

1.575GHz GPS Ceramic Chip Antenna

(Ground cleared under antenna, clearance area **7.80 mm x 5.25 mm**)

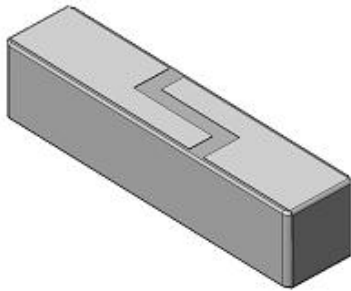
Pulse Part Number: **W3062A**

Features

- Omni directional radiation
- Low profile
- Compact size W x L x H (7 x 1.6 x 1.6 mm)
- Low weight (86 mg)
- Lead free materials
- Fully SMD compatible
- Lead free soldering compatible
- Tape and reel packing
- RoHS Compliant Product

Applications

- GPS L1 band
- 1.575 GHz



Electrical specifications @ +25 °C

Note: Electrical characteristics depend on test board (GP) size and antenna positioning on GP and Ground Clearance area size.

GPS

*Typical performance (testboard size 80 x 37 mm, PWB ground clearance area **7.80 mm x 5.25 mm**)*

Frequency Range [MHz]	RHCP Gain [dBic]	Linear Max Gain [dBi]	Efficiency [%] / [dB]	Return loss min. [dB]	Impedance [Ω]	Operating Temperature [°C]
1575.42 +/- 10	0 (peak) -0,5 (band edges)	2,5 (peak) 2 (band edges)	80 / -1 (peak) 75 / -1,25 (band edges)	-10	50	-40 to +85

Pulse Finland Oy

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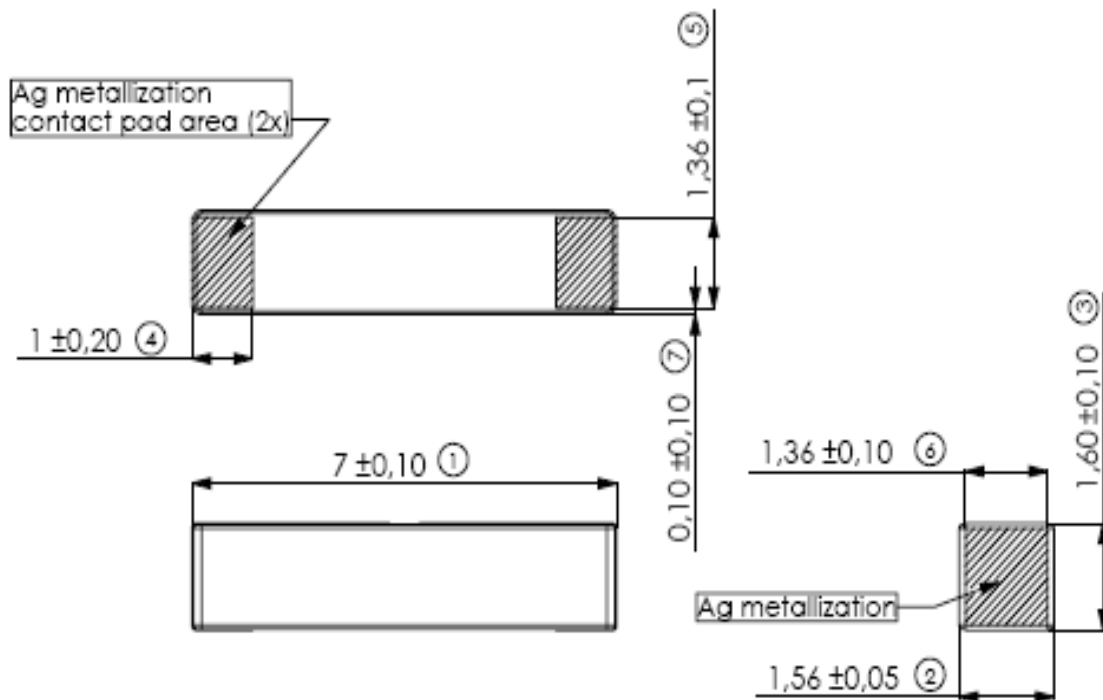


