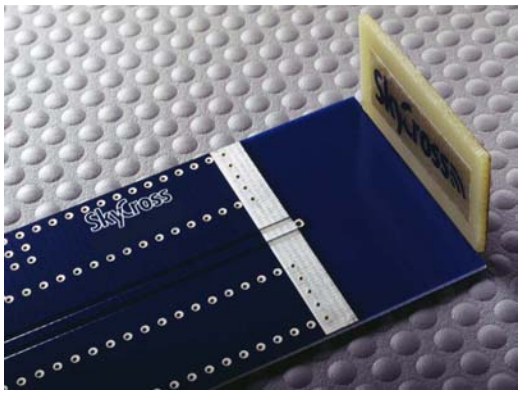
800 - 2500 MHz Ultra-wideband Antenna for Worldphone Handheld Applications



The 222-0562 Ultra-wideband Antenna with ground plane

Features

- *Ultra-wideband handheld antenna*
- *Ideal for embedded cellular/PCS/GPS/WLAN applications*

Band (MHz)	Application	Peak Gain (dBi)
800 MHz	AMPS	0.2
900 MHz	GSM	0.5
1575 MHz	GPS	1.5
1800 MHz	DCS	1.9
1900 MHz	PCS	2.6
2400 MHz	ISM	3.9

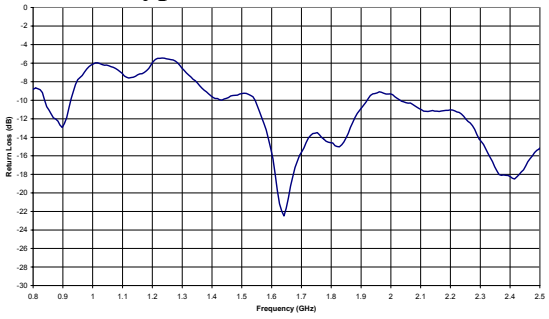
This Ultra-wideband antenna is designed using SkyCross' patented Meander Line Antenna (MLA) technology, providing superior efficiency and gain directivity in a small package. This antenna enables integration of six different popular frequency bands into one device for handheld applications.

Electrical Specifications

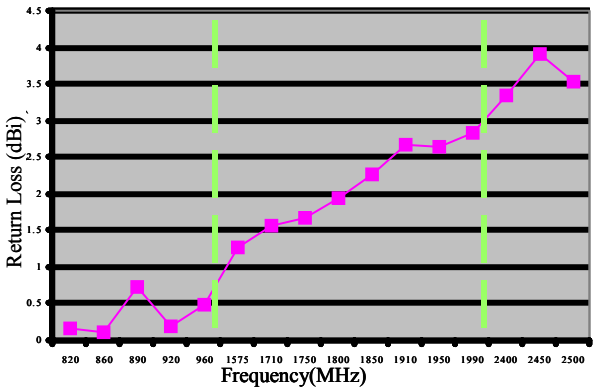
Frequency Range	824 — 2500 MHz
VSWR	< 3:1 across entire band
Polarization	Linear
Azimuth Pattern	Omni-directional across entire band
Feed Impedance	50 Ohms unbalanced

*Antenna measurements taken on a 3 x 1.5 inch ground plane, which includes a portion of the antenna

Typical Return Loss



Typical Swept Gain (Peak)

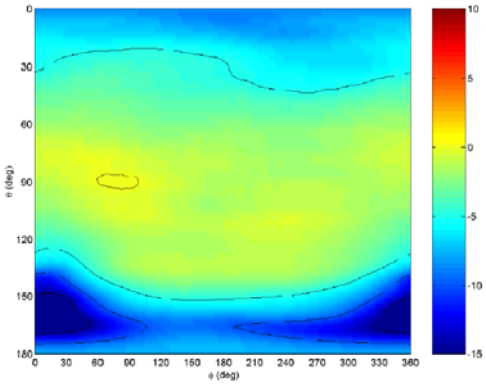


Mechanical Specifications

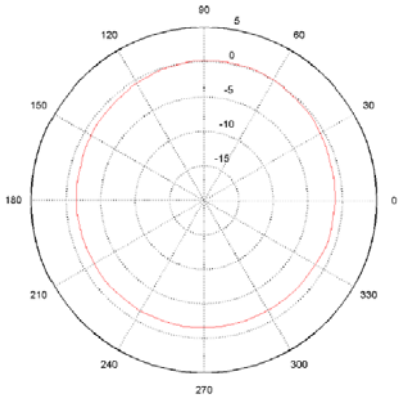
Size*	3.5 l x 1.3 w x 0.725 d inches 8.9 x 3.3 x 1.8 cm
Weight*	10.9 g

*Measurement taken on a 3 x 1.5 inch ground plane, which includes a portion of the antenna

