

Internal Antenna

2.4GHz FPC Antenna

W3991A-2400-2500 MHz



YAGEO GROUP

Features & Applications:

- 2400-2500 MHz
- BT/BLE Antenna
- Size 28.7x8.84x0.18 mm
- IoT, M2M, industrial metering
- DSRC, ISM band radio

YAGEO CORPORATION

3F, No.233-1, Pao Chiao Rd., Xindian Dist., New Taipei City, R.O.C

ELECTRICAL SPECIFICATIONS @ 25°C

General Specifications

Antenna type	Nominal Impedance	Polarization	Radiation pattern	Power withstanding
Monopole antenna	50Ω	Linear	Omni	5W

Frequency (MHz)	2400-2500MHz
Return Loss (dB)	< -10
Efficiency (%)	> 53
Peak Gain (dBi)	> 1.1

MECHANICAL SPECIFICATIONS

W3991A

Dimension (L x W x T)	Material	Color	Weight
28.7x8.84x0.18 mm	FPCB	Black	0.09g

ENVIRONMENTAL SPECIFICATIONS

W3991A

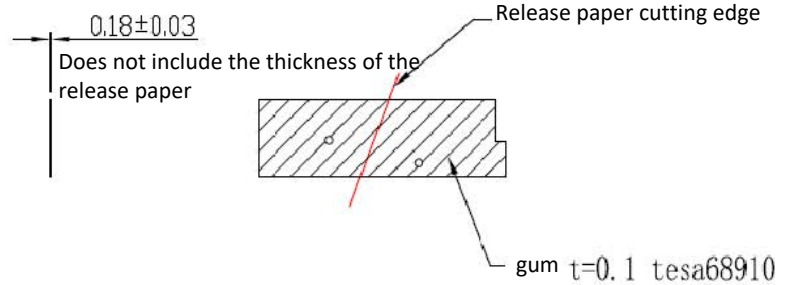
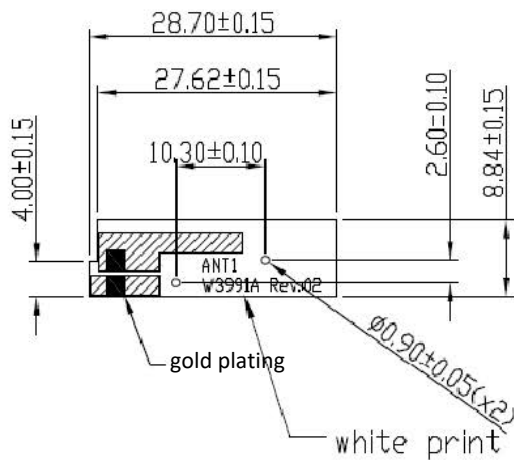
Storage Temperature	Operating Temperature	RoHS Compliant	
-40/+85° C	-40/+85° C	Yes	

