

Murandi
Communications Ltd.
Innovative Radio Frequency Solutions

MLink Antenna Specification

Revision – Draft

Feb 10, 2014

Murandi Communications Ltd.

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1 Revision History

Revision	Date	Description
Draft	Feb 10, 2014	Initial release

The details of each revision are captured in Revision Details Section 6.

2 Abbreviations

Abbreviation	Description
Attn	attenuator
BW	bandwidth
dB	decibel
dBc	decibel relative to carrier power
dB _i	decibel relative to an isotropic antenna
dBm	decibel relative to 1 milliwatt
FCC	federal communications commission
FHSS	frequency hopping spread spectrum
GPS	global positioning system
IC	Industry Canada
ISM	industrial, scientific and medical
ISR	interrupt service routine
kHz	kilohertz
LCD	liquid crystal display
LED	light emitting diode
LNA	low noise amplifier
mA	milliampere
mcd	millicandle
MHz	mega-hertz
mm	millimeter
msec	millisecond
mV	millivolt
PA	power amplifier
PLL	phase locked loop
ppm	parts per million
RBW	resolution bandwidth
RF	radio frequency
RTC	Real time clock

Abbreviation	Description
TBC	to be confirmed
TBD	to be determined
TRP	total radiated power
μ A	microampere
TDD	Time division duplex
UART	universal asynchronous receiver/transmitter
V	volts
W	width

3 Reference Documents

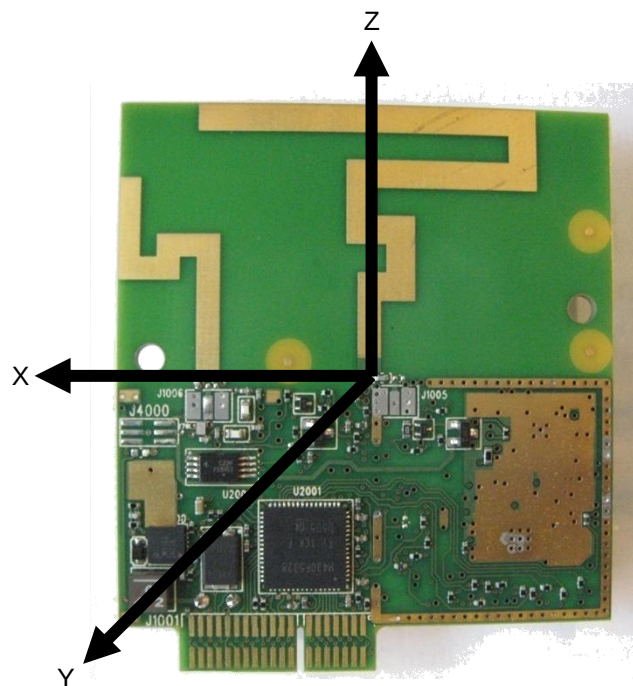
1. MLink Circuit Description – Draft, Feb 10, 2014
2. MLink Block Diagrams – Draft, Feb 10, 2014
3. Schematics (MLINK – Rev 3.pdf)
4. Bill of Materials (MLINK – Rev 3.bom)
5. Pictures (IMG_1673.jpg, IMG_1677.jpg, IMG_1680.jpg, IMG_1682.jpg, IMG_1684.jpg, & IMG_1695.jpg)

4 Introduction

This document contains Antenna Specifications for the Murandi Communications MLink 900 MHz transceiver as part of the FCC & IC submission.

5 Antenna Specification

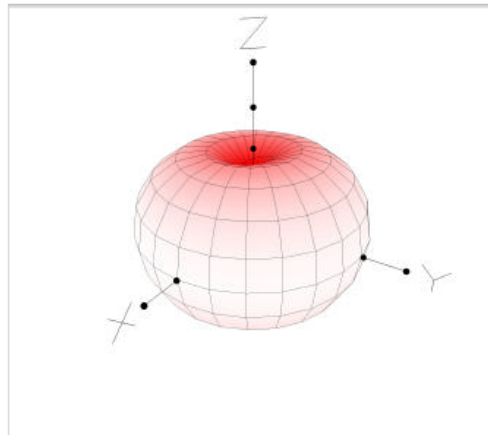
MLink 900 integral antenna performance was measured in the following orientation:



The following results obtained:



Total Radiated power: -0.41 dBm
Efficiency -0.11 dB

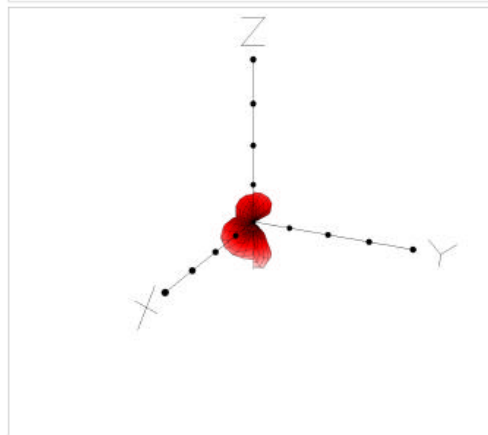


Vertical Polarization

Vert. Component: -0.43 dBm

Peak Gain: 2.14 dBi

Theta 90, Phi 285



Horizontal Polarization

Horz. Component: -23.26 dBm

Peak Gain: -14.22 dBi

Theta 165, Phi 75

File Name: MLink 65558 33pF 915MHz with 2AA cells extender

Tx Power: -0.30 dBm Estimated

Frequency: 915.50 MHz

Cable Attenuation: 1.45 dB

Notes:

Fri, Nov 15, 2013 12:29 PM

Receive Antenna Gain: 1.65 dBi

Separation: 1.20 m

The peak antenna gain is 2.4 dBi in the vertical polarization.

6 Revisions

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