

# RF Cable Datasheet

**Product OC:** YSAN027XX

**Version:** 2.2

**Date:** 2024-03-07

**Status:** Released

**Product Name:** RF Cable

**Key Features:**

Frequency Band: DC–6000 MHz

Cable Length: 100 mm (AA), 150 mm (BA), 200 mm (CA), 250 mm (DA),  
300 mm (EA), 150 mm (FA), 200 mm (GA), 250 mm (HA), 300 mm (IA),  
500 mm (JA)

Connector Type: SMA Female to IPEX MHF 4L

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	YSAN027AA	$\leq 1.76$
	YSAN027BA	$\leq 1.64$
	YSAN027CA	$\leq 1.75$
	YSAN027DA	$\leq 1.53$
	YSAN027EA	$\leq 1.47$
	YSAN027FA	$\leq 1.64$
	YSAN027GA	$\leq 1.75$
	YSAN027HA	$\leq 1.53$
	YSAN027IA	$\leq 1.47$
	YSAN027JA	$\leq 1.52$
Return Loss	YSAN027AA	$\leq -11.22$ dB
	YSAN027BA	$\leq -12.33$ dB
	YSAN027CA	$\leq -11.31$ dB
	YSAN027DA	$\leq -13.53$ dB
	YSAN027EA	$\leq -14.38$ dB
	YSAN027FA	$\leq -12.33$ dB
	YSAN027GA	$\leq -11.31$ dB

	YSAN027HA	$\leq -13.53$ dB
	YSAN027IA	$\leq -14.38$ dB
	YSAN027JA	$\leq -13.77$ dB
<b>Max Cable Loss</b>	YSAN027AA	-0.94 dB
	YSAN027BA	-1.22 dB
	YSAN027CA	-1.63 dB
	YSAN027DA	-1.87 dB
	YSAN027EA	-1.89 dB
	YSAN027FA	-1.22 dB
	YSAN027GA	-1.63 dB
	YSAN027HA	-1.87 dB
	YSAN027IA	-1.89 dB
	YSAN027JA	-2.90 dB
<b>Screening Effectiveness</b>		0.5–1 GHz: $\geq -50$ dB 1–3 GHz: $\geq -60$ dB 3–6 GHz: $\geq -65$ dB

Electrical - Detail														
SPEC	Band	B87	B31	B71	B12	B5	N74	B1	B40	Wi-Fi	B38	B42	N79	Wi-Fi
		/B88	/B72		/B13	/B8	/N75	/B2		2G	/B41	/B48		5G
			/B73	/B28	/B26	/N76	/B3							
		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	YSAN027AA	1.03	1.03	1.08	1.08	1.06	1.14	1.19	1.15	1.23	1.35	1.37	1.56	1.68
	YSAN027BA	1.06	1.05	1.02	1.04	1.08	1.06	1.12	1.16	1.17	1.17	1.35	1.48	1.64
	YSAN027CA	1.04	1.02	1.07	1.09	1.09	1.10	1.17	1.20	1.20	1.14	1.42	1.62	1.75
	YSAN027DA	1.02	1.04	1.09	1.08	1.09	1.12	1.17	1.21	1.16	1.22	1.39	1.42	1.53
	YSAN027EA	1.05	1.06	1.06	1.07	1.09	1.10	1.16	1.17	1.13	1.22	1.34	1.39	1.47
	YSAN027FA	1.06	1.05	1.02	1.04	1.08	1.06	1.12	1.16	1.17	1.17	1.35	1.48	1.64
	YSAN027GA	1.04	1.02	1.07	1.09	1.09	1.10	1.17	1.20	1.20	1.14	1.42	1.62	1.75
	YSAN027HA	1.02	1.04	1.09	1.08	1.09	1.12	1.17	1.21	1.16	1.22	1.39	1.42	1.53
	YSAN027IA	1.05	1.06	1.06	1.07	1.09	1.10	1.16	1.17	1.13	1.22	1.34	1.39	1.47
	YSAN027JA	1.01	1.05	1.06	1.07	1.10	1.10	1.16	1.18	1.18	1.19	1.36	1.45	1.52
Max S22 VSWR	YSAN027AA	1.02	1.05	1.06	1.08	1.05	1.11	1.13	1.17	1.20	1.26	1.38	1.52	1.76
	YSAN027BA	1.06	1.06	1.03	1.04	1.08	1.07	1.15	1.19	1.21	1.21	1.37	1.48	1.57
	YSAN027CA	1.04	1.03	1.07	1.09	1.09	1.13	1.19	1.23	1.23	1.17	1.44	1.62	1.74
	YSAN027DA	1.01	1.02	1.08	1.08	1.08	1.15	1.19	1.25	1.20	1.26	1.41	1.42	1.38
	YSAN027EA	1.04	1.06	1.06	1.06	1.09	1.12	1.18	1.20	1.13	1.27	1.35	1.38	1.32
	YSAN027FA	1.06	1.06	1.03	1.04	1.08	1.07	1.15	1.19	1.21	1.21	1.37	1.48	1.57
	YSAN027GA	1.04	1.03	1.07	1.09	1.09	1.13	1.19	1.23	1.23	1.17	1.44	1.62	1.74
	YSAN027HA	1.01	1.02	1.08	1.08	1.08	1.15	1.19	1.25	1.20	1.26	1.41	1.42	1.38
	YSAN027IA	1.04	1.06	1.06	1.06	1.09	1.12	1.18	1.20	1.13	1.27	1.35	1.38	1.32
	YSAN027JA	1.02	1.04	1.05	1.07	1.10	1.11	1.19	1.21	1.22	1.23	1.36	1.40	1.39
Max S11 Return Loss (dB)	YSAN027AA	-35.52	-35.73	-28.45	-28.05	-30.70	-23.58	-21.08	-23.13	-19.70	-16.60	-16.07	-13.25	-11.94
	YSAN027BA	-31.28	-32.15	-39.18	-34.03	-28.64	-30.87	-24.63	-22.48	-21.93	-22.09	-16.51	-14.23	-12.33
	YSAN027CA	-34.17	-38.28	-29.06	-27.48	-27.49	-26.46	-22.36	-20.93	-21.01	-23.60	-15.21	-12.50	-11.31
	YSAN027DA	-40.88	-35.20	-27.73	-28.72	-27.42	-24.76	-22.18	-20.39	-22.83	-19.91	-15.70	-15.21	-13.53
	YSAN027EA	-32.71	-30.23	-30.71	-29.79	-27.59	-26.32	-22.57	-22.27	-24.58	-19.95	-16.73	-15.68	-14.38
	YSAN027FA	-31.28	-32.15	-39.18	-34.03	-28.64	-30.87	-24.63	-22.48	-21.93	-22.09	-16.51	-14.23	-12.33
	YSAN027GA	-34.17	-38.28	-29.06	-27.48	-27.49	-26.46	-22.36	-20.93	-21.01	-23.60	-15.21	-12.50	-11.31
	YSAN027HA	-40.88	-35.20	-27.73	-28.72	-27.42	-24.76	-22.18	-20.39	-22.83	-19.91	-15.70	-15.21	-13.53
	YSAN027IA	-32.71	-30.23	-30.71	-29.79	-27.59	-26.32	-22.57	-22.27	-24.58	-19.95	-16.73	-15.68	-14.38
	YSAN027JA	-44.37	-32.39	-30.92	-29.03	-26.87	-26.26	-22.41	-21.87	-21.47	-21.36	-16.30	-14.78	-13.77