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GPS Ceramic Chip Antenna

(Ground cleared under antenna, clearance area **7.80 mm x 5.25 mm**)

terminal configuration and dimensions



Antenna features		
No.	Terminal Name	Terminal Dimensions
1	Feed / GND	1.00 x 1.36 mm
2	Feed / GND	1.00 x 1.36 mm
Antenna is symmetrical. Either of terminals 1 or 2 can be Feed / GND		

GPS Chip Antenna PWB Layout Specifications

Ground cleared under antenna, clearance area **7,80 x 5,25 mm**

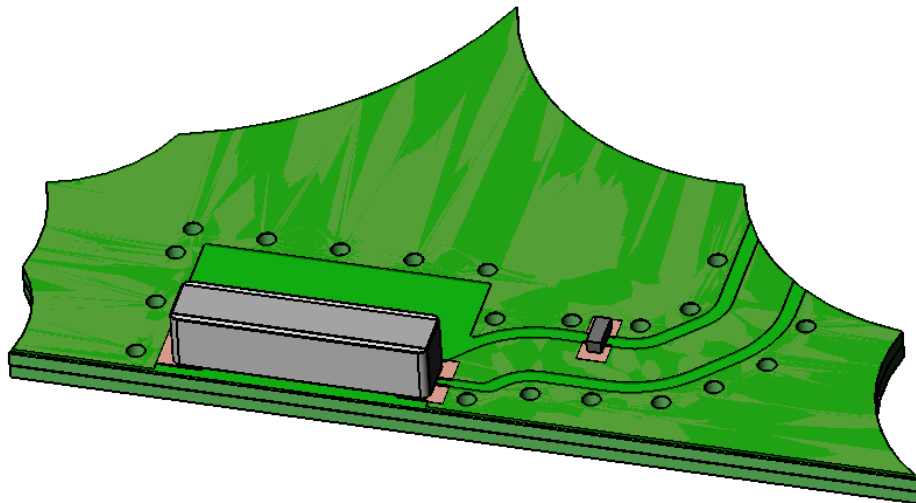
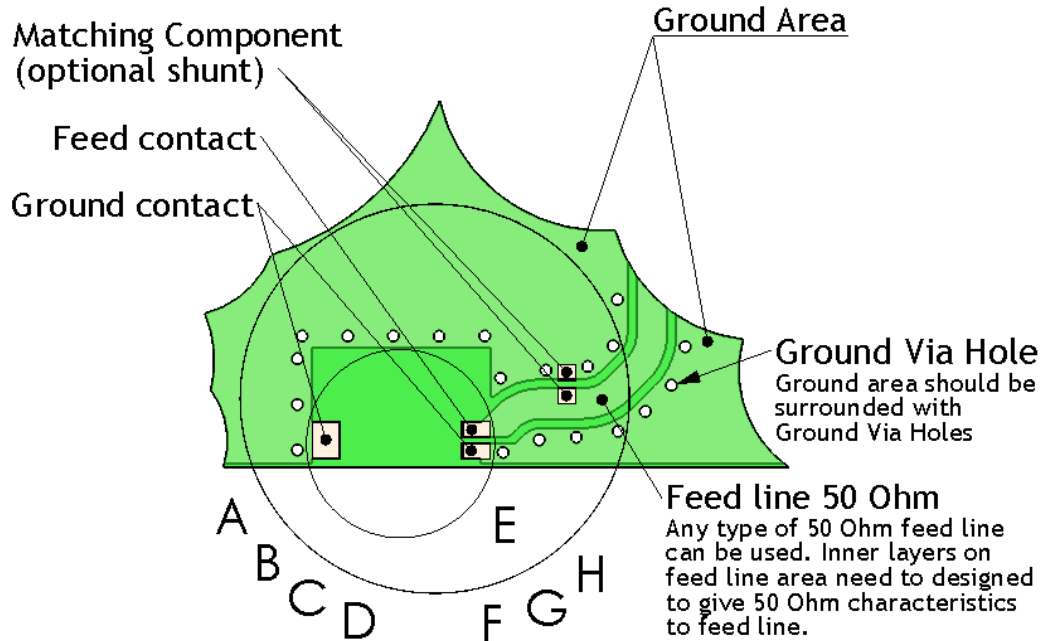
Matching and tuning component values depend on application and surrounding mechanics / materials.

