

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

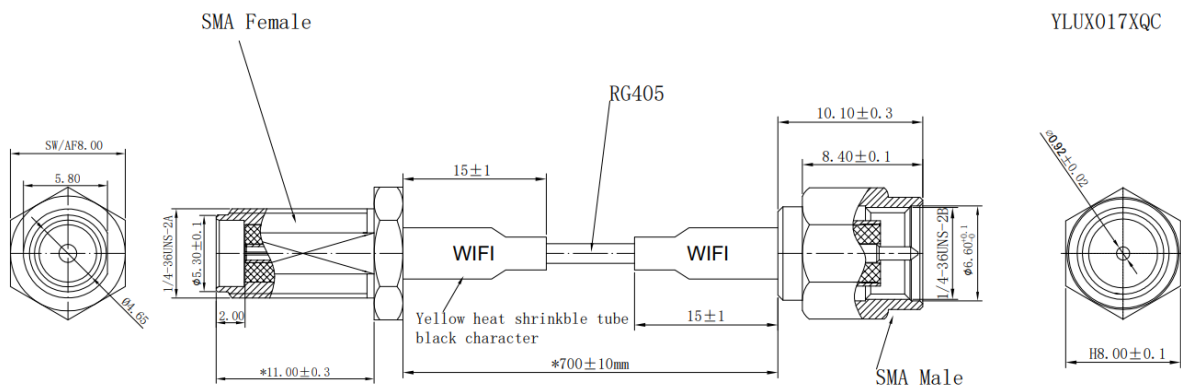
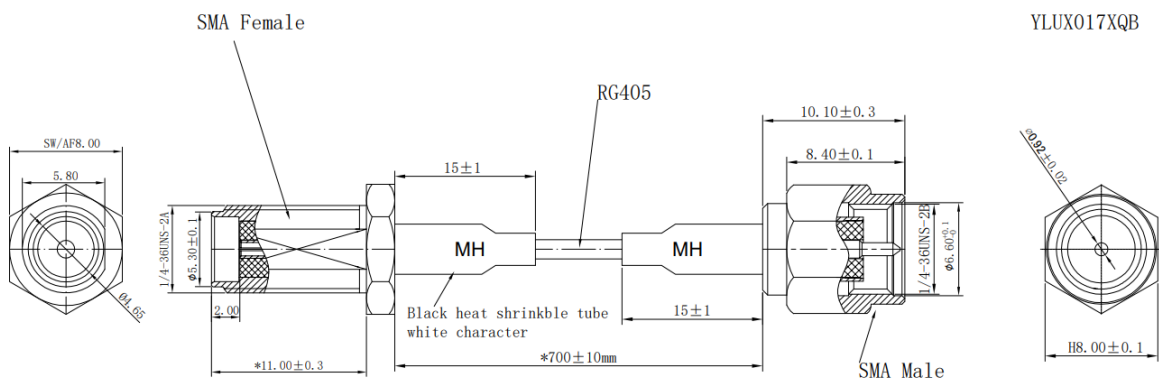
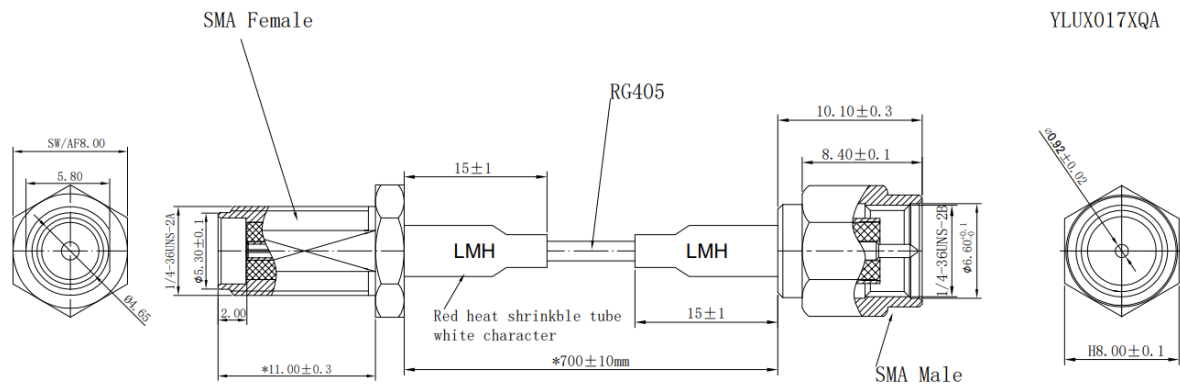
Electrical	
Frequency Range	DC–6000 MHz
Impedance	50 Ω
VSWR	≤ 1.42
Return Loss	$\leq -15.29\text{dB}$
Max Cable Loss	-1.49 dB

