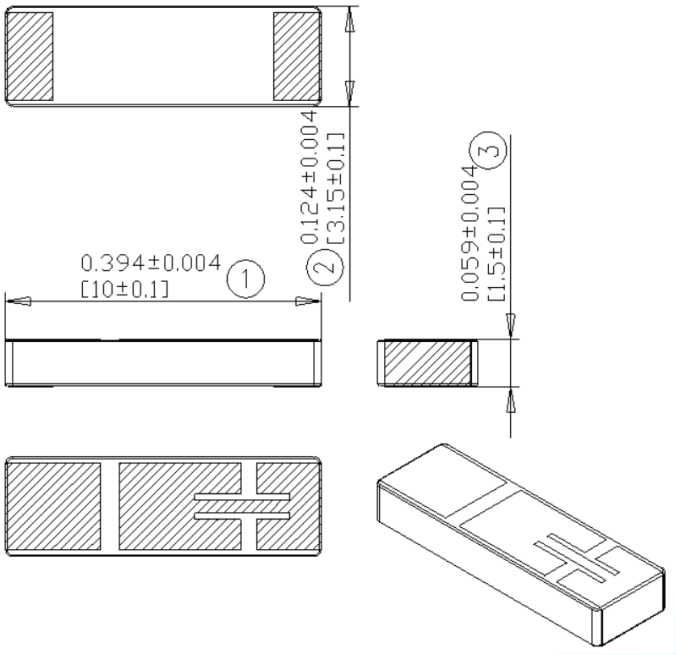
PulseLARSEN Antennas

TECHNICAL DATA SHEET

Description: Dual Band WLAN Ceramic

Series: Ceramic

PART NUMBER: W3006



All dimensions are in inches/mm

Features:

- - Omnidirectional radiation
- - Low profile
- - Compact size WxLxH (10 x 3.2 x 1.5 mm)
- - Low weight (240 mg)
- - Fully SMD compatible
- - Lead free soldering compatible
- - Tape and reel packing
- - RoHS Compliant Product
- - Single feed point

Applications:

- - IEEE 802.11a/b/g
- - 5 GHz WLAN
- - 2.4 GHz WLAN
- - 2.4 GHz ISM Band Systems
- - ZigBee IEEE 802.15.4

Issue: 1719

RoHS COMPLIANT

For more information:

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18110 SE 34th St Bldg 2 Suite 250
Vancouver, WA 98683
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Herrenberg, Germany
Tel: 49 7032 7806 0

Pulse (Suzhou) Wireless Products Co, Inc.
99 Huo Ju Road(#29 Bldg,4th Phase
Suzhou New District
Jiangsu Province, Suzhou 215009 PR China
Tel: 86 512 6807 9998

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ELECTRICAL SPECIFICATIONS

Frequency1	2.4-2.5GHz
Frequency2	5.15-5.85GHz
Nominal Impedance	50Ω
Return Loss Frequency1	-8 dB max
Return Loss Frequency2	-10 dB max
Efficiency Frequency1	60 %
Efficiency Frequency2	70 %
Peak Gain Frequency1	2.2dBi
Peak Gain Frequency2	4.5dBi
Polarization	Linear
Interface	SMD mount ceramic antenna

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MECHANICAL SPECIFICATIONS

Weight	0.24g
Size	10 x 3.2 x 1.5 mm

ENVIRONMENTAL SPECIFICATIONS

Operating temperature	-40~+85° C
Temperature	-40~+85° C
Humidity	Cyclic 6 +25° C/+55° C 95%
Vibration	
Sinusoidal 2-8Hz	7.5 mm
Sinusoidal 8-200Hz	20 m/s²
Shocks	0.5 m/s
Salt mist	96 hours

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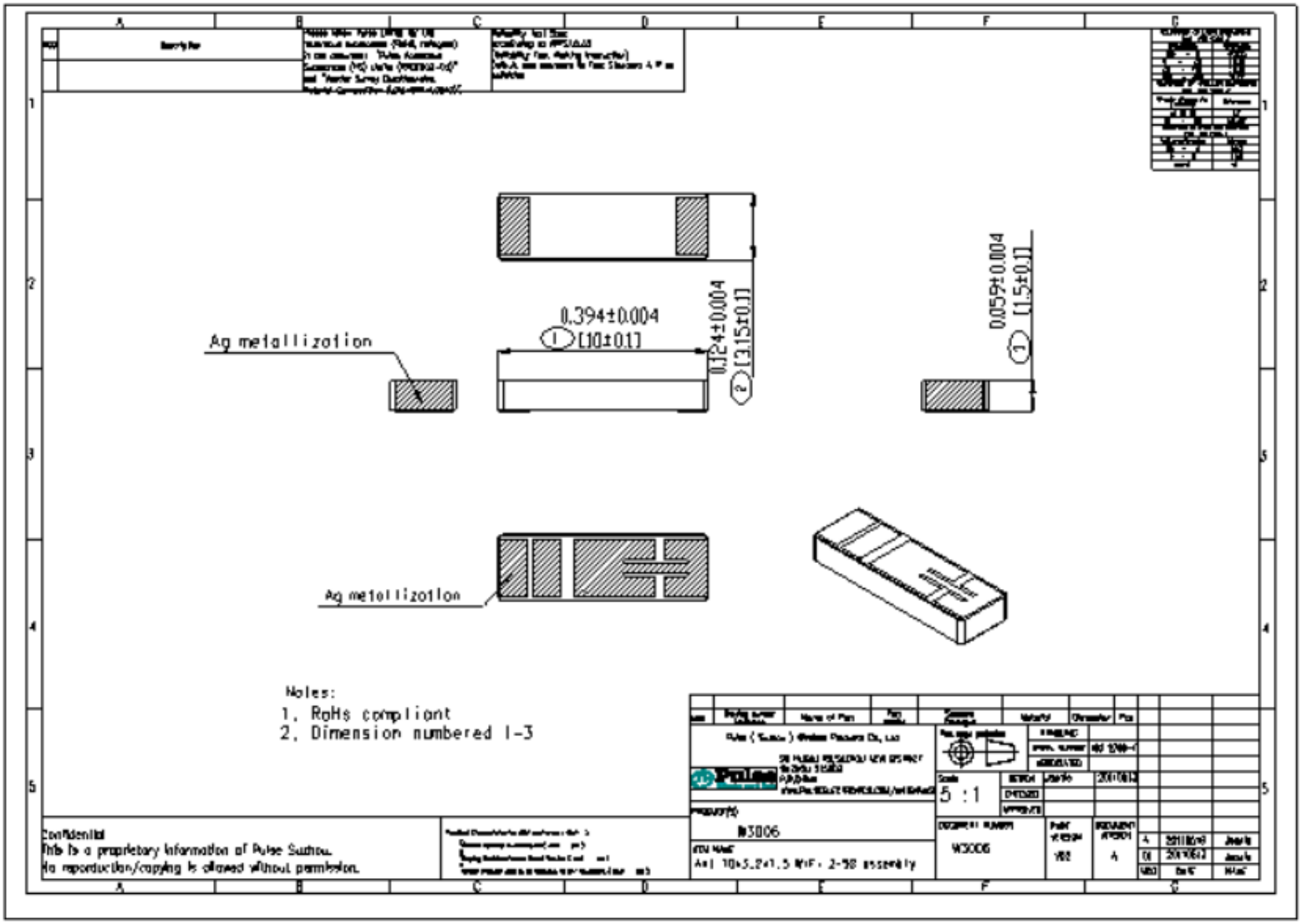

