



# RF Cable Datasheet

**Product OC:** YLUP025J2AC-CN

**Version:** 1.0

**Date:** 2025-12-30

**Status:** Released

**Product Name:** DC–6000 MHz SMA Female to RF 1 Cable

**Key Features:**

Frequency Band: DC–6000 MHz

Cable Length: 300 mm

Connector Type: SMA Female to RF 1

RoHS Compliant

# Overview

To meet the requirements of devices for RF connection among antennas, modules, and motherboards, as well as long-distance wiring, Quectel provides customers with a wide range of RF cable products. These cables use high-quality materials and connectors to reduce the loss to the greatest extent, ensuring overall RF performance. Quectel also provides customized services according to customers' particular requirements for cable material, cable length, and connector type.

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# 1 Specification

## 1.1. Electrical

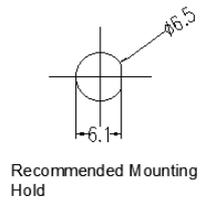
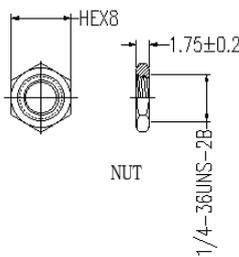
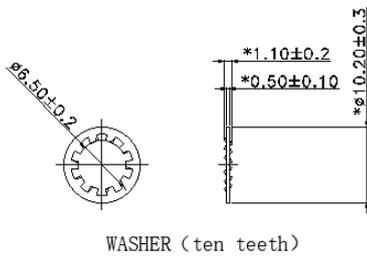
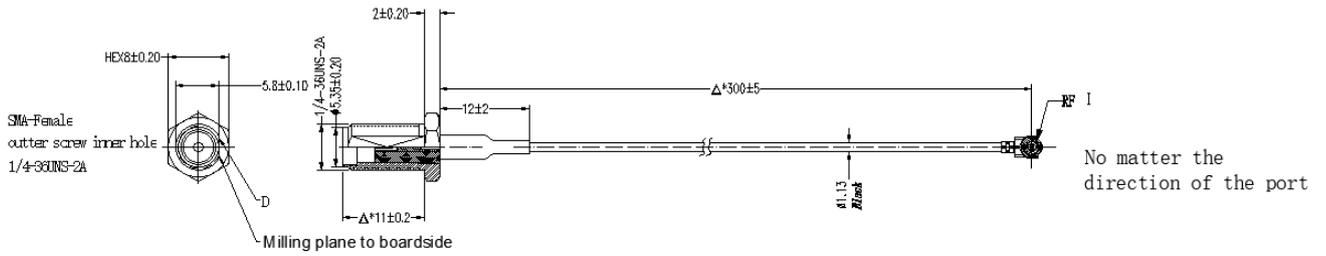
Electrical	
Frequency Range	DC–6000 MHz
Impedance	50 $\Omega$
VSWR	$\leq 1.6$
Return Loss	$\leq -12.6$ dB
Max Cable Loss	-2.1 dB
Screening Effectiveness	500 MHz – 1 GHz $\geq -50$ dB 1–3 GHz $\geq -60$ dB 3–6 GHz $\geq -65$ dB

Electrical – Detail													
Band	B87 /B88	B31 /B72 /B73	B71	B12 /B13 /B28	B5 /B8 /B26	n74 /n75 /n76	B1 /B2 /B3	B40	Wi-Fi 2G	B38 /B41	B42 /B48 /n77	n79	Wi-Fi 5G
SPEC	410– 430	450– 470	600– 700	700– 810	820– 960	1420– 1520	1700– 2170	2300– 2400	2400– 2500	2500– 2690	3300– 4200	4400– 5000	5150– 5850
Max S11 VSWR	1.02	1.04	1.11	1.09	1.14	1.11	1.22	1.24	1.24	1.24	1.28	1.32	1.36
Max S22 VSWR	1.02	1.04	1.12	1.08	1.16	1.11	1.24	1.28	1.27	1.30	1.42	1.49	1.60
Max S11 Return Loss (dB)	-40.09	-34.60	-25.84	-27.70	-23.69	-25.36	-20.17	-19.40	-19.44	-19.31	-18.08	-17.21	-16.31
Max S22 Return Loss (dB)	-40.85	-33.53	-25.11	-27.86	-22.86	-25.84	-19.30	-18.21	-18.42	-17.74	-15.28	-14.19	-12.74
Max Cable Loss S21 (dB)	-0.42	-0.45	-0.57	-0.60	-0.69	-0.86	-1.05	-1.16	-1.15	-1.25	-1.64	-1.84	-2.10
Max Cable Loss S12 (dB)	-0.42	-0.45	-0.56	-0.60	-0.69	-0.86	-1.06	-1.17	-1.17	-1.25	-1.64	-1.82	-2.08

