

certification report

BT/WIFI dual band antenna

Audi part number	Laird part number	description
5B4 035 510	9 40 18	BT / WiFi antenna

manufacturer

Laird Wireless Shanghai Ltd.
No.179, Cailun Road, Zhangjiang High-tech Park
Shanghai
PR China

supplier

Laird Hildesheim GmbH
Daimlerring 31
31135 Hildesheim
Deutschland

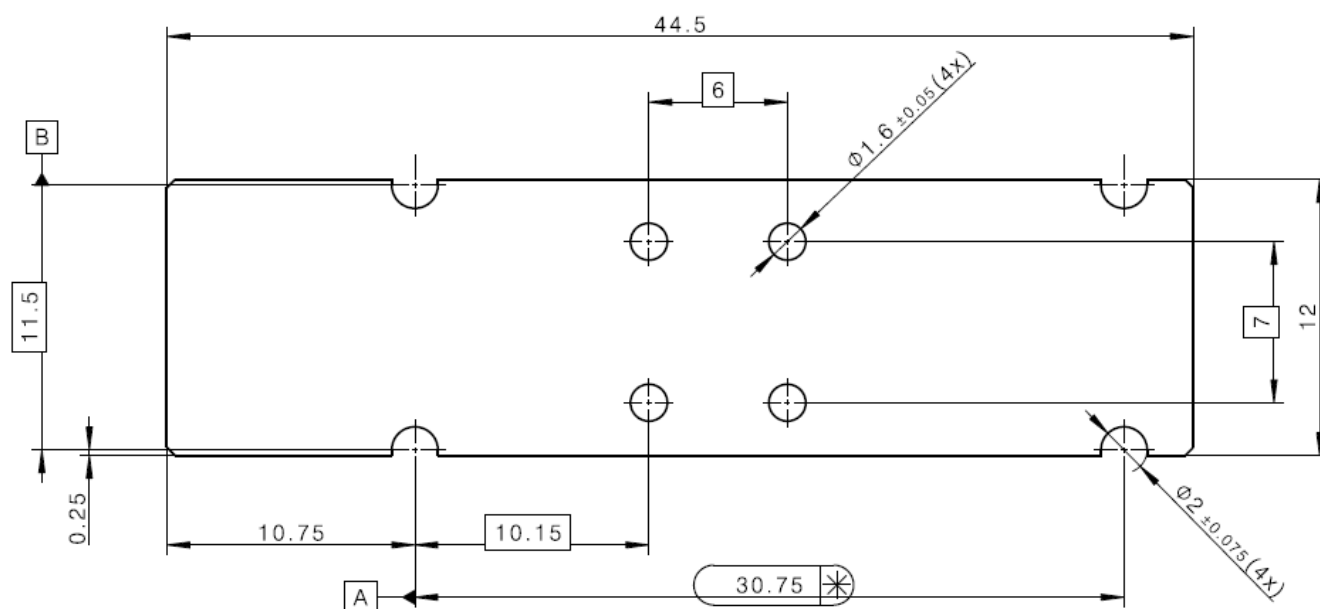
changes

version	author	date
A0	Nima Kiaei-Lochte	28.09.2018

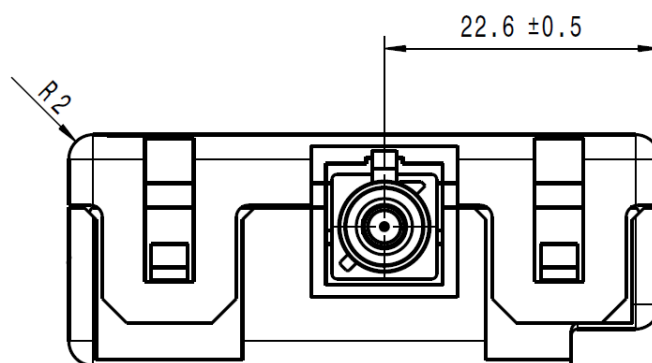
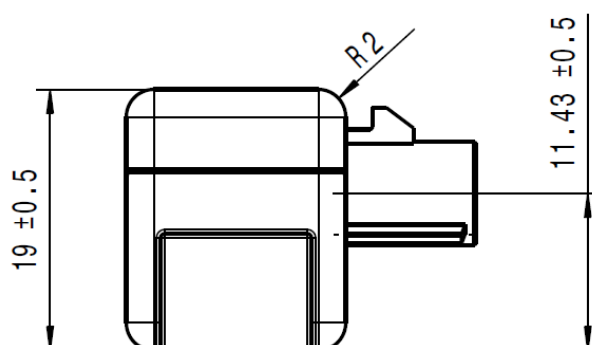
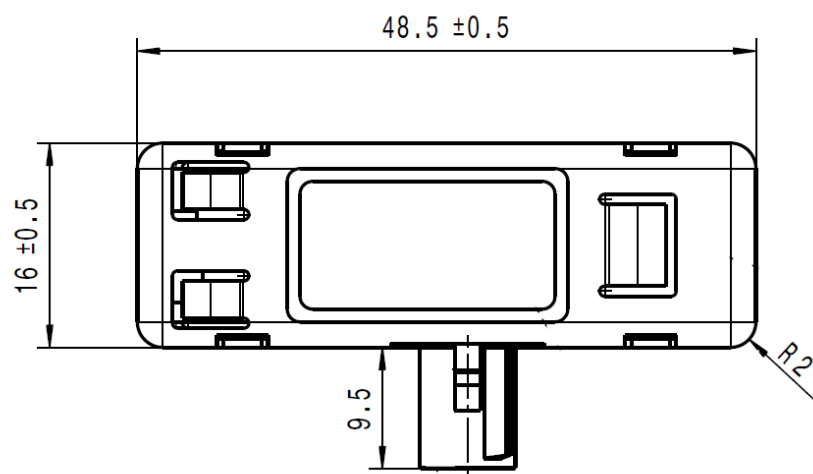
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dimensions antenna itself



dimensions component



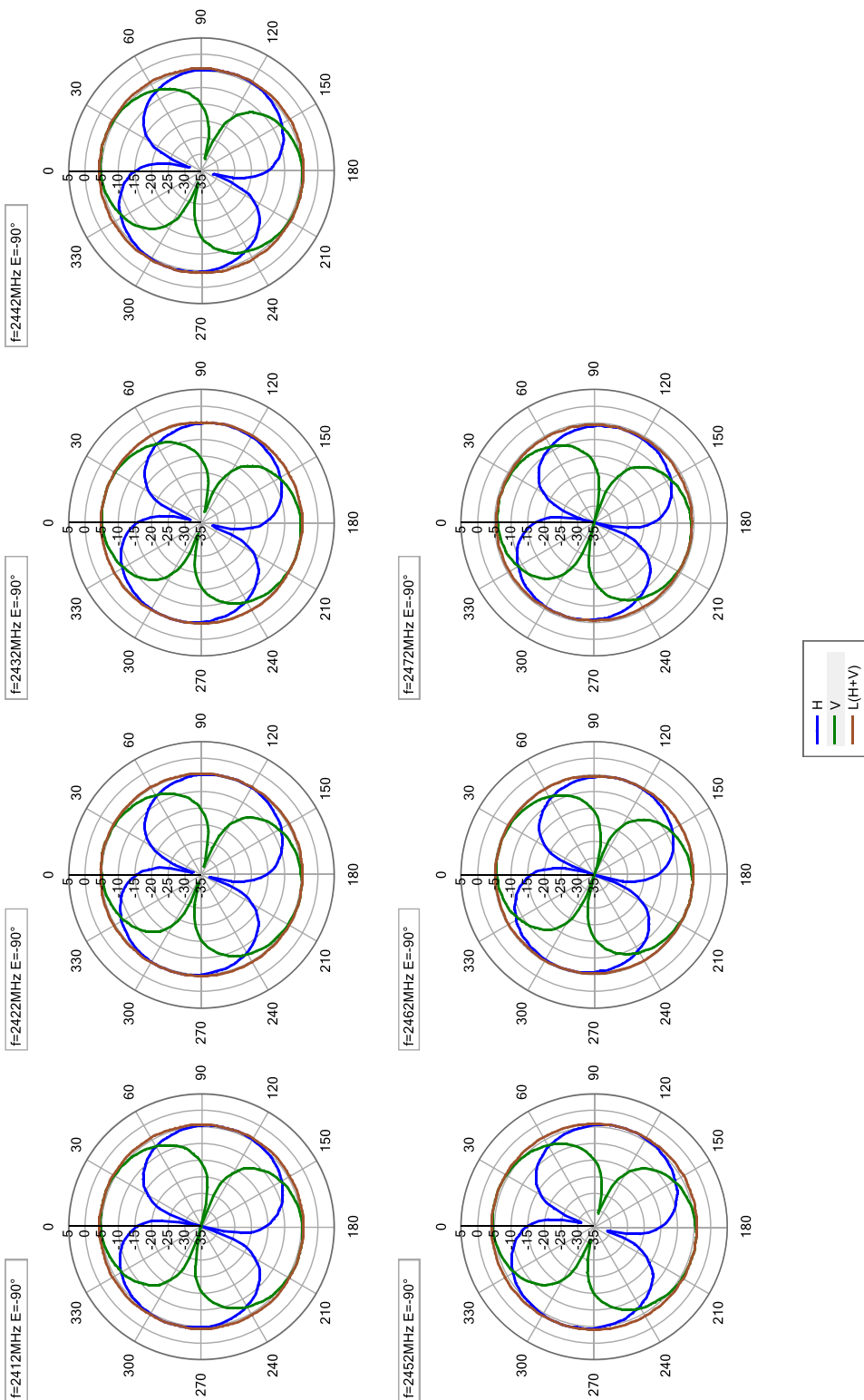
antenna electrical characteristics

Parameters	Min	Typ	Max	Units	Remarks
Frequency Band 2.4GHz	2400		2483.5	MHz	
Frequency Band 5GHz	5150		5850	MHz	
3D Efficiency	60			%	Final Assembly; measured without harness.
Antenna Peak Gain			3 5	dBi	@ f < 4.9GHz; @ f > 4.9GHz; Measured without harness.
Polarization		Vertical			also horizontal
S22 (Return Loss)			-8	dB	matching
Impedance		50		Ohm	Both bands
Diagnostic Resistor	9	10	11	KOhm	
Connections	Single Fakra II, Code G, male				

2.4 GHz - Polar Plot Horizontal Cut

Polar Plot Horizontal Cut

Antenna: 180924_WiFi_2.4_GHz



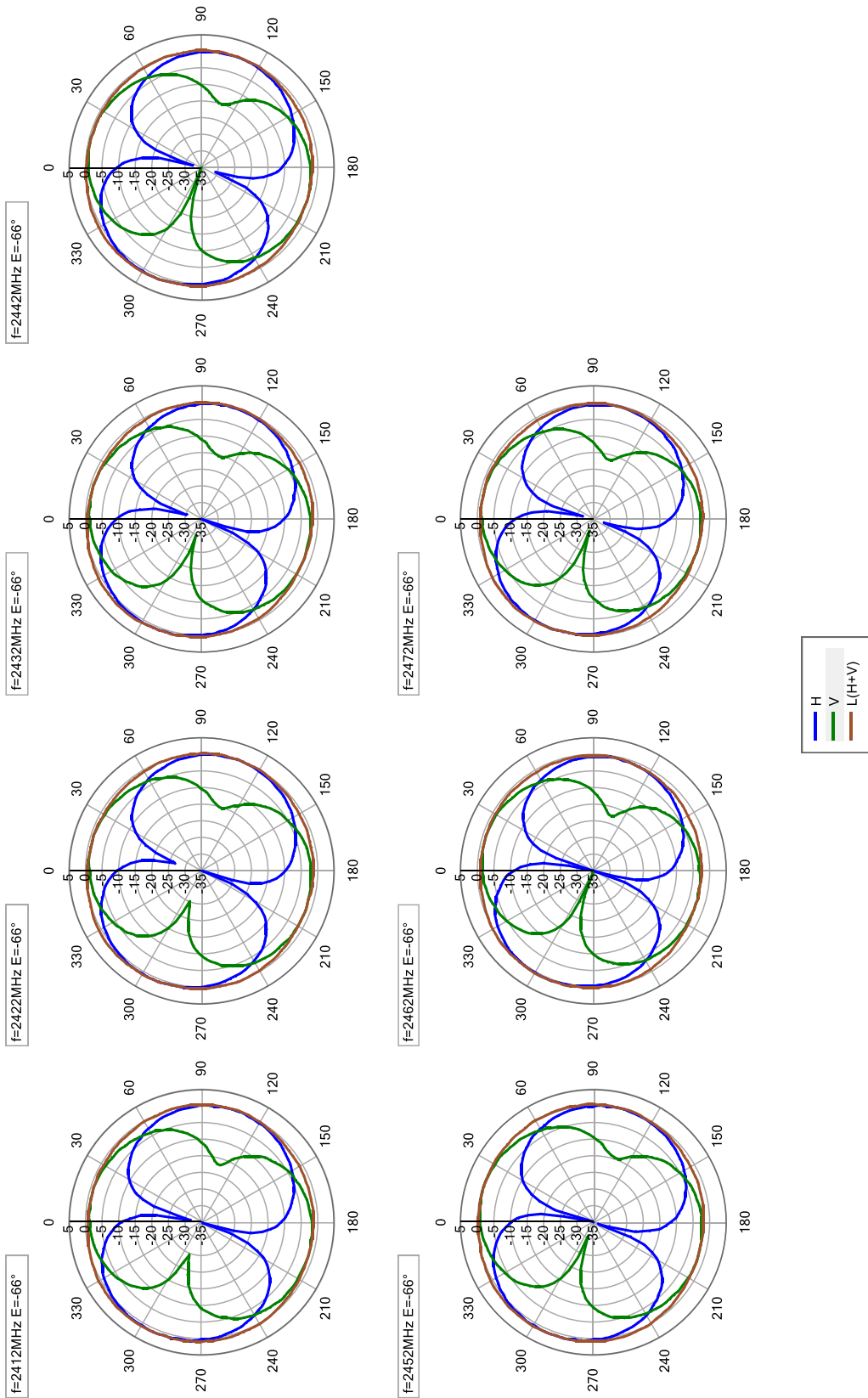
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Figure 1 - 180924_WiFi_2.4_GHz, Polar Plot Horizontal Cut, E=-90°

