

YIC



Dual Feed Pins GNSS Patch Antenna ATPGD1590R3540A

Datasheet

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1. Product Information

1.1 Scope

This specification shall cover the characteristics of the dual pin feed GNSS patch antenna with the type ATPGD1590R3540A.

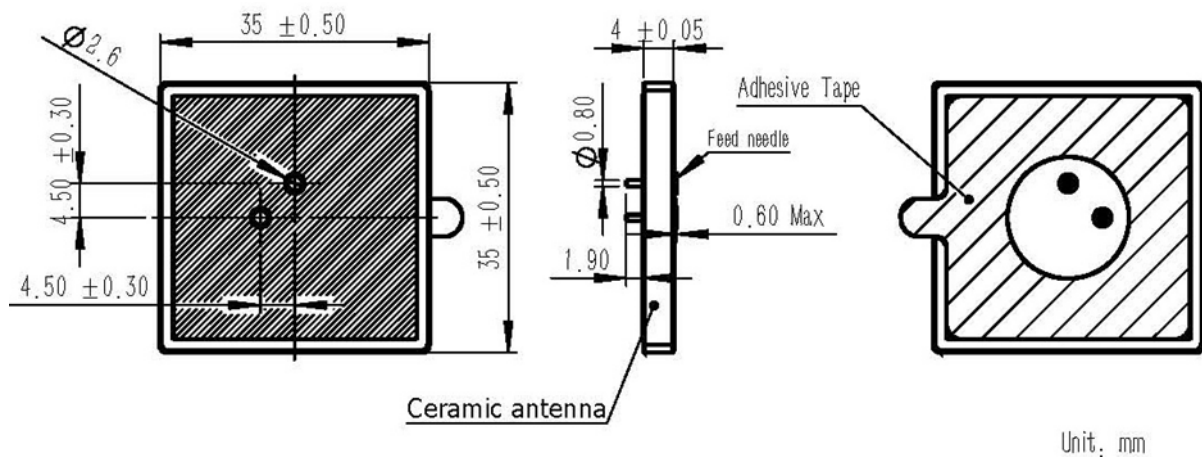
2. Part NO. : ATPGD1590R3540A

3. Outline Drawing and Dimensions

3.1 Appearance: No visible damage and dirt.

3.2 The products conform to the RoHS directive and national environment protection law.

3.3 Dimensions

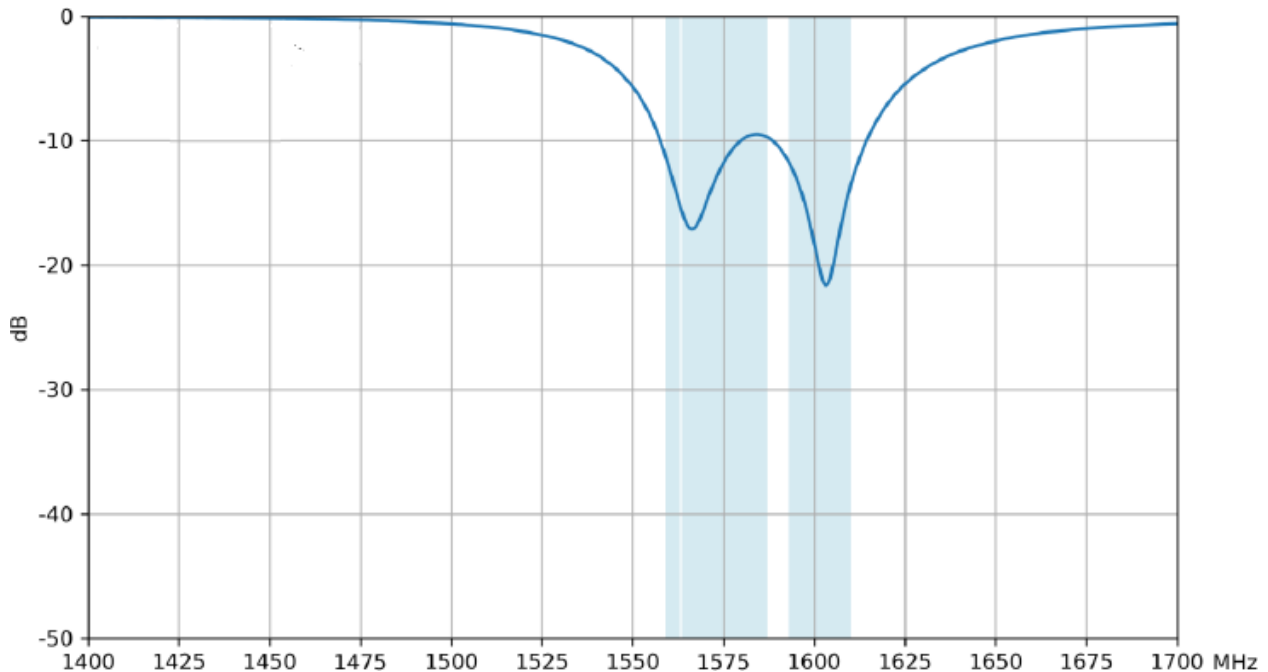


4. ELECTRICAL SPECIFICATIONS

4.1 Performance Characteristics

| Items | Content |
|--|-----------------|
| Range of Receiving Frequency | 1575~1616 (MHz) |
| Center frequency (with adhesive tape on 50 square ground Plane) | 1590±3 (MHz) |
| -10dB Bandwidth min | 25 (MHz) |
| VSWR at CF max | 1.5 |
| Polarization Model | Linear |
| Impedance | 50 (Ω) |
| Frequency Temperature Coefficient max | 20 (ppm/deg.°C) |

