Flavus 2.4 / 5 GHz Snap-In Antenna

Product Specification

1 Features

- Designed for dualband 2.4/5 GHz applications
- Intended for Snap-In mounting
- Supplied in trays

2 Description

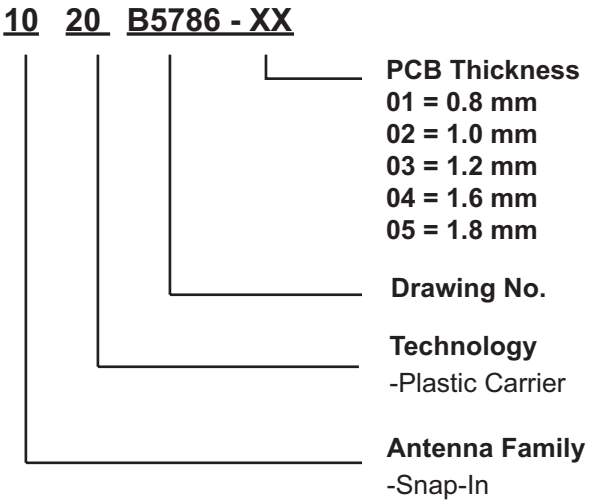
The Flavus antenna is a high performance antenna intended for use with Bluetooth and wireless LAN applications in both 802.11 a and b,g operations. The dual band functionallity is well suited for use with dual band WLAN radio modules. The Flavus 2.4/5 GHz antenna has the same footprint and characteristics as the popular Flavus 2.4 GHz antenna from gigaAnt. This enables OEM's to keep the same antenna type through a whole product range. For Bluetooth and 802.11b applications, use the single band antenna and for products using 802.11a (5Ghz) or dual band, just switch to the new Flavus 2.4/5 with ease.

3 Application

- Industrial applications
- Network nodes
- Access points
- Portable PCs
- Wireless cable modems

Contents

4 Model name



5 General data

Product Name	Flavus 2.4 / 5 GHz
Article No.	1020B5786-01..05
Frequency	2.4-2.5 GHz / 5.15 - 5.825 GHz
Polarization	Linear
Operating temperature	-40 to + 85 degC
Impedance	50 Ohm
Weight	0.6 gram
Antenna type	Snap-in

6 Electrical characteristics

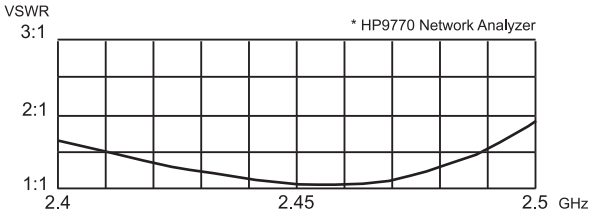
	Characteristics		**Conditions***
	2.4-2.5	5.15-5.825	
Peak Gain	4.0 dBi	3 dBi	Measured in 3D chamber (near field)
Efficiency	60%	70%	
VSWR	<2:1	<2:1	Measured in Network Analyzer

