antenova®

DATASHEET

CASI248-100 • CABLE ASSEMBLY

Description

- IPEX MHF1 to SMA(M) Plug with RF cable
- 100mm length, 1.37mm Outside Diameter coaxial cable

Contents

1. Features

High reliability connectors
Low loss cable
Low insertion loss RF connectors

2. General data

2.1. SMA (M) Plug 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	≦1.45
Durability	＞500 cycles
Temperature range	-55°c to +155°c

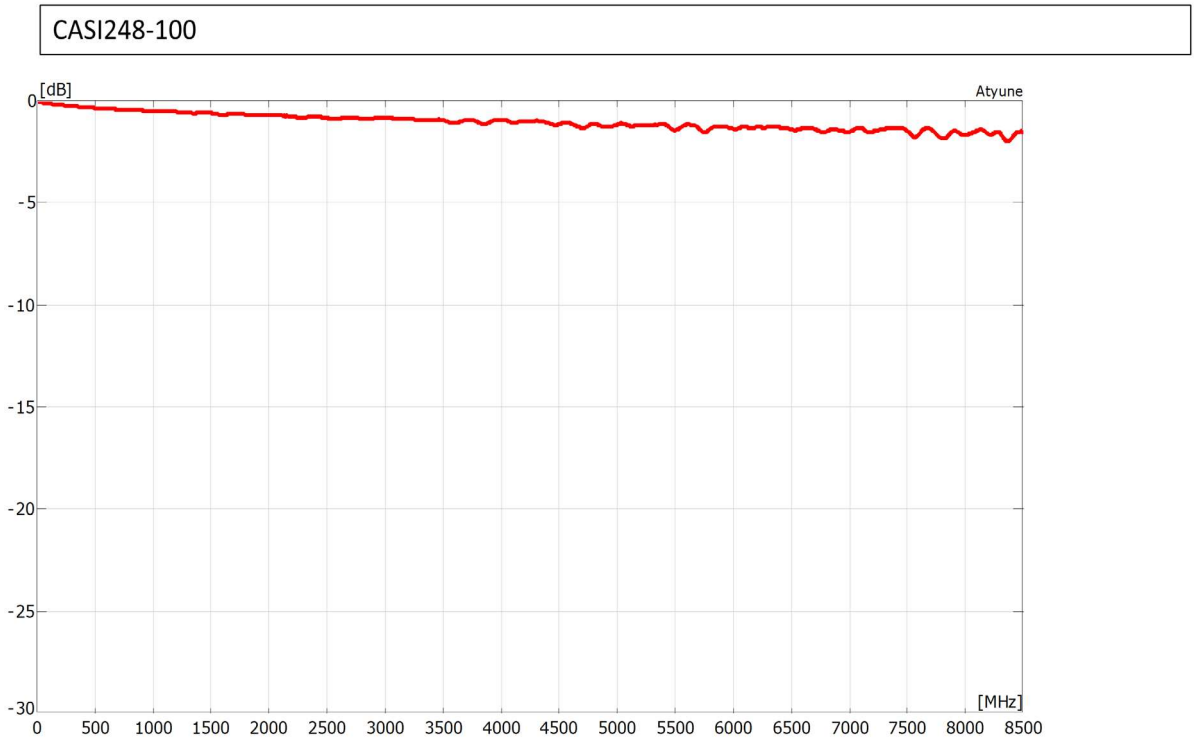
2.2. IPEX MHF 1 Connectors

IPEX part number – 21351-112R-37	
Impedance	50Ω
Frequency Range	DC ~ 6GHz
Rate Voltage	AC 60V
Withstanding Voltage	AC 200V/minute
Insulation Resistance	≧ 500 MΩ/DC 100V
Contact Resistance	≦ 20mΩ
Temperature	-40°C to +90°C
VSWR	≦ 1.50
Durability	30 cycles

2.3. Cable Specification

ELECTRICAL 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 (VMS)	1000
Max. Oper. Frequency (MHz)	6000
Operating Temperature	-55°C to +200°C
VSWR	≦ 1.50
Attenuation (dB/100m)	1000 MHz – 160dB/m 2000 MHz – 230dB/m 3000 MHz – 290dB/m 4000 MHz – 340dB/m 5000 MHz – 400dB/m 6000 MHz – 430dB/m
Cable length	100mm

3. Cable Insertion Loss

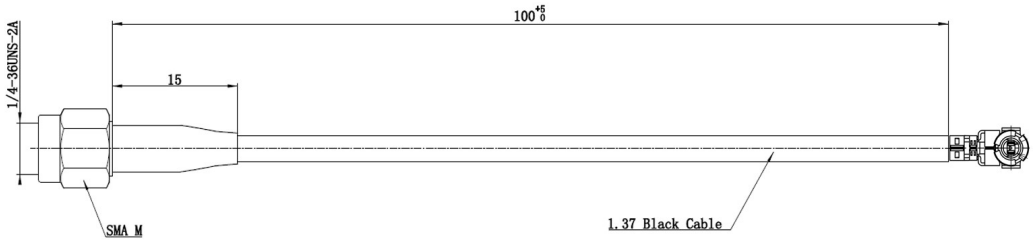


4. Part number

Part Number – CASI248-100

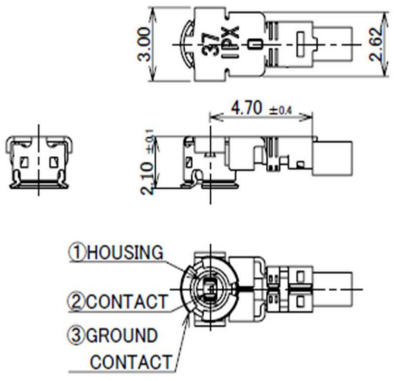
5. Drawing

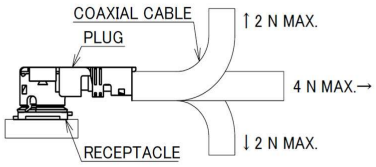
5.1. Cable assembly



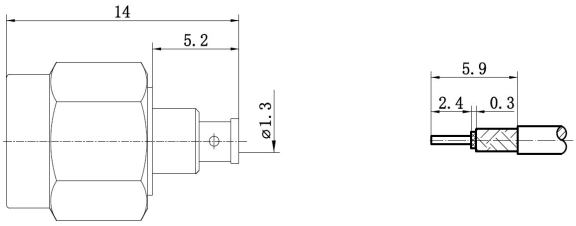
5.2. Connectors

connector 1: IPEX MHF1 21351-112R-37

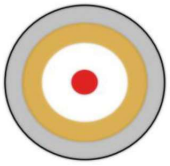


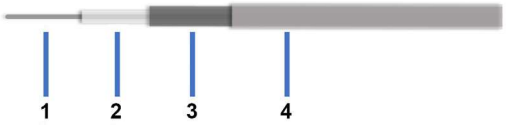


connector 2: :SMA Plug Connector



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

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.

Datasheet version

1.01 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.

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