## 1.2. Mechanical & Environmental

<b>Mechanical</b>		
<b>Cable Type &amp; Color &amp; Length</b>		Φ 1.13 & Black & 300 mm
<b>Item</b>	<b>Material</b>	<b>Diameter (mm)</b>
Inner Conductor	Silver plated copper wire	0.24
Insulator	FEP	0.7
Outer Conductor	Tinned copper wire	0.92
Jacket	PVC	1.13
<b>Connector Type</b>		SMA Female to RF 1
<b>Weight</b>		Typ. 3.7 g
<b>Environmental</b>		
<b>Operation Temperature</b>		-40 °C to +85 °C
<b>Storage Temperature</b>		-40 °C to +85 °C
<b>RoHS Compliant</b>		Yes

# 2 Drawing

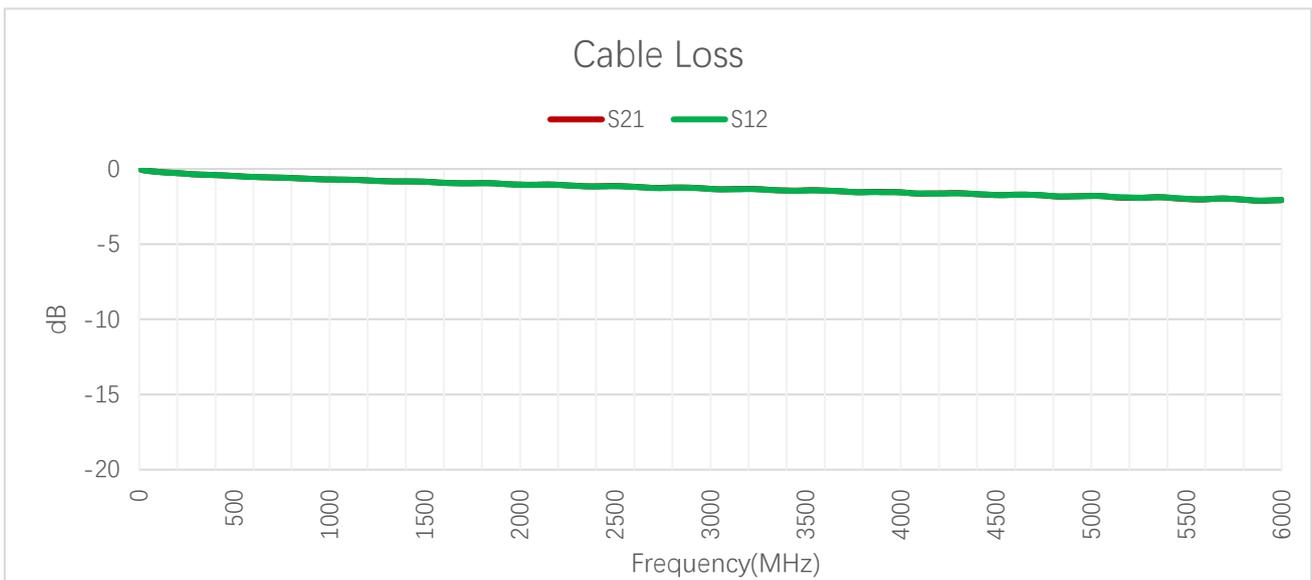


SMA CONNECTOR  
(Inner Hole)

