

# Specification

## Features & Performance

Model	CPE210 V3.2	CPE220 V3.0	CPE510 V3.2	CPE605 V1.0	CPE610 V2.0	CPE710 V1.0	
Name	2.4 GHz 300 Mbps 9 dBi Outdoor CPE	2.4 GHz 300 Mbps 12 dBi Outdoor CPE	5 GHz 300 Mbps 13 dBi Outdoor CPE	5 GHz 150 Mbps 23 dBi Outdoor CPE	5 GHz 300 Mbps 23 dBi Outdoor CPE	5GHz 867Mbps 23dBi Outdoor CPE	
Package Contents	Outdoor CPE 24 V Passive PoE Adapter AC Power Cord Mounting Kits Quick Installation Guide						
Hardware Feature	Processor	Qualcomm 650 MHz CPU, MIPS 24 Kc		Qualcomm 560 MHz CPU, MIPS 74 Kc		Qualcomm 750 MHz CPU, MIPS 74 Kc	
	Memory	64 MB DDR2 RAM, 8 MB Flash				128 MB DDR2 RAM, 16 MB Flash	
	Antenna Gain	9 dBi	12 dBi	13 dBi	23 dBi		
	Beamwidth	65° (Azimuth) / 40° (Elevation)	60° (Azimuth) / 30° (Elevation)	45° (Azimuth) / 45° (Elevation)	7° (Azimuth) / 10° (Elevation)	9° (Azimuth) / 7° (Elevation)	
	Interfaces	1 10/100 Mbps Shielded Ethernet Port (LAN/POE) 1 Grounding Terminal 1 Reset Button	1 10/100 Mbps Shielded Ethernet Port (LAN0/POE) 1 10/100 Mbps Shielded Ethernet Port (LAN1) 1 Grounding Terminal 1 Reset Button	1 10/100 Mbps Shielded Ethernet Port (LAN/POE) 1 Grounding Terminal 1 Reset Button	1 10/100 Mbps Shielded Ethernet Port (LAN/POE) 1 Reset Button		1 10/100/1000 Mbps Shielded Ethernet Port (LAN/POE) 1 Reset Button
	Power Supply	24 VDC / 0.25 A Passive PoE (+4,5 pins; -7,8 pins)	24 VDC / 0.5 A Passive PoE (+4,5 pins; -7,8 pins)		24 VDC / 0.25 A Passive PoE (+4,5 pins; -7,8 pins)	24 VDC / 0.5 A Passive PoE (+4,5 pins; -7,8 pins)	
	Dimensions (L x W x H)	224 × 79 × 60 mm	276 × 79 × 60 mm	224 × 79 × 60 mm	207 × 255 × 350 mm	207 × 280 × 366 mm	
	Protection <sup>4</sup>	15 kV ESD Protection 6 kV Lightning Protection					
Enclosure	Material: Outdoor ASA stabilized plastic Weatherproof: IPX5 water and dust proof design			Material: Outdoor PC stabilized plastic Weatherproof: IP65 water and dust proof design			

<sup>4</sup>Protection against lightning and electro-static discharge may be achieved through proper product setup, grounding and cable shielding. Refer to the instruction manual and consult an IT professional to assist with setting up this product.

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Wireless Features	Wireless Standards	IEEE 802.11 b/g/n		IEEE 802.11a/n		IEEE 802.11a/n/ac		
	Proprietary Protocol	TDMA Mode (with Pharos MAXtream enabled)					/	
	Frequency <sup>5</sup>	2.4-2.483 GHz		5.15-5.85 GHz				
	Wireless Speed <sup>6</sup>	Up to 300 Mbps (40 MHz, Dynamic) Up to 144.4 Mbps (20 MHz, Dynamic) Up to 72.2 Mbps (10 MHz, Dynamic) Up to 36.1 Mbps (5 MHz, Dynamic)			Up to 150 Mbps (40 MHz, Dynamic) Up to 72.2 Mbps (20 MHz, Dynamic) Up to 36.1 Mbps (10 MHz, Dynamic) Up to 18.05 Mbps (5 MHz, Dynamic)		Up to 300 Mbps (40 MHz, Dynamic) Up to 144.4 Mbps (20 MHz, Dynamic) Up to 72.2 Mbps (10 MHz, Dynamic) Up to 36.1 Mbps (5 MHz, Dynamic)	
	Maximum Transmit Power <sup>7</sup>	25 dBm (Adjustable power by 1 dBm)	30 dBm (Adjustable power by 1 dBm)	26 dBm (Adjustable power by 1 dBm)	23 dBm (Adjustable power by 1 dBm)	25 dBm (Adjustable power by 1 dBm)	27 dBm (Adjustable power by 1 dBm)	
Software Feature	Operation Mode	AP / Client / AP Router / AP Client Router (WISP Client)						
	Network Configurations	WAN: Static / Dynamic / PPPoE / L2TP / PPTP (CPE210 / CPE220 / CPE510 / CPE605 / CPE610 supports L2TP / PPTP) LAN: Static / Dynamic / DHCP IPv6 Forwarding: ALG / UPnP / Virtual Server / Port Trigger Security: SPI Firewall / Ping Forbidden / DoS Protection Access Control Static Routing Bandwidth Control IP & MAC Binding						

<sup>5</sup> Available operating frequency may vary depending on the limitation of the countries or regions in which the device is used.

<sup>6</sup> Maximum wireless transmission rates are the physical rates derived from IEEE Standard 802.11 specifications. Actual wireless transmission rate will vary as a result of:

- 1) environmental factors, including building materials, physical objects and obstacles,
- 2) network conditions, including local interference, volume and density of traffic, product location, network complexity, and network overhead and
- 3) client limitations, including rated performance, location, connection quality, and client condition.

<sup>7</sup> Maximum transmit power is limited by local regulatory settings.

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Software Feature	Wireless Configurations	Pharos MAXtreem TDMA Technology (CPE210 / CPE220 / CPE510 / CPE605 / CPE610 supports Maxtreem.) Long Range PtP Selectable Channel Width: 20/40/80 MHz for CPE710, 5/10/20/40 MHz for other models Auto Channel Selection Transmit Power Control Dynamic Frequency Selection (DFS) (CPE510 / CPE605 / CPE610 / CPE710 supports DFS.) WDS Enable/Disable Security: WPA / WPA2, WPA-PSK / WPA2-PSK (AES / TKIP) Encryption SSID Broadcast Enable/Disable Multi-SSID with VLAN Tagging (AP mode only) Distance / ACK Timeout Setting Wireless MAC Address Filter Wireless Advanced: Beacon Inteval / RTS Threshold / Fragmentation Threshold / DTIM Inteval / AP Isolation / Short GI / Wi-Fi Multimedia				
	Management	Discovery and Remote Management via Pharos Control application HTTP / HTTPS Web-based management System Log SNMP Agent (v2c) Ping Watch Dog Dynamic DDNS SSH Server				
	System Tools	Indicators: Signal Strength / Noise / Transmit CCQ / CPU / Memory Monitors: Throughput / Stations / Interfaces / ARP / Routes / WAN / DHCP Spectrum Analysis Speed Test Ping Traceroute Antenna Alignment				

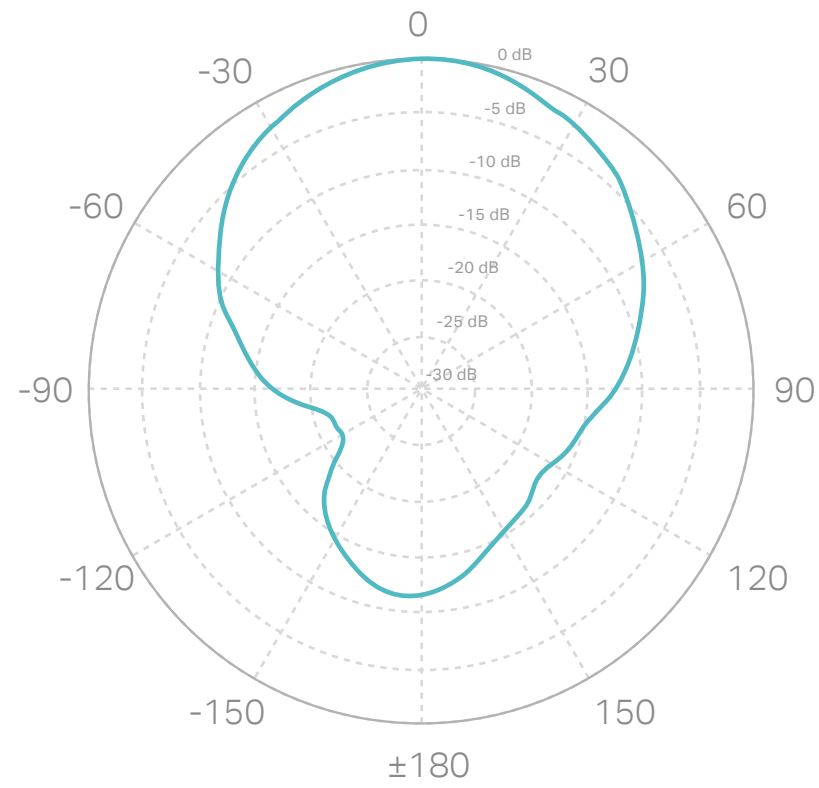
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## Features & Performance

