



GE Vingmed Ultrasound AS

Strandpromenaden 45
N- 3183 Horten, Norway

Vscan Air Integrated PCB Antenna Specifications

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Revision History

Rev.	Date	Author	Details of Changes
1	06 Apr 2020	Gunaseelan Murugan	Initial release

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Vscan Air Integrated PCB Antenna Specifications

Description

Integrated 2.4GHz and 5GHz PCB Antenna

Electrical Specifications

	2.4GHz	5GHz UNII-1	5GHz UNII-3
Frequency	2.4-2.5GHz	5.15-5.25GHz	5.73-5.83GHz
Nominal Impedance	50Ω	50Ω	50Ω
Return Loss	-3.7dB max	-6dB max	-7.5dB max
Efficiency	43%	56%	66%
Peak Gain	2.53dBi	4dBi	4.68dBi

Mechanical Specifications

PCB Material : FR-4



Detailed dimensions

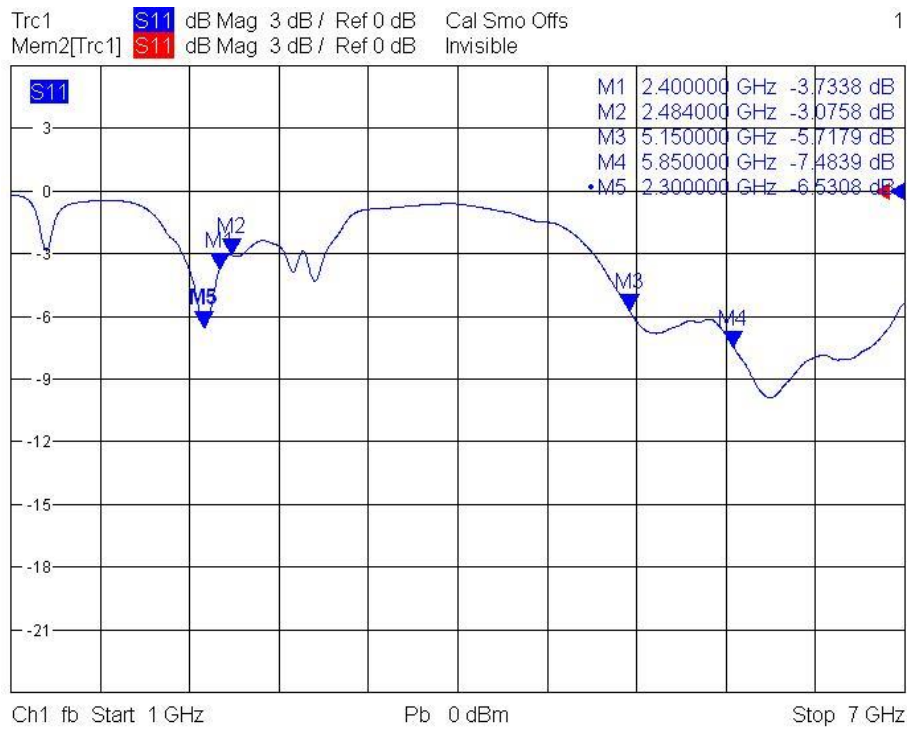
	Length	Width
A to B	5.30	0.889
B to C	13.52	0.889
C to E	1.04	0.889
E to D	5.52	0.889
E to F	4.31	0.889
F to G	3.96	0.38

