



J-LINK CO., LTD

Date : April 12, 2019

Specifications For Approval

Customer: Kaon Media Co. , Ltd.

product name

Part No: SW25DEC100P

Product name

Description: Internal PCB Antenna (33.5mm)

Brand Name : Daeyou Media Systems

Review (Proposed By)		Acknowledge (Approved By)
Designed,	Approved	

J-LINK CO., LTD.

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1. Revision history

amendment	Changes	revision date	Related page author	
1.0	- New writing	2019-04-01		Jaehyuk Lee

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2. Material certificate

turn	Part Name	raw material	raw material company	Processor	Color	Working Method	Quantity	Remarks
1	Φ1.13 Coaxial Cable	other than FEP		ETC	Black	MHF PLUG	1	
2	Antenna	FR4		ETC	Black		1	1 1.0mm
1, Raw materials should be written in full name 2, Each raw material must be accurately described according to the part name.								

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3. Technical matters

3.1. electrical specifications

stand station	2.4GHz	5GHz
frequency range	2400~2483.5MHz	5150~5875MHz
highest gain [dBi]	1.9 dBi	2.0 dBi
Jeong Jae-pabi	2.5:1 or less	2.0 : 1 or less
Rated Impedance	50Ω	
bias	Linear	
copy pattern	Omi-Directional	
maximum output	2Watts(Max)	

3.2. mechanical specifications

size	33.5(mm) x 9.0(mm) x 1.0(mm)
cable length	100mm
cable color	black
weight	about 1.4 g
operating temperature	-40℃ ~ +80℃
operating humidity	0 ~ 95%
Connector type	MHF1 PLUG

3.3. Packaging Specifications

Product Name	Quantity	texture	note
Poly bag (small)	1BAG(20EA)	PP	220mm X 100mm
poly bag (large)	1BAG(200EA)	PP	250mm X 200mm
out box	1BOX(2,000EA)	KBL paper	

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4. Test conditions

4.1. test environment conditions

Electrical, mechanical and environmental tests are performed after pre-treatment based on standard conditions. The standard condition means a temperature of 15°C to 25°C, a relative humidity of 25% to 80%, and an atmospheric pressure of 86 to 106 kPa. do. This means the first process of the test method, and the purpose is to set the characteristics of the test item to a stable state before measurement and testing.
(Standard condition: 20 °C, atmospheric pressure)

- For mechanical tests, the pre-treatment process is 1 hour.
- After the environmental test, the pretreatment process is 2 hours for the mechanical test.
- However, if there is a history before the test after the pre-treatment process, the pre-treatment process is extended.

4.2. test equipment.

The following equipment is required for testing this antenna.

- Network Analyzer for measuring antenna's standing wave ratio and impedance.
- Raise the transmit antenna. Up moving down. Positioner that rotates the lower transfer unit and the receiving antenna, Controller that controls it.
- STANDARD HORN antenna used in WLNA (WiFi) band.
- An anechoic chamber equipped with cables, connectors and measuring equipment.
- Digital vernier calipers for dimensional measurements.
- Temperature chamber for environmental testing.
- Salt spray tester.

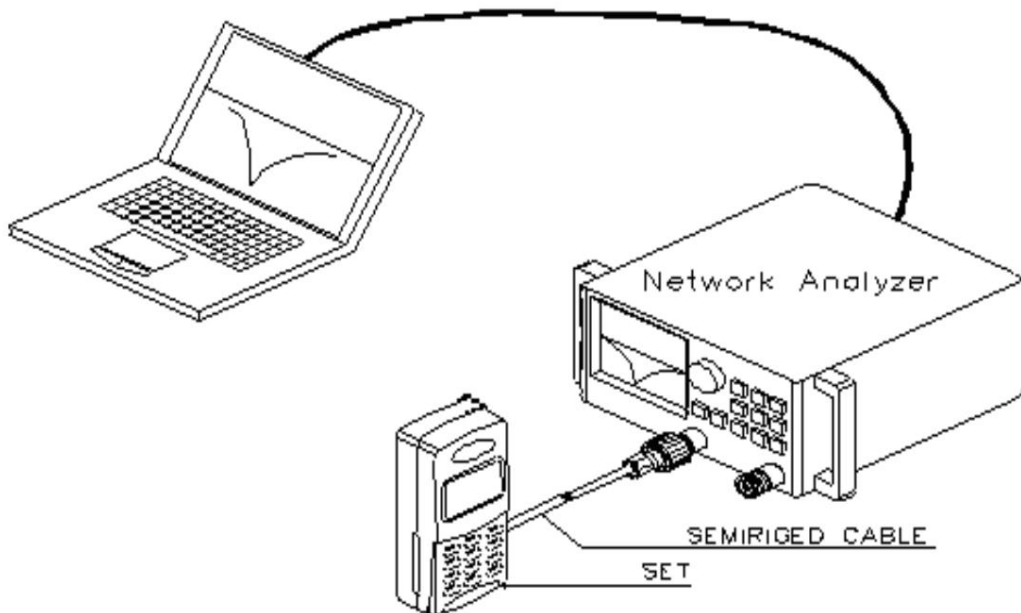
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5. Electrical Requirements

