

WAG-F-LCLF-00-001 Specification

1. Explanation of part number :

WAG F LCLF 00 001
(1) (2) (3) (4) (5)

(1) Product Type: Wireless Antenna

(2) Combo: FPCB

(3) Frequency : 2400-2500 MHz, 5150~5850MHz, 5925~7125MHz

(4) Coaxial Cable Type : no coaxial cable

(5) Suffix : 001

2. Storage Condition:

Temperature -40 to +85°C

Humidity 20 to 85 %RH

Recommended storage condition:

Store in room condition as listed below: Temperature -20°C~+45°C, Humidity 80% Max.

3. Operating Condition:

Temperature -40 to +85°C

Humidity 10 to 85 %RH

4. Electrical Specification:

Those specifications were specially defined for NDT501 model, and all characteristics were measured in the customer's machine.

4-1. Frequency Band:

Frequency Band	MHz
ANT-1 WIFI	2400-2500 5150-5850 5925-7125
ANT-2 WiFi	5150-5850 5925-7125

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DESIGNED BY:周振兴 APPROVED BY : 唐龙



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TITLE: WAG-F-LCLF-00-001 Specification

DOCUMENT
NO.

ENSXXXXXXXXXX

PAGE REV.
P1

4-2. Impedance

50 ohm nominal

4-3. Matching circuit

None

4-4. VSWR

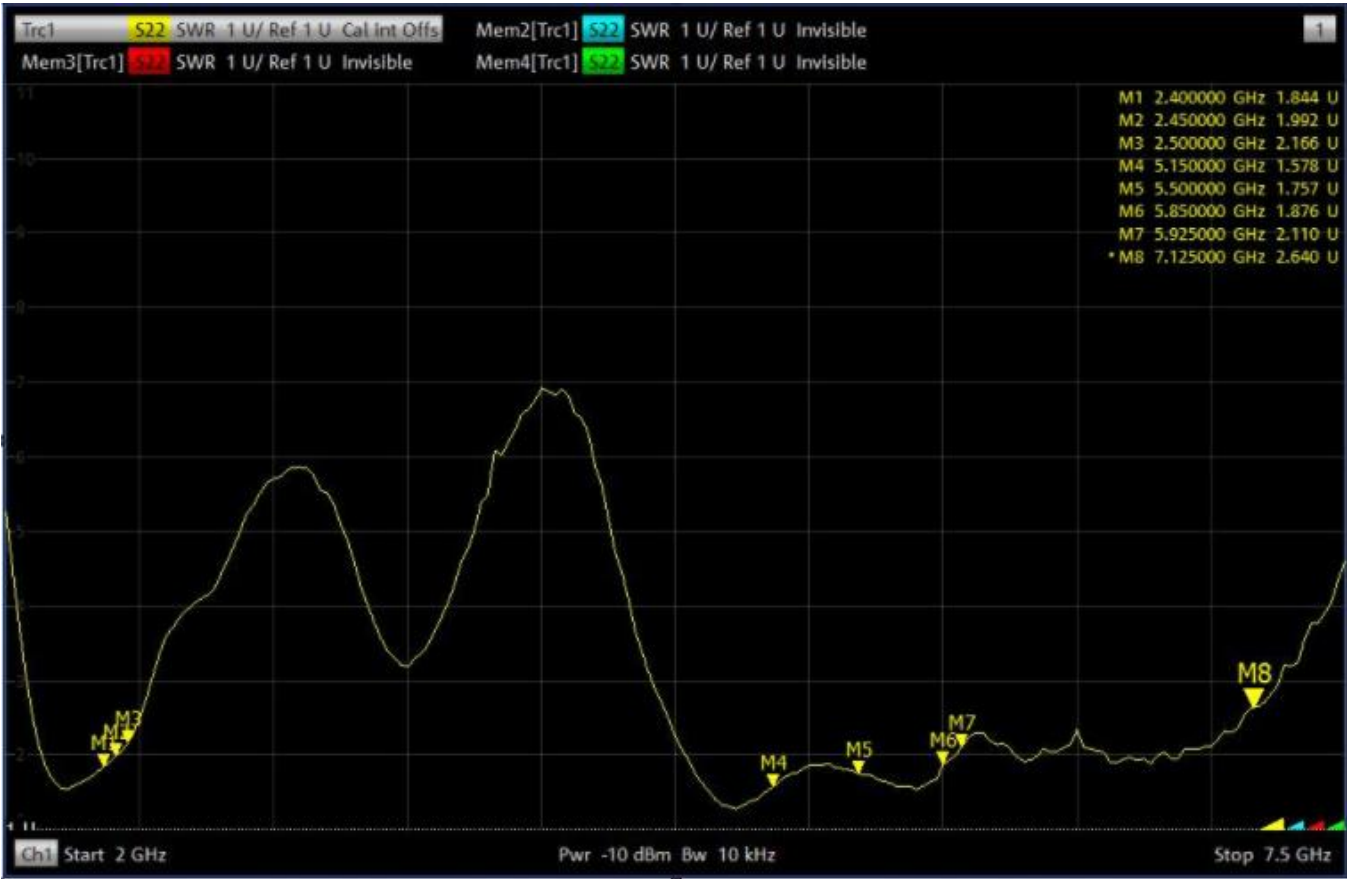
4-4.1 Measuring Method

- 1.A 50Ωcoaxial cable is connected to the antenna. Then this cable is connected to a network analyzer to measure the VSWR
- 2.Keeping this jig away from metal at least 20cm

4-4.2 Measurement frequency points and VSWR value

ANT1

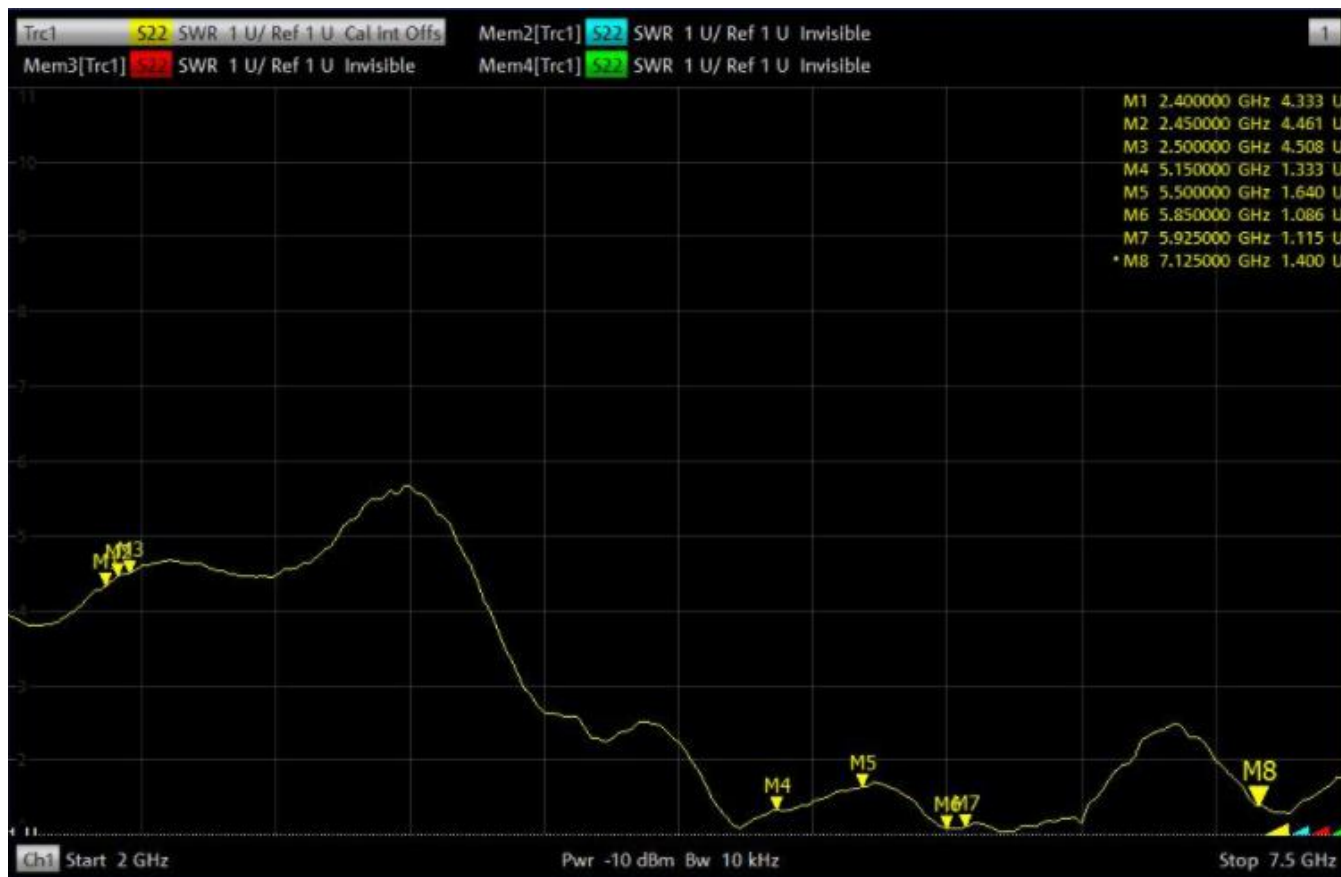
Frequency (Unit MHz)	2400	2500	5150	5850	5925	7125
WiFi	1.8	2.1	1.5	1.9	2.1	2.6