*Note all data provided in this table are based on the gigaAnt reference board

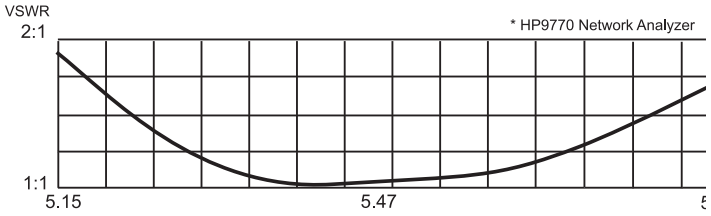
7 Electrical performance

7.1 Voltage Standing Wave Ratio

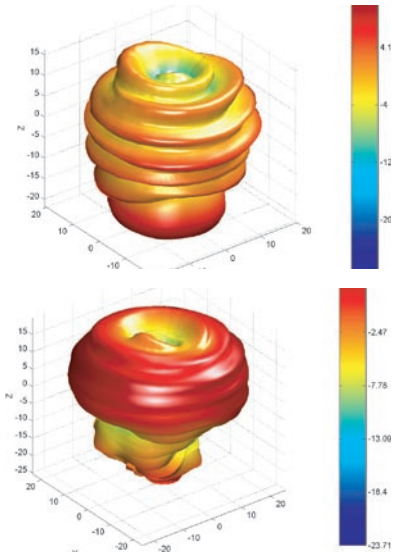
2.4-2.5 GHz



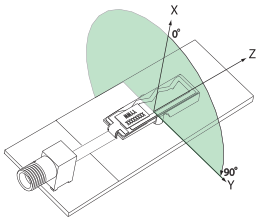
5.15-5.825 GHz



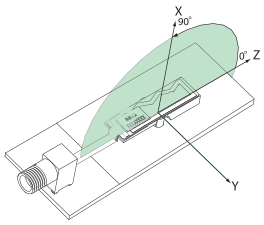
7.2 3D-Radiation



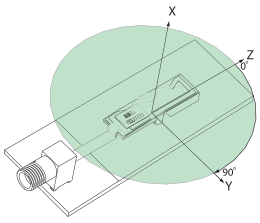
7.3 Radiation patterns



XY- Plane

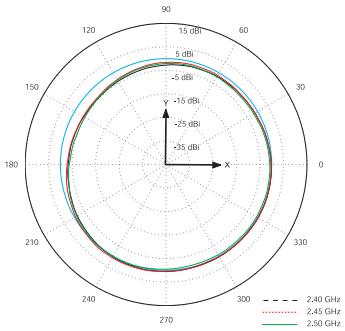


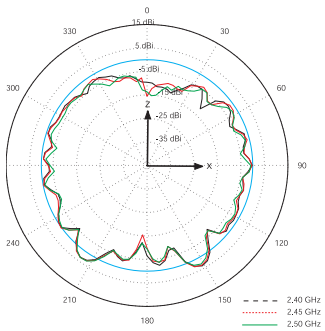
XZ- Plane

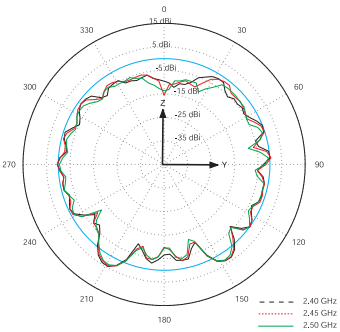


YZ- Plane

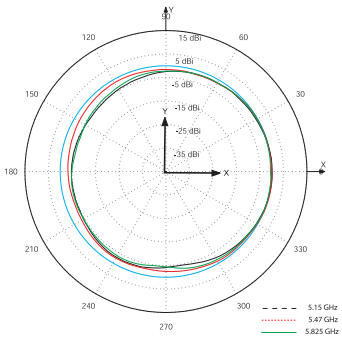
2.4-2.5 GHz

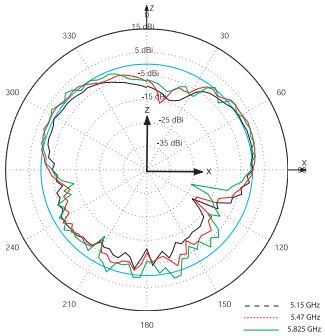


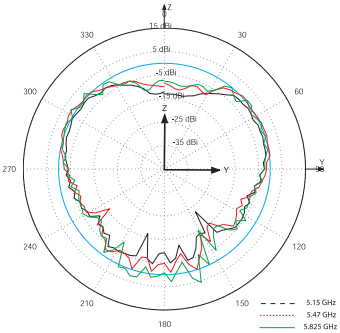




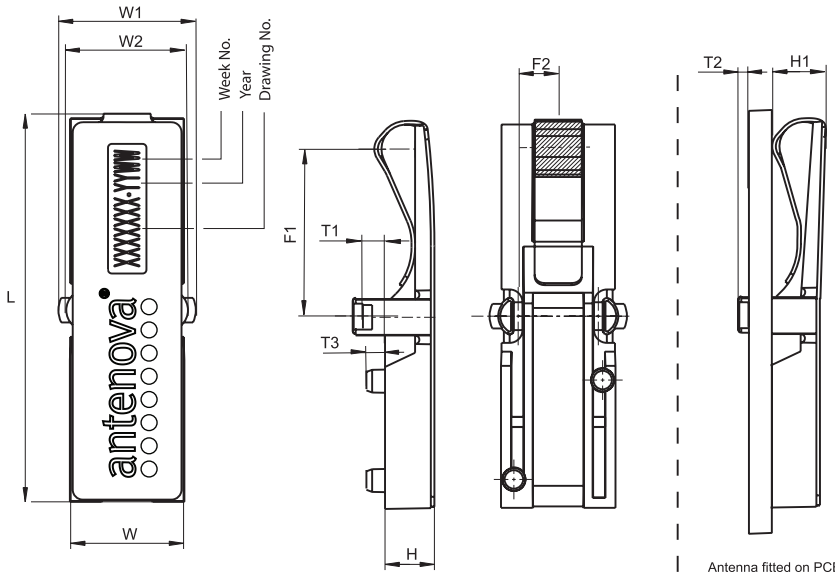
5.15-5.825 GHz