5.1. Jeong Jae-pabi

The antenna must satisfy the standing wave ratio requirements specified in the electrical specifications.

Division	2.4GHz	5GHz	note
	2400~2483.5MHz	5150~5875MHz	
VSWR	2.5:1 or less	2.0 : 1 or less	N/A



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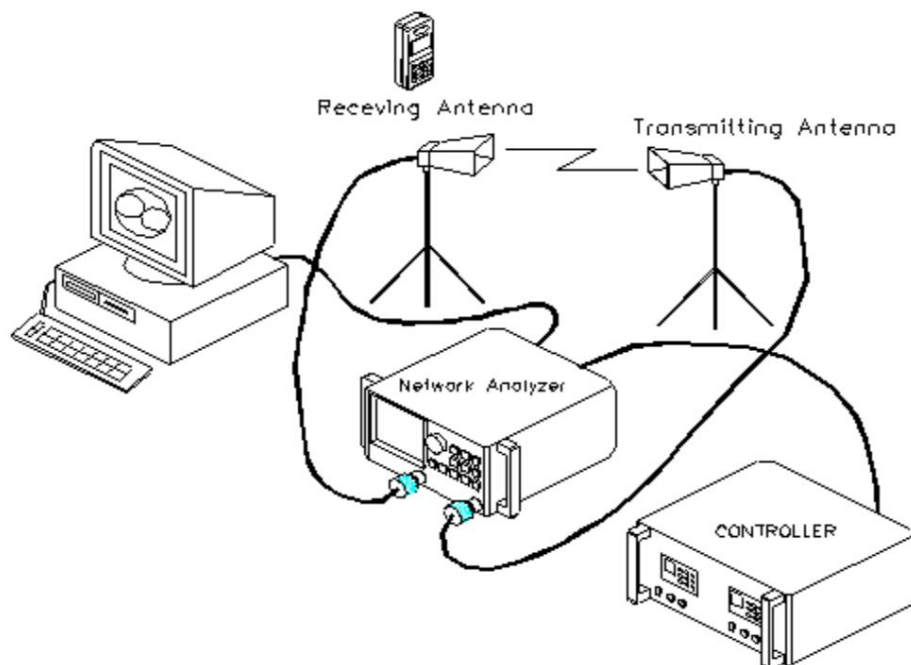
5.2. copy pattern

The radiation pattern of this antenna is omni-directional in H-Plane.

5.3. antenna gain

The antenna gain is a value measured in H Plane after calibration using the WLAN band's STANDARD HORN antenna, and the unit is [dBi] and must satisfy the following specifications.

frequency	2.4GHz	5GHz
	2400~2483.5MHz	5150~5875MHz
Peak gain(dBi)	1.9 dBi	2.0 dBi



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6. Environmental Requirements

6.1. thermal shock test.

Place the antenna in the chamber. Cycle the temperature as follows. The temperature is held at -40°C for 45 minutes and increased to $+80^{\circ}\text{C}$ for 5 minutes, held at $+80^{\circ}\text{C}$ for 45 minutes and then decreased to -40°C for another 5 minutes. Repeat this process 27 times and finish at room temperature 20°C . There shall be no apparent defects and the electrical requirements shall be satisfied during the measurement. After the test, the mechanical requirements must also be satisfied.

6.2. High temperature high humidity storage test.

The antenna is placed in a temperature chamber with a humidity of 95% and a temperature of $+80^{\circ}\text{C}$ for 48 hours. After taking the antenna out of the chamber, 2 hours have elapsed before measurement at room temperature. There shall be no cosmetic defects, and during the measurement requirements must be met.