Feed line should be designed to match 50 Ω characteristic impedance, depending on PWB material and thickness.

Recommended test board layout for electrical characteristic measurement, test board outline size 80 x 37 mm.

PWB layout for W3062A

Note: All dimensions are in metric system.



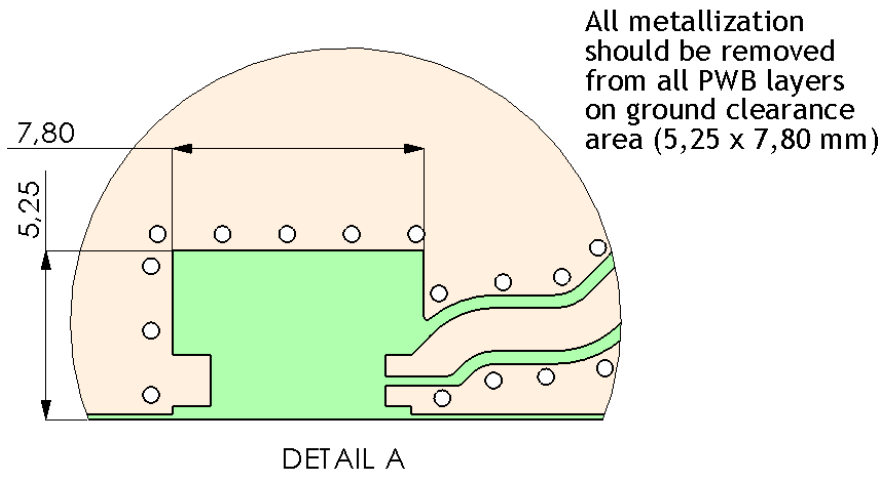
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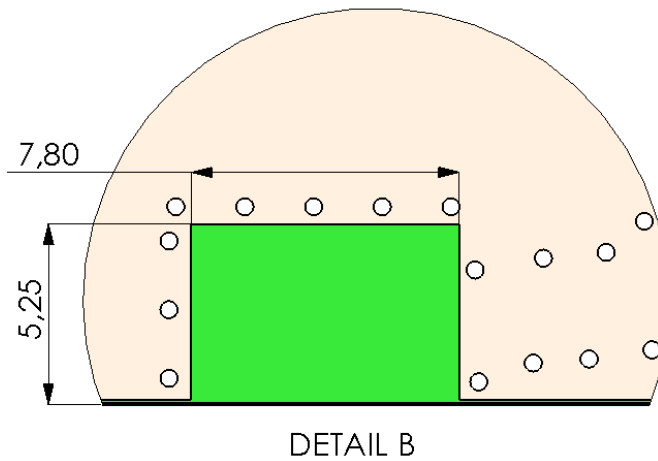
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Ground clearance area for W3062A

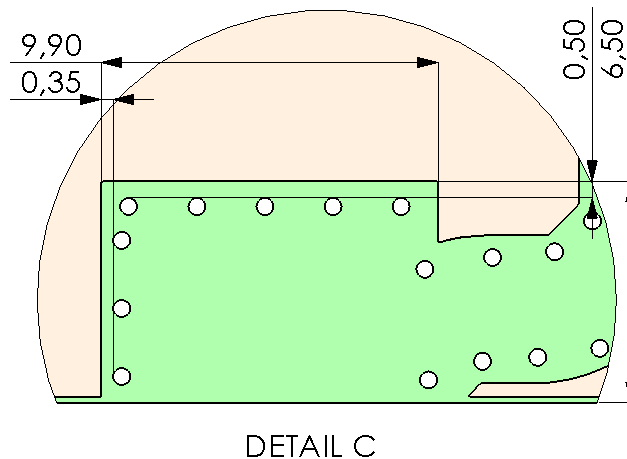
Ground clearance area (5,25 x 7,80 mm)