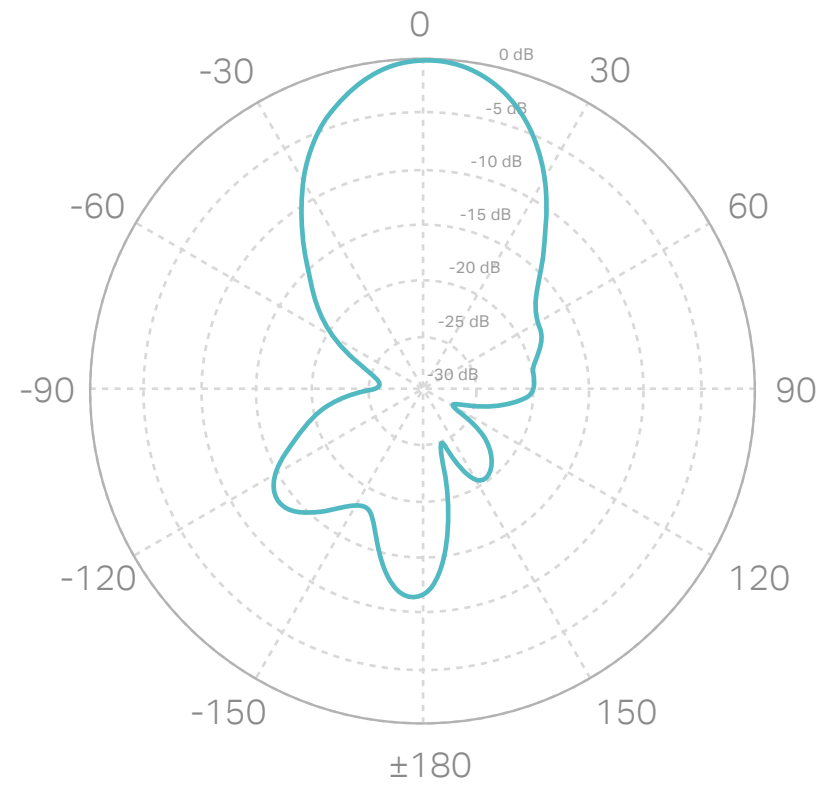
Model		CPE210 V3.2	CPE220 V3.0	CPE510 V3.2	CPE605 V1.0	CPE610 V2.0	CPE710 V1.0
Name		2.4 GHz 300 Mbps 9 dBi / 12 dBi Outdoor CPE		5 GHz 300 Mbps 13 dBi Outdoor CPE	5 GHz 150 Mbps 23 dBi Outdoor CPE	5 GHz 300 Mbps 23 dBi Outdoor CPE	5GHz 867Mbps 23dBi Outdoor CPE
Software Feature	System-level Optimizations	IGMP Snooping / Proxy for multicast applications					
	System Requirements	Microsoft Windows 98SE, NT, 2000, XP, Vista™ or Windows 10, Windows 8, Windows 7, MAC OS, NetWare, UNIX or Linux. Note: We recommend you to use one of following Web browsers for better experience: Google Chrome, Safari, Firefox. IE browsers are not recommended.					
Others	Certification	CE, FCC, RoHS, IPX5			CE, FCC, RoHS, IP65	CE, FCC, RoHS, IP65, IC	
	Environment	Operating Temperature: -40 °C~70 °C (-40 °F~158 °F) Storage Temperature: -40 °C~70 °C (-40 °F~158 °F) Operating Humidity: 10%~90% non-condensing Storage Humidity: 5%~95% non-condensing					