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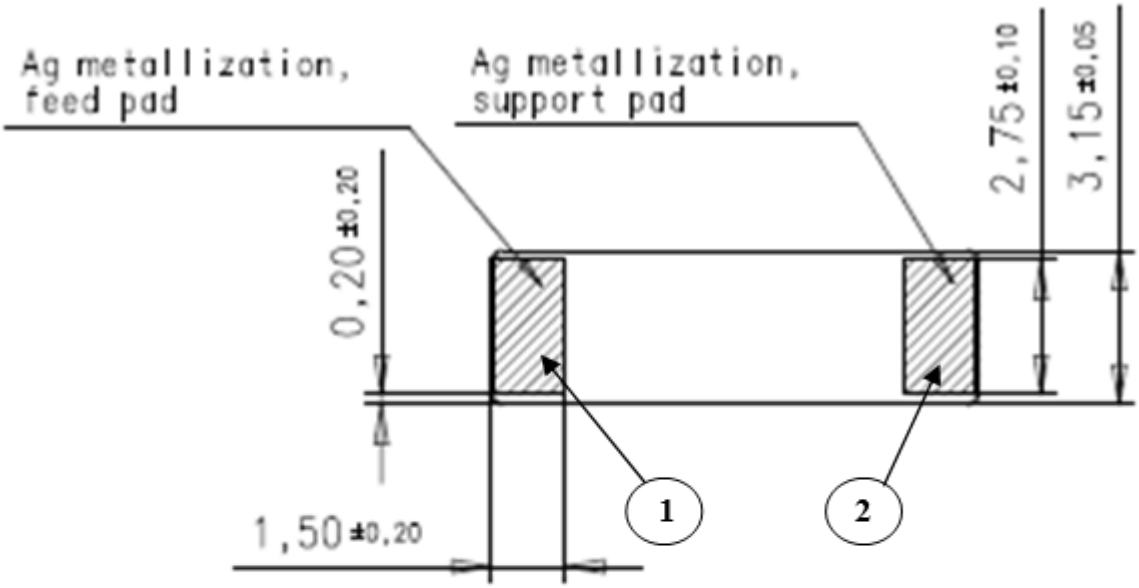

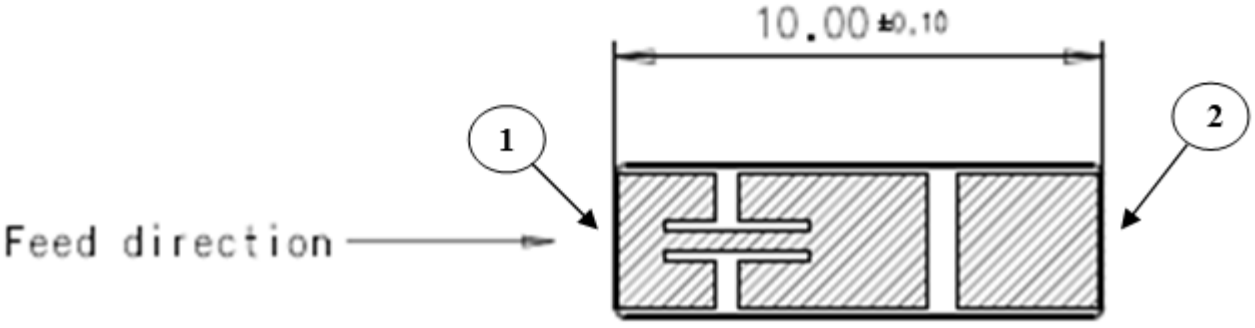

No.	Terminal Name	Terminal Dimensions
1	Feed	1.5 x 2.75 mm
2	Support pad	1.5 x 2.75 mm
Antenna feed pad can be identified by looking top surface metallization pattern		

