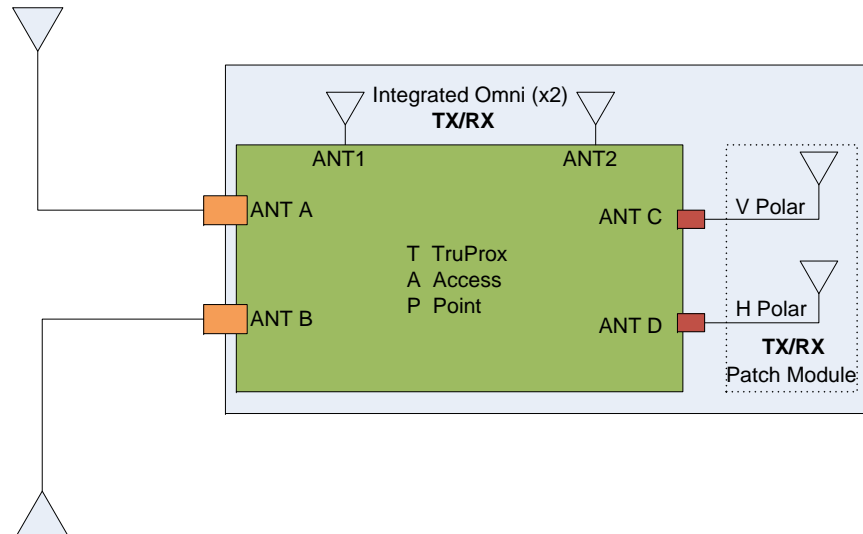


Antenna Technical Description

Product Name: AreaSensor
Model No: AS1000
P/N: PX-7100-0003-00
HW Build: P2
FCC ID: X9S-AS1000

ANT A (RX only):

Various directional antennas:
Teletronics: P/N:15-537 (15dBi; 20 degree beam width)



ANT B (RX only):

Various directional antennas:
Teletronics: P/N:15-537 (15dBi; 20 degree beam width)

■ SMA
■ MMCX



Rufa 2.4 GHz SMD Antenna

Part No. 3030A5839 / 3030A5887

Product Specification

1 Features

- Designed for 2.4 GHz applications: Bluetooth®, Wi-Fi® (802.11b/g), ZigBee®, etc.
- Easy to integrate
- Low profile design for use with no ground beneath the antenna
- High efficiency
- Light weight
- Intended for SMD mounting
- Supplied in tape on reel

2 Description

Rufa is intended for use with all 2.4 GHz applications. The antenna uses a ground plane in order to radiate efficiently, but this ground plane must not extend underneath the antenna itself.

The antenna is available in two versions with the feed locations on the right or left hand side of the antenna.

3 Applications

- Mobile phones
- PDAs
- PNDs
- Headsets
- PMPs / MP3s
- Laptops
- PC-Cards
- Sensors



Integrated Antenna and RF Solutions

Rufa 2.4 GHz SMD Antenna
Part No. 3030A5839 / 3030A5887

4 Part numbers

Rufa Left: 3030A5839-01



Rufa Right: 3030A5887-01



5 General data

Product name	Rufa 2.4 GHz
Part Number	3030A5839-01 (Left)
	3030A5887-01 (Right)
Frequency	2.4 – 2.5 GHz
Polarization	Linear
Operating temperature	-40 °C to +85 °C
Impedance with matching	50 Ω
Weight	0.1 g
Antenna type	SMD
Dimensions	12.8 x 3.9 x 1.1 [mm]

6 Electrical characteristics

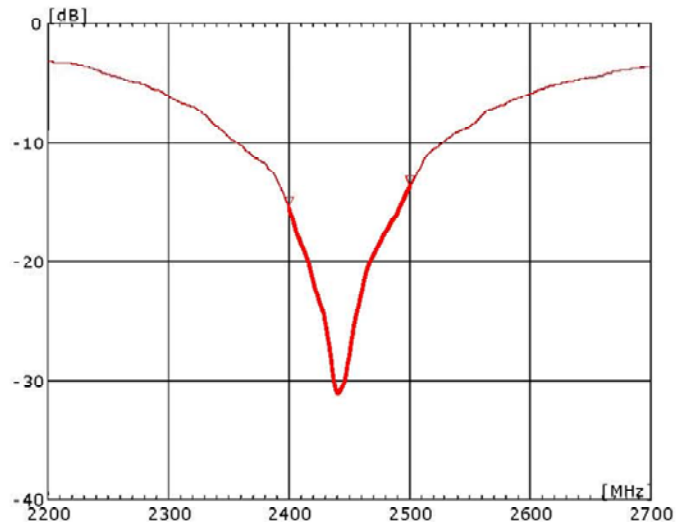
	Typical performance	Conditions
Peak gain	2.1 dBi	All data measured on Antenova's reference boards, part numbers AN-1-0543-1 and AN-1-0556-1 Data given for the 2.4 – 2.5 GHz frequency range
Average gain	-1.2 dBi	
Average efficiency	75%	
Maximum Return Loss	-11 dB	
Maximum VSWR	1.8:1	

