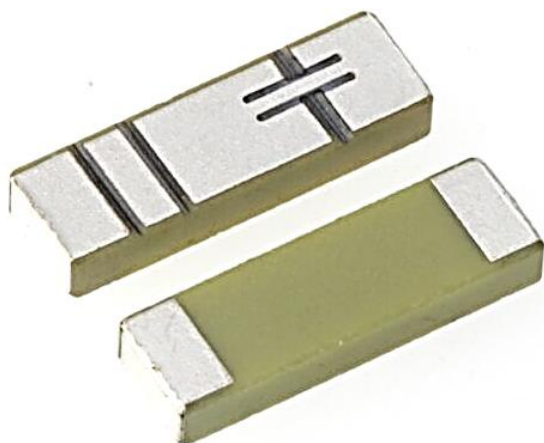


Description: Dual Band WLAN Ceramic

Series: Ceramic

PART NUMBER: W3006

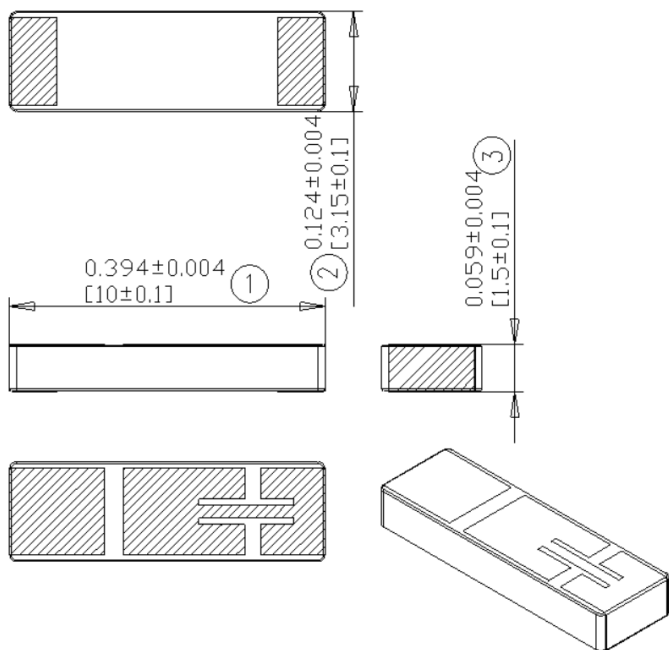


Features:

- - 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



All dimensions are in inches/mm

Issue: 1719

In the effort to improve our products, we reserve the right to make changes judged to be necessary.

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Pulse GmbH & Do, KG  
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Herrenberg, Germany  
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Pulse (Suzhou) Wireless Products Co, Inc.  
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Suzhou New District  
Jiangsu Province, Suzhou 215009 PR China  
Tel: 86 512 6807 9998



**Description: Dual Band WLAN Ceramic****Series: Ceramic****PART NUMBER: W3006****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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Description: Dual Band WLAN Ceramic

Series: Ceramic

PART NUMBER: W3006

**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/s <sup>2</sup>
Shocks	0.5 m/s
Salt mist	96 hours

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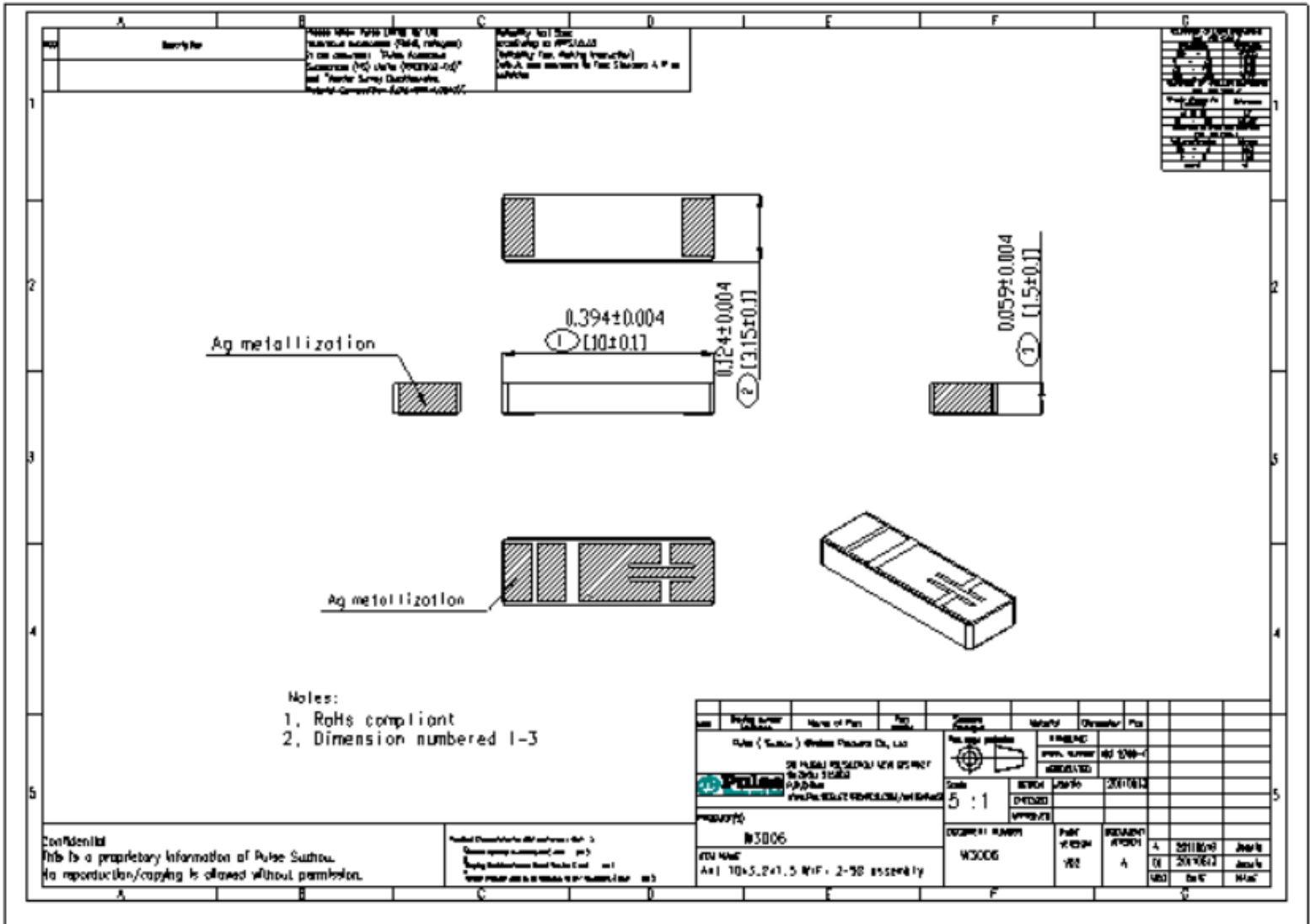
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Description: Dual Band WLAN Ceramic