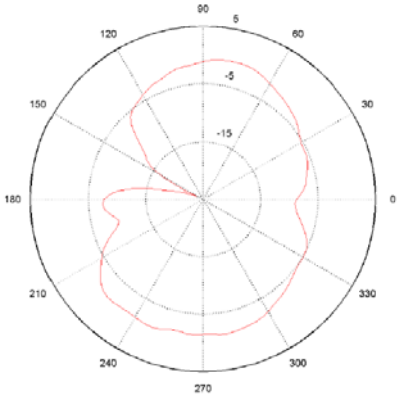
Spherical Gain Contour Map and Typical Gain Patterns at 820 MHz



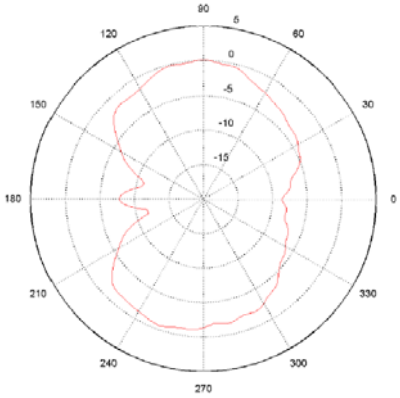
Spherical Gain Contour Map at 820 MHz



Gain at 820 MHz, Theta = 90

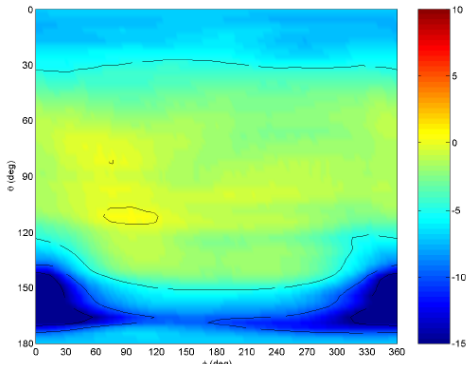


Gain at 820 MHz, Phi =0

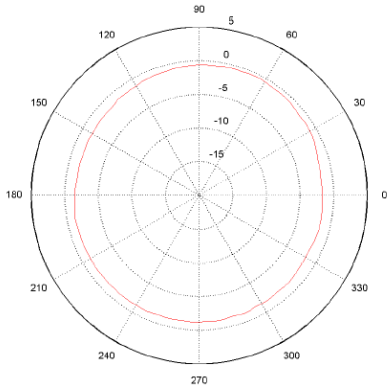


Gain at 820 MHz, Phi = 90

Spherical Gain Contour Maps and Typical Gain Pattern at 950 MHz

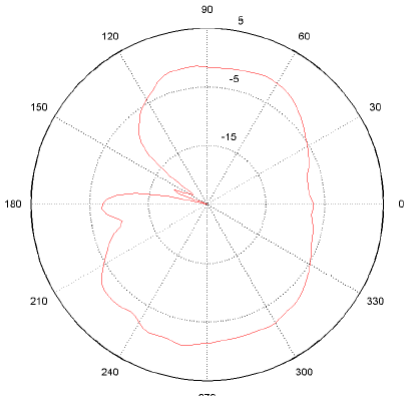


Spherical Gain Contour Map at 950 MHz

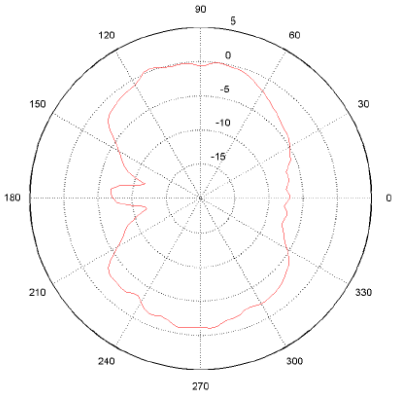


Gain at 950 MHz, Theta = 90

Typical Gain Patterns at 950 MHz

