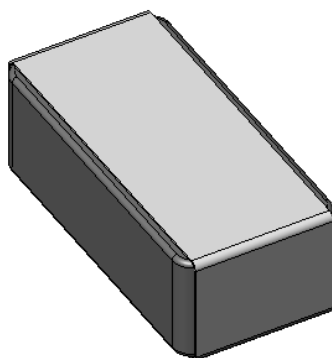




Dualband WLAN Antenna

Ceramic Chip Antenna (ground cleared under antenna)

Pulse Part Number: **W3078**



Features

- Omnidirectional radiation
- Low profile
- Compact size WxLxH (3,2 x 1,6 x 1.1 mm)
- Low weight (33 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

Electrical specifications @ +25 °C

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

Dualband WLAN

*Typical performance (testboard size 80x37 mm, PWB ground clearance area **11.15 x 6.40 mm**)*

One shunt and one serial inductors are used for impedance matching.

Frequency Range [MHz]	Max Gain [dBi]	Efficiency [%] / [dB]	Return loss min. [dB]	Impedance [Ω]	Operating Temperature [°C]
2400 – 2483.5	1,7 (peak) 1,0 (band edges)	65 / -1,9 (peak) 55 / -2,5 (band edges)	-10	50	-40 to +85
4950 – 5850	4,3 (peak) 3,7 (band edges)	80 / -0,95 (peak) 55 / -2,5 (band edges)	-6	50	-40 to +85

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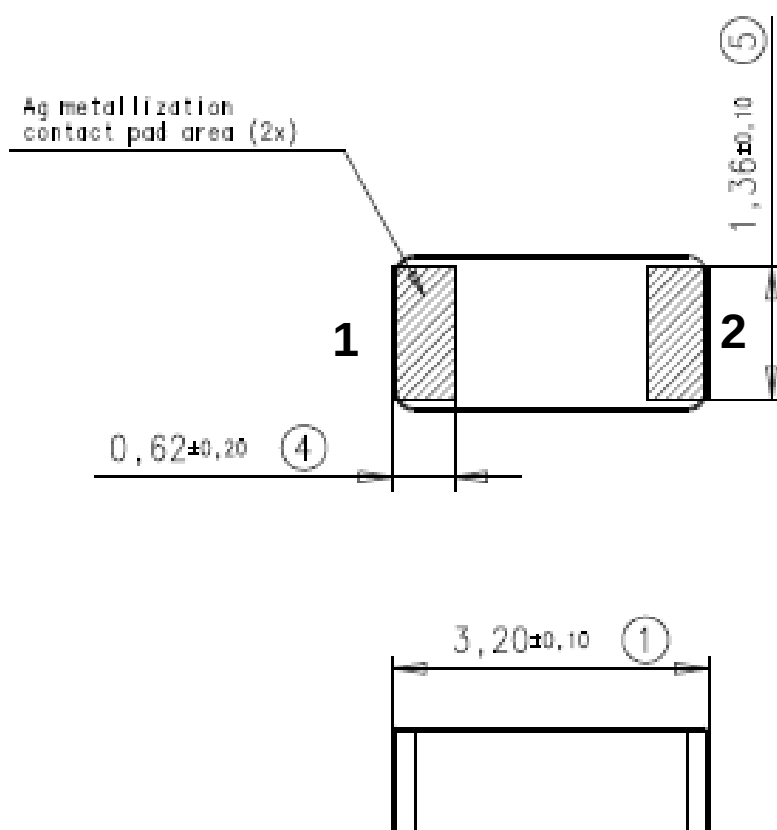


Dualband WLAN Antenna

Ceramic Chip Antenna (ground cleared under antenna **11.15 x 6.40 mm**)

Pulse Part Number: **W3078**

Antenna Terminal Configuration and Dimensions



No.	Terminal Name	Terminal Dimensions
1	Feed / GND	0.62 x 1.36 mm
2	Feed / GND	0.62 x 1.36 mm
Antenna is symmetrical. Either of terminals 1 or 2 can be Feed / GND		

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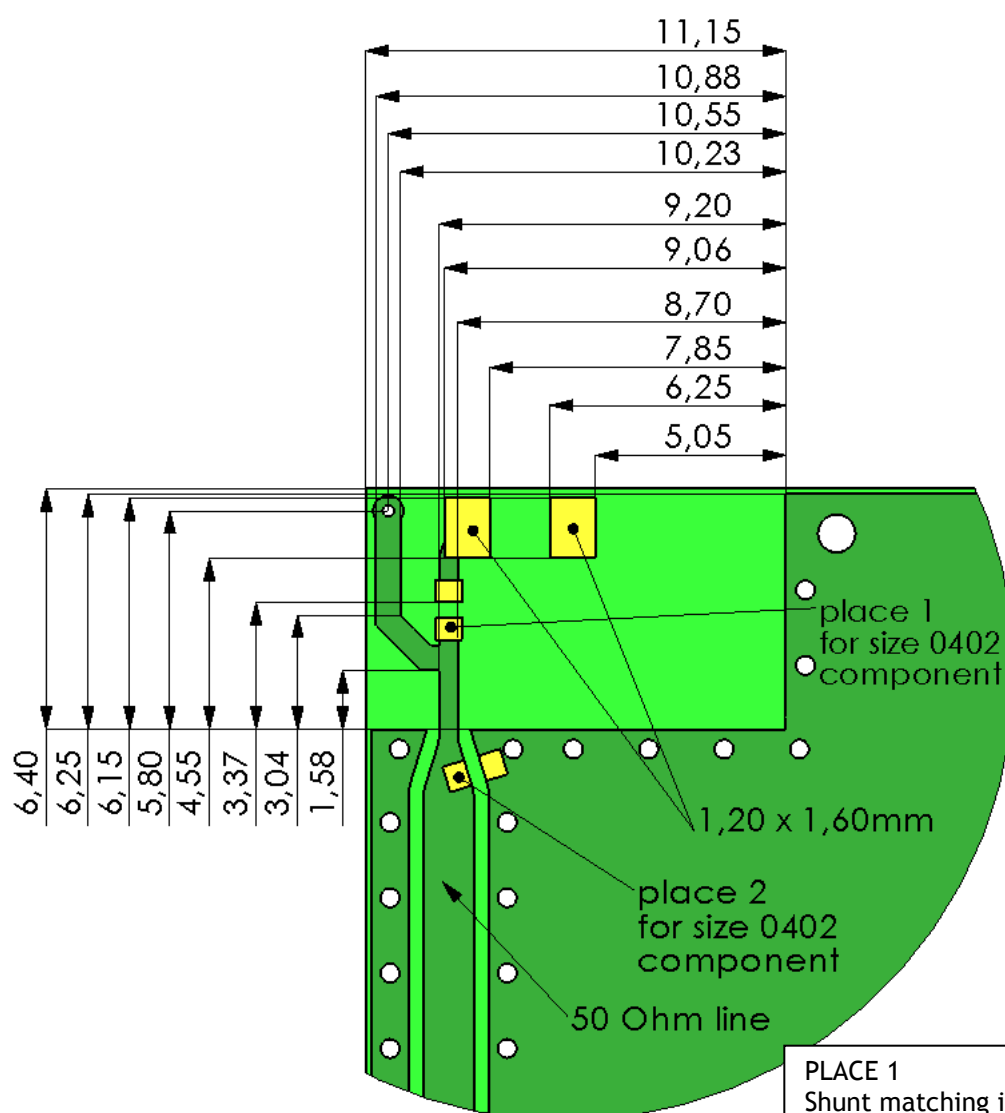
Dualband WLAN Antenna

