

# NARROWBAND MICROSTRIP PATCH ANTENNA

CUSTOM CENTER FREQUENCY FROM 3.5 GHz TO 8.5 GHz

MPAX-L

## KEY FEATURES

- Narrowband patch antenna with a custom operating frequency between 3.5 GHz and 8.5 GHz
- Guaranteed to meet performance specifications at your desired operating frequency or your money back
- Individually measured VSWR, radiation pattern, and gain data is provided with each custom antenna order
- Linearly polarized with typical gain of 6 dBi at the center frequency
- VSWR typically below 2:1 with 4% bandwidth
- High-quality microwave substrates used to minimize losses
- Optional water-resistant enclosure available with multiple mounting options

## DESIGN SPECIFICATIONS

- Design: Single element microstrip patch antenna
- Operating Frequency: Custom (from 3.5 GHz to 8.5 GHz)
- Polarization: Linear (horizontal/vertical based on orientation)
- Connector: SMA Female
- Construction: PTFE microwave laminate with copper cladding coated with black solder mask
- Mounting: Pre-drilled holes available for mounting (see diagrams on pages 4 and 5)
- Dimensions (without/with enclosure):
  - Length: 4.7 in [120 mm] / 5.1 in [130 mm]
  - Width: 0.25 in [6.35 mm] / 1.8 in [45 mm]
  - Height: 7.0 in [178 mm] / 7.1 in [180 mm]



MPAX-LP

### MODELS

MPAX-LP	ANTENNA ONLY (PCB)
MPAX-LE	ANTENNA WITH ENCLOSURE

## PERFORMANCE SPECIFICATIONS

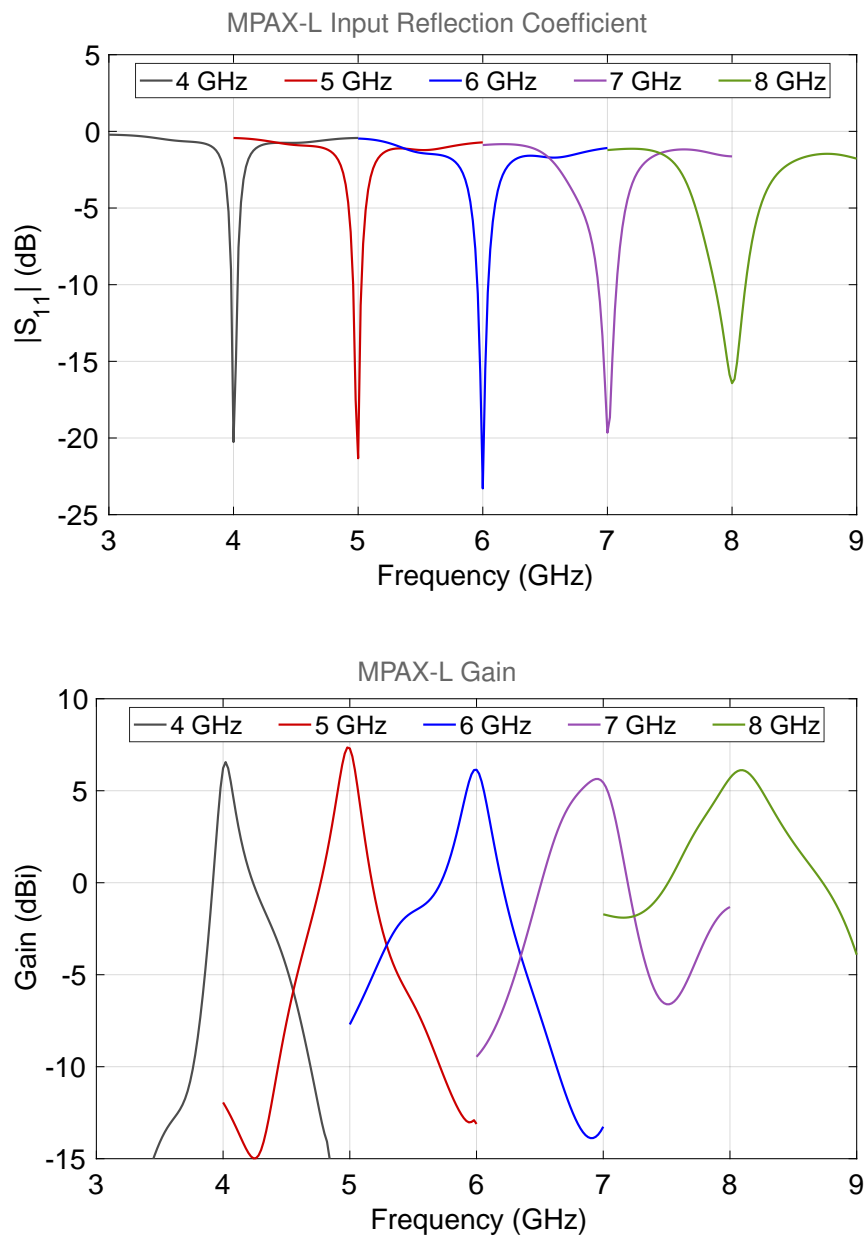
Parameter		Center Frequency	Min.	Typ.	Max.	Unit
VSWR		3.5 GHz – 8.5 GHz	–	1.8	2.5	–
Impedance Bandwidth		3.5 GHz – 8.5 GHz	2%	4%	6%	
Gain at Center Freq.		3.5 GHz – 8.5 GHz	5.0	6.0	7.5	dBi
HPBW	E-Plane	3.5 GHz – 8.5 GHz	40	75	110	deg.
	H-Plane		50	75	90	
Input Power		3.5 GHz – 8.5 GHz	–	–	10	W
Impedance		–	50			Ω
Connector		–	SMA (female)			–

