

Antenna

YKL001CA Datasheet

Antenna Services

Version: 1.3

Date: 2021-12-01

Status: Released



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About the Document

Revision History

Version	Date	Author	Note
1.0	2020-07-27	Kenny YIN	Initial
1.1	2020-12-15	Kenny YIN	Updated the antenna image in Chapter 2.
1.2	2021-07-25	Kenny YIN	Updated working temperature (Chapter 3).
1.3	2021-12-01	Kenny YIN	Updated the product description in Chapter 1.

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1 Product Description

This Quectel external 4G antenna covers main 4G LTE bands and is compatible with 3G/2G/LPWA bands as well. The external antenna is barely influenced by the internal environment of devices, giving a much better performance in efficiency, radiation and gain whilst providing an optimized solution for a customer product. Quectel also offers flexible installation with custom cable length and connector options.

2 Product Features

- Cellular NB
- High efficiency
- Excellent performance



3 Product Specifications

Passive Electrical Specifications

Frequency Range	NB: 800–1000 MHz; 1700–1900 MHz
Input Impedance	50 Ω
VSWR	≤ 4.5
Gain	≤ 2.19 dBi
Polarization Type	Linear

Mechanical Specifications

Antenna Size	50 mm \times 48 mm RG174, Cable Length = 310 mm
Casing	PC + ABS
Connect Type	SMA Male (Center Pin)
Working Temperature	-40 $^{\circ}$ C to +85 $^{\circ}$ C
Radome Color	Black
IP Rating	IP66
Mounting Type	Screw