ANT2

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			PAGE REV. P1

Frequency (Unit MHz)	5150	5850	5925	7125
WiFi	1.3	1.1	1.1	1.4



4-5. Efficiency and Gain

4-5.1 Measuring equipment

Measuring instrument:

Microwave chamber, Network analyzer, and standard antenna.

Instructions for microwave chamber:

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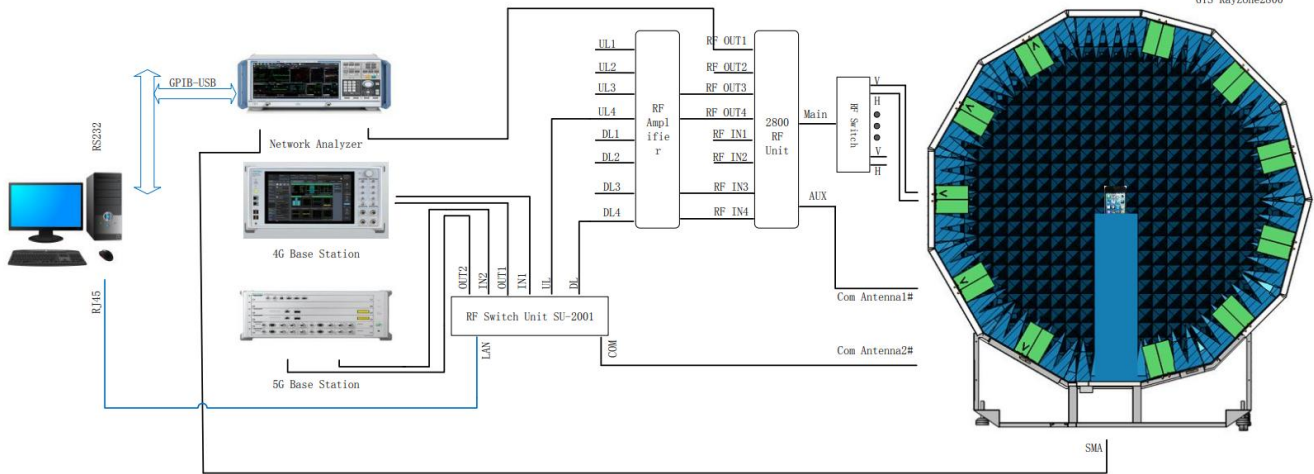
PAGE REV.
P1

This is a microwave chamber set up by our company in Suzhou, This microwave chamber belongs to a set of near-field measurement system. The size of the chamber is 2.95M * 3M * 3M.



RayZone2800 Test Setup

Anechoic Chamber
GTS RayZone2800



The microwave chamber, shown above, using a unique multi-probe technique, The aim is to reduce the measurement time of the whole measurement system. The measuring system use multi-probe array instead of single probe to scan the measured surface of the antenna under test, a single probe has the capability of measuring orthogonal polarization amplitude and phase, it also has a wide frequency range, the corresponding multi-probe array is switched quickly by electronic switch, greatly improved the measurement efficiency.