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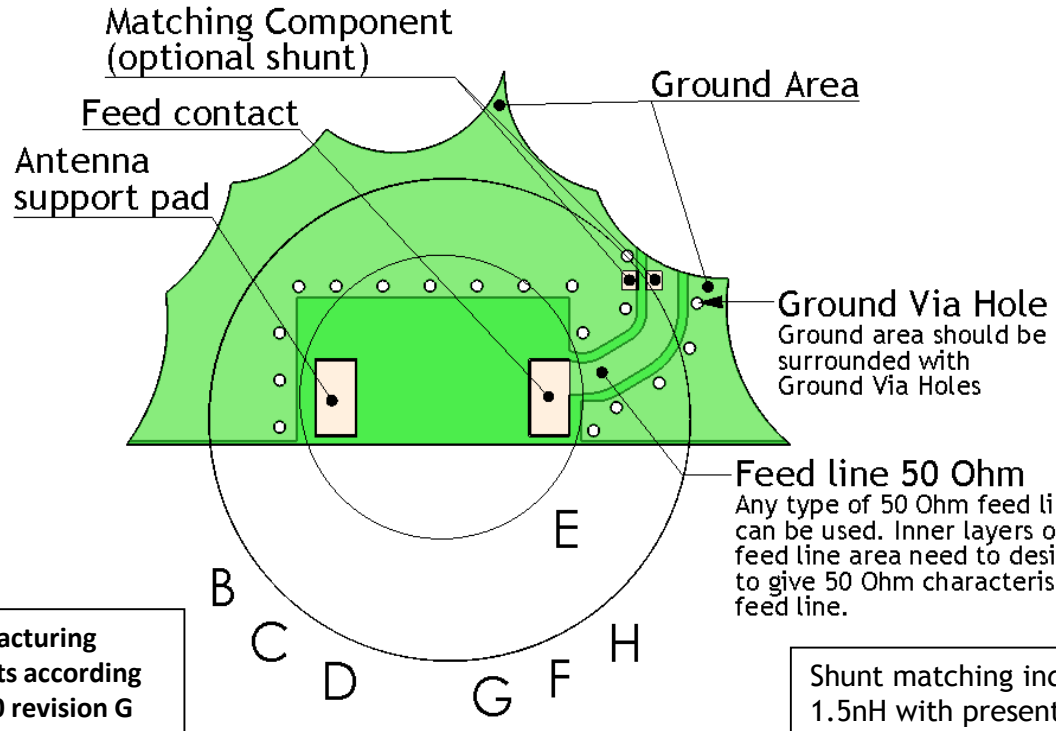
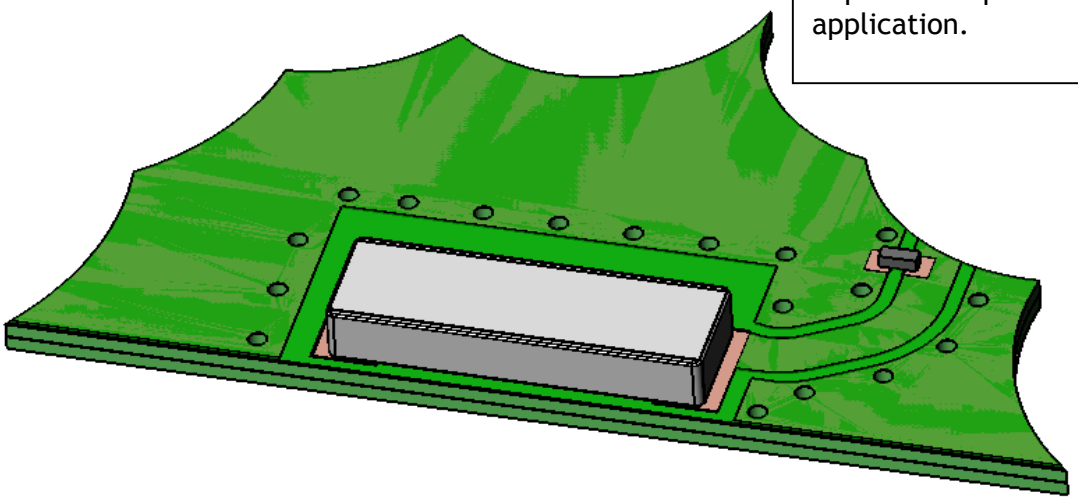
Ground cleared under antenna, clearance area 11.60 mm x 6.25 mm



PWB manufacturing requirements according to IPC-A-600 revision G or similar

Shunt matching inductor, 1.5nH with presented setup.

Exact inductor value depends on specific application.