# CPE210 Antenna Patterns

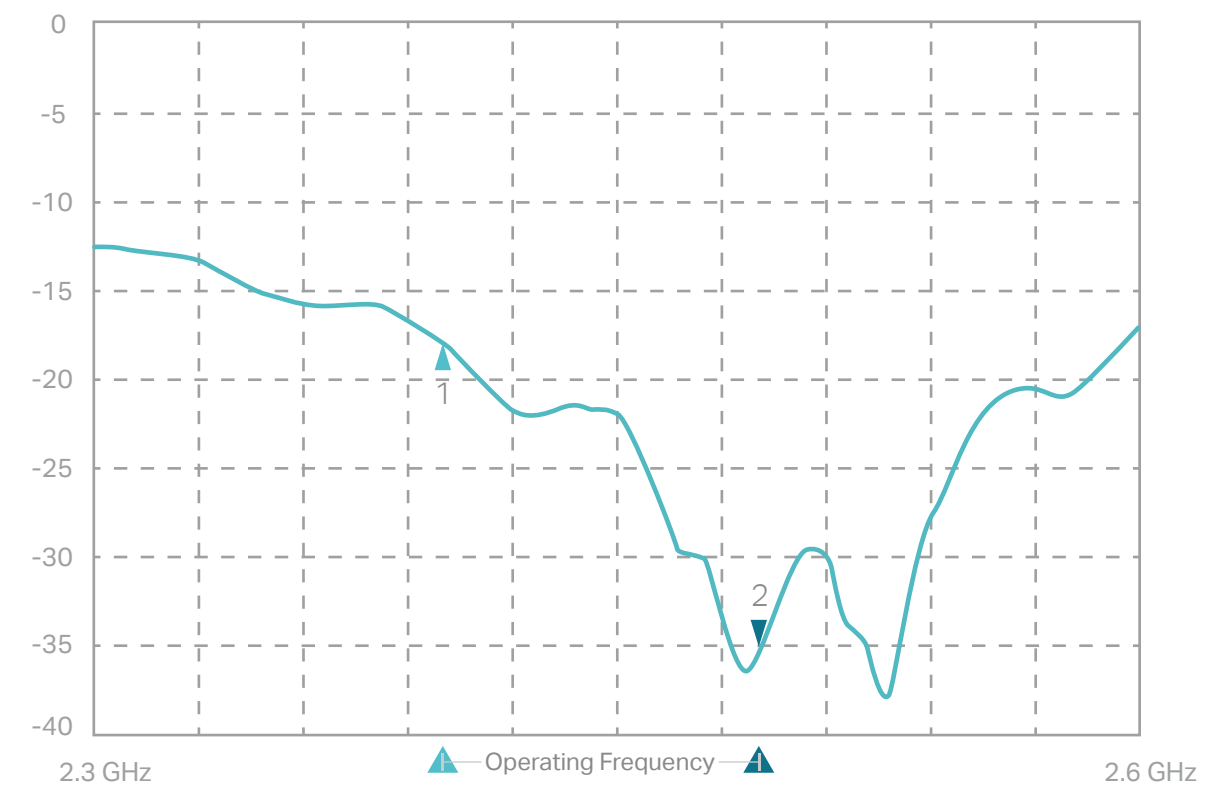
## Vertical Azimuth



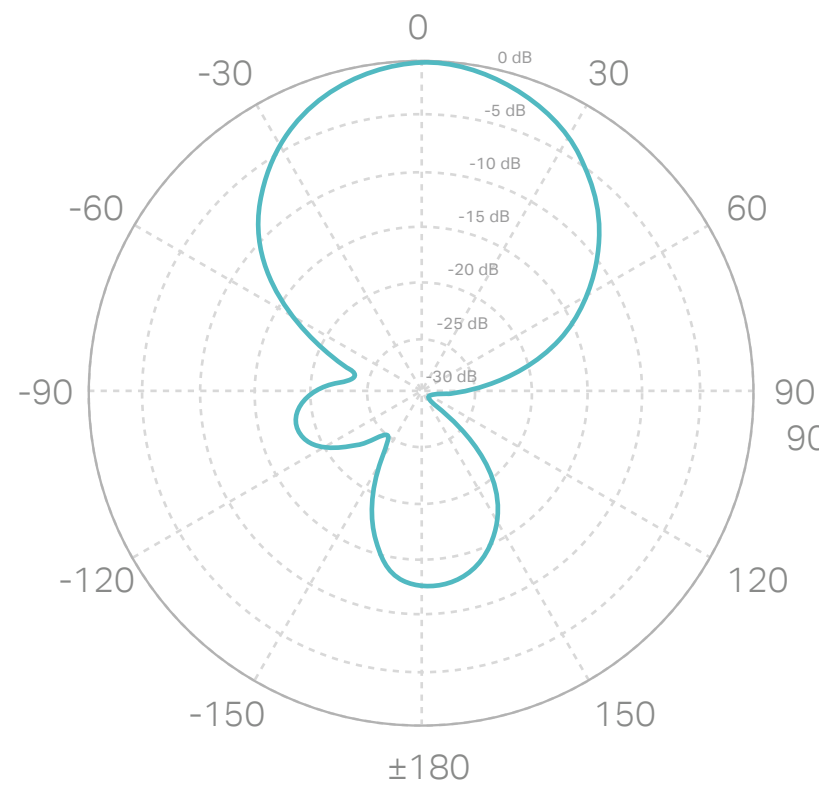
## Vertical Elevation



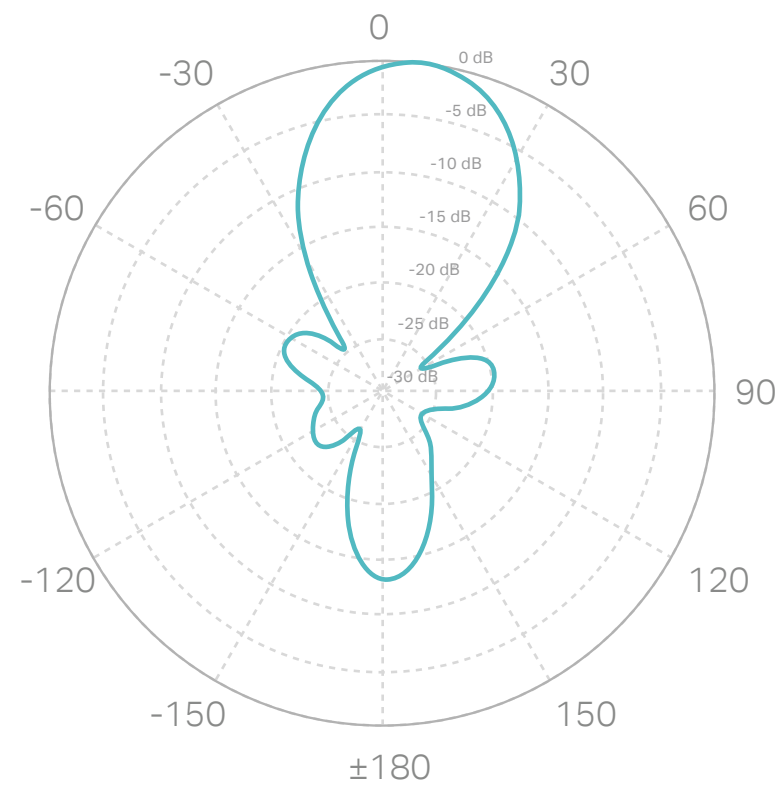
## Return Loss – Vertical Polarization



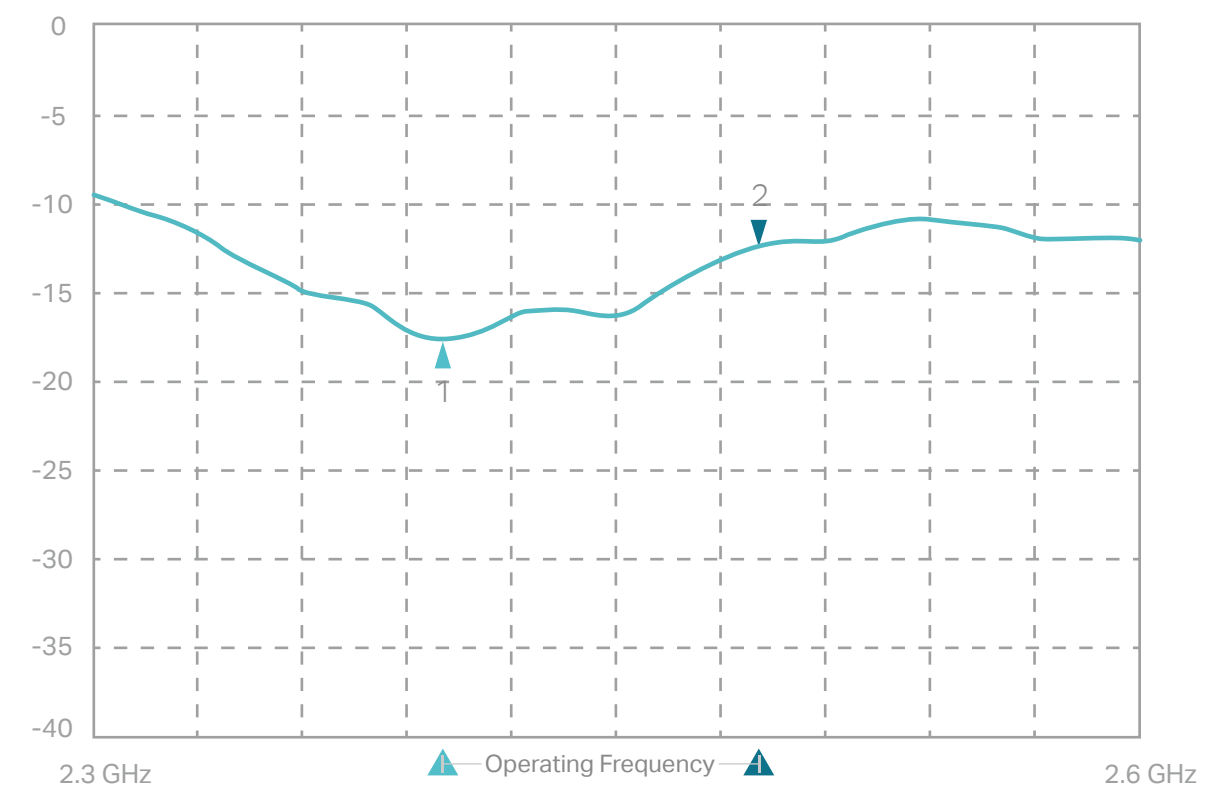