Series: Ceramic

PART NUMBER: W3006

MECHANICAL DRAWING AND TERMINAL CONFIGURATION



Issue: 1719

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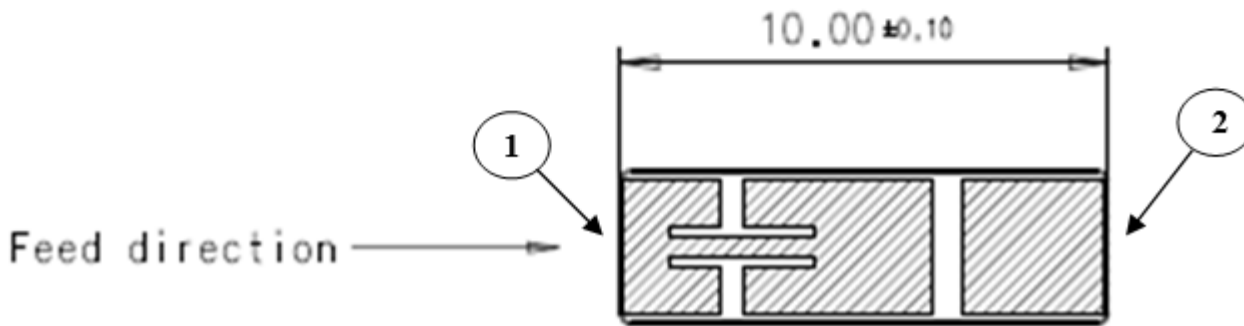
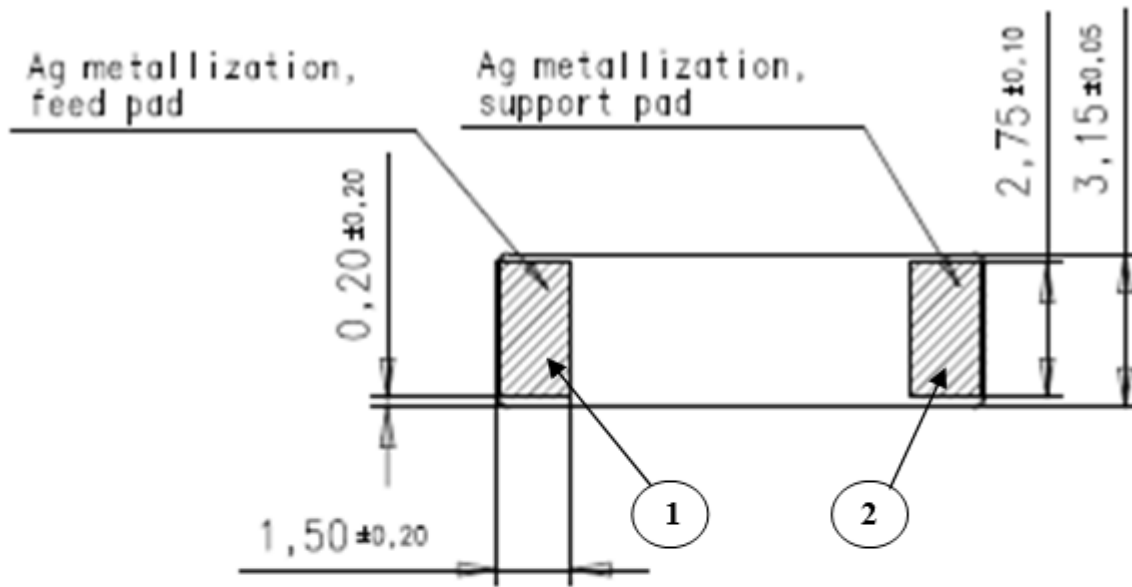
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Description: Dual Band WLAN Ceramic

