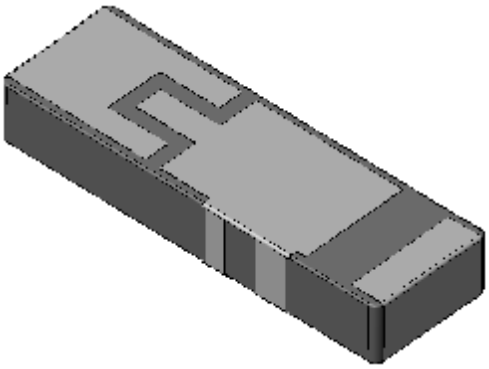
W3056 Ceramic Single Feed GPS/BT Antenna

Ground clearance type i.e. groundings removed from all PWB layers (ground removal area 10.80 mm x 6.25 / 4.25 mm.).

Pulse Part Number: W3056



Features

- Omni directional radiation
- Low profile
- Compact size W x L x H (10 x 3.2 x 1.5mm)
- Low weight (240 mg)
- Lead free materials
- Fully SMD compatible
- Lead free soldering compatible
- Tape and reel packing
- RoHS Compliant Product

Dual Band Applications

- GPS L1 band (1.575 GHz)
- Bluetooth, WLAN, WiFi (2.4 – 2.5GHz)

Electrical specifications @ +25 °C

Note: Electrical characteristics are measured on test pwb with matching circuit (2.2 nH shunt matching inductor on feed).

GPS / BT

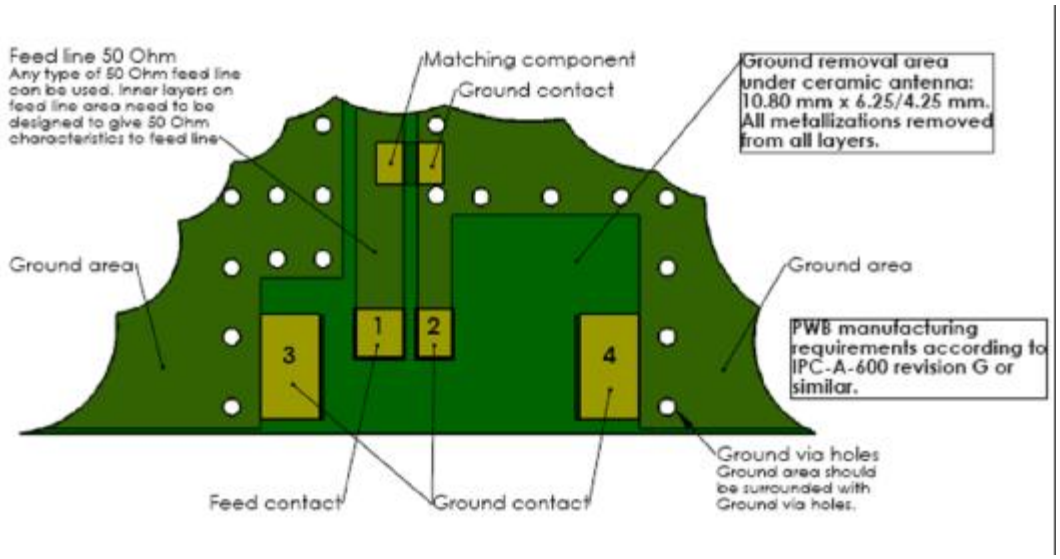
Typical performance (test board size 100x40mm, PWB ground removal area 10.80 mm x 6.25/4.25 mm)

Frequency Range [MHz]	Efficiency [%] / [dB]	Return loss min. [dB]	Impedance [Ω]	Operating Temperature [°C]
1575.42 +/-10	75/-1.25 (Peak) 65/-1.9 (+/- 10MHz)	-20 (Peak) -10 (+/- 10MHz)	50	-40 to +85
2400 - 2480	80/-1 (Peak) 70/-1.55 (Band edges)	-10 (Peak) -8 (Band edges)	50	-40 to +85