Internal Antenna 2.4GHz FPC Antenna

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Mechanical Drawing

W3991A



Dimensions: mm, Unless otherwise specified, all tolerances are ± 0.20 mm

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W3991A-2400-2500 MHz

TEST Setup

W3991A



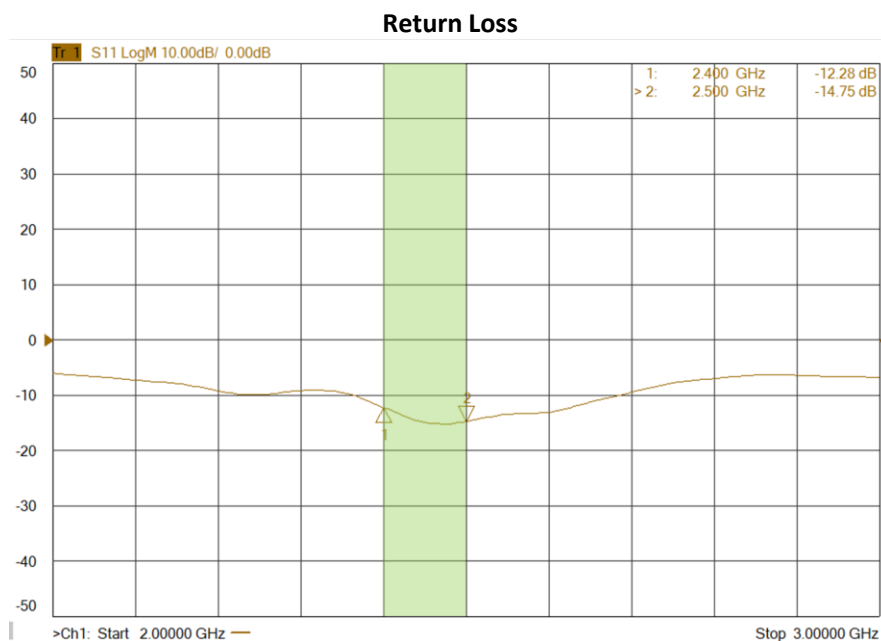
Internal Antenna

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W3991A-2400-2500 MHz

Charts- Return Loss & Efficiency & Peak Gain

W3991A



Efficiency and Peak Gain

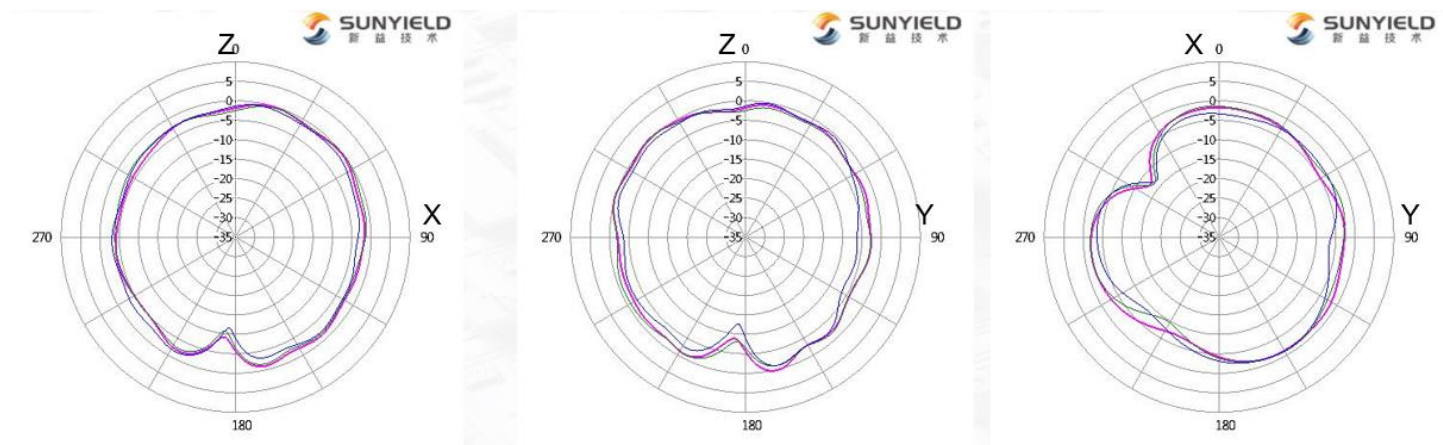
Frequency 频率(MHz)	Efficiency 效率(%)	Gain 增益(dBi)
2400	53.22	1.16
2410	55.95	1.34
2420	56.01	1.25
2430	57.74	1.46
2440	58.26	1.33
2450	60.84	1.35
2460	60.98	1.59
2470	61.54	1.89
2480	60.58	1.89
2490	61.34	1.71
2500	60.25	1.43

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Charts- Radiation Pattern

W3991A



Internal Antenna

2.4GHz FPC Antenna

W3991B-2400-2500 MHz



YAGEO GROUP

Features & Applications:

- 2400-2500 MHz
- BT/BLE Antenna
- Size 22.4x5.9x0.18 mm
- IoT, M2M, industrial metering
- DSRC, ISM band radio

ELECTRICAL SPECIFICATIONS @ 25°C

General Specifications

Antenna type	Nominal Impedance	Polarization	Radiation pattern	Power withstanding
Monopole antenna	50Ω	Linear	Omni	5W

Frequency (MHz)	2400-2500MHz
Return Loss (dB)	< -10
Efficiency (%)	> 50
Peak Gain (dBi)	> 2.5