Ceramic Chip Antenna (ground cleared under antenna 11.15 x 6.40 mm)

Pulse Part Number: **W3078**

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

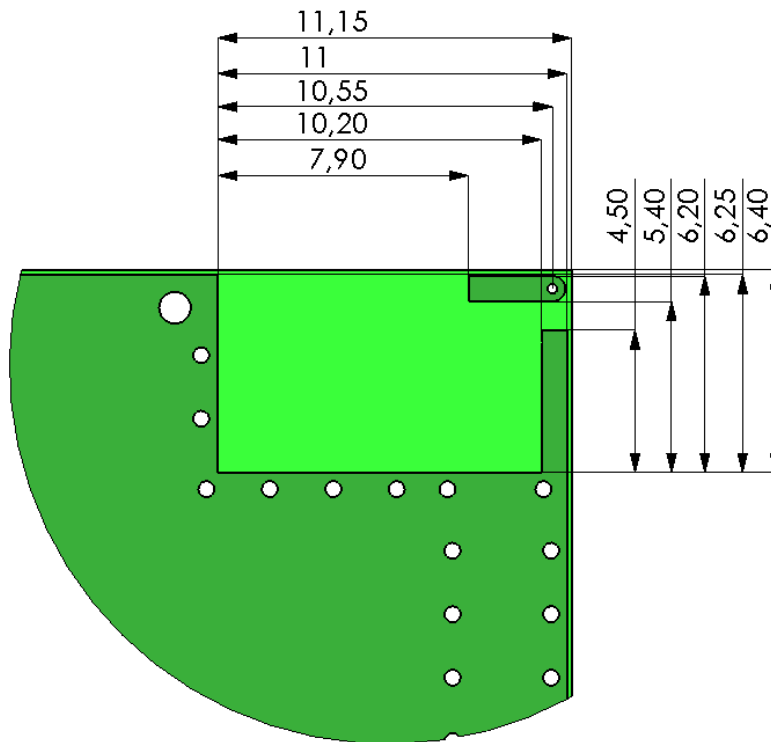
TOP VIEW



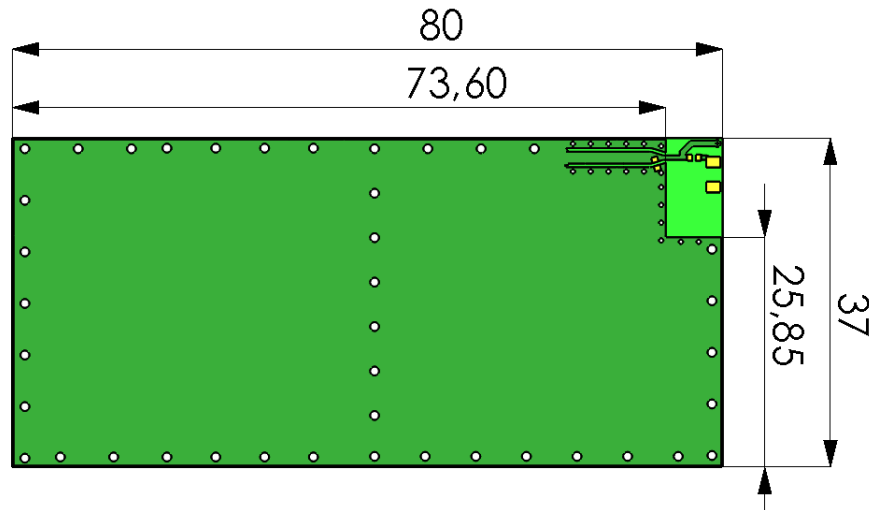
PLACE 1
Shunt matching inductor,
2,2nH with presented setup.

PLACE 2
Serial matching inductor,
6,8nH with presented setup.

Exact inductor value depends on specific application.



