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# RF Cable Datasheet

**Product OC:** YLUX017XQA & YLUX017XQB & YLUX017XQC

**Version:** 1.0

**Date:** 2023-11-10

**Status:** Released

**Product Name:** RF Cable

**Key Features:**

Frequency Band: DC–6000 MHz

Cable Length: 700 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

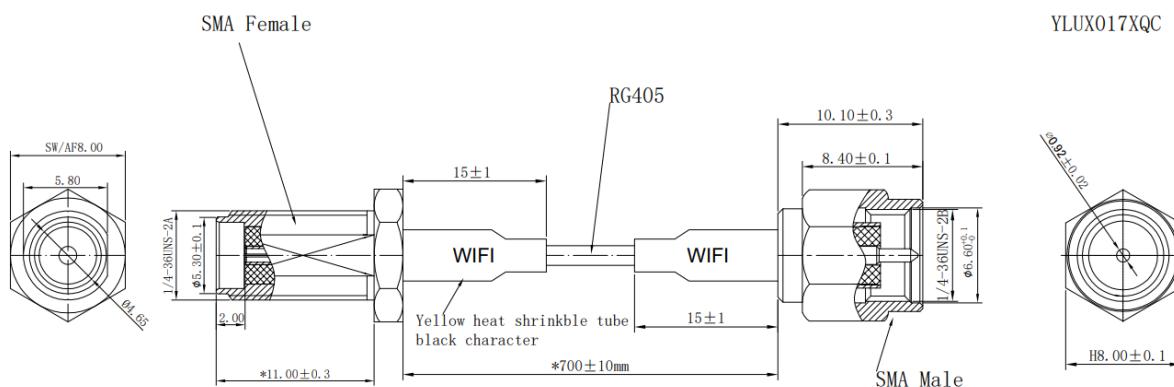
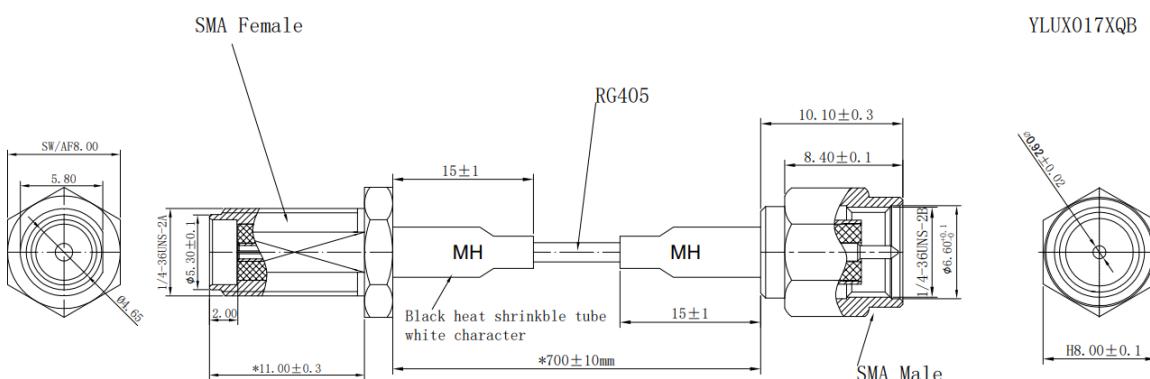
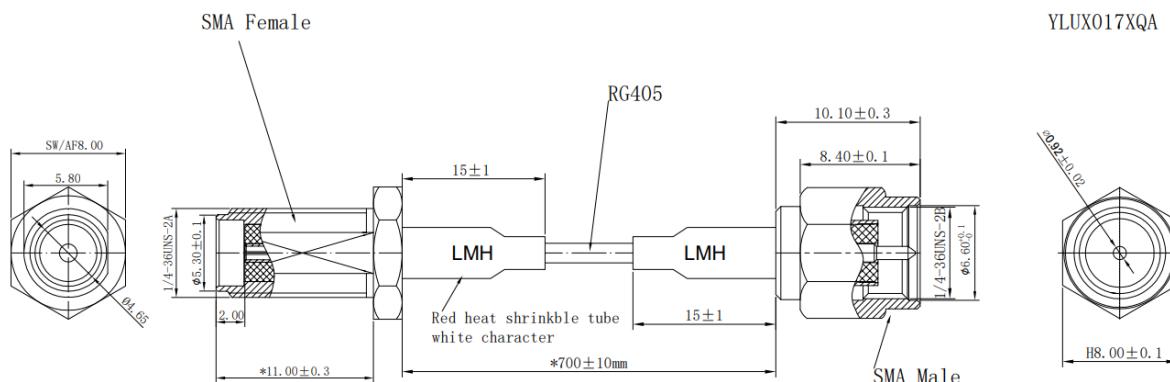
Electrical												
<b>Frequency Range</b>												DC–6000 MHz
<b>Impedance</b>												50 Ω
<b>VSWR</b>												≤ 1.42
<b>Return Loss</b>												≤ -15.29dB
<b>Max Cable Loss</b>												-1.49 dB