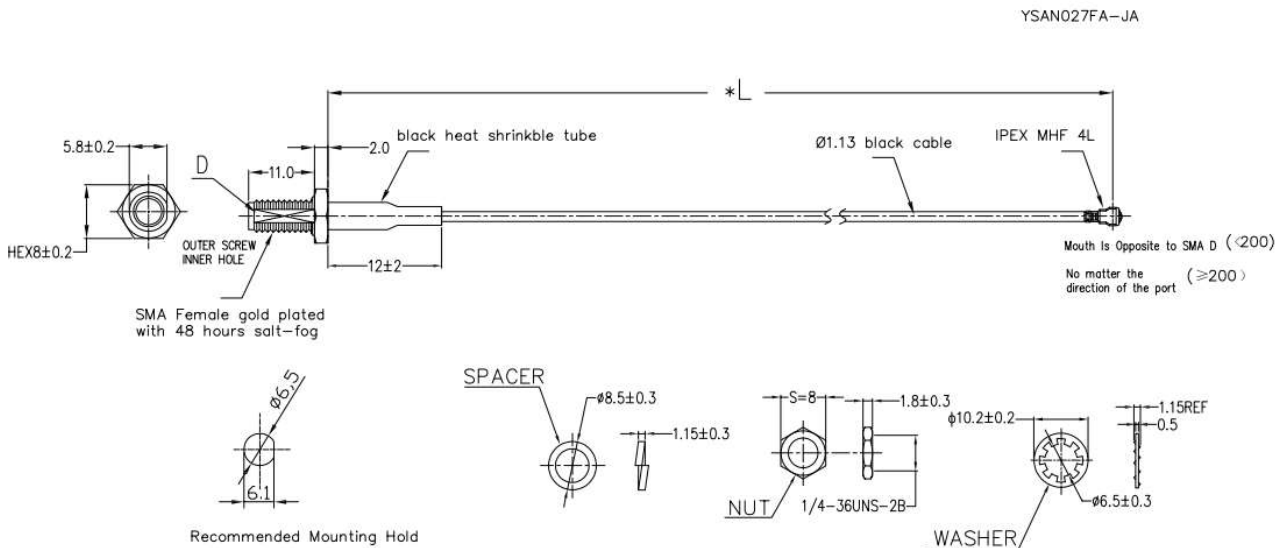
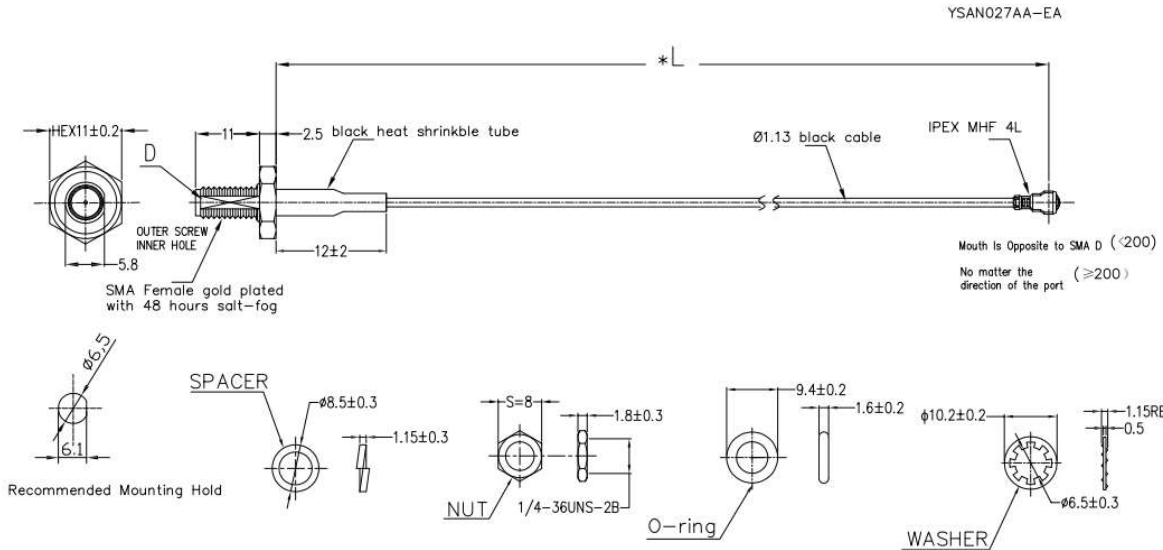
<b>Max S22 Return Loss (dB)</b>	YSAN027AA	-41.45	-32.27	-30.97	-27.99	-32.52	-25.87	-24.37	-22.29	-20.90	-18.70	-15.94	-13.75	-11.22
	YSAN027BA	-30.89	-31.43	-38.01	-35.13	-28.68	-29.98	-23.00	-21.13	-20.45	-20.48	-16.07	-14.28	-13.06
	YSAN027CA	-34.63	-37.39	-29.56	-27.20	-27.22	-24.48	-21.37	-19.64	-19.65	-22.00	-14.89	-12.57	-11.39
	YSAN027DA	-45.35	-38.86	-28.17	-28.41	-28.76	-23.00	-21.26	-19.14	-20.92	-18.68	-15.37	-15.25	-15.93
	YSAN027EA	-33.63	-30.84	-30.15	-30.66	-27.35	-24.77	-21.49	-20.66	-24.40	-18.47	-16.49	-15.89	-17.26
	YSAN027FA	-30.89	-31.43	-38.01	-35.13	-28.68	-29.98	-23.00	-21.13	-20.45	-20.48	-16.07	-14.28	-13.06
	YSAN027GA	-34.63	-37.39	-29.56	-27.20	-27.22	-24.48	-21.37	-19.64	-19.65	-22.00	-14.89	-12.57	-11.39
	YSAN027HA	-45.35	-38.86	-28.17	-28.41	-28.76	-23.00	-21.26	-19.14	-20.92	-18.68	-15.37	-15.25	-15.93
	YSAN027IA	-33.63	-30.84	-30.15	-30.66	-27.35	-24.77	-21.49	-20.66	-24.40	-18.47	-16.49	-15.89	-17.26
	YSAN027JA	-42.06	-33.91	-31.90	-28.99	-26.67	-25.54	-21.16	-20.33	-19.92	-19.89	-16.42	-15.60	-15.77
<b>Max Cable Loss S21 (dB)</b>	YSAN027AA	-0.16	-0.17	-0.21	-0.23	-0.25	-0.37	-0.43	-0.48	-0.52	-0.56	-0.66	-0.81	-0.94
	YSAN027BA	-0.21	-0.22	-0.27	-0.29	-0.32	-0.41	-0.54	-0.58	-0.57	-0.64	-1.03	-1.12	-1.22
	YSAN027CA	-0.27	-0.28	-0.35	-0.38	-0.41	-0.53	-0.72	-0.75	-0.76	-0.77	-1.26	-1.47	-1.63
	YSAN027DA	-0.29	-0.30	-0.38	-0.42	-0.50	-0.69	-0.88	-0.95	-0.92	-1.06	-1.48	-1.67	-1.87
	YSAN027EA	-0.38	-0.40	-0.49	-0.54	-0.59	-0.75	-0.98	-1.01	-0.97	-1.16	-1.51	-1.67	-1.89
	YSAN027FA	-0.21	-0.22	-0.27	-0.29	-0.32	-0.41	-0.54	-0.58	-0.57	-0.64	-1.03	-1.12	-1.22
	YSAN027GA	-0.27	-0.28	-0.35	-0.38	-0.41	-0.53	-0.72	-0.75	-0.76	-0.77	-1.26	-1.47	-1.63
	YSAN027HA	-0.29	-0.30	-0.38	-0.42	-0.50	-0.69	-0.88	-0.95	-0.92	-1.06	-1.48	-1.67	-1.87
	YSAN027IA	-0.38	-0.40	-0.49	-0.54	-0.59	-0.75	-0.98	-1.01	-0.97	-1.16	-1.51	-1.67	-1.89
	YSAN027JA	-0.61	-0.64	-0.79	-0.85	-0.94	-1.20	-1.48	-1.56	-1.61	-1.72	-2.44	-2.71	-2.90

## 1.2. Mechanical & Environmental

Mechanical		
OC	* Length (mm)	Weight (g)
YSAN027AA	100 ±3	4.35
YSAN027BA	150 ±5	4.50
YSAN027CA	200 ±5	4.65
YSAN027DA	250 ±5	4.80
YSAN027EA	300 ±5	4.95
YSAN027FA	150 ±5	3.59
YSAN027GA	200 ±5	3.75
YSAN027HA	250 ±5	3.90
YSAN027IA	300 ±5	4.05
YSAN027JA	500 ±5	4.66
<b>Cable Type &amp; Color</b>		Φ 1.13 & Black
Item	Material	Diameter (mm)
Inner Conductor	Silver plated copper wire	0.24
Insulator	FEP	0.7
Outer Conductor	Tinned copper wire	0.92
Jacket	FEP	1.13
<b>Connector Type</b>		SMA Female to IPEX MHF 4L
Environmental		
<b>Operation Temperature</b>		-40 °C to +80 °C
<b>Storage Temperature</b>		-40 °C to +80 °C
<b>RoHS Compliant</b>		Yes