LAYOT PLACEMENT ON



PCB

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

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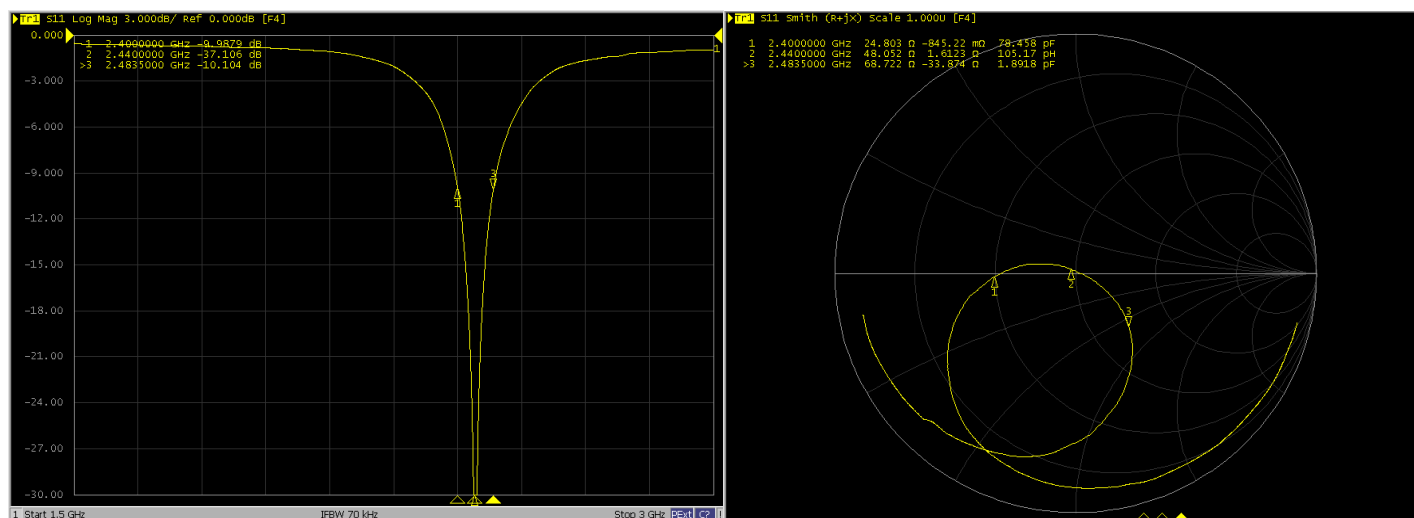
Dualband WLAN Antenna

Ceramic Chip Antenna (ground cleared under antenna **11.15 x 6.40 mm**)

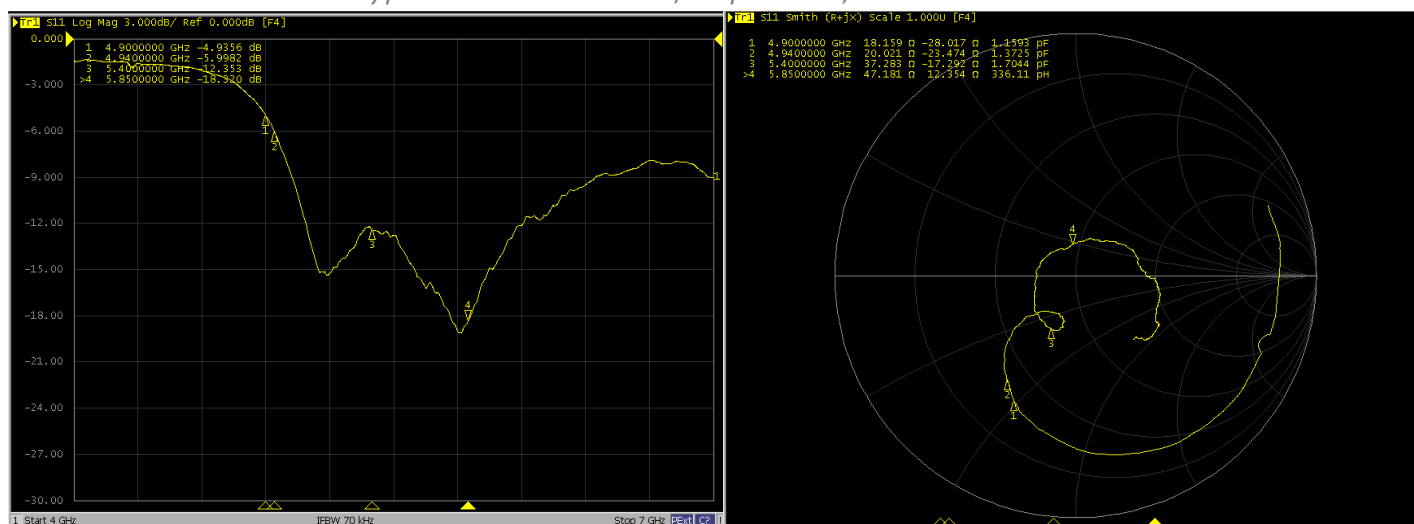
Pulse Part Number: **W3078**

Typical Electrical Characteristics (T=25 °C)

2,4 GHz Typical Return Loss S11/ impedance, measured on the test board



5GHz Typical Return Loss S11/ impedance, measured on the test board



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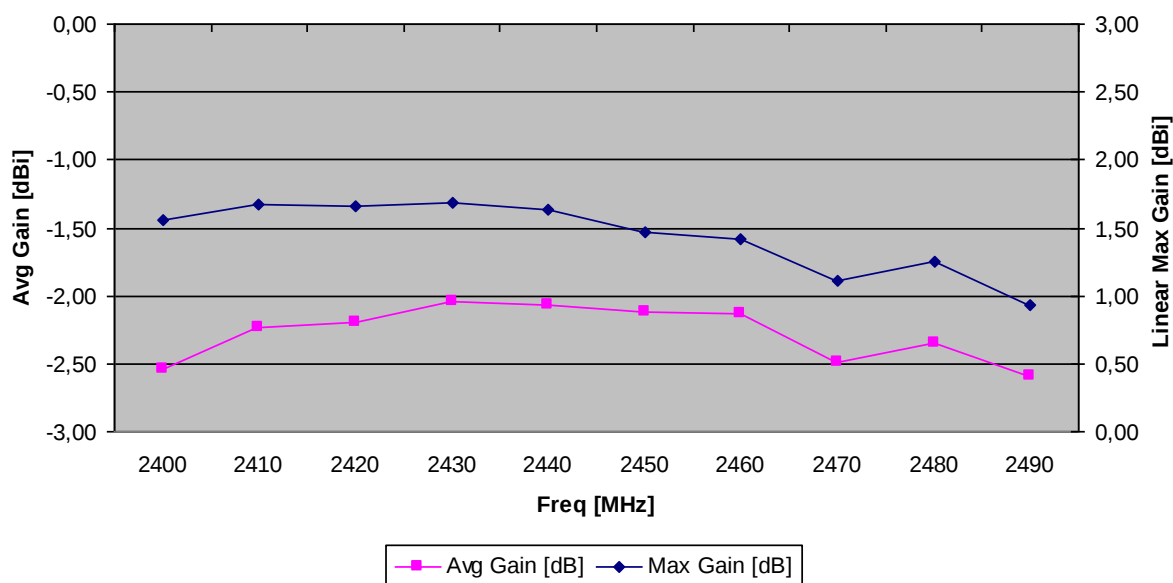
Dualband WLAN Antenna