Unit: mm

# 3 Detailed Performance

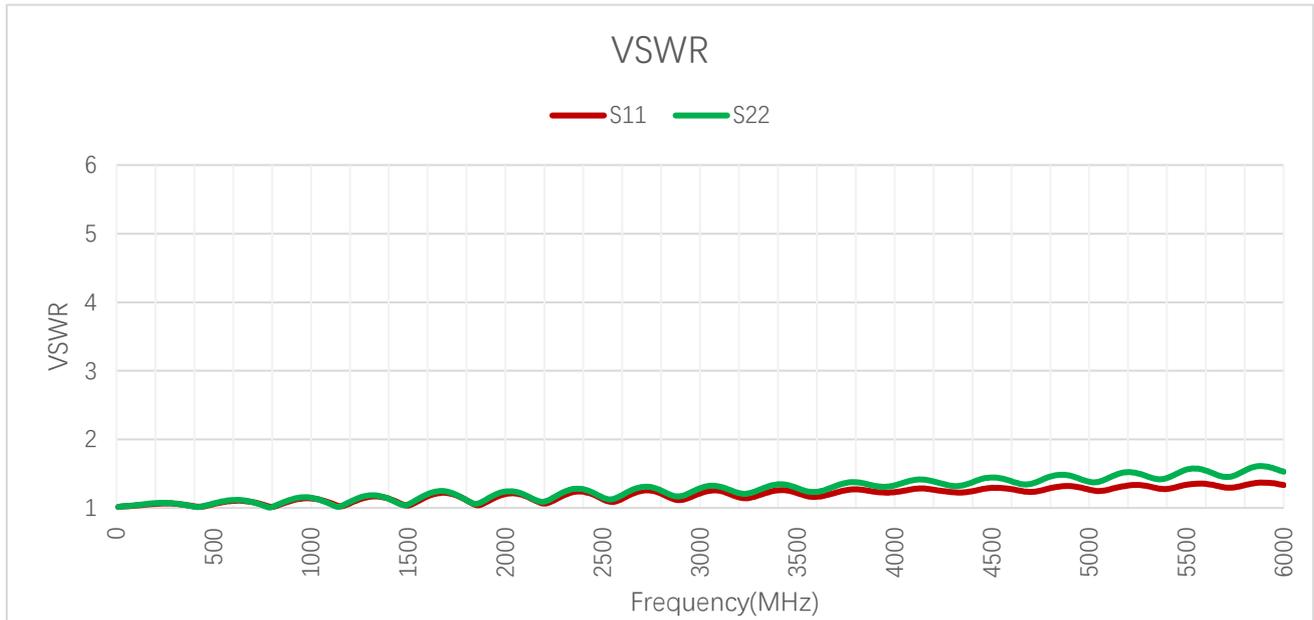
## 3.1. Cable Loss



**Cable Loss (dB)**

Frequency (MHz)	100	300	410	420	460	470	600	630	710	830
<b>S21</b>	-0.19	-0.36	-0.41	-0.42	-0.44	-0.45	-0.53	-0.54	-0.57	-0.62
<b>S12</b>	-0.20	-0.36	-0.41	-0.41	-0.44	-0.45	-0.53	-0.54	-0.57	-0.62
Frequency (MHz)	900	960	1440	1710	1740	1880	1950	2140	2350	2450
<b>S21</b>	-0.66	-0.69	-0.83	-0.95	-0.95	-0.97	-1.01	-1.03	-1.15	-1.14
<b>S12</b>	-0.65	-0.69	-0.83	-0.95	-0.95	-0.96	-1.02	-1.03	-1.16	-1.15
Frequency (MHz)	2600	3600	4700	5000	5500	6000				
<b>S21</b>	-1.19	-1.43	-1.73	-1.79	-2.00	-2.07				
<b>S12</b>	-1.19	-1.45	-1.72	-1.79	-1.98	-2.06				

