

# MDL, GPS/G 3V0 ~ 5V0 SMA PLUG RG-174 3M 9

## B3G02G-S6-15-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	49.14*46.14*17.14mm	;	Radome	#G
Weight	96.7 g (typ.)	;	Connector	SMA PLUG
Cable	RG-174 3m	;	Adhesive	3M GT7112

### 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 with 70x70 mm ground plane in an anechoic chamber.

#### 5-1 Patch

Characteristics		Specification
Frequency Range		1558MHz~1615MHz
Center Frequency		1582±5 MHz
Bandwidth (10dB return loss)		73.61 MHz max.
Zenith Gain	1561.098 MHz	4.7 dBic typ.
	1575.42 MHz	4.8 dBic typ.
	1602 MHz	4.65 dBic typ.
	1606 MHz	4.54 dBic typ.
Polarization		R.H.C.P.

UNLESS OTHER SPECIFIED TOLERANCES ON :

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



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SCALE :

UNIT : mm

DRAWN BY: 吳政達

CHECKED BY: 林純正

DESIGNED BY: 許振璋  
曾元杰

APPROVED BY: 陳彥銘

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### 5-2 Filter / LNA

Characteristics		Specification
Frequency Range		1558MHz~1615MHz
Gain	1561.098 MHz	24±3 dB (at 3.0±0.1 V) 29±3 dB (at 5.0±0.1 V)
	1575.42 MHz	27±3 dB (at 3.0±0.1 V) 31±3 dB (at 5.0±0.1 V)
	1602 MHz	25±3 dB (at 3.0±0.1 V) 30±3 dB (at 5.0±0.1 V)
	1606 MHz	26±3 dB (at 3.0±0.1 V) 30±3 dB (at 5.0±0.1 V)
Noise Figure	1575.42 MHz	2.4 dB, 2.7 dB Max (at 3.0±0.1 V) 2.3 dB, 2.6 dB Max (at 5.0±0.1 V)
	1602 MHz	
Filter Outband attenuation		32dB typ. fo±50MHz 45dB typ. fo±100MHz
Output V.S.W.R		2.0 max
Operation Voltage		3.0 V~5.0 V
Current		9±3 mA (at 3.0±0.1 V) 17±3 mA (at 5.0±0.1 V)

### 5-3 Overall Specification <Through Antenna, LNA, without cable loss>

Characteristics		Specification
Frequency Range		1558MHz~1615MHz
Zenith Gain	1561.098 MHz	28.7±3 dB (at 3.0±0.1 V) 33.7±3 dB (at 5.0±0.1 V)
	1575.42 MHz	31.8±3 dB (at 3.0±0.1 V) 35.8±3 dB (at 5.0±0.1 V)
	1602 MHz	29.65±3 dB (at 3.0±0.1 V) 34.65±3 dB (at 5.0±0.1 V)
	1606 MHz	30.54±3 dB (at 3.0±0.1 V) 34.54±3 dB (at 5.0±0.1 V)
Output Impedance		50 ohm
Output VSWR		2.0 typ
Operation Voltage		3.0 V~5.0 V
Current		9±3 mA (at 3.0±0.1 V) 17±3 mA (at 5.0±0.1 V)

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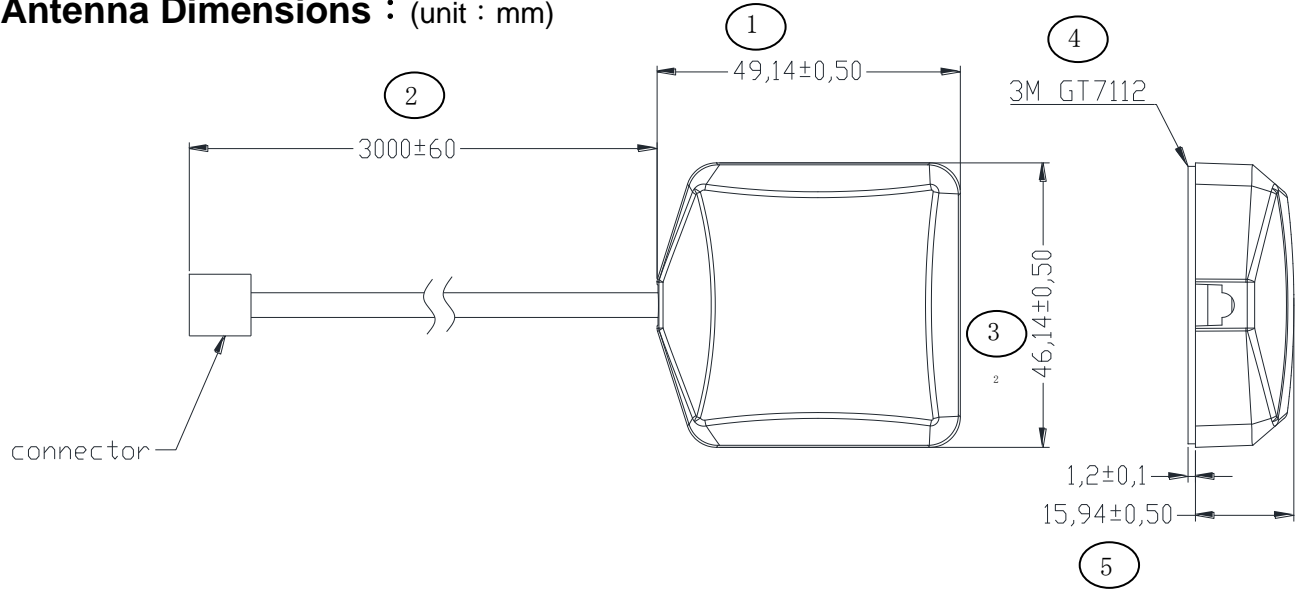
TITLE : MDL,GPS/G 3V0 ~ 5V0 SMA PLUG RG-174 3M  
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NO.

