



YLUX016XQD



YLUX016XQE



YLUX016XQF

## RF Cable Datasheet

**Product OC:** YLUX016XQD & YLUX016XQE & YLUX016XQF

**Version:** 1.1

**Date:** 2025-07-14

**Status:** Released

**Product Name:** RF Cable

**Key Features:**

Frequency Band: DC–6000 MHz

Cable Length: 1700 mm

Connector Type: SMA Male to SMA Female

RoHS and REACH 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 Ω
VSWR	≤ 1.20
Return Loss	≤ -20.82 dB
Max Cable Loss	-2.72 dB

Electrical – Detail													
Band	B87	B31		B12	B5	n74	B1		Wi-Fi	B38	B42		Wi-Fi
	/B88	/B72	B71	/B13	/B8	/n75	/B2	B40	2G	/B41	/B48	n79	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	1.03	1.01	1.04	1.04	1.04	1.06	1.08	1.08	1.08	1.08	1.12	1.12	1.20
Max S22 VSWR	1.03	1.02	1.03	1.03	1.04	1.06	1.07	1.05	1.04	1.04	1.07	1.09	1.18
Max S11 Return Loss (dB)	-36.88	-43.46	-33.71	-33.71	-34.06	-31.21	-28.40	-28.64	-28.00	-28.29	-24.73	-24.89	-20.82
Max S22 Return Loss (dB)	-37.39	-40.41	-37.03	-35.45	-34.47	-30.85	-29.79	-32.07	-33.36	-34.01	-29.52	-27.78	-21.79
Max Cable Loss S21 (dB)	-0.62	-0.66	-0.81	-0.88	-0.96	-1.24	-1.62	-1.73	-1.75	-1.80	-2.21	-2.43	-2.66

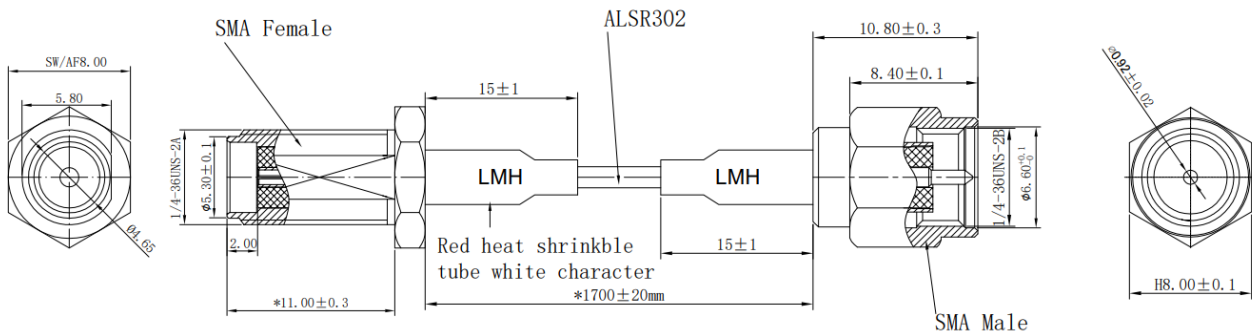
<b>Max Cable Loss S12 (dB)</b>	-0.63	-0.66	-0.81	-0.88	-0.96	-1.23	-1.63	-1.73	-1.78	-1.80	-2.23	-2.46	-2.68
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## 1.2. Mechanical & Environmental

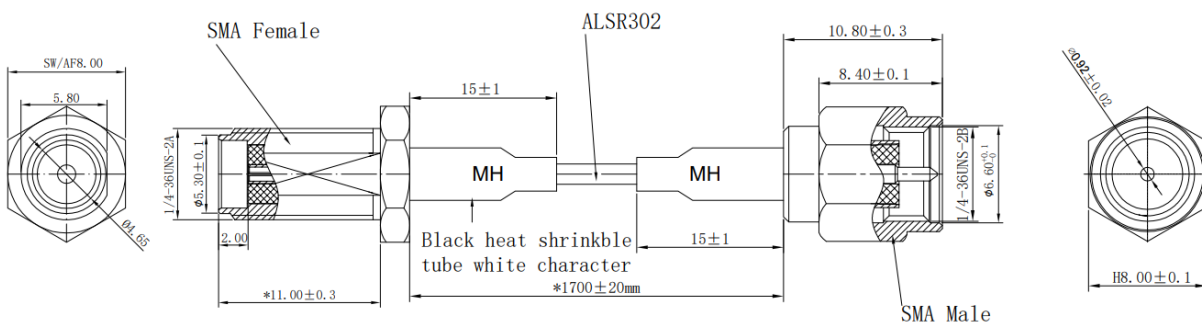
<b>Mechanical</b>	
<b>Cable Type &amp; Color &amp; Length</b>	ALSR302 & Black & 1700 mm
<b>Item</b>	<b>Material</b> <span style="float: right;"><b>Diameter (mm)</b></span>
Inner Conductor	Bare copper <span style="float: right;">0.81 ±0.01</span>
Insulator	PP <span style="float: right;">2.15 ±0.10</span>
Outer Conductor	Tinned copper wire <span style="float: right;">2.65 ±0.10</span>
Jacket	PVC <span style="float: right;">3.30 ±0.10</span>
<b>Connector Type</b>	SMA Male to SMA Female
<b>Weight</b>	Typ. 36.5 g
<b>Environmental</b>	
<b>Operation Temperature</b>	-40 °C to +85 °C
<b>Storage Temperature</b>	-40 °C to +85 °C
<b>RoHS and REACH Compliant</b>	Yes