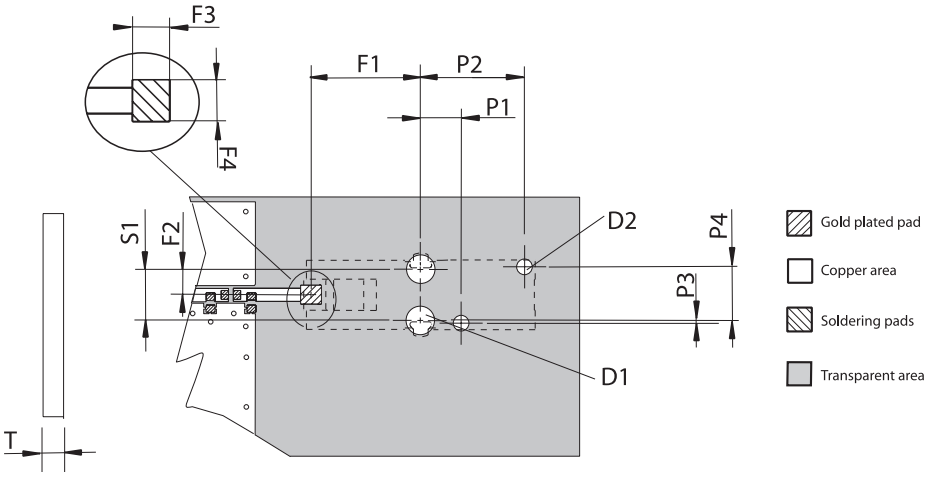
8 Antenna Dimensions



L	W	W1	W2	H	H1	F1	F2	T1	T2	T3
Length	Width	Width	Width	Height	Height	Feed	Feed	PCB		
27.3 ±0.2	7.9 ±0.2	9.6±0.2	8.5±0.2	3.45±0.1	3.85±0.1	11.85±0.2	2.8±0.1	T1±0.05	1.35±0.2	1.3±0.1

Dimensions in millimeters

9 Antenna Footprint

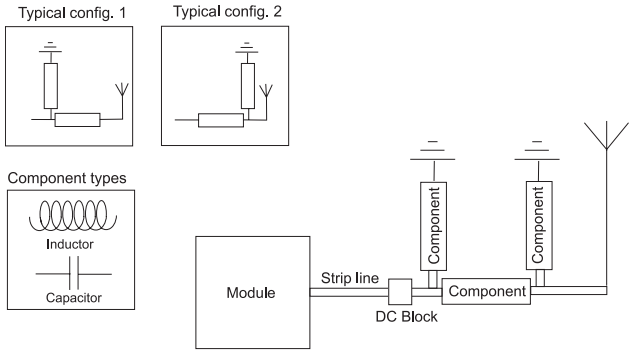


F1	F2	F3	F4	S1	P1	P2	P3	P4	D1	D2	T*
Feed	Feed	Feed	Feed	Snap-In	Position	Position	Position	Position	Diameter	Diameter	PCB
11.85±0.1	2.8±0.1	2±0.05	2.25±0.05	5.6±0.1	4.5±0.1	11.5±0.1	0.3±0.1	5.9±0.1	3.05±0.1	1.75±0.1	0.8, 1.0, 1.2, 1.6, 1.8

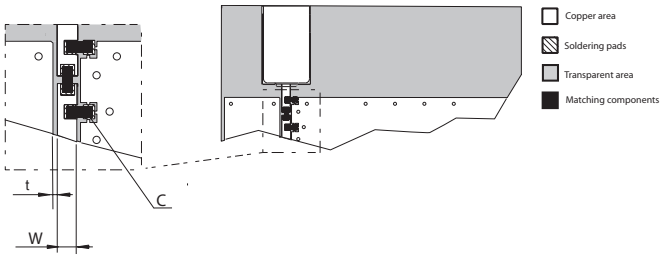
Dimensions in millimeters

10 Electrical interface

10.1 Transmission line and matching



The matching network has to be individually designed using one, two or three components.