Ceramic Chip Antenna (ground cleared under antenna **11.15 x 6.40 mm**)

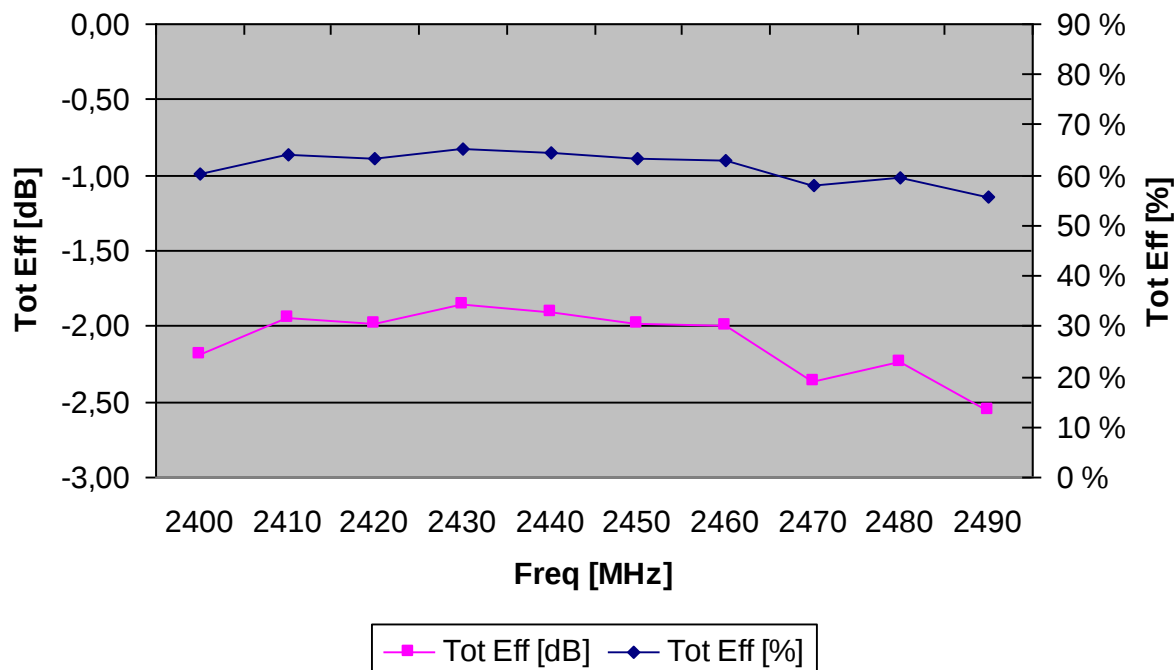
Pulse Part Number: **W3078**

2,4 GHz free space efficiency and maximum gain

DualBand WiFi 2,4G 3,2x1,6x1,1mm



DualBand WiFi 2,4G 3,2x1,6x1,1mm



Pulse Finland Oy

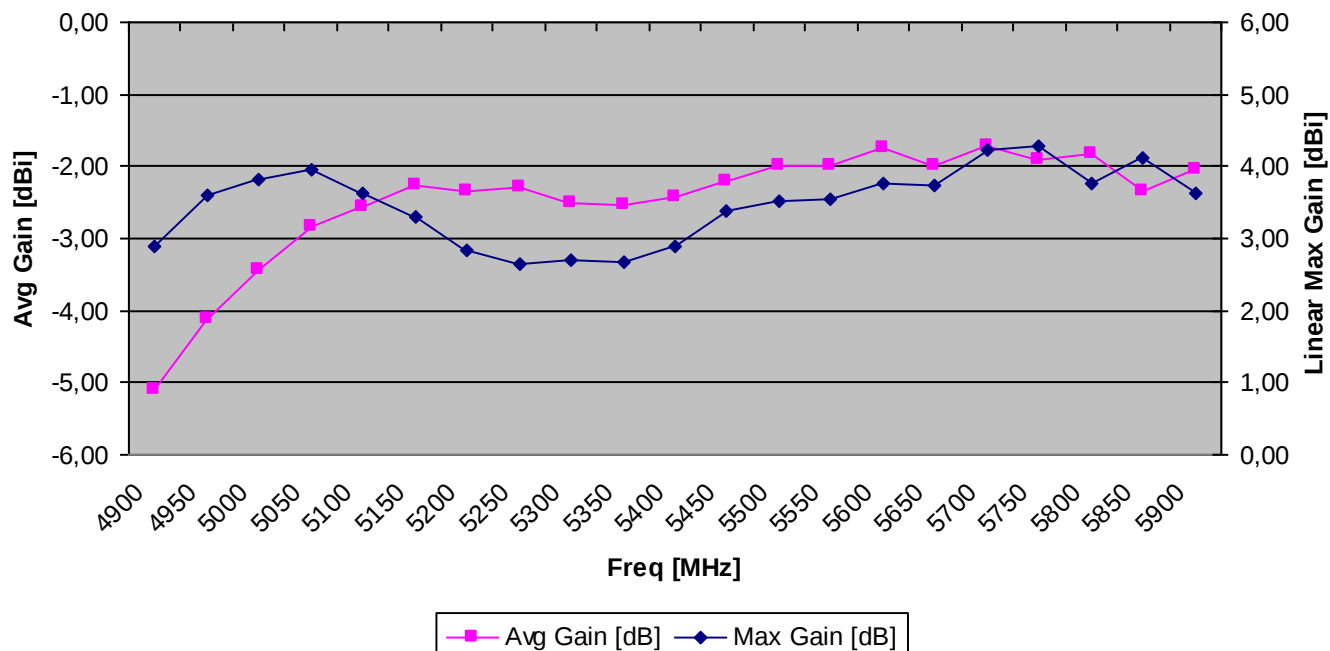
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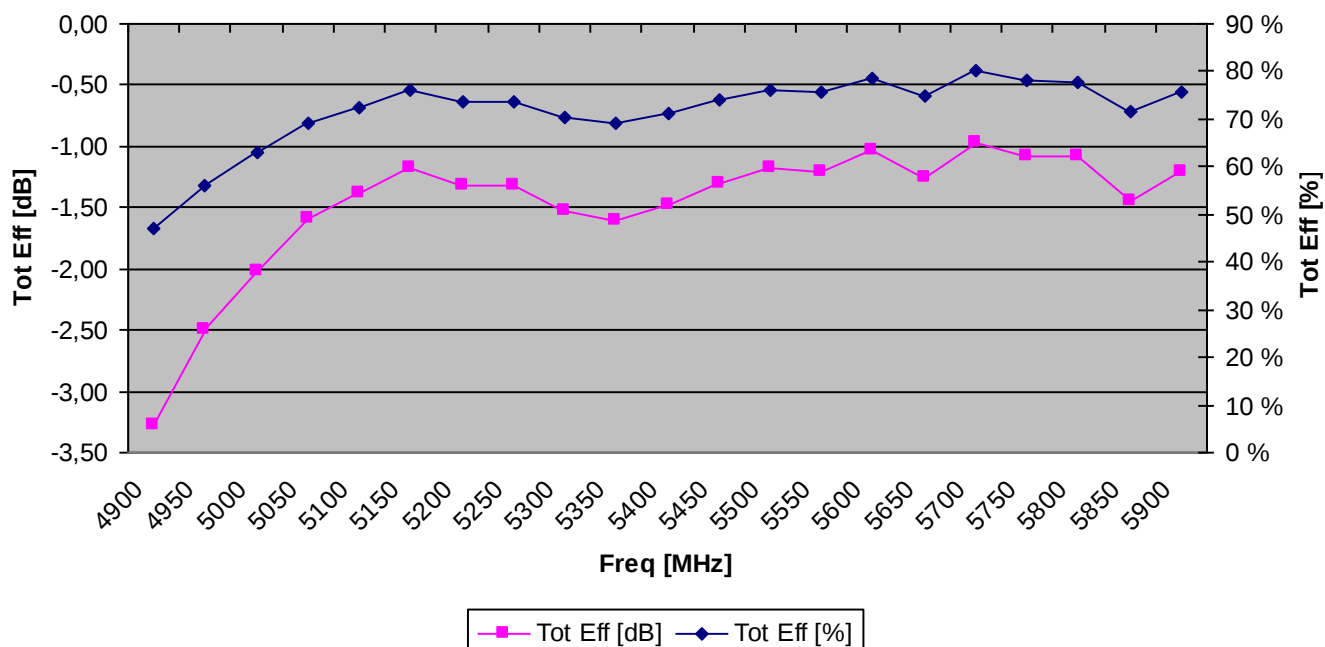