The probe model: MA186960A(400MHz~7.5GHz) . Because of its capability of broadband frequency and the orthogonal polarization function, the number of probes needed to be equipped with the system is reduced; The small size of the probe reduces the coupling between the probes, make it is possible to insert probes of other frequency bands between probes, then a single system can support a wider frequency range.

4-5.2 Efficiency and Gain

Antenna gain is marked (dBi) and is based on STANDARD HORN antenna. The data shows Peak Gain and Average Gain.

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ANT1

ANT1			
Freq(MHz)	Efficiency_dB	Gain	Efficiency(%)
2400	-2.71	2.08	53.58
2410	-2.59	2.01	55.13
2420	-2.47	1.93	56.60
2430	-2.36	1.86	58.04
2440	-2.05	2.16	62.34
2450	-2.26	2.03	59.43
2460	-1.99	2.30	63.19
2470	-2.32	2.07	58.62
2480	-2.44	2.01	57.00
2490	-2.48	2.03	56.46
2500	-2.42	2.21	57.32
AVG	-2.37	2.06	57.97
5150	-4.22	1.02	37.82
5250	-3.92	1.48	40.58
5350	-3.69	1.58	42.72
5470	-4.02	1.16	39.59
5600	-3.66	1.85	43.07
5725	-4.07	1.44	39.19
5785	-2.95	2.71	40.23
5800	-3.31	1.73	40.42
5850	-3.59	1.95	43.80
AVG	-3.90	1.73	40.82
5925	-3.42	1.50	45.53
6025	-2.31	2.58	58.77
6125	-3.30	2.44	49.79
6225	-2.33	2.67	58.50
6325	-2.22	2.50	60.01
6425	-3.76	0.95	42.09
6525	-2.41	2.37	57.44
6625	-2.86	1.99	68.87
6725	-2.54	2.89	34.67
6825	-4.60	0.33	69.21
6925	-2.79	4.84	52.61
7025	-3.06	5.27	49.39

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DOCUMENT
NO.

ENSXXXXXXXXXX

PAGE REV.
P1

7125	-2.42	4.89	57.26
AVG	-2.93	2.70	54.16

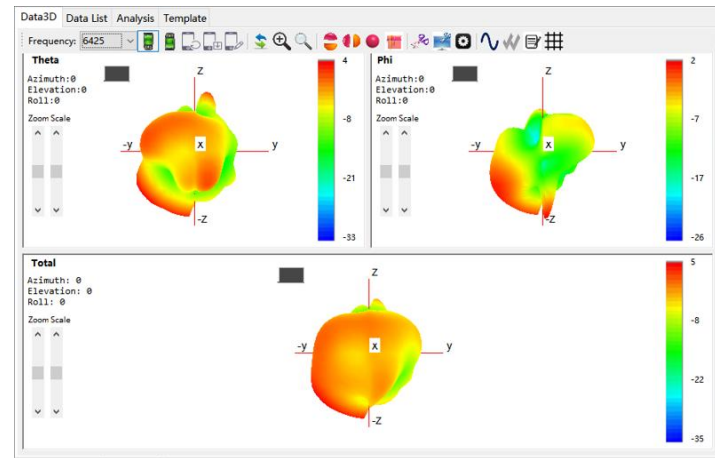
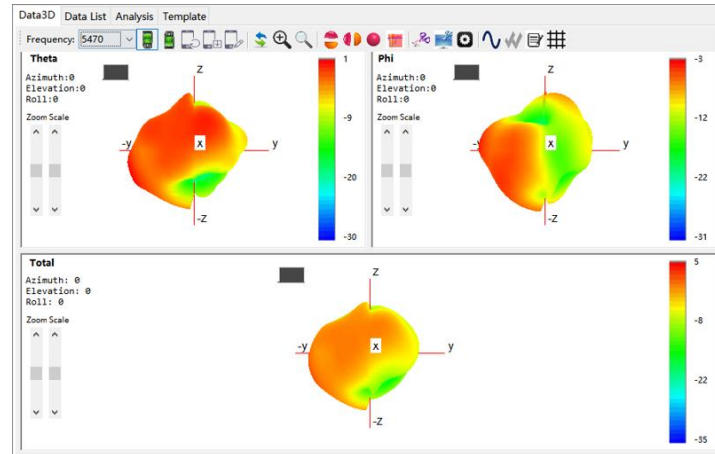
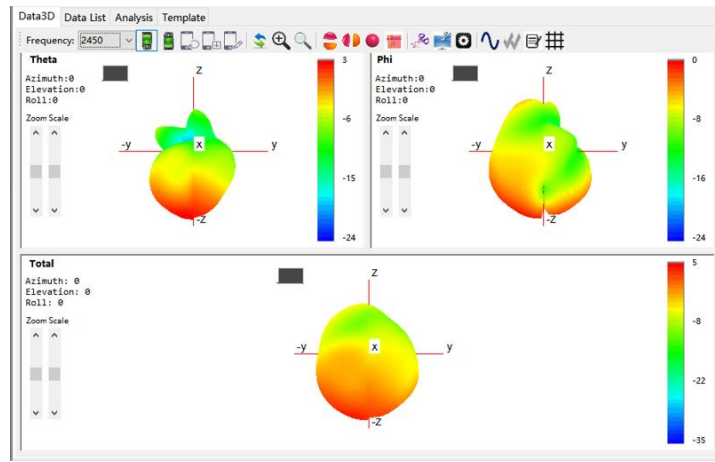
ANT2