Electrical - Detail														
SPEC	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
		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		1.04	1.04	1.03	1.05	1.06	1.09	1.12	1.14	1.14	1.15	1.28	1.34	1.36
Max S22 VSWR		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
Max S11 Return Loss (dB)		-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
Max S22 Return Loss (dB)		-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
Max Cable Loss S21 (dB)		-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
Max Cable Loss S12 (dB)		-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

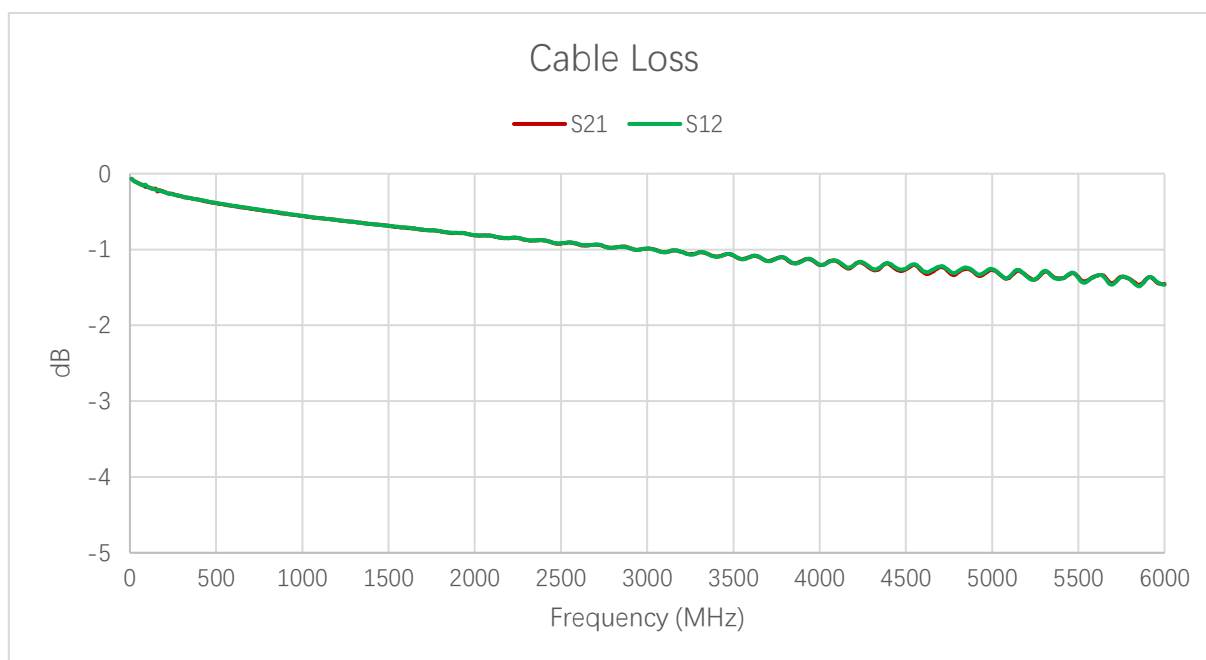
Mechanical		
Cable Type & Color & Length		RG405 & Black & 700 mm
Item	Material	Diameter (mm)
Inner Conductor	Silver plated copper wire	0.54 ±0.01
Insulator	PTFE	1.67 ±0.05
Outer Conductor	Tinned copper wire	2.1 ±0.1
Jacket	FEP	2.6 ±0.1
Connector Type		SMA Male to SMA Female
Weight		Typ. 18.9g
Environmental		
Operation Temperature		-40 °C to +85 °C
Storage Temperature		-40 °C to +85 °C
RoHS and REACH Compliant		Yes