5 GHz free space efficiency and maximum gain

DualBand WiFi 5G 3,2x1,6x1,1mm



DualBand WiFi 5G 3,2x1,6x1,1mm



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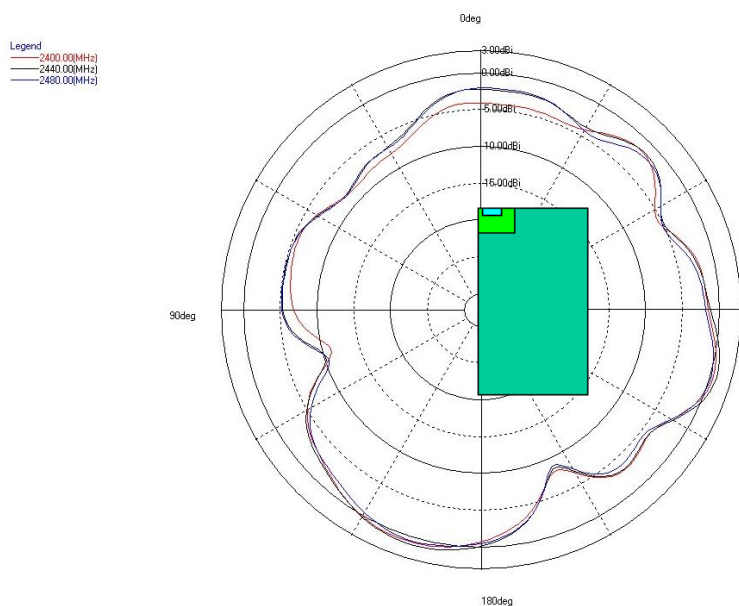
Dualband WLAN Antenna

Ceramic Chip Antenna (ground cleared under antenna **11.15 x 6.40 mm**)

