

## Description

- IPEX MHF1 to SMA (F) Bulkhead Straight Connector
- 100mm length, 1.37mm Outside Diameter coaxial cable

# Contents

1. Features	2
2. General data	2
3. Cable Insertion Loss	5
4. Part number	6
6. Hazardous Material Regulation Conformance	8

## 1. Features

---

High reliability connectors  
 Low loss cable  
 Low insertion loss RF connectors

## 2. General data

---

### 2.1. SMA Jack Straight Connector

---

ELECTRICAL	
Impedance	50Ω
Frequency Range	DC ~ 6GHz
Working Voltage	Max ≤ 335Vrms
Dielectric Withstanding Voltage	1000 Vrms
Insulation Resistance	≥ 1000MΩ
Center Contact Resistance	≤ 10mΩ
Outer Contact Resistance	≤ 5mΩ
VSWR	≤ 1.20 @3GHz
Durability	> 500 cycles
Temperature range	-55°C to +155°C

## 2.2. IPEX MHF 1 Connectors

---

IPEX part number – 21351-112R-37	
Impedance	50Ω
Frequency Range	DC ~ 6GHz
Rate Voltage	AC 60V
Withstanding Voltage	AC 200V/minute
Insulation Resistance	$\geq 500\text{M}\Omega/\text{DC}100\text{V}$
Contact Resistance	$\leq 20\text{m}\Omega$
Temperature	-40°C to +90°C
VSWR	$\leq 1.50$
Durability	30 cycles

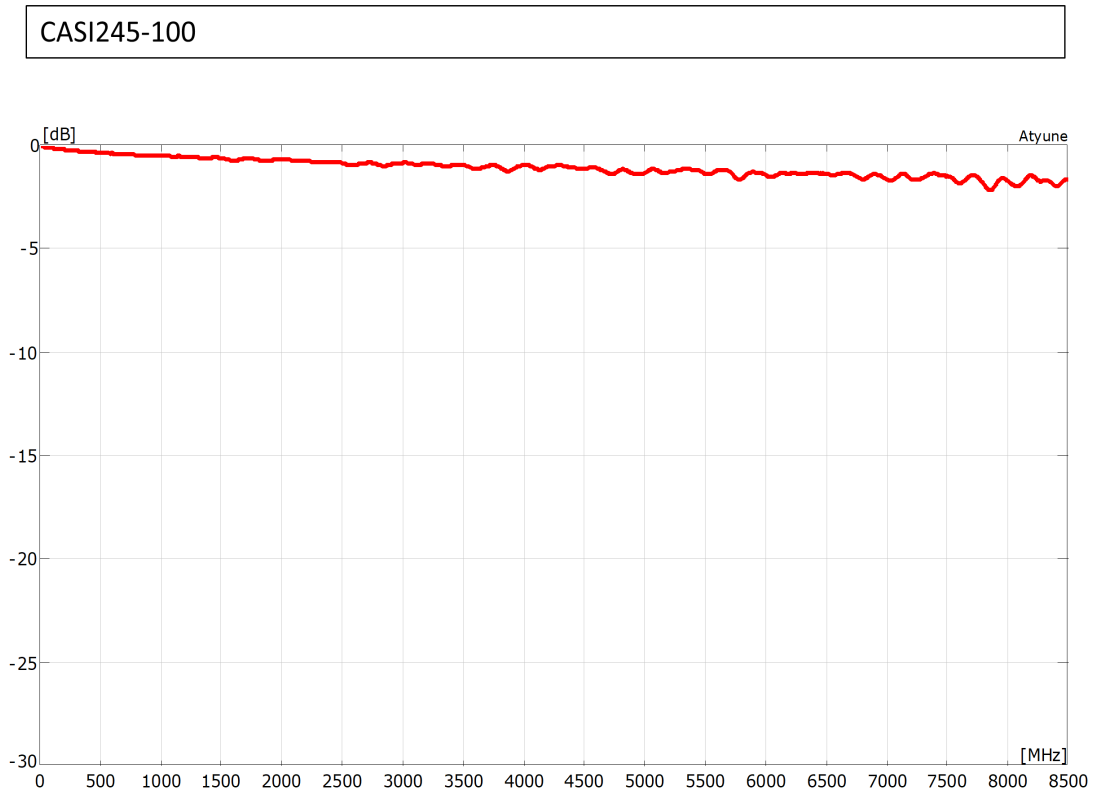
### 2.3. Cable Specification

---

ELECTEICAL Characteristics	
Cable Item	30 AWG O.D 1.37 Black
Capacitance (pF/m)	96
Impedance (ohm)	50
Velocity (%)	70
Min. Bend Radius (mm)	4
Max. Oper. Voltage (Vrms)	1000
Max. Oper. Frequency (MHz)	6000
Operating Temperature	-55°C to +200°C
VSWR	1.50
Attenuation (dB/100m)	1000 MHz - 160dB/100m 2000 MHz - 230dB/100m 3000 MHz - 290dB/100m 4000 MHz - 340dB/100m 5000 MHz - 400dB/100m 6000 MHz - 430dB/100m
Cable length	100mm