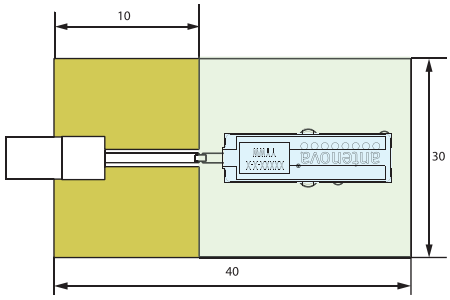


t, w = Unique dimensioning according to your PCB *

C = Inductor and capacitor values according to your specific device*

* Antenova provides this service upon request

10.2 Test board dimensions



The testboard is designed for evaluation purposes for Flavus antenna. The card has the same size as a typical PCMCIA card and is fitted with an SMA connector.

10.3 Test board matching

The testboard requires no external matching.

Note! External components could be used in implementations due to size of PCB board, surrounding components etc.

11 Reliability

11.1 Temperature and Humidity

Item	Standard	Low	High	Duration
Operating temperature	EN/IEC 60068-2-2, Test Bd: Dry heat	-30 degC	+90 degC	-
Temperature cycling	EN/IEC 60068-2-14, Test Na: Change of temperature	-30 degC	+90 degC	100cycles / 10min
Storage life Humidity	EN/IEC 60068-2-1, Test Ca: Damp heat	+40 degC / 93% RH		96 h
Storage life Low temperature	EN/IEC 60068-2-1, Test Ad: Cold	-25 degC	-	200 h
Storage life High temperature	EN/IEC 60068-2-2, Test Bb: Dry heat	-	+ 90 degC	1000 h

11.2 Mechanical

Item	Standard	Specification	Duration
Contact force		Antenna is mounted on reference board. and a pressure gauge is applied to antenna contact.	
Drop test		Dummy weight: 150g Height: 170cm	One drop at each side, total drops: 6
Vibration	EN/IEC 60068-2-6, Test Fc (sinusoidal)	Acceleration spectral density:10-1000Hz Acceleration: 20m/s2 Number of axes: 3 mutually perpendicular	5 cycles per axis

11.3 Miscellaneous

Item	Standard	Specification	Duration
Contact pad Corrosion	ASTM B117	SO2 Concentration: 25 ppm Temperature : 25 Deg C RH: 93%	96 hours

11.4 Judgement standard

The judgement of the above tests should be made as follows:

1. Visual inspection - Normal appearance with no obvious deformation
2. Electrical inspection - The antenna satisfies the VSWR specification throughout the GSM band
3. Mechanical inspection - Acceptable contact force min. 0.5 N

12 Hazardous Material Regulation Conformance

Cadmium and cadmium compound.

Organic brominated compound (PBB, PBDE)

Polychlorinated biphenyl (PCB)

Polychlorinated naphthalene (PCN)

Organic tin compound

Asbestos

Azo compound

Lead and lead compound

Mercury and mercury compound

Sexivalent chrome compound

Chlorinated paraffin (CP)

Mirex

Formaldehyde

Tetra-bromo-bisphenol-A-bis (TBBP-A-bis)