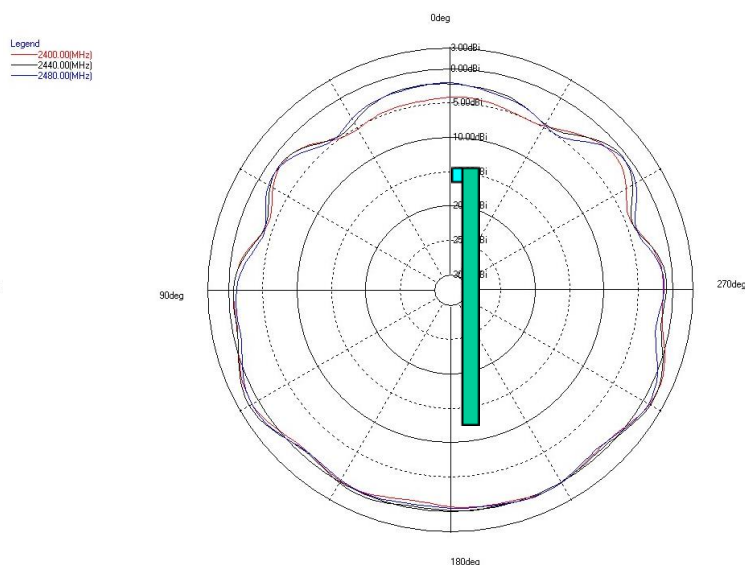
Pulse Part Number: **W3078**

2,4 GHz Typical Free space Radiation Patterns

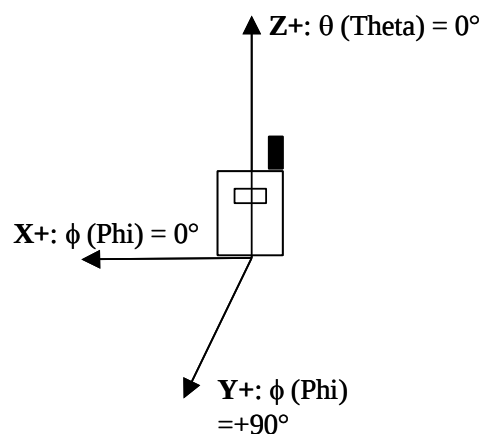
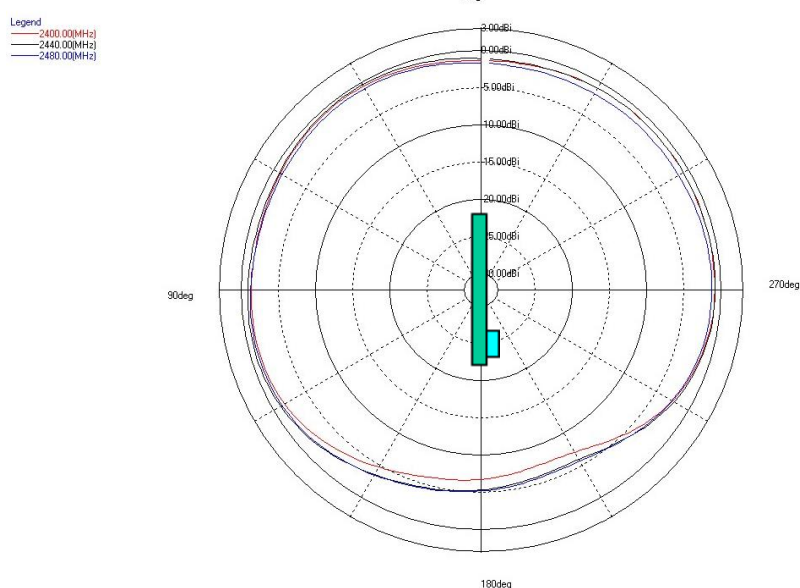
XZ-PLANE



ZY-PLANE



XY-PLANE



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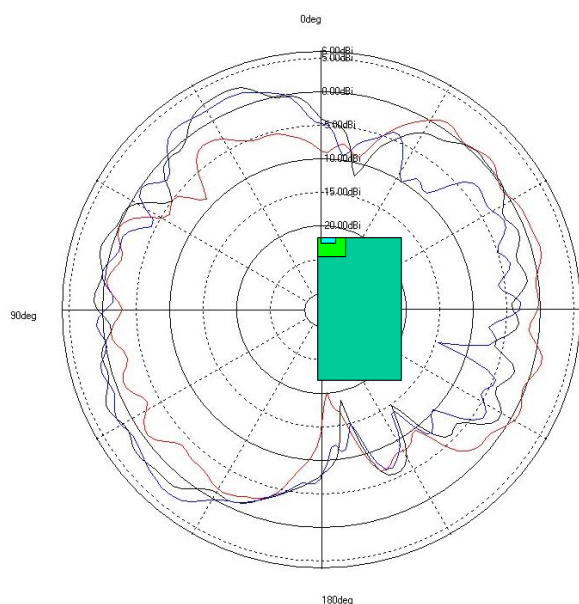
Dualband WLAN Antenna

Ceramic Chip Antenna (ground cleared under antenna **11.15 x 6.40 mm**)

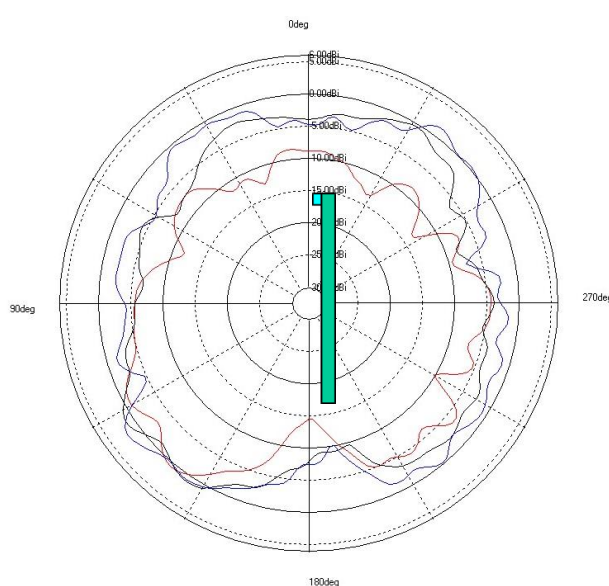
Pulse Part Number: **W3078**

5 GHz Typical Free space Radiation Patterns

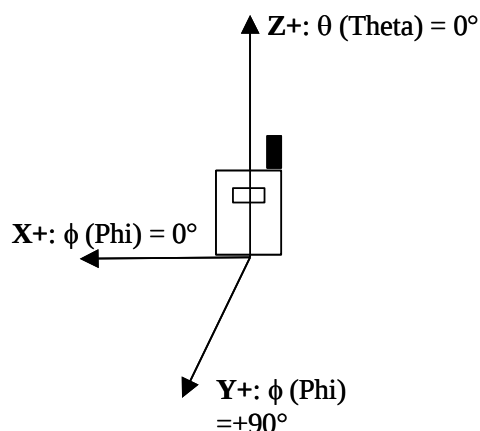
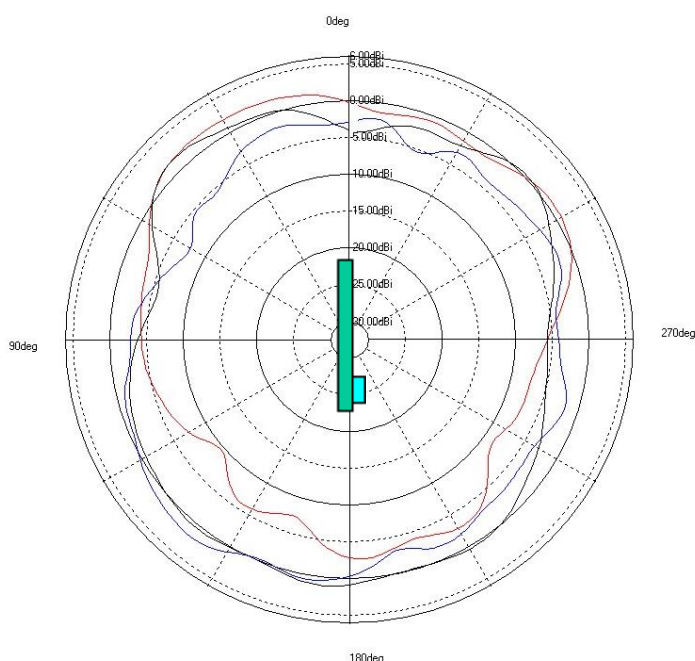
XZ-PLANE