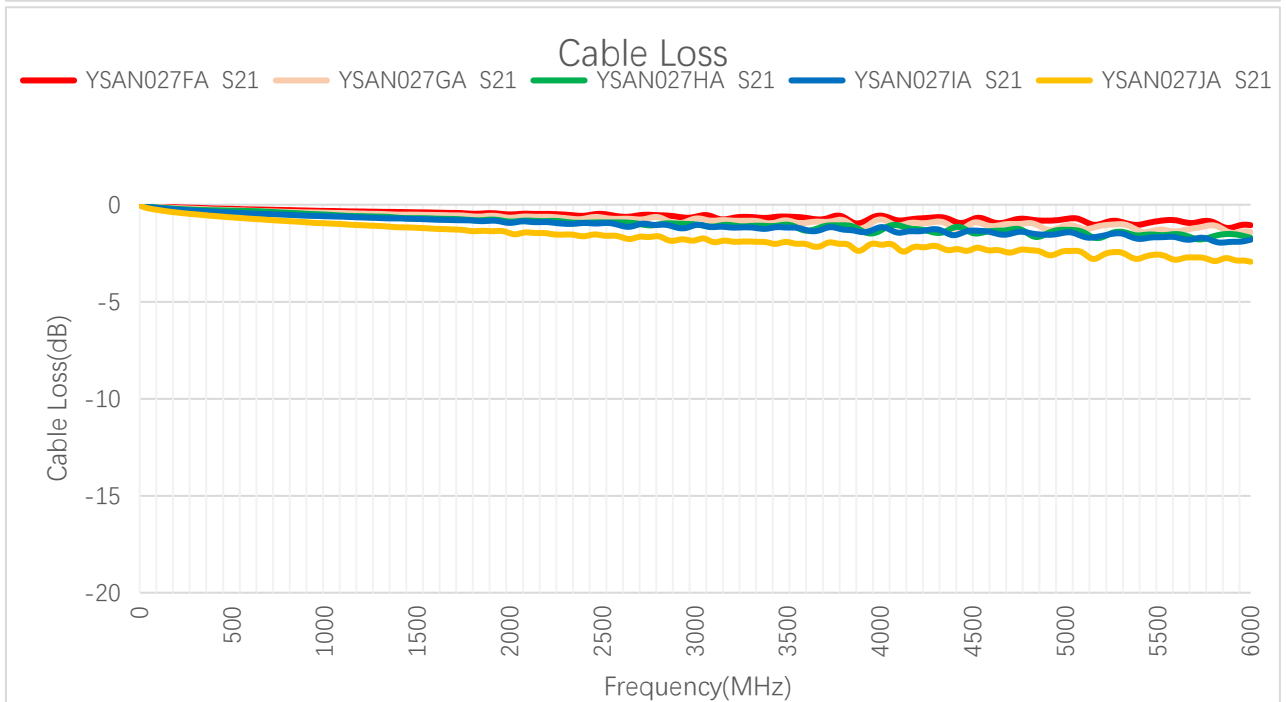
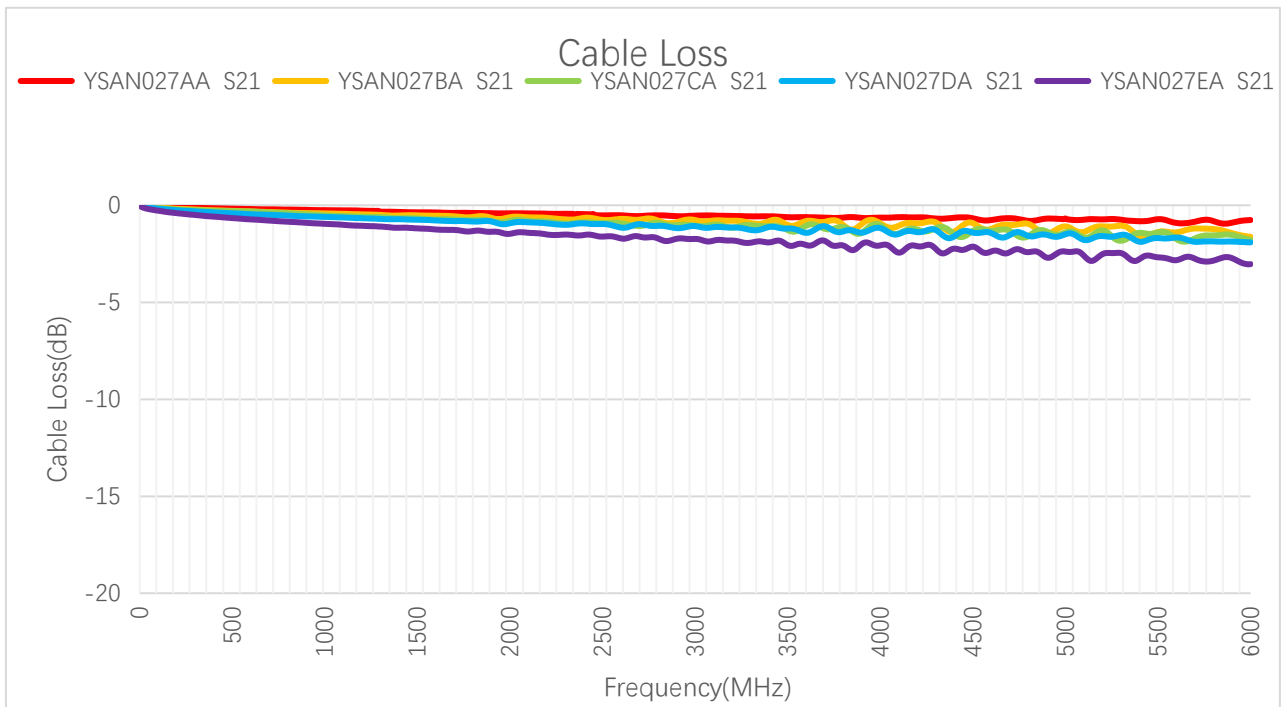
# 2 Drawing



SMA CONNECTOR  
(Inner Hole)

# 3 Detailed Performance

## 3.1. Cable Loss



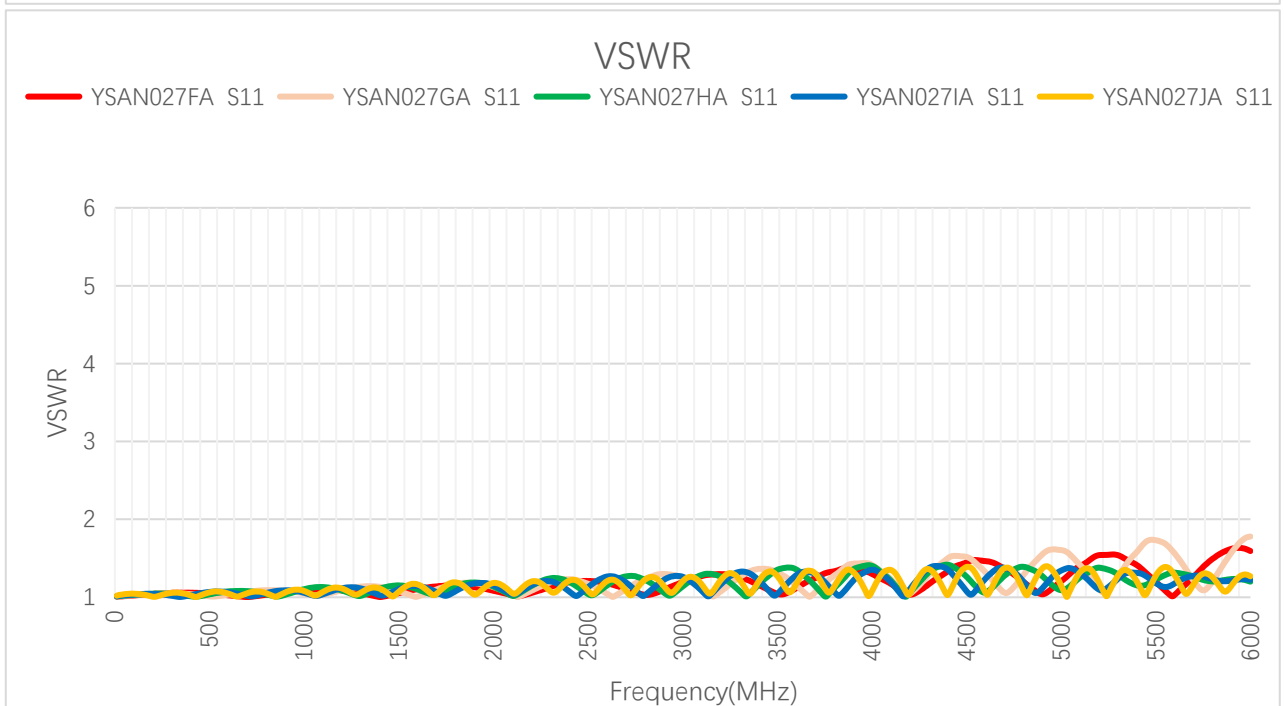
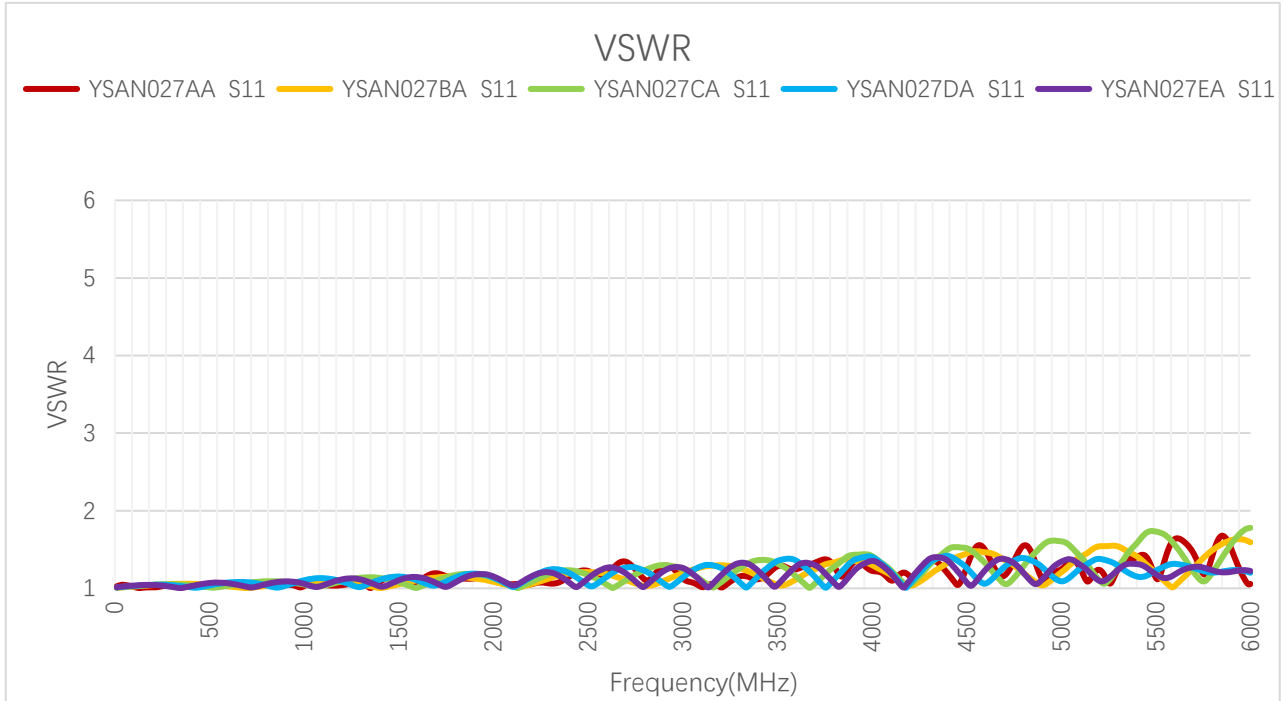
Cable Loss (dB)

