Document No. E2B-94-1115

Type1DX Antenna Design Guide

April, 2019

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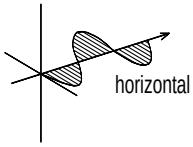
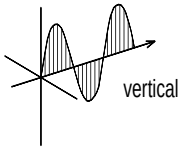
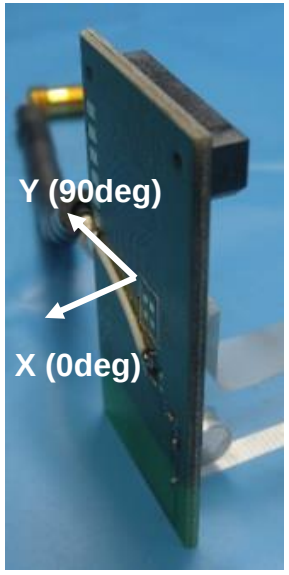
Measurement Board

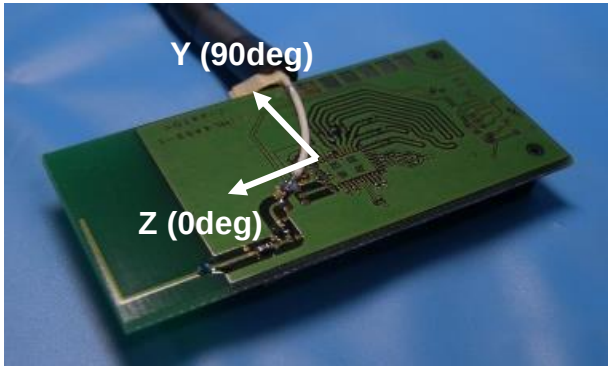
XY plane



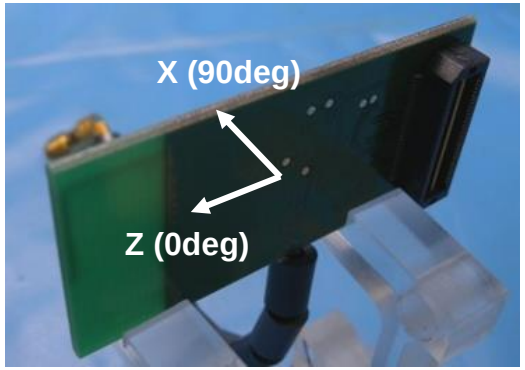




YZ plane



ZX plane



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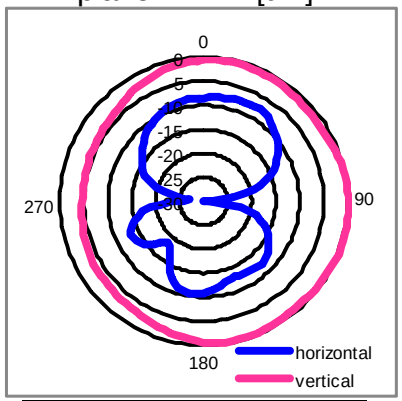
Antenna Performance

[dBi] [dB]

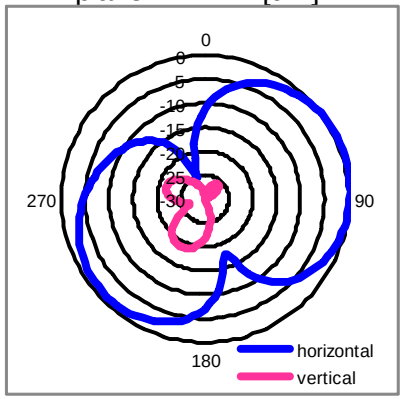
LINEAR POLARIZATION		XY-plane hor.	XY-plane ver.	YZ-plane hor.	YZ-plane ver.	ZX-plane hor.	ZX-plane ver.	Total Efficiency
2400 MHz	MAX.	-7.9	0.0	0.3	-21.4	-0.4	-7.1	
	AVE.	-12.3	-1.5	-3.6	-26.0	-4.5	-9.1	-2.4
2442 MHz	**MAX.**	**-7.5**	**0.3**	**0.6**	**-18.8**	**-0.4**	**-6.8**	
	AVE.	**-12.0**	**-1.4**	**-3.4**	**-24.5**	**-4.3**	**-8.9**	**-2.3**
2484 MHz	MAX.	-7.1	0.4	0.5	-18.3	0.1	-6.4	
	AVE.	-11.5	-1.3	-3.6	-23.5	-4.1	-8.7	-2.2