ZY-PLANE



XY-PLANE



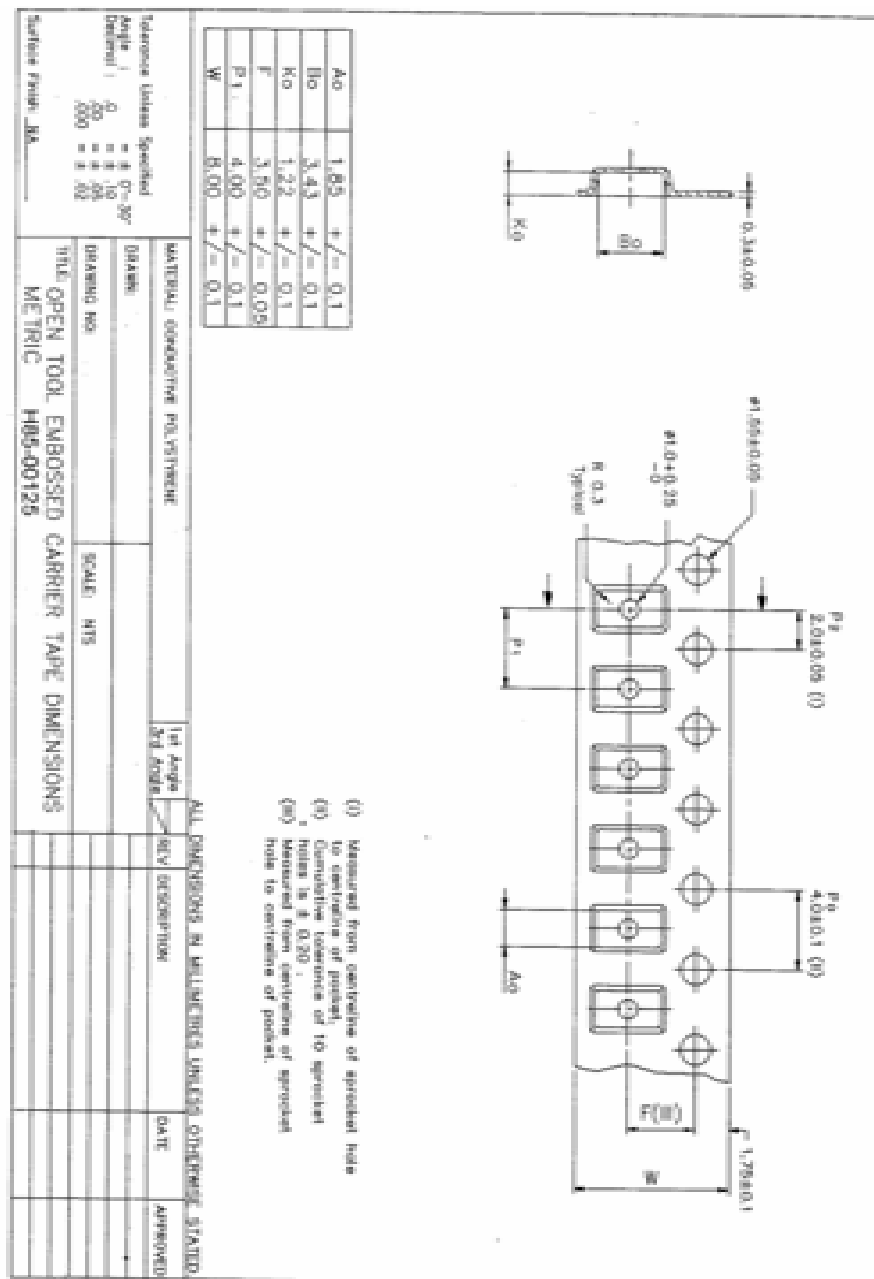


W3078 Antenna Packing

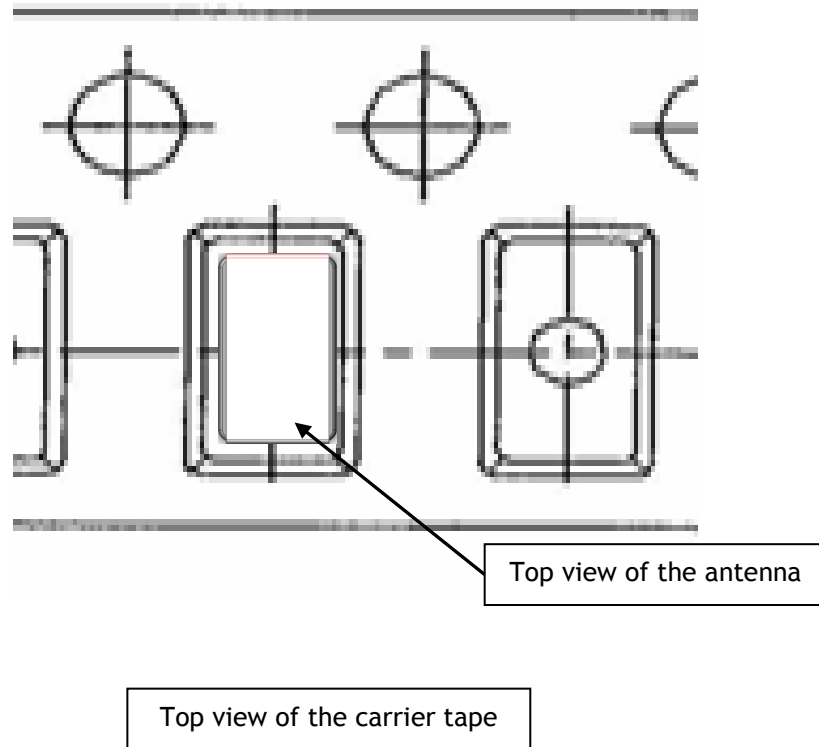
General

Tape and reel packing is used. Carrier tape, reel and box dimensions are presented in following pictures.