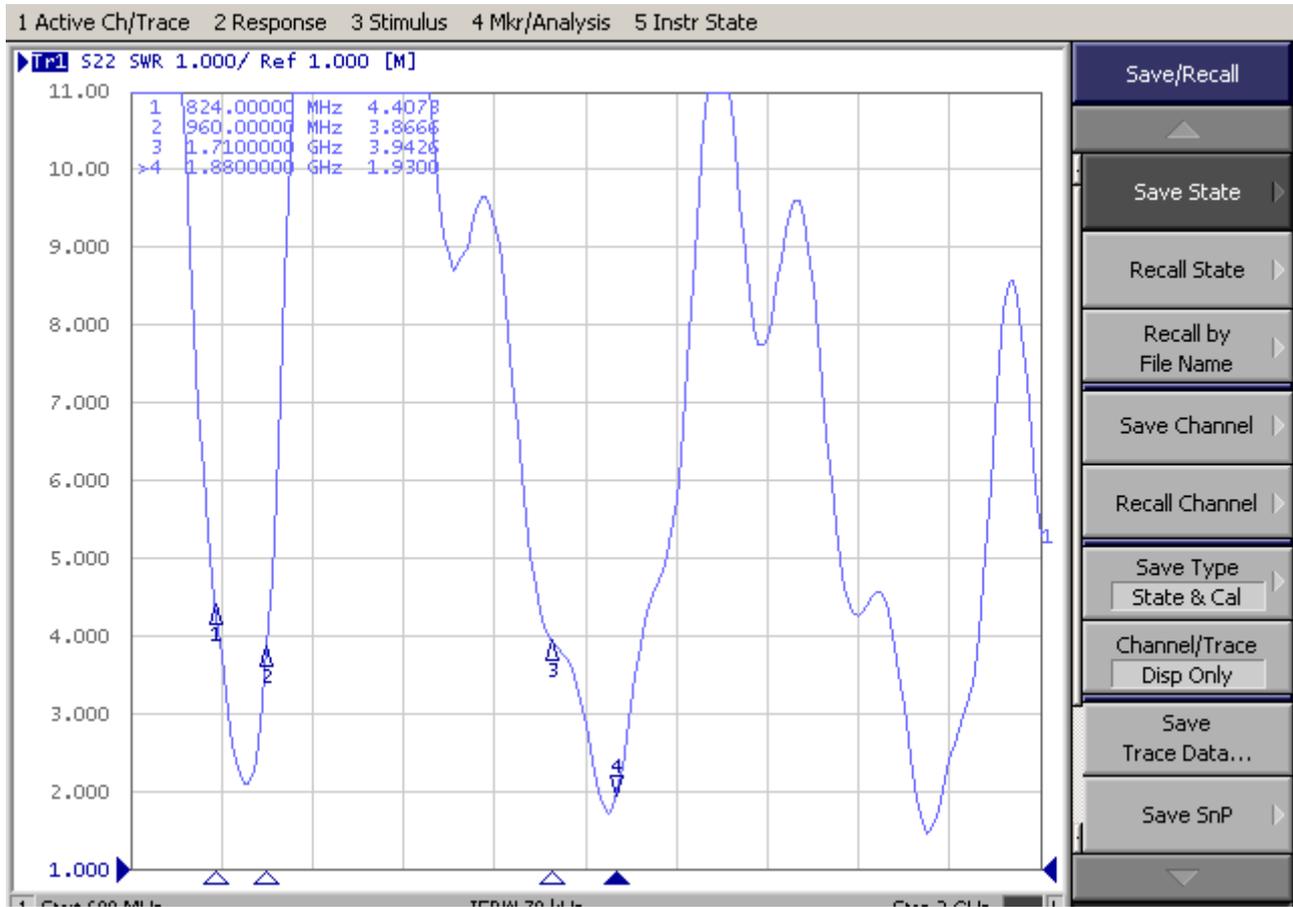
4 Overall Performance

4.1. Test Environment

- KEYSIGHT VNA Network Analyzer E5063A 100 kHz – 8.5 GHz