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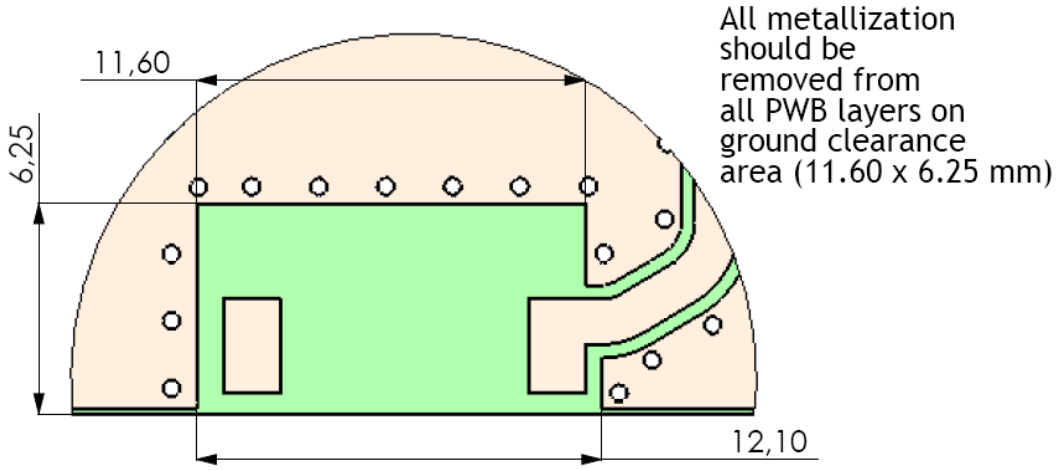
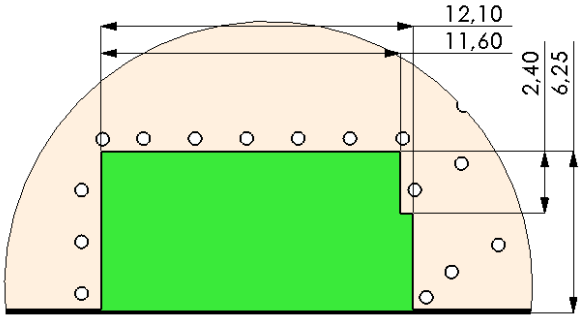
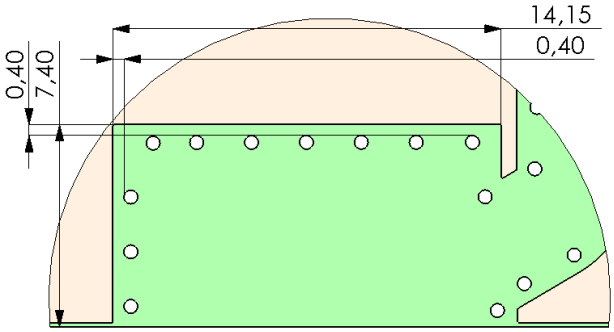
Ground clearance area (11.60 x 6.25 mm)



Opening in bottom/inner ground layers



Opening in other layers (no ground/ RF)



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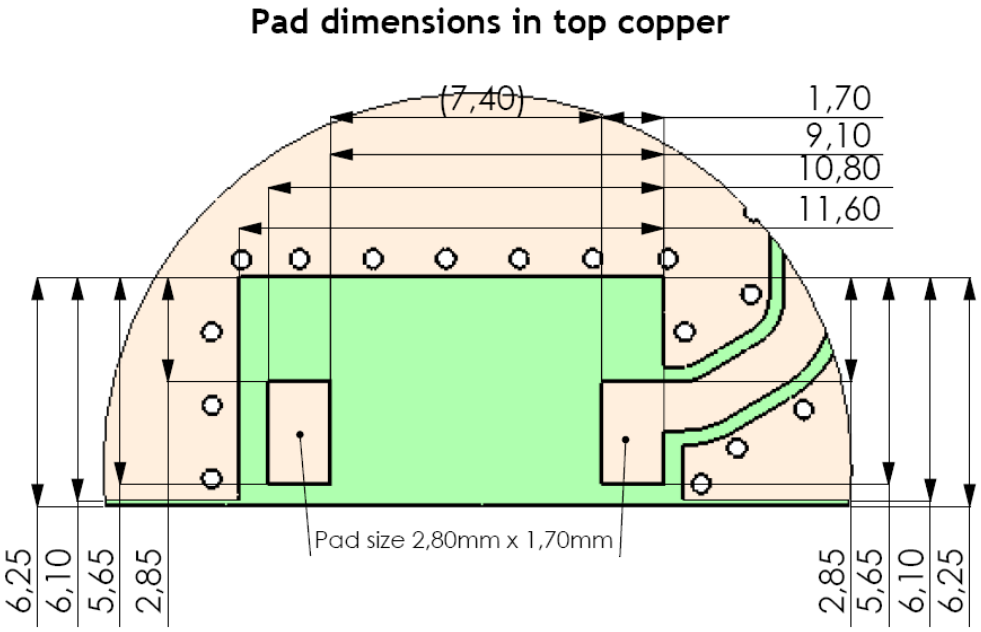
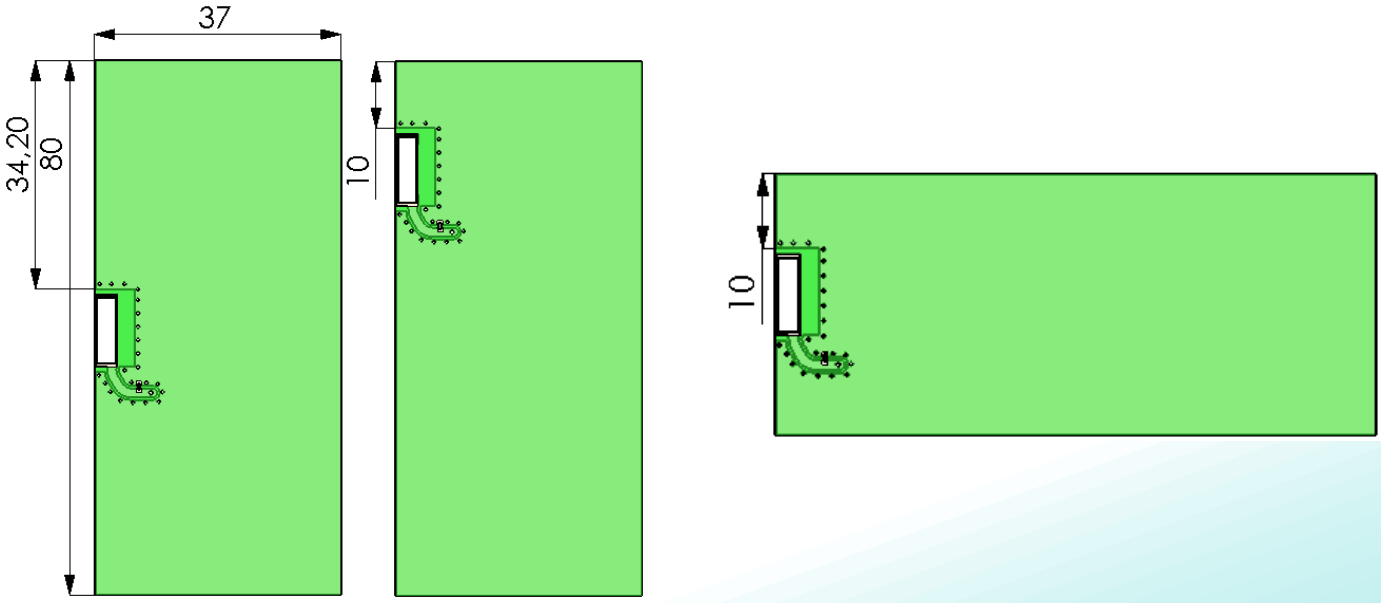
MECHANICAL DRAWING AND TERMINAL CONFIGURATION

