

KC.GA.00080 GNSS ACTIVE ANTENNA SPECIFICATION

1. Application:

This application shall apply for antenna unit which shall be used with an engine for automobile

2. Appearance:

| | |
|---|----------------|
| Antenna Unit (with radome, connector, and cable – refer to an attached drawing) | |
| Dimensions | 49.5*38*17.5mm |
| Radome | #S1W |
| Output Connector | SMA |
| Cable | RG-174 (black) |

3. Operating Condition:

| | |
|-----------------------|-------------|
| Operating Temperature | -40 ~ +85°C |
| Relative Humidity | 20 ~ 95% RH |

4. Storage Condition:

| | |
|-------------------------------|---|
| Storage Temperature | -40 ~ +85°C |
| Relative Humidity | 20 ~ 95% RH |
| Recommended Storage condition | Store in room 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 10 watt, air pressure 960 ±100 HPA unless otherwise noted.

* Antenna characteristics are measured with test housing in an anechoic chamber.

5-1 GNSS PATCH Antenna

| Characteristics | | Specification |
|---------------------------------|-------------|------------------|
| Frequency Range | | 1575MHz, 1602MHz |
| Center Frequency | | 1575 MHz |
| Bandwidth (10dB return loss) | | 20 MHz |
| Zenith Gain | 1561.098MHZ | 3.0 dBic typ. |
| | 1575.42 MHz | 3.0 dBic typ. |
| Polarization | | R.H.C.P. |

| | | |
|--|-----------------|--|
| UNLESS OTHER SPECIFIED TOLERANCES ON: X=± X.X=± X.XX=± ANGLES=± HOLEDIA=± | |  TOXU TECHNOLOGY CO., LTD. |
| SCALE: | UNIT: mm | |
| DRAWN BY: XIN | CHECKED BY: YS | THIS DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF TOXU 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: De wen | APPROVED BY: YS | |
| TITLE: KC.GA.00080 GNSS ACTIVE ANTENNA SPECIFICATION | | SPEC REV. P0 |

5-2 GNSS LNA

| Characteristics | Specification |
|-------------------|-----------------|
| Frequency Range | 1575MHz,1602MHz |
| Gain | 27 dB TYP |
| Noise Figure | <1.5 dB |
| Output V.S.W.R | 2.0 max |
| Operation Voltage | 3.3 V |
| Current | <20 mA |

5-3 GNSS Overall Specifications (Through Antenna , LNA and cable)

| Characteristics | Specification |
|-------------------|-----------------|
| Frequency Range | 1575MHz,1602MHz |
| Zenith Gain | 29 dBic typ |
| Output Impedance | 50 ohm |
| Output VSWR | 2.0 typ |
| Operation Voltage | 3.3V |
| Current | <20 mA |

6. Antenna Dimension:

深圳市同讯精密技术有限公司
Shenzhen TOXU Electronics Technology Co. Ltd.

ADDRESS: 深圳市龙华区福城街道黄坑社区黄坑路52号五楼
TEL: 0755 2819 9697

| Reversion | Engineering Change Description | Date | Owner |
|-----------|--------------------------------|------------|-------|
| A/0 | NEW | 2022.07.26 | LI |

包装方式: 1PCS/BAG

NOTES:

- Electrical:
 - 1.1 Impedance: 50 OHM.
 - 1.2 Frequency: 1.57542GHz±1.561GHz
 - 1.3 VSWR: <2.0
 - 1.4 Peak Gain: 28dBi
 - 1.5 Radiation Patten: Omni-directional
- Environmental:
 - 2.1 Storage Temperature Range: -40 TO +85° C
 - 2.2 Operating Temperature Range: -40 TO +85° C
- All material must meet RoHS Request.
- 连接器与线材拉力: 5~8kgf
- 图中标示 (Δ) 为重点管控尺寸