Opening in bottom/inner ground layers

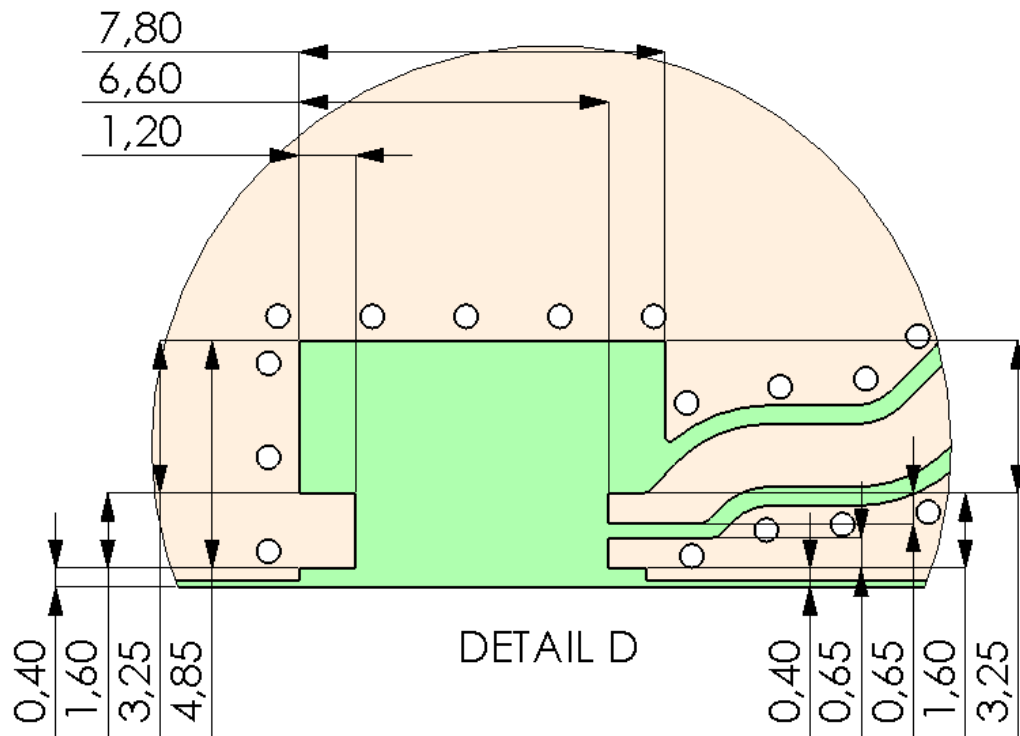


Opening in other layers (no ground/ RF)