MECHANICAL SPECIFICATIONS

W3991B

Dimension (L x W x T)	Material	Color	Weight
22.4x5.9x0.18 mm	FPCB	Black	0.05g

ENVIRONMENTAL SPECIFICATIONS

W3991B

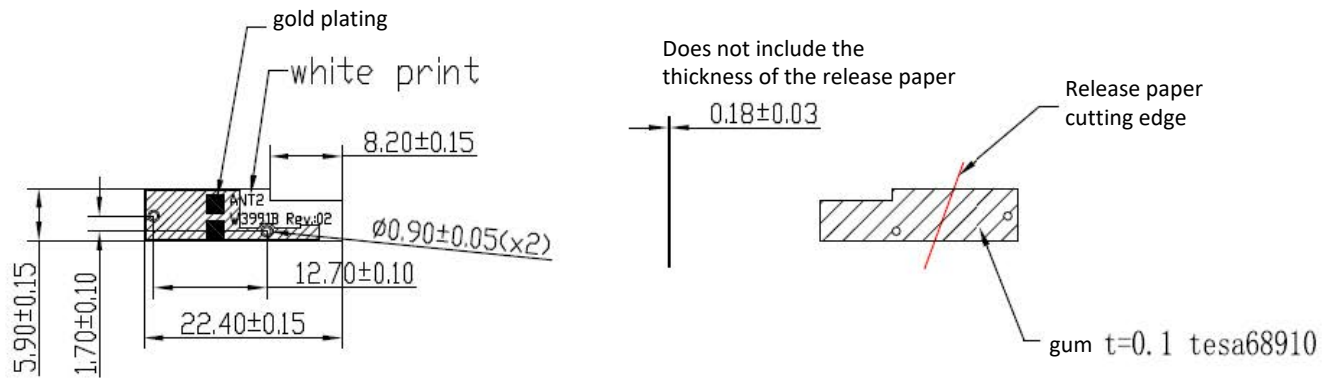
Storage Temperature	Operating Temperature	RoHS Compliant
-40/+85° C	-40/+85° C	Yes

