



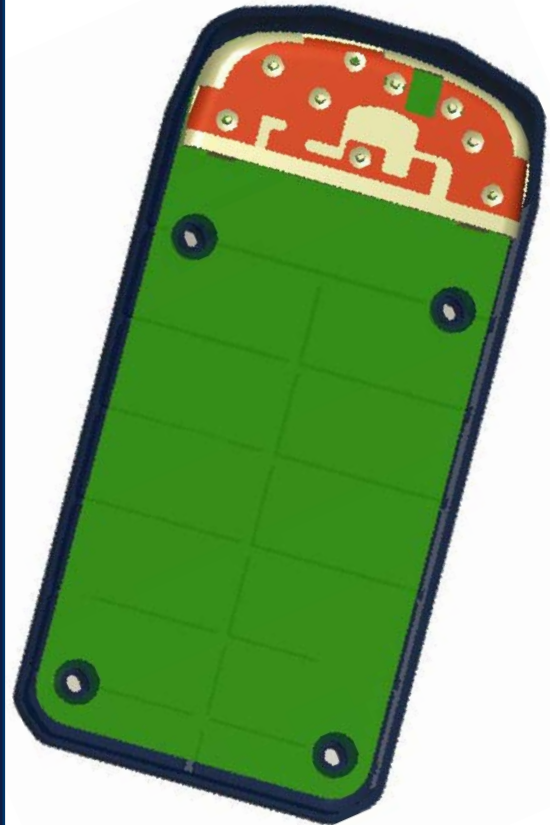
PENTANOVA® Custom Penta-band Antenna

Antenova's PENTANOVA® penta-band antenna covers the AMPS 850, GSM 900, DCS 1800, PCS 1900 and WCDMA 2100 bands. This small and efficient antenna is suitable for European and American (CDMA/TDMA 800 and 1900) handsets, smartphones and PDA applications.

Antenova's High Dielectric Antenna (HDA®) technology attains low volume and high efficiency. Samples of this integrated antenna into specific handset cases can be prepared upon request and made available for independent testing.

Benefits:

- Low volume and small size
- High efficiency
- Multi-band capability
- Surface mount attachment available
- Internal antenna



PENTANOVA® custom penta-band antenna

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electrical

FREQUENCY RANGES

EGSM :	800MHz - 960MHz
AMPS/CDMA/TDMA :	824MHz - 890MHz
DCS :	1710MHz - 1880MHz
PCS/CDMA/TDMA :	1850MHz - 1990 MHz
WCDMA :	2110MHz - 2170MHz

PEAK GAIN ELEMENT :

[lower band] :	1.0dBi
[upper band] :	2.6dBi
RETURN LOSS :	824MHz - -6.77
	960MHz - -4.61
	1710MHz - -7.32
	2170MHz - -7.01

ELEMENT VSWR : Better than 3.5:1

IMPEDANCE : 50Ω, real

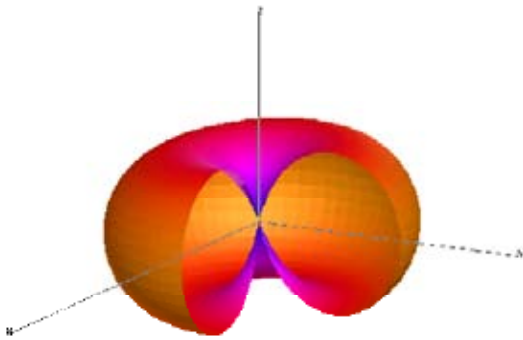
mechanical

ELEMENT VOLUME : <4.5cc
ELEMENT SIZE : 40 x 15 x 7mm

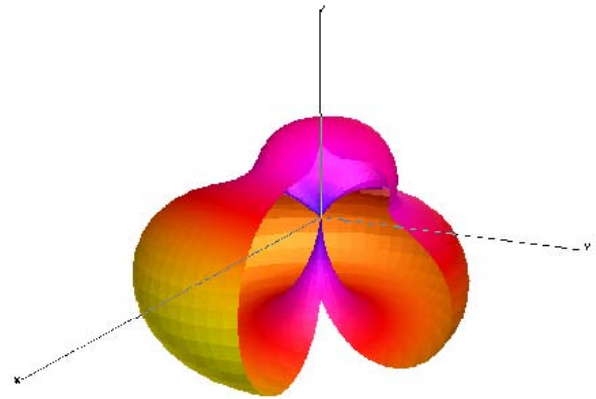
MOUNTING : SURFACE MOUNT
CLIP FIT ANTENNA ASSEMBLY

These results were measured using a 100mm x 40mm ground plane. A variety of ground plane sizes are available.

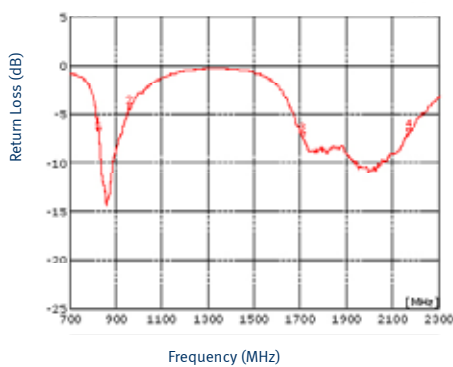
Simulated 3D total directivity plot at 900MHz



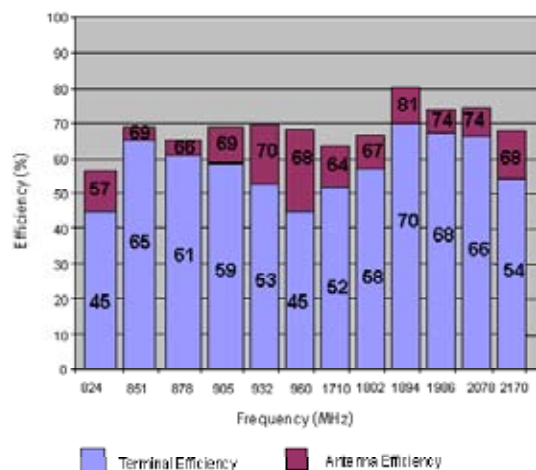
Simulated 3D total directivity plot at 1940 MHz



Graph showing return loss for all five bands



Measured antenna efficiency



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UK Patent applied for.
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