Series: Ceramic

PART NUMBER: W3006

MECHANICAL DRAWING AND TERMINAL CONFIGURATION



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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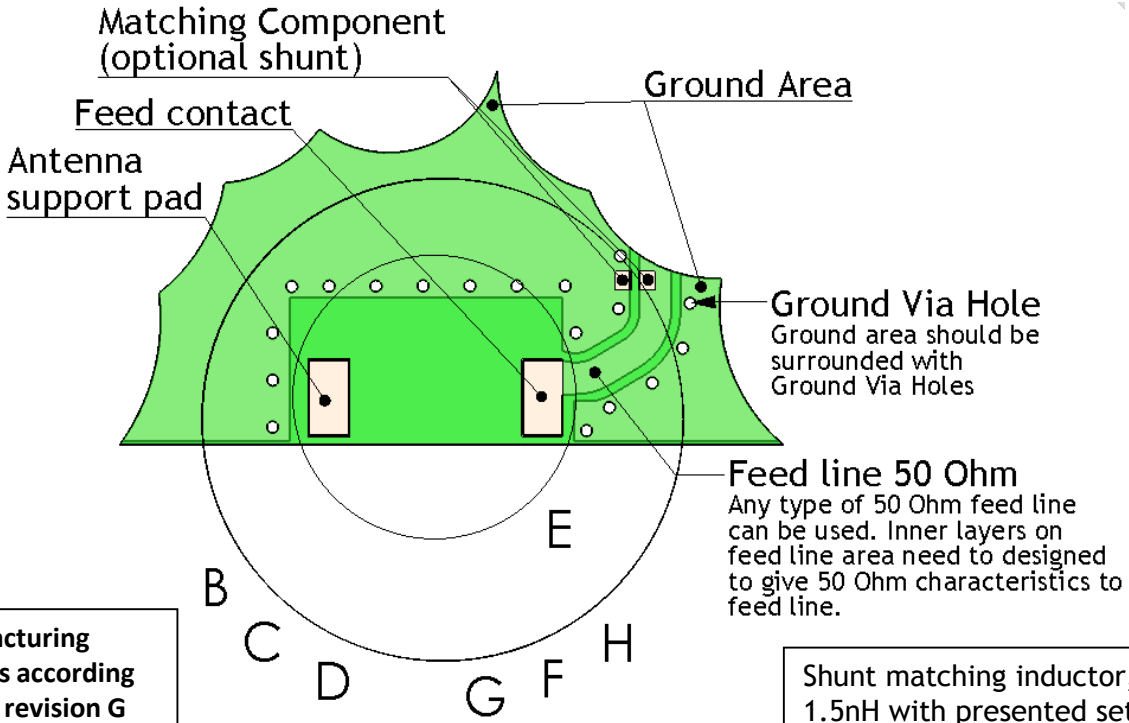
Description: Dual Band WLAN Ceramic