Integrated Antenna and RF Solutions

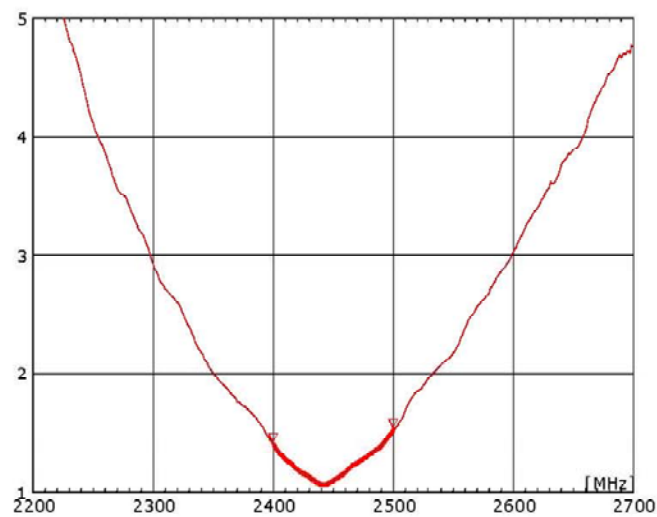
Rufa 2.4 GHz SMD Antenna
Part No. 3030A5839 / 3030A5887