Polar Plot Horizontal Cut

Antenna: 180924_WiFi_2.4_GHz



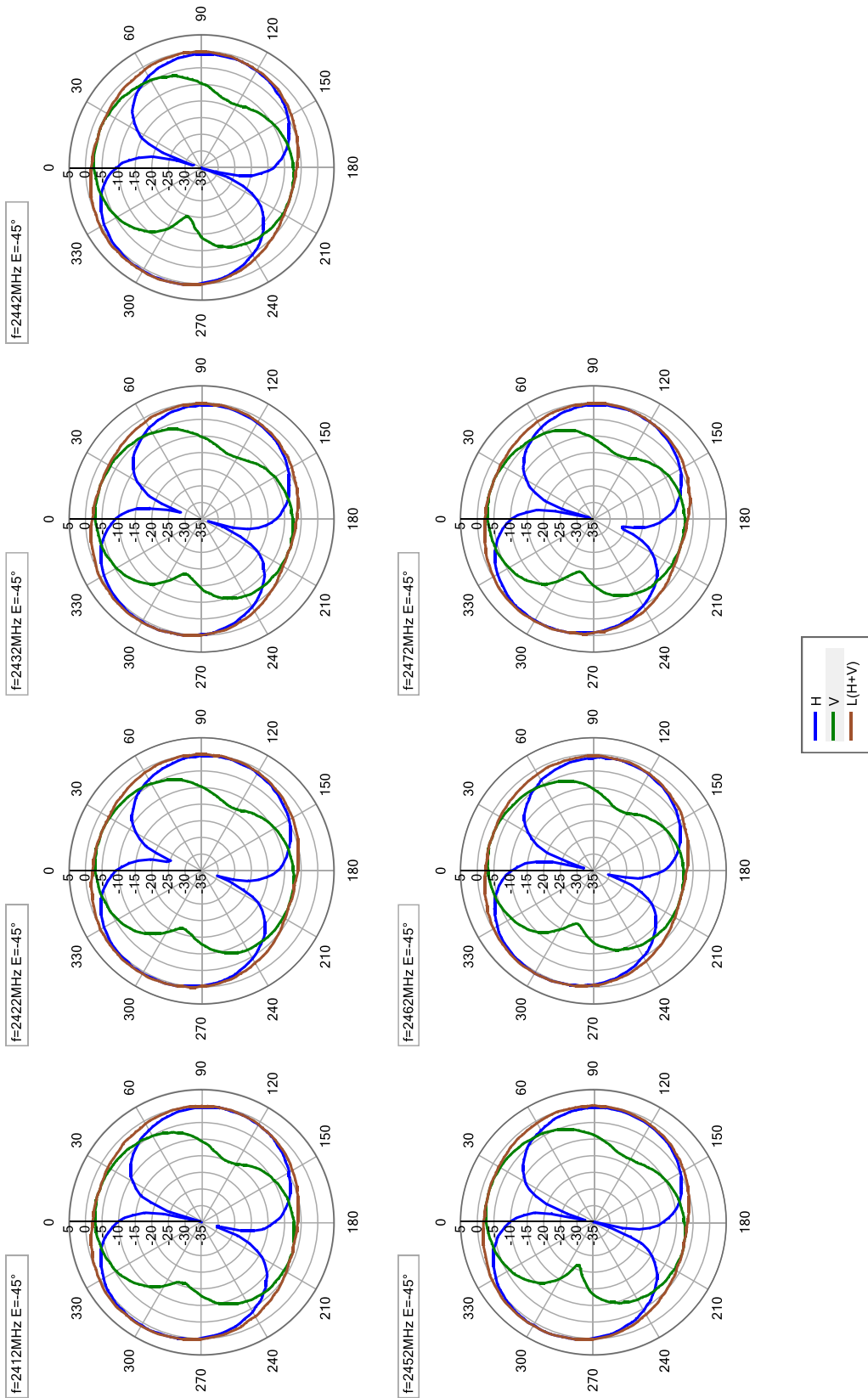
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Figure 2 - 180924_WiFi_2.4_GHz, Polar Plot Horizontal Cut, $E=-66^\circ$

Polar Plot Horizontal Cut

Antenna: 180924_WiFi_2.4_GHz



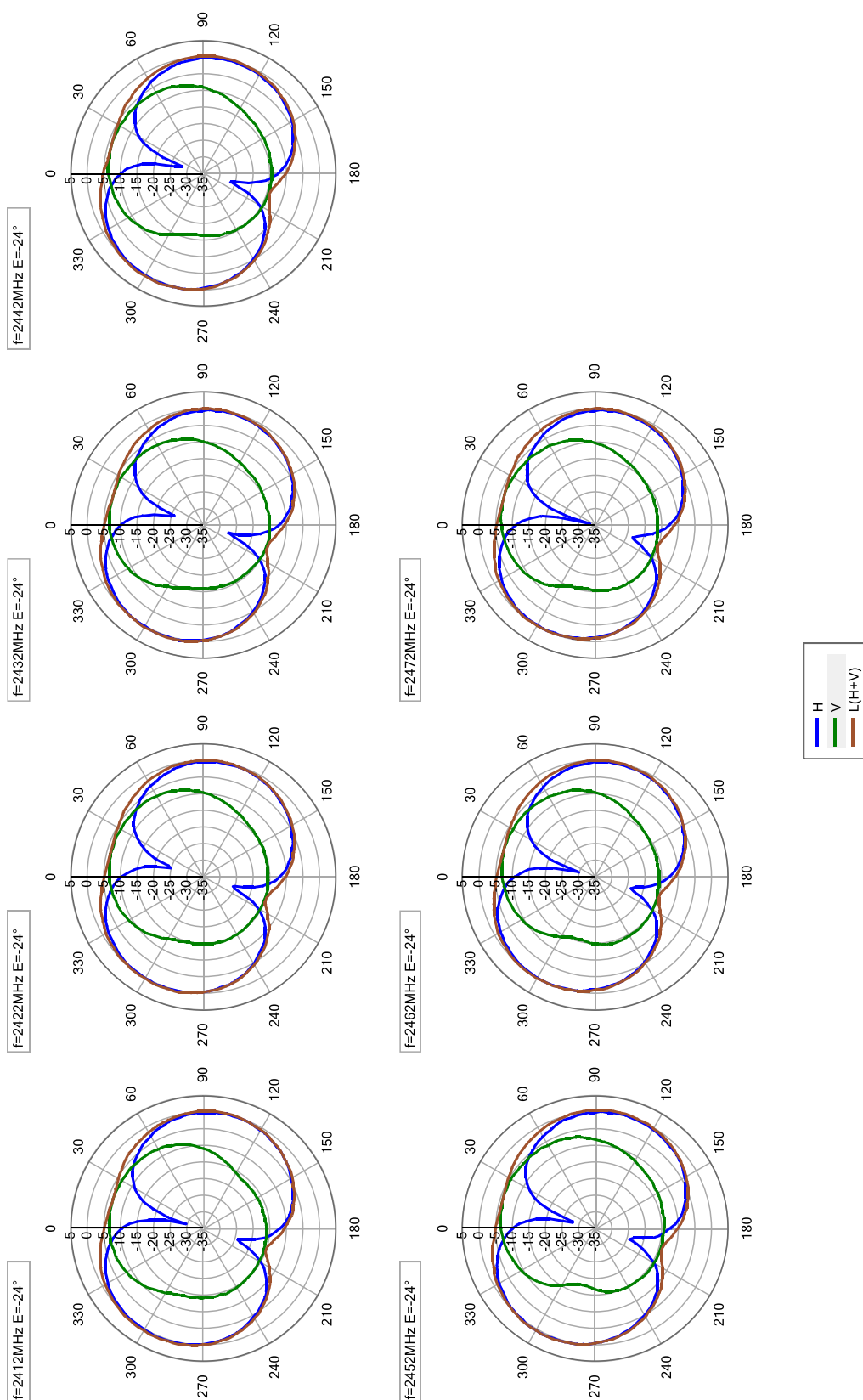
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Figure 3 - 180924_WiFi_2.4_GHz, Polar Plot Horizontal Cut, E=-45°