Series: Ceramic

PART NUMBER: W3006

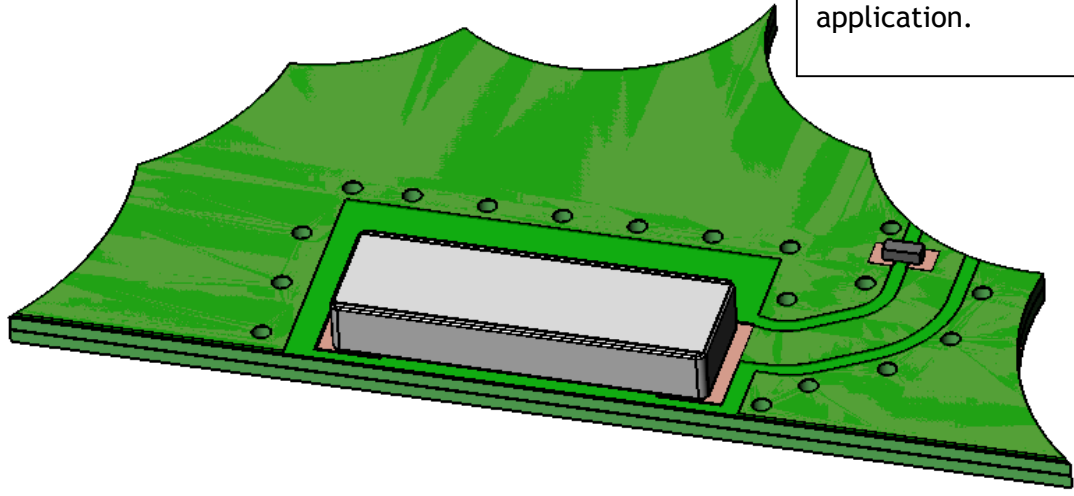
MECHANICAL DRAWING AND TERMINAL CONFIGURATION

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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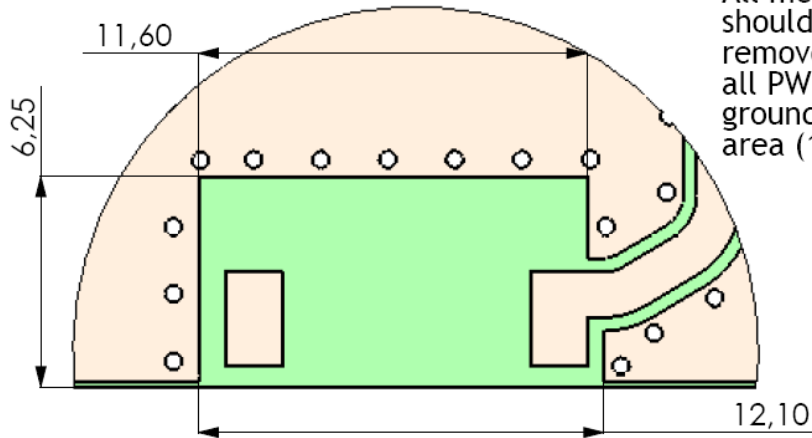
Description: Dual Band WLAN Ceramic

Series: Ceramic

PART NUMBER: W3006

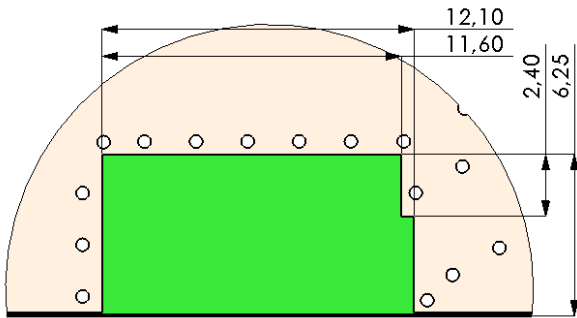
MECHANICAL DRAWING AND TERMINAL CONFIGURATION

Ground clearance area (11.60 x 6.25 mm)

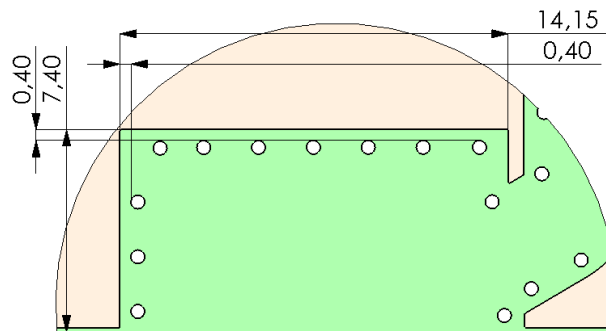


All metallization should be removed from all PWB layers on ground clearance area (11.60 x 6.25 mm)

Opening in bottom/inner ground layers



Opening in other layers (no ground/ RF)



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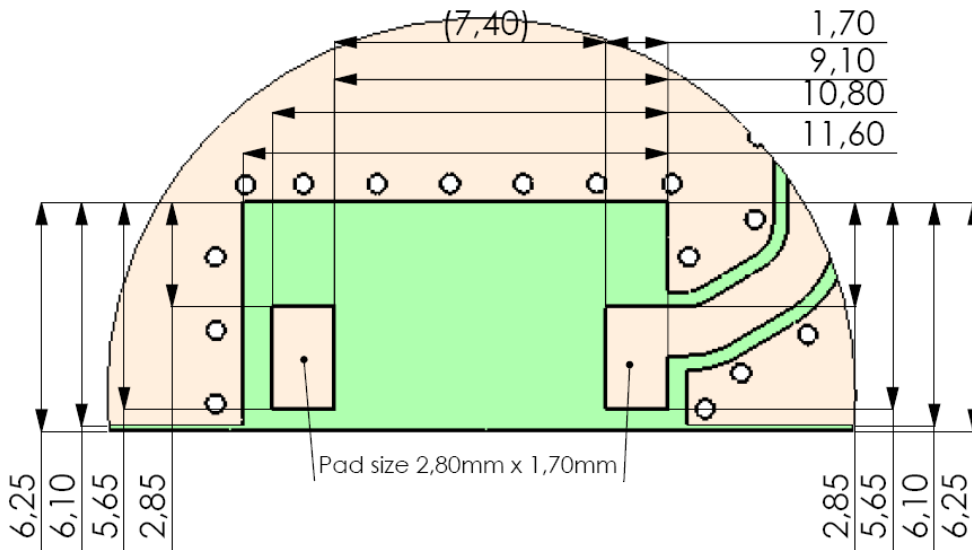
Series: Ceramic