# 2 Drawing

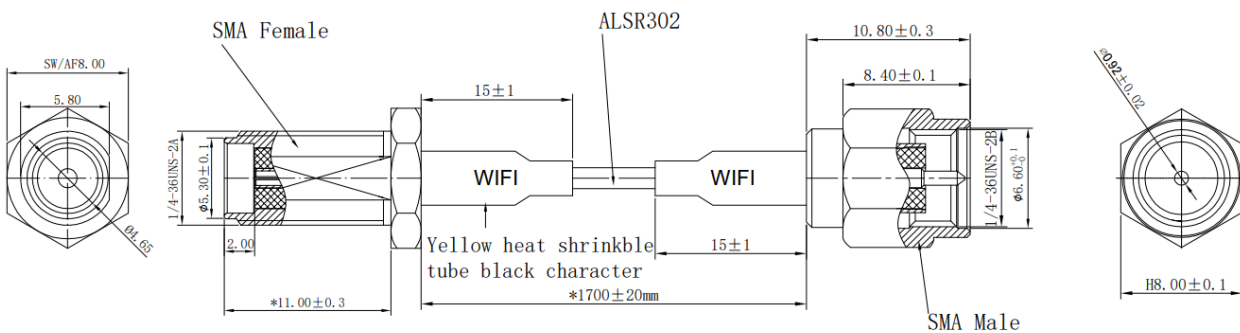
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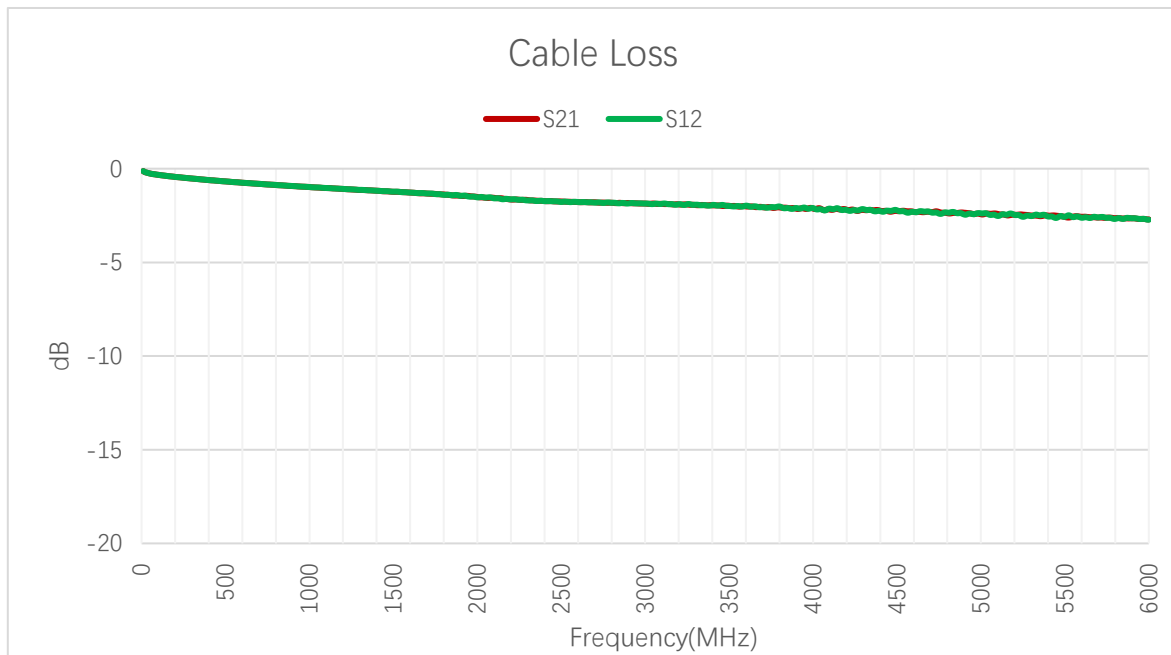