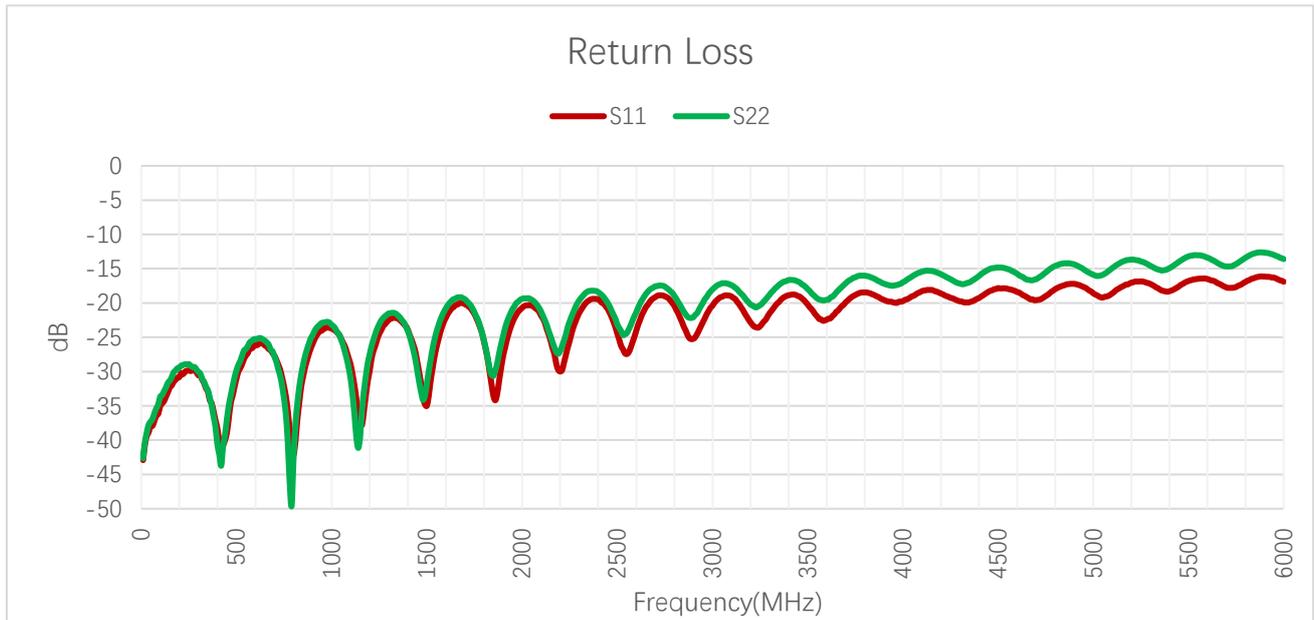
### 3.2. VSWR



**VSWR**

Frequency (MHz)	100	300	410	420	460	470	600	630	710	830
<b>S11</b>	1.04	1.06	1.02	1.02	1.03	1.04	1.10	1.11	1.08	1.04
<b>S22</b>	1.04	1.07	1.02	1.01	1.04	1.04	1.12	1.12	1.08	1.05
Frequency (MHz)	900	960	1440	1710	1740	1880	1950	2140	2350	2450
<b>S11</b>	1.11	1.14	1.09	1.21	1.19	1.06	1.16	1.13	1.23	1.20
<b>S22</b>	1.12	1.16	1.08	1.23	1.20	1.09	1.20	1.13	1.28	1.22
Frequency (MHz)	2600	3600	4700	5000	5500	6000				
<b>S11</b>	1.13	1.16	1.23	1.27	1.34	1.33				
<b>S22</b>	1.19	1.24	1.35	1.38	1.56	1.53				

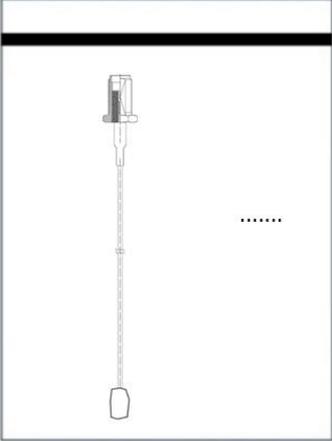
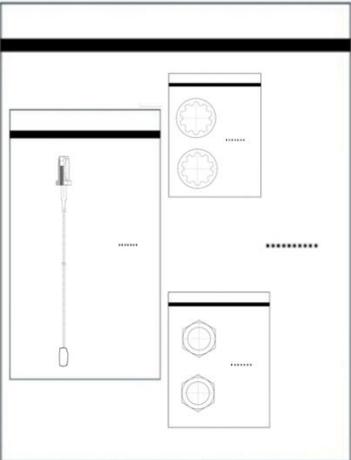
### 3.3. Return Loss