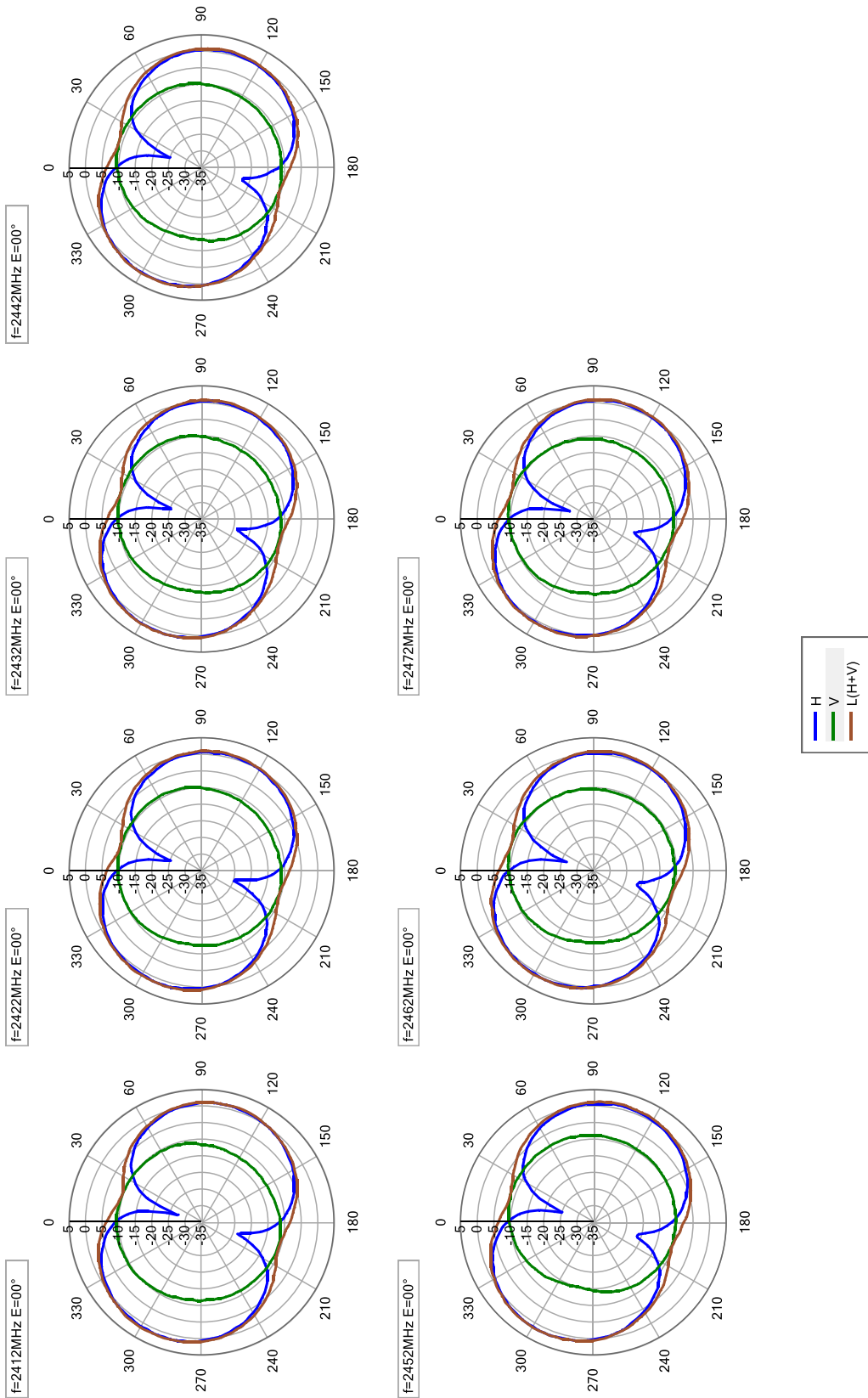
Polar Plot Horizontal Cut

Antenna:180924_WiFi_2.4_GHz



Polar Plot Horizontal Cut

Antenna: 180924_WiFi_2.4_GHz



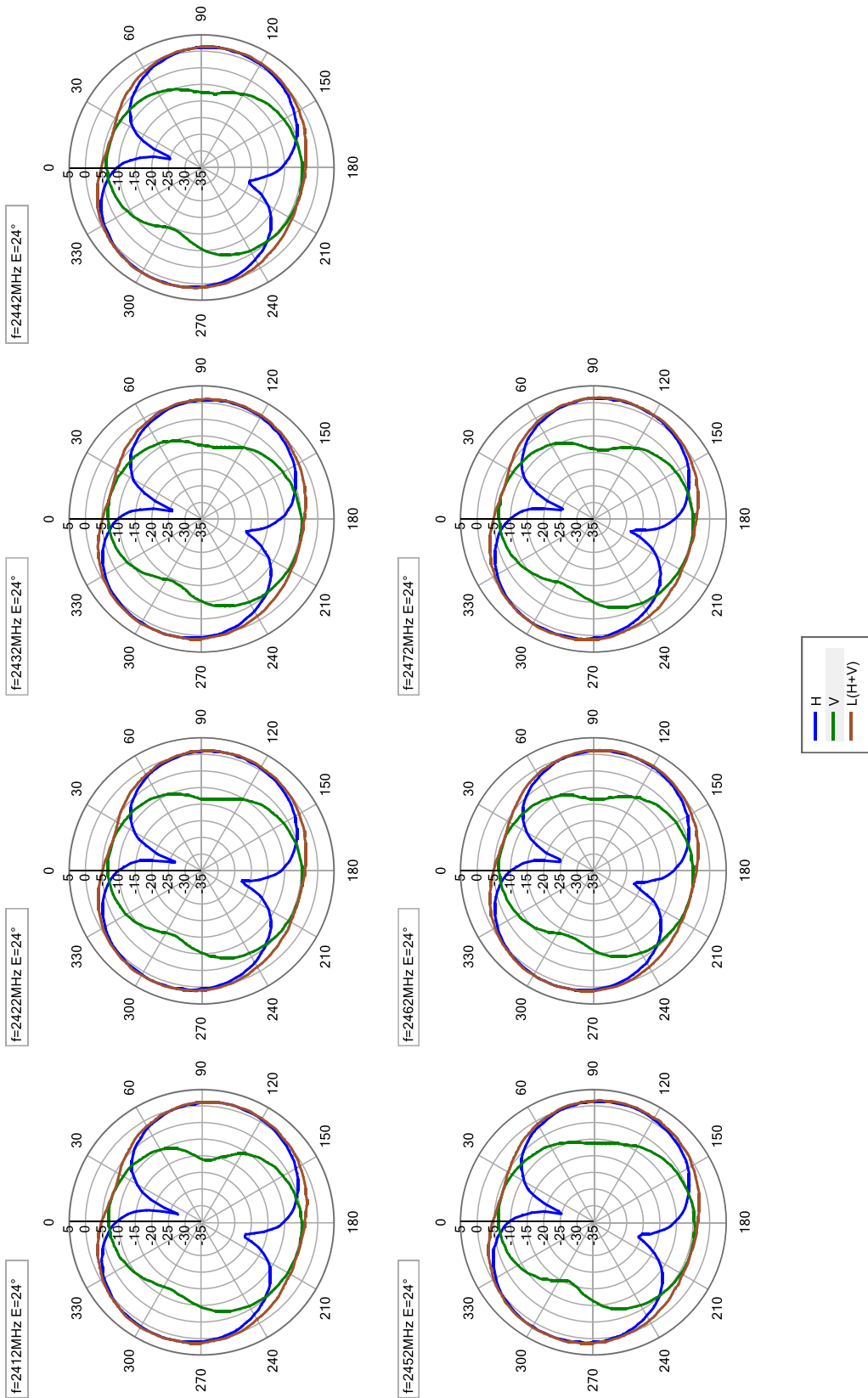
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Figure 5 - 180924_WiFi_2.4_GHz, Polar Plot Horizontal Cut, E=0°

Polar Plot Horizontal Cut

Antenna: 180924_WiFi_2.4_GHz



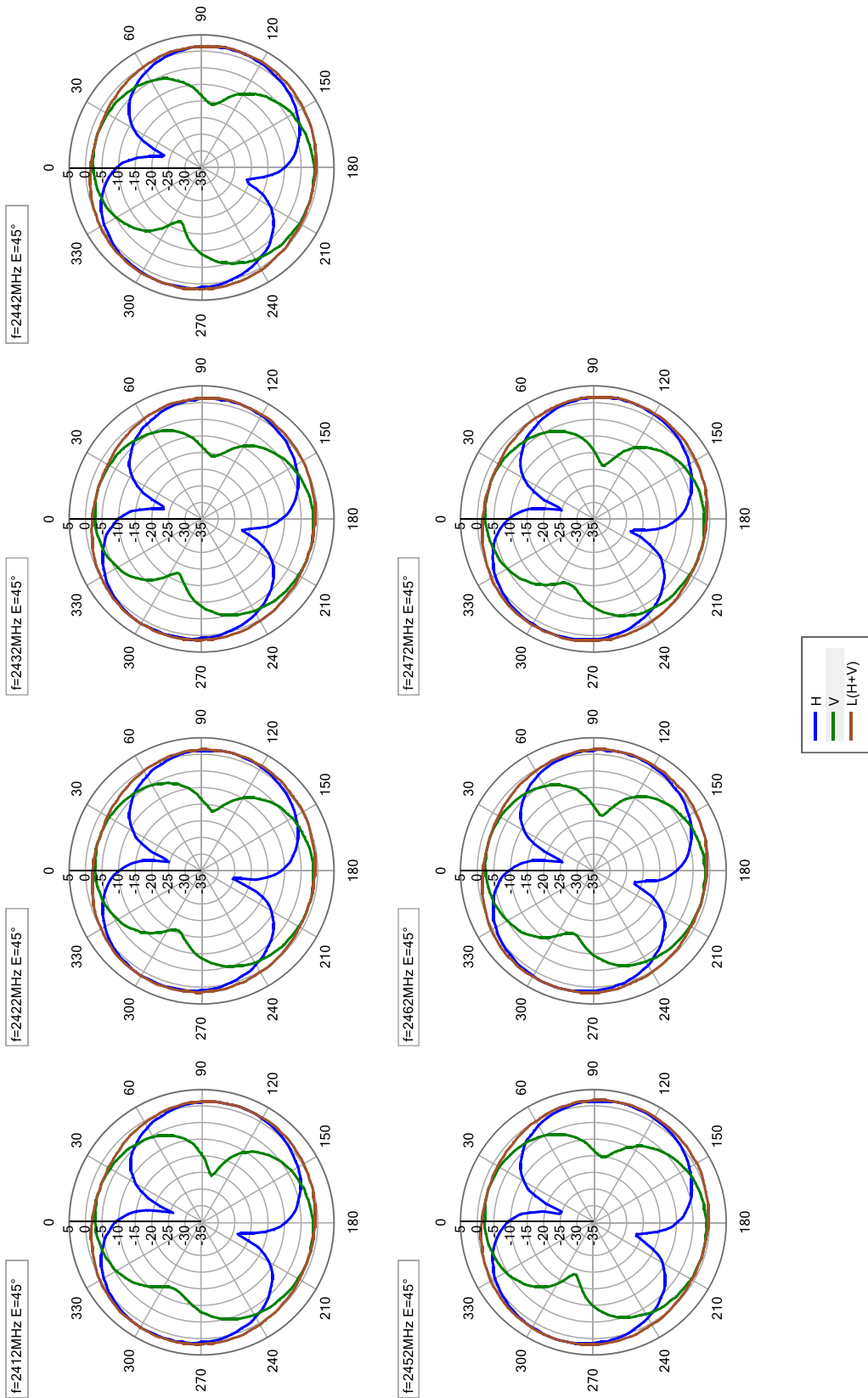
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Figure 6 - 180924_WiFi_2.4_GHz, Polar Plot Horizontal Cut, E=24°

Polar Plot Horizontal Cut

Antenna: 180924_WiFi_2.4_GHz



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Figure 7 - 180924_WiFi_2.4_GHz, Polar Plot Horizontal Cut, E=45°

Polar Plot Horizontal Cut

Antenna: 180924_WiFi_2.4_GHz

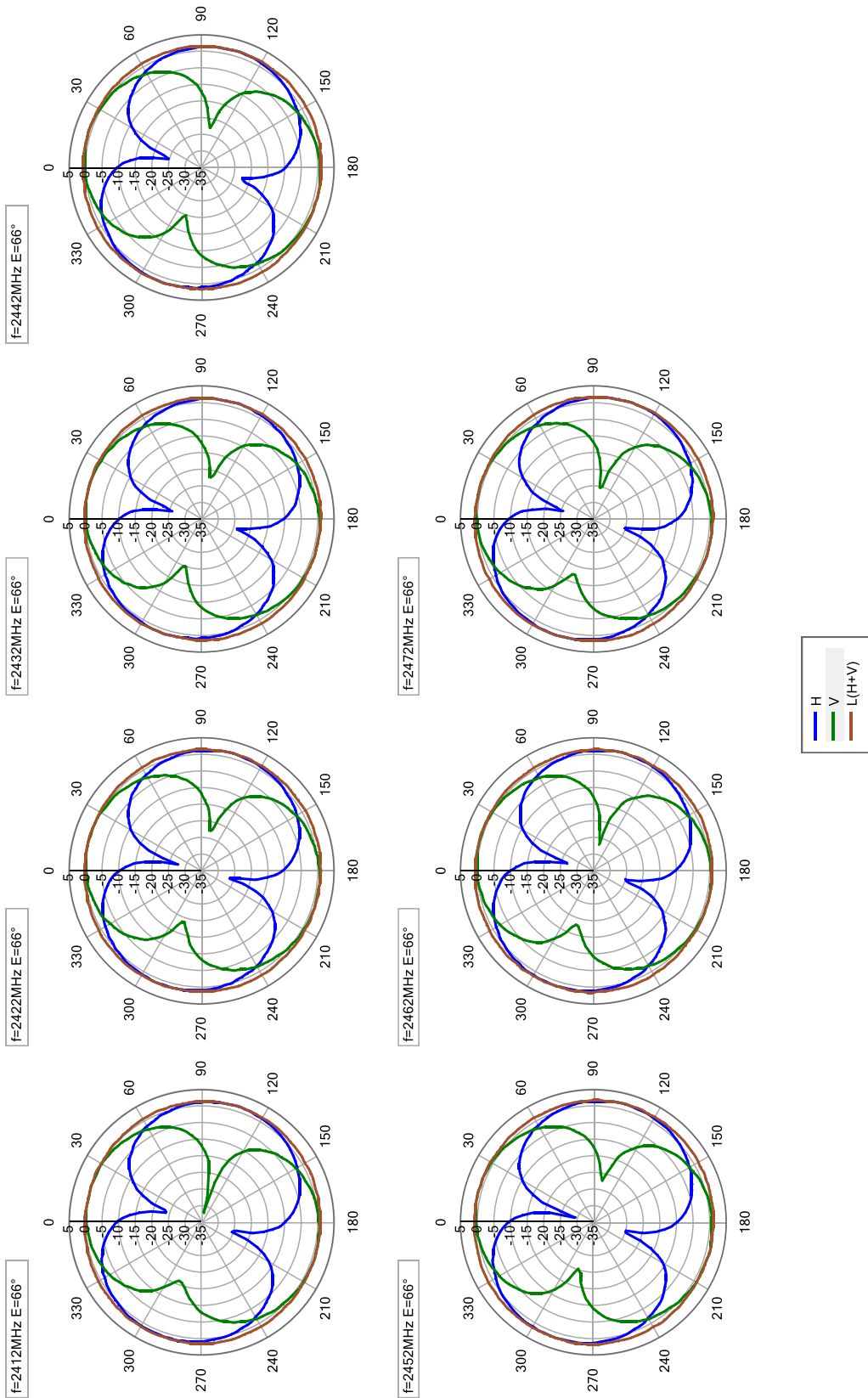
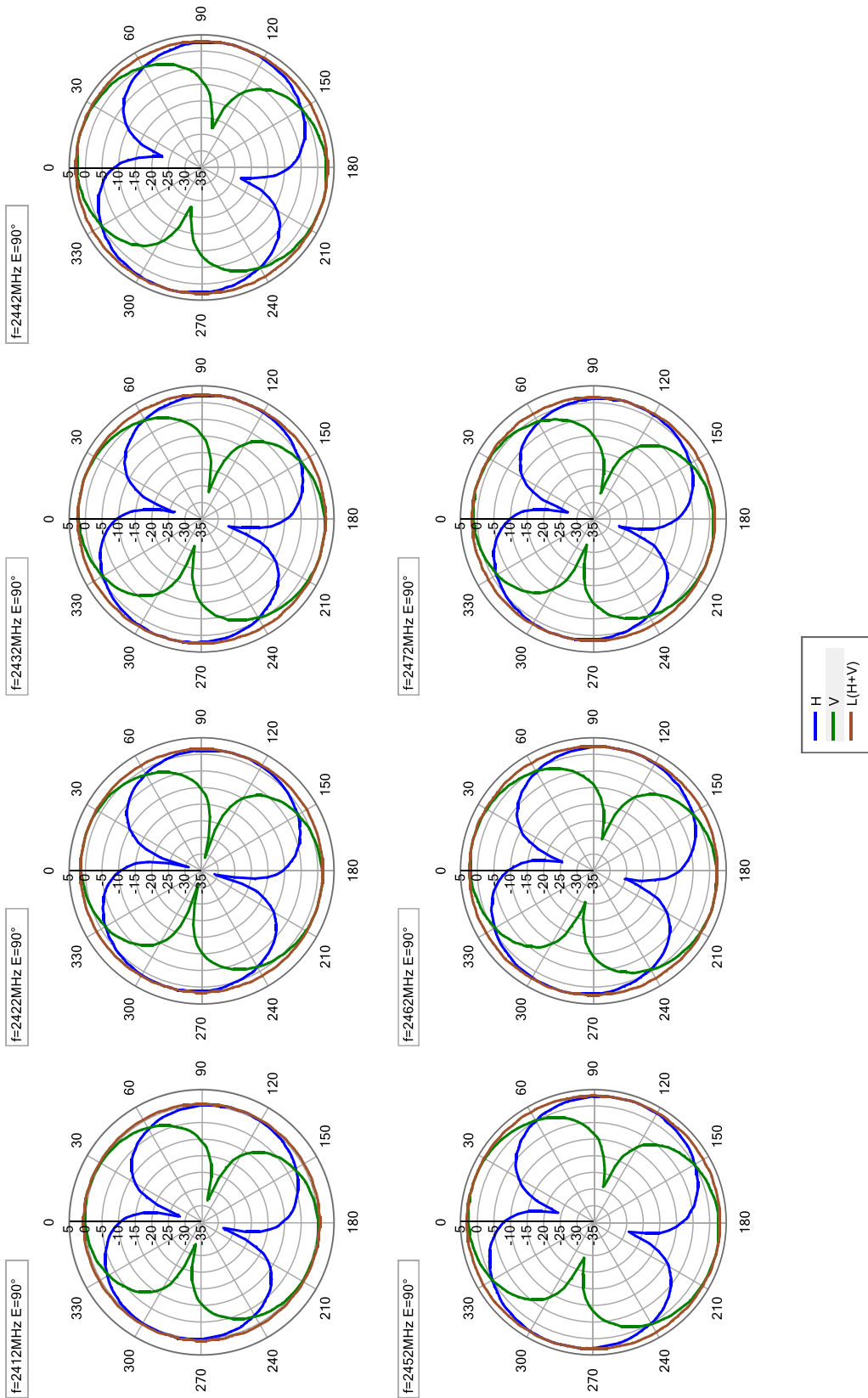