Freq(MHz)	Efficiency_dB	Gain	Efficiency(%)
5150	-4.12	2.14	38.74
5250	-3.70	1.67	42.71
5350	-3.29	2.19	46.88
5470	-3.14	2.46	48.52
5600	-3.36	1.99	46.18
5725	-3.53	1.40	44.36
5785	-3.05	1.45	49.53
5800	-3.04	1.39	49.70
5850	-3.12	0.87	48.71
AVG	-3.37	1.72	46.14
5925	-3.48	0.32	44.87
6025	-2.98	1.22	50.32
6125	-3.26	1.53	47.24
6225	-2.93	2.33	50.89
6325	-2.59	2.88	55.14
6425	-3.59	1.69	43.72
6525	-3.40	1.56	45.72
6625	-3.63	1.25	43.31
6725	-3.67	2.60	42.93
6825	-4.76	1.11	33.38
6925	-4.35	1.52	36.73
7025	-5.14	0.09	30.62
7125	-6.02	-0.05	25.00
AVG	-3.83	1.38	42.29

3D Pattern

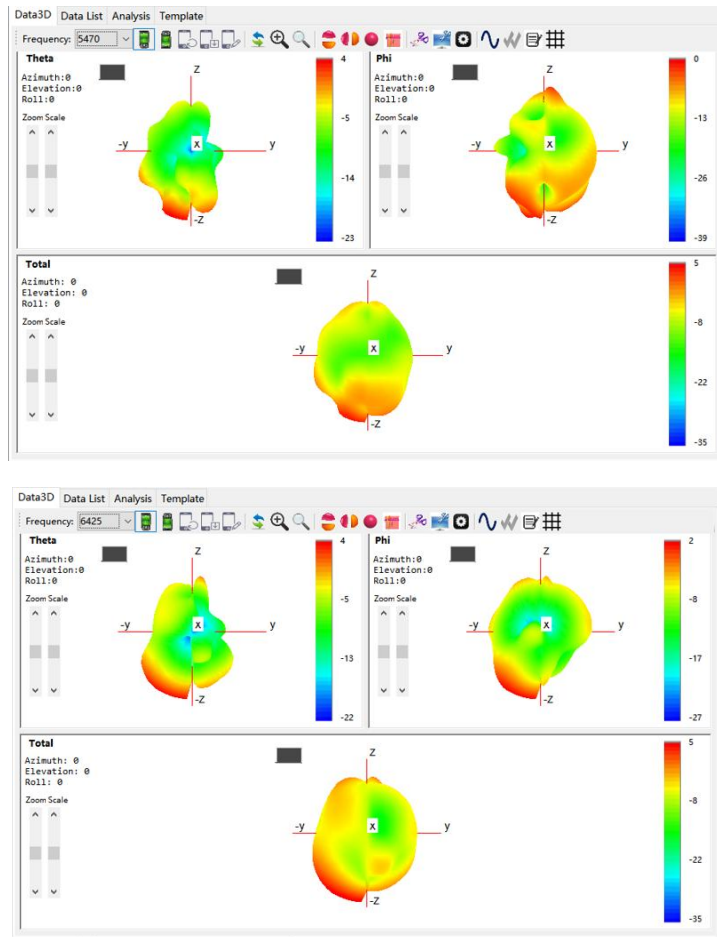
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Ant2