- RayZone® 2800 Chamber 5G (FR1) SISO/MIMO, 400 MHz – 8.0 GHz

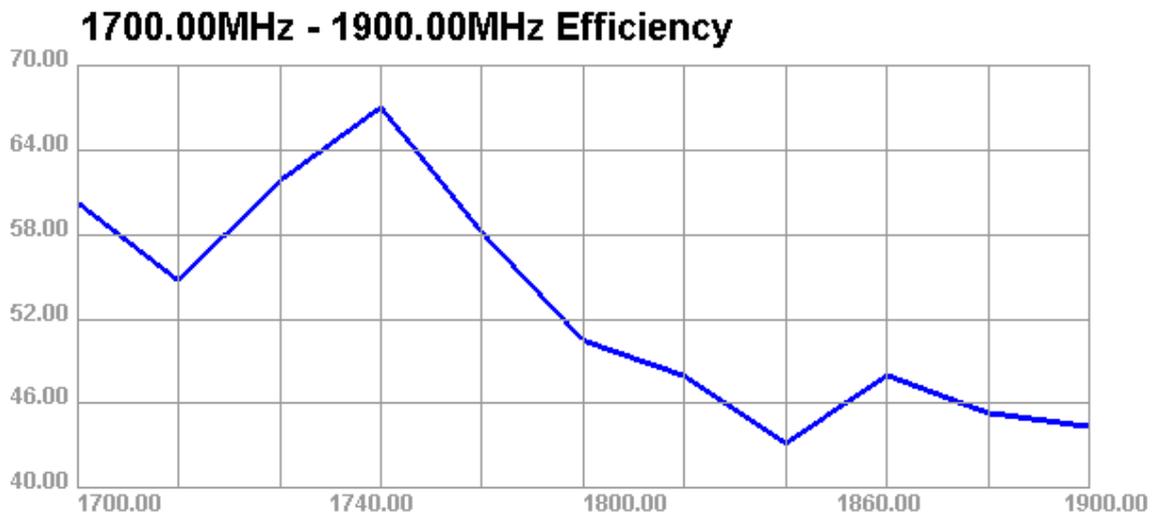
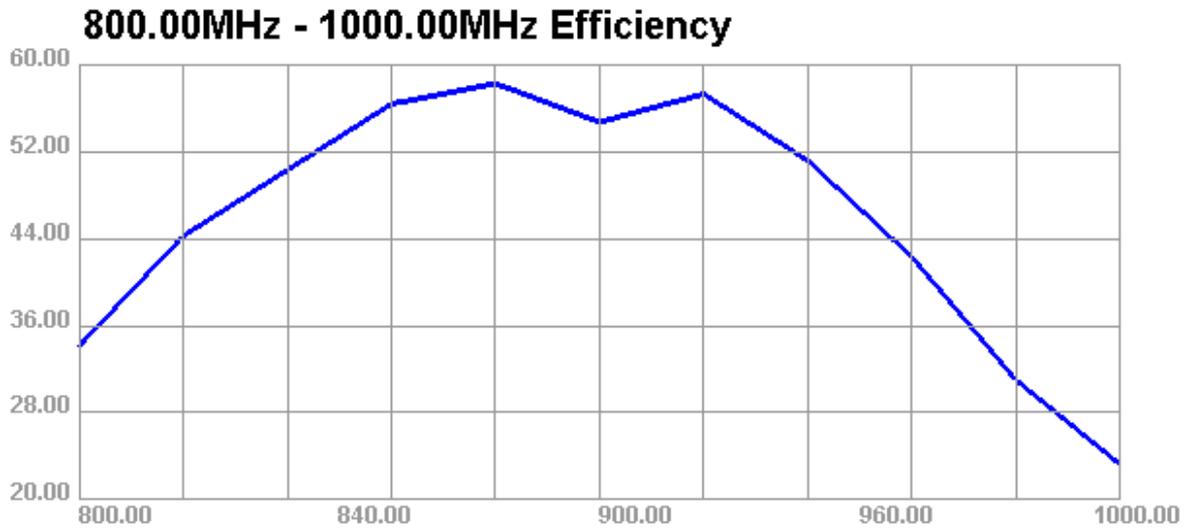