Figure 8 - 180924_WiFi_2.4_GHz, Polar Plot Horizontal Cut, E=66°

Polar Plot Horizontal Cut

Antenna: 180924_WiFi_2.4_GHz



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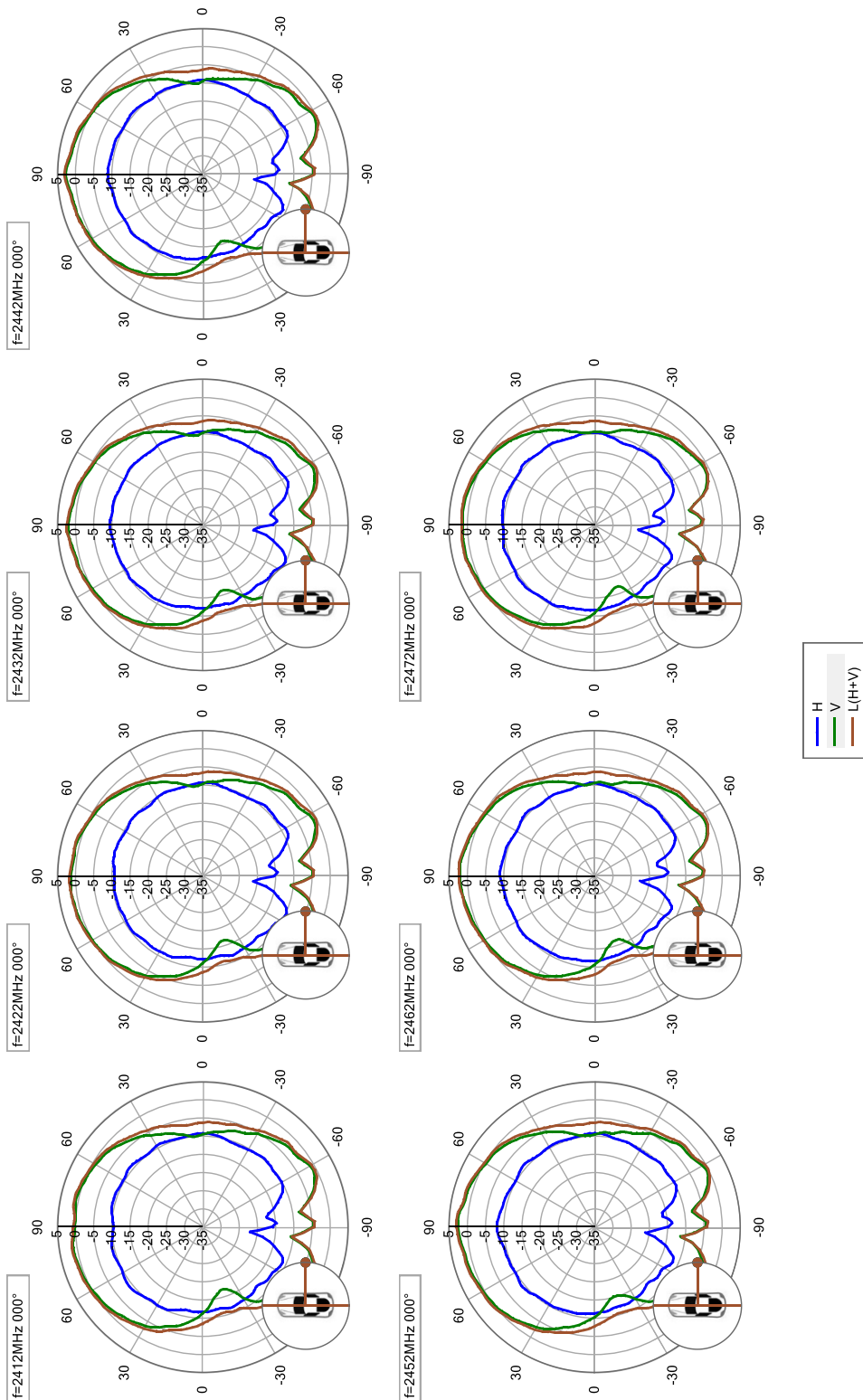
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Figure 9 - 180924_WiFi_2.4_GHz, Polar Plot Horizontal Cut, E=90°

2.4 GHz - Polar Plot Vertical Cut

Polar Plot Vertical Cut

Antenna: 180924_WiFi_2.4_GHz



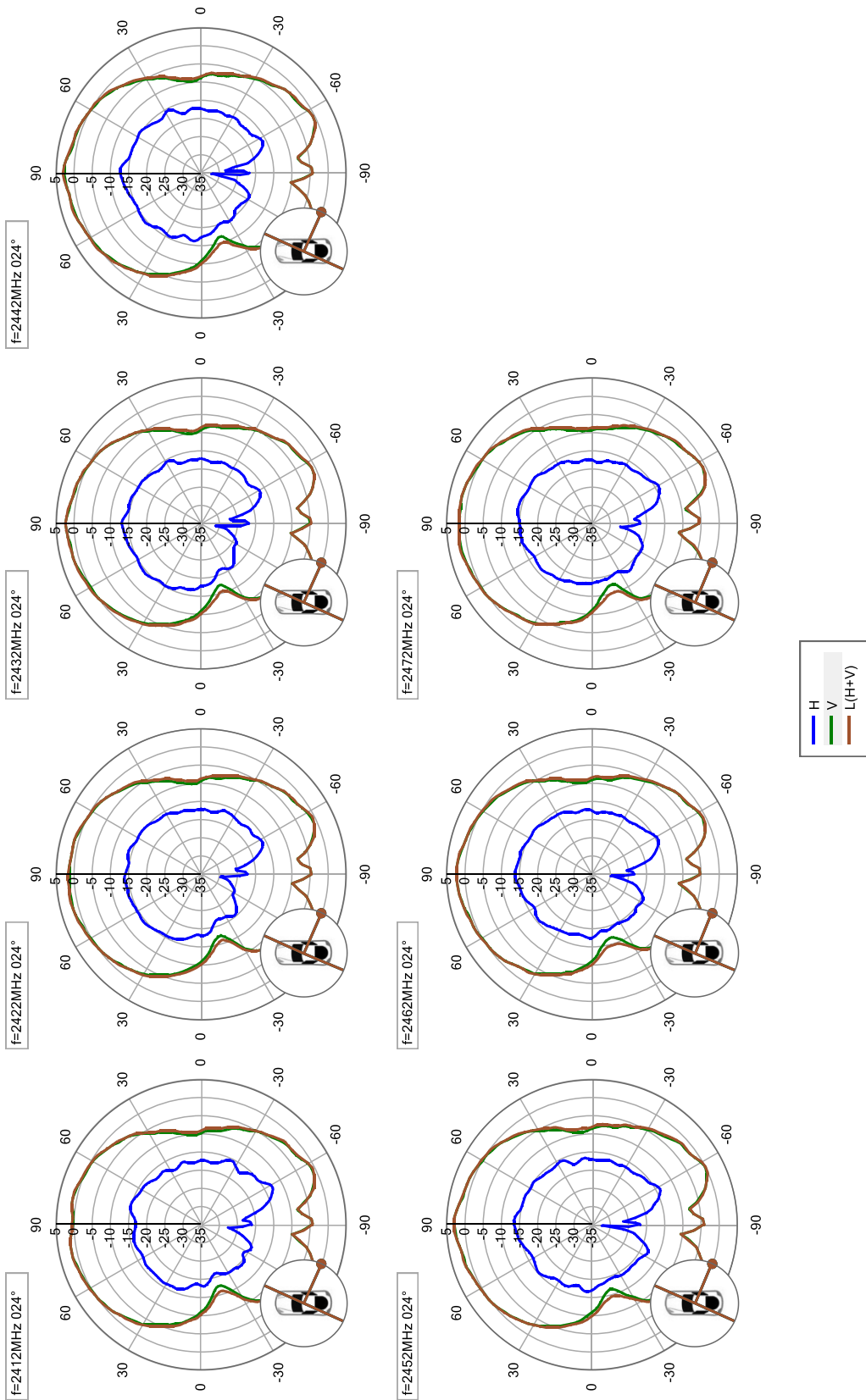
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Figure 10 - 180924_WiFi_2.4_GHz, Polar Plot Vertical Cut, Phi=0°

Polar Plot Vertical Cut

Antenna: 180924_WiFi_2.4_GHz



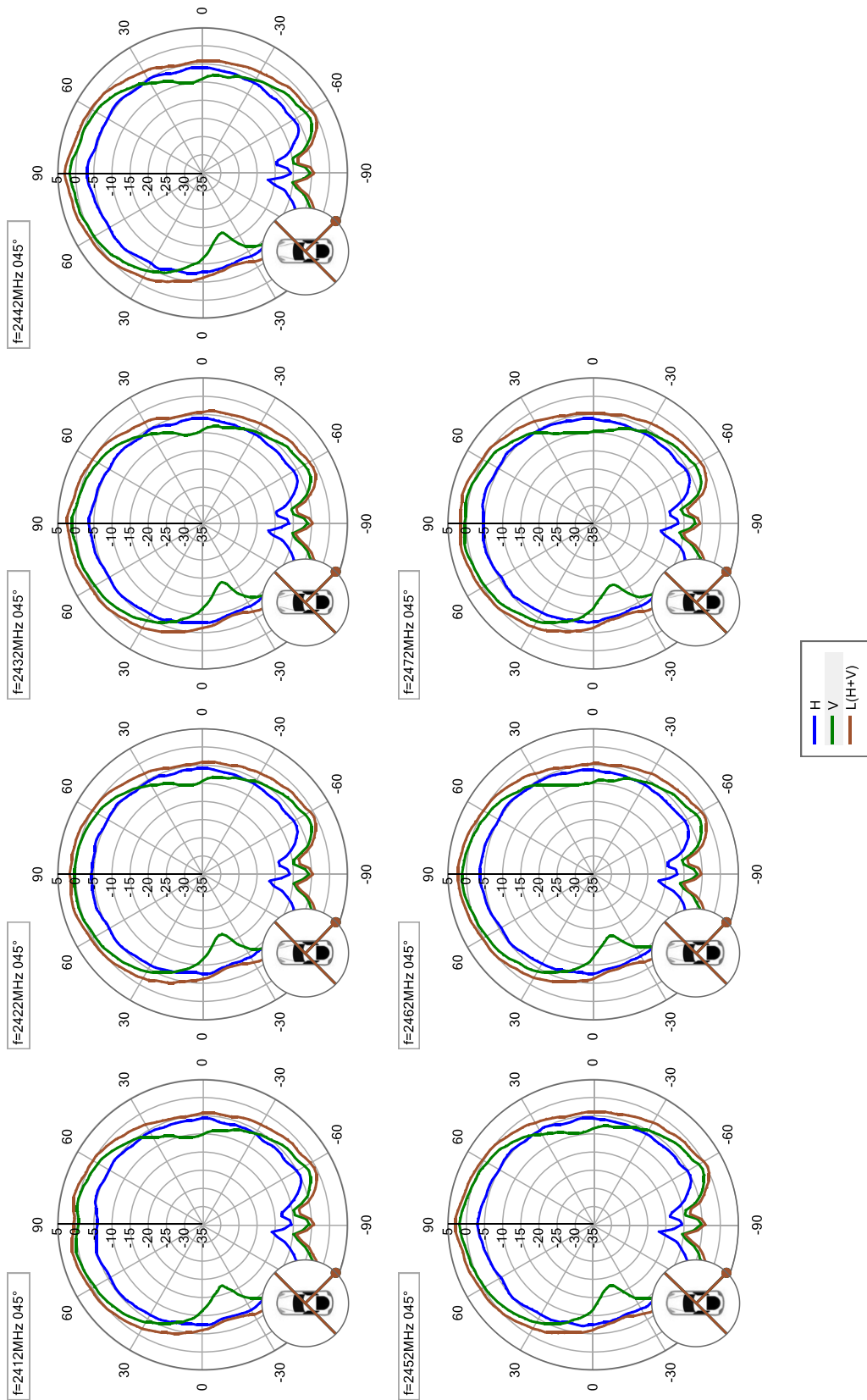
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Figure 11 - 180924_WiFi_2.4_GHz, Polar Plot Vertical Cut, Phi=24°