	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-	450-	600-	700-	820-	1420-	1700-	2300-	2400-	2500-	3300-	4400-	5150-	
	430	470	700	810	960	1520	2170	2400	2500	2690	4200	5000	5850	
<b>Max S11 VSWR</b>	1.04	1.04	1.03	1.05	1.06	1.09	1.12	1.14	1.14	1.15	1.28	1.34	1.36	
<b>Max S22 VSWR</b>	1.04	1.04	1.03	1.05	1.06	1.08	1.09	1.12	1.12	1.12	1.27	1.34	1.39	
<b>Max S11 Return Loss (dB)</b>	-34.04	-33.69	-36.73	-33.10	-30.76	-27.62	-25.22	-23.41	-23.48	-22.87	-18.08	-16.82	-16.40	
<b>Max S22 Return Loss (dB)</b>	-34.40	-33.66	-35.97	-32.76	-31.09	-28.04	-27.04	-25.03	-25.03	-24.64	-18.53	-16.86	-15.82	
<b>Max Cable Loss S21 (dB)</b>	-0.38	-0.38	-0.46	-0.50	-0.54	-0.69	-0.85	-0.88	-0.92	-0.94	-1.24	-1.33	-1.49	
<b>Max Cable Loss S12 (dB)</b>	-0.38	-0.38	-0.46	-0.50	-0.54	-0.70	-0.85	-0.88	-0.92	-0.95	-1.25	-1.35	-1.47	

## 1.2. Mechanical & Environmental

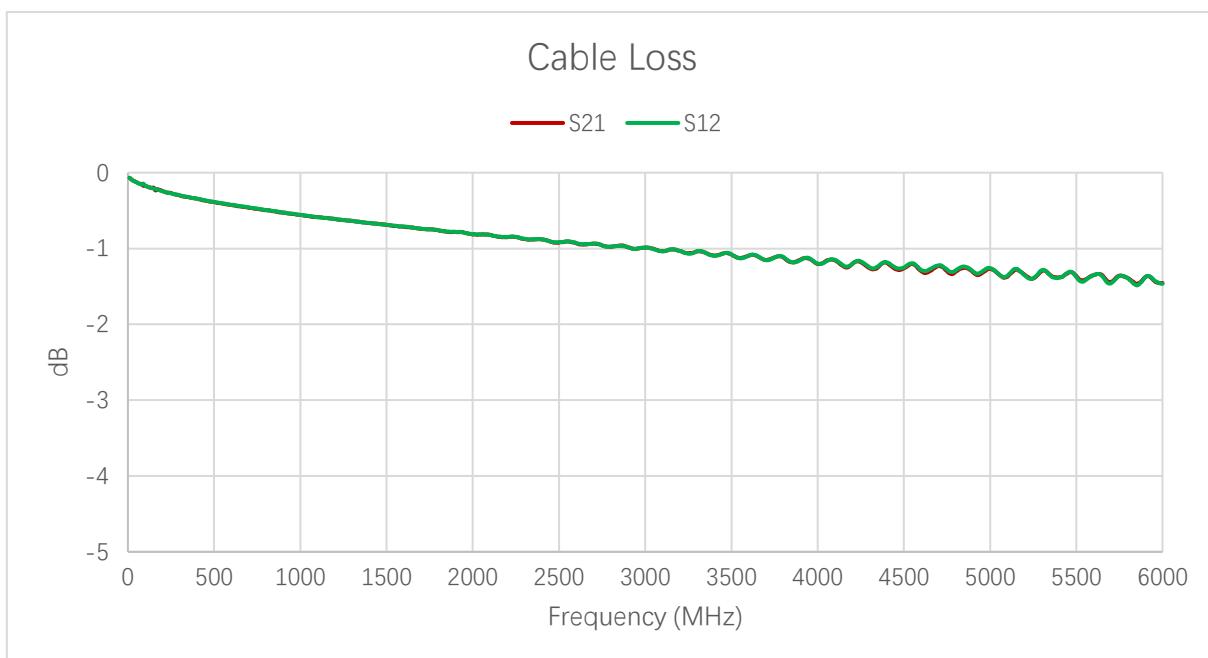
<b>Mechanical</b>		
<b>Cable Type &amp; Color &amp; Length</b>		RG405 & Black & 700 mm
Item	Material	Diameter (mm)
Inner Conductor	Silver plated copper wire	0.54 ±0.01
Insulator	PTFE	1.67 ±0.05
Outer Conductor	Tinned copper wire	2.1 ±0.1
Jacket	FEP	2.6 ±0.1
<b>Connector Type</b>		SMA Male to SMA Female
<b>Weight</b>		Typ. 18.9g
<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