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# 3 Detailed Performance

## 3.1. Cable Loss

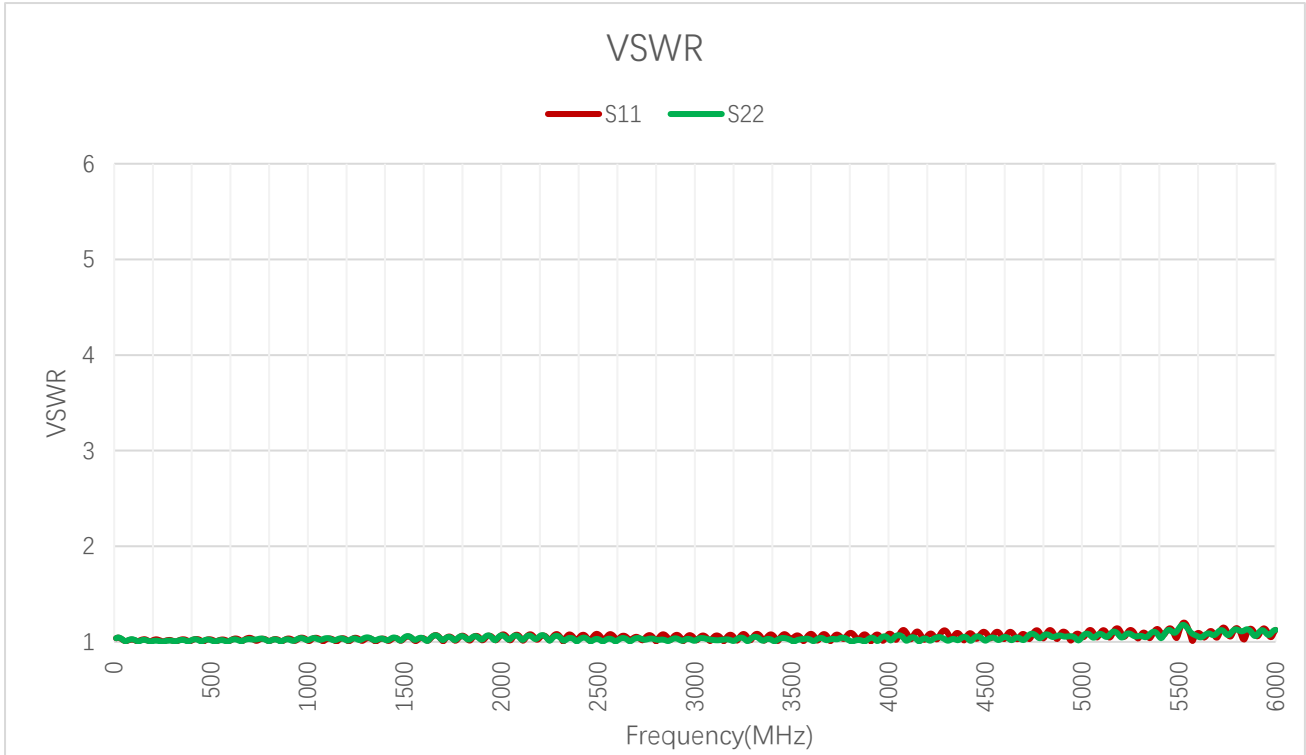


**Cable Loss (dB)**

Frequency (MHz)	100	300	410	420	460	470	600	630	710	830
S21	-0.33	-0.52	-0.62	-0.62	-0.65	-0.66	-0.75	-0.77	-0.81	-0.89
S12	-0.33	-0.53	-0.61	-0.62	-0.65	-0.66	-0.75	-0.77	-0.81	-0.89
Frequency (MHz)	900	960	1440	1710	1740	1880	1950	2140	2350	2450
S21	-0.93	-0.96	-1.20	-1.33	-1.34	-1.43	-1.46	-1.58	-1.70	-1.74
S12	-0.92	-0.96	-1.20	-1.32	-1.34	-1.41	-1.49	-1.61	-1.72	-1.74
Frequency (MHz)	2600	3600	4700	5000	5500	6000				
S21	-1.78	-2.01	-2.31	-2.43	-2.57	-2.71				