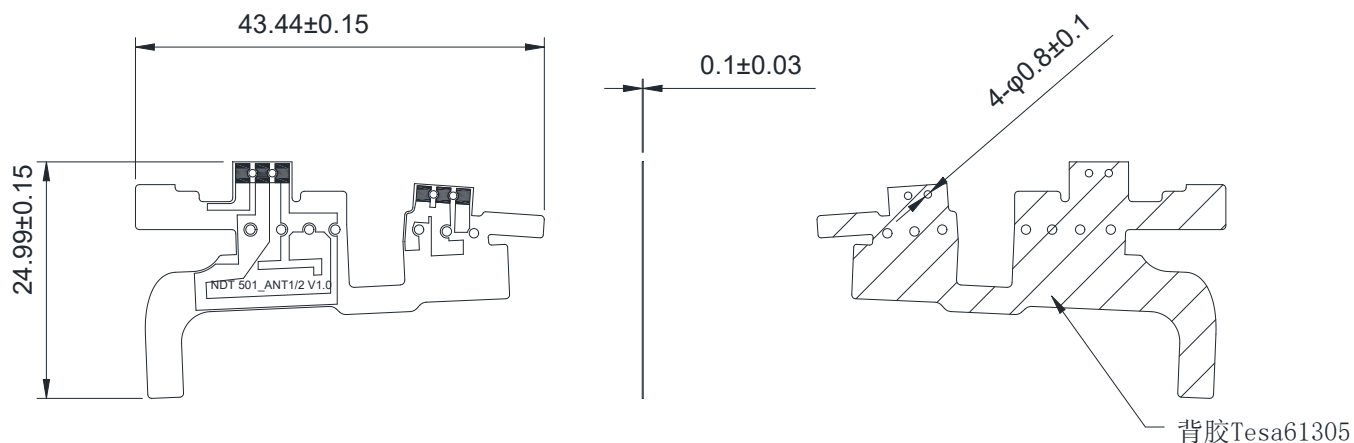
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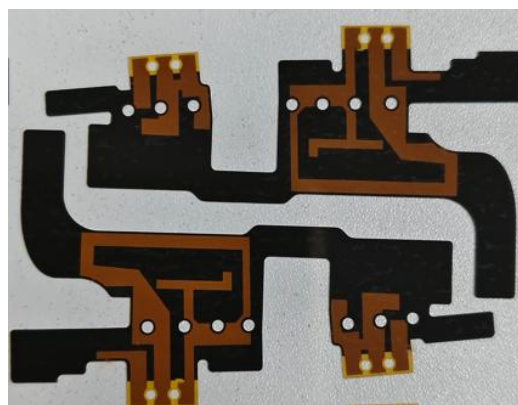
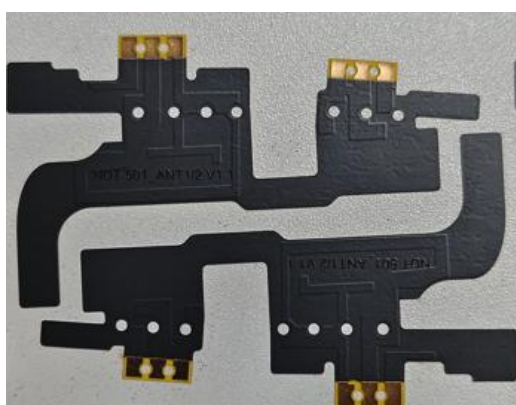
Frequency Band(MHz)	2400	2500	5150	5850	5925	7125
ANT1 Efficiency(dB)	≥ -3.8	≥ -4.5	≥ -5	≥ -4	≥ -5	≥ -3
NT2 Efficiency(dB)	N/A	N/A	≥ -6	≥ -3.5	≥ -5.5	≥ -4

5. Mechanical Specification:

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			PAGE REV. P1



6. Product picture:



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TITLE: WAG-F-LCLF-00-001 Specification		DOCUMENT NO.	ENSXXXXXXXXXX PAGE 9 OF 7
			PAGE REV. P1