# 3 Detailed Performance

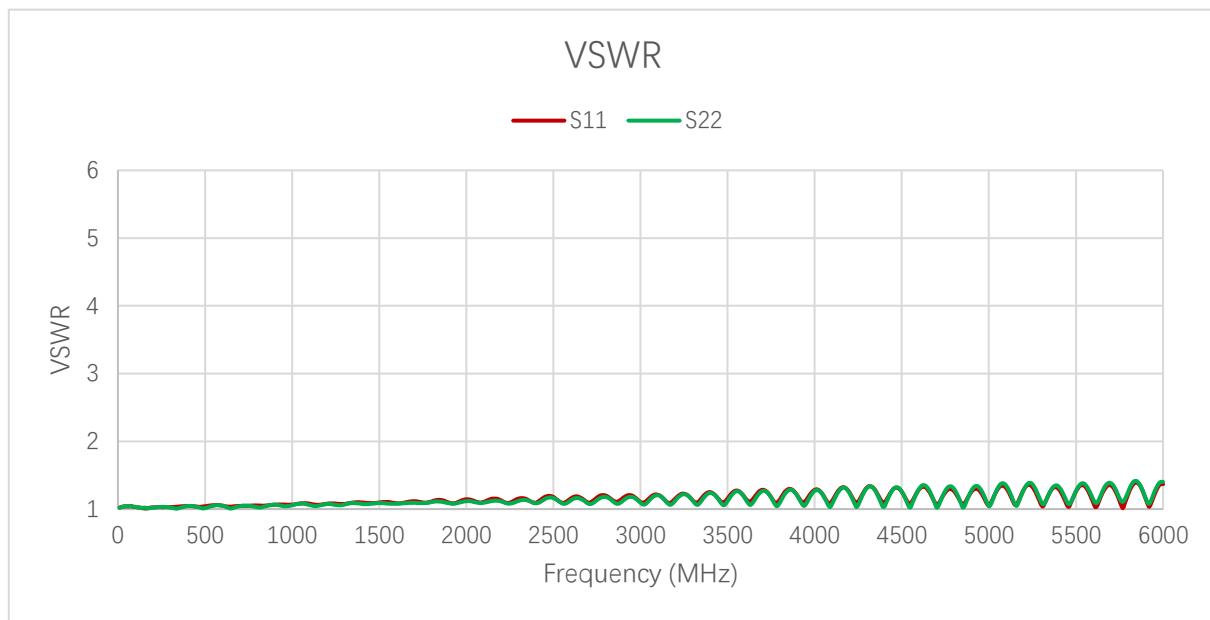
## 3.1. Cable Loss



Cable Loss (dB)