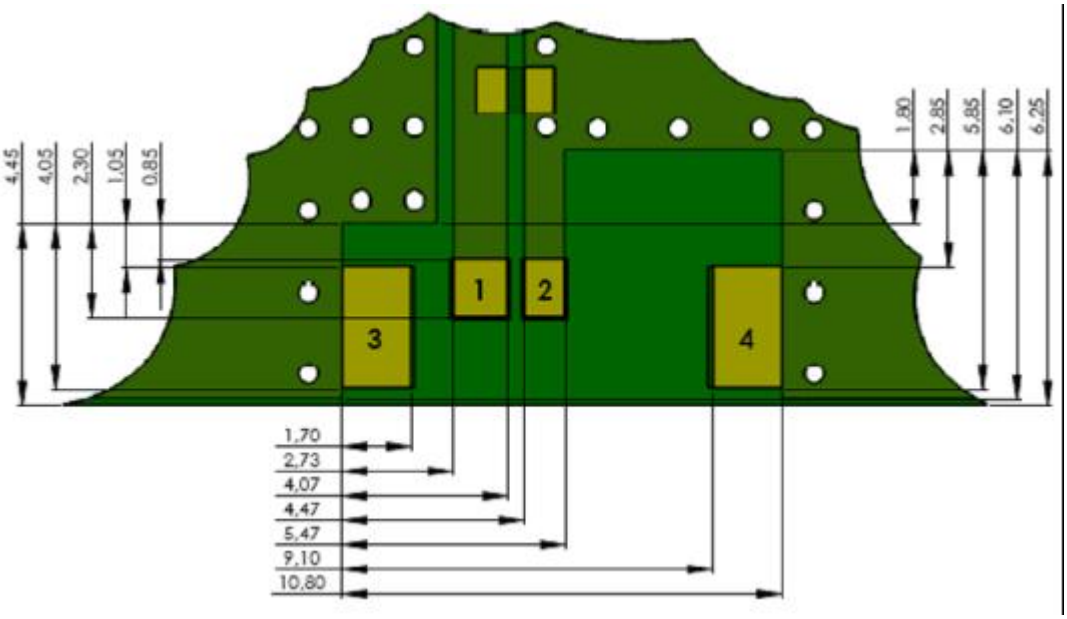
Pulse Finland Oy
Takatie 6
90440 Kempele, Finland
Tel: +358 207 935 500
Fax: +358 207 935 501

Domicile: Kempele
Business ID: 1933992-8
firstnamelastname@pulseeng.com
www.pulseeng.com/antennas

GPS/BT Ceramic Chip Antenna



PWB Layout under ceramic antenna

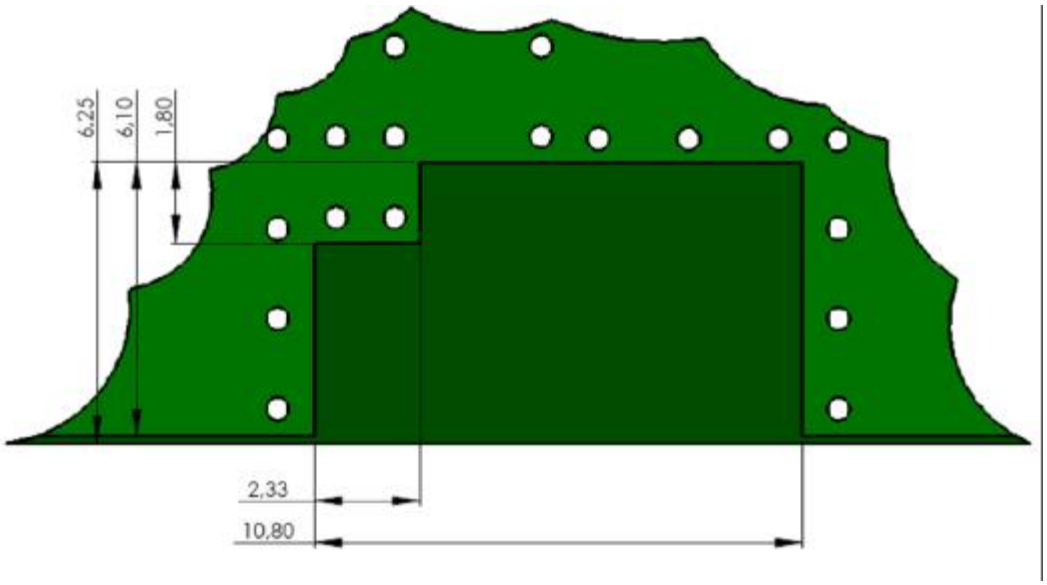


Recommended Antenna Pad Dimensions on PWB Layout (top surface)