## Horizontal Azimuth



## Horizontal Elevation

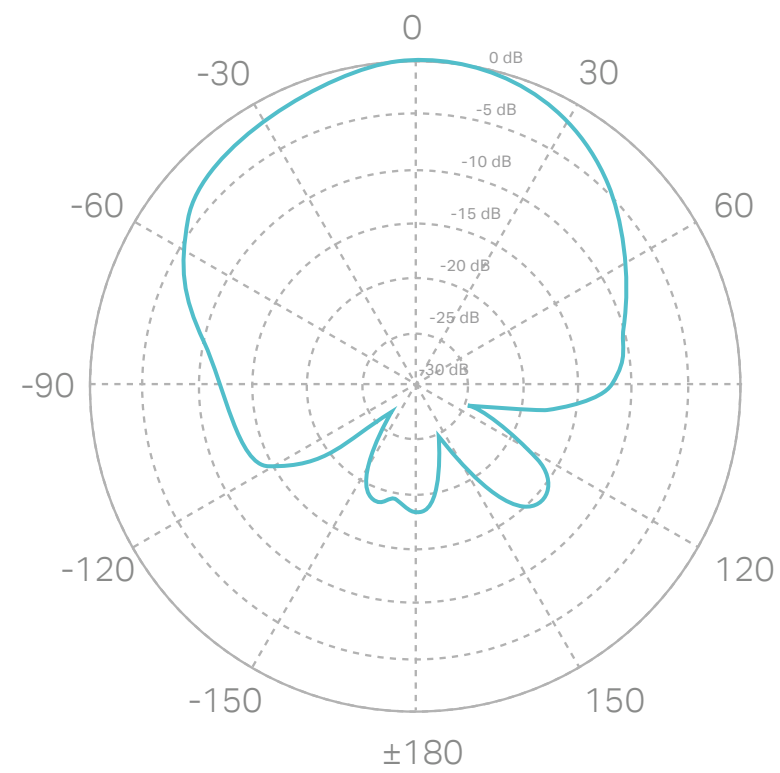


## Return Loss – Horizontal Polarization

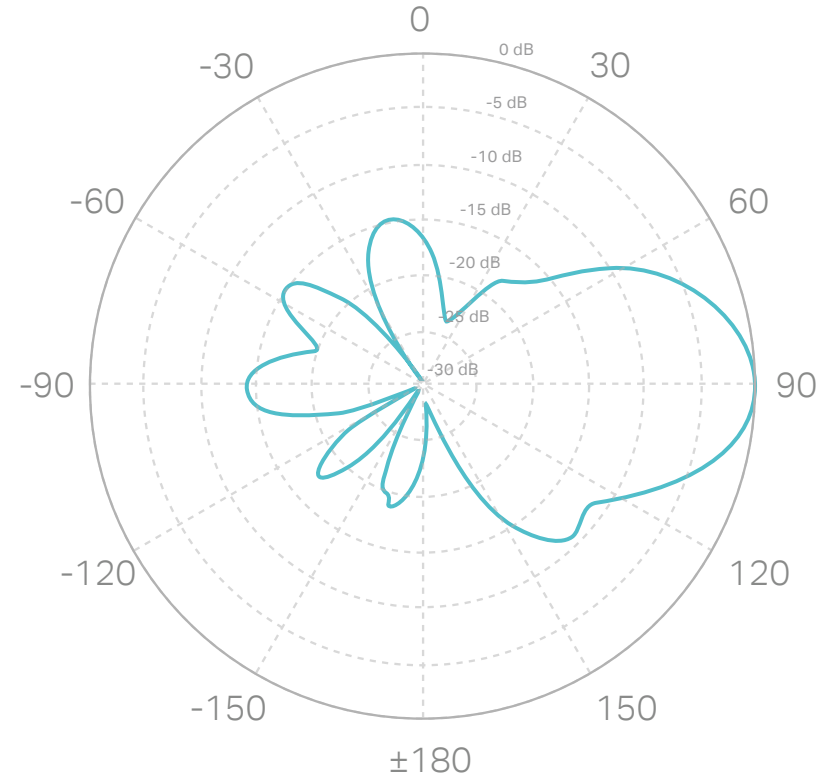


# CPE220 Antenna Patterns

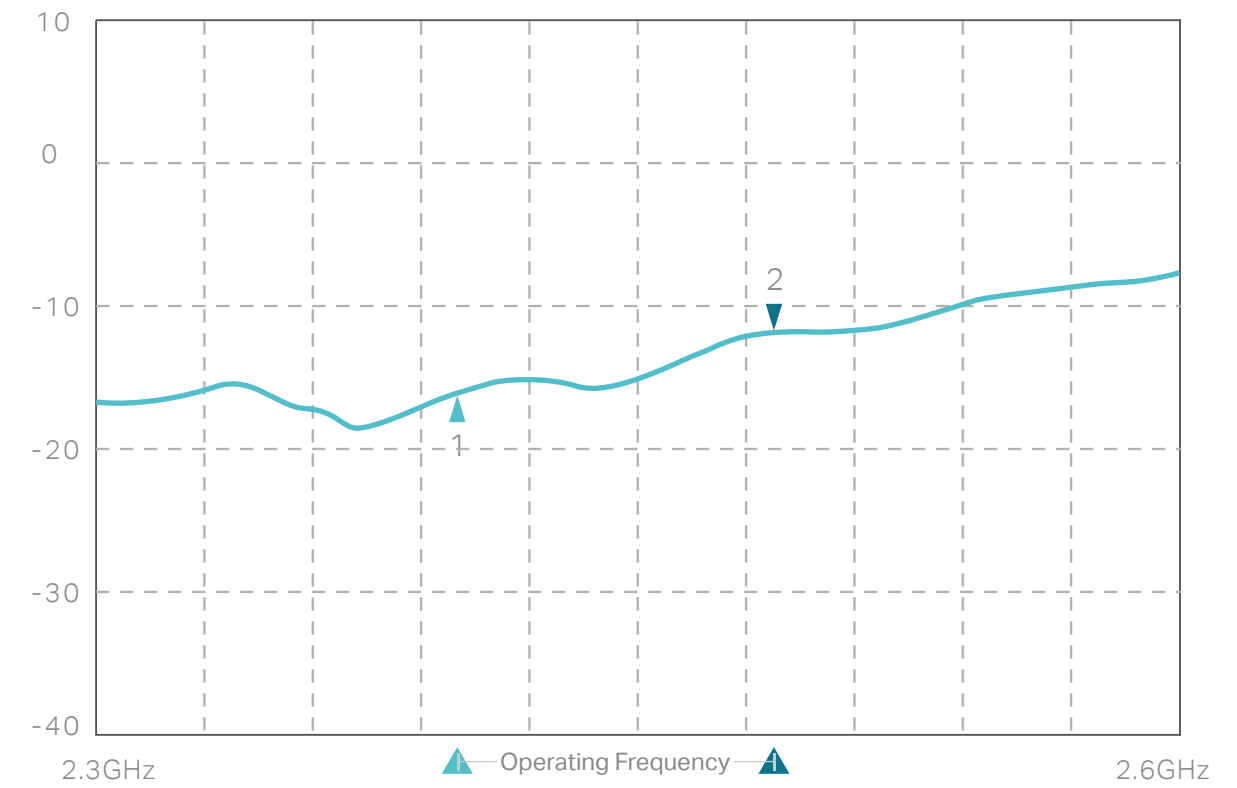
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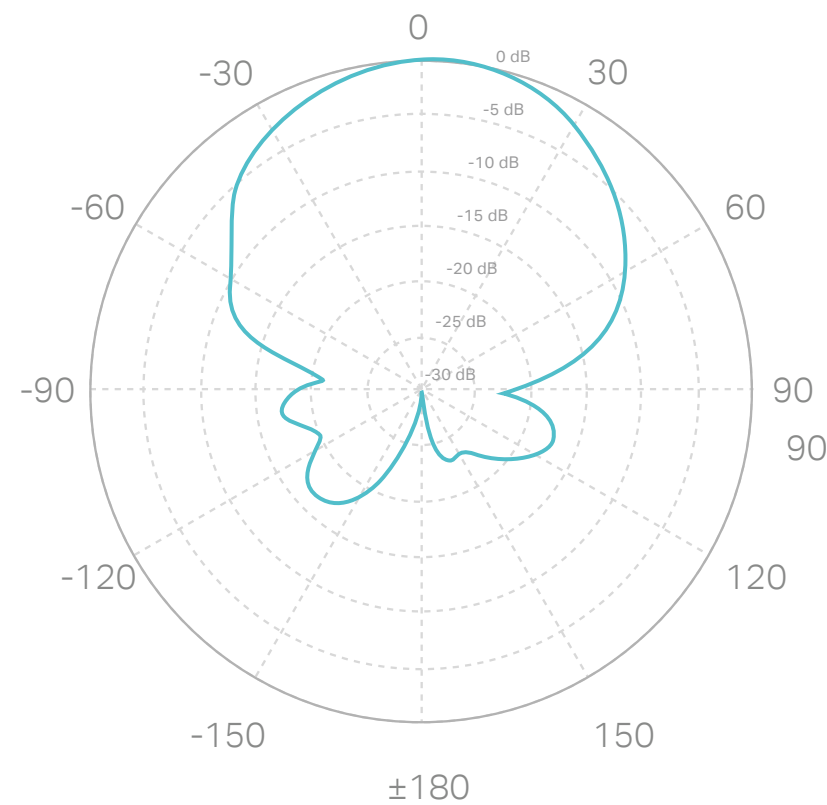
## Vertical Elevation