Test Results – Passive Measurements

Test Setup

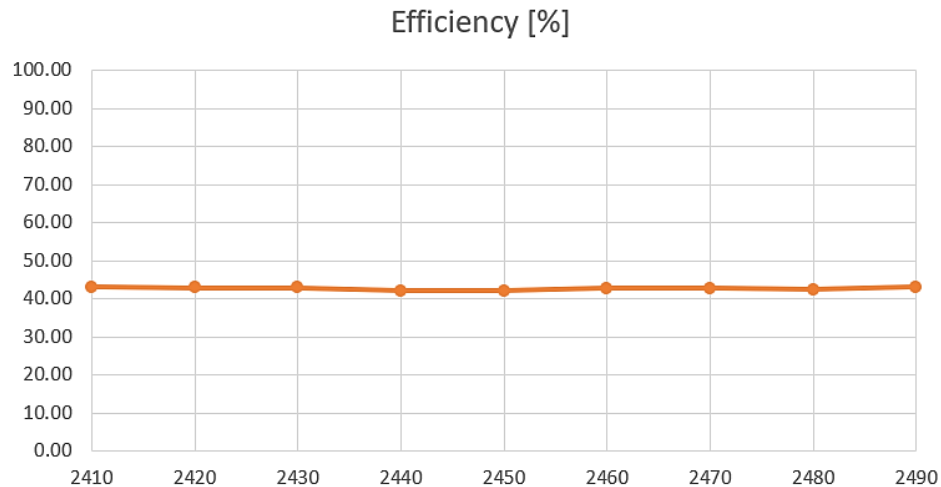


Return Loss

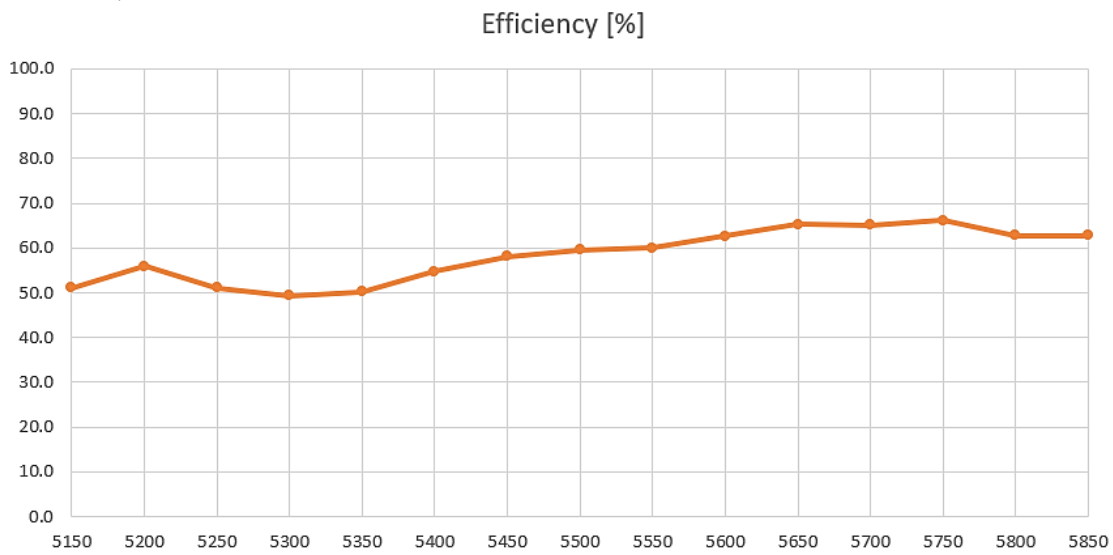


Charts

Efficiency 2.4GHz

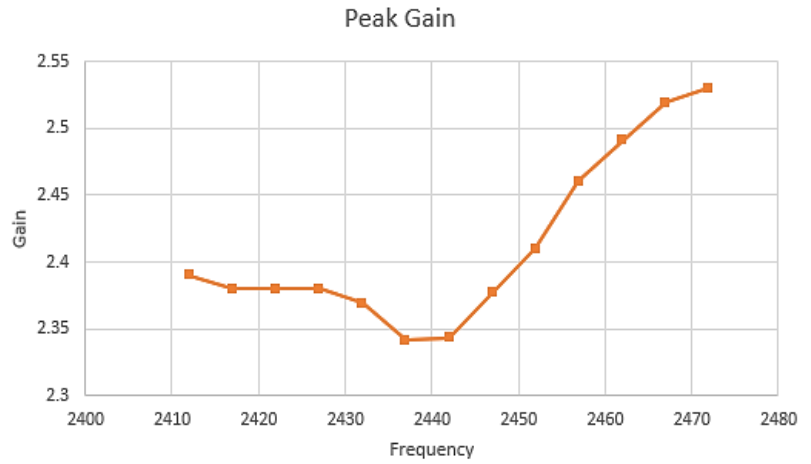


Efficiency 5GHz



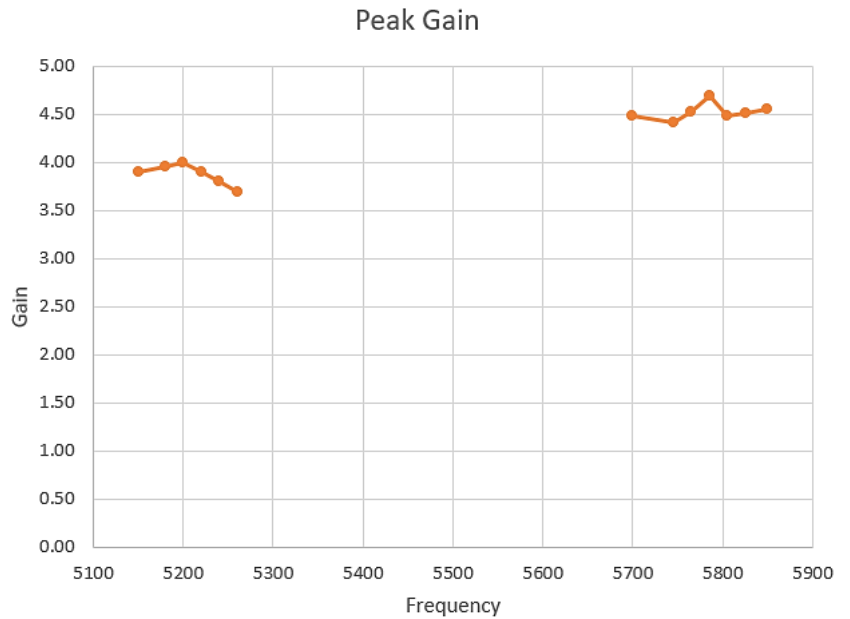
Peak Gain 2.4GHz

Frequency	Gain
2412	2.39
2417	2.38
2422	2.38
2427	2.38
2432	2.37
2437	2.34
2442	2.34
2447	2.38
2452	2.41
2457	2.46
2462	2.49
2467	2.52
2472	2.53



Peak Gain 5GHz

Band	Frequency	Gain
UNII - I	5150	3.89
	5180	3.95
	5200	4.00
	5220	3.90
	5240	3.80
	5260	3.69
UNII - III	5700	4.48
	5745	4.41
	5765	4.52
	5785	4.68
	5805	4.49
	5825	4.51
	5850	4.55