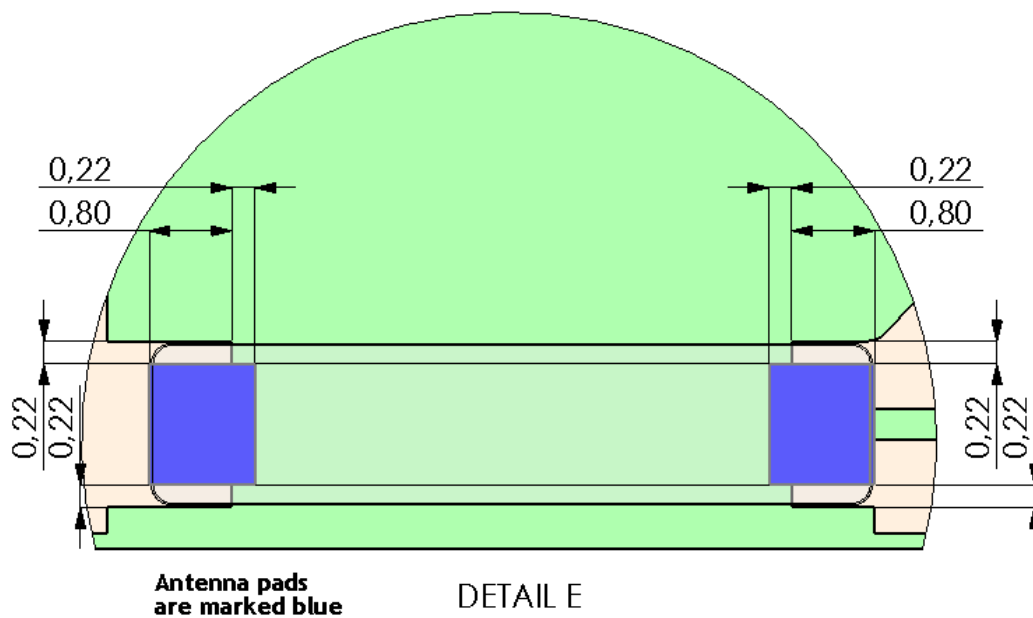


PWB pad dimensions and antenna position for W3062A

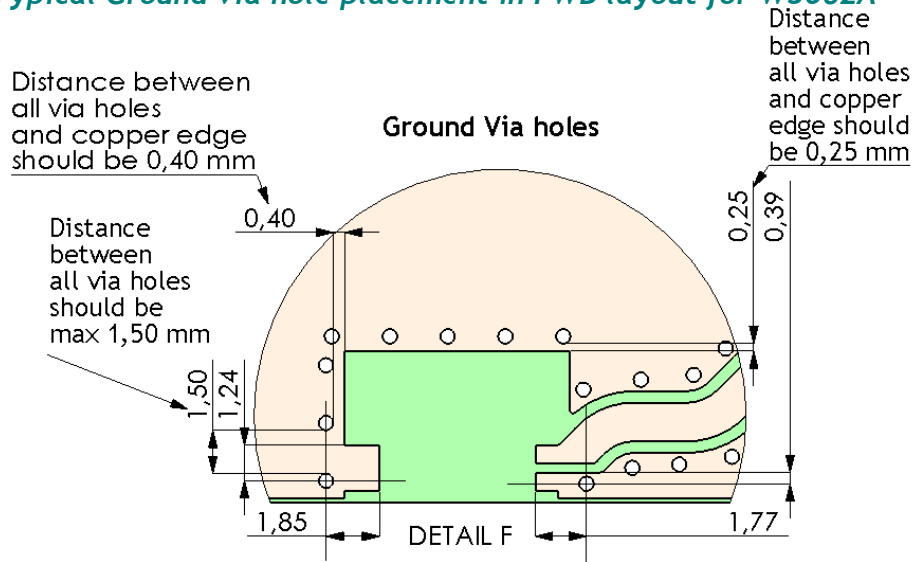
Pad dimensions in top copper



Antenna position on PWB layout

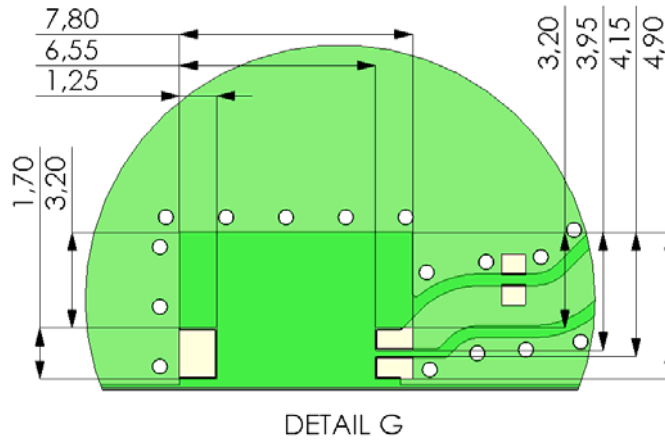


Typical Ground via hole placement in PWB layout for W3062A

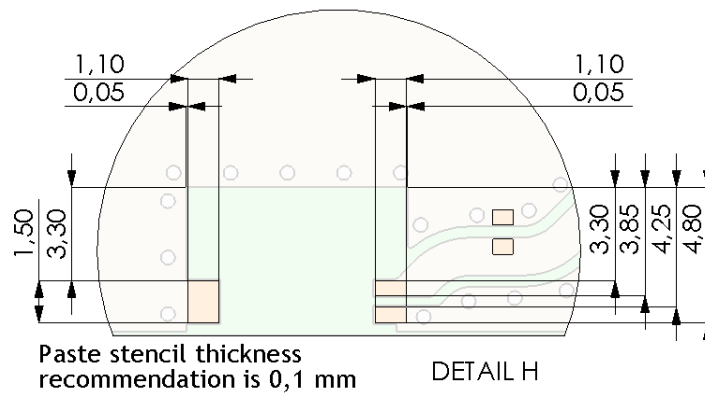