| ITEM NO. | PART OR IDENTIFYING NO. | NOMENCLATURE OR DESCRIPTION | QTY REQD | UNIT |
|----------|-------------------------|--|----------|------|
| ⑨ | KF_24_02_0009 | L*W*H=84*37.5*40.3MM 红皮胶, 3M不印字, ROHS | 1 | PCS |
| ⑧ | KF_21_05_0001 | L*W*H=15*15*6mm. 黑色海绵正方形, 单面背胶, 有网眼, ROHS | 1 | PCS |
| ⑦ | KF_06_00_0012 | GPS鼠标型光子-L*W*H=19.5*38*16.4mm. 黑色, 无印字, 超声, 两件式, ROHS | 1 | PCS |
| ⑥ | KF_26_01_0004 | GPS模块光子-L*W*H=25*25*1mm. 陶瓷镀银, 白色, 单面, ROHS | 1 | PCS |
| ⑤ | KF_07_02_0002 | L*W*H=21.3*25.7*3.3mm. 镀锌铁, 穿边中点出线, ROHS | 1 | PCS |
| ④ | KF_12_02_0003 | L*W*H=28*28mm. 外高玻璃, FR-4, 双面绿油白字, 二根放大 ANT2801-13. QWIST_0116, ROHS | 1 | PCS |
| ③ | KF_16_00_0019 | OD=4.0mm, EVA, 黑色, 300V, 薄, 收缩比率1/2. 有印字, 4000/卷, ROHS | 20 | mm |
| ② | KF_05_00_0110 | 公头公针 本体和针镀金, 50 Ω 接RG174, 盐水48H 三件套 ROHS 永家昌 | 1 | PCS |
| ① | KF_00_12_0002 | RG174, 50 Ω, 黑色, OD: 2.8mm. 芯线和编织铜, ROHS | 2 | M |

| SPEC. CLASS | A | B | C | D |
|-------------|------|------|------|-----|
| < 8mm | 0.05 | 0.1 | 0.1 | 0.2 |
| 8-25mm | 0.08 | 0.15 | 0.15 | 0.3 |
| 25-80mm | 0.12 | 0.2 | 0.25 | 0.4 |
| 80-250mm | 0.25 | 0.3 | 0.4 | 0.5 |
| ANGLE | 0.5 | | | |

TOXU® 同讯技术

CAD GENERATED DRAWING, DO NOT MANUALLY UPDATE

APPROVALS:
DRAWN: Lixn
CHECKED:
RESP ENG:
QUAL ENG:

MATERIAL: As mention

Scale: 1

SEE: M DWG NO. DATE: 2021.11.19 REV: A/1
C/D FILE: DWG TYPE: CUSTOMER DRAWING

PARTS LIST


| | | |
|--|---|---|
| <p>UNLESS OTHER SPECIFIED TOLERANCES ON:</p> <p>X=± X.X=± X.XX=±</p> <p>ANGLES=± HOLEDIA=±</p> | | <p>TOXU® 同讯技术</p> <p>TOXU TECHNOLOGY CO., LTD.</p> |
| <p>SCALE:</p> <p>DRAWN BY: XIN</p> <p>DESIGNED BY: De wen</p> | <p>UNIT: mm</p> <p>CHECKED BY: YS</p> <p>APPROVED BY: YS</p> | <p>THIS DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF TOXU TECHNOLOGY CO.,LTD.AND SHALL NOT BE REPRODUCED OR USED AS THE BASIS FOR THE MANUFACTURE OR SALE OF APPARATUS OR DEVICES WITHOUT PERMISSION</p> |
| <p>TITLE: KC.GA.00080 GNSS ACTIVE ANTENNA SPECIFICATION</p> | | <p>SPEC REV.</p> <p>P0</p> |

7. Connector appearance: SMA



8. Product Image:



| | | | | |
|---|------------------------|--|------------------|-----------|
| UNLESS OTHER SPECIFIED TOLERANCES ON: $X = \pm$ $X.X = \pm$ $X.XX = \pm$ ANGLES = \pm HOLEDIA = \pm | |  TOXU TECHNOLOGY CO., LTD. | | |
| SCALE: | UNIT: mm | | | |
| DRAWN BY: XIN | CHECKED BY: YS | THIS DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF TOXU 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: De wen | APPROVED BY: YS | | | |
| TITLE: KC.GA.00080 GNSS ACTIVE ANTENNA SPECIFICATION | | <table border="1"> <tr> <td>SPEC REV.</td> </tr> <tr> <td>P0</td> </tr> </table> | SPEC REV. | P0 |
| SPEC REV. | | | | |
| P0 | | | | |