PART NUMBER: W3006

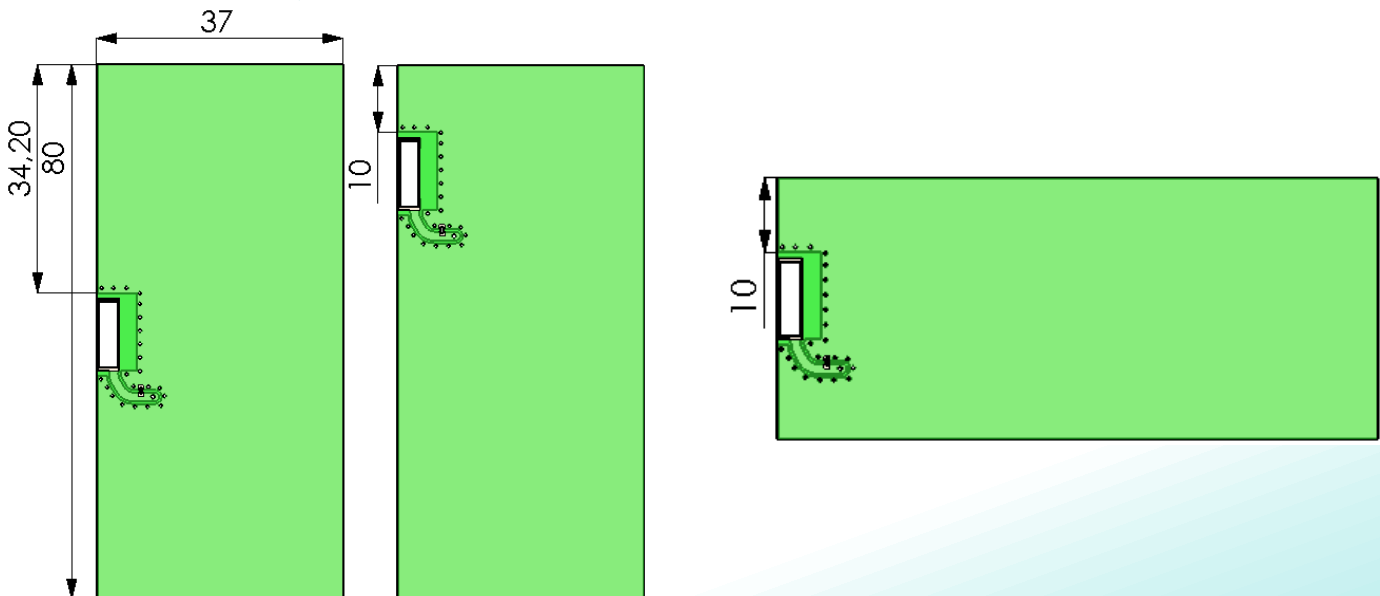
**MECHANICAL DRAWING AND TERMINAL CONFIGURATION**

*Recommended Antenna Pad Dimensions on PWB Layout (top surface)*

Pad dimensions in top copper



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



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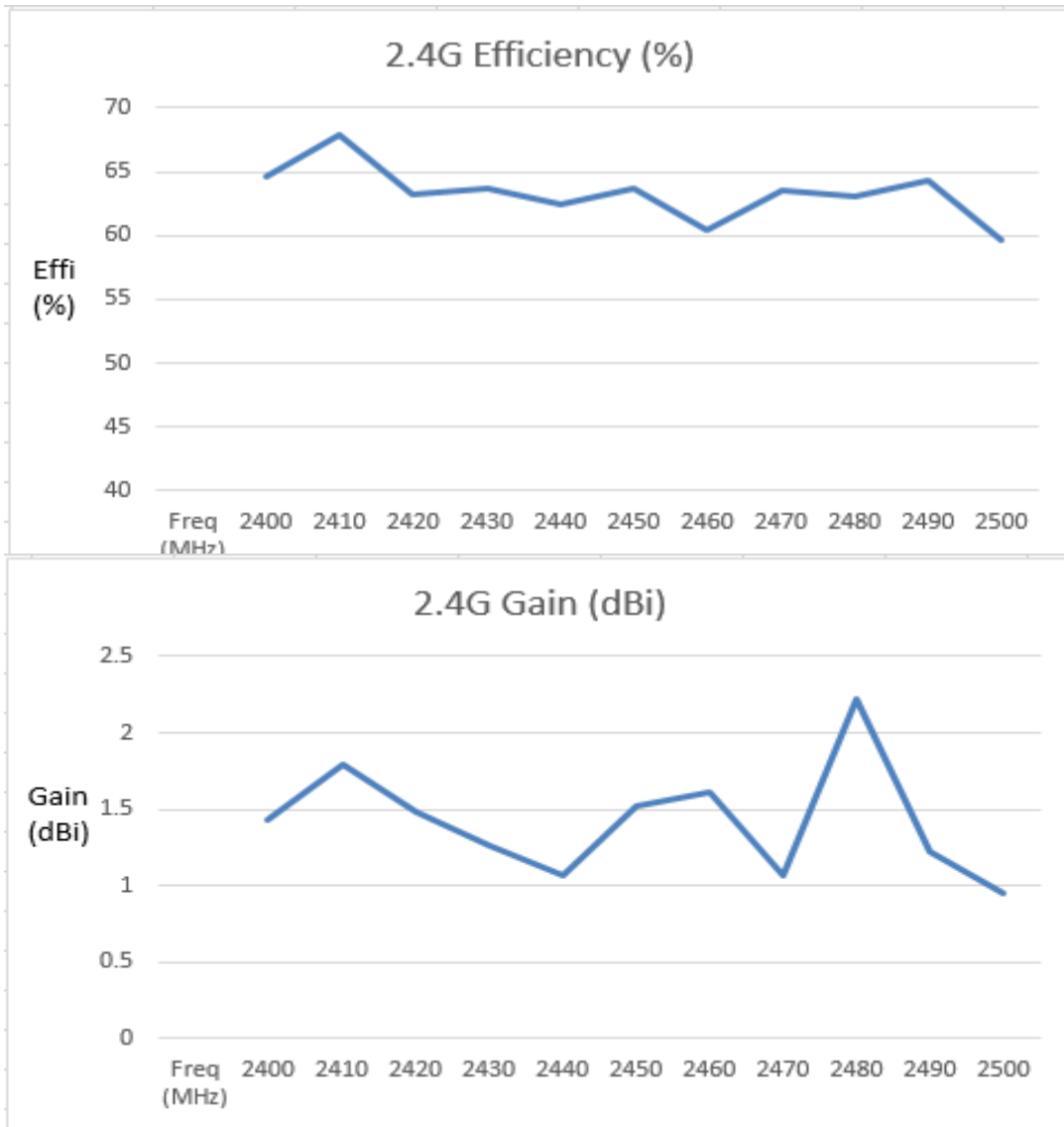
Series: Ceramic