Recommended Antenna Pad Dimensions on PWB Layout (top surface)



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



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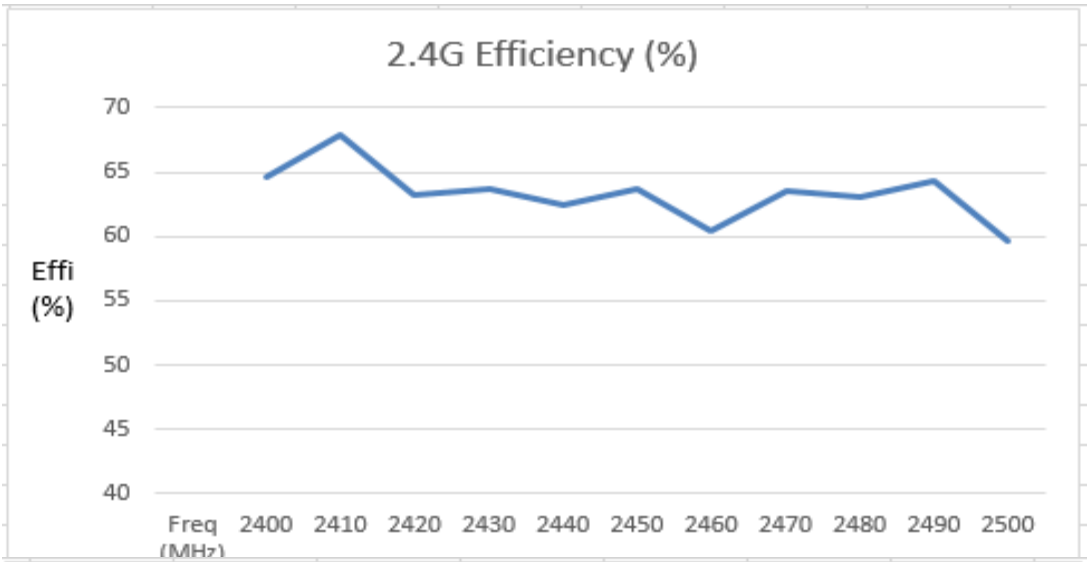
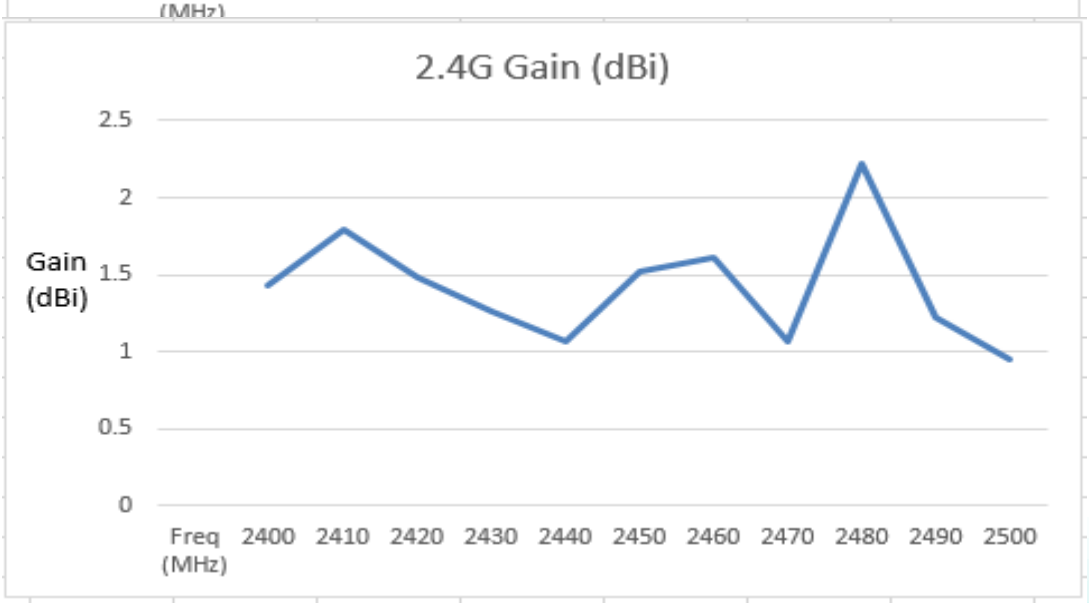
CHARTS

Measured on the 80x37mm test board with matching circuit, 1.5nH shunt inductor
Ground cleared under antenna, clearance area 11.60 mm x 6.25 mm

