

AMC-ANTGPSCP12X4

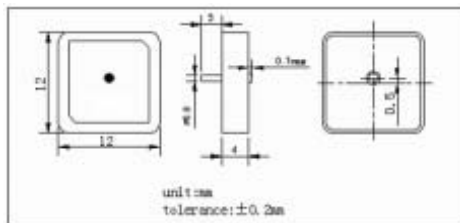
Internal 12mm Microwave Dielectric Antenna

12MM X 12MM X 4MM CERAMIC PATCH ANTENNA FOR GPS AND WLAN



The Alpha Micro AMC-ANTGPSCP12X4 microwave dielectric antenna is a small form factor ceramic patch designed to be used for GPS and WLAN applications. It is mounted via pin and double-sided adhesive.

Dimension (Unit: mm)



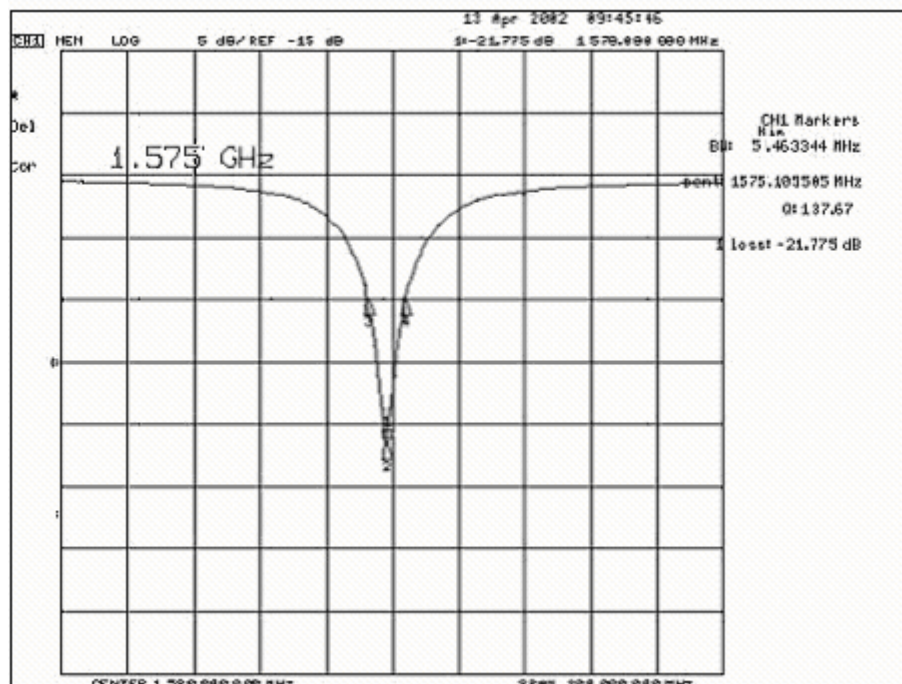
Structure and Material

No.	Description	名称	Structure and material	结构及材料
4.1	Antenna Substrate	天线基片	Dielectric Ceramics	介质陶瓷
4.2	Pin	引脚	Copper, tin plated	铜镀锡
4.3	Electrode	电极	Ag Plated	镀银
4.4	Ground Base	接地面	Ag Plated	镀银

Electrical Characteristics (Table 2)

No.	Item (项目)	Specifications (特性)	Post Environmental Tolerance (环境试验后允许附加误差)
5.1	接收频率范围 (MHz) Range of Receiving Frequency	1575.42 ± 1.1	± 2.5MHz
5.2	中心频率 (15×15 mm ² 屏蔽时) Center Frequency (MHz) (with 15mm Square GND Plane)	1575	± 3.0MHz
5.3	带宽 Band Width (MHz) (Return Loss < -10dB)	>4.0	± 0.5 MHz
5.4	驻波比 V.S.W.R (in Center Frequency)	< 1.5	± 0.5
5.5	增益 Gain (Zenith) (dBi typ) (with 15 mm Square GND Plane)	-1 dB	± 0.5
5.6	轴比 Axial Ratio (with 30 mm Square GND Plane)	3.0 dB	± 0.2
5.7	偏振方式 Polarization	右旋圆极化 Right-Handed Circular	---
5.8	特性阻抗 Impedance (Ω)	50	---
5.9	频率温度系数 (ppm/°C) Frequency Temperature Coefficient	0 ± 10	---

Characteristic curve



Reliability: MTBF= 1×10^{-6} /pc.hr

Temperature: 40±5°C
Load: DC=5V±0.5 V
Quantity: 2000pcs
Sustained Time: 480h

Environmental specifications

Post Environmental Tolerance (Refer to table 2)

Temperature range: 25±3°C
Relative Humidity range: 55~75%RH
Operating Temperature range: -40°C~+85°C
Storage Temperature range: -40°C~+100°C

Moisture Proof

The AMC-ANTGPSCP12x4 should satisfy the electrical characteristics specified above after exposed to the temperature 40±2°C and the relative humidity 90~95% RH for 96 hours and 1~2 hours recovery time under normal condition.

Vibration Resist

The AMC-ANTGPSCP12x4 should satisfy the electrical characteristics specified above after applied to the vibration of 10 to 55Hz with amplitude of 1.5mm for 2 hours each in X, Y and Z directions.

Drop Shock

The AMC-ANTGPSCP12x4 should satisfy the electrical characteristics specified above after dropping onto the hard wooden board from the height of 30cm for 3 times on each facet of the 3 dimensions of the device.

High Temperature Endurance

The AMC-ANTGPSCP12x4 should satisfy the electrical characteristics specified above after exposed to temperature $80\pm 5^{\circ}\text{C}$ for 24 ± 2 hours and 1~2 hour's recovery time under normal temperature.

Low Temperature Endurance

The AMC-ANTGPSCP12x4 should also satisfy the electrical characteristics specified above after exposed to the temperature $-40^{\circ}\text{C}\pm 5^{\circ}\text{C}$ for 24 ± 2 hours and to 2 hours recovery time under normal temperature.

Temperature Cycle Test

The AMC-ANTGPSCP12x4 should also satisfy the electrical characteristics specified above after exposed to the low temperature -25°C and high temperature $+85^{\circ}\text{C}$ for 30 ± 2 min each by 5 cycles and 1 to 2 hours recovery time under normal temperature.

Ordering Information

Part Number	Description
AMC-ANTGPSCP12x4	1575MHz Internal 12mm Microwave Dielectric Antenna for GPS