PART NUMBER: W3006

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



Issue: 1719

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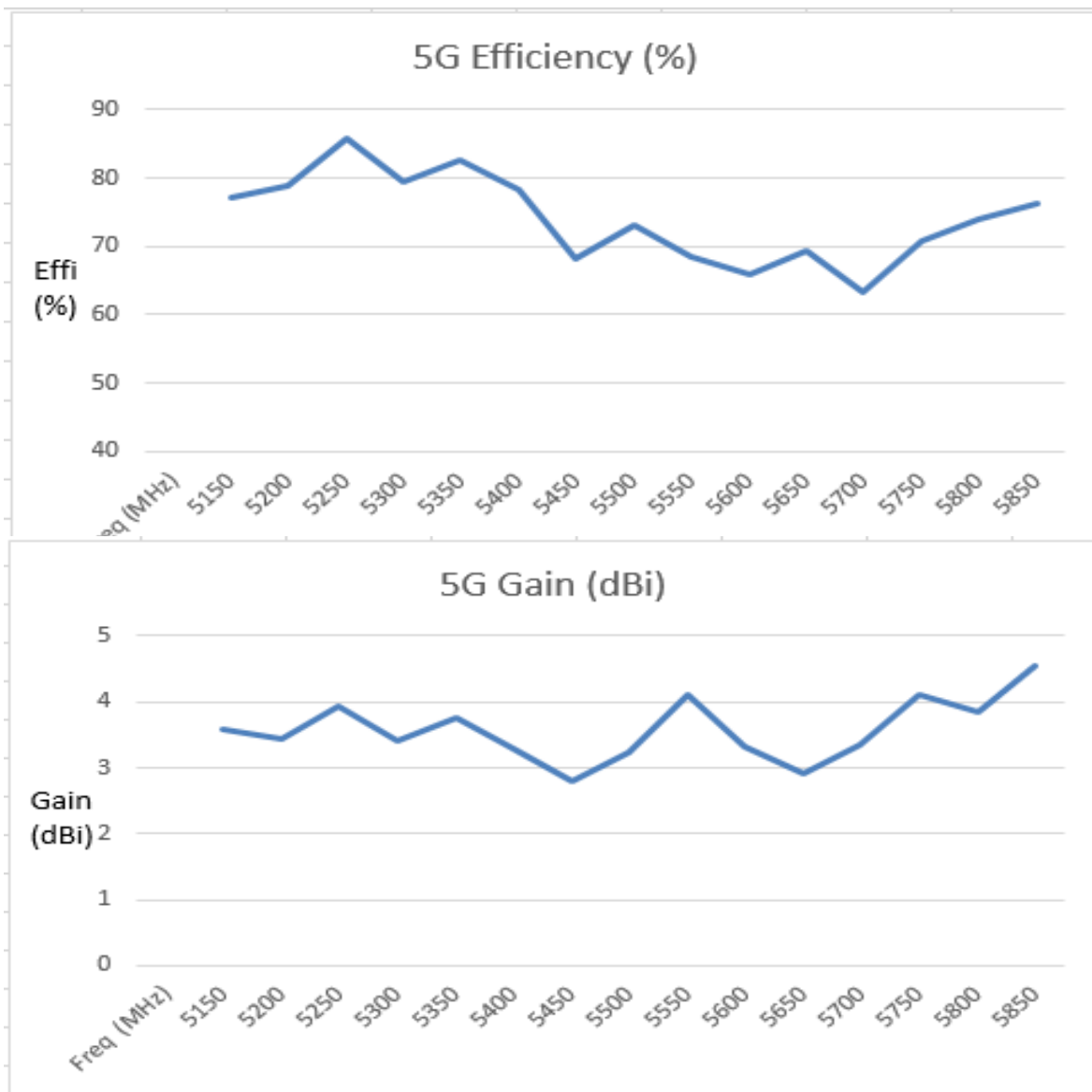
Series: Ceramic