2 Drawing



3 Detailed Performance

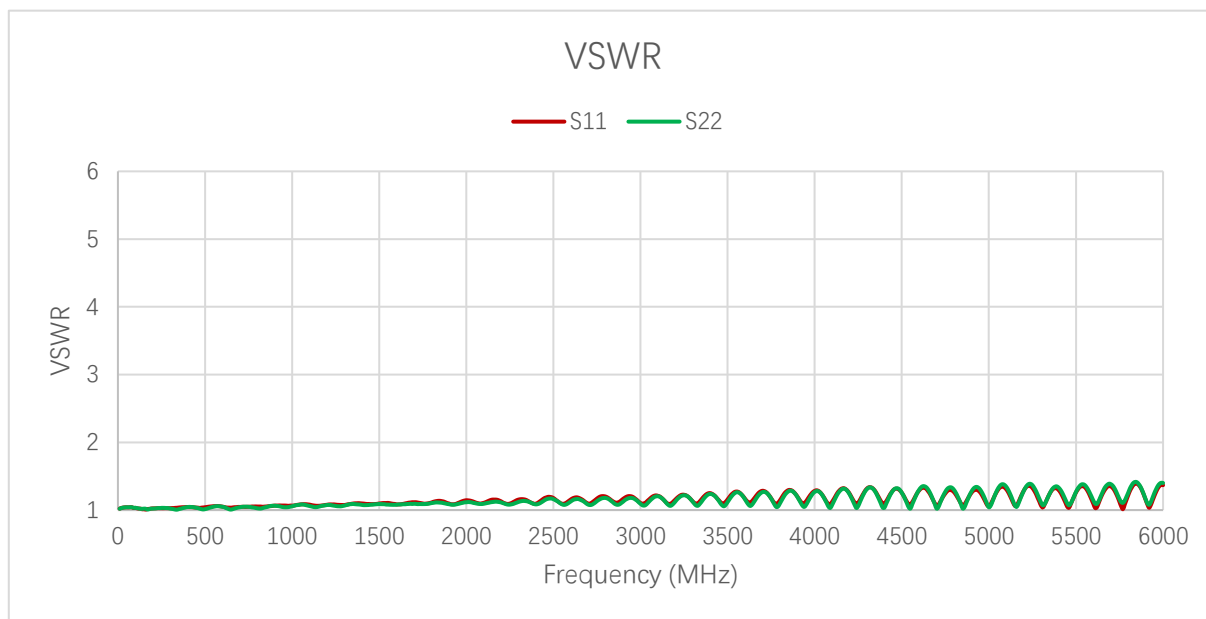
3.1. Cable Loss



Cable Loss (dB)

Frequency (MHz)	100	300	410	420	460	470	600	630	710	830
S21	-0.17	-0.30	-0.35	-0.35	-0.37	-0.38	-0.42	-0.43	-0.46	-0.50
S12	-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
S21	-0.52	-0.54	-0.67	-0.74	-0.75	-0.78	-0.79	-0.84	-0.88	-0.91
S12	-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				
S21	-0.93	-1.09	-1.22	-1.26	-1.38	-1.47				
S12	-0.93	-1.09	-1.23	-1.27	-1.36	-1.45				