Solder resist opening and paste stencil recommendations for W3062A

Solder resist opening



Paste stencil recommendation



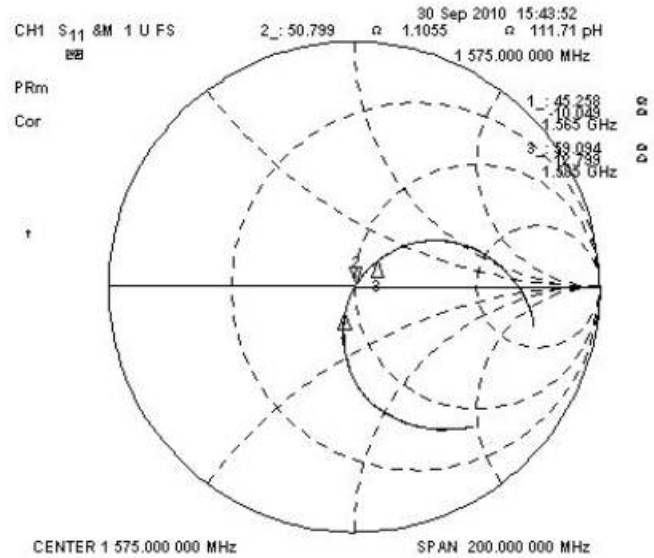
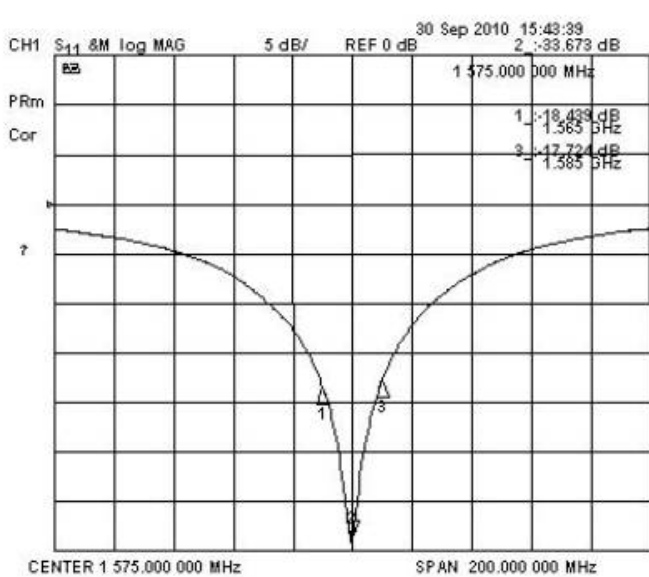
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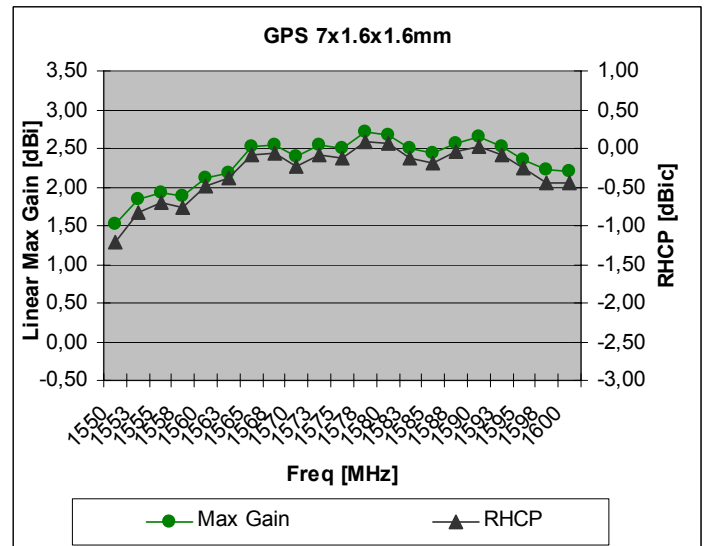
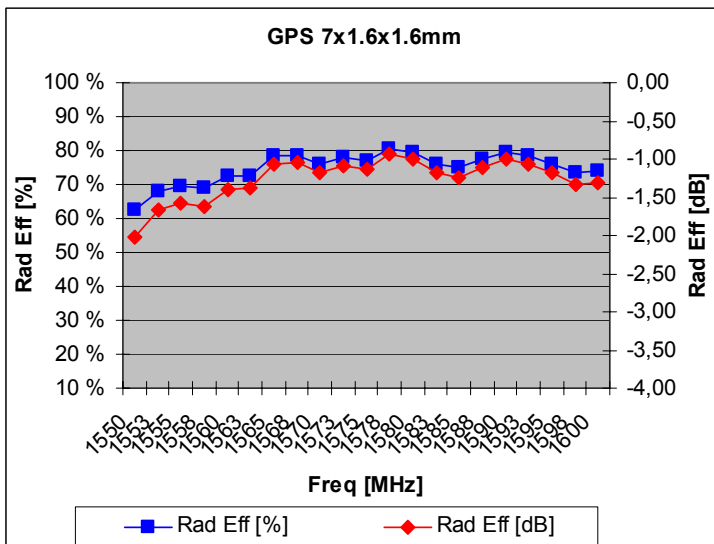
Typical Electrical Characteristics (T=25 °C)