Carrier tape



Block orientation: soldering pads facing down to the bottom of the carrier tape.



Pulse Finland Oy

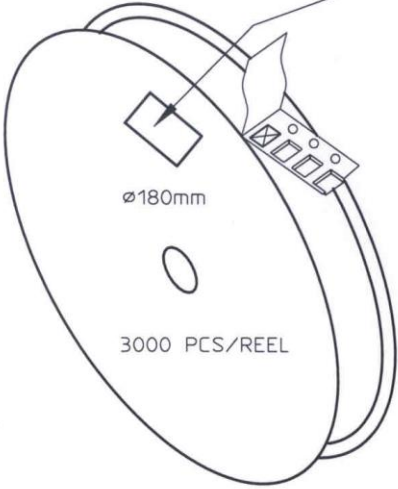
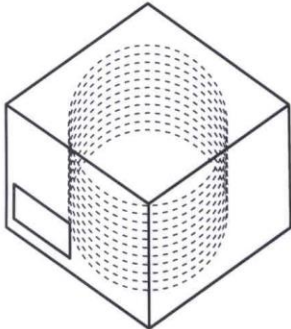
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W3078 Antenna Packing

Reel and packing information:

REEL LABEL INFORMATION:

- TRACEABILITY
- QUANTITY
- PRODUCT CODE

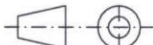
CARRIER TAPE H85-00125
width=8,00 depth=1,22
COVER TAPE H85-00126
width=5,60

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 (182x182x132)	1 pcs
- LABEL	1 pcs/BOX
REEL H85-00127 (D180, W12)	10 pcs
- REEL LABEL	1 pcs/REEL

MATERIAL							
HANDLINGS							
		RATIO	DRWN	090507	PeHa	H	
			DGNER			G	
			CHKD			F	
			APPRD			E	
			APPRD BY			D	
PRODUCT			H90-OY805			C	
DENOMINATION			PACKING FORM			B	
						A	
			VERSION			MOD/DATE/NAME	

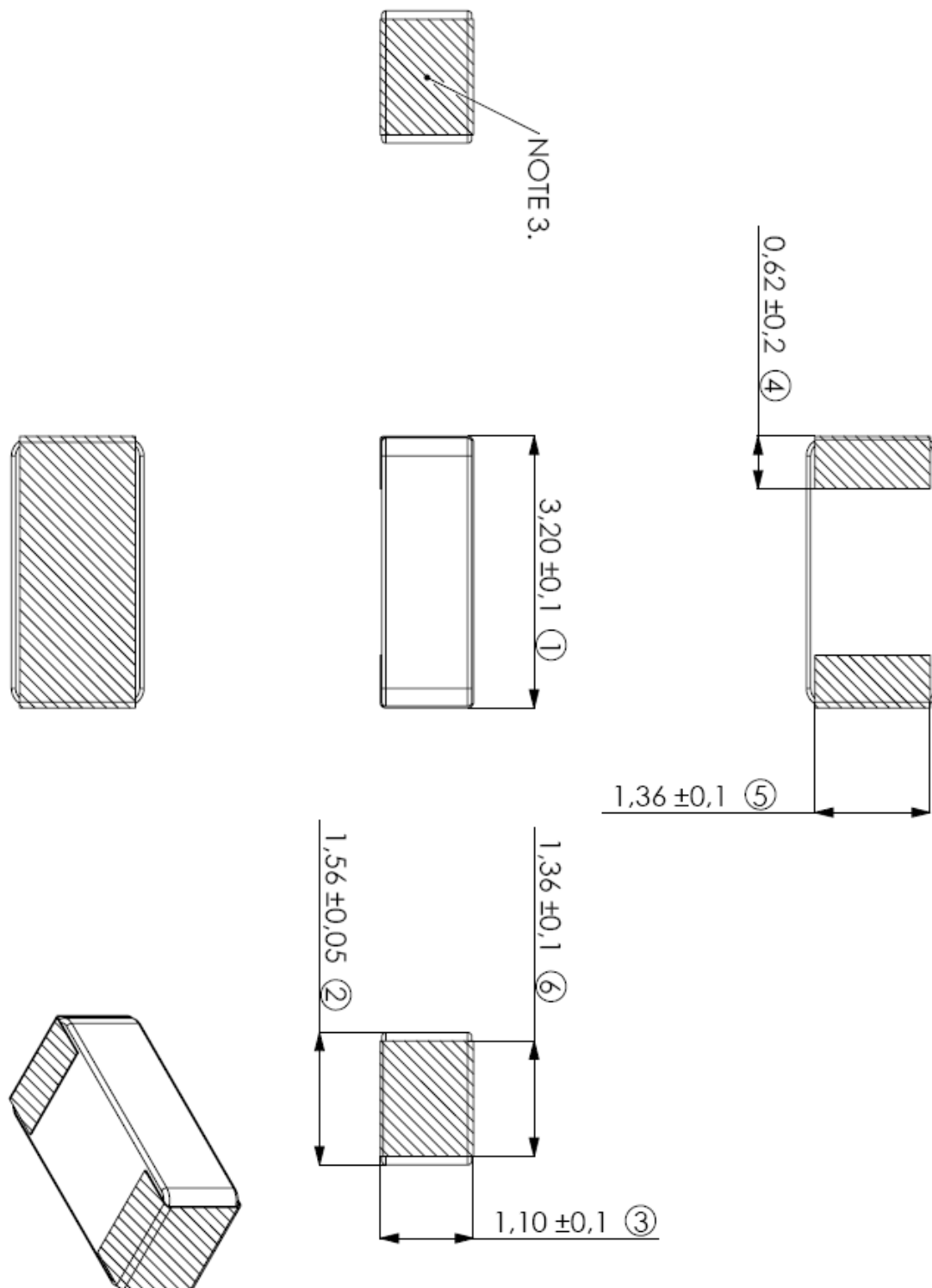
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W3078 Antenna Mechanical Outline



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