

MDL 3.0~5.0/12V TE2298721 RG174/2300mm 9

GPSFMLTEWIFIS15N-S3-01

1. Application :

This application shall apply for antenna unit which shall be used with an engine for an automobile.
(for impedance 50Ω)

2. Appearance :

Antenna Unit (with radome, connector, and cable –refer to an attached drawing)

Characteristics	Specification
Dimensions	160*60*68mm
Radome	S15N
Weight	489g typ.
Connector	TE2298721-1
Cable	RG174 Black
IP Rating	IPx5

3. Operating Condition :

Temperature	-40 ~ +80°C
Humidity	20 ~ 95%RH

4. Storage Condition :

Temperature	-40 ~ +80°C
Humidity	20 ~ 95%RH
Recommended Storage condition	Store in the indoor condition as listed below: Temperature -20°C~+45°C, Humidity 80% Max.

5. Electrical Specification :

※All value are defined at 25±15°C, 65±20%RH, power handling 1μ watt, air pressure 960±100 HPA unless otherwise noted.

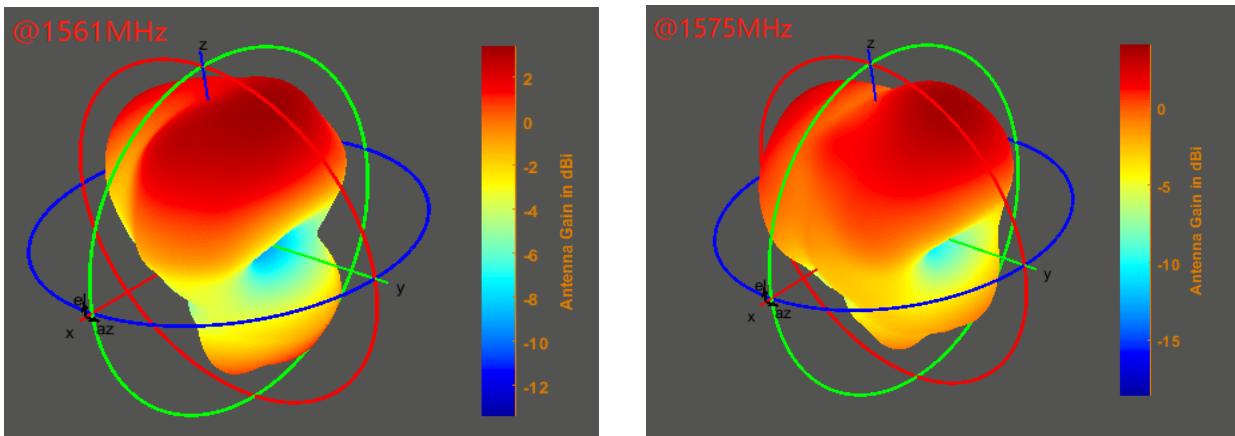
※GPS patch antenna characteristics are measured with test housing in an anechoic chamber.

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DESIGNED BY: 刘硕/吕巧云		APPROVED BY: 杨开月				
TITLE : GPSFMLTEWIFIS15N-S3-01		DOCUMENT NO.	ENS000160470	SPEC REV. A0		

5-1 GNSS Patch Antenna Specification.

Characteristics	Specification
Center Frequency	1560~1580 MHz
Gain at Zenith (90°)	3 dBiC typ.
Polarization	R.H.C.P

3D Radiation pattern (without cable loss)



5-2 GNSS LNA Specification.

Characteristics	Specification				
Frequency Range	1560~1580MHz				
Gain	<table border="1"> <tr> <td>1561MHz</td> <td>27±3dB (3.0±0.1V)</td> </tr> <tr> <td>1575.42MHz</td> <td>28±3dB (3.0±0.1V)</td> </tr> </table>	1561MHz	27±3dB (3.0±0.1V)	1575.42MHz	28±3dB (3.0±0.1V)
1561MHz	27±3dB (3.0±0.1V)				
1575.42MHz	28±3dB (3.0±0.1V)				
Noise Figure	2.0dB Max				
Output V.S.W.R	2.0 typ.				
Operation Voltage	DC=3.0V				
Current	DC=9.5±3mA (3.0±0.1V)				

5-3 GNSS Antenna Overall Specification. (Through Antenna, LNA, without cable loss)