<b>S12</b>	-1.78	-1.97	-2.32	-2.38	-2.57	-2.72				
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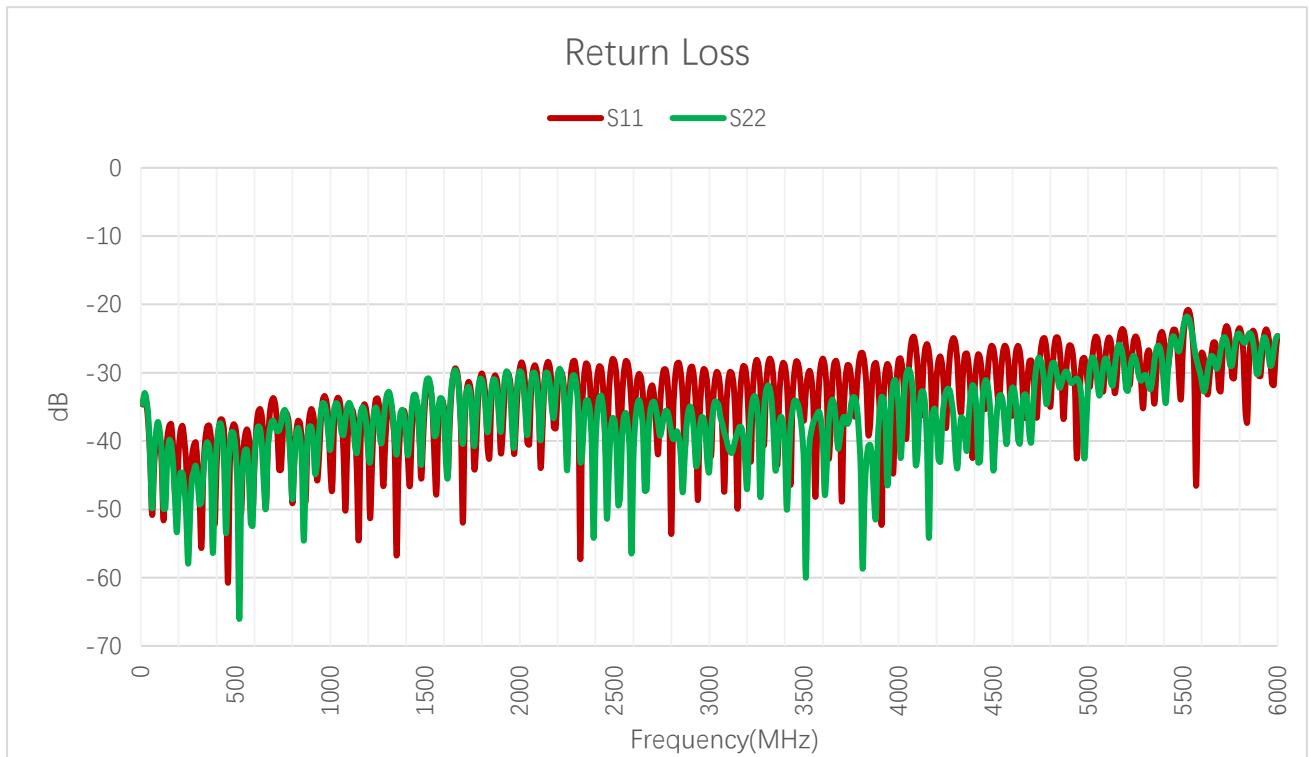
### 3.2. VSWR



**VSWR**

Frequency (MHz)	100	300	410	420	460	470	600	630	710	830
<b>S11</b>	1.02	1.01	1.02	1.03	1.00	1.01	1.01	1.03	1.04	1.03
<b>S22</b>	1.02	1.01	1.02	1.03	1.01	1.02	1.01	1.02	1.03	1.03
Frequency (MHz)	900	960	1440	1710	1740	1880	1950	2140	2350	2450
<b>S11</b>	1.03	1.04	1.03	1.03	1.05	1.06	1.05	1.07	1.08	1.02
<b>S22</b>	1.03	1.04	1.04	1.03	1.04	1.05	1.05	1.07	1.04	1.02
Frequency (MHz)	2600	3600	4700	5000	5500	6000				
<b>S11</b>	1.02	1.08	1.08	1.05	1.10	1.13				
<b>S22</b>	1.01	1.02	1.02	1.05	1.14	1.12				