XY plane [dBi]



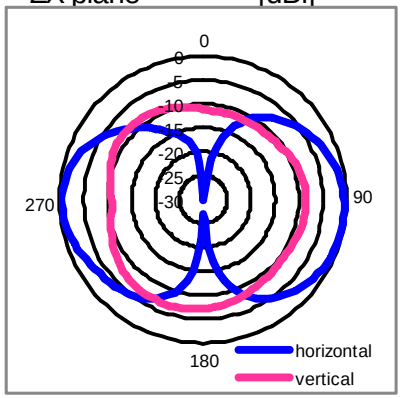
	HOR.	VER.
MAX	-7.5	0.3
AVE	-12.0	-1.4

YZ plane [dBi]



	HOR.	VER.
MAX	0.6	-18.8
AVE	-3.4	-24.5

ZX plane [dBi]



	HOR.	VER.
MAX	-0.4	-6.8
AVE	-4.3	-8.9

Antenna Type: Monopole (pattern antenna)
Antenna Gain: 0.6dBi (peak)

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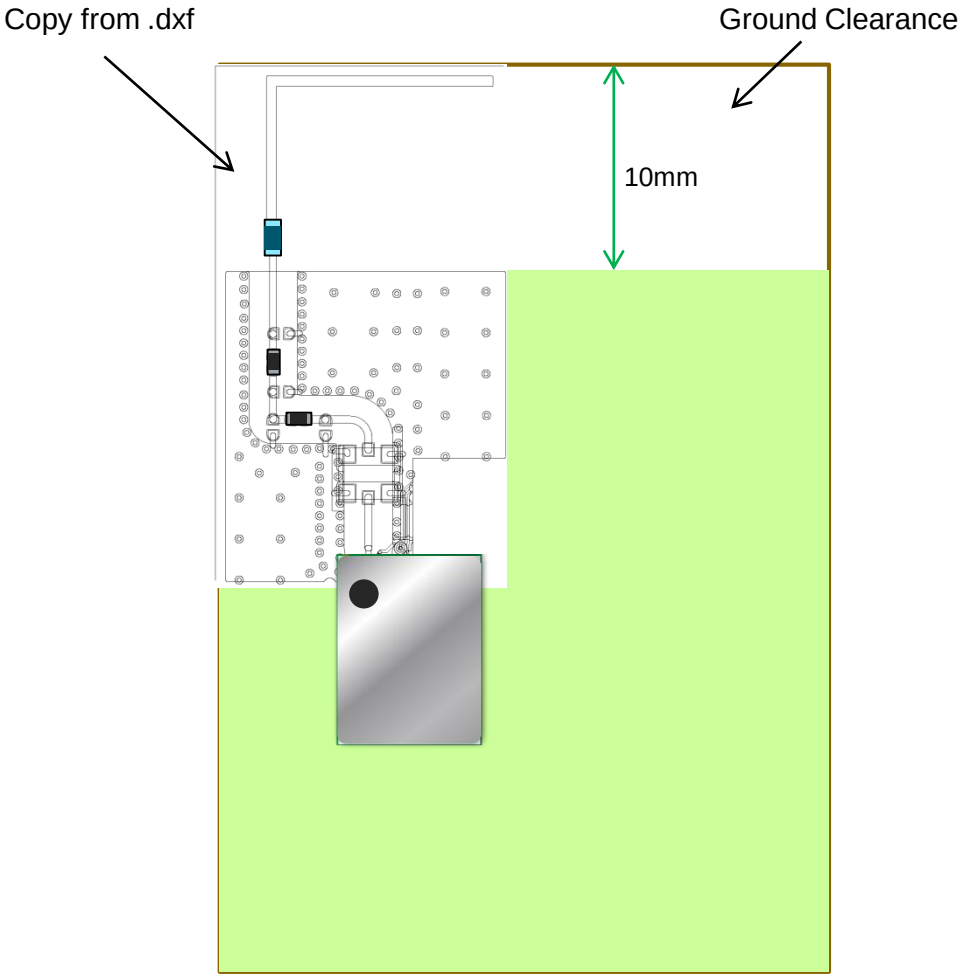
Layout Guide for Good Antenna Performance