PWB features		
No.	**Terminal Name**	**Terminal Dimensions**
1	**Feed**	**1.45 x 1.34 mm**
2	**GND**	**1.45 x 1.00 mm**
3	**GND**	**3.00 x 1.70 mm**
4	**GND**	**3.00 x 1.70 mm**

Pulse Finland Oy
Takatie 6
90440 Kempele, Finland
Tel: +358 207 935 500
Fax: +358 207 935 501

Domicile: Kempele
Business ID: 1933992-8
firstnamelastname@pulseeng.com
www.pulseeng.com/antennas



Recommended ground clearance area under antenna on PWB (bottom surface)

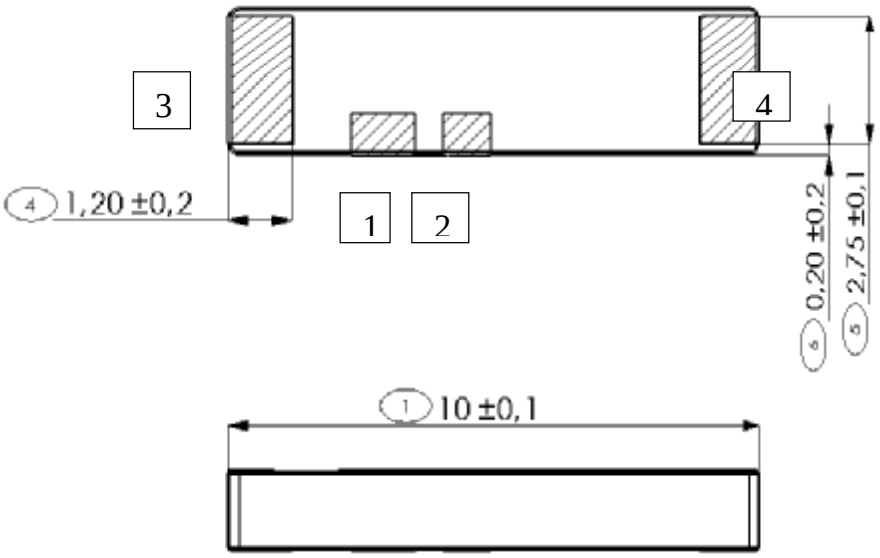
Pulse Finland Oy
Takatie 6
90440 Kempele, Finland
Tel: +358 207 935 500
Fax: +358 207 935 501

Domicile: Kempele
Business ID: 1933992-8
firstnamelastname@pulseeng.com
www.pulseeng.com/antennas

GPS/BT Ceramic Chip Antenna

Terminal Configuration

Antenna



No.	Terminal Name	Terminal Dimensions
1	Feed	1.34 x 0.80 mm
2	GND	1.00 x 0.80 mm
3	GND	2.75 x 1.20 mm
4	GND	2.75 x 1.20 mm

Pulse Finland Oy
Takatie 6
90440 Kempele, Finland
Tel: +358 207 935 500
Fax: +358 207 935 501

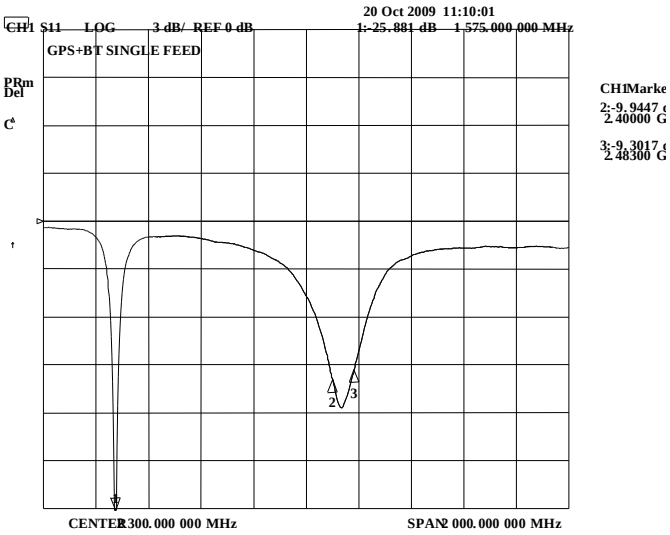
Domicile: Kempele
Business ID: 1933992-8
firstnamelastname@pulseeng.com
www.pulseeng.com/antennas