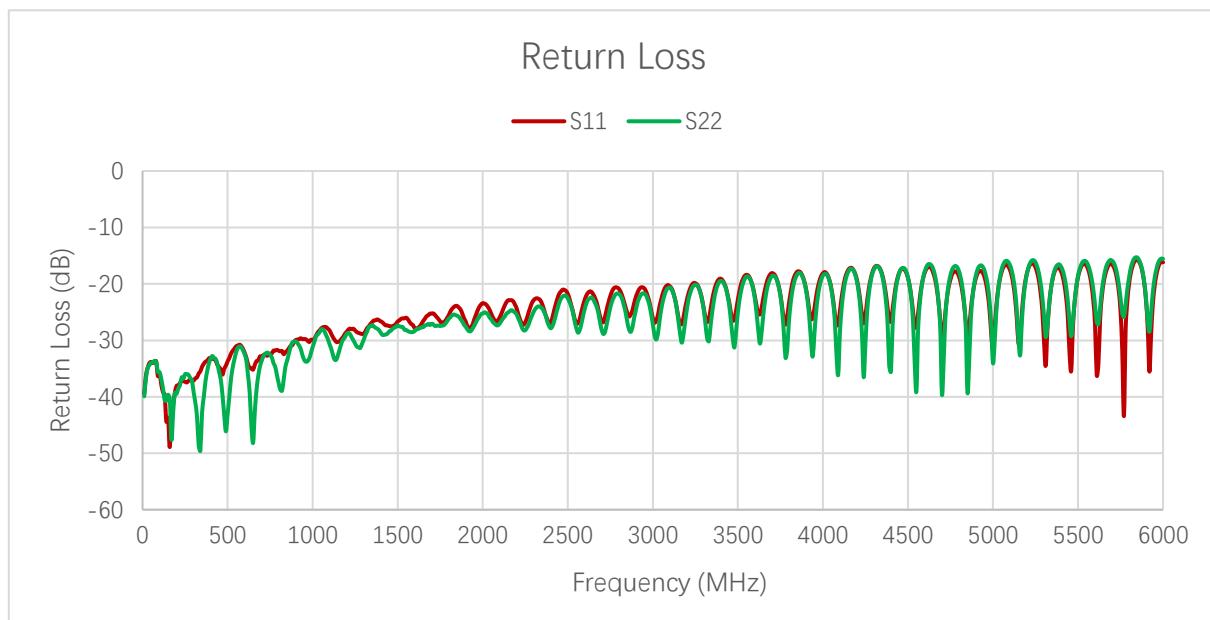
Frequency (MHz)	100	300	410	420	460	470	600	630	710	830
<b>S21</b>	-0.17	-0.30	-0.35	-0.35	-0.37	-0.38	-0.42	-0.43	-0.46	-0.50
<b>S12</b>	-0.17	-0.30	-0.35	-0.35	-0.37	-0.38	-0.43	-0.44	-0.47	-0.50
Frequency (MHz)	900	960	1440	1710	1740	1880	1950	2140	2350	2450
<b>S21</b>	-0.52	-0.54	-0.67	-0.74	-0.75	-0.78	-0.79	-0.84	-0.88	-0.91
<b>S12</b>	-0.53	-0.54	-0.67	-0.74	-0.75	-0.78	-0.79	-0.84	-0.88	-0.91
Frequency (MHz)	2600	3600	4700	5000	5500	6000				
<b>S21</b>	-0.93	-1.09	-1.22	-1.26	-1.38	-1.47				
<b>S12</b>	-0.93	-1.09	-1.23	-1.27	-1.36	-1.45				

### 3.2. VSWR



VSWR										
Frequency (MHz)	100	300	410	420	460	470	600	630	710	830
<b>S11</b>	1.03	1.03	1.04	1.04	1.04	1.03	1.05	1.04	1.05	1.05
<b>S22</b>	1.03	1.02	1.05	1.05	1.03	1.02	1.05	1.02	1.05	1.03
Frequency (MHz)										
<b>S11</b>	1.07	1.07	1.09	1.12	1.10	1.12	1.10	1.15	1.14	1.18
<b>S22</b>	1.06	1.04	1.08	1.09	1.09	1.10	1.09	1.12	1.13	1.15
Frequency (MHz)										
<b>S11</b>	1.16	1.17	1.07	1.05	1.26	1.37				
<b>S22</b>	1.13	1.16	1.02	1.04	1.27	1.40				