### 3. Cable Insertion Loss

---

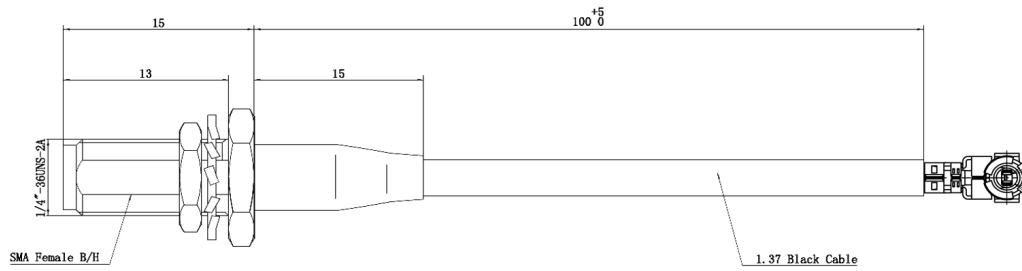


## 4. Part number

Part Number – CASI245-100

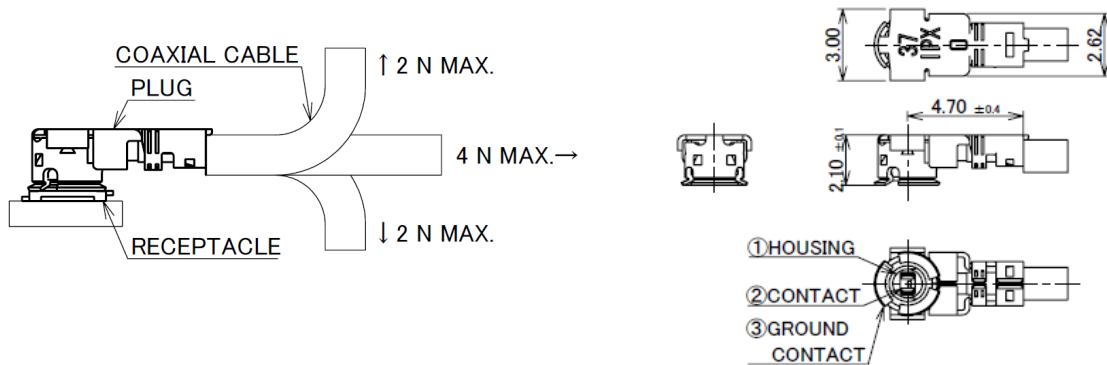
## 5. Drawing

### 5.1. Cable assembly

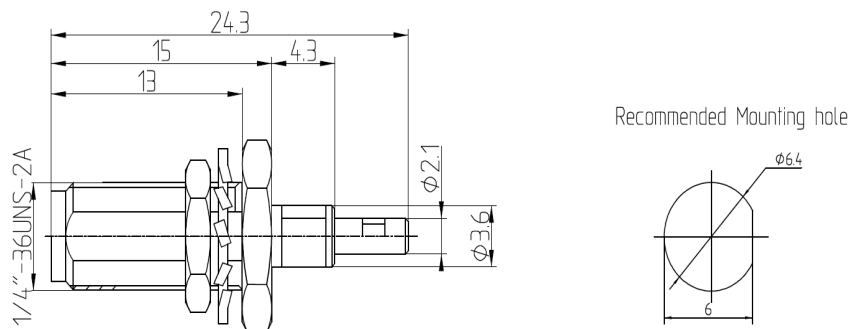


### 5.2. Connectors

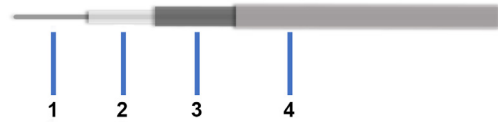
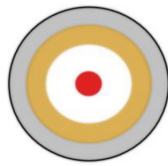
connector 1: IPEX MHF1 21351-112R-37



connector 2: SMA Jack Straight Connector



### 5.3. Cable Construction Specification



Cable Cross Section

		MATERIAL	DIAMETER (MM)
1	Inner Conductor	Silver plated copper clad steel	7 x 0.102
2	Dielectric	FEP	0.88
3	Outer Conductor	Silver Plated Copper Braid	1.10
4	Jacket	FEP	1.37

### 5.4. Bill of Material

		MATERIAL	FINISH	QTY
1	SMA Jack Bulkhead connector	Brass	Gold	1
2	IPEX MHF1	Brass	Gold	1
3	1.37 Coaxial Cable	FEP Jacket	Black	1
4	Heat Shrink Tube	PE	Black	1
5	Washer	Brass	Gold	1
6	Nut	Brass	Gold	1

## 6. Hazardous Material Regulation Conformance

---

The connector has been tested to conform to RoHS requirements.  
A certification of conformance is available from Antenova's website.

### Quality statements

Antenova's products conform to REACH and RoHS legislation. For our statements regarding these and other quality standards, please see [antenova.com](http://antenova.com).



Antenova reserves all rights to the contents of this document. Antenova gives no warranties based solely on the accuracy or completeness of the contents of this document and reserves the right to make changes to the specifications of the products described herein at any time and without notice.

Datasheet version

1.02 release APR 6th 2023

# Antenna design, integration and test resources

Product designers – the details contained in this datasheet will help you to complete your embedded antenna design. Please follow our technical advice carefully to obtain optimum antenna performance.

We aim to support our customers to create high performance wireless products. You will find a wealth of design resources, calculators and case studies to aid your design on our website.

Antenova's design laboratories are equipped with the latest antenna design tools and test chambers. We provide antenna design, test and technical integration services to help you complete your design and obtain the required certifications.

If you cannot find the antenna you require in our product range, please contact us to discuss creating a custom antenna to meet your exact requirements.

Share knowledge with RF experts around the world.

**ask.antenova** is a global forum for designers and engineers working with wireless technology.

[VISIT ASK.ANTENOVA](https://www.ask.antenova.com)

Visit [antenova.com](https://www.antenova.com)

Order antenna samples and evaluation boards, and read our antenna resources

[VISIT ANTENOVA.COM](https://www.antenova.com)

Request a volume quotation for antennas:

[sales@antenova.com](mailto:sales@antenova.com)

Global headquarters

**Antenova Ltd, 2nd Floor Titan Court, 3 Bishop Square, Hatfield, AL10 9NA**

**+44 (0) 1707 927589**