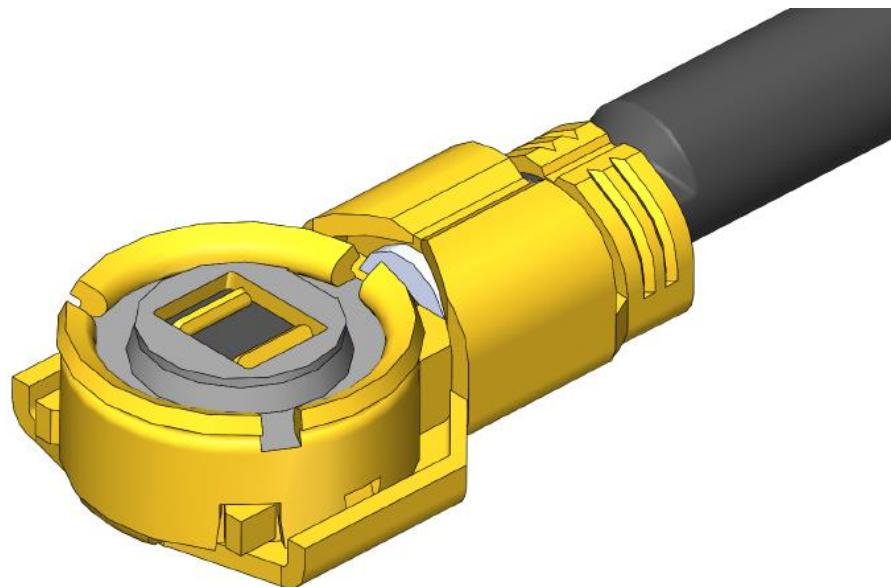
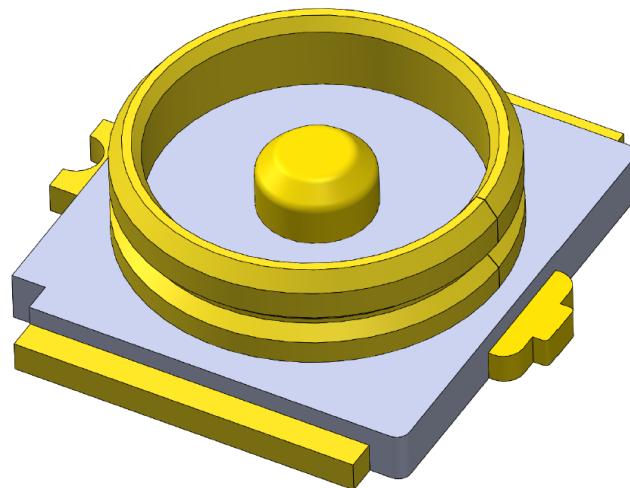


Series: [MH081](#) Micro High Frequency RF Cable Assembly, 0.81 mm DIA Coax Cable

MHF4 End Cable Assembly



Receptacle End



See www.samtec.com for more information.

Series: [MH081](#) Micro High Frequency RF Cable Assembly, 0.81 mm DIA Coax Cable

1.0 SCOPE

1.1 This specification covers performance, testing and quality requirements for Samtec MH081 Series Micro High Frequency RF Cable Assembly, 0.81 mm DIA Coax Cable with MHF4 end.

2.0 DETAILED INFORMATION

2.1 Product prints, footprints, catalog pages, test reports and other specific, detailed information can be found at <https://www.samtec.com/products/mh081>.

3.0 TESTING

3.1 Voltage Rating: 65 VDC

3.2 Operating Temperature Range: -40°C to +90°C

3.3 Operating Humidity Range: Up to 98% (Per EIA-364-31)

3.4 Electrical:

| ITEM | TEST CONDITION | REQUIREMENT | STATUS |
|---------------------------|------------------------------------------------------------------------------------|---------------------------------------------|--------|
| Withstanding Voltage | EIA-364-20 (No Flashover, Sparkover, or Breakdown) | 200 VDC | Pass |
| Insulation Resistance | 100V DC, 2 Minutes Max | 1,000 MΩ MIN | Pass |
| Contact Resistance (LLCR) | Open Circuit Voltage=20 mV Max Test Current=10 mA Max Test Current=10 mA Max | Δ 20 mΩ maximum (Samtec defined)/ No damage | Pass |