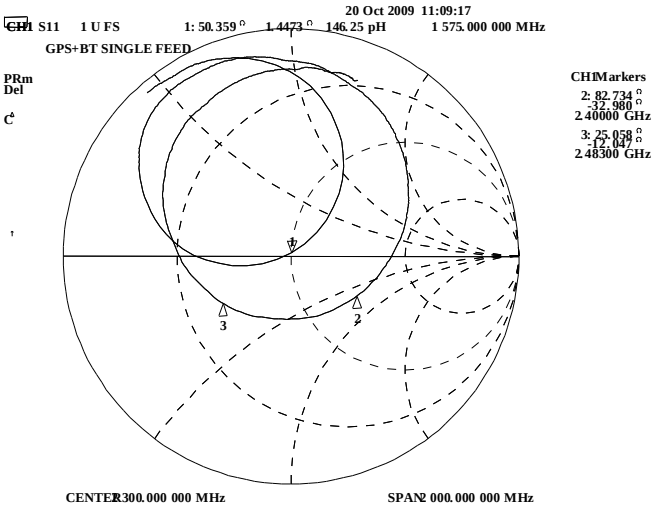
GPS/BT Ceramic Chip Antenna

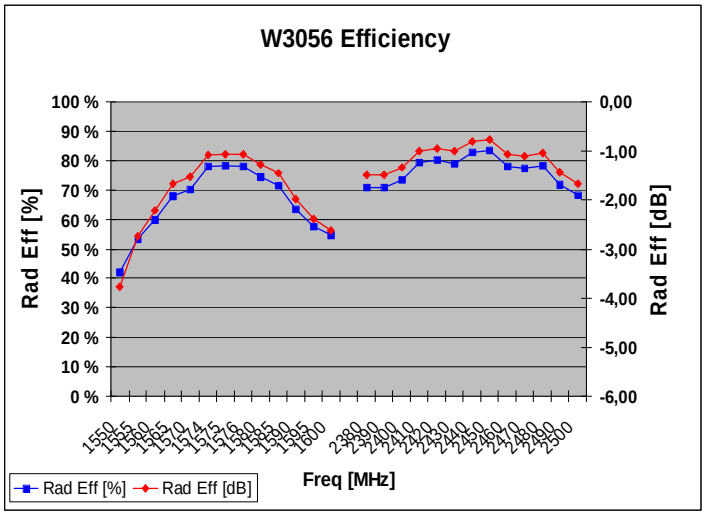
Typical Electrical Characteristics (T=25 °C)

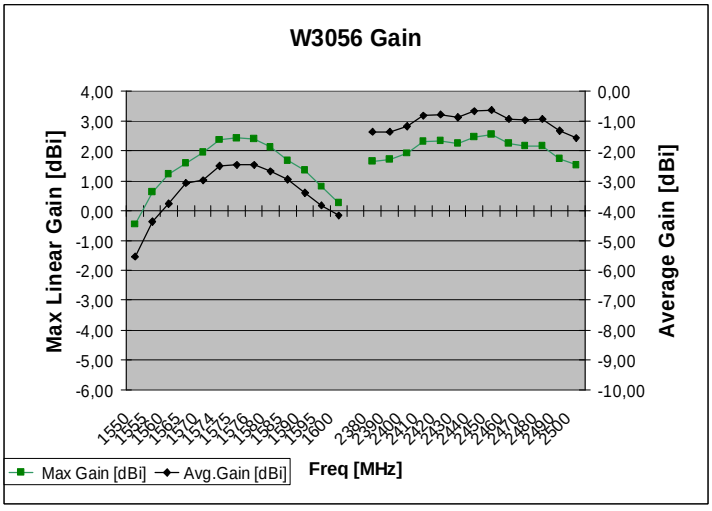
Measured on test pwb with matching circuit (2.2 nH shunt matching inductor on feed).