Frequency (MHz)	100	300	410	420	460	470	600	630	710	830
YSAN027AA	-0.08	-0.13	-0.16	-0.16	-0.17	-0.17	-0.19	-0.20	-0.21	-0.23
YSAN027BA	-0.10	-0.17	-0.21	-0.21	-0.22	-0.22	-0.25	-0.26	-0.27	-0.29
YSAN027CA	-0.12	-0.22	-0.26	-0.26	-0.28	-0.28	-0.32	-0.33	-0.35	-0.39
YSAN027DA	-0.15	-0.26	-0.29	-0.29	-0.29	-0.30	-0.32	-0.34	-0.38	-0.43
YSAN027EA	-0.17	-0.31	-0.37	-0.38	-0.40	-0.40	-0.46	-0.47	-0.50	-0.55
YSAN027FA	-0.10	-0.17	-0.21	-0.21	-0.22	-0.22	-0.25	-0.26	-0.27	-0.29
YSAN027GA	-0.12	-0.22	-0.26	-0.26	-0.28	-0.28	-0.32	-0.33	-0.35	-0.39
YSAN027HA	-0.15	-0.26	-0.29	-0.29	-0.29	-0.30	-0.32	-0.34	-0.38	-0.43
YSAN027IA	-0.17	-0.31	-0.37	-0.38	-0.40	-0.40	-0.46	-0.47	-0.50	-0.55
YSAN027JA	-0.28	-0.50	-0.59	-0.60	-0.63	-0.64	-0.73	-0.74	-0.79	-0.86
Frequency (MHz)	900	960	1440	1710	1740	1880	1950	2140	2350	2450
YSAN027AA	-0.24	-0.25	-0.36	-0.39	-0.39	-0.41	-0.42	-0.42	-0.48	-0.45
YSAN027BA	-0.31	-0.32	-0.39	-0.47	-0.48	-0.47	-0.53	-0.48	-0.58	-0.49
YSAN027CA	-0.40	-0.41	-0.52	-0.58	-0.61	-0.60	-0.71	-0.63	-0.73	-0.67
YSAN027DA	-0.47	-0.50	-0.66	-0.74	-0.76	-0.78	-0.88	-0.84	-0.91	-0.89
YSAN027EA	-0.57	-0.59	-0.73	-0.82	-0.81	-0.81	-0.97	-0.90	-0.96	-0.97
YSAN027FA	-0.31	-0.32	-0.39	-0.47	-0.48	-0.47	-0.53	-0.48	-0.58	-0.49
YSAN027GA	-0.40	-0.41	-0.52	-0.58	-0.61	-0.60	-0.71	-0.63	-0.73	-0.67
YSAN027HA	-0.47	-0.50	-0.66	-0.74	-0.76	-0.78	-0.88	-0.84	-0.91	-0.89
YSAN027IA	-0.57	-0.59	-0.73	-0.82	-0.81	-0.81	-0.97	-0.90	-0.96	-0.97
YSAN027JA	-0.90	-0.94	-1.16	-1.28	-1.32	-1.37	-1.41	-1.44	-1.55	-1.54
Frequency (MHz)	2600	3600	4700	5000	5500	6000				
YSAN027AA	-0.52	-0.61	-0.67	-0.68	-0.72	-0.76				

<b>YSAN027BA</b>	-0.61	-0.75	-0.74	-0.80	-0.86	-1.18				
<b>YSAN027CA</b>	-0.70	-0.81	-1.01	-1.09	-1.38	-1.62				
<b>YSAN027DA</b>	-0.93	-1.05	-1.32	-1.40	-1.41	-1.79				
<b>YSAN027EA</b>	-1.15	-1.42	-1.53	-1.50	-1.69	-1.91				
<b>YSAN027FA</b>	-0.61	-0.75	-0.74	-0.80	-0.86	-1.18				
<b>YSAN027GA</b>	-0.70	-0.81	-1.01	-1.09	-1.38	-1.62				
<b>YSAN027HA</b>	-0.93	-1.05	-1.32	-1.40	-1.41	-1.79				
<b>YSAN027IA</b>	-1.15	-1.42	-1.53	-1.50	-1.69	-1.91				
<b>YSAN027JA</b>	-1.71	-2.05	-2.42	-2.39	-2.68	-3.04				