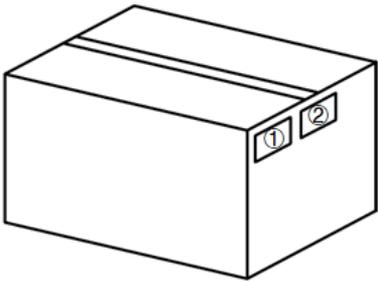
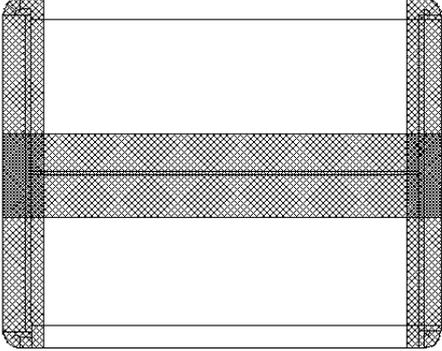


**Return Loss (dB)**

Frequency (MHz)	100	300	410	420	460	470	600	630	710	830
<b>S11</b>	-35.03	-30.54	-40.09	-40.70	-36.77	-34.60	-26.10	-25.84	-28.32	-34.58
<b>S22</b>	-33.65	-30.04	-42.07	-43.72	-34.96	-33.53	-25.25	-25.15	-28.59	-32.33
Frequency (MHz)	900	960	1440	1710	1740	1880	1950	2140	2350	2450
<b>S11</b>	-25.98	-23.69	-27.11	-20.32	-21.17	-31.30	-22.82	-24.59	-19.65	-20.87
<b>S22</b>	-24.73	-22.86	-28.24	-19.72	-20.79	-27.34	-20.91	-24.10	-18.26	-20.00
Frequency (MHz)	2600	3600	4700	5000	5500	6000				
<b>S11</b>	-24.02	-22.42	-19.58	-18.59	-16.80	-16.90				
<b>S22</b>	-21.33	-19.53	-16.53	-15.87	-13.20	-13.60				

# 4 Packaging

Step	Packaging Picture / 2D Picture	Description
1		<p>50 products are wrapped with EPE foam. (50 Products /Tie) 50 products in a small PE bag. (50 Products / Small PE Bag)</p>
2		<p>500 products and accessories in a big PE bag. (500 Products and Accessories / Big PE Bag)</p>
3		<p>(4 Big PE Bags / Carton Box) (2000 Products / Carton Box) Estimated quantity Products that cannot fill the entire carton box are packed in a suitable size carton box. <u>Carton Size:</u> <u>L x W x H = 400 x 290 x 210 mm</u></p>

4	 A 3D perspective drawing of a rectangular carton. On the front face, there are two small rectangular labels. The left label is marked with a circled '1' and the right label is marked with a circled '2'.	<p><b>Position for Attaching Labels</b></p> <ul style="list-style-type: none"><li>① Carton Label</li><li>② Quality Label</li></ul>
5	 A 2D perspective drawing of a rectangular carton. The top and bottom edges are shaded with a cross-hatch pattern, representing the H-shaped sealing structure.	<p><b>Sealing Cartons</b> H-shaped sealing cartons</p>
Note	<p>The initial packaging method described above is for reference only, and the final actual packaging method shall be subject to the actual shipping packaging.</p>	

# Contact Us

At Quectel, our aim is to provide timely and comprehensive services to our customers. If you require any assistance, please contact our headquarters:

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**Or our local offices. For more information, please visit:**

<https://www.quectel.com/contact/>.

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# Revision History

Version	Date	Author	Note
-	2025-12-30	Kevin Cui/ Kadar Liao/ Strong Qiang/ Rainey Liao	Creation of the document
1.0	2025-12-30	Kevin Cui/ Kadar Liao/ Strong Qiang/ Rainey Liao	First official release

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