Typical Return Loss S11/ impedance, free space efficiency and gain









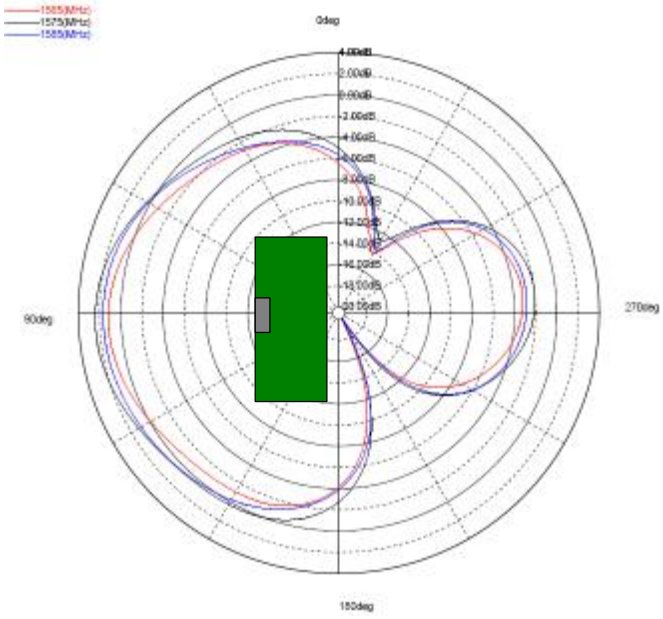
Pulse Finland Oy
Takatie 6
90440 Kempele, Finland
Tel: +358 207 935 500
Fax: +358 207 935 501

Domicile: Kempele
Business ID: 1933992-8
firstnamelastname@pulseeng.com
www.pulseeng.com/antennas