Polar Plot Vertical Cut

Antenna: 180924_WiFi_2.4_GHz



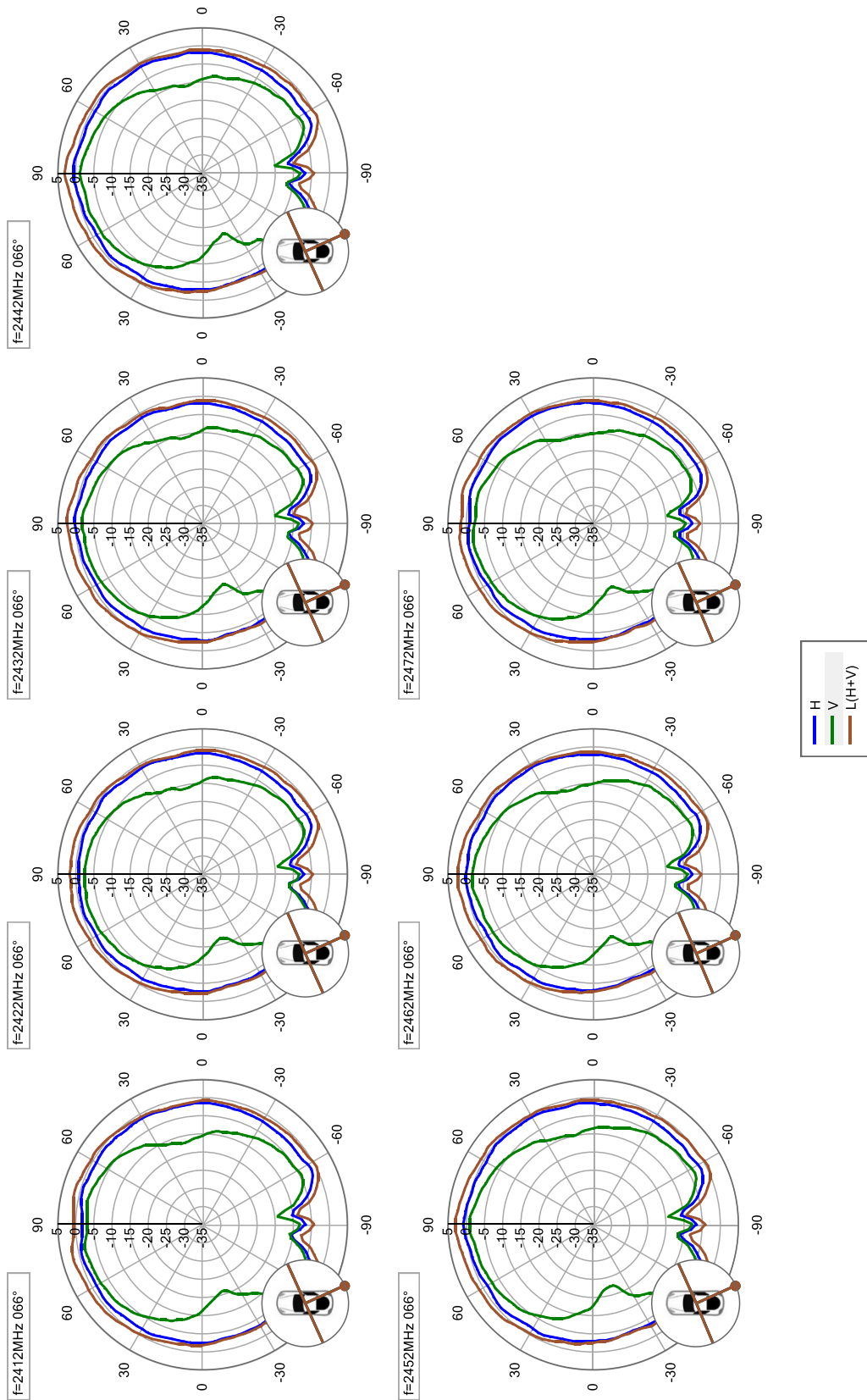
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Figure 12 - 180924_WiFi_2.4_GHz, Polar Plot Vertical Cut, Phi=45°

Polar Plot Vertical Cut

Antenna: 180924_WiFi_2.4_GHz



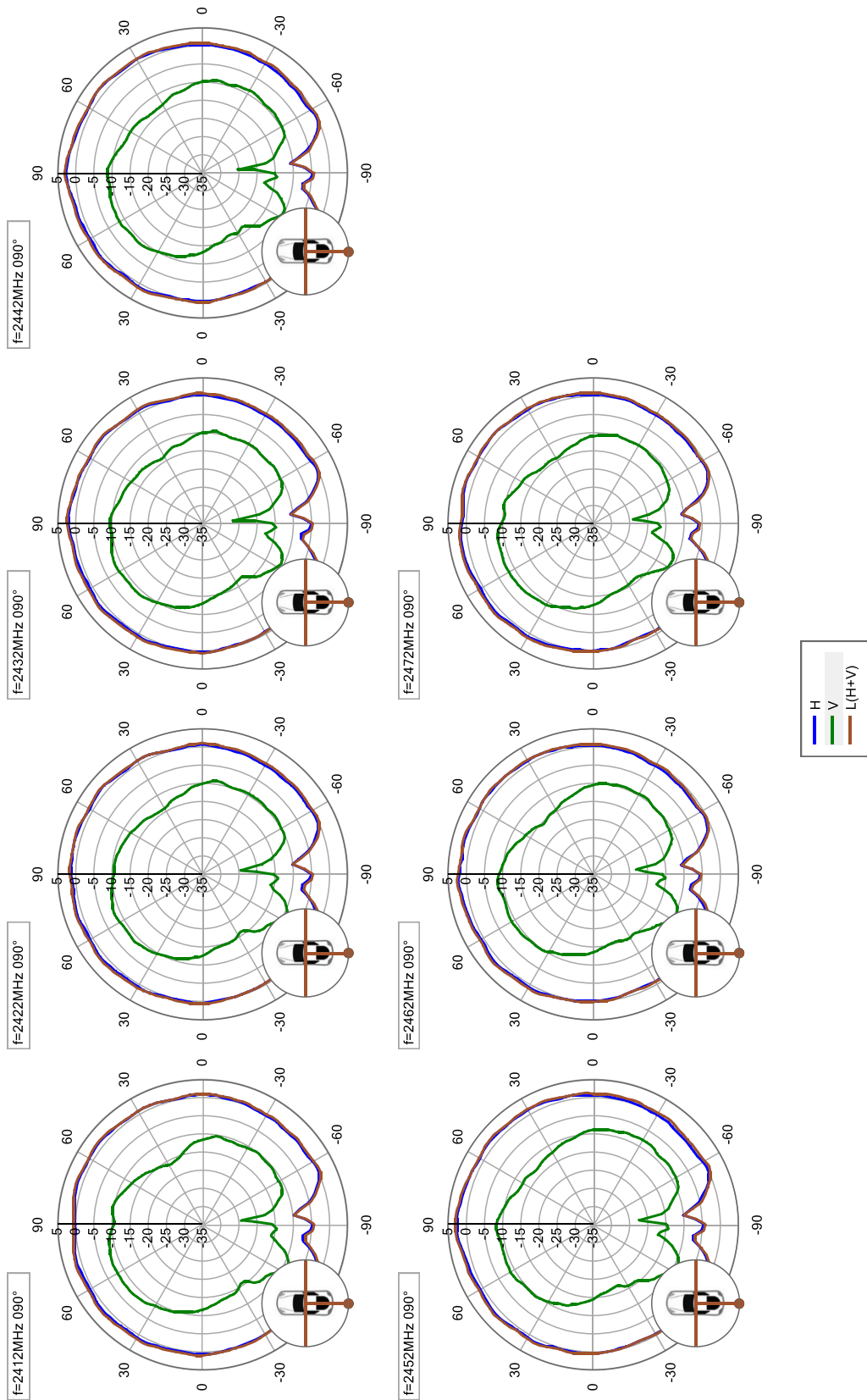
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Figure 13 - 180924_WiFi_2.4_GHz, Polar Plot Vertical Cut, $\Phi=66^\circ$

Polar Plot Vertical Cut

Antenna: 180924_WiFi_2.4_GHz



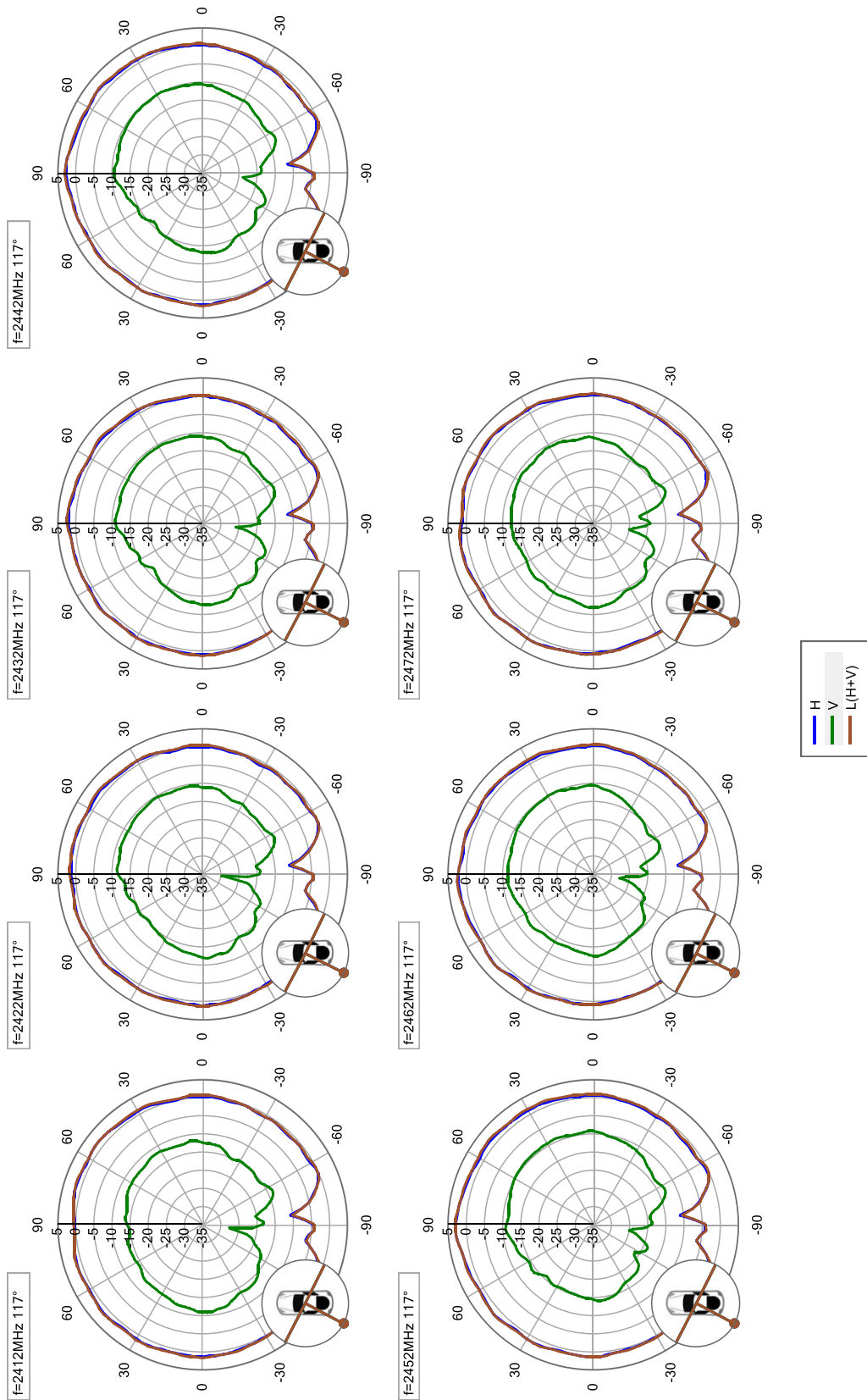
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Figure 14 - 180924_WiFi_2.4_GHz, Polar Plot Vertical Cut, Phi=90°