6.3. high temperature storage test.

Place the antenna in a temperature chamber with a humidity of 80% and a temperature of $+80^{\circ}\text{C}$ for 24 hours. After taking out the antenna from the chamber, 24 hours have elapsed before measurement at room temperature. There shall be no apparent defects and the electrical requirements shall be satisfied during the measurement.

6.4. cold storage test.

The antenna is placed in a temperature chamber at -40°C for 48 hours. 1 hour after the antenna was removed from the chamber Then measure at room temperature. There shall be no cosmetic defects, and the electrical requirements must be met during the measurement. must be satisfied

6.5. salt spray test.

The antenna was left in an atmosphere saturated with sodium 5% aqueous solution at 35°C for 48 hours. After the test, there shall be no mechanical damage and shall be electrically satisfactory. The test shall satisfy the standards of IEC 68-2-11.

6.6. How to deal with defective parts.

In the event of a defect in a part, selection, rework, or 1:1 replacement is performed according to the customer's requirements.

6.7. Reliability assurance level.

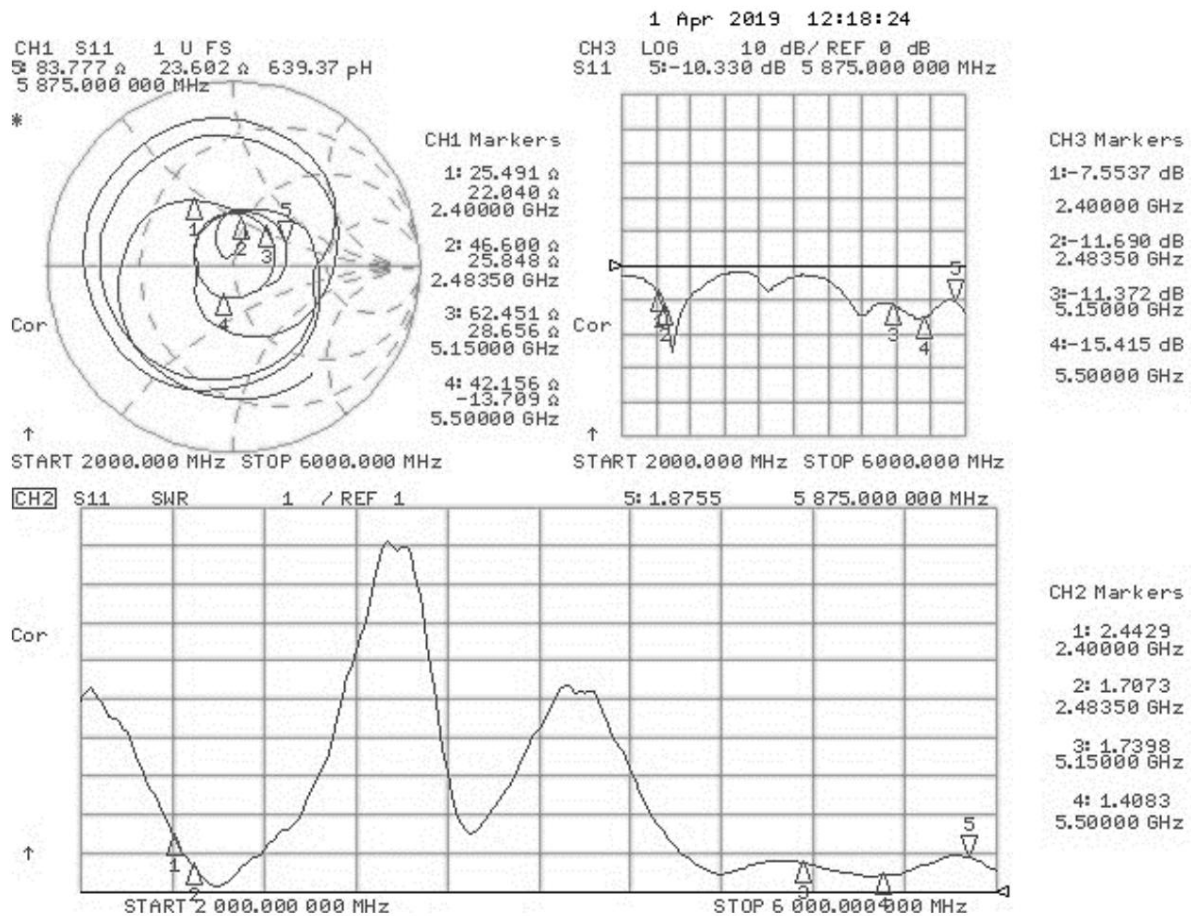
Parts Warranty Period: Minimum 3-year warranty.