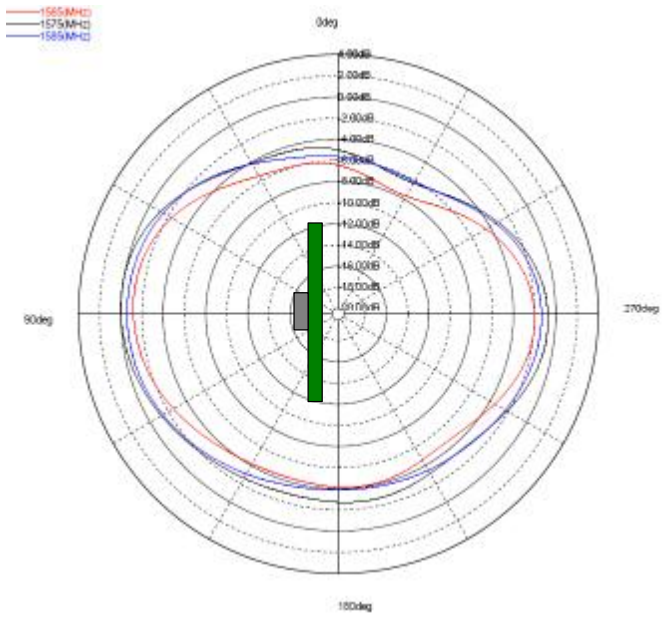
GPS/BT Ceramic Chip Antenna

Typical Free space Radiation Patterns / GPS

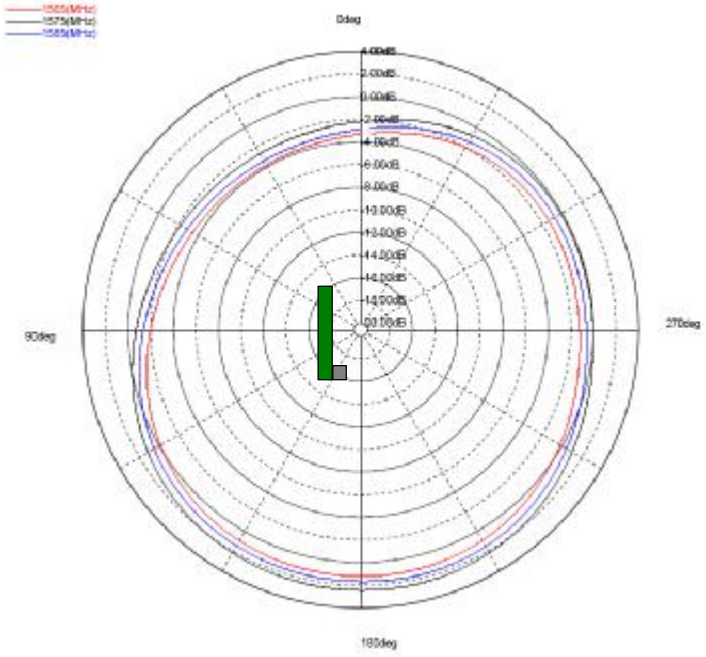
XZ-PLANE

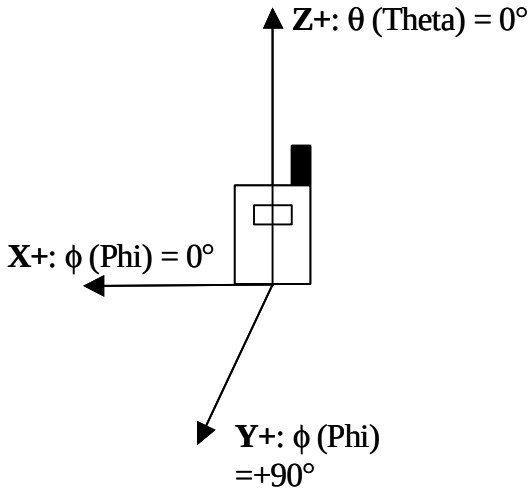


ZY-PLANE



XY-PLANE



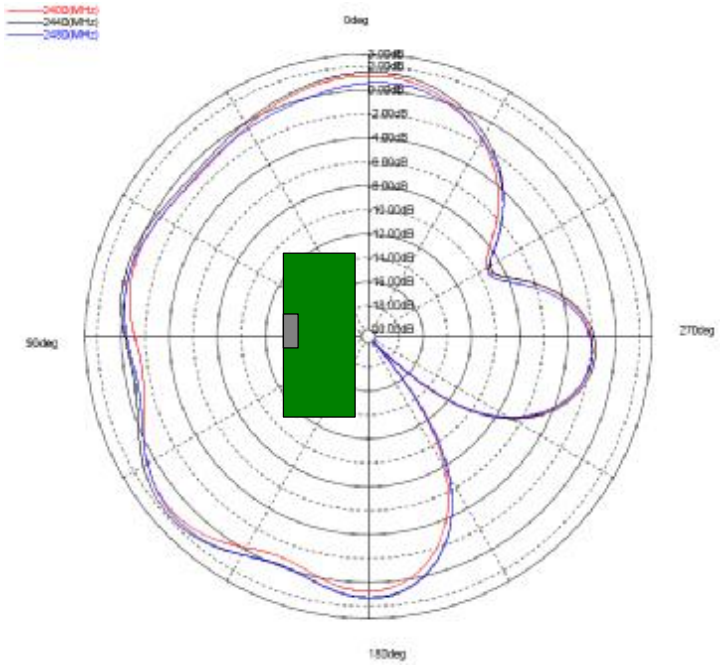


Pulse Finland Oy
Takatie 6
90440 Kempele, Finland
Tel: +358 207 935 500
Fax: +358 207 935 501