7 Electrical performance

7-1 Return Loss

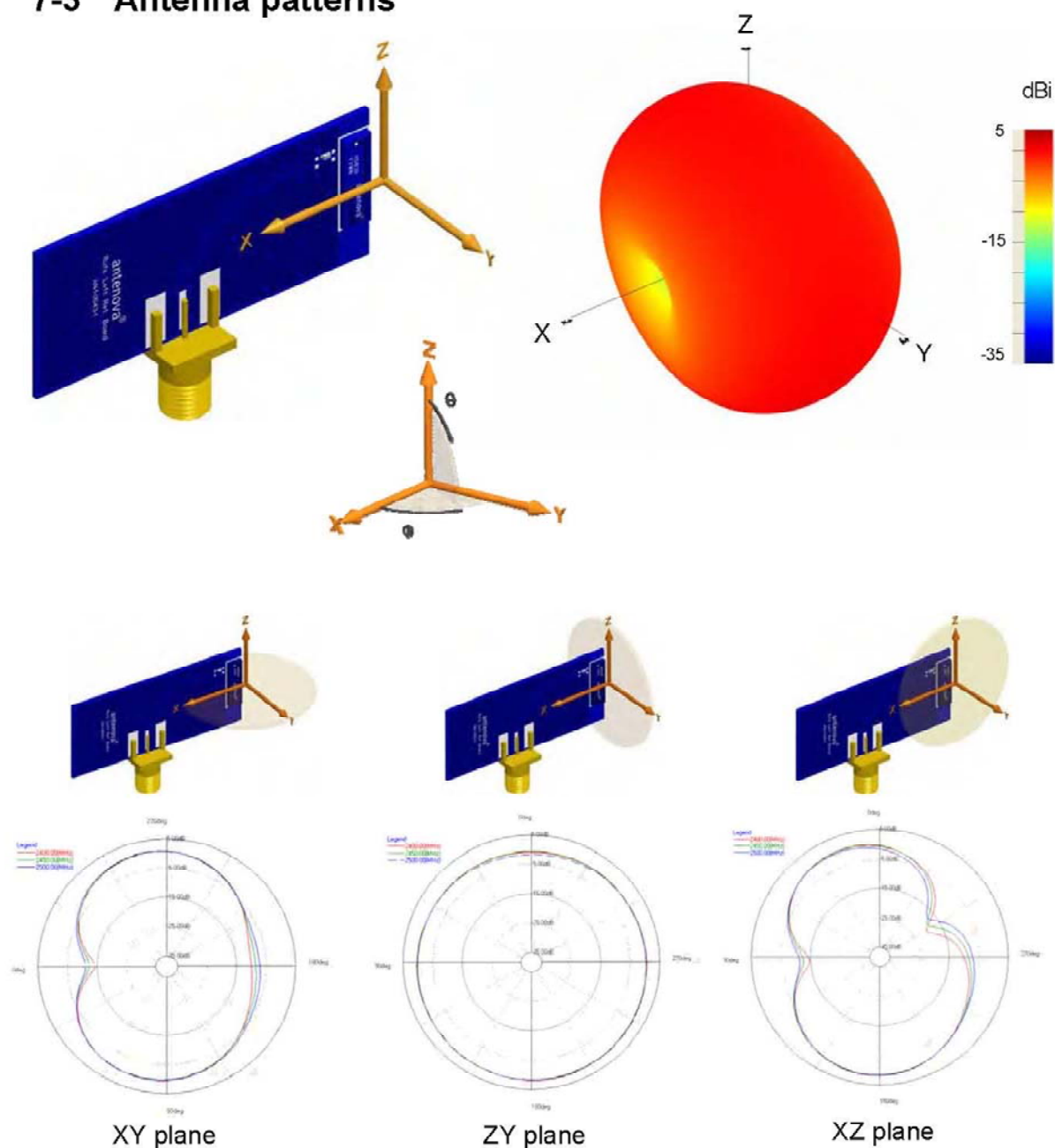


7-2 VSWR



Rufa 2.4 GHz SMD Antenna
Part No. 3030A5839 / 3030A5887

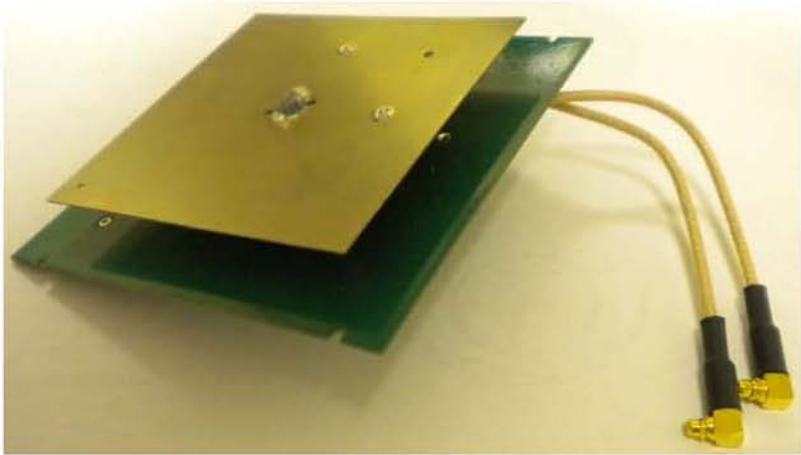
7-3 Antenna patterns



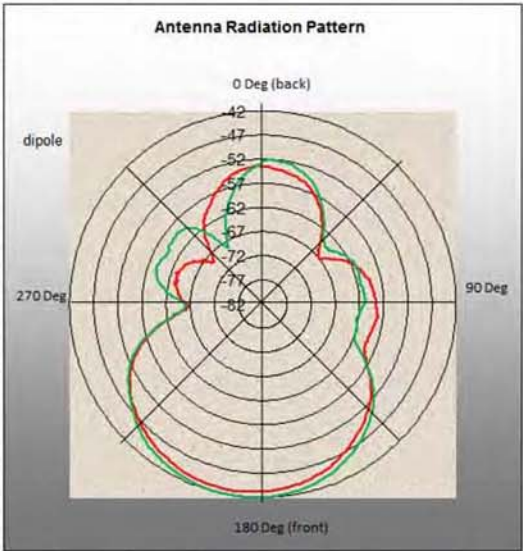
Patterns show combined polarisations
measured on reference board AN-1-0556-1

Integrated Antenna and RF Solutions

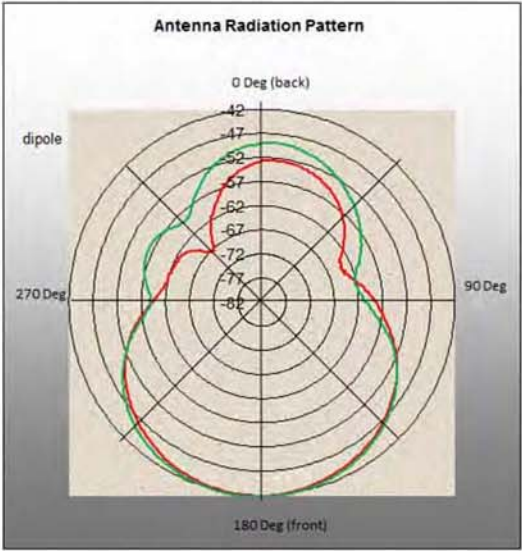
Patch Antenna
Electrical Specifications



Frequency: 2400 – 2500MHz
Impedance: 50 Ohm



Antenna Polarization: Horizontal
Frequency (MHz): 2450 MHz
Calibration 0 dBi = -50.50 dBm
Peak gain vert (dBi) 7.58
Peak gain Horz (dBi) 8.63



Antenna Polarization: Vertical
Frequency (MHz): 2450 MHz
Calibration 0 dBi = -49.70 dBm
Peak gain vert (dBi) 7.89
Peak gain Horz (dBi) 8.06