Characteristics	Specification				
Frequency Range	1560~1580 MHz (In the shark fin)				
Zenith Gain	<table border="1"> <tr> <td>1561MHz</td> <td>30±3dBiC (3.0±0.1V)</td> </tr> <tr> <td>1575.42MHz</td> <td>31±3dBiC (3.0±0.1V)</td> </tr> </table>	1561MHz	30±3dBiC (3.0±0.1V)	1575.42MHz	31±3dBiC (3.0±0.1V)
1561MHz	30±3dBiC (3.0±0.1V)				
1575.42MHz	31±3dBiC (3.0±0.1V)				
Output Impedance	50Ω				
Output V.S.W.R	MAX 3.0 typ.				
Operation Voltage	DC= 3.0V				
Current	DC=9.5±3mA (3.0±0.1V)				

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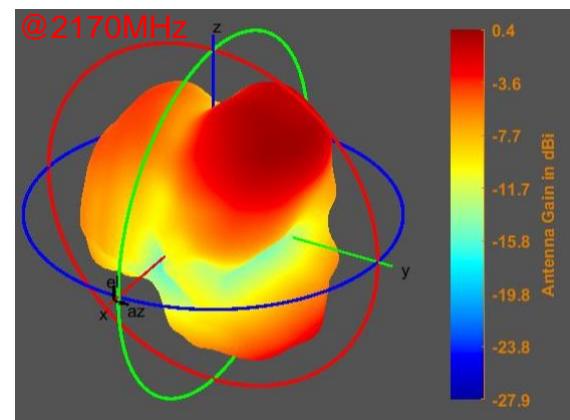
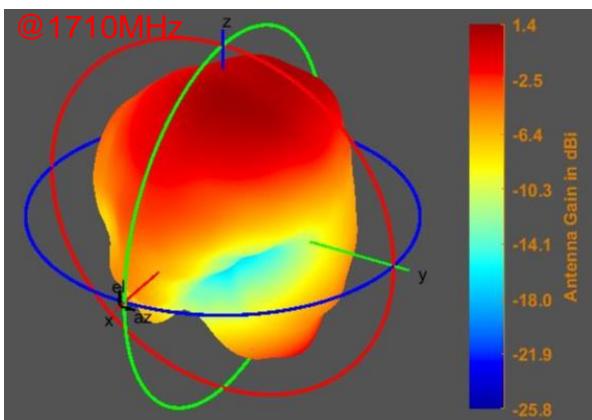
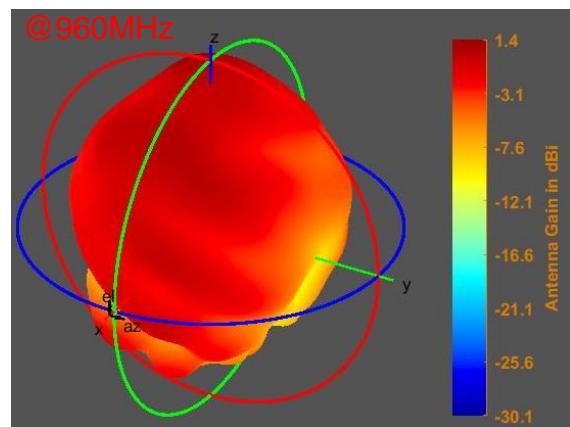
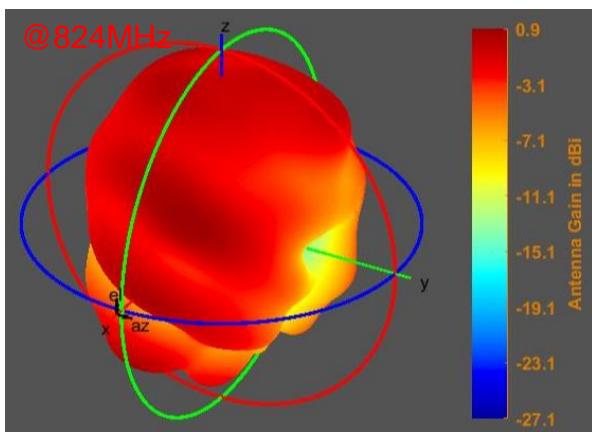
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5-4 LTE Antenna Electrical Specifications