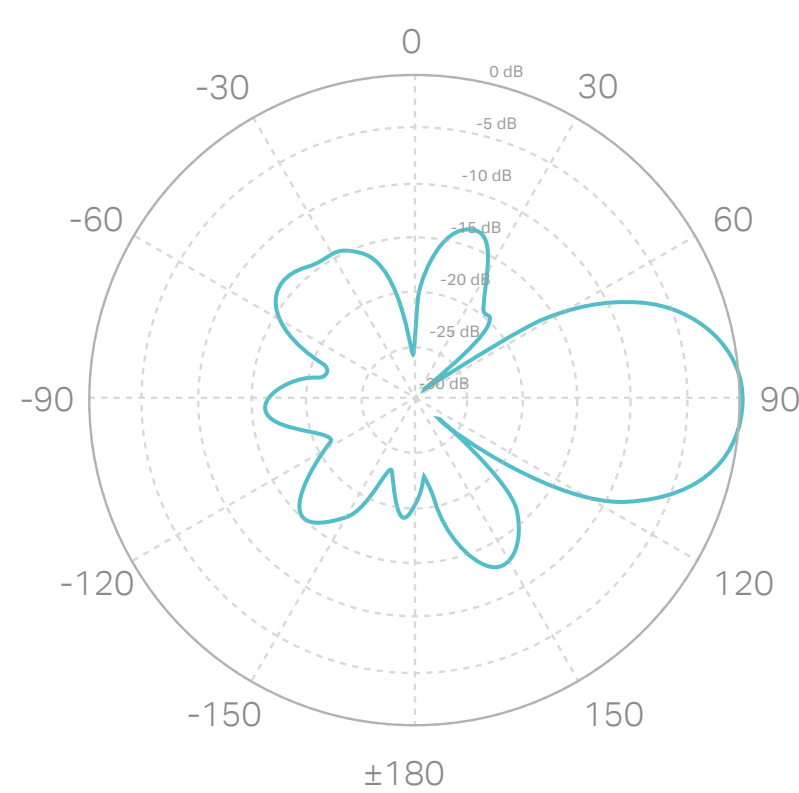
## Return Loss – Vertical Polarization



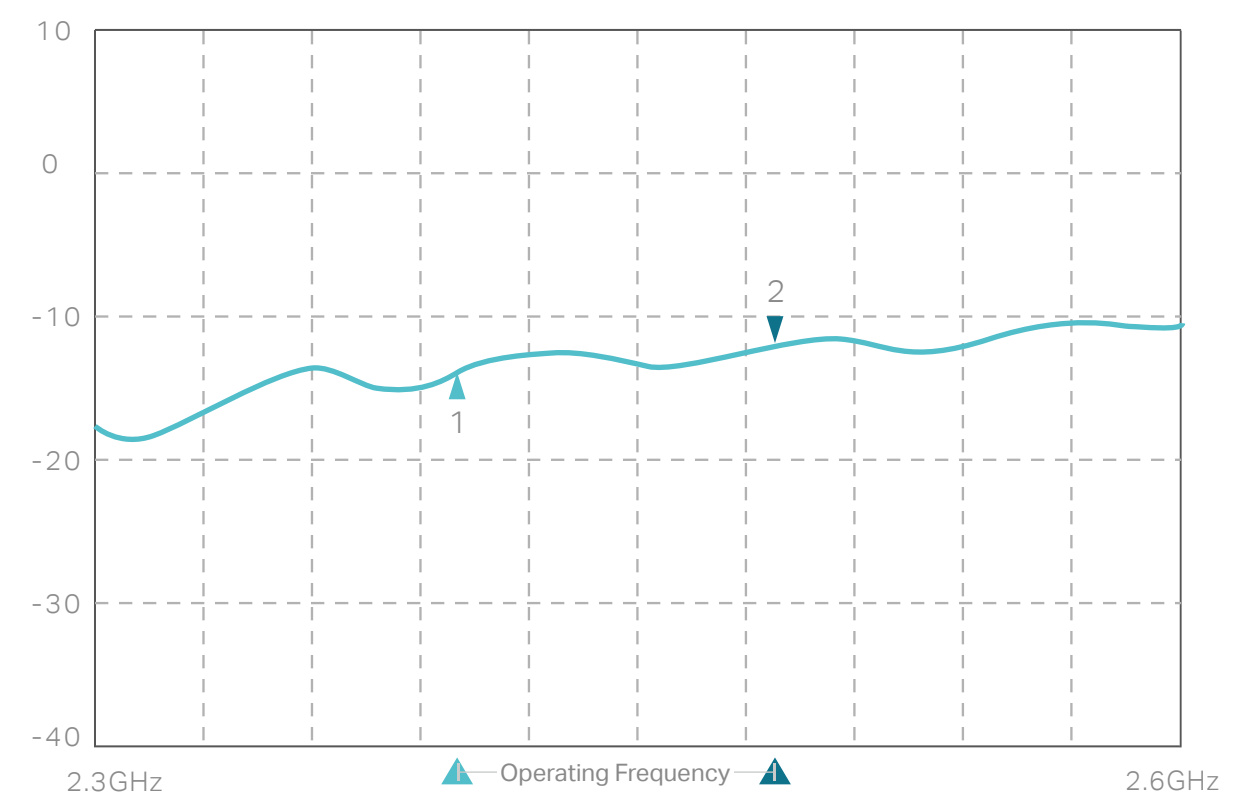
## Horizontal Azimuth



## Horizontal Elevation

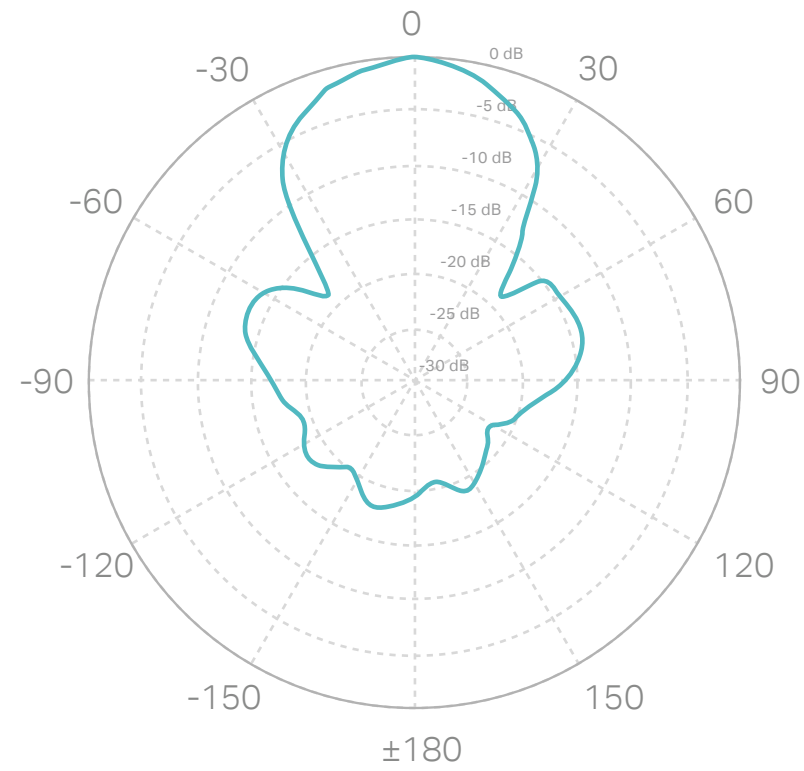


## Return Loss – Horizontal Polarization

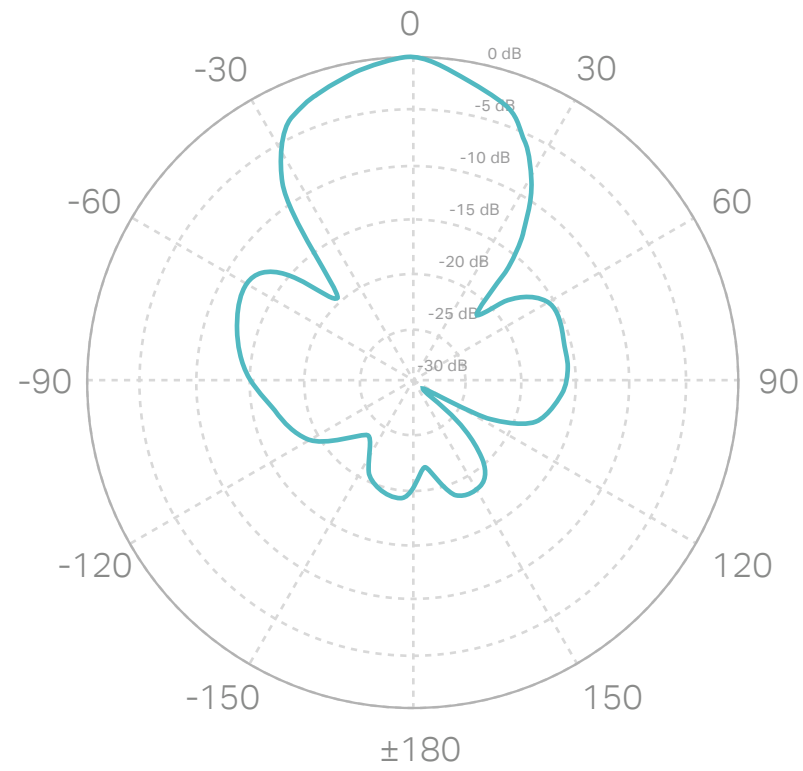


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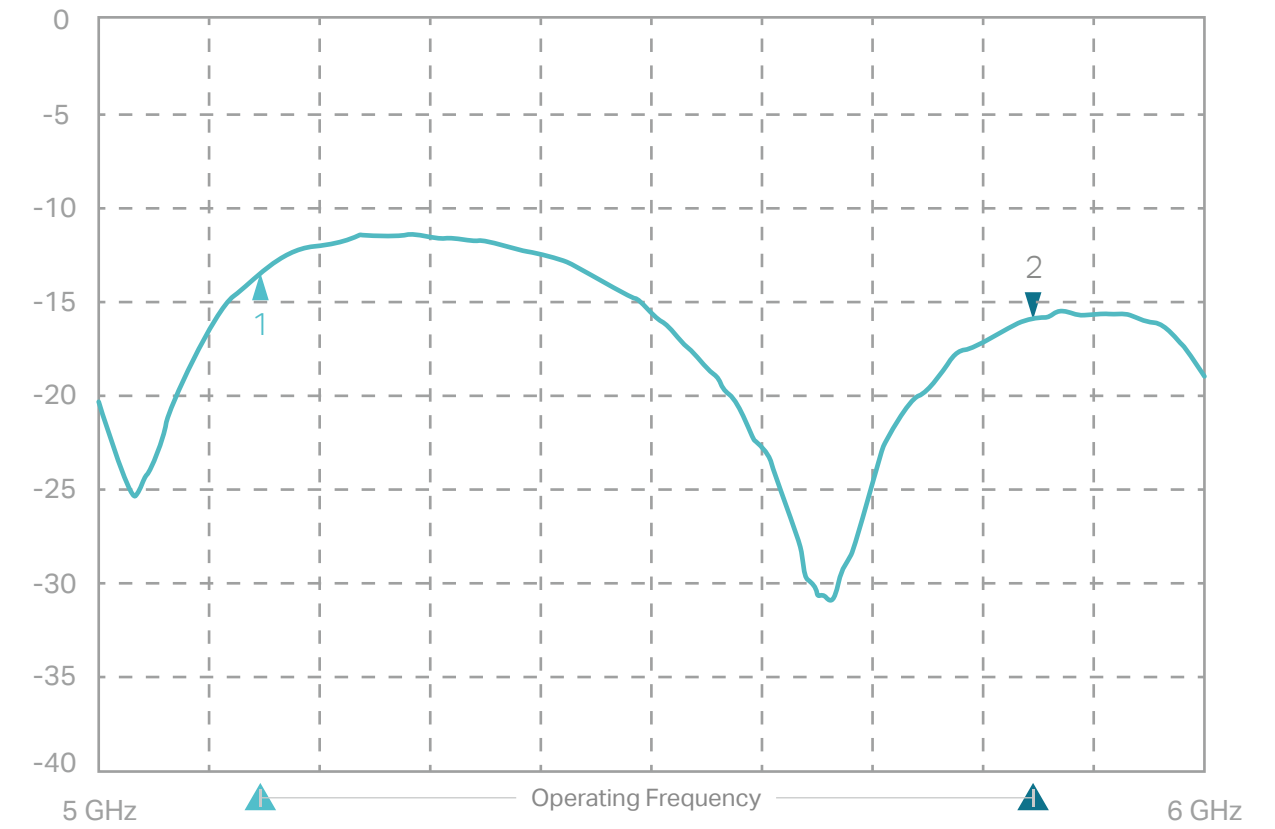
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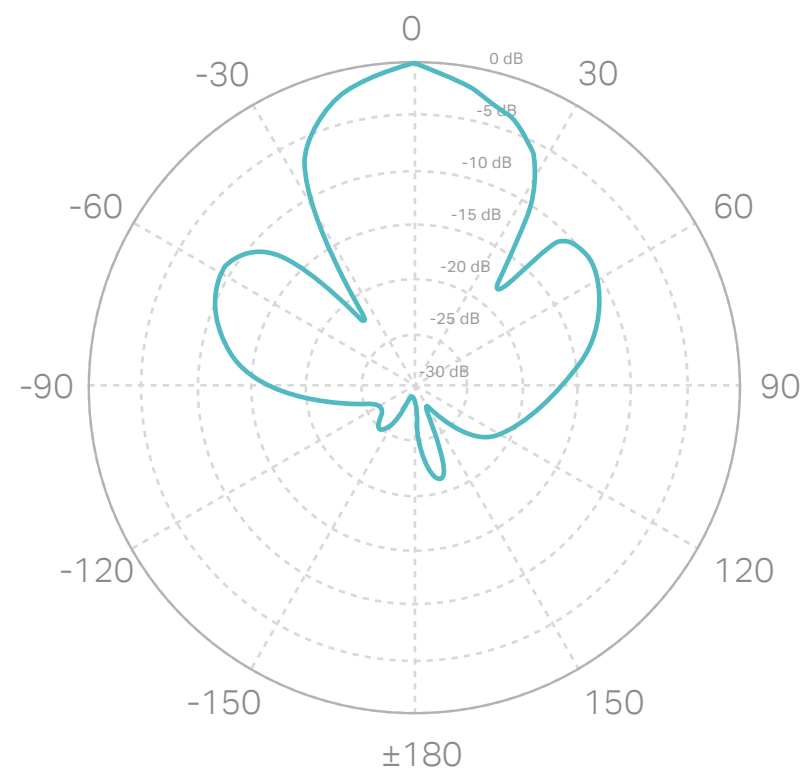
## Vertical Elevation