### 3.2. VSWR

#### 3.2.1. VSWR-S11

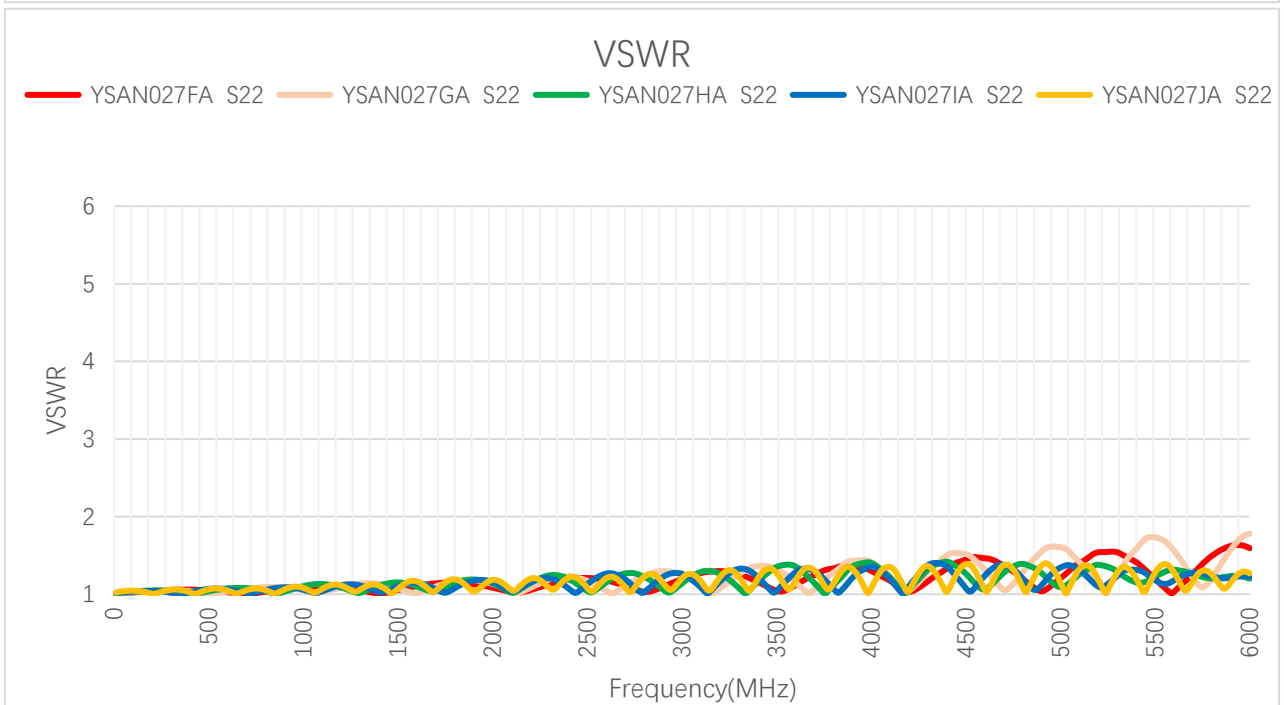
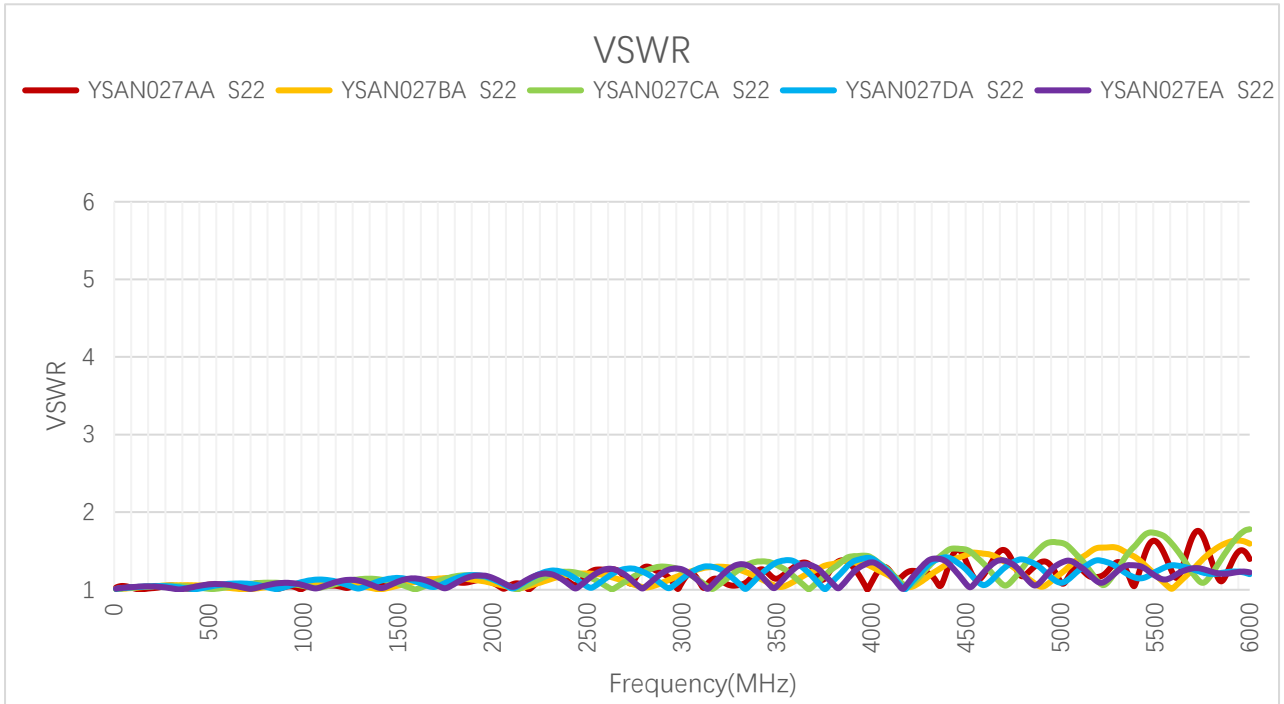


VSWR-S11

Frequency (MHz)	100	300	410	420	460	470	600	630	710	830
YSAN027AA	1.02	1.04	1.03	1.03	1.03	1.03	1.06	1.07	1.07	1.05
YSAN027BA	1.02	1.06	1.06	1.06	1.05	1.05	1.02	1.02	1.02	1.05
YSAN027CA	1.03	1.06	1.04	1.04	1.02	1.02	1.04	1.05	1.08	1.09
YSAN027DA	1.04	1.04	1.01	1.02	1.03	1.04	1.08	1.09	1.07	1.02
YSAN027EA	1.04	1.02	1.04	1.04	1.06	1.06	1.06	1.05	1.02	1.08
YSAN027FA	1.02	1.06	1.06	1.06	1.05	1.05	1.02	1.02	1.02	1.05
YSAN027GA	1.03	1.06	1.04	1.04	1.02	1.02	1.04	1.05	1.08	1.09
YSAN027HA	1.04	1.04	1.01	1.02	1.03	1.04	1.08	1.09	1.07	1.02
YSAN027IA	1.04	1.02	1.04	1.04	1.06	1.06	1.06	1.05	1.02	1.08
YSAN027JA	1.05	1.07	1.01	1.00	1.04	1.05	1.04	1.01	1.07	1.01
Frequency (MHz)	900	960	1440	1710	1740	1880	1950	2140	2350	2450
YSAN027AA	1.04	1.03	1.13	1.19	1.17	1.12	1.14	1.05	1.08	1.22
YSAN027BA	1.06	1.08	1.02	1.12	1.12	1.11	1.09	1.02	1.15	1.17
YSAN027CA	1.08	1.06	1.09	1.10	1.12	1.16	1.14	1.03	1.19	1.18
YSAN027DA	1.05	1.09	1.11	1.04	1.07	1.17	1.15	1.07	1.20	1.09
YSAN027EA	1.09	1.07	1.04	1.03	1.01	1.15	1.15	1.07	1.12	1.04
YSAN027FA	1.06	1.08	1.02	1.12	1.12	1.11	1.09	1.02	1.15	1.17
YSAN027GA	1.08	1.06	1.09	1.10	1.12	1.16	1.14	1.03	1.19	1.18
YSAN027HA	1.05	1.09	1.11	1.04	1.07	1.17	1.15	1.07	1.20	1.09
YSAN027IA	1.09	1.07	1.04	1.03	1.01	1.15	1.15	1.07	1.12	1.04
YSAN027JA	1.07	1.09	1.04	1.06	1.12	1.04	1.11	1.08	1.09	1.16
Frequency (MHz)	2600	3600	4700	5000	5500	6000				
YSAN027AA	1.17	1.25	1.16	1.25	1.14	1.06				
YSAN027BA	1.15	1.13	1.36	1.26	1.18	1.61				

<b>YSAN027CA</b>	1.04	1.13	1.03	1.61	1.75	1.80				
<b>YSAN027DA</b>	1.14	1.32	1.30	1.22	1.24	1.34				
<b>YSAN027EA</b>	1.22	1.27	1.39	1.38	1.35	1.21				
<b>YSAN027FA</b>	1.15	1.13	1.36	1.26	1.18	1.61				
<b>YSAN027GA</b>	1.04	1.13	1.03	1.61	1.75	1.80				
<b>YSAN027HA</b>	1.14	1.32	1.30	1.22	1.24	1.34				
<b>YSAN027IA</b>	1.22	1.27	1.39	1.38	1.35	1.21				
<b>YSAN027JA</b>	1.17	1.17	1.40	1.27	1.37	1.53				