4.2. VSWR



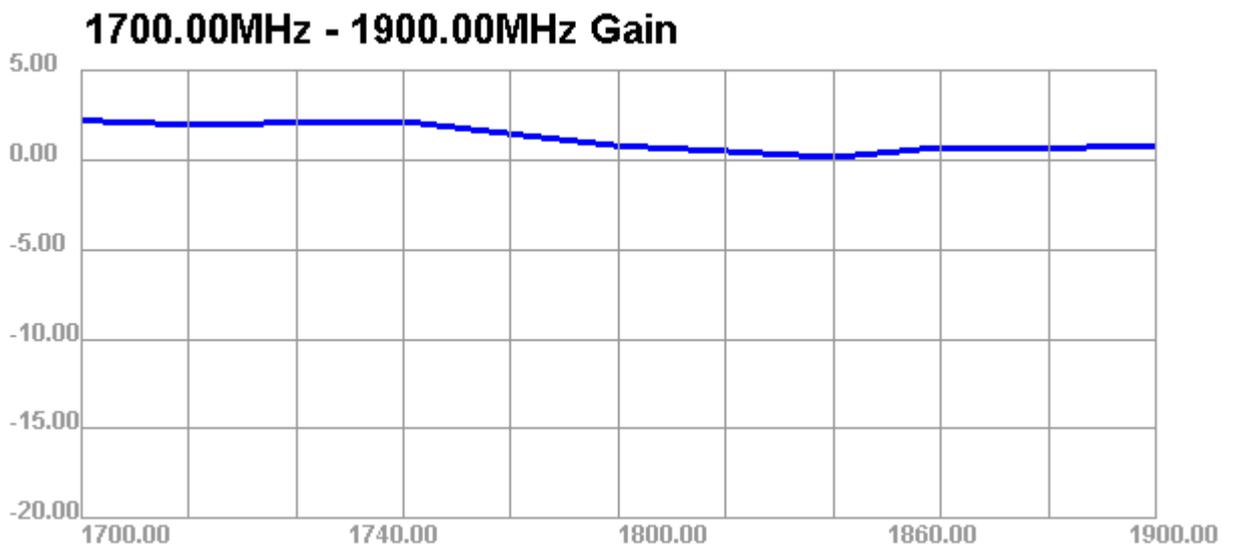
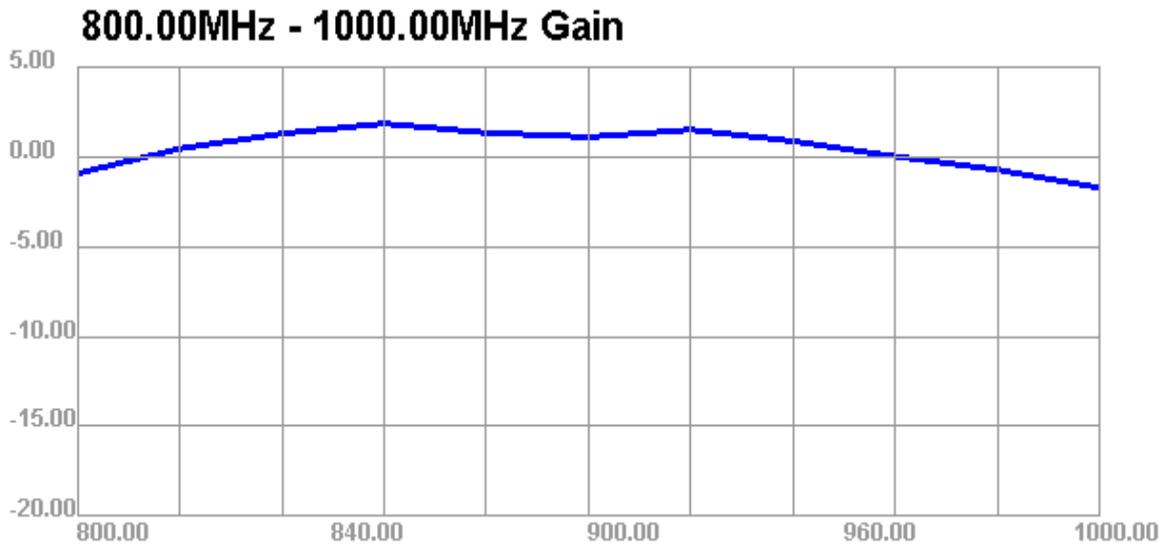
Frequency (MHz)	824	960	1710	1880
VSWR	4.41	3.87	3.94	1.93