Free space efficiency and maximum gain for 2.4G





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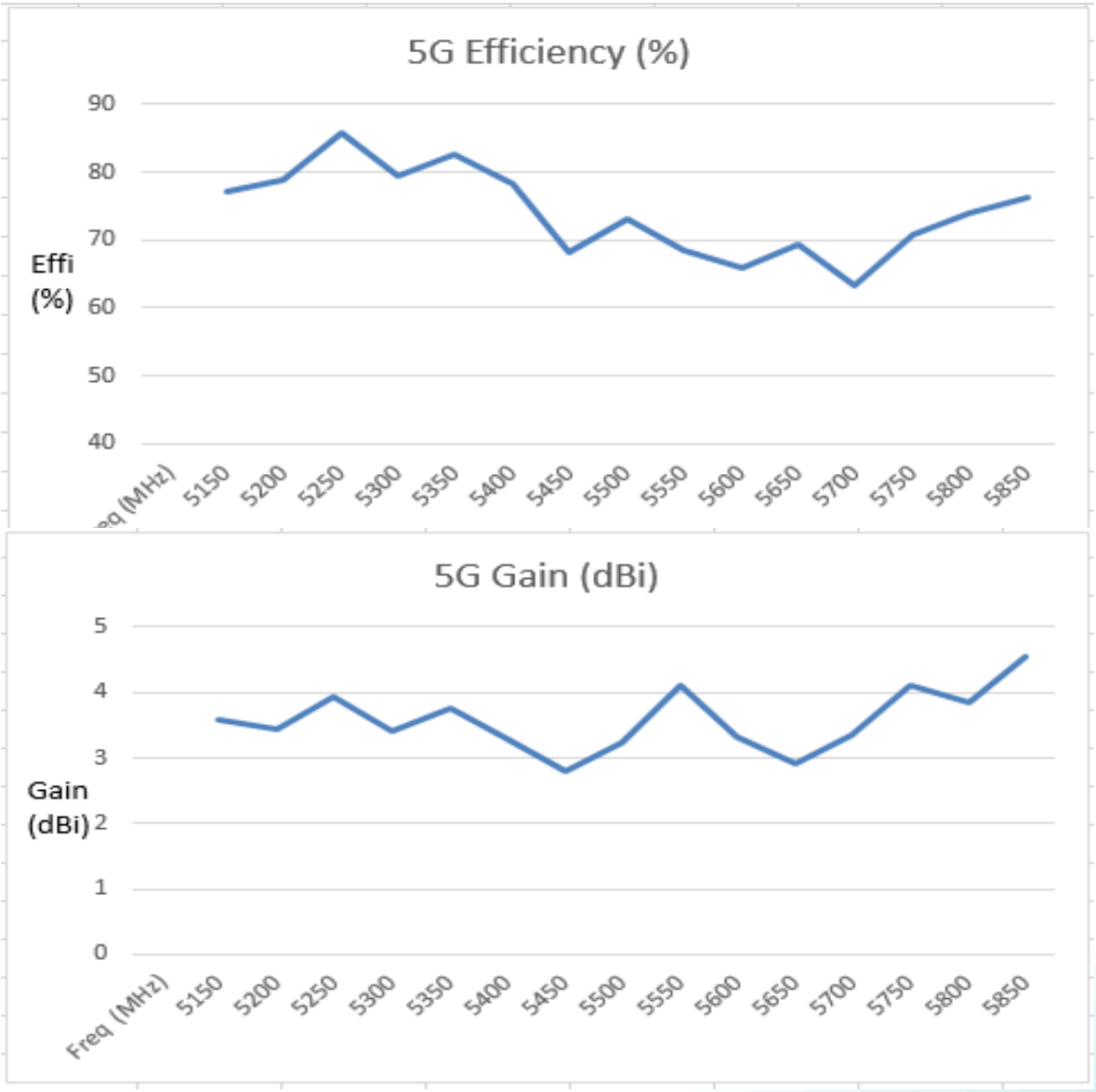
Ground cleared under antenna, clearance area 11.60 mm x 6.25 mm

