## **GPS ANTENNA WITH LNA**



Telecommunication Technology & Engineering Accessories

Rev.V1.0

### Model: GPS-1575-40DBN

| 1. OVERALL PERFORMANCE (ANTENNA ELEMENT, LNA & CABLE): |   |  |
|--|---|--|
| Center Frequency                                       | $1575.42 \pm 5$ MHz(When covered with a radome and me assured by LNA ground plane)                  |  |
| Gain   | 38dB±2dBi typ   |  |
| Noise Figure   | 2.7dB max   |  |
| Polarization   | Right Hand Circular Polarization(R.H.C.P)   |  |
| 3db beam width   | 110±10°   |  |
| Front to back ratio                                    | 10dB min  |  |
| Axial Ratio  | 5 dB max  |  |
| Output VSWR  | 2.5 max   |  |
| P1dB(out)  | >0dBm   |  |
| Out Of Band Rejection                                  | f0=1575.42MHz   |  |
|  | f0=1575.42MHz±30MHz 30dbc min   |  |
|  | f0=1575.42MHz±50MHz 50dbc min   |  |
|  | f0=1575.42MHz±100MHz 70dbc min  |  |
| Output Impedance                                       | 50ohm   |  |
| Voltage  | DC: 4V~6V (Through the coaxial cable: The inner conductor "+", The outer conductor "-")             |  |
| Current  | 45mA max  |  |
| Surge resistion  | Surge resistion according to IEC61000-4-5 std. at 4kv, 1.2/50us, Output impedance 2D. of Instrument |  |
| Weight   | <1kg  |  |
| Connector  | N-Female  |  |

### 2. APPLICATION:

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

| 3. OPERRATING CONDITION: |               | 4. STORAGE CONDITION: |                 |
|--------------------------|---------------|-----------------------|-----------------|
| Temperature              | -40℃ to +85℃  | Temperature           | -40°C to +100°C |
| Humidity                 | 5% to 100% RH | Humidity              | 5% to 95% RH    |

| 5. PATCH:                   |  |  |
|-----------------------------|--|--|
| Dimensions                  | 25mm(L)×25mm(W)×4mm(H) (Antenna Module); 176mmX118.5mm (Antenna Dimension) |  |
| Center Frequency            | 1575.42±2MHz   |  |
| Bandwidth(10dB return loss) | 10MHz min  |  |
| Peak Gain                   | 4.0dBic typ  |  |
| Front To Back Ratio         | 10dB min   |  |
| Axial Ratio                 | 5 dB max   |  |
| Output V.S.W.R              | ≤1.5dB   |  |
| Output Impedance            | 50ohm  |  |
| Polarization                | R.H.C.P  |  |





All specifications are subject to change without notice.

© 2019 TONE SPREAD TECHNOLOGY CO.,LTD. All Rights Reserved.

# **GPS ANTENNA WITH LNA**



#### Telecommunication Technology & Engineering Accessories

| 6. LNA/Filter:            |   |
|---------------------------|---|
| Voltage                   | DC:4V~6V  |
| Current                   | 45mA max  |
| Center Frequency          | 1575.42±5MHz  |
| Gain                      | $34\pm 2$ dB typ  |
| Noise Figure              | 2.7dB max   |
| Passband Ripple           | 1575.42M $\pm 1.023$ MHz : <1dB / 1575.42M $\pm 5$ MHz : <2dB |
| P1dB(out)                 | >0dBm   |
|                           | f0=1575.42MHz   |
| Filter                    | f0=1575.42MHz±30MHz 30dbc min                                 |
| (Out of band attenuation) | f0=1575.42MHz±50MHz 50dbc min                                 |
|                           | f0=1575.42MHz±100MHz 70dbc min                                |
| Input VSWR                | ≤2.5:1  |
| Output V.S.W.R            | ≤2.5:1  |

### 7. NOTE:

- 1. This product specification guarantees the quality of our product as a single unit. Please make sure that your product is evaluated and confirmed against your specifications when our product is mounted to your product.
- 2. We cannot warrant against failure caused by any use of our product that deviates from the intended use as described in this product specification.
- 3. The product will get free warranty for three months since the date of purchase users operate in the correct way; users will have to pay cost of the materials and maintaining fee out of the condition.
- 4. Electrostatic sensitive device Observe precautions for handling.