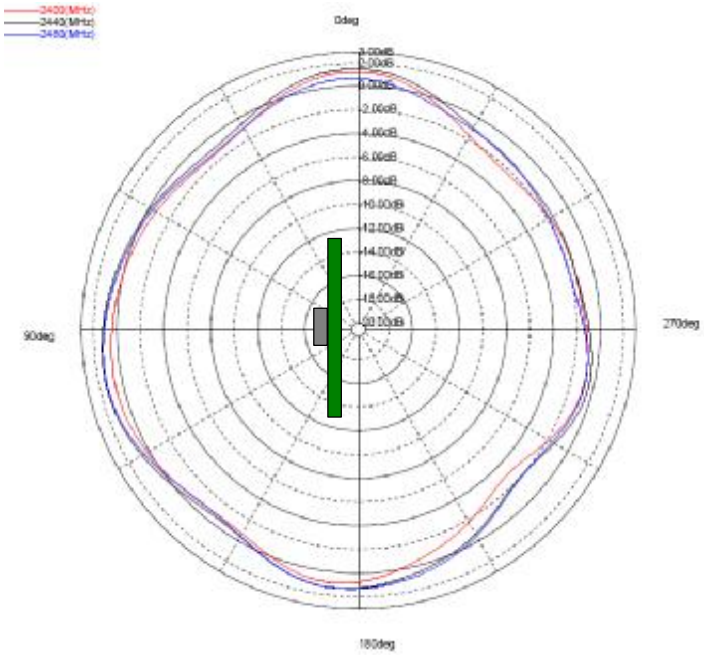
Domicile: Kempele
Business ID: 1933992-8
firstnamelastname@pulseeng.com
www.pulseeng.com/antennas