Internal Antenna 2.4GHz FPC Antenna

W3991B-2400-2500 MHz

Mechanical Drawing

W3991B



Dimensions: mm, Unless otherwise specified, all tolerances are ± 0.20 mm

Internal Antenna 2.4GHz FPC Antenna

W3991B-2400-2500 MHz

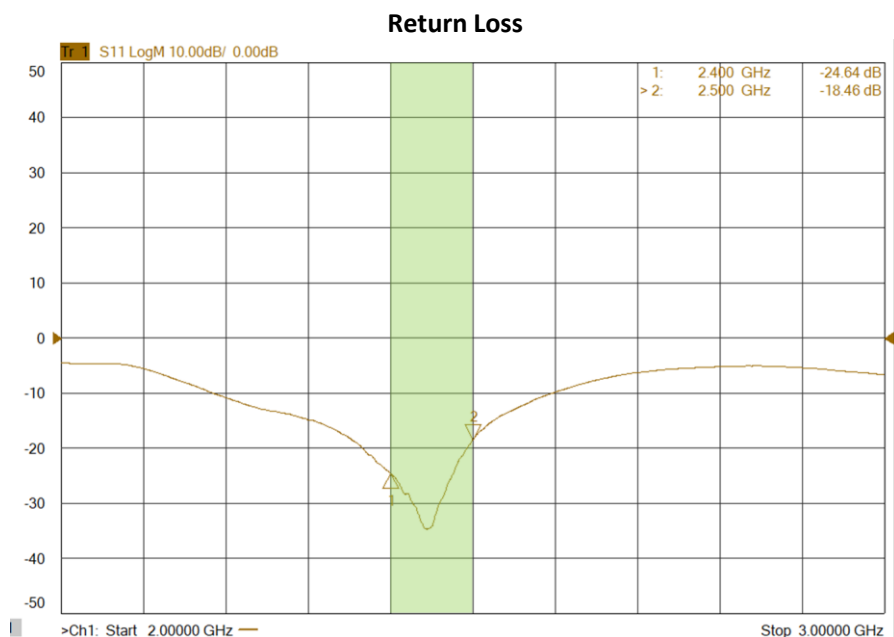
TEST Setup

W3991B



Charts- Return Loss & Efficiency & Peak Gain

W3991B



Efficiency and Peak Gain

Frequency 频率(MHz)	Efficiency 效率(%)	Gain 增益(dBi)
2400	52.89	3.23
2410	53.32	3.29
2420	54.48	3.14
2430	54.38	3.08
2440	55.05	3.37
2450	56.25	3.63
2460	55.93	3.60
2470	55.66	3.44
2480	54.84	3.22
2490	53.12	2.92
2500	50.88	2.51

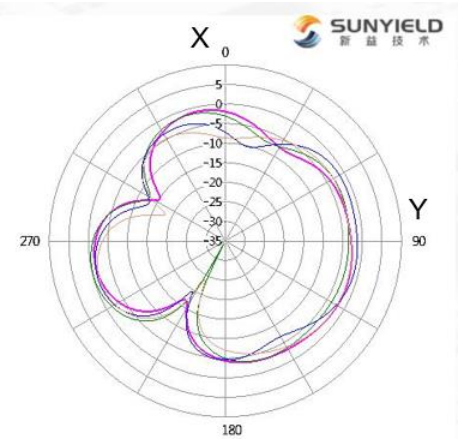
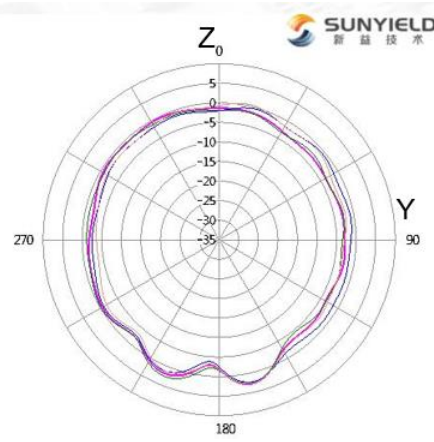
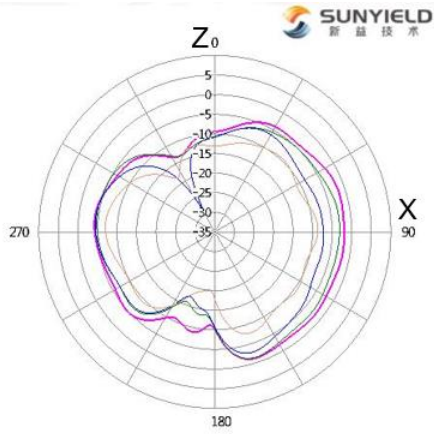
Internal Antenna

2.4GHz FPC Antenna

W3991B-2400-2500 MHz

Charts- Radiation Pattern

W3991B



Internal Antenna

2.4GHz FPC Antenna

W3991C-2400-2500 MHz



YAGEO GROUP

Features & Applications:

- 2400-2500 MHz
- BT/BLE Antenna
- Size 27.2x6.68x0.18 mm
- IoT, M2M, industrial metering
- DSRC, ISM band radio

ELECTRICAL SPECIFICATIONS @ 25°C

General Specifications

Antenna type	Nominal Impedance	Polarization	Radiation pattern	Power withstanding
Dipole antenna	50Ω	Linear	Omni	5W
Frequency (MHz)	2400-2500MHz			
Return Loss (dB)	< -10			
Efficiency (%)	> 48			
Peak Gain (dBi)	> 1.1			