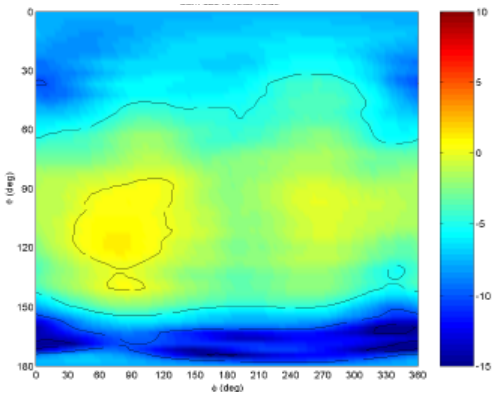


Gain at 950 MHz, Phi = 0

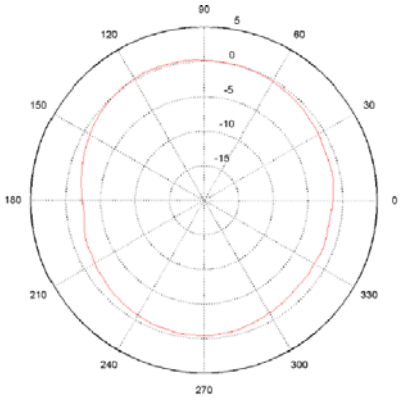


Gain at 950 MHz, Phi = 90

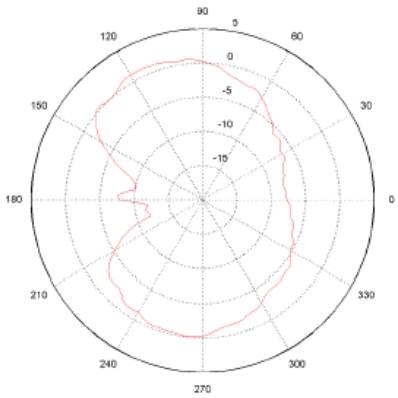
Spherical Gain Contour Maps and Typical Gain Pattern at 1575 MHz



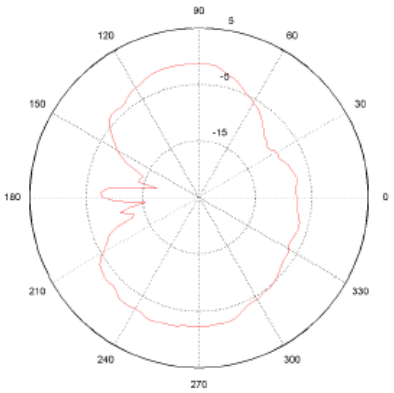
Spherical Gain Contour Map at 1575 MHz



Gain at 1575 MHz, Theta = 90

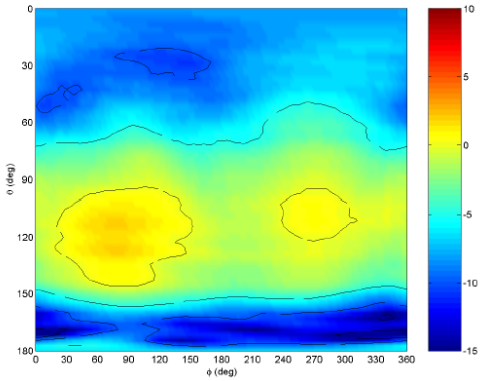


Gain at 1575 MHz, Phi = 0

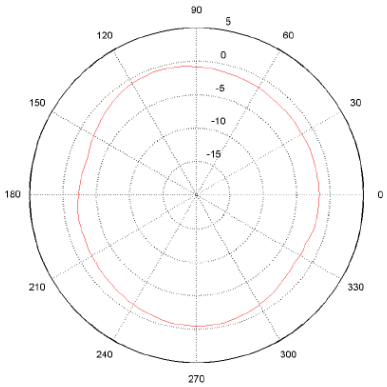


Gain at 1575 MHz, Phi = 90

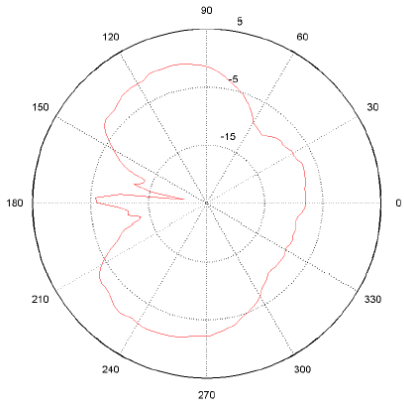
Spherical Gain Contour Map and Typical Gain Patterns at 1800 MHz