Characteristics	Specification
Frequency	824-960 MHz, 1710-2690 MHz
Polarization	Linear
Peak Gain	1.5 dBi typ. (824~960MHz) 2.0 dBi typ. (1710~2690MHz)
Average Gain	-0.42 to -1.58 dBi (824~960MHz) -0.27 to -3.09 dBi (1710~2690MHz)
Output V.S.W.R	MAX 4.0
Testing Condition	In the shark fin

3D Radiation pattern (with cable loss)



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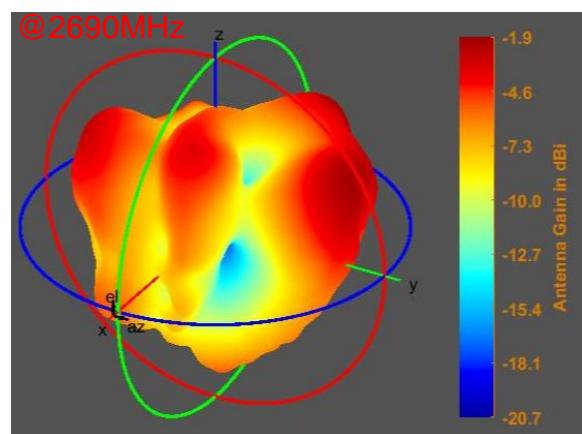
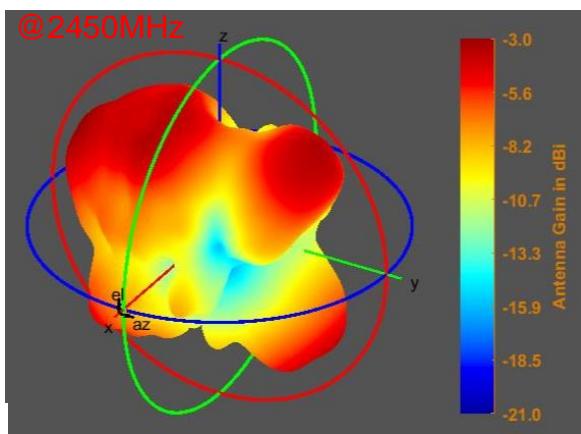
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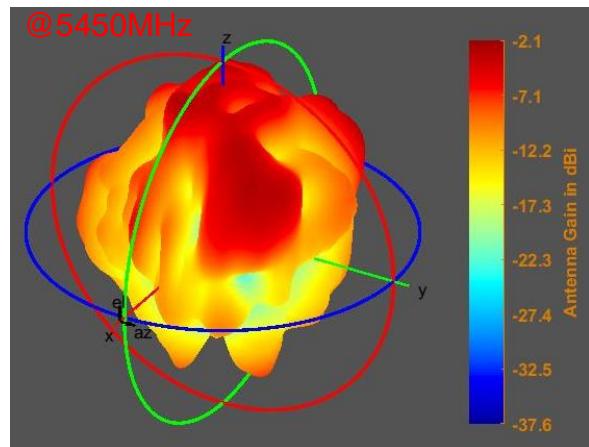
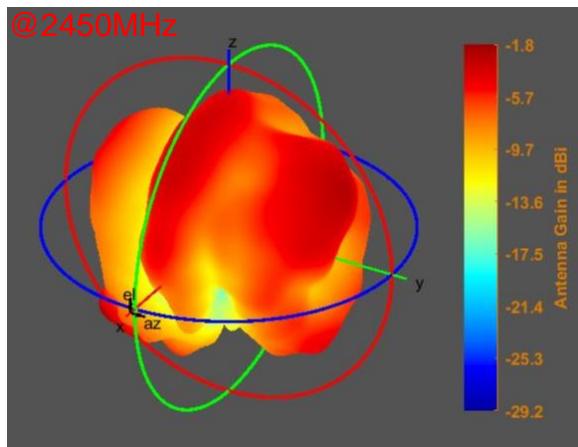
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5-5 WIFI Antenna Electrical Specifications

Characteristics	Specification
Frequency	2.4~2.5 GHz, 5.15~5.85GHz
Polarization	Linear
Peak Gain	2.5 dBi typ. (2400~2500MHz) 3.5 dBi typ. (5150~5850MHz)
Average Gain	-1.82 to -1.58 dBi (2400~2500MHz) -1.65 to -0.72 dBi (5150~5850MHz)
Output V.S.W.R	MAX 2.5
Testing Condition	In the shark fin