Free space efficiency and maximum gain for 5G



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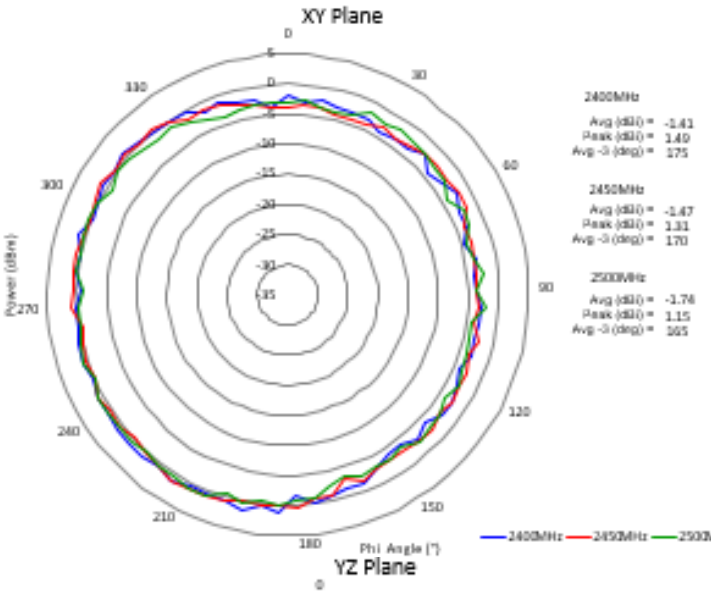
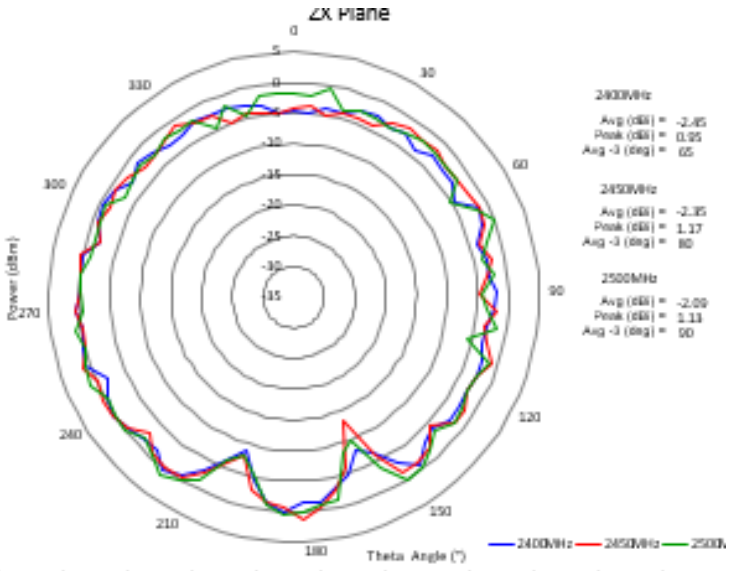
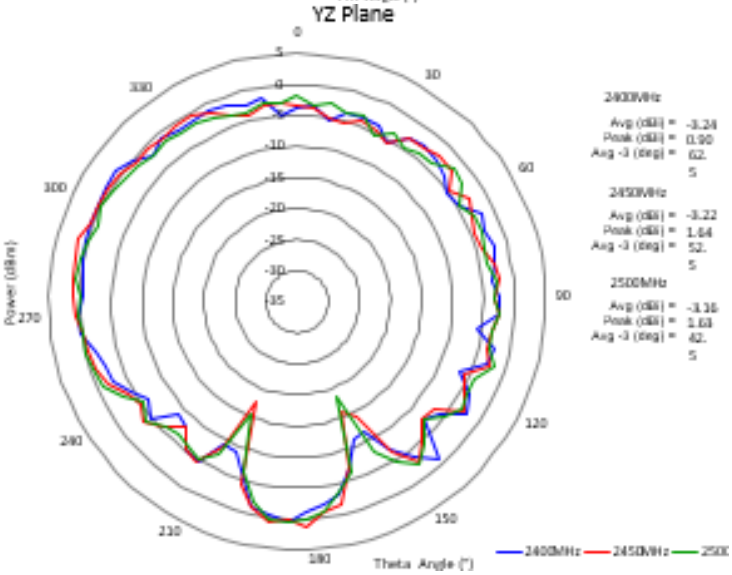
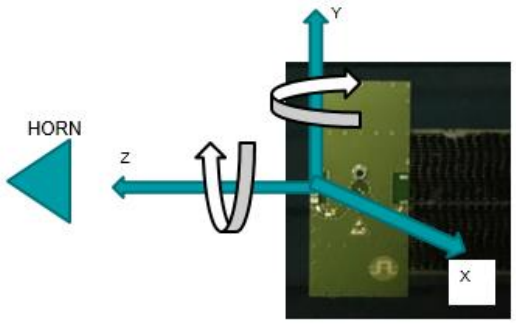
2.4 GHz Typical Free Space Radiation Patterns









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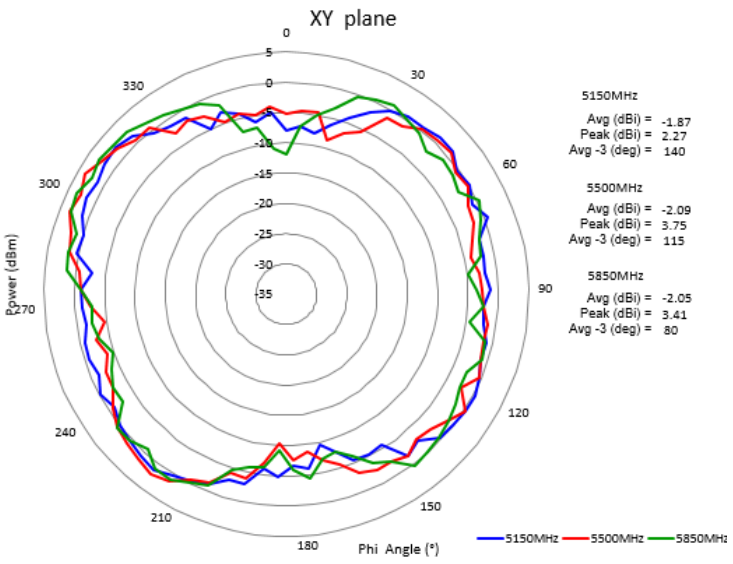
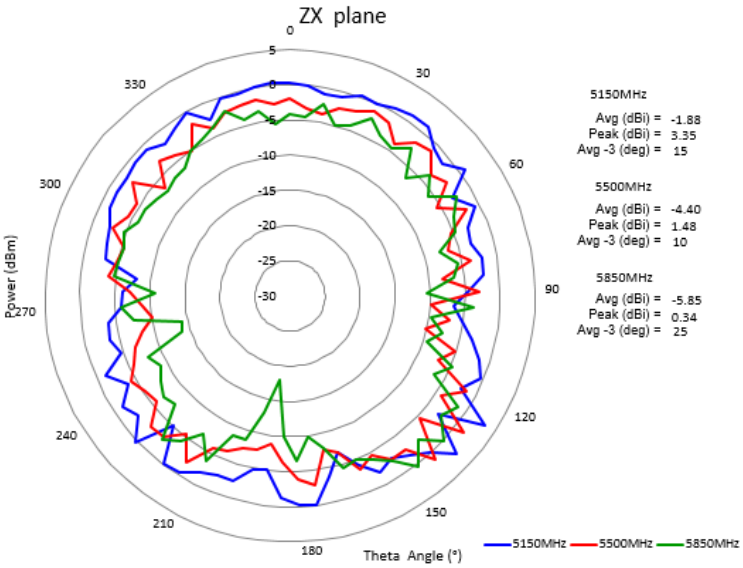
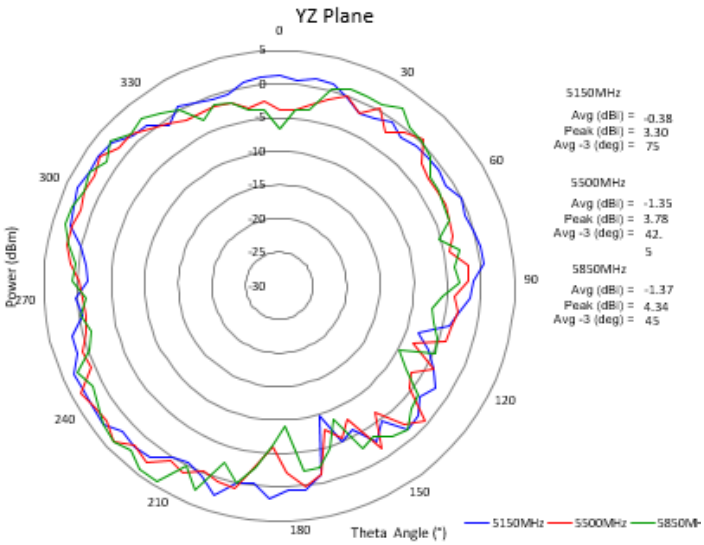
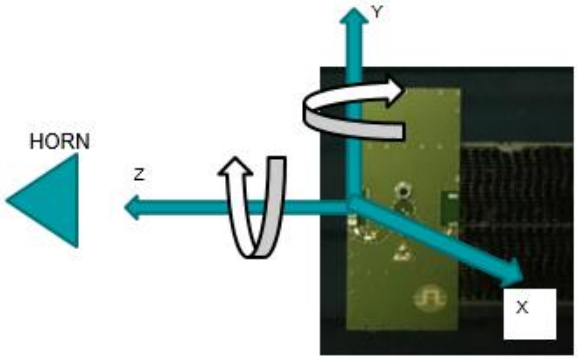
5GHz Typical Free Space Radiation Patterns