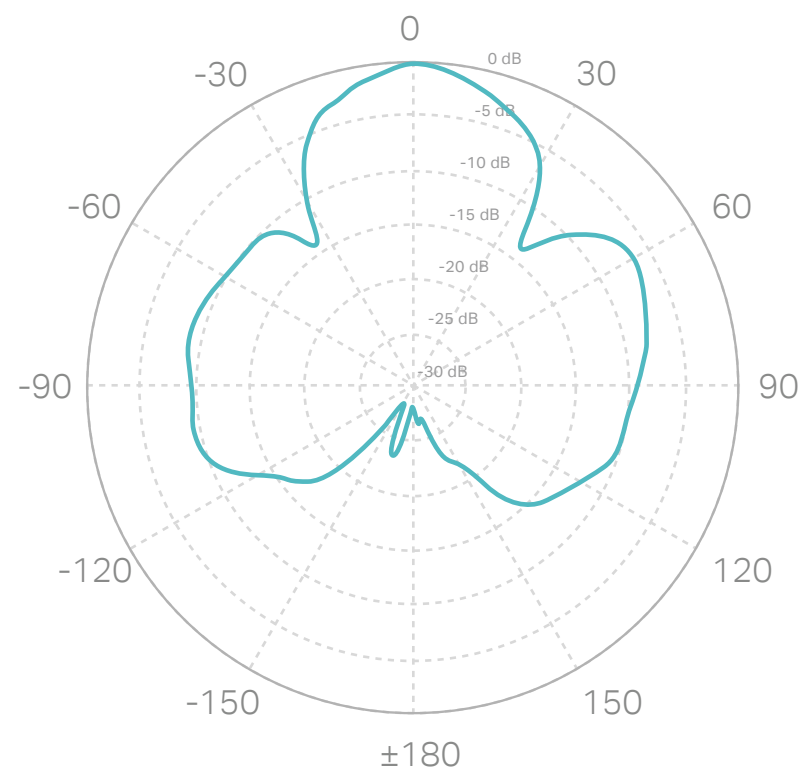
## Return Loss – Vertical Polarization



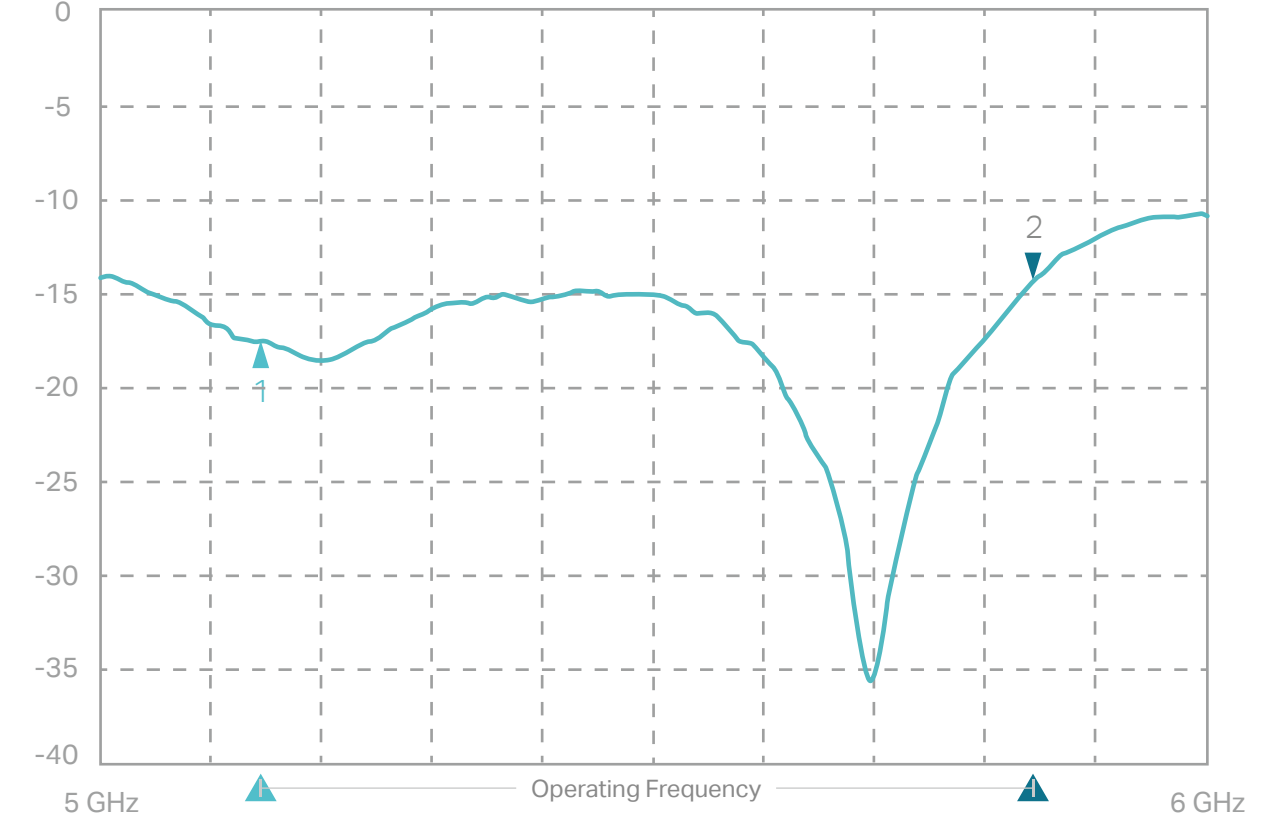
## Horizontal Azimuth



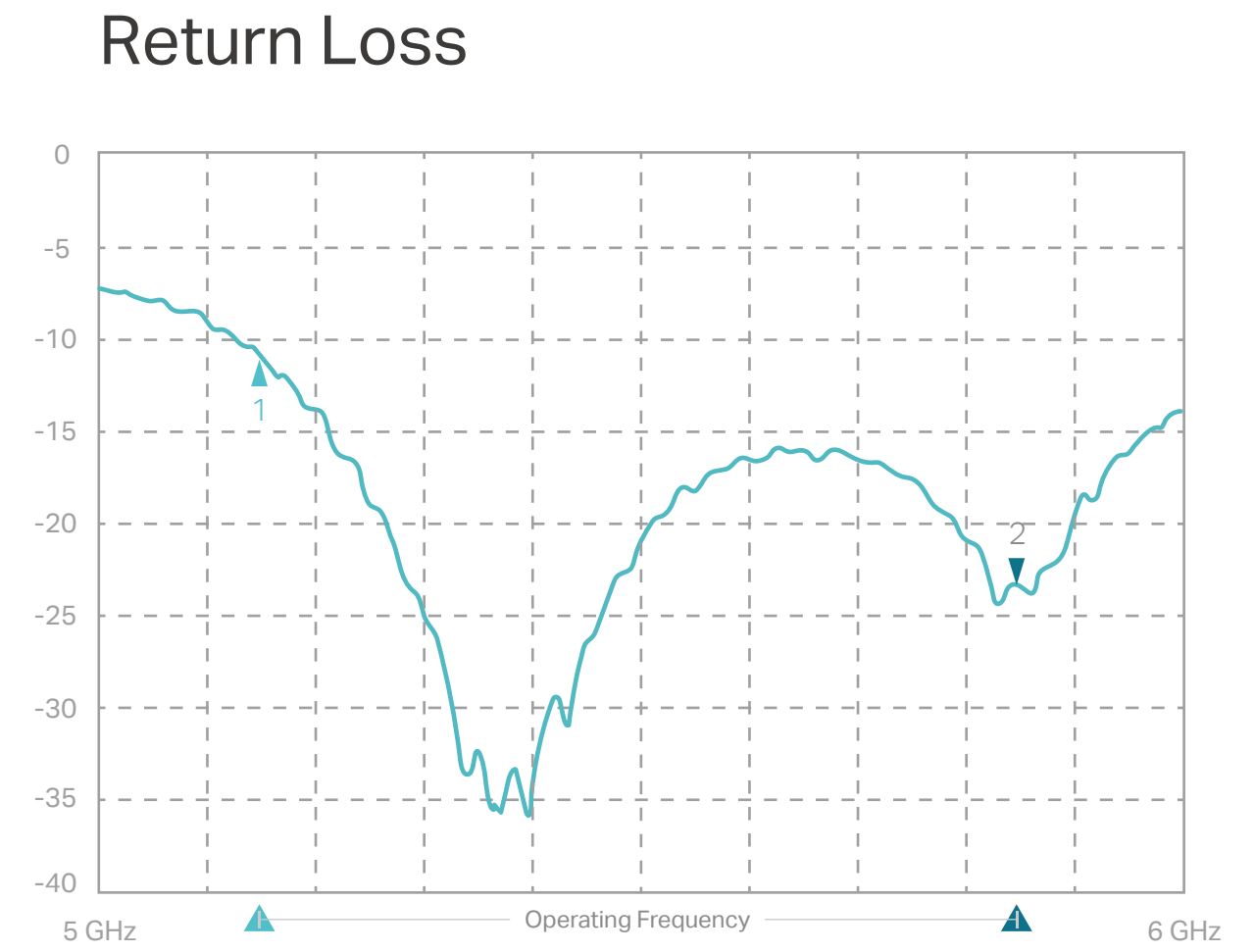
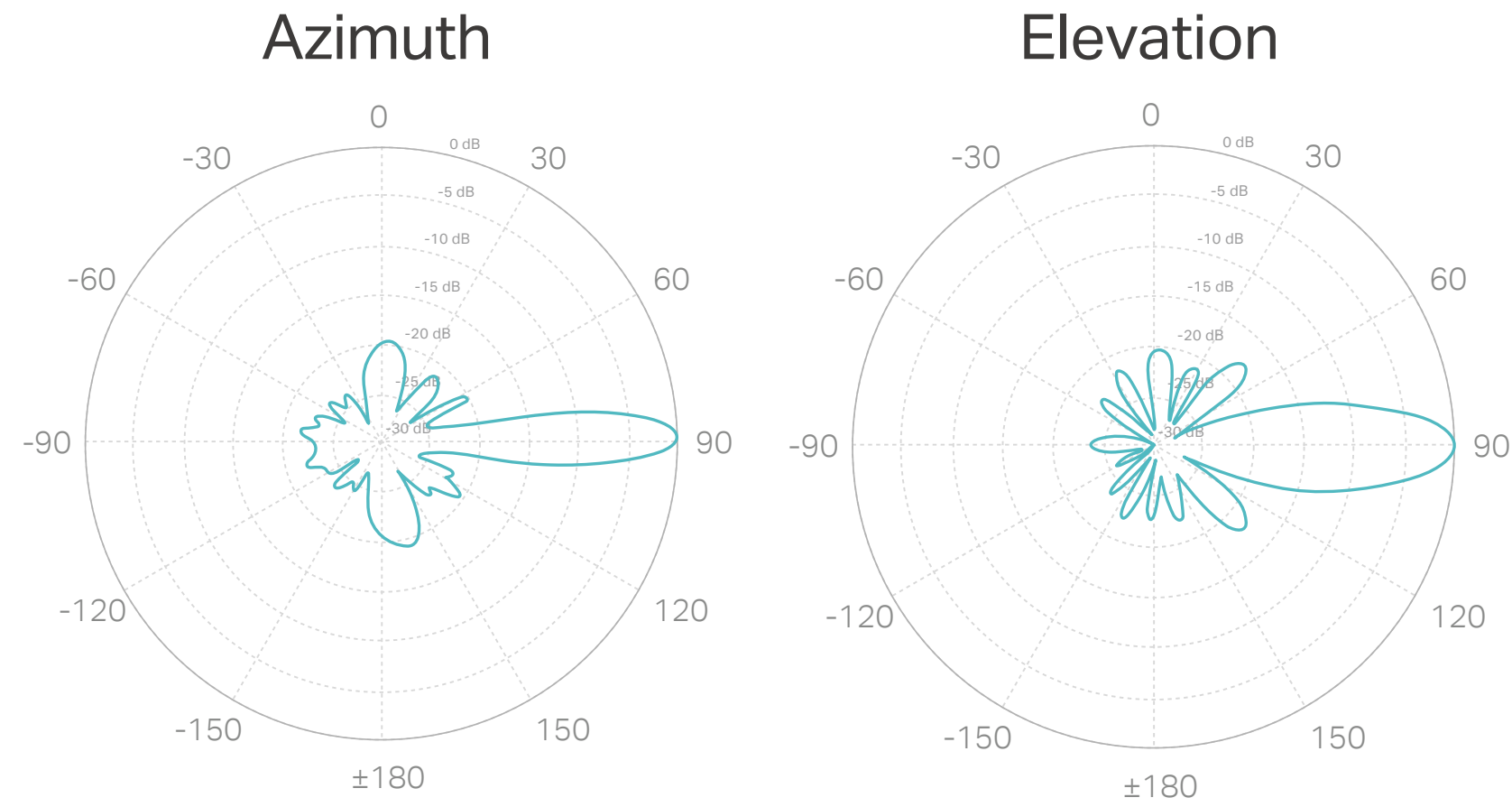
## Horizontal Elevation