**3.2.2. VSWR-S22**





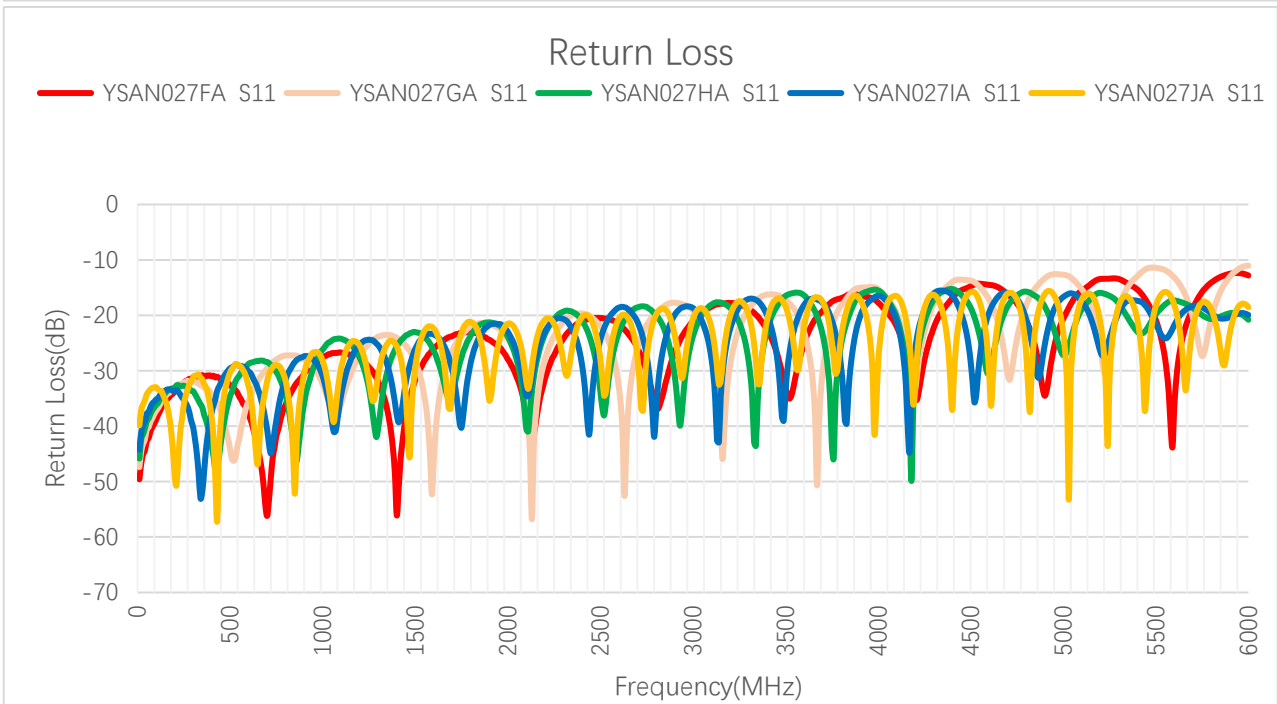
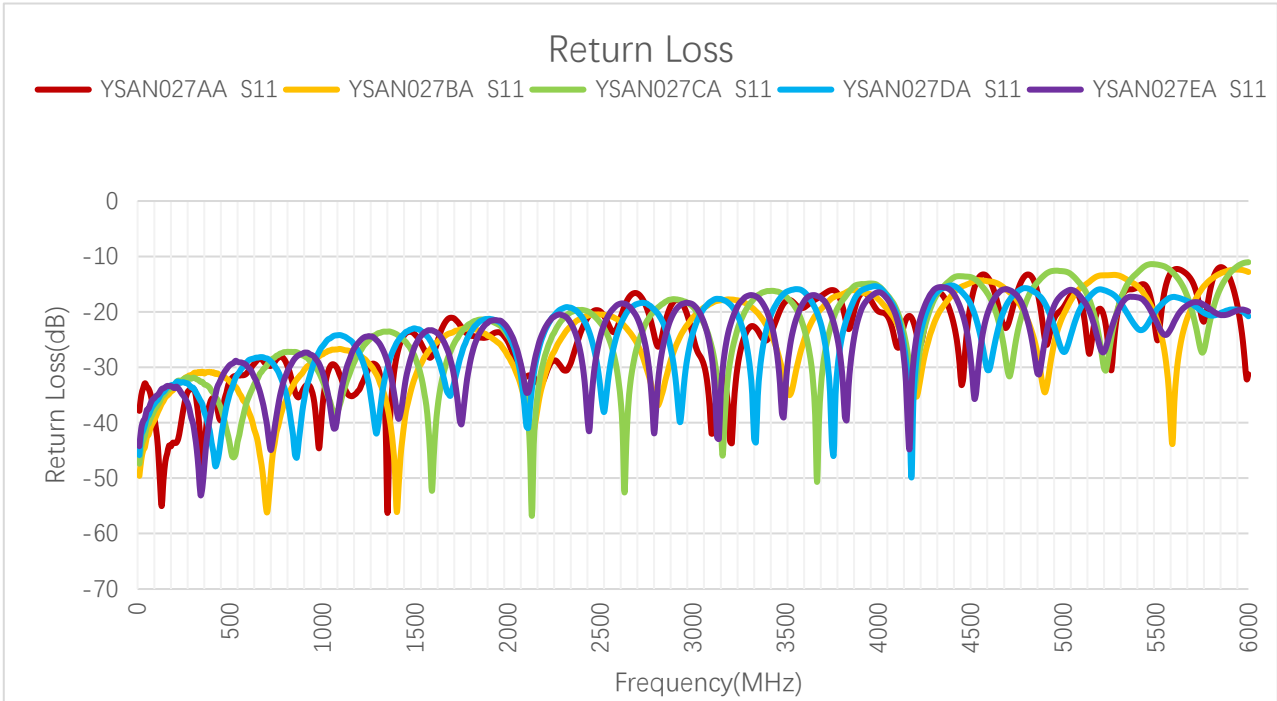
**VSWR-S22**

Frequency (MHz)	100	300	410	420	460	470	600	630	710	830
YSAN027AA	1.02	1.05	1.01	1.01	1.04	1.05	1.06	1.05	1.06	1.04
YSAN027BA	1.02	1.06	1.06	1.06	1.05	1.05	1.03	1.02	1.00	1.04
YSAN027CA	1.03	1.05	1.04	1.03	1.02	1.02	1.03	1.05	1.07	1.09
YSAN027DA	1.03	1.04	1.01	1.01	1.02	1.02	1.08	1.08	1.08	1.02
YSAN027EA	1.04	1.02	1.03	1.04	1.05	1.06	1.06	1.05	1.01	1.07
YSAN027FA	1.02	1.06	1.06	1.06	1.05	1.05	1.03	1.02	1.00	1.04
YSAN027GA	1.03	1.05	1.04	1.03	1.02	1.02	1.03	1.05	1.07	1.09
YSAN027HA	1.03	1.04	1.01	1.01	1.02	1.02	1.08	1.08	1.08	1.02
YSAN027IA	1.04	1.02	1.03	1.04	1.05	1.06	1.06	1.05	1.01	1.07
YSAN027JA	1.05	1.06	1.02	1.01	1.03	1.04	1.05	1.02	1.06	1.02
Frequency (MHz)	900	960	1440	1710	1740	1880	1950	2140	2350	2450
YSAN027AA	1.03	1.03	1.07	1.12	1.12	1.10	1.13	1.08	1.16	1.07
YSAN027BA	1.06	1.08	1.02	1.14	1.15	1.13	1.11	1.02	1.17	1.21
YSAN027CA	1.08	1.07	1.12	1.11	1.13	1.18	1.17	1.01	1.22	1.21
YSAN027DA	1.03	1.08	1.14	1.05	1.08	1.19	1.18	1.06	1.24	1.12
YSAN027EA	1.09	1.08	1.04	1.05	1.02	1.17	1.18	1.07	1.16	1.03
YSAN027FA	1.06	1.08	1.02	1.14	1.15	1.13	1.11	1.02	1.17	1.21
YSAN027GA	1.08	1.07	1.12	1.11	1.13	1.18	1.17	1.01	1.22	1.21
YSAN027HA	1.03	1.08	1.14	1.05	1.08	1.19	1.18	1.06	1.24	1.12
YSAN027IA	1.09	1.08	1.04	1.05	1.02	1.17	1.18	1.07	1.16	1.03
YSAN027JA	1.06	1.10	1.06	1.07	1.13	1.07	1.12	1.09	1.11	1.20
Frequency (MHz)	2600	3600	4700	5000	5500	6000				
YSAN027AA	1.26	1.31	1.51	1.10	1.63	1.40				
YSAN027BA	1.18	1.12	1.37	1.21	1.20	1.59				

<b>YSAN027CA</b>	1.05	1.15	1.06	1.61	1.73	1.78				
<b>YSAN027DA</b>	1.15	1.36	1.28	1.09	1.23	1.20				
<b>YSAN027EA</b>	1.27	1.28	1.38	1.34	1.18	1.22				
<b>YSAN027FA</b>	1.18	1.12	1.37	1.21	1.20	1.59				
<b>YSAN027GA</b>	1.05	1.15	1.06	1.61	1.73	1.78				
<b>YSAN027HA</b>	1.15	1.36	1.28	1.09	1.23	1.20				
<b>YSAN027IA</b>	1.27	1.28	1.38	1.34	1.18	1.22				
<b>YSAN027JA</b>	1.21	1.17	1.37	1.15	1.28	1.27				