Measured on the 80 x 37mm test board. Matched with 2.2pF shunt capacitor

Typical Return Loss S11/ impedance



Free space efficiency, maximum gain and RHCP



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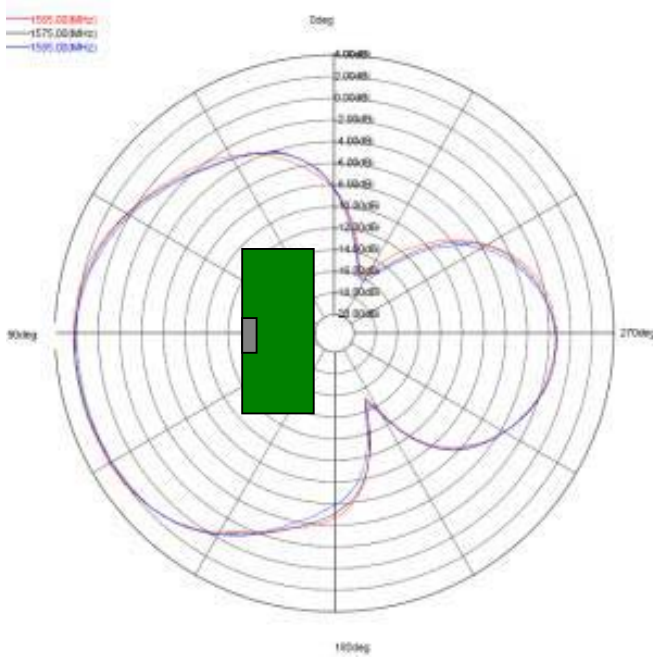


GPS Ceramic Chip Antenna

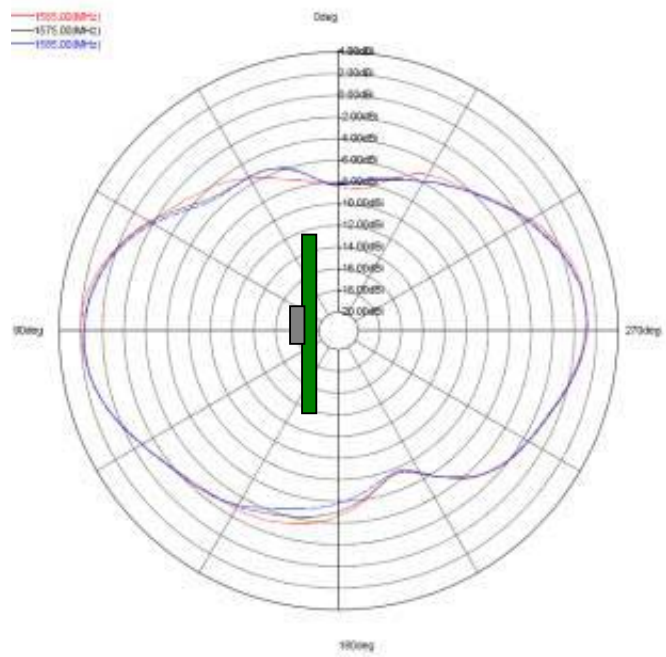
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Typical Free space Radiation Patterns