- Place the antenna on top-left corner.
- Keep GND clearance all long the top edge.
- Place metal stuff as far as possible.
- Place two pi-network for matching and attenuating.
  - Put 0ohm in series and no load in parallel on the initial design.
  - Put appropriate value of C/L/R depends on actual performance.

Please follow Installation Manual.

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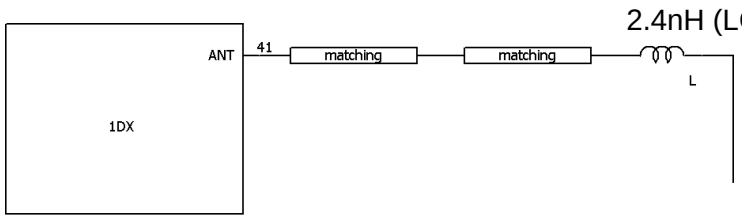
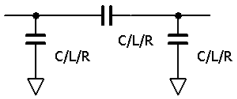
Antenna Design

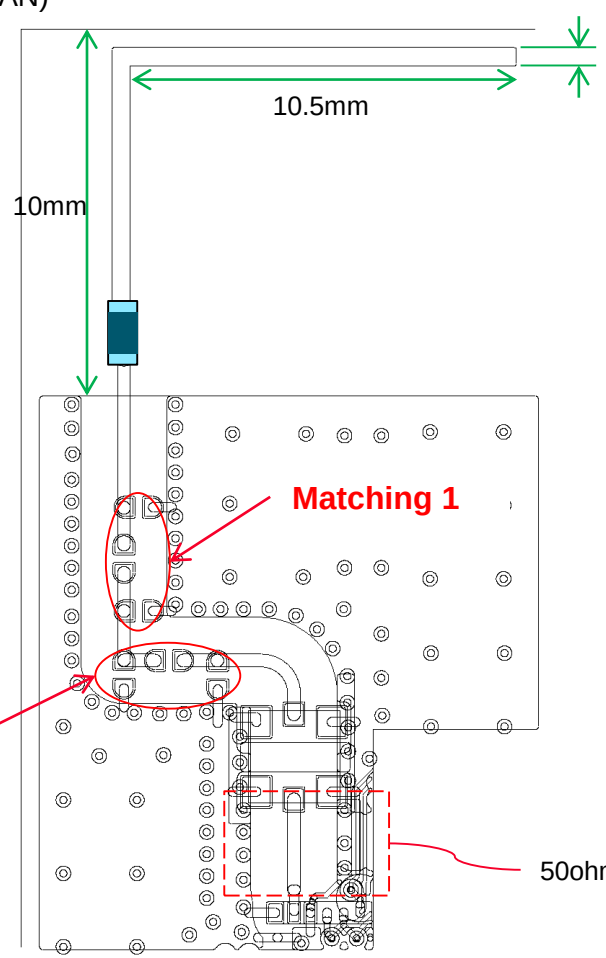


2.4nH (LQW15AN)

matching

"matching" part should be pi-network as below.
Appropriate value of C/L/R depends on the design of the product.
Put 0 ohm in series and no load in parallel on the initial design.





Please follow ” type1dx_antenna_p2ml4452-1.dxf”

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