13 Application example

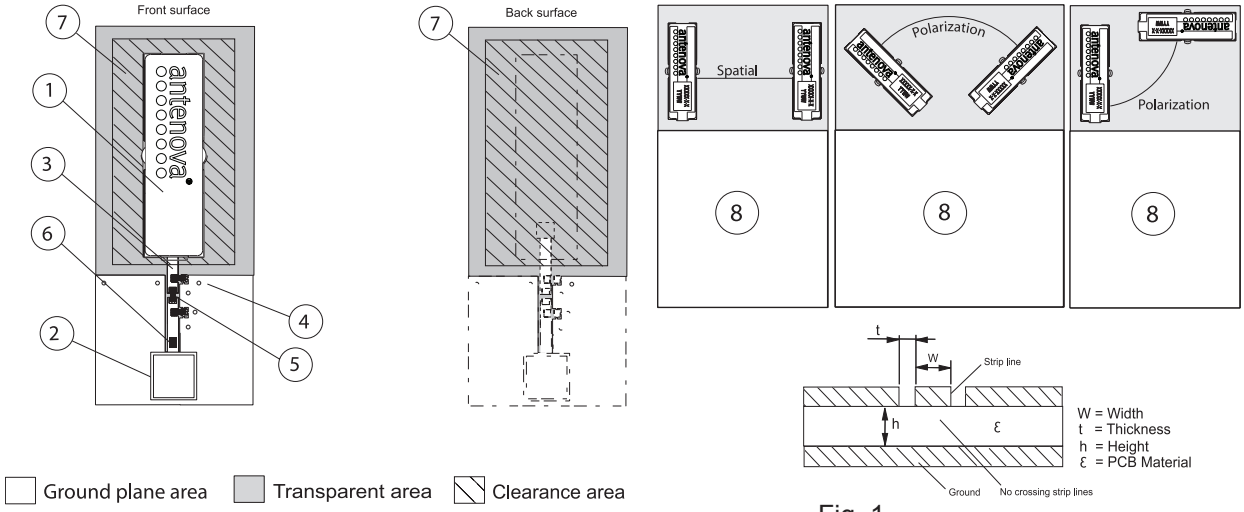


Fig. 1

1. **Placement of antenna**
   The antenna shall preferably be placed at the edge of the PCB oriented as above. Other placements and orientations and size of groundplanes are possible, but will affect the performance. Avoid active components near the antenna.
2. **Placement of GSM module or radio**
   To avoid losses the module shall be placed as close to the antenna as possible.
3. **Strip line**
   The strip line must be dimensioned according to your specific PCB. (see Fig 1). No crossing strip lines are allowed between the strip line and its ground plane.
4. **Via connections**
   To avoid spurious effects, via connections must be made to analogue ground.
5. **Component matching**
   Component values are depending on antenna placement, PCB dimensions and location of other components.
6. **DC Block**
   Might be needed depending on RF Module configuration.
7. **Clearance area**
   Avoid components and parts close to the antenna.
8. **Diversity**
   The antenna should be arranged to maximise the diversity effect. This could be done by separating the antennas as far as possible and place them perpendicular to each other.

Note ! Incorrect implementation of the antenna will affect the performance.
Contact Antenova for implementation services.

14 Packaging

14.1 Shelf storage recommendation

Temperature	-10 to +40 degree C
Humidity	Less than 75% RH
Shelf Life	12 Months
Storage place	Away from corrosive gas and direct sunlight

14.2 Packaging characteristics

Quantity	Number of trays	Tray quantity
840 pcs / box	6 / box	140 pcs

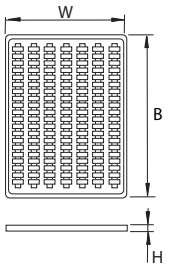
14.3 Tray dimension

Material: Anti static plastic tray

Width [mm] W: 290

Breadth [mm] B: 390

Height [mm] H: 14



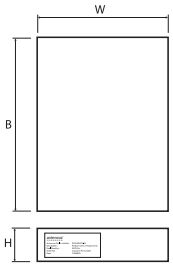
14.4 Box dimension

Material: Paper

Width [mm] W: 296

Breadth [mm] B: 396

Height [mm] H: 75



14.5 Label information

antenova®

Antenova Article number :	XXXXAXXXX-XX
Description :	Product name, Frequenzy Hz
Reel Quantity :	XXXX Pcs.
Order No:	Customer PO number
Date:	YYMMDD

antenova®

www.antenova.com

Corporate Headquarters

Antenova Ltd.
Far Field House
Albert Road
Stow-cum-Quy
Cambridge
CB9 5AR

Tel: +44 (0) 1223 810600
Fax: +44 (0) 1223 810650
Email: info@antenova.com

Asia Headquarters

Antenova Asia Ltd.
3F, No 10, Alley 6, Lane 45
Poa Shing Road
Hsin Tien City
Taipe County
ROC 23145

Tel: +886 (0) 2 2917 6536
Fax: +886 (0) 2 2910 6546
Email: info@antenova.com

Sales Offices

Europe
Charlotta Olander
UK/EU Sales Manager

Tel: +46 702 913731
Email: Lotta.Olander@antenova.com

America
David Nuti
NA Sales Manager

Tel: +1 214 668 0357
Email: David.Nuti@antenova.com

Asia
CL Lim
VP Sales Asia

Tel: +886 (0) 931 201 318
Email: CL.Lim@antenova.com

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Certificate No: 4598/04

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- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits,General Dynamics и др.);

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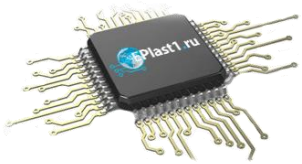
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



Как с нами связаться

Телефон: 8 (812) 309 58 32 (многоканальный)
Факс: 8 (812) 320-02-42
Электронная почта: org@eplast1.ru
Адрес: 198099, г. Санкт-Петербург, ул. Калинина, дом 2, корпус 4, литера А.