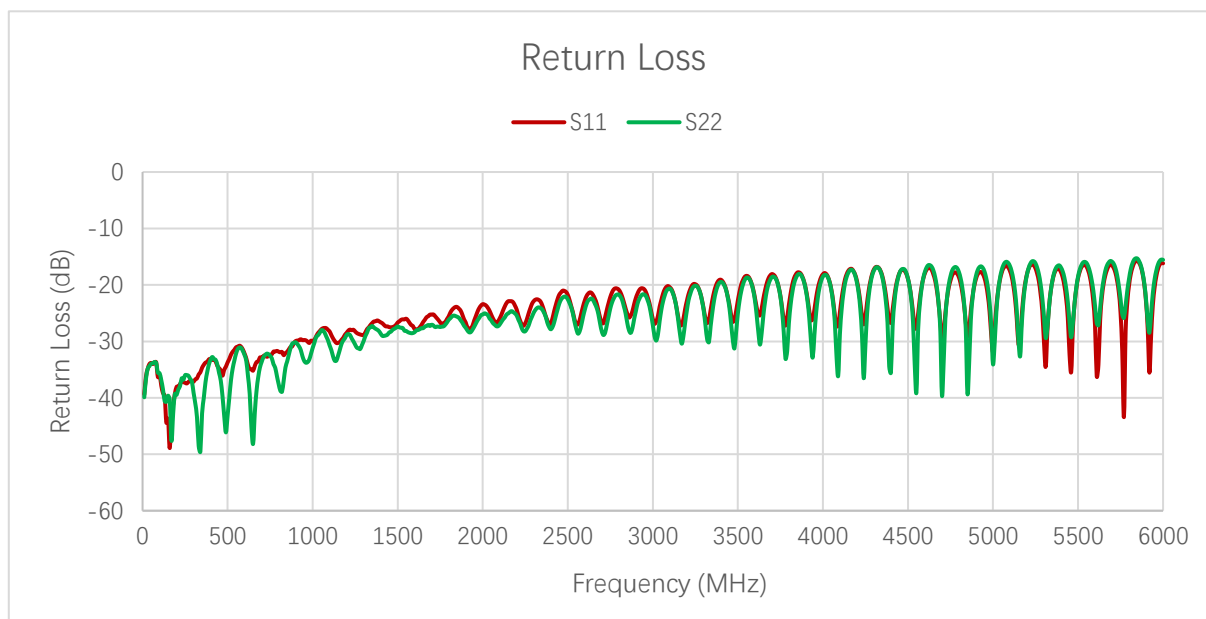
3.2. VSWR



VSWR

Frequency (MHz)	100	300	410	420	460	470	600	630	710	830
S11	1.03	1.03	1.04	1.04	1.04	1.03	1.05	1.04	1.05	1.05
S22	1.03	1.02	1.05	1.05	1.03	1.02	1.05	1.02	1.05	1.03
Frequency (MHz)	900	960	1440	1710	1740	1880	1950	2140	2350	2450
S11	1.07	1.07	1.09	1.12	1.10	1.12	1.10	1.15	1.14	1.18
S22	1.06	1.04	1.08	1.09	1.09	1.10	1.09	1.12	1.13	1.15
Frequency (MHz)	2600	3600	4700	5000	5500	6000				
S11	1.16	1.17	1.07	1.05	1.26	1.37				
S22	1.13	1.16	1.02	1.04	1.27	1.40				

3.3. Return Loss

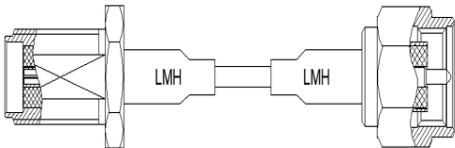
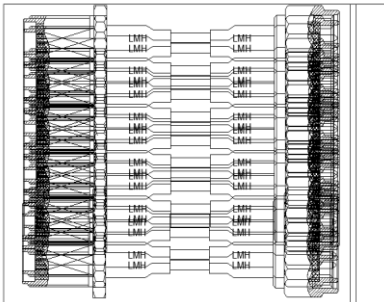


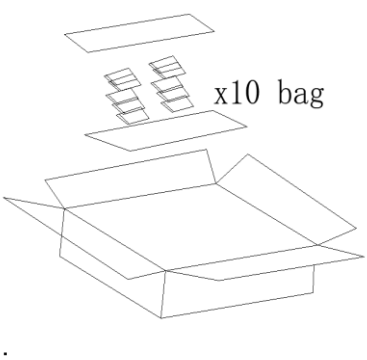
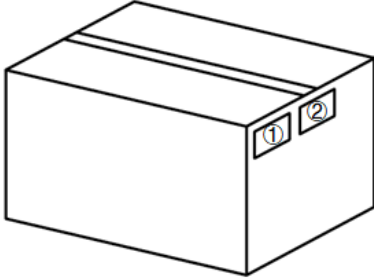
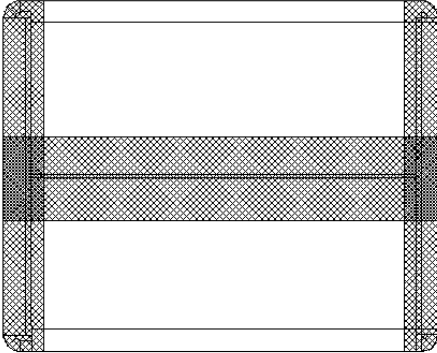
Return Loss (dB)

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	 <p>25PCS/袋</p>	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>L × W × H = 325 × 325 × 200 mm</u></p>
4		<p>Position for Attaching Labels</p> <p>① Carton Label ② Quality Label</p>
5		<p>Sealing Cartons “I” type sealing cartons</p>
6	<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

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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