PART NUMBER: W3006

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 5G



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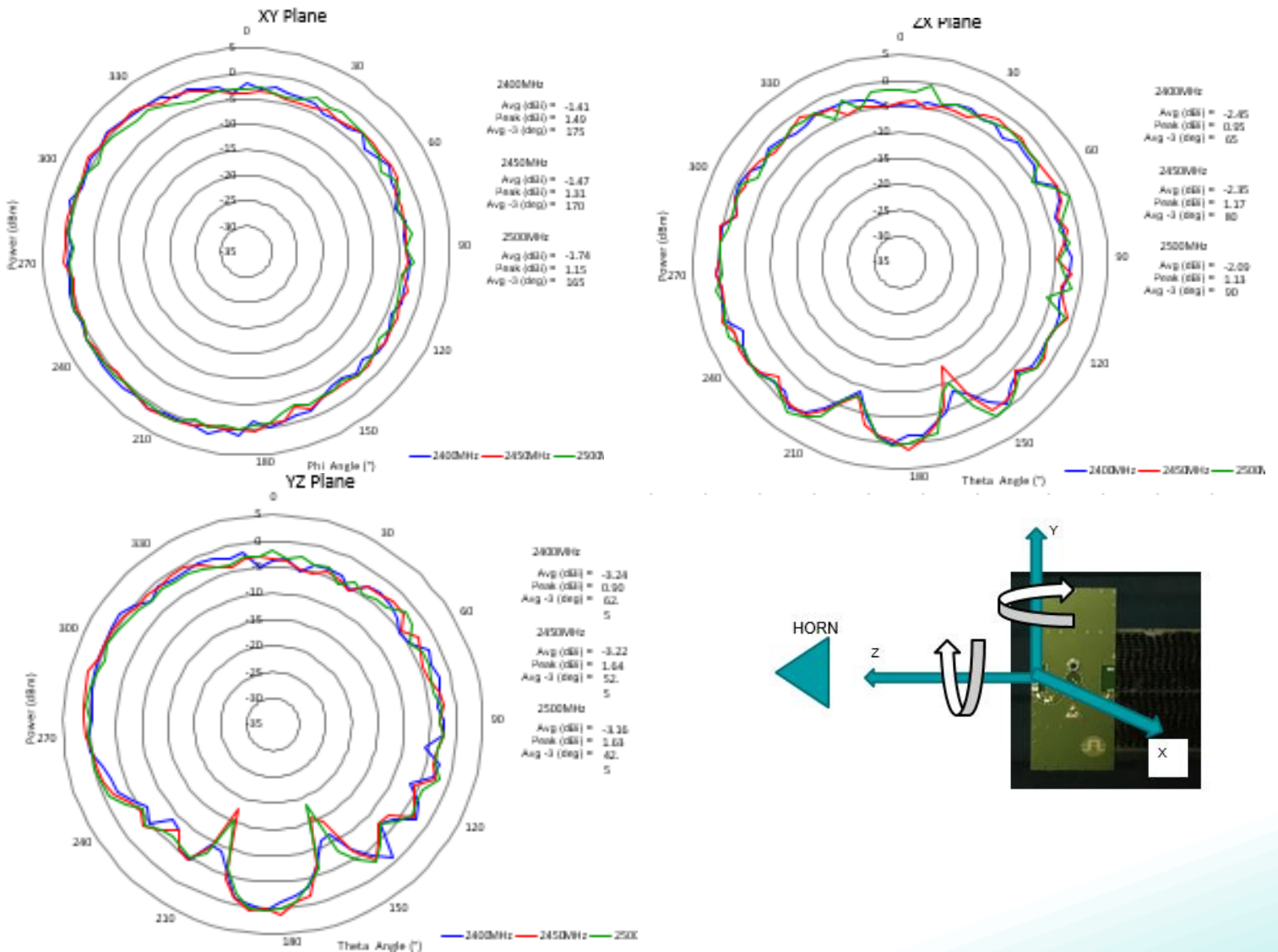
Series: Ceramic