4.3. Efficiency



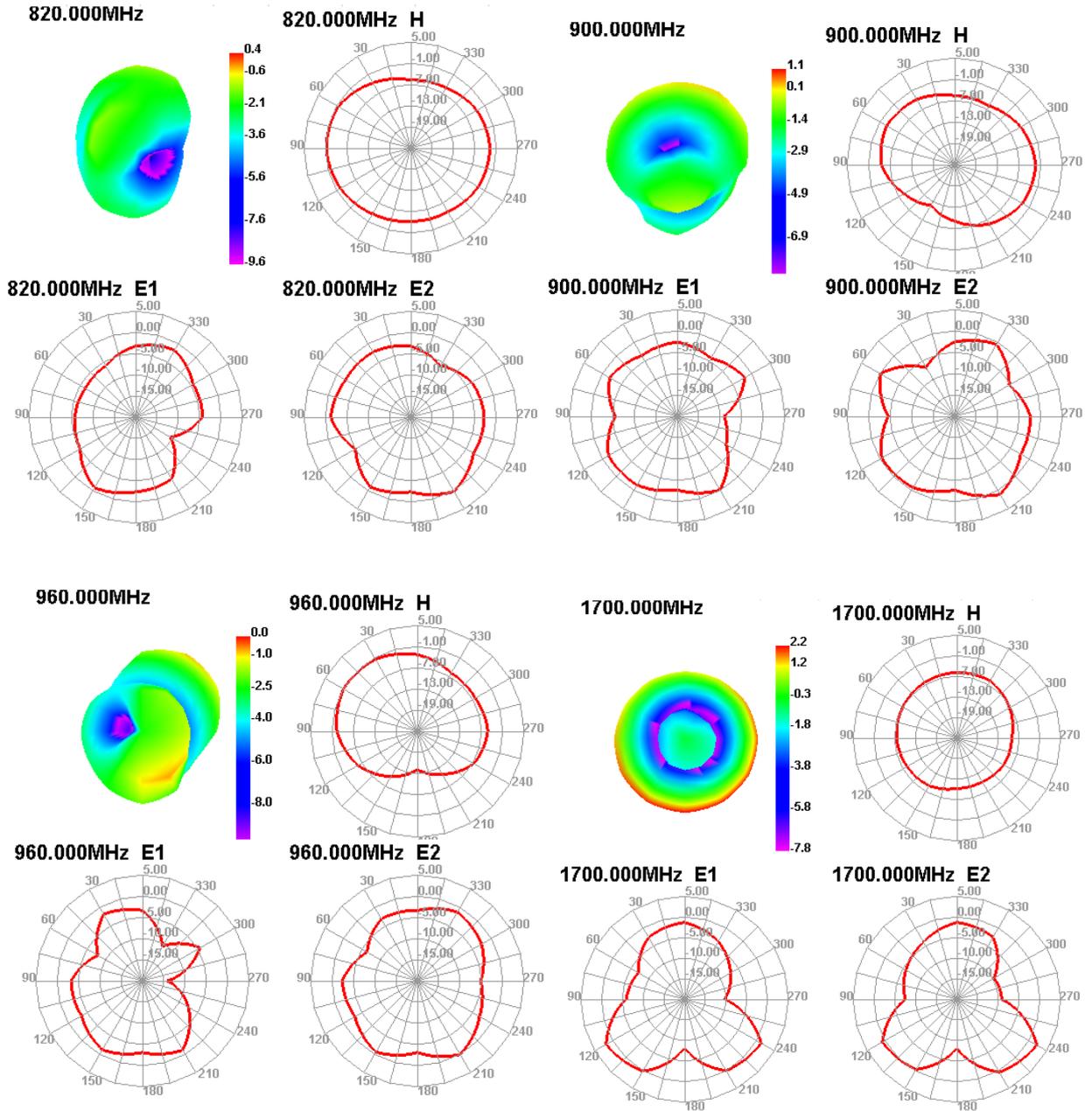
Frequency (MHz)	800	820	960	1700	1740	1860	1900
Efficiency (%)	34.13	44.25	42.33	60.27	61.78	48.01	44.38

4.4. Gain

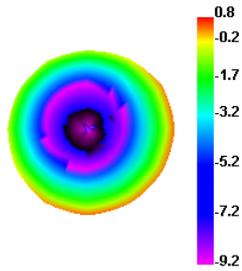


Frequency (MHz)	800	820	960	1700	1740	1860	1900
Gain (dBi)	-0.93	0.44	0.02	2.19	2.06	0.69	0.79

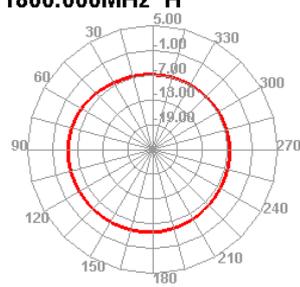
4.5. Radiation Pattern



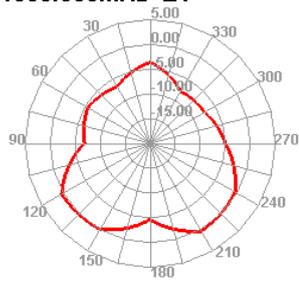
1800.000MHz



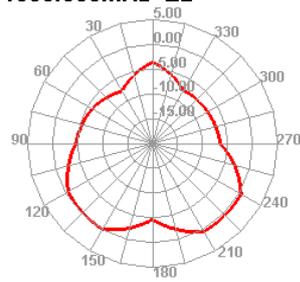
1800.000MHz H



1800.000MHz E1



1800.000MHz E2



5 Product Size