Polar Plot Vertical Cut

Antenna: 180924_WiFi_2.4_GHz



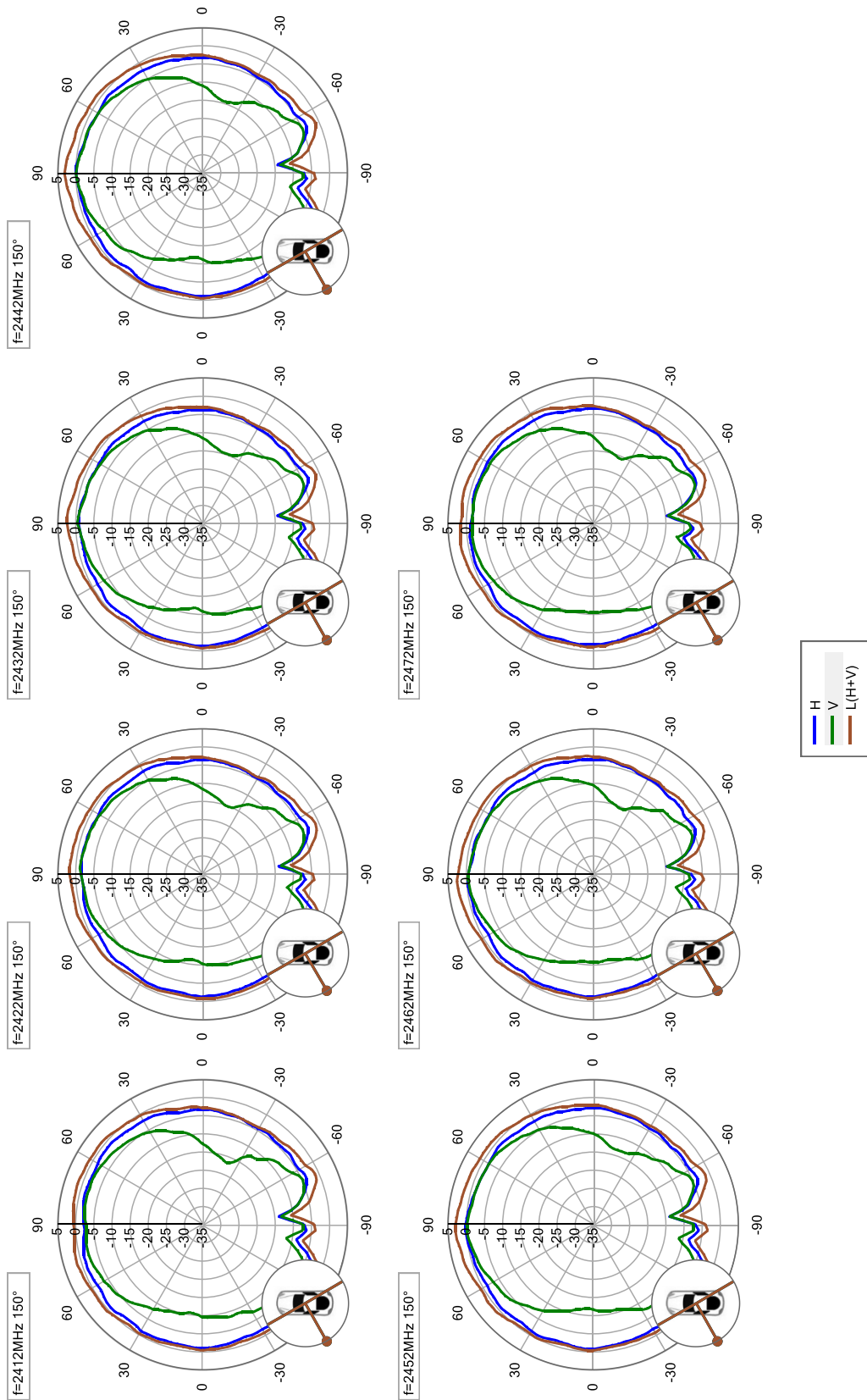
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Figure 15 - 180924_WiFi_2.4_GHz, Polar Plot Vertical Cut, Phi=117°

Polar Plot Vertical Cut

Antenna: 180924_WiFi_2.4_GHz



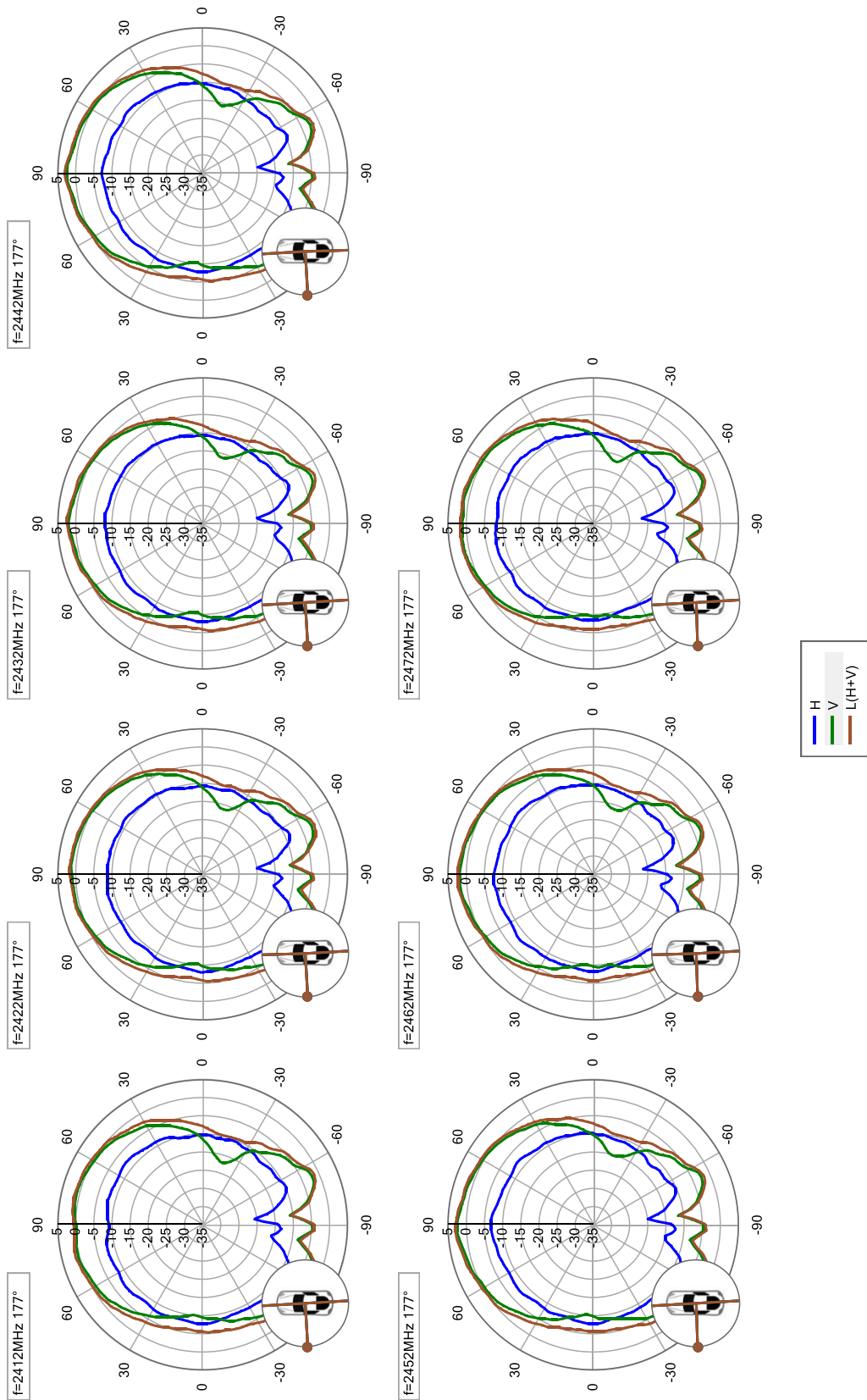
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Figure 16 - 180924_WiFi_2.4_GHz, Polar Plot Vertical Cut, Phi=150°

Polar Plot Vertical Cut

Antenna: 180924_WiFi_2.4_GHz



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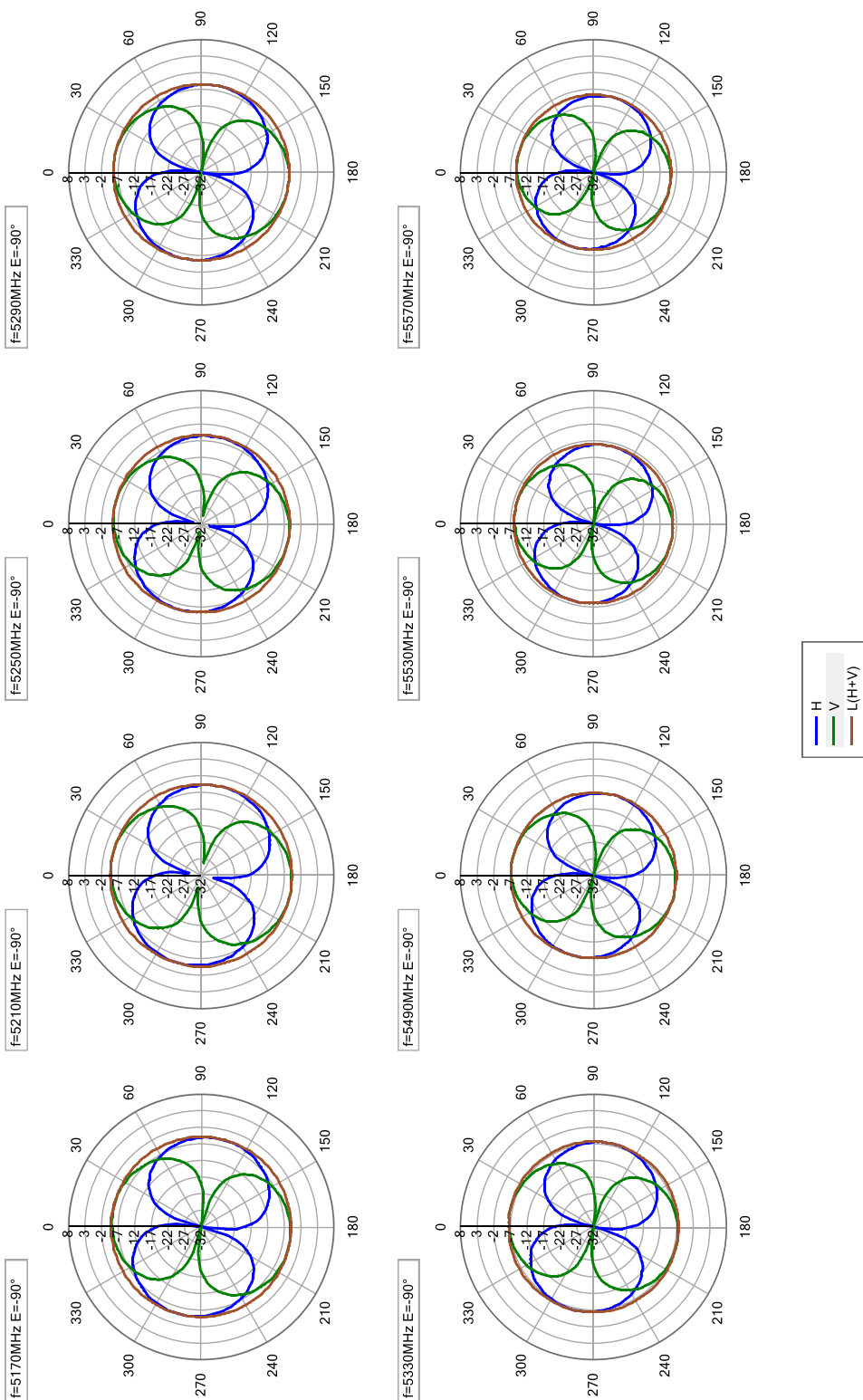
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Figure 17 - 180924_WiFi_2.4_GHz, Polar Plot Vertical Cut, Phi=177°