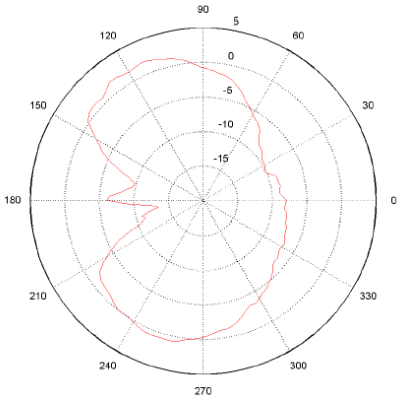
Spherical Gain Contour Map at 1800 MHz



Gain at 1800 MHz, Theta = 90

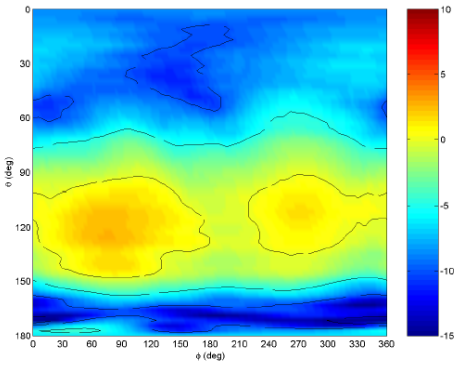


Gain at 1800 MHz, Phi = 0

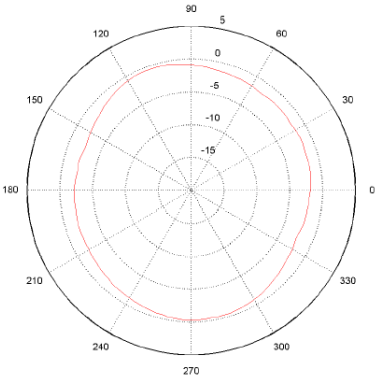


Gain at 1800 MHz, Phi = 90

Spherical Gain Contour Map and Typical Gain Pattern at 1900 MHz

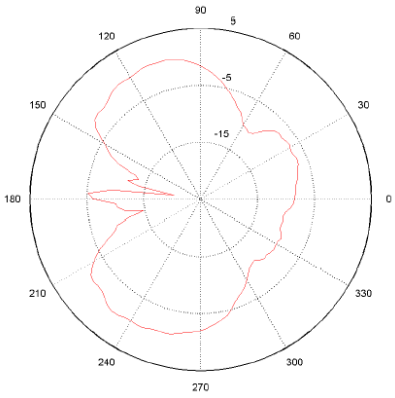


Spherical Gain Contour Map at 1900 MHz

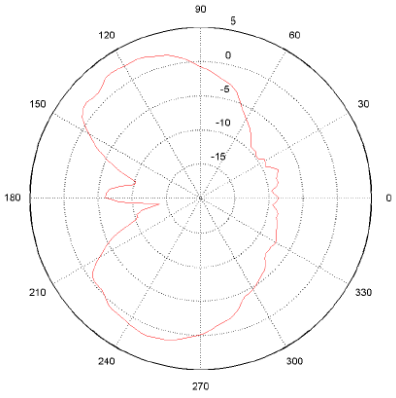


Gain at 1900 MHz, Theta = 90

Typical Gain Patterns at 1900 MHz

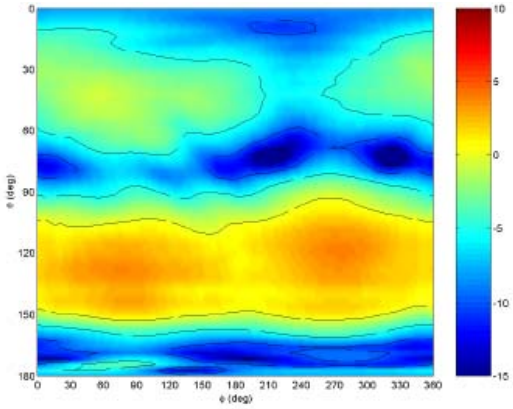


Gain at 1900 MHz, Phi = 0

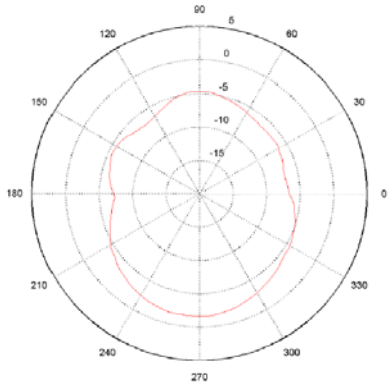


Gain at 1900 MHz, Phi = 90

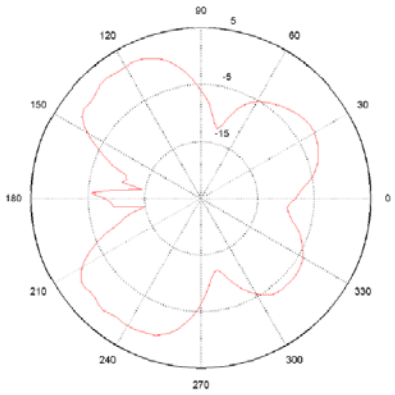
Spherical Gain Contour Map and Typical Gain Pattern at 2450 MHz



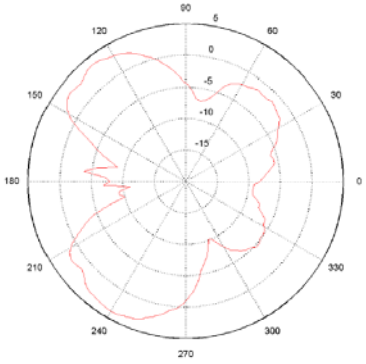
Spherical Gain Contour Map at 2450 MHz



Gain at 2450 MHz, Theta = 90



Gain at 2450 MHz, Phi = 0



Gain at 2450 MHz, Phi = 90