### 3.3. Return Loss

#### 3.3.1. Return Loss - S11

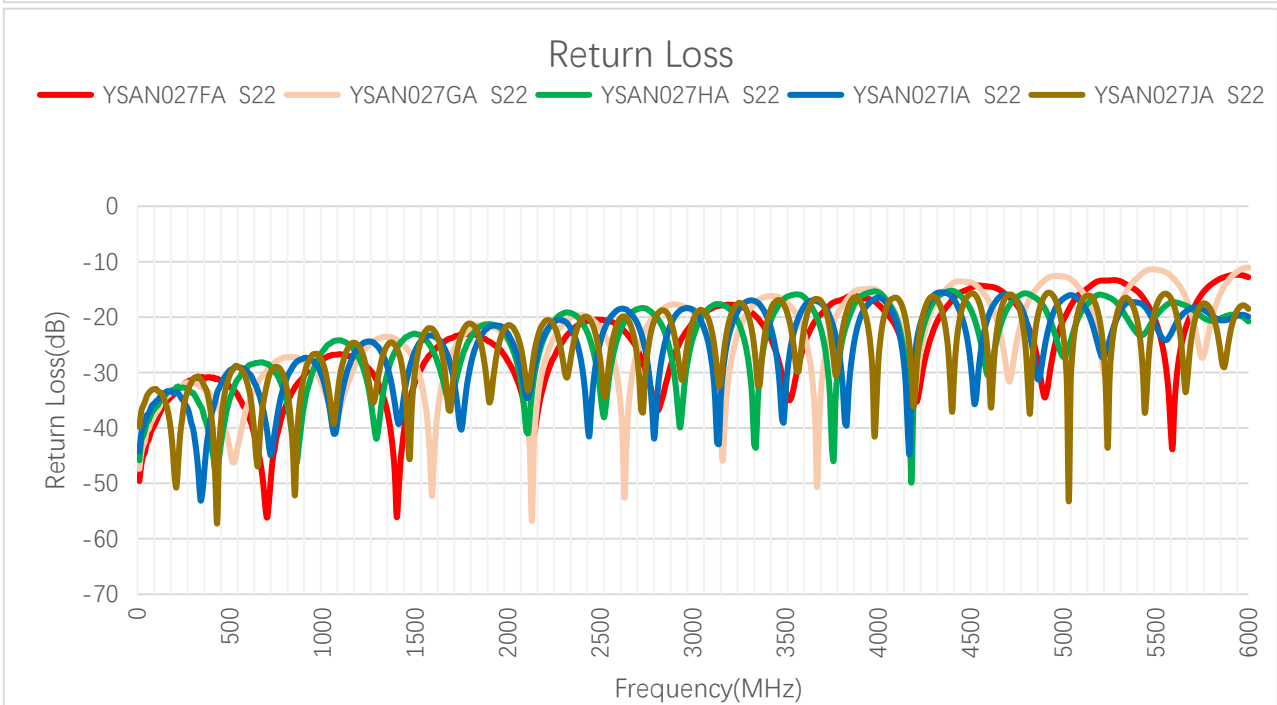
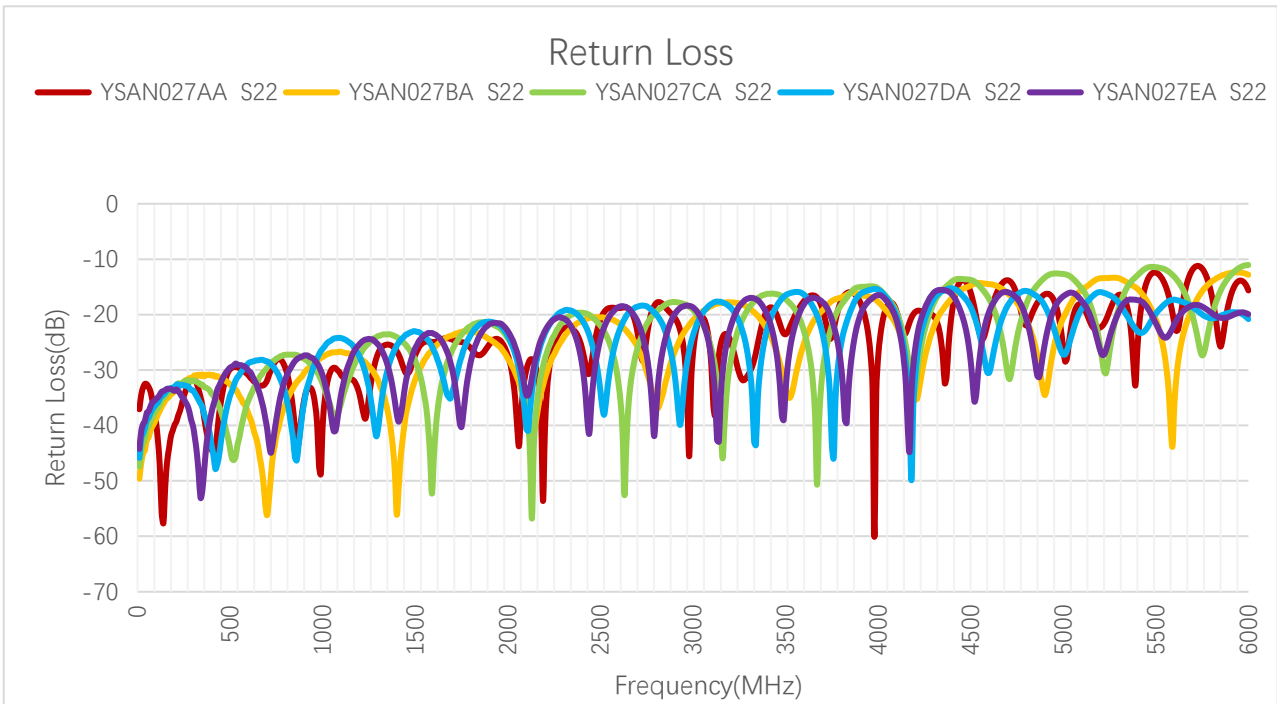


Return Loss (dB)-S11

Frequency (MHz)	100	300	410	420	460	470	600	630	710	830
YSAN027AA	-41.18	-33.87	-35.52	-36.07	-37.80	-35.73	-30.63	-29.37	-29.70	-31.92
YSAN027BA	-38.40	-31.29	-31.28	-31.35	-32.15	-32.40	-39.18	-42.10	-42.11	-32.85
YSAN027CA	-36.06	-30.60	-34.17	-35.09	-39.49	-41.06	-34.73	-32.33	-28.74	-27.51
YSAN027DA	-34.74	-33.33	-43.50	-42.15	-36.25	-35.20	-28.01	-27.73	-29.08	-42.32
YSAN027EA	-33.85	-39.80	-34.50	-33.53	-30.63	-30.23	-30.71	-32.57	-40.31	-28.76
YSAN027FA	-38.40	-31.29	-31.28	-31.35	-32.15	-32.40	-39.18	-42.10	-42.11	-32.85
YSAN027GA	-36.06	-30.60	-34.17	-35.09	-39.49	-41.06	-34.73	-32.33	-28.74	-27.51
YSAN027HA	-34.74	-33.33	-43.50	-42.15	-36.25	-35.20	-28.01	-27.73	-29.08	-42.32
YSAN027IA	-33.85	-39.80	-34.50	-33.53	-30.63	-30.23	-30.71	-32.57	-40.31	-28.76
YSAN027JA	-31.87	-29.29	-44.37	-63.03	-33.98	-32.39	-33.66	-43.70	-29.98	-43.28
Frequency (MHz)	900	960	1440	1710	1740	1880	1950	2140	2350	2450
YSAN027AA	-33.67	-37.81	-24.22	-21.20	-22.30	-24.64	-23.67	-31.79	-28.19	-20.21
YSAN027BA	-30.11	-28.64	-38.53	-25.04	-24.79	-25.45	-27.57	-39.13	-23.34	-21.96
YSAN027CA	-28.70	-31.27	-27.08	-26.40	-24.97	-22.44	-23.74	-37.06	-21.03	-21.69
YSAN027DA	-32.62	-27.42	-25.33	-33.28	-29.13	-22.22	-23.23	-29.83	-20.91	-27.38
YSAN027EA	-27.67	-29.66	-34.32	-37.00	-47.66	-23.13	-22.98	-29.31	-25.01	-33.63
YSAN027FA	-30.11	-28.64	-38.53	-25.04	-24.79	-25.45	-27.57	-39.13	-23.34	-21.96
YSAN027GA	-28.70	-31.27	-27.08	-26.40	-24.97	-22.44	-23.74	-37.06	-21.03	-21.69
YSAN027HA	-32.62	-27.42	-25.33	-33.28	-29.13	-22.22	-23.23	-29.83	-20.91	-27.38
YSAN027IA	-27.67	-29.66	-34.32	-37.00	-47.66	-23.13	-22.98	-29.31	-25.01	-33.63
YSAN027JA	-29.62	-27.00	-34.33	-30.59	-25.14	-33.43	-25.72	-27.91	-27.19	-22.51
Frequency (MHz)	2600	3600	4700	5000	5500	6000				
YSAN027AA	-22.00	-19.23	-22.45	-19.23	-23.81	-31.26				
YSAN027BA	-23.39	-24.11	-16.40	-18.75	-21.62	-12.63				