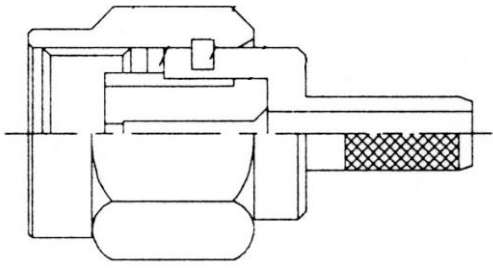
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**Antenna Dimensions : (unit : mm)**



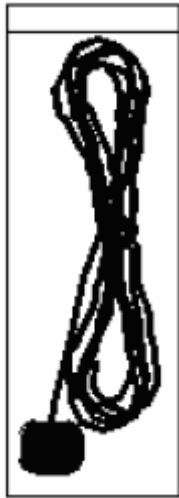
**Connector appearance : SMA PLUG**



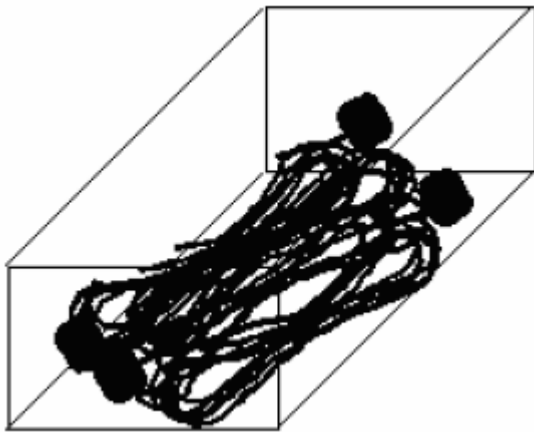
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<b>SCALE :</b>	<b>UNIT : mm</b>	
DRAWN BY: 吳政達	CHECKED BY: 林純正	THIS DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF INPAQ TECHNOLOGY CO.,LTD.AND SHALL NOT BE REPRODUCED OR USED AS THE BASIS FOR THE MANUFACTURE OR SALE OF APPARATUS OR DEVICES WITHOUT PERMISSION
DESIGNED BY: 許振璋 曾元杰	APPROVED BY: 陳彥銘	
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包裝規格：依 **PKG000000006** 包裝

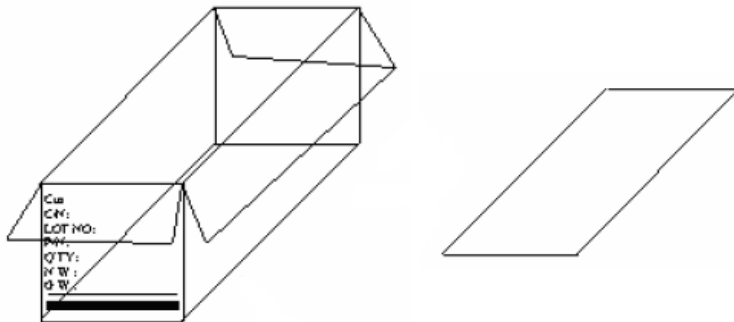
1PE package--->1PCS



1 inner carton--->20PCS



1 Outer Carton--->4 inner carton(include 2pcs partition)



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