

# MDL,GPSL1L2L5/U12W 3-5V SMA PLUG RG-174 3M 1

## GPSLX09U8W-S6-01-A

### 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)

Dimensions	65.0*65.0*26.0 mm	;	Radome	#N
Connector	SMA PLUG	;	Cable	RG174, 3000 mm
PCB	Lead free	;		

### 3. Operating Condition :

Temperature -40 to +85 °C

### 4. Storage Condition :

Temperature -40 to +85 °C  
Humidity 65±20 % RH

### 5. Electrical Specification :

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

\* Patch characteristics are measured in an anechoic chamber.

#### 5-1 Patch Specification

Characteristics	Specification	
Frequency Range	L1: 1557~1606 MHz	L2/L5: 1160 to 1240 MHz
Center Frequency	1581.5 MHz	1200 MHz
Peak Gain	2.8 dBic typ	3.2 dBic typ
Polarization	R.H.C.P	
Zenith Axial Ratio	4dB Max	

The patch antenna performance is measured with the D=150 mm ground plane

UNLESS OTHER SPECIFIED TOLERANCES ON :

X=±      X.X=±      X.XX=±  
A N G L E S = ±      H O L E   D I A = ±



INPAQ TECHNOLOGY CO., LTD.

SCALE : N/A

UNIT : mm

DRAWN BY: 林純正

CHECKED BY: 林純正

DESIGNED BY: 許振璋

APPROVED BY: 蔡凱翔

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TITLE : MDL,GPSL1L2L5/U12W 3-5V SMA PLUG  
RG-174 3M 1 GPSLX09U8W-S6-01-A

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**5-2 Filter/LNA Specification**

Characteristics	Specification	
Frequency	L1:1557~1606 MHz	L2/L5: 1160~1240 MHz
Gain	27±3dB(1557MHz)	25±3dB(1160MHz)
	27±3dB(1575.42MHz)	27±3dB(1176.45MHz)
	26±3dB(1602MHz)	25±3dB(1227.6MHz)
	25±3dB(1606MHz)	23±3dB(1240MHz)
Noise Figure	2.0 dB typ	2.0 dB typ
Filter Outband attenuation	40.0dB TYP. @ fo±100MHz (fo = 1557 & 1606 MHz)	40.0dB TYP. @ fo±100MHz (fo = 1160 & 1240 MHz)
Output V.S.W.R	2.0 typ	2.0 typ
Operation Voltage	3-5V	3-5V
Current	29±3 mA	29±3 mA

**5-3 Overall Specification (Through Patch and LNA without cable loss)**

Characteristics	Specification	
Frequency	L1:1557~1606 MHz	L2/L5: 1160~1240 MHz
Gain	29.8±3dB(1557MHz)	28.2±3dB(1160MHz)
	29.8±3dB(1575.42MHz)	30.2±3dB(1176.45MHz)
	28.8±3dB(1602MHz)	28.2±3dB(1227.6MHz)
	27.8±3dB(1606MHz)	26.2±3dB(1240MHz)
Output Impedance	50ohm	50ohm
Output V.S.W.R	2.0 typ	2.0 typ
Operation Voltage	3-5V	3-5V
Current	29±3 mA	29±3 mA

UNLESS OTHER SPECIFIED TOLERANCES ON :

X=±      X.X=±      X.XX=±  
 ANGLES = ±      HOLE DIA = ±



**INPAQ TECHNOLOGY CO., LTD.**

SCALE : N/A

UNIT : mm

DRAWN BY: 林純正

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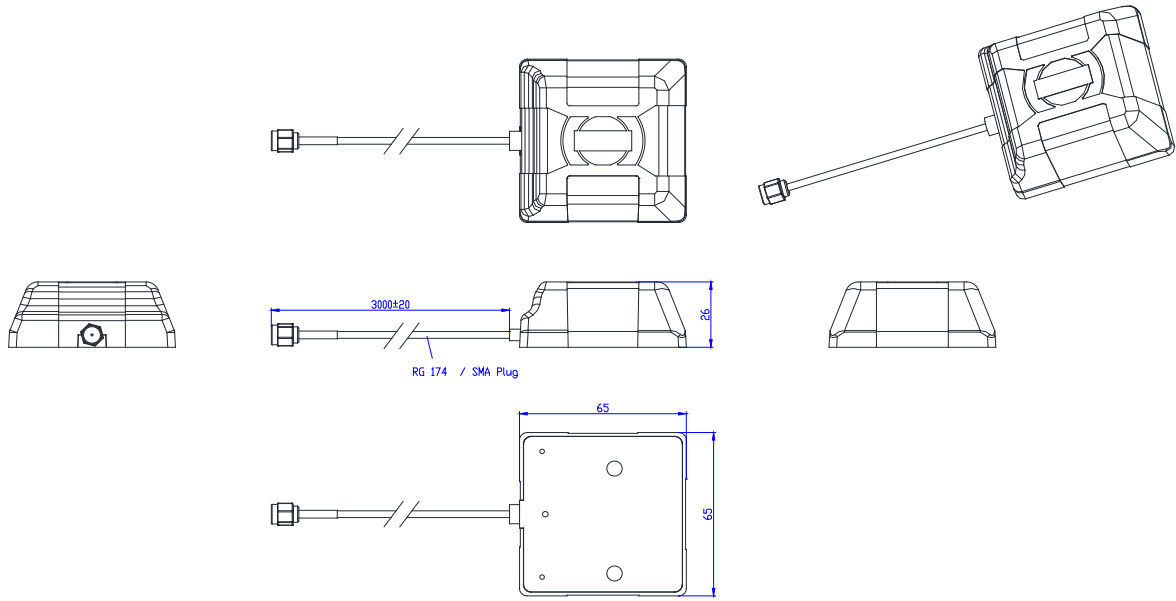
DOCUMENT NO.

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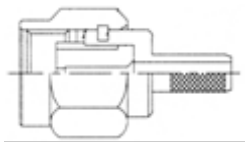
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6. Antenna Dimensions : (unit : mm)



Connector appearance: SMA PLUG (内牙公針)



UNLESS OTHER SPECIFIED TOLERANCES ON :

X=±      X.X=±      X.XX=±  
 ANGLES = ±      HOLE DIA = ±



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