3D Radiation pattern (with cable loss)



5-6 FM Antenna Electrical Specifications

Characteristics	Specification
Frequency Range	87~108 MHz (In the shark fin)
LNA Gain	14±3dB (12.0±0.1V)

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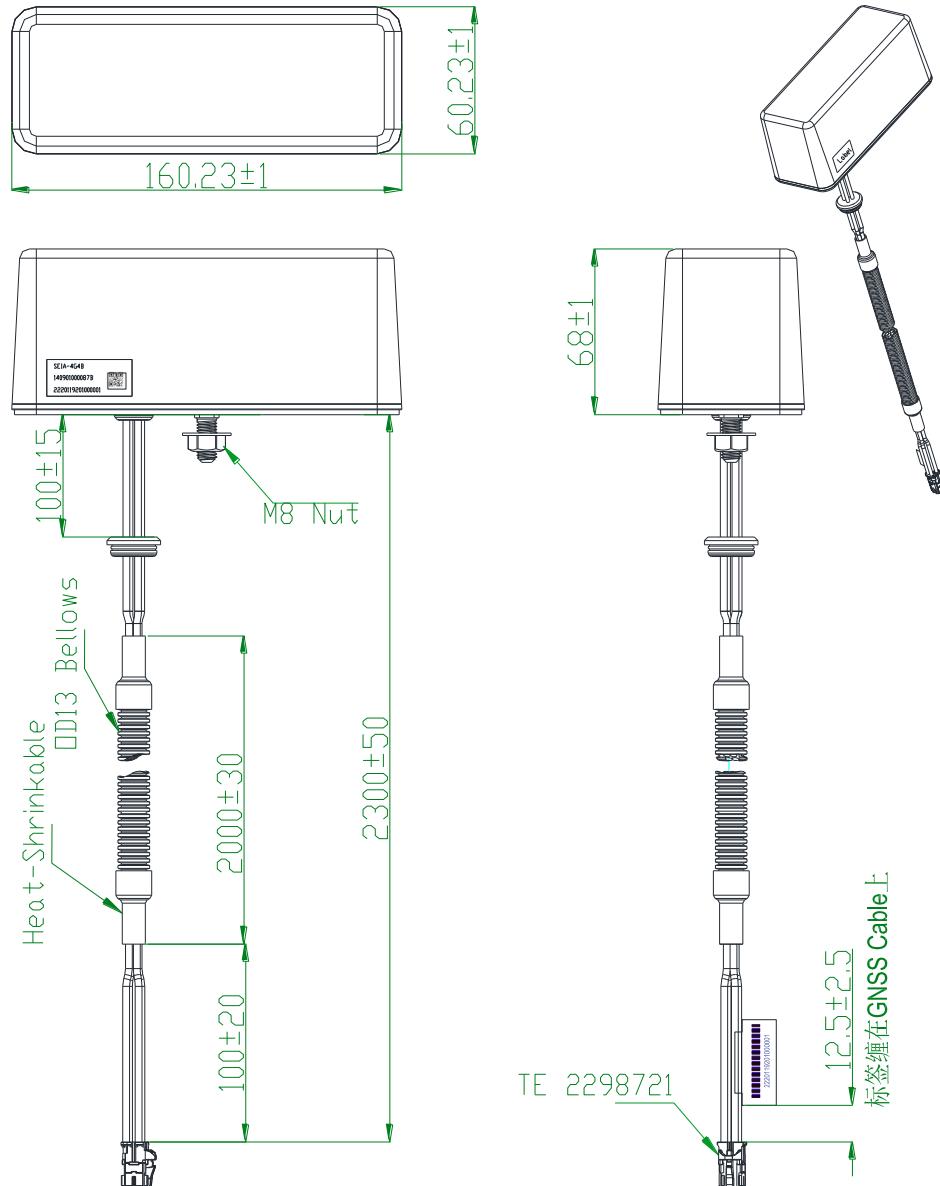
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Output Impedance	50Ω
Output V.S.W.R	2.0 typ.
Operation Voltage	DC= 12.0V
Current	DC=5±2mA (12.0V)
Noise Figure	2.5dB Max