### 3.3. Return Loss

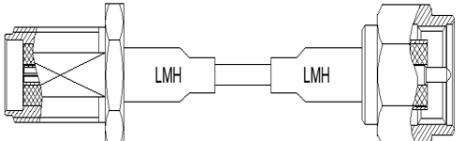
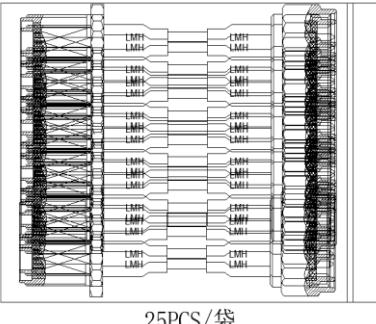


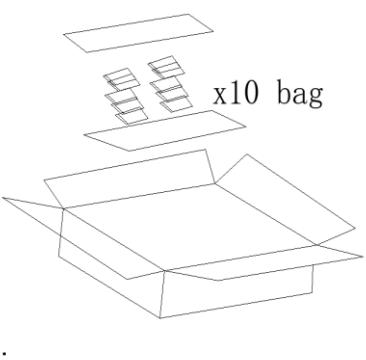
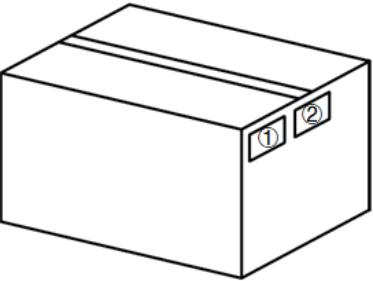
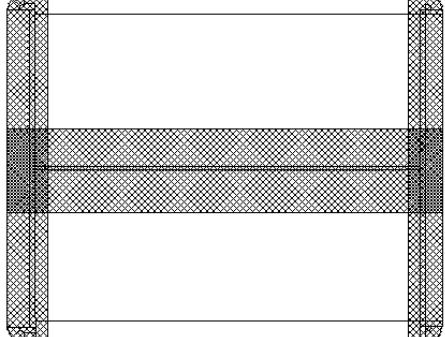
Return Loss (dB)

Frequency (MHz)	100	300	410	420	460	470	600	630	710	830
S11	-35.90	-37.14	-33.28	-33.26	-35.16	-36.08	-32.18	-34.86	-32.61	-32.44
S22	-35.62	-39.13	-32.76	-33.11	-36.98	-39.71	-32.44	-39.31	-32.85	-36.91
Frequency (MHz)	900	960	1440	1710	1740	1880	1950	2140	2350	2450
S11	-29.94	-29.81	-27.34	-25.22	-26.24	-25.25	-26.30	-23.21	-23.61	-21.73
S22	-30.15	-33.77	-28.81	-27.19	-27.40	-26.67	-27.40	-25.25	-24.37	-23.32
Frequency (MHz)	2600	3600	4700	5000	5500	6000				
S11	-22.77	-22.21	-29.65	-31.86	-18.79	-16.18				
S22	-24.42	-22.64	-39.57	-34.04	-18.56	-15.56				

## 4 Packaging

- YLUX017XQA
- YLUX017XQB
- YLUX017XQC

Step	Packaging picture / 2D picture	Description
1		Product drawing
2		25 pcs antenna products in a PE bag.

3		<p>10 PE Bags / Carton Box (250 PCS / 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><math>L \times W \times H = 325 \times 325 \times 200 \text{ mm}</math></u></p>
4		<p><b>Position for Attaching Labels</b></p> <p>① Carton Label ② Quality Label</p>
5		<p><b>Sealing Cartons</b> “工” type sealing cartons</p>
6	The initial packaging method described above is for reference only, and the final actual packaging method shall be subject to the actual shipping packaging.	

# 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:**

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# Revision History

Version	Date	Author	Note
-	2023-11-10	Mordecai LIU/ Lucky FENG/ David LIU/ Aria CHU	Creation of the document
1.0	2023-11-10	Mordecai LIU/ Lucky FENG/ David LIU/ Aria CHU	First official release



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