<b>YSAN027CA</b>	-33.23	-24.07	-36.01	-12.58	-11.31	-10.89				
<b>YSAN027DA</b>	-23.80	-17.25	-17.73	-20.11	-19.33	-16.75				
<b>YSAN027EA</b>	-20.01	-18.59	-15.72	-15.92	-16.45	-20.40				
<b>YSAN027FA</b>	-23.39	-24.11	-16.40	-18.75	-21.62	-12.63				
<b>YSAN027GA</b>	-33.23	-24.07	-36.01	-12.58	-11.31	-10.89				
<b>YSAN027HA</b>	-23.80	-17.25	-17.73	-20.11	-19.33	-16.75				
<b>YSAN027IA</b>	-20.01	-18.59	-15.72	-15.92	-16.45	-20.40				
<b>YSAN027JA</b>	-22.02	-22.25	-15.58	-18.59	-16.22	-13.59				

### 3.3.2. Return Loss - S22





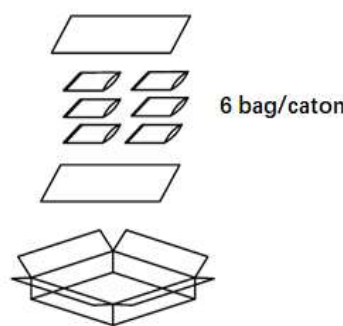
Return Loss (dB)-S22

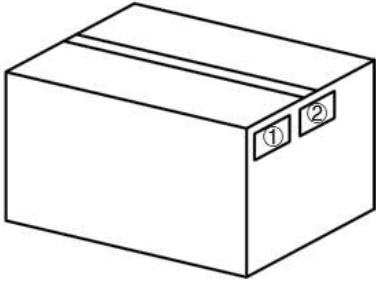
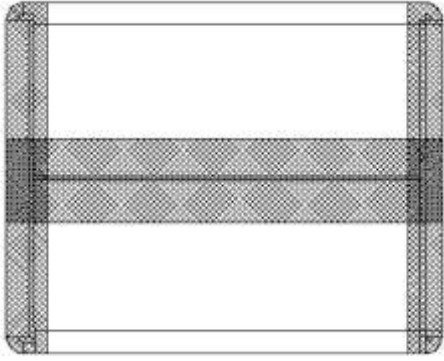
Frequency (MHz)	100	300	410	420	460	470	600	630	710	830
YSAN027AA	-39.46	-31.52	-44.82	-44.09	-33.84	-32.27	-30.97	-32.15	-30.88	-34.52
YSAN027BA	-38.85	-31.18	-30.89	-31.20	-31.53	-31.73	-38.01	-41.20	-53.23	-33.85
YSAN027CA	-37.26	-31.87	-34.63	-35.37	-38.48	-39.71	-35.41	-33.10	-29.06	-27.22
YSAN027DA	-36.17	-33.68	-45.35	-47.81	-40.71	-38.86	-28.74	-28.39	-28.63	-40.12
YSAN027EA	-35.18	-40.17	-36.24	-35.14	-31.47	-30.84	-30.15	-31.79	-43.31	-29.44
YSAN027FA	-38.85	-31.18	-30.89	-31.20	-31.53	-31.73	-38.01	-41.20	-53.23	-33.85
YSAN027GA	-37.26	-31.87	-34.63	-35.37	-38.48	-39.71	-35.41	-33.10	-29.06	-27.22
YSAN027HA	-36.17	-33.68	-45.35	-47.81	-40.71	-38.86	-28.74	-28.39	-28.63	-40.12
YSAN027IA	-35.18	-40.17	-36.24	-35.14	-31.47	-30.84	-30.15	-31.79	-43.31	-29.44
YSAN027JA	-32.96	-31.25	-42.06	-49.32	-36.22	-33.91	-32.86	-40.63	-30.63	-39.46
Frequency (MHz)	900	960	1440	1710	1740	1880	1950	2140	2350	2450
YSAN027AA	-35.38	-36.44	-29.91	-24.62	-24.90	-26.32	-24.47	-28.43	-22.62	-29.07
YSAN027BA	-30.51	-28.68	-40.28	-23.56	-23.19	-23.99	-25.62	-41.64	-22.27	-20.54
YSAN027CA	-27.97	-29.98	-25.17	-25.69	-24.02	-21.45	-22.32	-43.87	-19.95	-20.28
YSAN027DA	-35.88	-28.76	-23.94	-32.78	-28.64	-21.30	-21.76	-31.26	-19.40	-24.74
YSAN027EA	-27.36	-28.40	-34.04	-31.71	-39.54	-22.26	-21.57	-29.59	-22.67	-36.61
YSAN027FA	-30.51	-28.68	-40.28	-23.56	-23.19	-23.99	-25.62	-41.64	-22.27	-20.54
YSAN027GA	-27.97	-29.98	-25.17	-25.69	-24.02	-21.45	-22.32	-43.87	-19.95	-20.28
YSAN027HA	-35.88	-28.76	-23.94	-32.78	-28.64	-21.30	-21.76	-31.26	-19.40	-24.74
YSAN027IA	-27.36	-28.40	-34.04	-31.71	-39.54	-22.26	-21.57	-29.59	-22.67	-36.61
YSAN027JA	-30.51	-26.69	-31.44	-29.82	-24.17	-29.78	-25.15	-26.99	-25.45	-20.83
Frequency (MHz)	2600	3600	4700	5000	5500	6000				
YSAN027AA	-18.82	-17.54	-13.81	-26.12	-12.42	-15.64				
YSAN027BA	-23.39	-24.11	-16.40	-18.75	-21.62	-12.63				

<b>YSAN027CA</b>	-33.23	-24.07	-36.01	-12.58	-11.31	-10.89				
<b>YSAN027DA</b>	-23.80	-17.25	-17.73	-20.11	-19.33	-16.75				
<b>YSAN027EA</b>	-20.01	-18.59	-15.72	-15.92	-16.45	-20.40				
<b>YSAN027FA</b>	-23.39	-24.11	-16.40	-18.75	-21.62	-12.63				
<b>YSAN027GA</b>	-33.23	-24.07	-36.01	-12.58	-11.31	-10.89				
<b>YSAN027HA</b>	-23.80	-17.25	-17.73	-20.11	-19.33	-16.75				
<b>YSAN027IA</b>	-20.01	-18.59	-15.72	-15.92	-16.45	-20.40				
<b>YSAN027JA</b>	-22.02	-22.25	-15.58	-18.59	-16.22	-13.59				



# 4 Packaging

Step	Packaging Picture / 2D Picture	Description
1		<p>25 products and accessories are put into small PE bags.</p>
2		<p>20 small PE bag in a big PE bag. 500 pcs products in a big PE bag.</p>
3		<p>Place a clapboard at the bottom and top. (6 Big PE Bags / Carton Box) (3000 pcs 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> L × W × H = 300 × 260 × 230 mm</p>

<p>4</p>		<p><b>Position for Attaching Labels</b></p> <p>① Carton Label ② Quality Label</p>
<p>5</p>		<p><b>Sealing Cartons</b></p> <p>“I” type 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>	

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# Revision History

Version	Date	Author	Note
-	2022-08-08	Sly Liu	Creation of the document
1.0	2022-08-08	Sly Liu	First official release
1.1	2022-07-18	Sly Liu	Modified antenna photos and drawings.
2.0	2023-10-17	Zeline LIANG/ Lucky FENG/ David LIU/ Aria CHU	Updated the template and all test data.
2.1	2023-12-02	Lucky FENG/ Zeline LIANG/ Aria CHU	<ol style="list-style-type: none"><li>1. Numerous changes were made to this document. It should be read in its entirety.</li><li>2. Updated the drawing (Chapter 2)</li></ol>
2.2	2024-03-07	Aria CHU	Deleted REACH Compliant (Chapter 1.2).

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