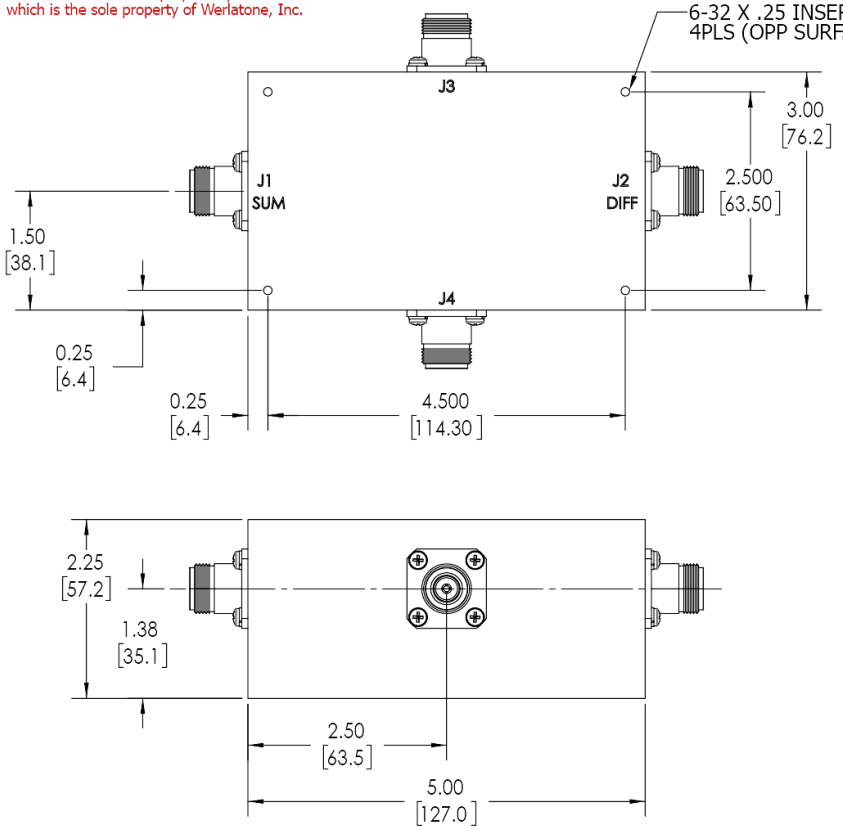



Phase Balance:




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| REVISION HISTORY | | | |
|---|---|---|---|
| REV. | REVISION RECORD | DATE | APPROVED |
| A | ECN 5376 | 5/6/11 | PR |
| B | ECN 9696 | 11/25/2019 | RB |

**NOTES: UNLESS OTHERWISE SPECIFIED**

1. **MATERIAL: ALUMINUM 6061-T6**
2. **FINISH: CHEM FILM PER MIL-DTL-5541F TYPE I CLASS 3 (YELLOW IRIDITE)**
3. **CONNECTORS:**
   **J1-J4: N FEMALE**

| | |
|---|---|
| NEXT ASSY | USED ON |
| APPLICATION | |

UNLESS OTHERWISE SPECIFIED
INTERPRET DRAWING IAW MIL-STD-100
DIMENSIONING PER ASME Y14.5M-2009
PARENTHETICAL INFO FOR REF ONLY
DIMENSIONS ARE IN INCHES
DIMENSIONAL LIMITS APPLY BEFORE PROCESSES
TOLERANCES:
ANGLES ± 2°
3 PL ± .005 [.13]
2 PL ± .015 [.38]
REMOVE ALL BURRS AND SHARP EDGES R.01 MAX
CONCENTRICITY MACHINED DIA: .002 FIM
MACHINE TOOL MISMATCH .003 MAX

THIRD ANGLE PROJECTION

| | | DATE |
|---|---|---|
| DWN | SD | 11/25/2019 |
| CHK | CS | 11/25/2019 |
| ENGR | | |
| MFGR | | |
| QA | | |
| RLSE | | |

WERLATONE| SINCE 1965
17 Jon Barrett Rd
Patterson, NY 12563

TITLE
OUTLINE

| SIZE | CAGE CODE | DWG NO | REV |
|---|---|---|---|
| B | | 10135-500 | B |

SCALE 1:1.5 SHEET 1 OF 1

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