Typical Free space Radiation Patterns / BT

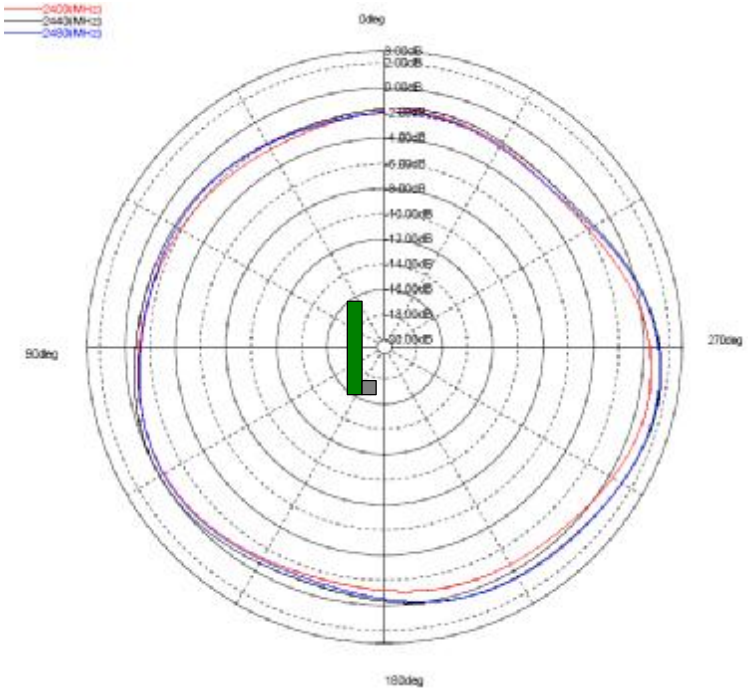
XZ-PLANE

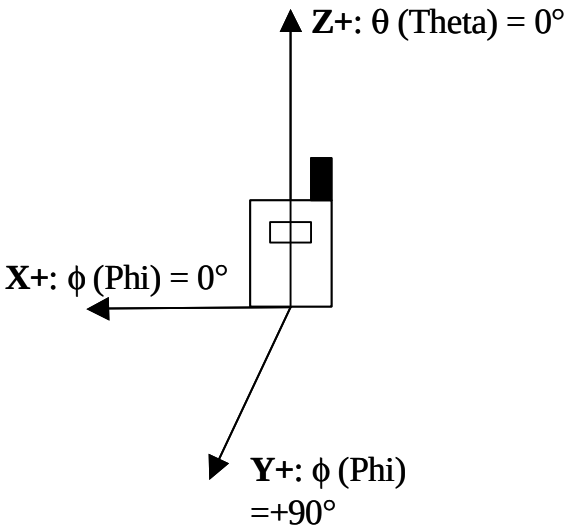


ZY-PLANE



XY-PLANE



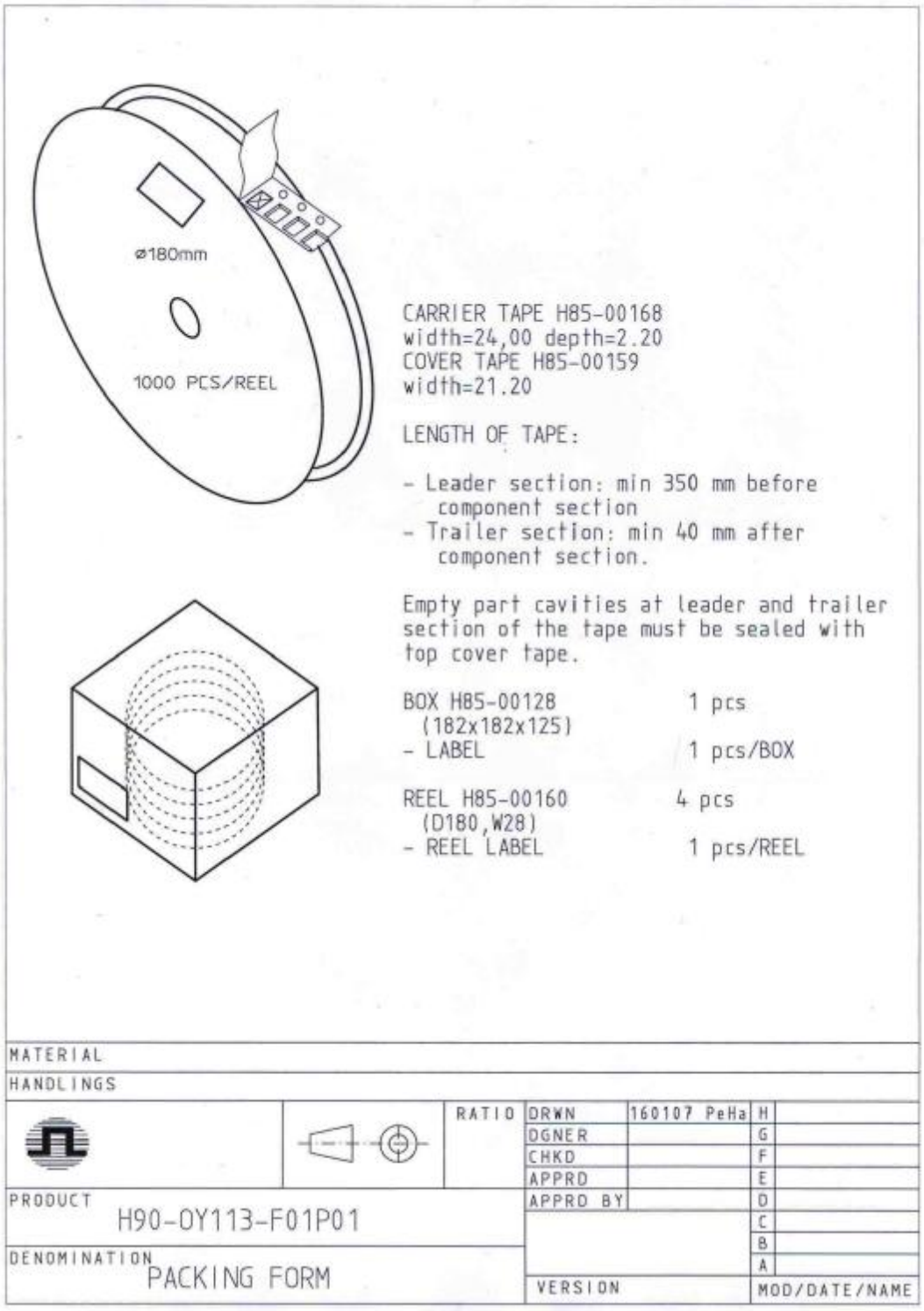


Pulse Finland Oy
Takatie 6
90440 Kempele, Finland
Tel: +358 207 935 500
Fax: +358 207 935 501

Domicile: Kempele
Business ID: 1933992-8
firstnamelastname@pulseeng.com
www.pulseeng.com/antennas

W3056 GPS/BT Antenna Packing

Packing form



Pulse Finland Oy
Takatie 6
90440 Kempele, Finland
Tel: +358 207 935 500
Fax: +358 207 935 501

Domicile: Kempele
Business ID: 1933992-8
firstnamelastname@pulseeng.com
www.pulseeng.com/antennas