### 3.3. Return Loss

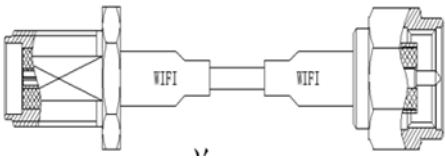
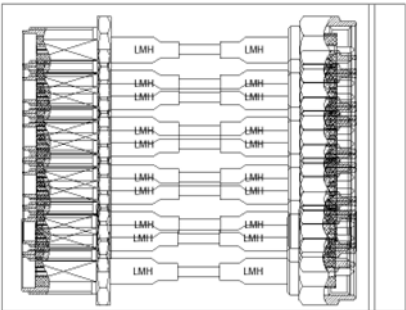
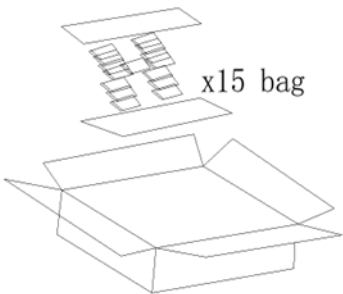


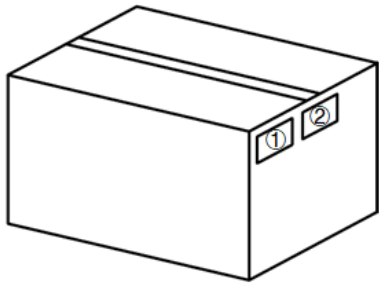
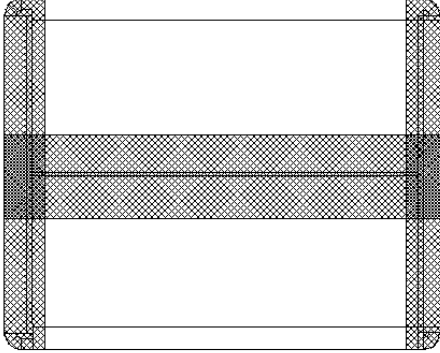
**Return Loss (dB)**

Frequency (MHz)	100	300	410	420	460	470	600	630	710	830
<b>S11</b>	-39.53	-43.77	-38.70	-36.88	-60.76	-43.46	-43.53	-35.32	-34.75	-37.05
<b>S22</b>	-38.57	-45.81	-38.22	-37.39	-45.20	-40.41	-42.58	-38.25	-37.96	-38.08
Frequency (MHz)	900	960	1440	1710	1740	1880	1950	2140	2350	2450
<b>S11</b>	-35.31	-34.06	-35.37	-36.88	-32.21	-31.16	-31.46	-29.15	-28.64	-39.03
<b>S22</b>	-37.93	-34.47	-33.32	-35.33	-33.32	-32.83	-32.61	-29.98	-34.12	-39.32
Frequency (MHz)	2600	3600	4700	5000	5500	6000				
<b>S11</b>	-38.85	-27.93	-28.23	-32.10	-26.64	-24.61				
<b>S22</b>	-42.66	-40.08	-40.15	-32.08	-23.71	-24.63				

# 4 Packaging

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Step	Packaging Picture / 2D Picture	Description
1		Product drawing
2	 <p>10PCS/袋</p>	10 antenna products in a PE bag.
3		<p>15 PE Bags / Carton Box (150 Antennas / Carton Box) Estimated Quantity</p> <p>Products that cannot fill the entire carton box are packed in a suitable size carton box.</p> <p><u>Carton Size:</u> <u>L × W × H = 325 × 325 × 200 mm</u></p>

<p>4</p>		<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>
<p>5</p>		<p><b>Sealing Cartons</b> H-shaped sealing cartons</p>
<p>Note</p>	<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:**

**Quectel Wireless Solutions Co., Ltd.**

Building 5, Shanghai Business Park Phase III (Area B), No.1016 Tianlin Road, Minhang District, Shanghai 200233, China

Tel: +86 21 5108 6236

Email: [info@quectel.com](mailto:info@quectel.com)

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

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# Revision History

Version	Date	Author	Note
-	2023-11-10	Jim LUO/ Lucky FENG/ David LIU/ Aria CHU	Creation of the document
1.0	2023-11-10	Jim LUO/ Lucky FENG/ David LIU/ Aria CHU	First official release
1.1	2025-07-14	Aria CHU	Updated the antenna image (Cover page).

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