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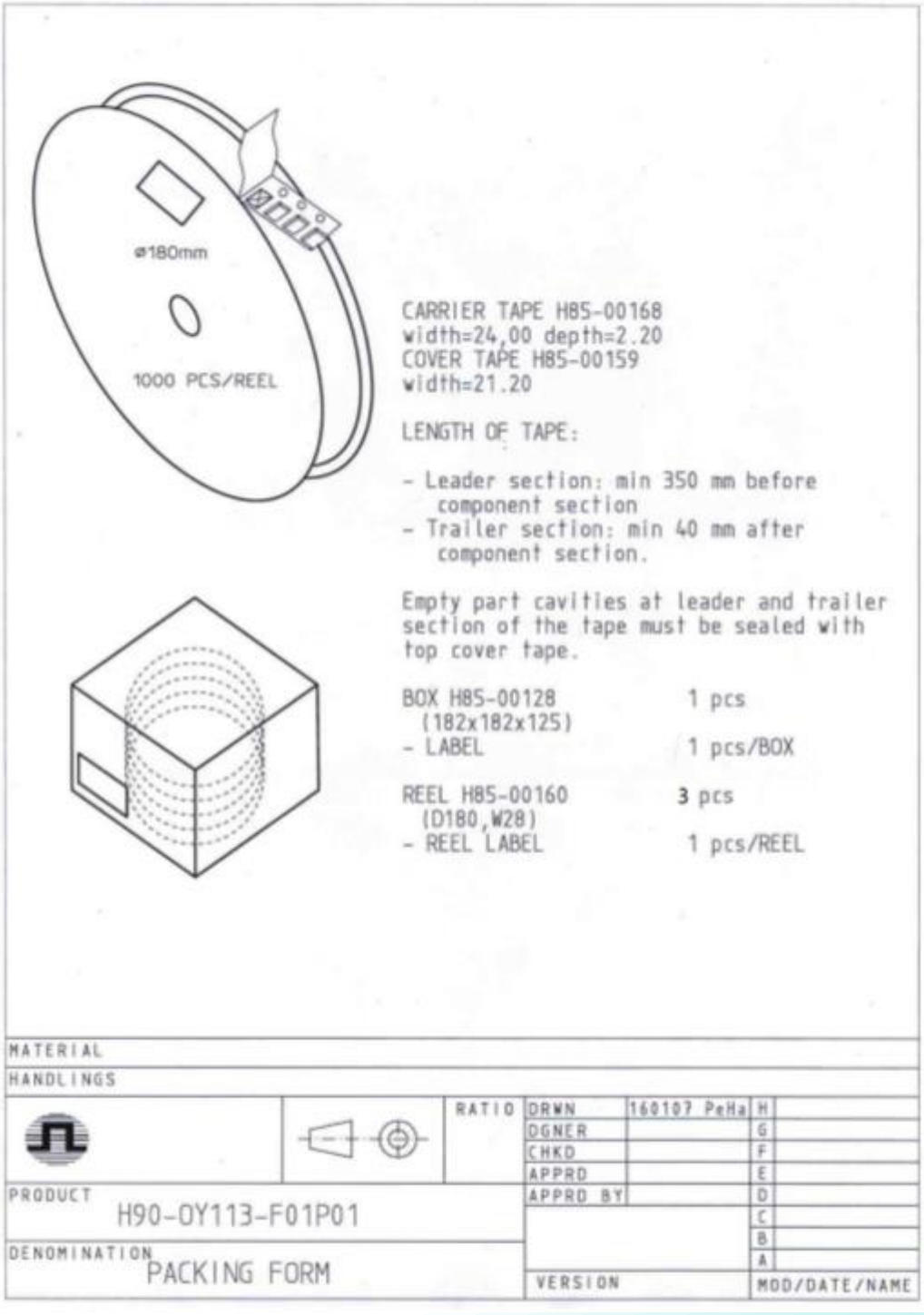
PACKAGING



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