MECHANICAL SPECIFICATIONS

W3991C

Dimension (L x W x T)	Material	Color	Weight
27.2x6.68x0.18 mm	FPCB	Black	0.06g

ENVIRONMENTAL SPECIFICATIONS

W3991C

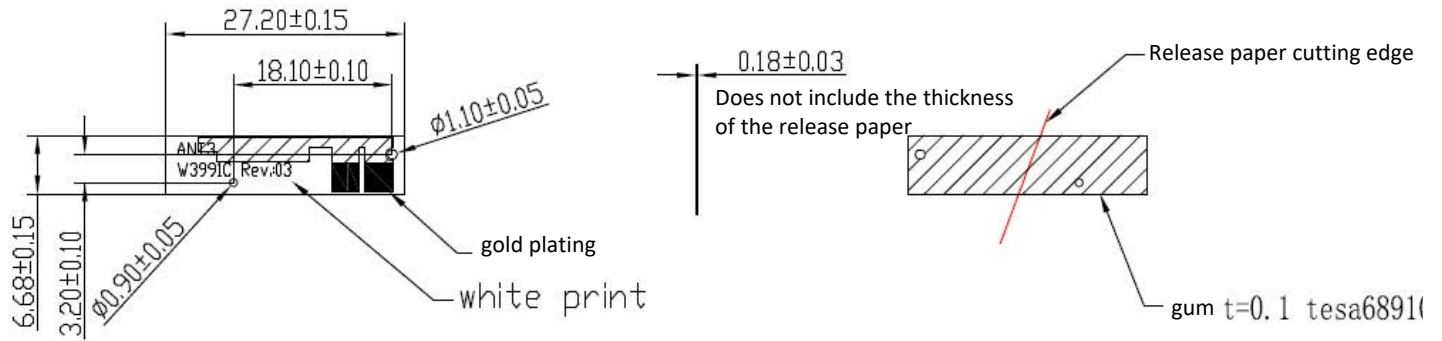
Storage Temperature	Operating Temperature	RoHS Compliant	
-40/+85° C	-40/+85° C	Yes	

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Mechanical Drawing

W3991C



Dimensions: mm, Unless otherwise specified, all tolerances are ± 0.20 mm

Internal Antenna 2.4GHz FPC Antenna

W3991C-2400-2500 MHz

TEST Setup

W3991C

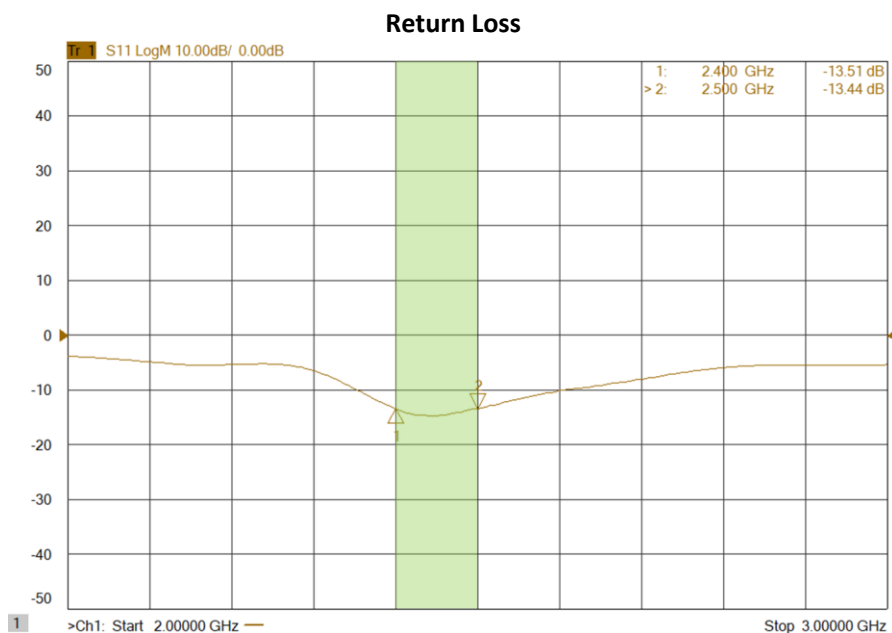


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Charts- Return Loss & Efficiency & Peak Gian

W3991C



Efficiency and Peak Gain

Frequency 频率(MHz)	Efficiency 效率(%)	Gain 增益(dBi)
2400	48.49	1.11
2410	49.58	1.26
2420	50.38	1.12
2430	52.52	1.17
2440	52.69	1.11
2450	54.48	1.11
2460	54.94	1.02
2470	55.84	1.15
2480	54.19	1.47
2490	55.10	1.62
2500	53.23	1.39

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Charts- Radiation Pattern

W3991C