## Return Loss – Horizontal Polarization



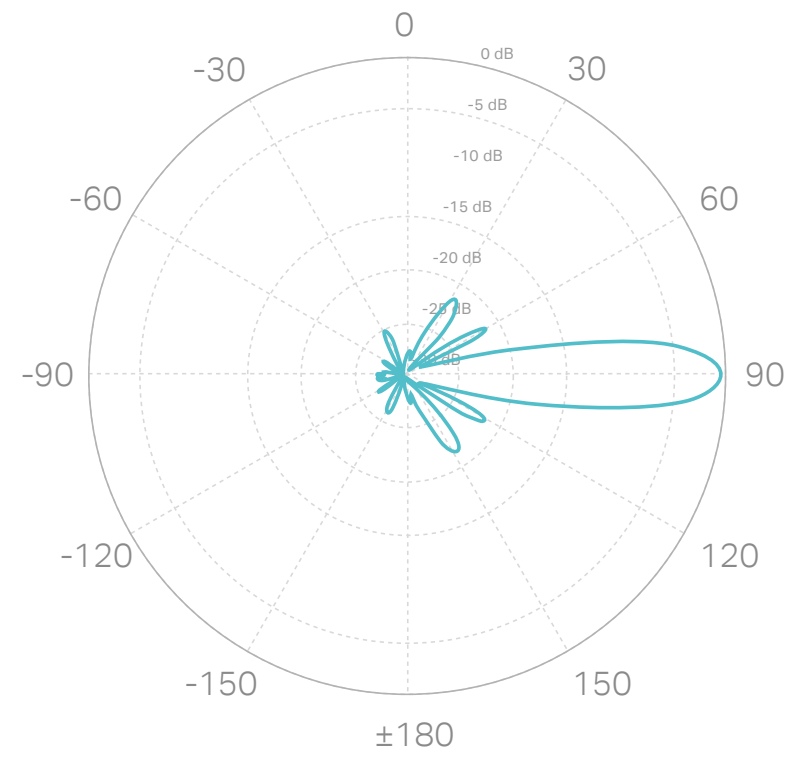
# CPE605 Antenna Patterns



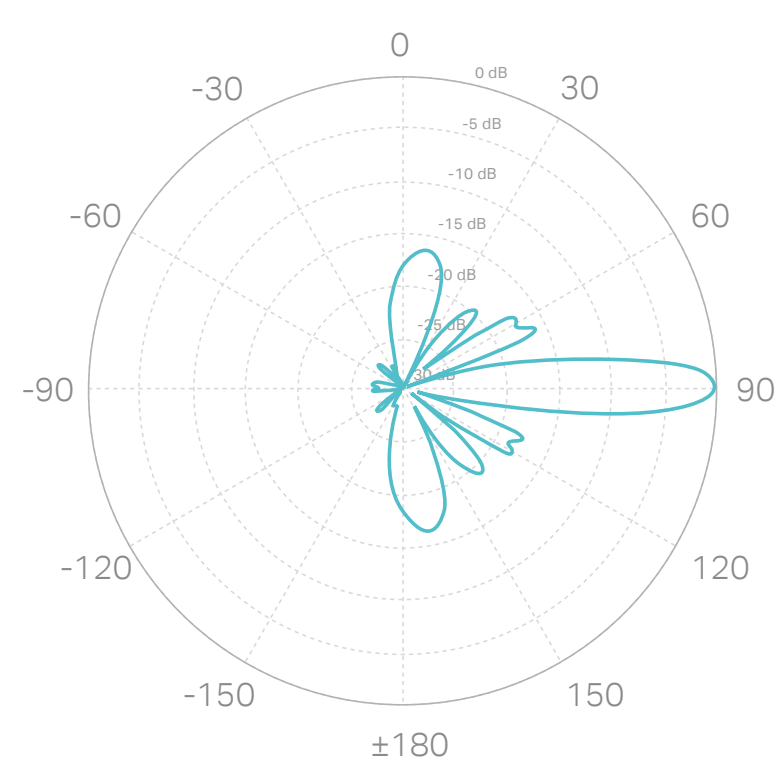


# CPE610 Antenna Patterns

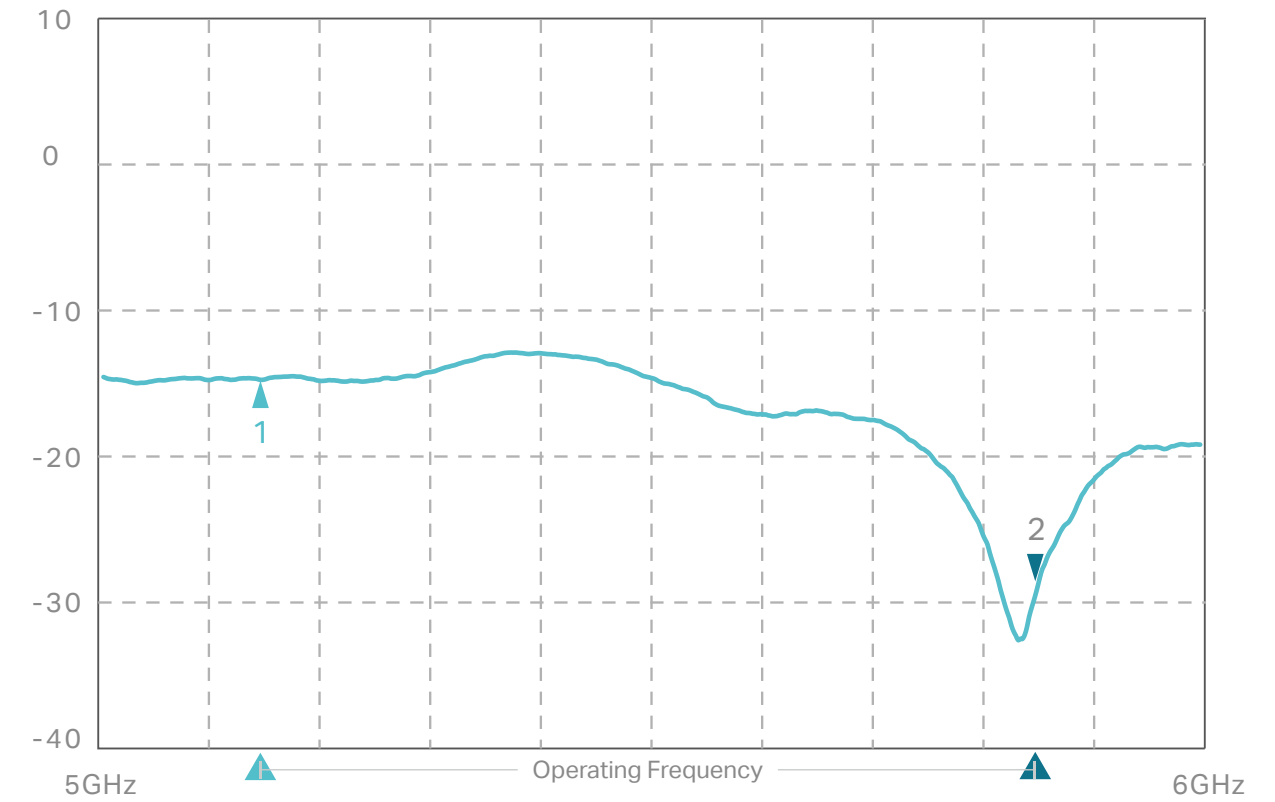
## Vertical Azimuth



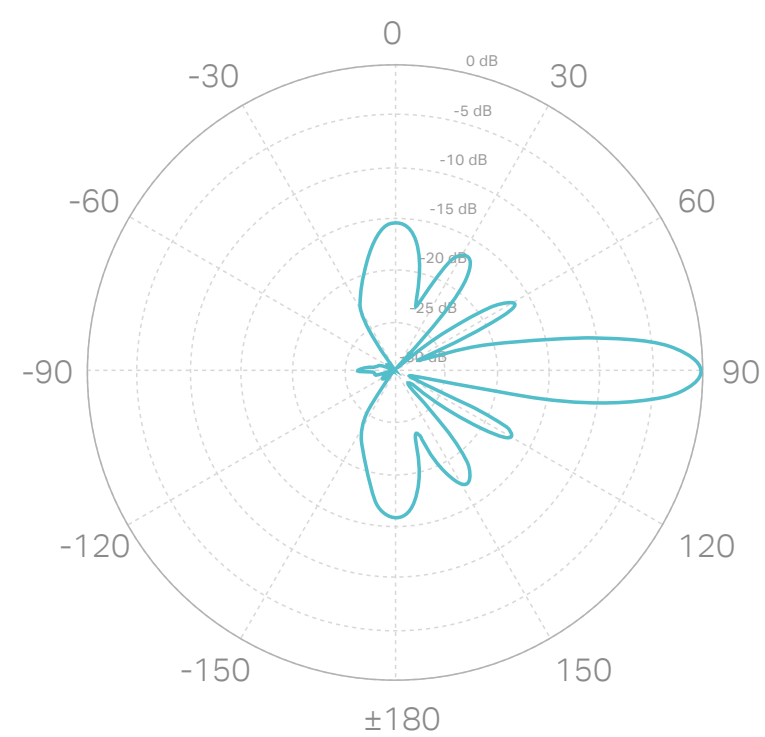
## Vertical Elevation



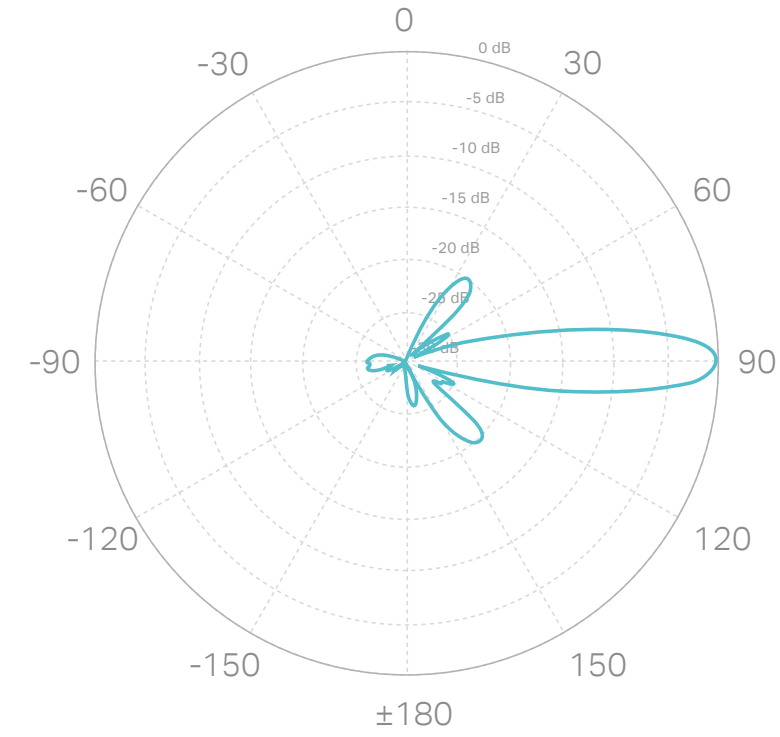
## Return Loss – Vertical Polarization



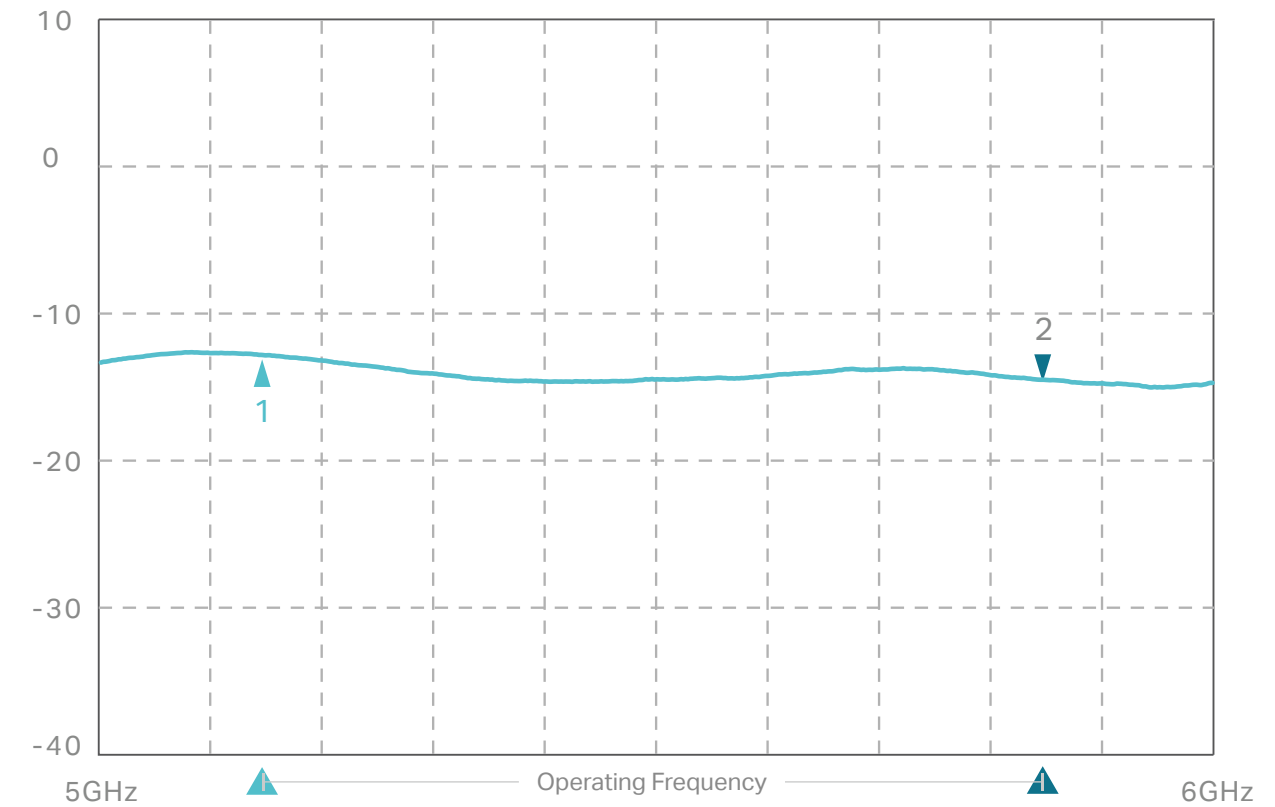
## Horizontal Azimuth



## Horizontal Elevation

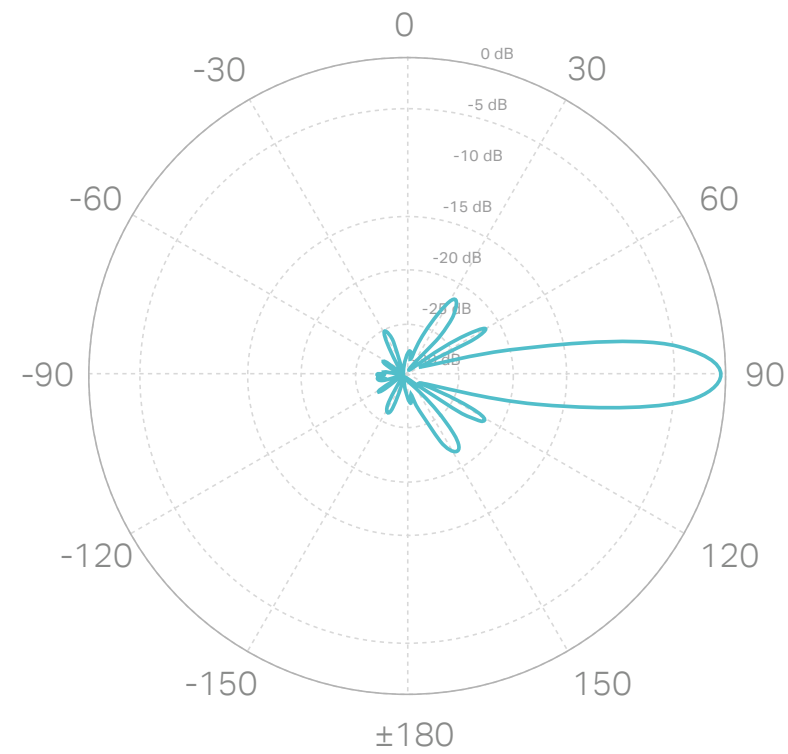