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7. Other Required Documents

7.1. electrical characteristics

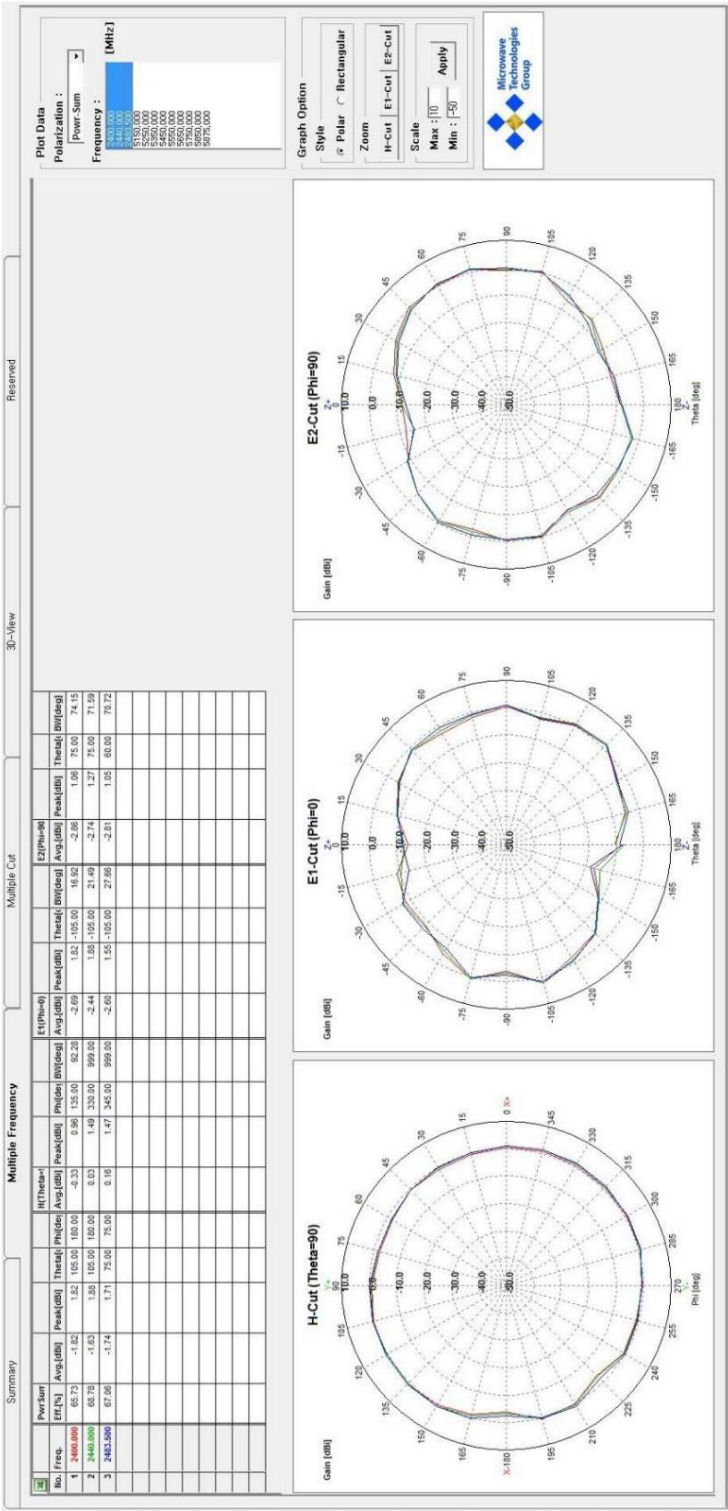
7.1.1. Smith chart, Return Loss, Standing Wave Ratio (VSWR)



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7.2. copy pattern

7.2.1. 2.4GHz Radiation Pattern



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7.3. mechanism drawing