5 GHz - Polar Plot Horizontal Cut

Polar Plot Horizontal Cut

Antenna: 180924_WiFi_5.0_GHz



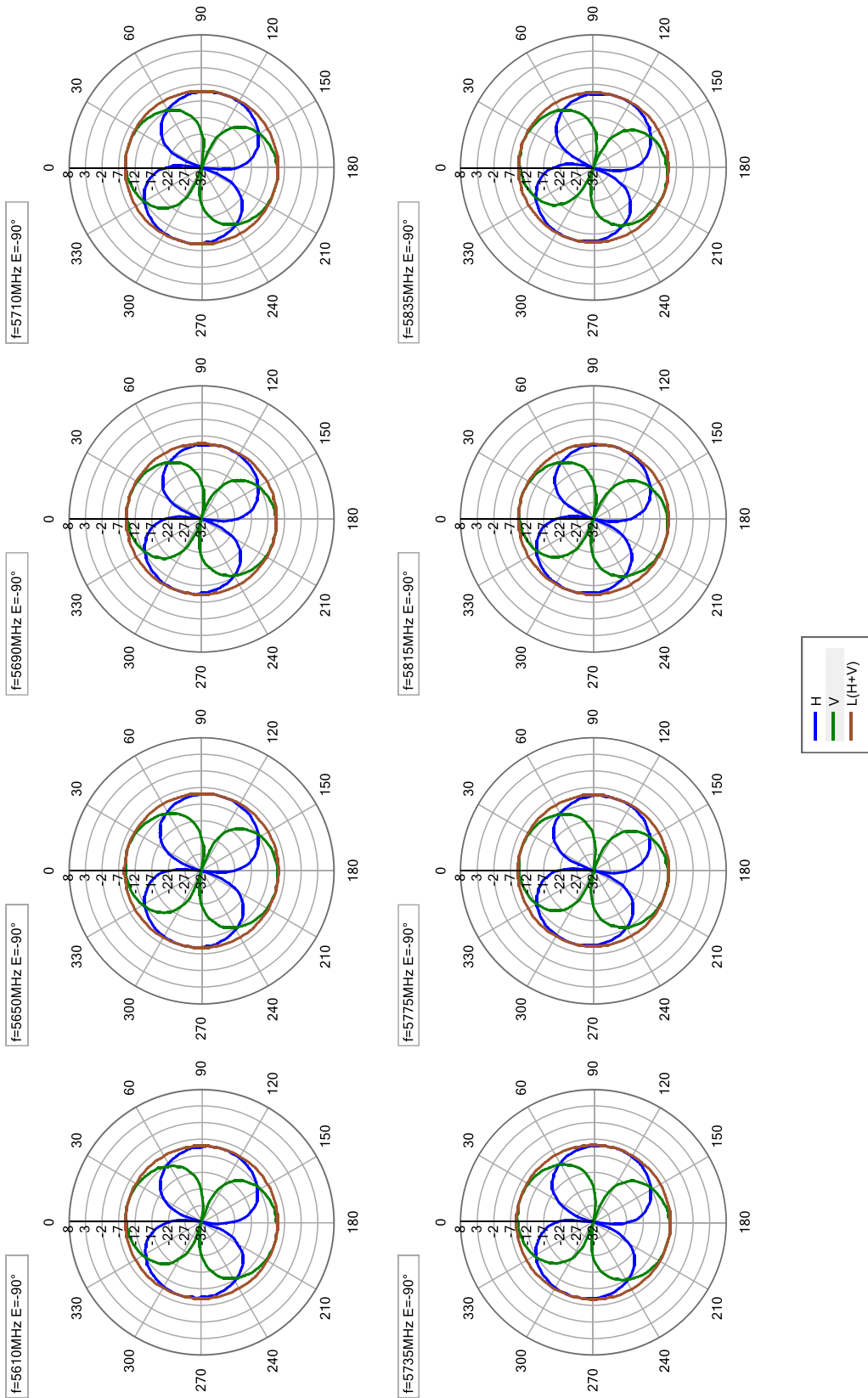
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Figure 18 - 180924_WiFi_5.0_GHz, Polar Plot Horizontal Cut, E=-90°

Polar Plot Horizontal Cut

Antenna: 180924_WiFi_5.0_GHz



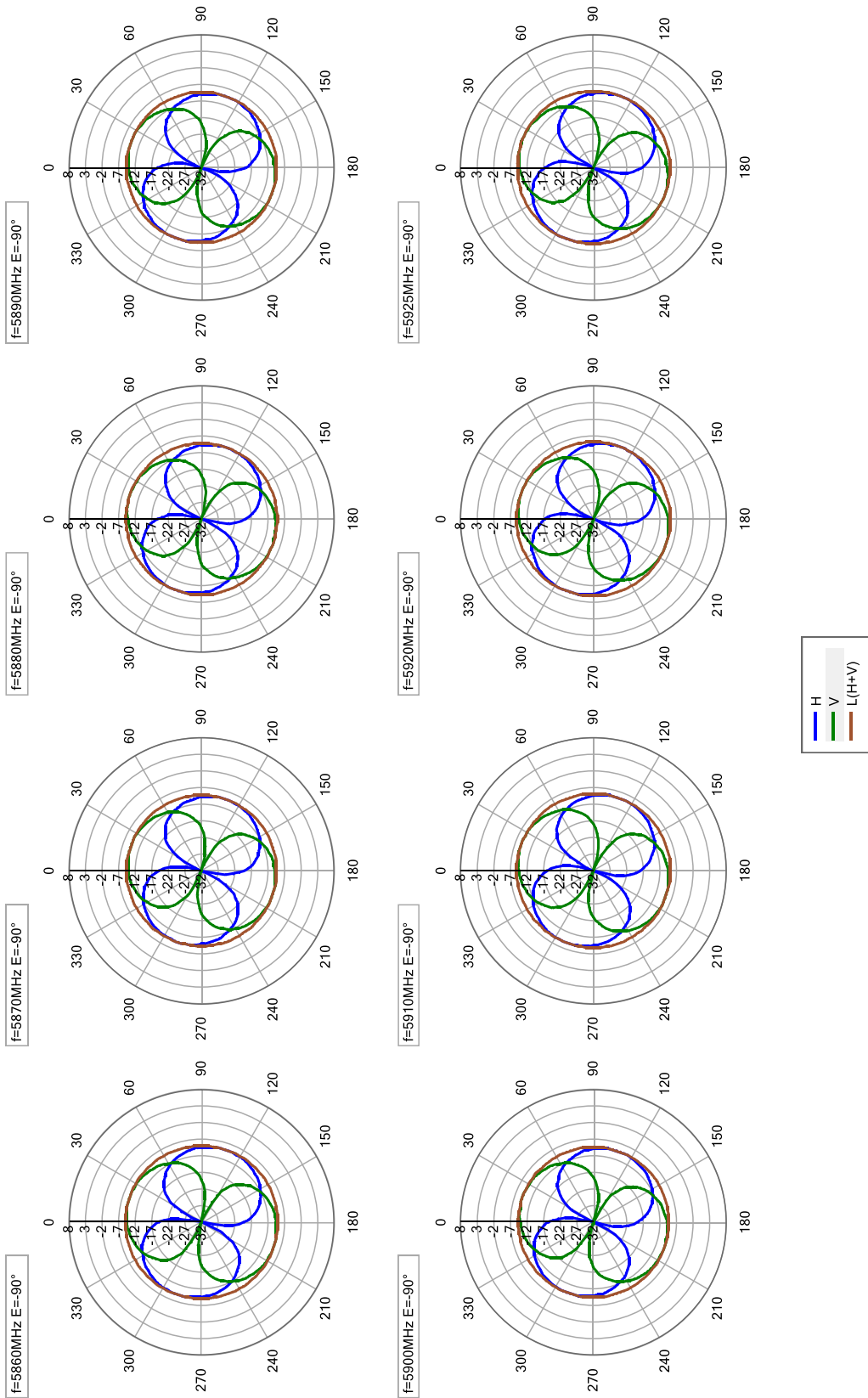
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Figure 19 - 180924_WiFi_5.0_GHz, Polar Plot Horizontal Cut, E=-90°

Polar Plot Horizontal Cut

Antenna: 180924_WiFi_5.0_GHz



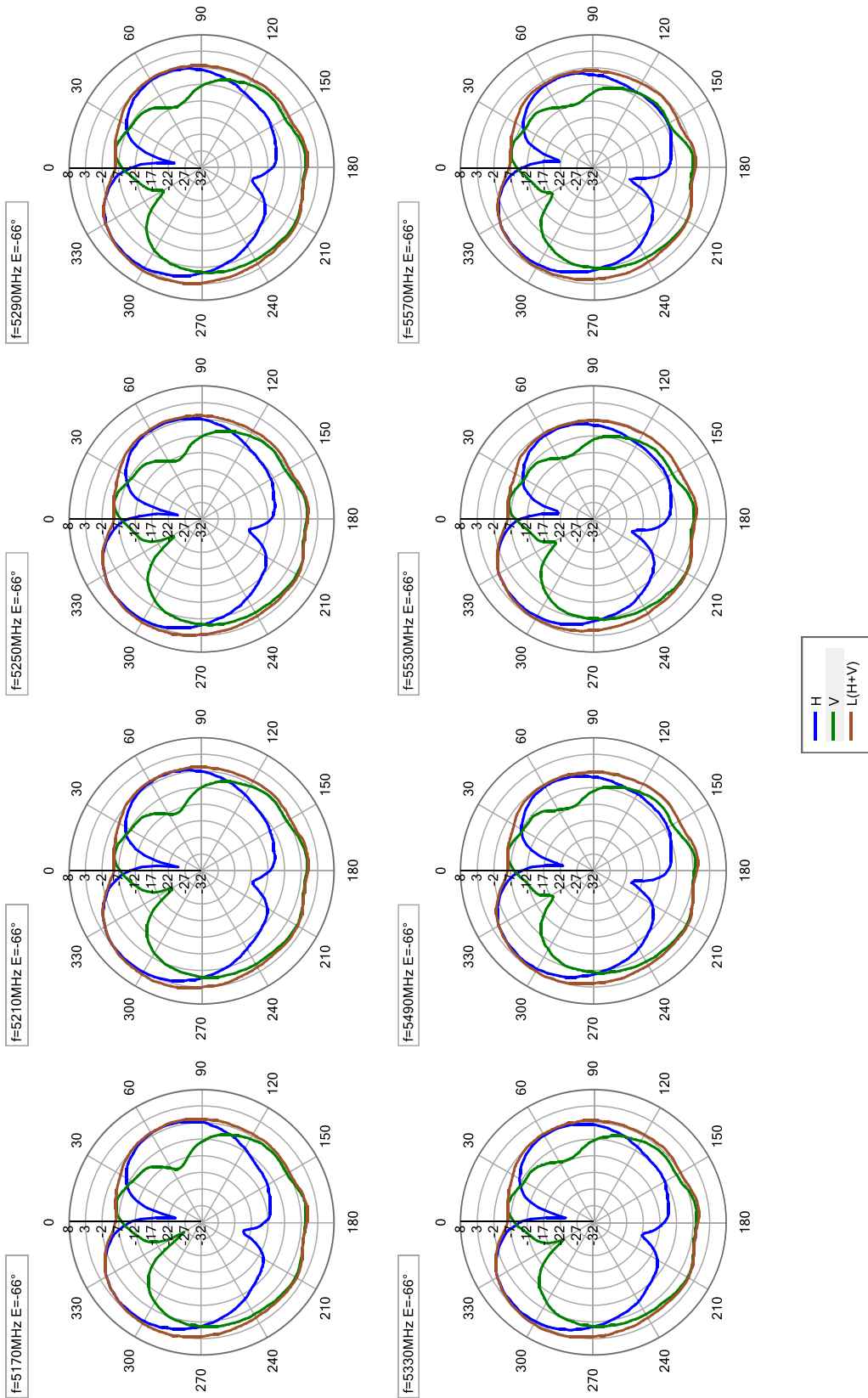
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Figure 20 - 180924_WiFi_5.0_GHz, Polar Plot Horizontal Cut, E=-90°

Polar Plot Horizontal Cut

Antenna: 180924_WiFi_5.0_GHz



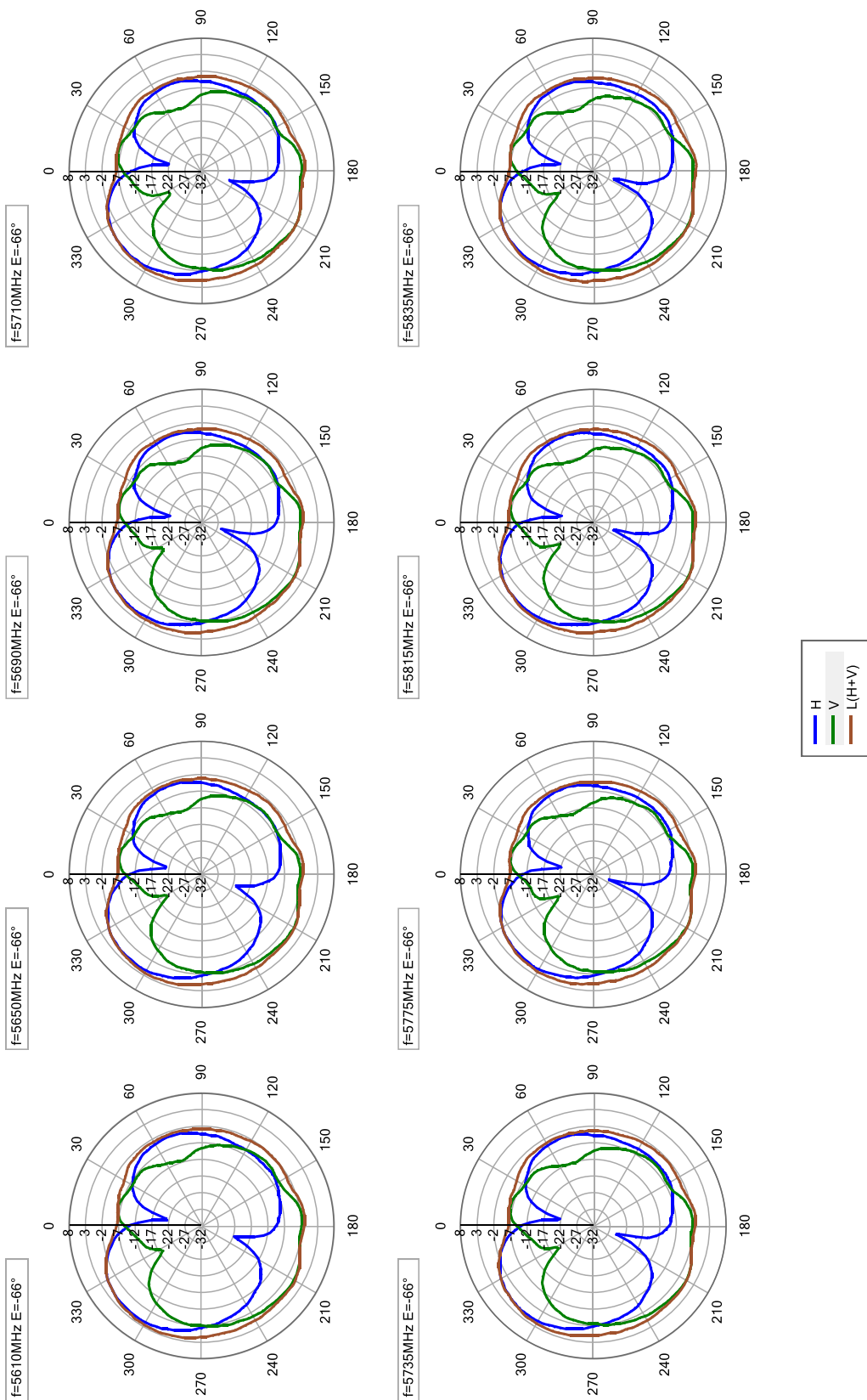
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Figure 21 - 180924_WiFi_5.0_GHz, Polar Plot Horizontal Cut, E=-66°