3.5 Mechanical:

| ITEM | TEST CONDITION | REQUIREMENT | STATUS |
|----------------|------------------------------------------------------------------------------------------------------------|--------------------------------------------|--------|
| Durability | EIA-364-09C (With Extraction tool CAT-EX-MHF4-01) | 30 cycles | Pass |
| Unmating Force | EIA-364-13 (With Extraction tool CAT-EX-MHF4-01) | Initial: 4N MIN After 30 Cycles: 2N MIN | Pass |
| Crimp Strength | Pull the cable at speed of 25±3mm/minutes by the tensile strength machine and measure the retention force. | 5N MIN | Pass |

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3.6 Environmental:

| ITEM | TEST CONDITION | REQUIREMENT | STATUS |
|---------------------------|--------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------|
| Thermal Shock | Thermal Cycles: 5 (30 minute dwell) Hot Temp: +85°C Cold Temp: -55°C Hot/Cold Transition: Immediate | Visual Inspection: No Damage LLCR: Δ 20 mΩ DWV: 200 VAC IR: >100 MΩ | Pass |
| Thermal Aging (Temp Life) | Test Condition 4 @ 90°C +/- 2°C Condition B for 96 hours | Visual Inspection: No Damage LLCR: Δ 20 mΩ | Pass |
| Cyclic Humidity | Test Temp: +40°C +/- 2°C Relative Humidity: 90 to 95% Test Duration: 96 hours | Visual Inspection: No Damage LLCR: Δ 20 mΩ DWV: 200 VAC IR: >100 MΩ | Pass |

4.0 HIGH SPEED PERFORMANCE

4.1 Frequency Range:

| Connector | Frequency Range |
|-----------|-----------------|
| MHF4 End | 0-6 GHz |

4.2 Impedance: 50 ohm

4.3 V.S.W.R: Plug: 1.3 Max (0~3 GHz), 1.5 Max (3~6 GHz)

Receptacle: 1.3 Max (0~3 GHz), 1.4 Max (3~6 GHz)

5.0 APPLICATION INFORMATION

5.1 Min Cable Bend Radius: RG-081= .02" [5.0mm]

5.2 Cable Management: Samtec recommends some form of cable management to prevent non-axial forces being applied to the connector.

6.0 ADDITIONAL RESOURCES

6.1 For additional mechanical testing or product information, contact our Customer Engineering Support Group at
CES@samtec.com

6.2 For additional information on high speed performance testing, contact our Signal Integrity Group at
SIG@samtec.com

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6.3 For RoHS, REACH or other environmental compliance information, contact our Product Environmental Compliance Group at PEC@samtec.com

USE OF PRODUCT SPECIFICATION SHEET

This Product Specification Sheet (“PSS”) is a brief summary of information related to the Product identified. As a summary, it should only be used for the limited purpose of considering the purchase/use of Product. For specific, detailed information, including but not limited to testing and Product footprint, refer to Section 2.0 of this document and the links there provided to test reports and prints. This PSS is the property of Samtec, Inc. (“Samtec”) and contains proprietary information of Samtec, our various licensors, or both. Samtec does not grant express or implied rights or license under any patent, copyright, trademark or other proprietary rights and the use of the PSS for building, reverse engineering or replication is strictly prohibited. By using the PSS, the user agrees to not infringe, directly or indirectly, upon any intellectual property rights of Samtec and acknowledges that Samtec, our various licensors, or both own all intellectual property therein. The PSS is presented “AS IS”. While Samtec makes every effort to present excellent information, the PSS is only provided as a guideline and does not, therefore, warrant it is without error or defect or that the PSS contains all necessary and/or relevant information about the Product. The user agrees that all access and use of the PSS is at its own risk. **NO WARRANTIES EXPRESSED OR IMPLIED, INCLUDING ANY WARRANTY OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR OF ANY KIND WHATSOEVER ARE PROVIDED**