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### TYPICAL PERFORMANCE



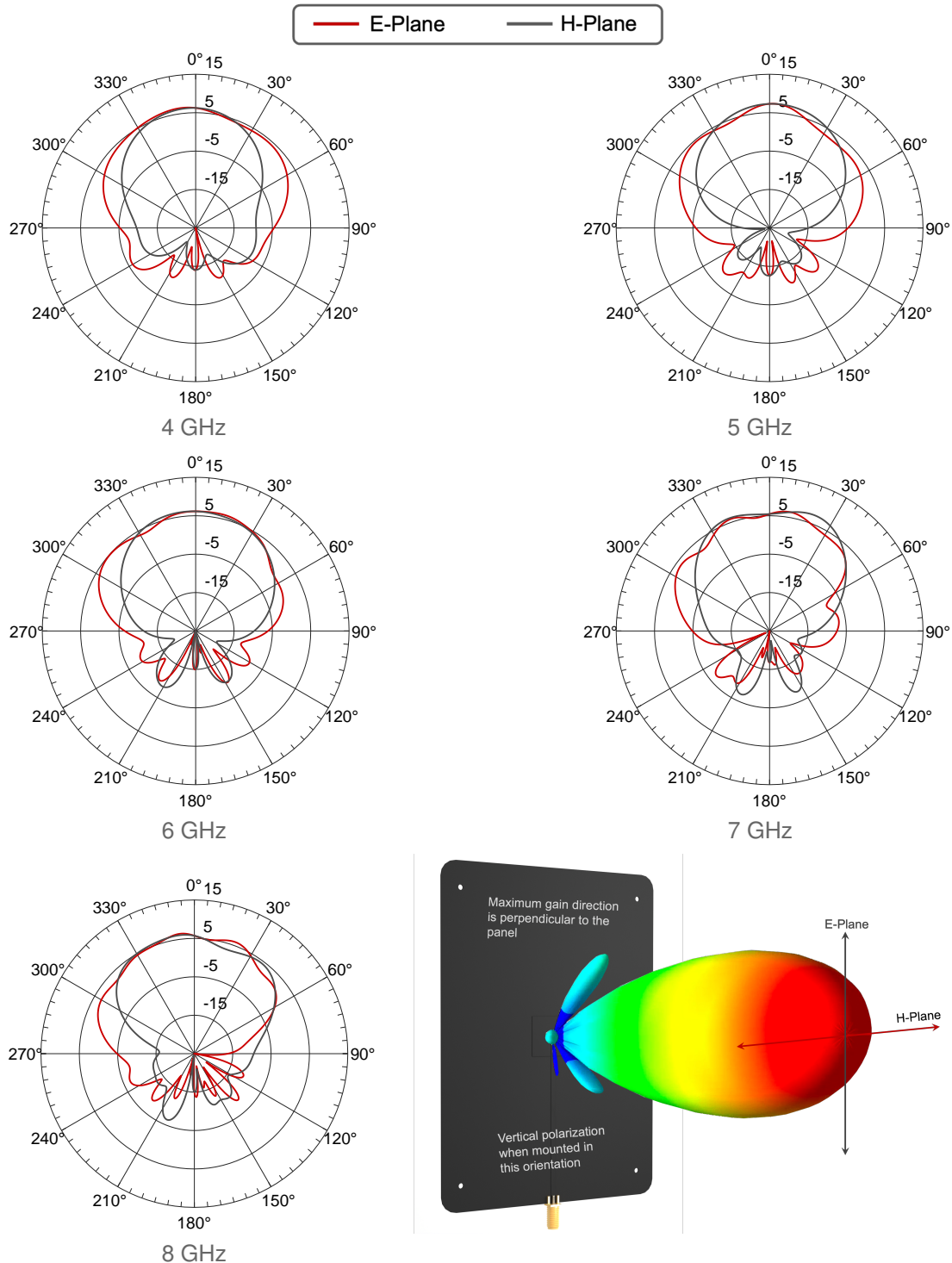
Note: These plots represent typical performance for select center frequencies (4 GHz, 5 GHz, 6 GHz, 7 GHz, and 8 GHz). Any custom center frequency between 3.5 GHz and 8.5 GHz can be specified when ordering.

