WERLATONE

Model H7972
180° Hybrids Connectorized



**PRODUCT DATA SHEET** **H7972**

**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: | 100 - 1000 MHz |
| Power: | 50 W CW |
| Insertion Loss: | 1.3 dB Max. |
| VSWR: | 1.30:1 Max. |
| Phase Balance: | 180° ± 5° Max. |
| Amplitude Balance: | ± 0.4 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 |
| Size: | 4.0 x 2.2 x 1.1'' |

**Connector Configurations:**

| **Model** | **Sum Port (J1)** | **Inputs (J2,J3)** |
|---|---|---|
| H7972-10 | N Female | N Female |
| H7972-12 | N Female | SMA |
| H7972-102 | SMA | SMA |

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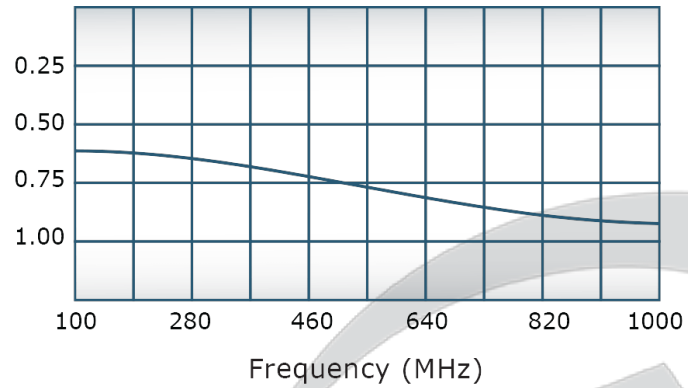
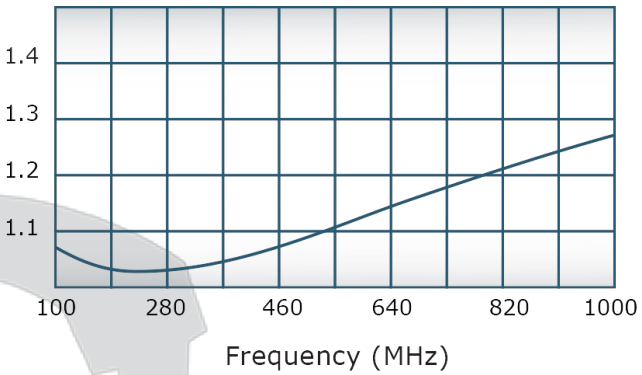
## Performance Data (Specifications subject to change without notice):

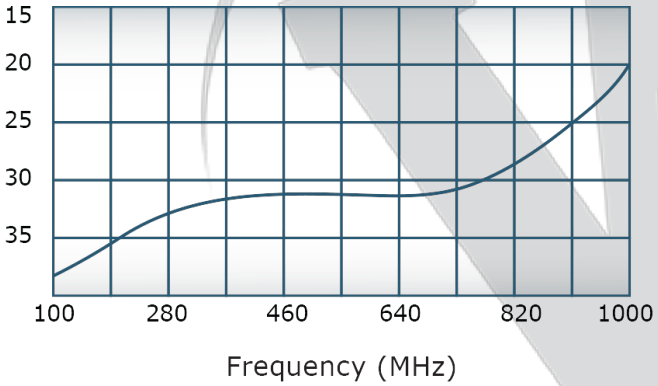
Insertion Loss:



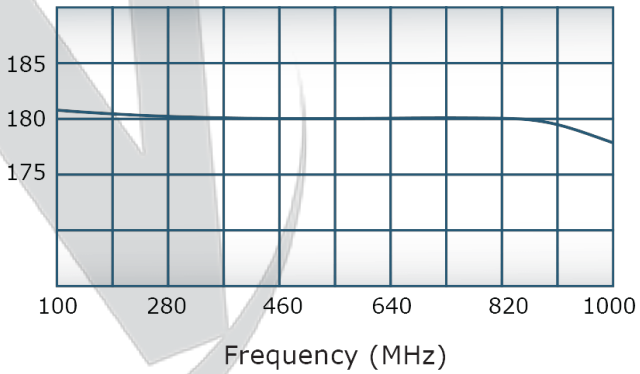

VSWR:




Isolation:




Phase Balance:

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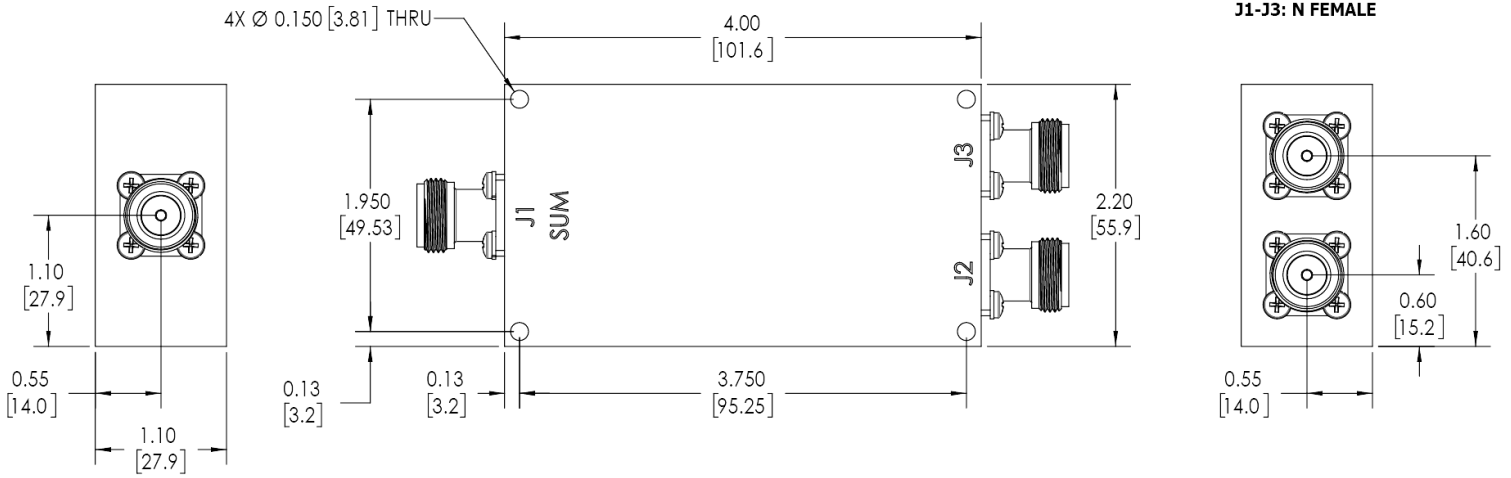
| REVISION HISTORY | | | |
|---|---|---|---|
| REV. | REVISION RECORD | DATE | APPROVED |
| A | ECN 9696 | 12/2/2019 | RB |

**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-J3: N FEMALE**




| | | | | | |
|---|---|---|---|---|---|
| NEXT ASSY | USED ON | 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 | DWN SD 12/2/2019 | CHK CS 12/2/2019 | ENGR | MFGR | QA | RLSE | WERLATONE\| SINCE 1965 — 17 Jon Barrett Rd Patterson, NY 12563 |
| APPLICATION | | | | | | TITLE: OUTLINE |
| | | | | | | SIZE B \| CAGE CODE \| DWG NO 20215-500 \| REV A |
| | | | | | | SCALE 1:1 \| SHEET 1 OF 1 |

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