## Return Loss – Horizontal Polarization

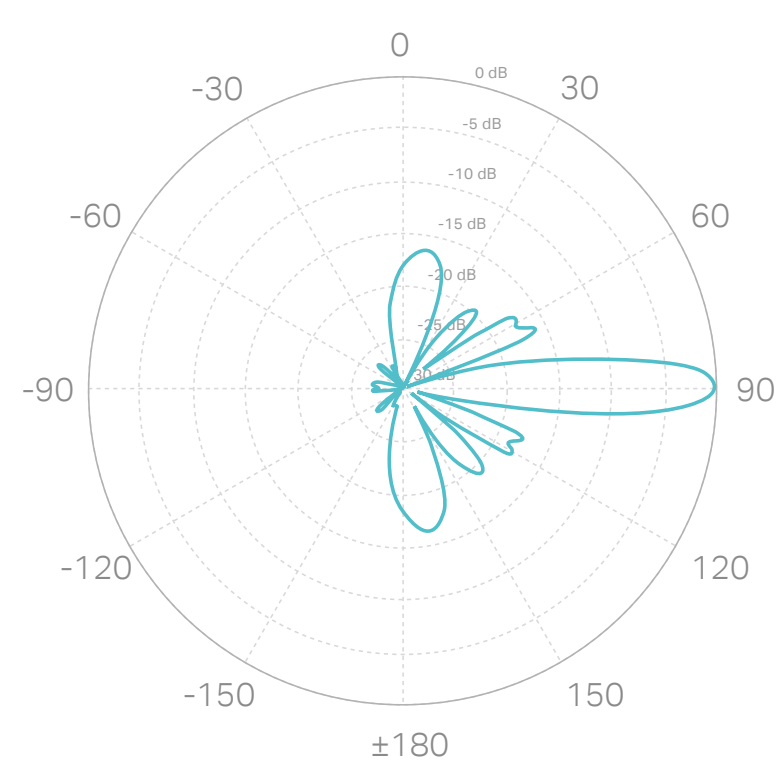


# CPE710 Antenna Patterns

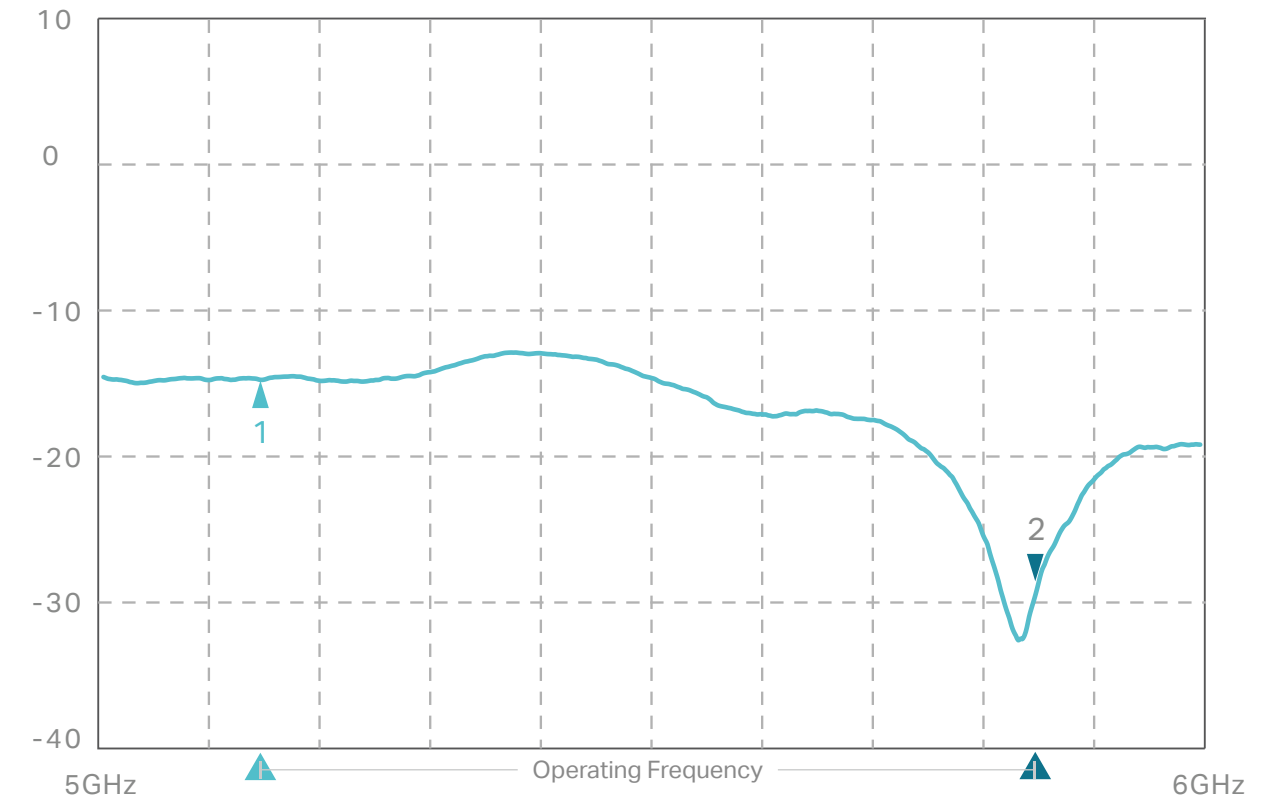
## Vertical Azimuth



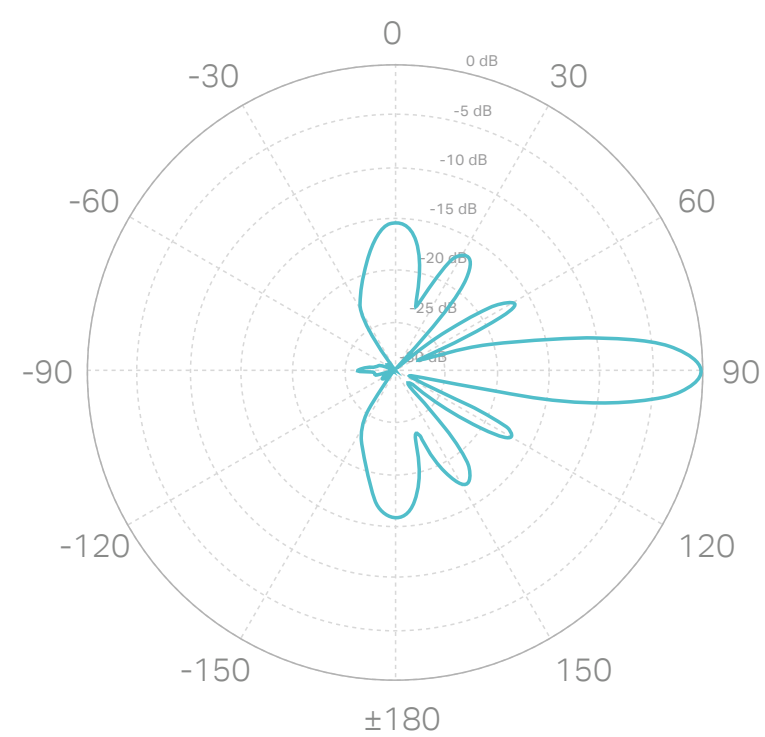
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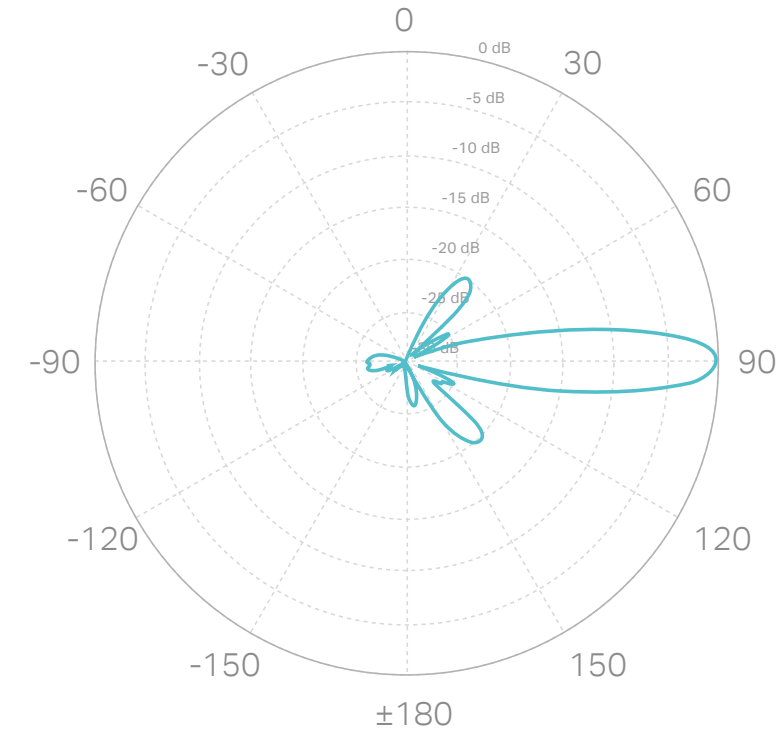
## Return Loss – Vertical Polarization



## Horizontal Azimuth



## Horizontal Elevation



## Return Loss – Horizontal Polarization

