

MDL GPS/D-2V7~5V3 MMCX PLUG RG174 1.5M 6

GPS10D-S6-16-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	37.5*34.5*12.5 mm	; Radome	#D
Weight	44 g (typ)	; Connector	MMCX PLUG
Cable	RG-174 1.5m		

3. Operating Condition:

Temperature	-40 to +90°C
Humidity	10 to 95% RH

4. Storage Condition:

Temperature	-40 to +90°C
Humidity	10 to 95% RH

5. Electrical Specification:

* All value are defined at $25\pm 15^\circ\text{C}$, $65\pm 20\%$ 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
Center Frequency	1575.42 MHz (when covered with a radome and measured by 70*70mm ground plane)
Bandwidth (10dB return loss)	10 MHz min
Gain at Zenith	5.0 dBic typ
Gain at 10° elevation	- 1.0 dBic min
Polarization	R.H.C.P
Axial Ratio	3.0 dB typ

UNLESS OTHER SPECIFIED TOLERANCES ON :

X = \pm X.X = \pm X.XX =
ANGLES = \pm HOLE DIA = \pm



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SCALE :

UNIT : mm

DRAWN BY : 紀尚佑

CHECKED BY : 紀尚佑

DESIGNED BY : 李昇鴻

APPROVED BY : 蔡凱翔

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5-2 Filter / LNA

Characteristics		Specification
Center Frequency		1575.42 MHz
Gain	2.7V	25dB±3dB
	3.3V	27dB±3dB
	5.3V	29dB±3dB
Noise Figure		1.5 dB typ
Filter Out band attenuation		7dB TYP fo±20MHz 20dB TYP fo±50MHz 30dB TYP fo±100MHz (fo=1575.42MHz)
Output V.S.W.R		2.0 max
Operation Voltage		DC =2.7V~5.3V
Current	2.7V	9mA ± 3mA
	3.3V	12mA ± 3mA
	5.3V	22mA ± 3mA

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

Characteristics		Specification
Center Frequency		1575.42±1.023 MHz (when covered with a radome on LNA ground plane.)
Gain at Zenith	2.7V	(5V5)30 dBic typ(for ground 70x70mm)
	3.3V	(5V5)32 dBic typ(for ground 70x70mm)
	5.3V	(5V5)34 dBic typ(for ground 70x70mm)
Output Impedance		50ohm
Output VSWR		2.0 typ
Operation Voltage		DC =2.7V~5.3V
Current	2.7V	9mA ± 3mA
	3.3V	12mA ± 3mA
	5.3V	22mA ± 3mA

UNLESS OTHER SPECIFIED TOLERANCES ON :

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



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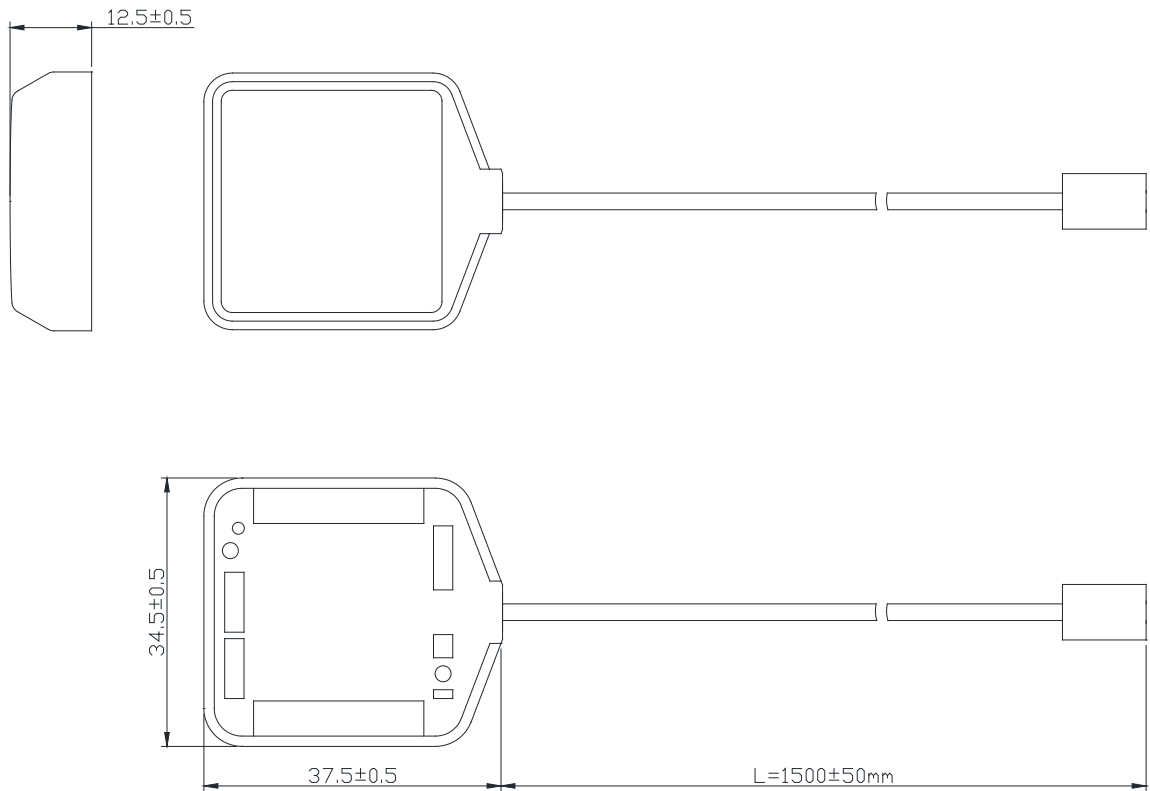
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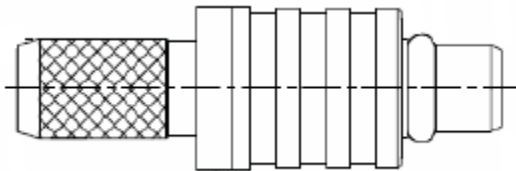
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6. Antenna Dimensions:



connector appearance : MMCX PLUG



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