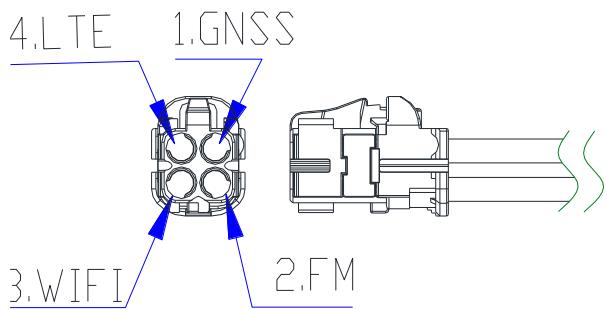
6. Machine drawing

6-1 Antenna Dimensions

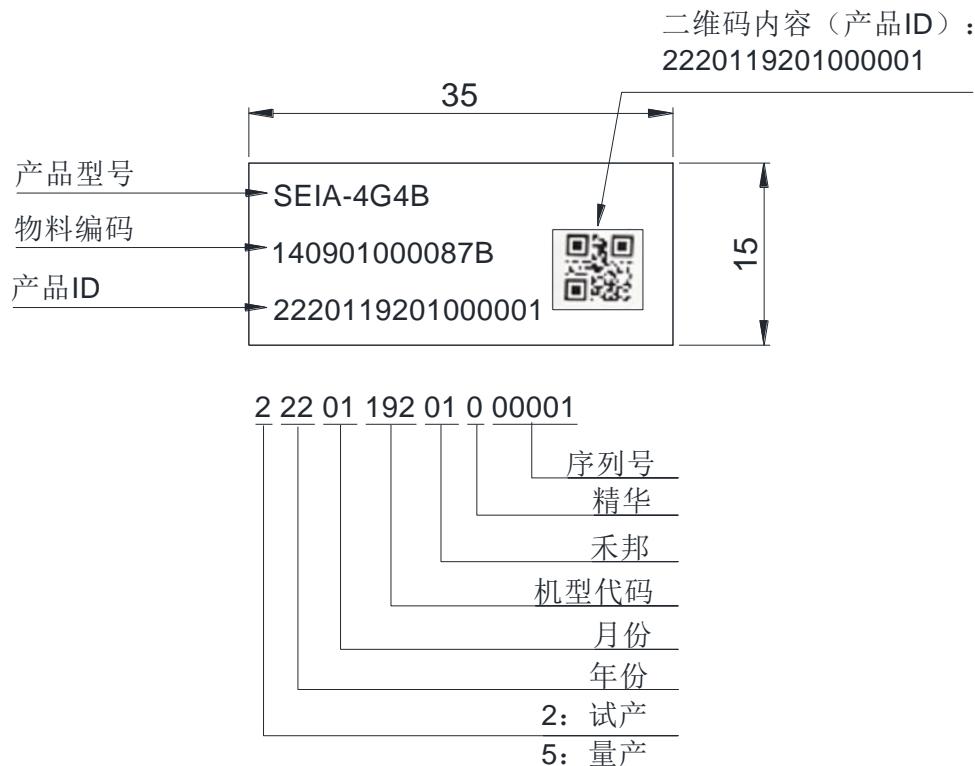


6-2 Connector Pin Definition

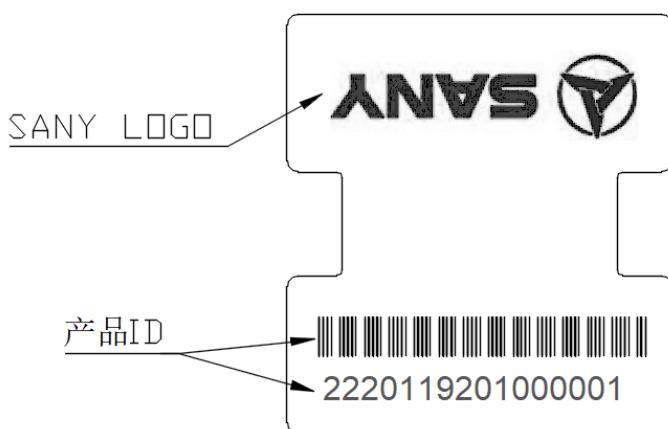
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6-3 Body Label Definition



6-4 Cable Label Definition



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