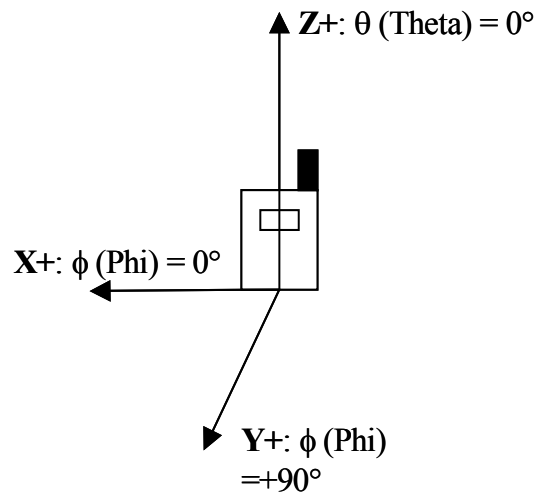
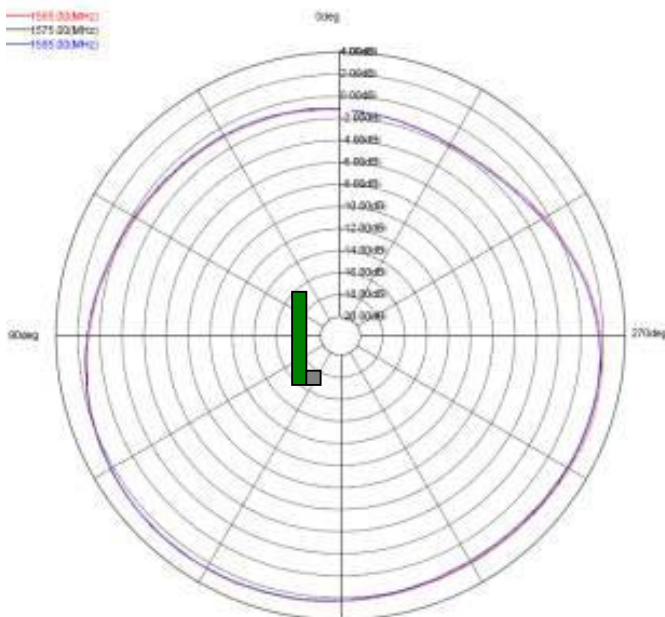
XZ-PLANE



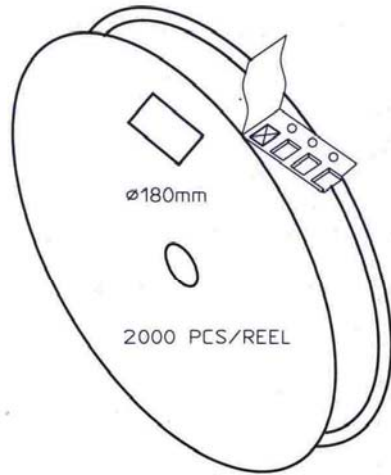
ZY-PLANE



XY-PLANE



Packing form

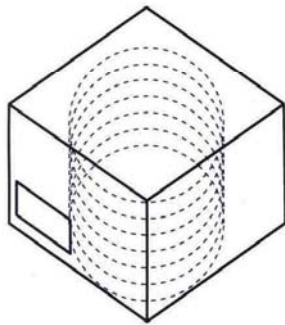


CARRIER TAPE H85-00192
width=16,00 depth=1.70
COVER TAPE H85-00193
width=13.40


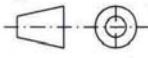
LENGTH OF TAPE:

- Leader section: min 350 mm before component section
- Trailer section: min 40 mm after component section.

Empty part cavities at leader and trailer section of the tape must be sealed with top cover tape.



- BOX H85-00128 1 pcs
(182x182x125)
- LABEL 1 pcs/BOX
- REEL H85-00164 6 pcs
(D180, W28)
- REEL LABEL 1 pcs/REEL

MATERIAL							
HANDLINGS							
		RATIO	DRWN	161007	PeHa	H	
			DGNER			G	
			CHKD			F	
			APPRD			E	
PRODUCT			H90-0Y838		APPRD BY		D
DENOMINATION			PACKING FORM				C
							B
							A
			VERSION		MOD/DATE/NAME		