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### TYPICAL PERFORMANCE (CONT.)

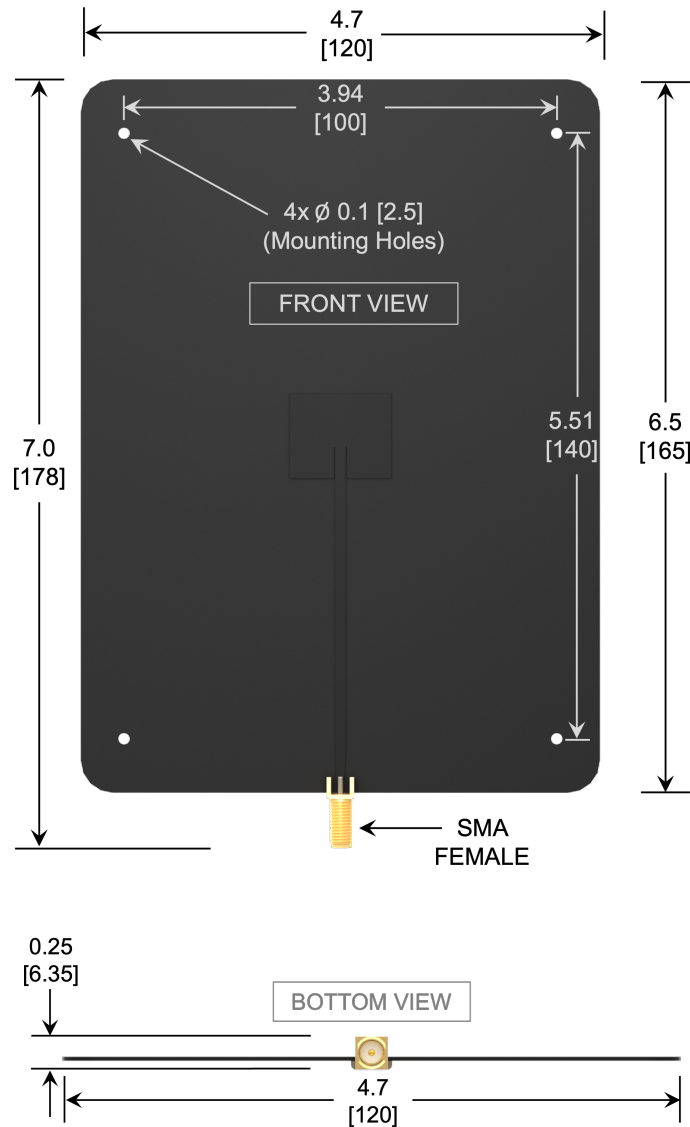


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CUSTOM CENTER FREQUENCY FROM 3.5 GHz TO 8.5 GHz

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### CAD DRAWING WITH NO ENCLOSURE (MPAX-LP OPTION)