Polar Plot Horizontal Cut

Antenna: 180924_WiFi_5.0_GHz



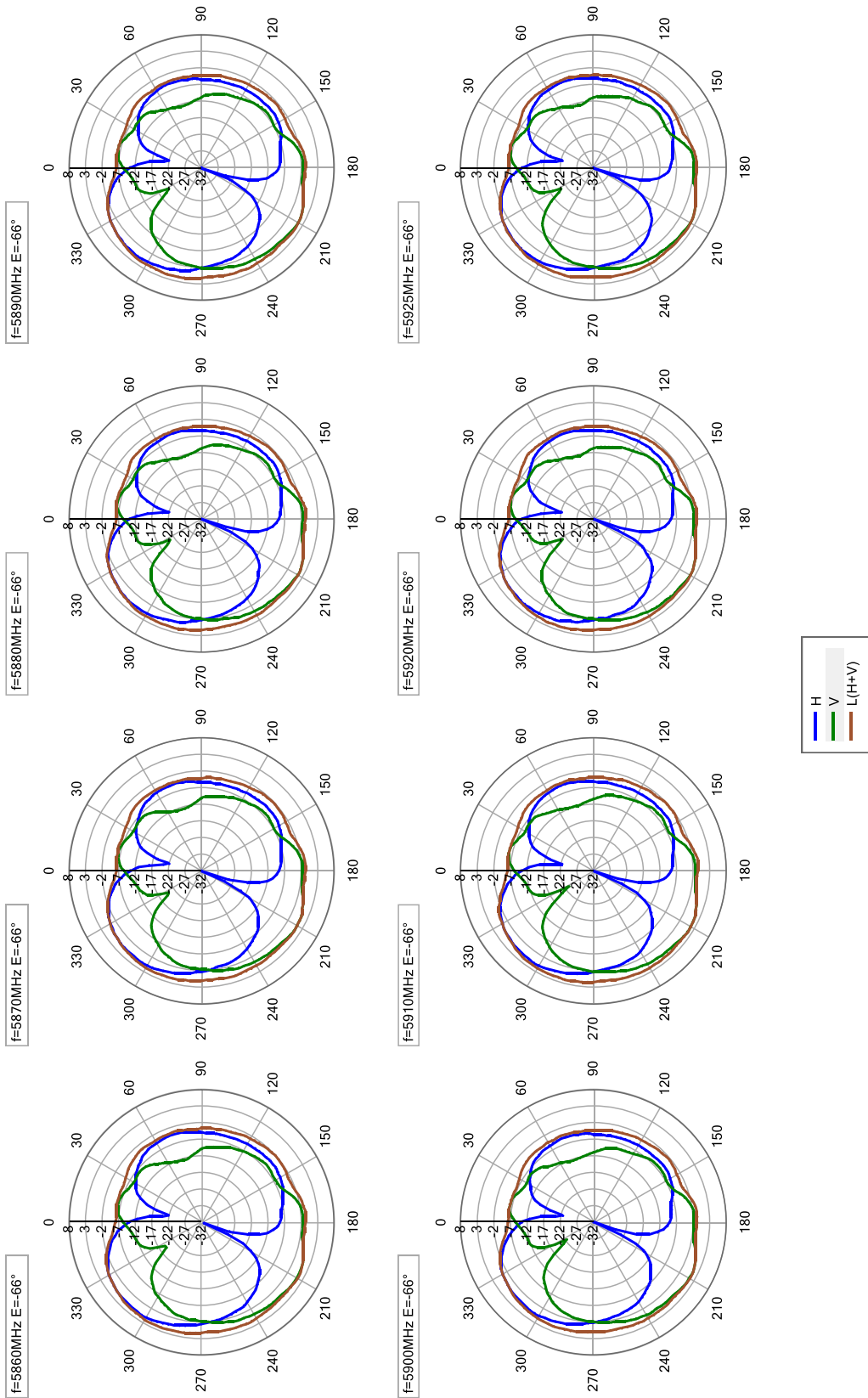
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Figure 22 - 180924_WiFi_5.0_GHz, Polar Plot Horizontal Cut, $E = -66^\circ$

Polar Plot Horizontal Cut

Antenna: 180924_WiFi_5.0_GHz



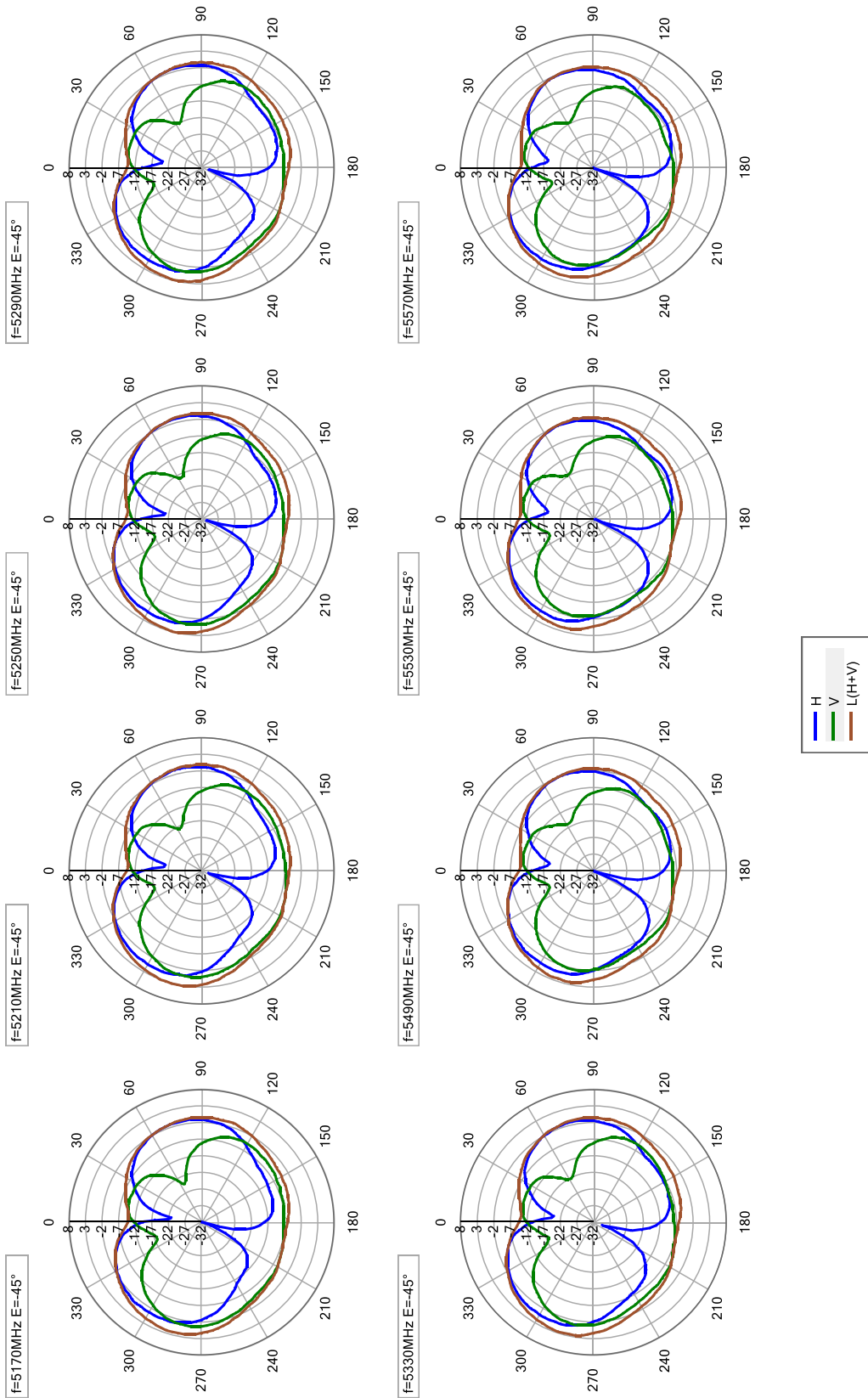
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Figure 23 - 180924_WiFi_5.0_GHz, Polar Plot Horizontal Cut, E=-66°

Polar Plot Horizontal Cut

Antenna: 180924_WiFi_5.0_GHz



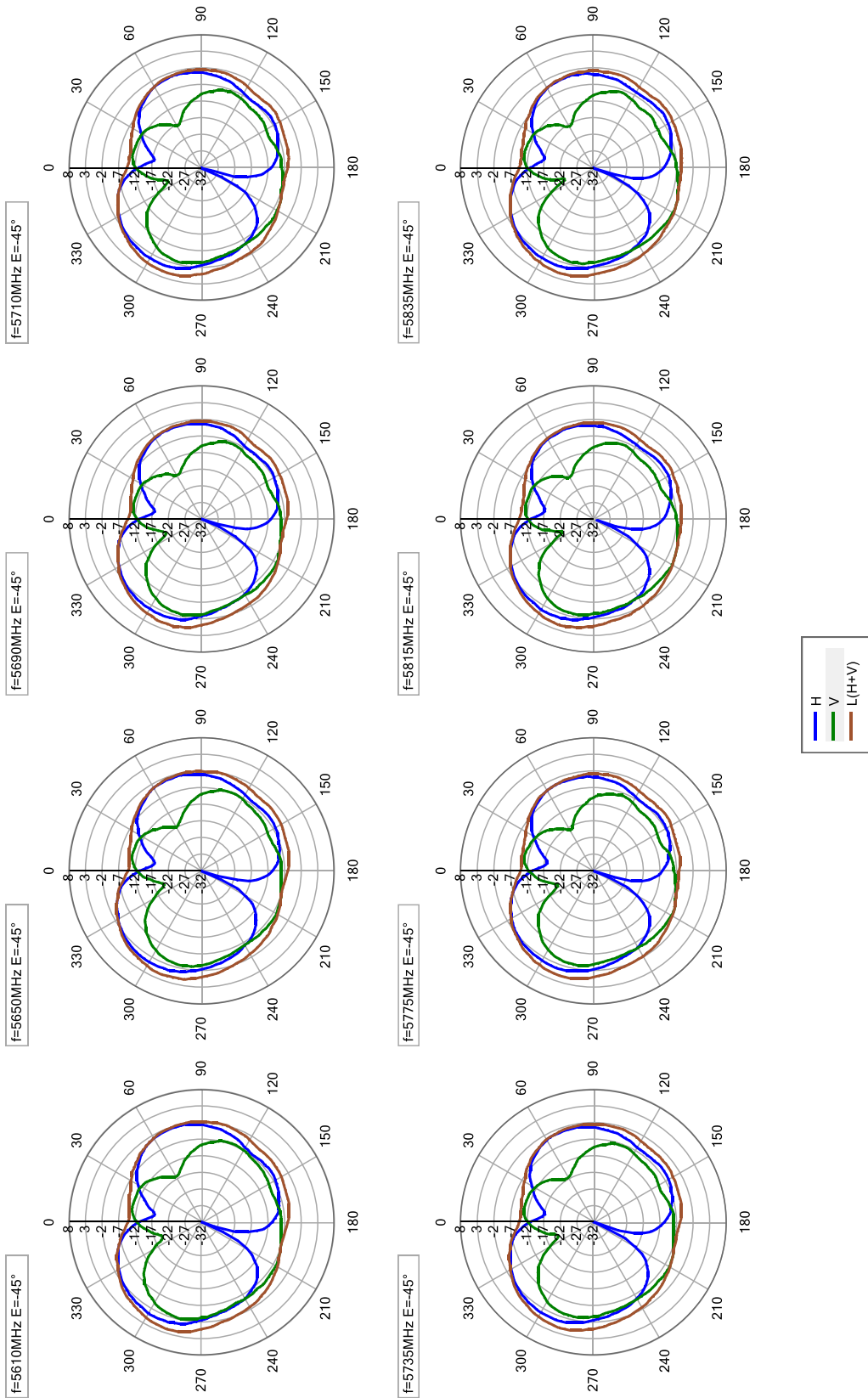
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Figure 24 - 180924_WiFi_5.0_GHz, Polar Plot Horizontal Cut, E=-45°

Polar Plot Horizontal Cut

Antenna: 180924_WiFi_5.0_GHz



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Figure 25 - 180924_WiFi_5.0_GHz, Polar Plot Horizontal Cut, $E = -45^\circ$