4.2 Return loss Characteristic

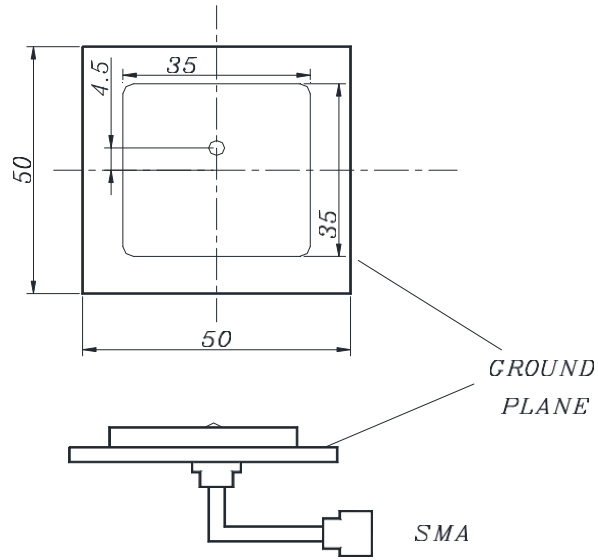


5. Test

5.1 Test Conditions

Parts shall be measured under a condition (Temp.: $20^{\circ}\text{C} \pm 15^{\circ}\text{C}$, Humidity : $65\% \pm 20\%$ R.H.)

5.2 Test Jig



6. Environmental Test

| No. | Item | Test Condition | Remark |
|-----|----------------------------|---|--|
| 6.1 | Humidity Test | The device is subjected to 90%~95% relative humidity $60^{\circ}\text{C} \pm 3^{\circ}\text{C}$ for 96h~98h, then dry out at $25^{\circ}\text{C} \pm 5^{\circ}\text{C}$ and less than 65% relative humidity for 2h~4h. After dry out the device shall satisfy the specification in table 1. | It shall fulfill the specifications in Table 1. |
| 6.2 | High Temperature Exposure | The device shall satisfy the specification in table 1 after leaving at 105°C for 96h~98h, provided it would be measured after 2h~4h leaving in $25^{\circ}\text{C} \pm 5^{\circ}\text{C}$ and less than 65% relative humidity. | It shall fulfill the specifications in Table 1. |
| 6.3 | Low Temperature | The device shall satisfy the specification in table 1 after leaving at -40°C for 96h~98h, provided it would be measured after 2h~4h leaving in $25^{\circ}\text{C} \pm 5^{\circ}\text{C}$ and less than 65% relative humidity. | It shall fulfill the specifications in Table 1. |
| 6.4 | Temperature Cycle | Subject the device to -40°C for 30 min. followed by a high temperature of 105°C for 30 min cycling shall be repeated 5 times. At the room temperature for 1h prior to the measurement. | It shall fulfill the specifications in Table 1. |
| 6.5 | Vibration | Subject the device to vibration for 2h each in x、y and z axis with the amplitude of 1.5mm, the frequency shall be varied uniformly between the limits of 10Hz~55Hz. | It shall fulfill the specifications in Table 1. |
| 6.6 | Soldering Test | Lead terminals are heated up to $350^{\circ}\text{C} \pm 10^{\circ}\text{C}$ for 5s ± 0.5 s with brand iron and then element shall be measured after being placed in natural conditions for 1 h. No visible damage and it shall fulfill the specifications in Table 1 | It shall fulfill the specifications in Table 1. |
| 6.7 | Solder ability | Lead terminals are immersed in soldering bath of $260^{\circ}\text{C} \sim 290^{\circ}\text{C}$ for $3\text{s} \pm 0.5\text{s}$. More than 95% of the terminal surface of the device shall be covered with fresh solder. | The terminals shall be at least 95% covered by solder. |
| 6.8 | Terminal Pressure Strength | Force of 2kg is applied to each lead in axial direction for $10\text{s} \pm 1$ s (see drawing). No visible damage and it shall fulfill the specifications in Fig 1 | Mechanical damage such as breaks shall not occur. |

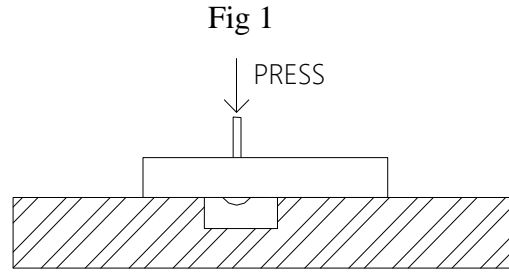


TABLE 1

| Item | Specification After Test (MHz) |
|-------------------------|--------------------------------|
| Center Frequency change | ± 2.0 |
| -10dB Bandwidth Change | ± 2.0 |