PART NUMBER: W3006

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

2.4 GHz Typical Free Space Radiation Patterns



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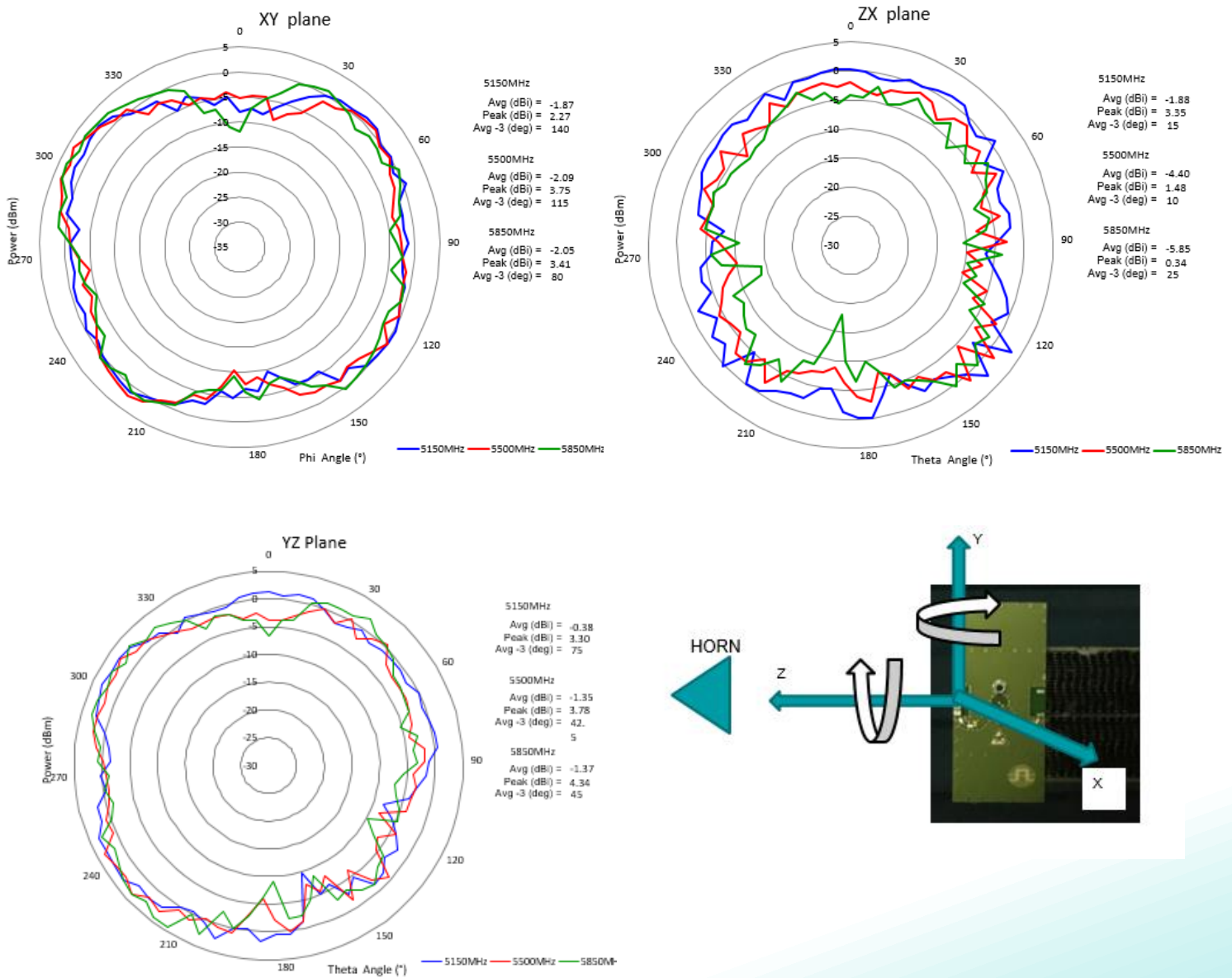
Series: Ceramic

PART NUMBER: W3006

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

5GHz Typical Free Space Radiation Patterns



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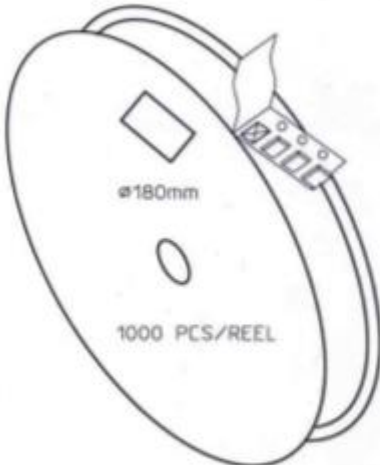
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Description: Dual Band WLAN Ceramic

Series: Ceramic

PART NUMBER: W3006

PACKAGING

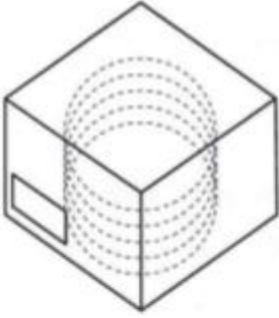


CARRIER TAPE H85-00168  
width=24,00 depth=2.20  
COVER TAPE H85-00159  
width=21.20


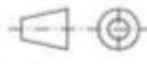
LENGTH OF TAPE:

- 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 H85-00160	3 pcs
(D180, W28)	
- REEL LABEL	1 pcs/REEL

MATERIAL				
HANDLINGS				
		RATIO	DRWN 160107 PeHa H	
			DGNER	G
			CHKD	F
			APPRD	E
PRODUCT	H90-OY113-F01P01	APPRD BY	D	
DENOMINATION	PACKING FORM		C	
			B	
			A	
	VERSION	MOD/DATE/NAME		

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