



GPS Patch Antenna

- Miniature GPS Patch Antenna
- Centre freq 1.575.42MHz
- 20mm x 20mm x 8mm
- VSWR <1.5:1
- Gain (Zenith) 2dB
- Polarisation RHCP
- LNA Gain 28dB (+/-2)
- Noise Figure 1.5dB
- 2.5m RG174 Connecting Lead
- Alternative Connectors: FME / TNC / SMA / MMCX
- 50 Ohm Impedance



Applications

- GPS Systems
- Embedded positioning

Description

A compact GPS Antenna for embedded positioning applications where high performance is required .

Part Numbers

	Dimensions (mm)	Weight (Kg)	Cable	Connector
ANT-GPS-P20SMA	20mm sq		RG174	SMA (M)

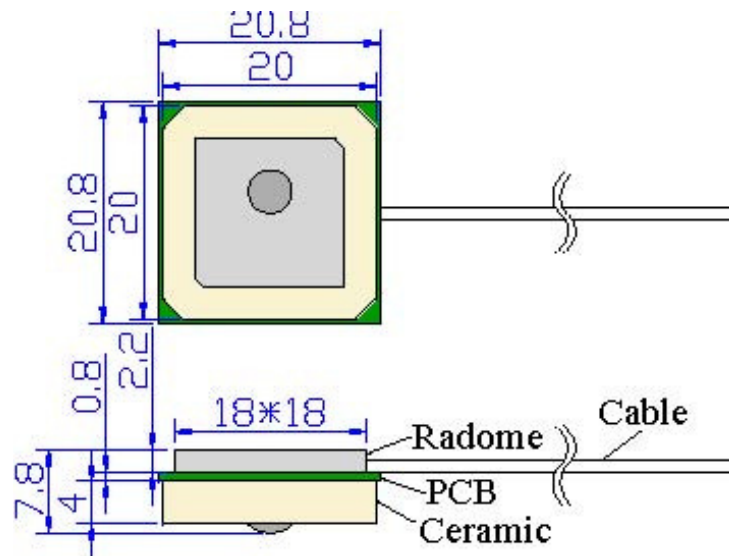
RF Solutions Ltd.,
Unit 21, Cliffe Industrial Estate,
Lewes, E. Sussex. BN8 6JL. England.

Email : sales@rfsolutions.co.uk <http://www.rfsolutions.co.uk>

Tel: +44 (0)1273 898 000 Fax: +44 (0)1273 480 661



Mechanical Detail



Reliability Data

The module has been tested to operate within the following Environmental Conditions;

Condition: Temperature range $25 \pm 3^\circ\text{C}$

Relative Humidity range 55~75%RH

Operating Temperature range $-40^\circ\text{C} \sim +85^\circ\text{C}$

Storage Temperature range $-40^\circ\text{C} \sim +100^\circ\text{C}$

Moisture Resilience

The device satisfies the stated electrical characteristics specified after being exposed to the temperature $40 \pm 2^\circ\text{C}$ and the relative humidity 90~95% RH for 96 hours and 1~2 hours recovery time under normal condition.

Vibration Resistance

The device satisfies the electrical characteristics specified after being vibrated from 10 to 55Hz with amplitude of 1.5mm for 2 hours each in X, Y and Z directions.

Drop Shock

The device satisfies the electrical characteristics specified after being dropped onto a hard wooden board from a height of 30cm 3 times on each face of the 3 dimensions of the device.

High / Low Temperature Endurance

The device satisfies the electrical characteristics specified after being exposed to temperature $80 \pm 5^\circ\text{C}$ for 24 ± 2 hours and being given 1~2 hours recovery time under normal temperature. And after being exposed to the temperature $-40^\circ\text{C} \pm 5^\circ\text{C}$ for 24 ± 2 hours and being given 1 to 2 hours recovery time under normal temperature.

Temperature Cycle Test

The device satisfies the electrical characteristics specified after being exposed to -25°C and $+85^\circ\text{C}$ for 30 ± 2 min each by 5 cycles and being given 1 to 2 hours recovery time under normal temperature.



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Dielectric Antenna

Item	Specification	Tolerance
Centre Frequency	1575.42Hz	+/-3MHz
Band Width (MHz)	± 5 MHz	± 1 MHz
V.S.W.R (in BW)	1.5 : 1	—
Gain (Zenith)	2 dB	± 0.5 dB
Polarization	RHCP	—
Impedance	50 Ω	—

LNA / Filter

Item	Specification	Tolerance
LNA Gain	28±2 dB	±2.5 dB
Noise Figure	1.5 dB	—
Filter Out Band Attenuation	30dB Min f0+40MHz 30dB Min f0-40MHz 40dB Min f0+100MHz 35dB Min f0-100MHz	±1.0 dB
DC Voltage	3~5 V	
DC Current	5~10 mA	

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