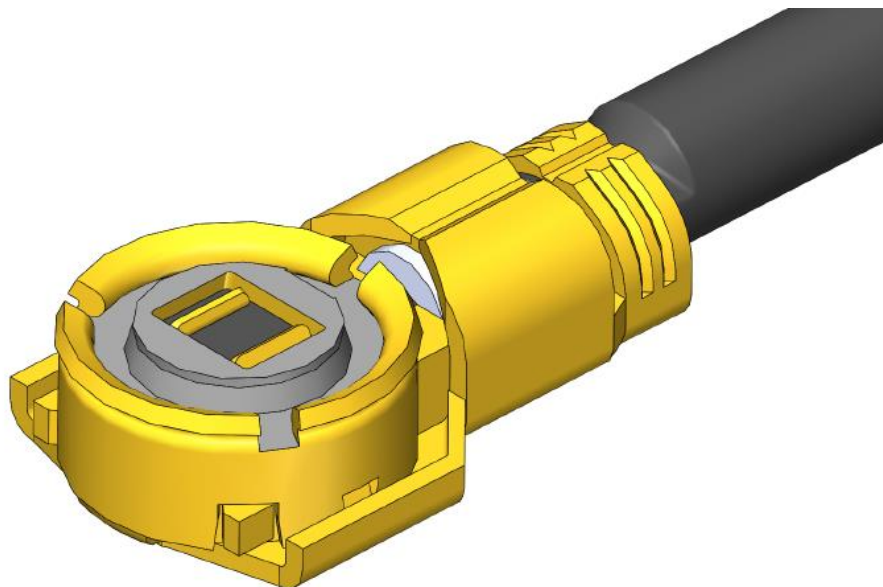
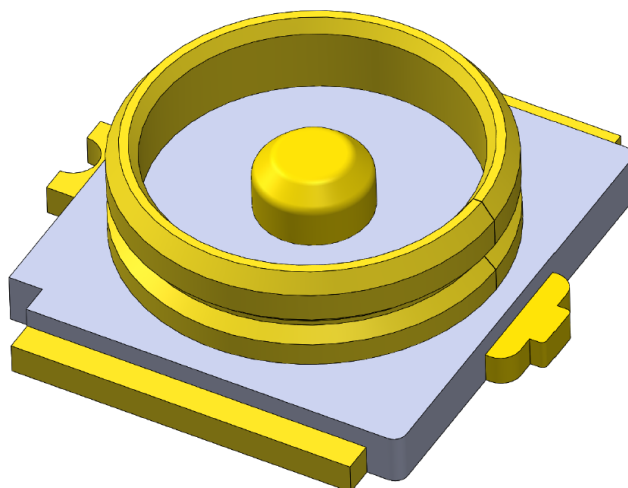


**Series:** MH081 Micro High Frequency RF Cable Assembly, 0.81 mm DIA Coax Cable

### MHF4 End Cable Assembly



### Receptacle End



See [www.samtec.com](http://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: $\Delta$ 20 m $\Omega$ DWV: 200 VAC IR: >100 M $\Omega$	Pass
Thermal Aging (Temp Life)	Test Condition 4 @ 90°C+/-2°C Condition B for 96 hours	Visual Inspection: No Damage LLCR: $\Delta$ 20 m $\Omega$	Pass
Cyclic Humidity	Test Temp: +40°C +/-2°C Relative Humidity: 90 to 95% Test Duration: 96 hours	Visual Inspection: No Damage LLCR: $\Delta$ 20 m $\Omega$ DWV: 200 VAC IR: >100 M $\Omega$	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](mailto:CES@samtec.com)

### 6.2 For additional information on high speed performance testing, contact our Signal Integrity Group at [SIG@samtec.com](mailto: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](mailto: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**