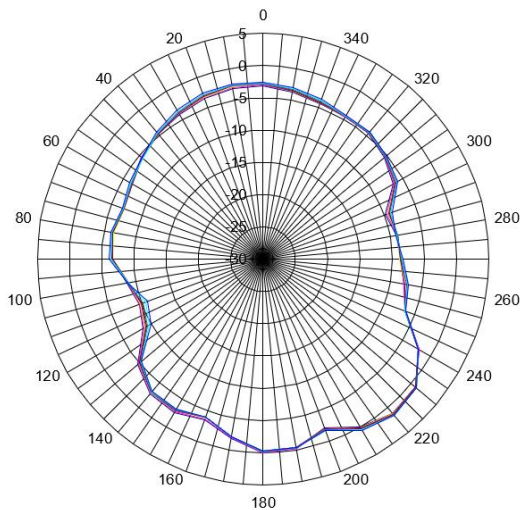


Radiation Pattern

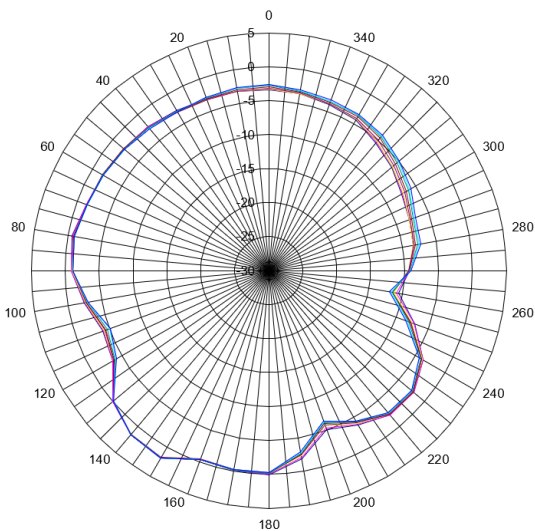
2.4GHz Frequency

XZ Plane

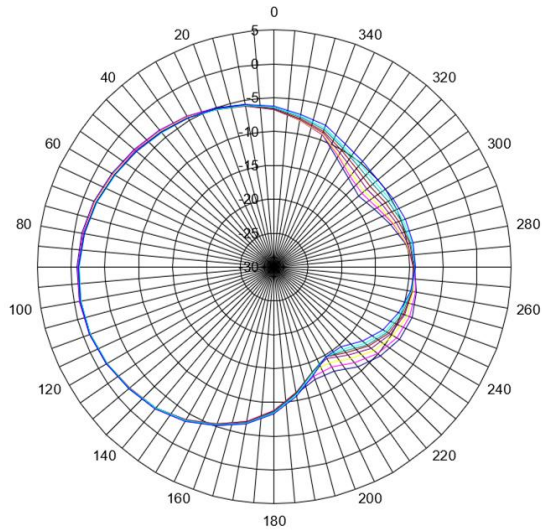
—2420 —2430 —2440 —2450 —2460 —2470 —2480 —2490



YZ Plane

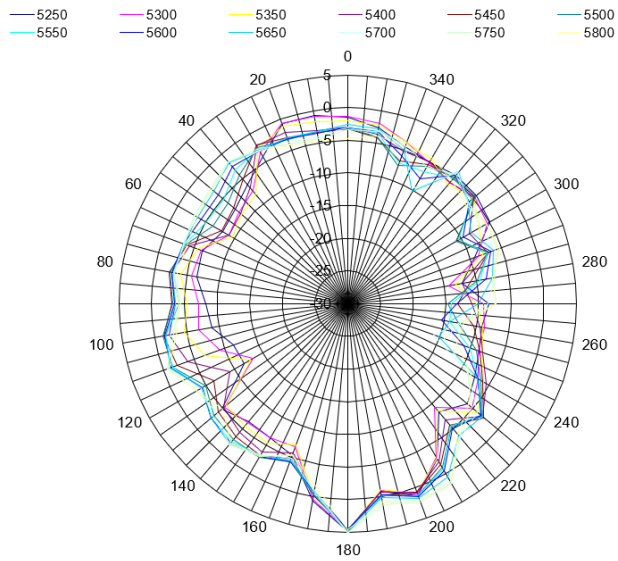


XY Plane

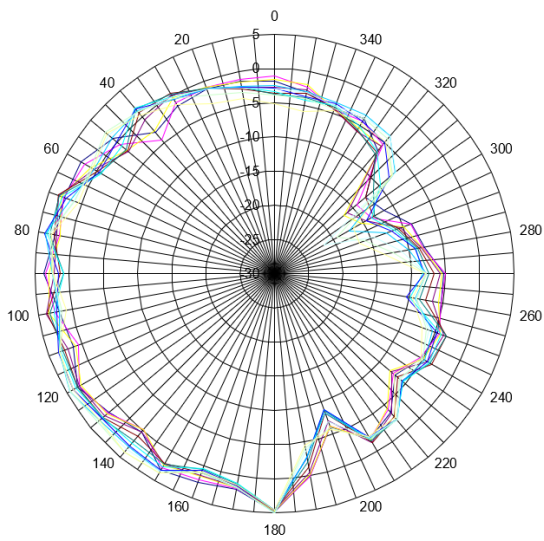


5GHz Frequency

XZ Plane



YZ Plane



XY Plane