#### NOTES:

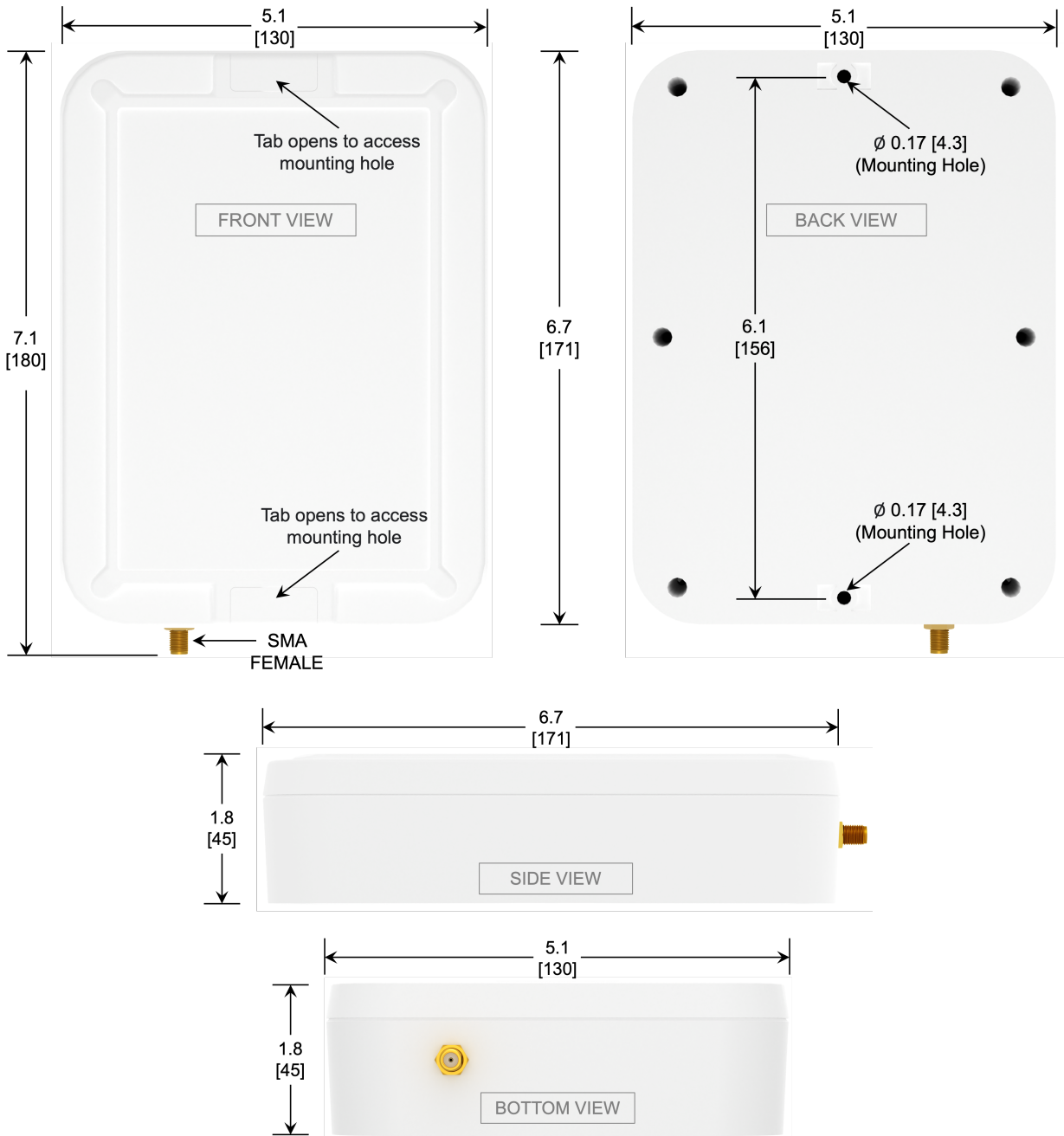
1. UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE NOMINAL
2. DIMENSIONS ARE IN INCHES [mm]
3. APPEARANCE OF PATCH WILL VARY BASED ON DESIRED CENTER FREQUENCY
4. ALL SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE AT ANY TIME

## NARROWBAND MICROSTRIP PATCH ANTENNA

CUSTOM CENTER FREQUENCY FROM 3.5 GHz TO 8.5 GHz

MPAX-L

### CAD DRAWING WITH ENCLOSURE (MPAX-LE OPTION)



**NOTES:**

1. UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE NOMINAL
2. DIMENSIONS ARE IN INCHES [mm]
3. ALL SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE AT ANY TIME