BHWR550C

Production Datasheet

5GHz General-Purpose Compact Broadband Antenna

Description

HWR550C is a broadband 5GHz antenna based on patented design architecture, with the goal to maximize range and throughput of Wi-Fi and other 5GHz wireless platforms with challenging space constrains in product ID design. BHWR550C features a well-defined, near-omnidirectional radiation pattern in the horizontal plane when placed vertically, providing comparable gain and efficiency with traditional dipole antennas but at a much lower profile. The ultra-compact size (12x30mm), compatibility with common IPX/UFL cable assembly and VSWR stability over housing effects makes BHWR550C an ideal candidate for embedded antennas, replacing multiple expensive and spacing-taking external antennas in Wi-Fi routers and other products without compromise in performance.

Key Features

- 5.15-5.85GHz Operation Frequency Range
- VSWR< 2:1 over 5.15-5.85GHz
- High Gain: ~2dBi
- High Efficiency: TBD
- Stable VSWR over Housing/Cabling Effects
- Near-Omni Patterns in Horizontal Plane
- Suitable for Embedded Antenna Designs

Key Applications

- Wi-Fi 3/4/5/6 Routers/Repeaters
- Wi-Fi Modules/Data Links
- 5GHz Audio/Video Streaming
- Generic 5GHz Radio Designs
- FPC Antenna Replacement with Minimum Frequency Shift

Product Information

12x30x0.6mm PCB for IPX/UFL Cable Assembly

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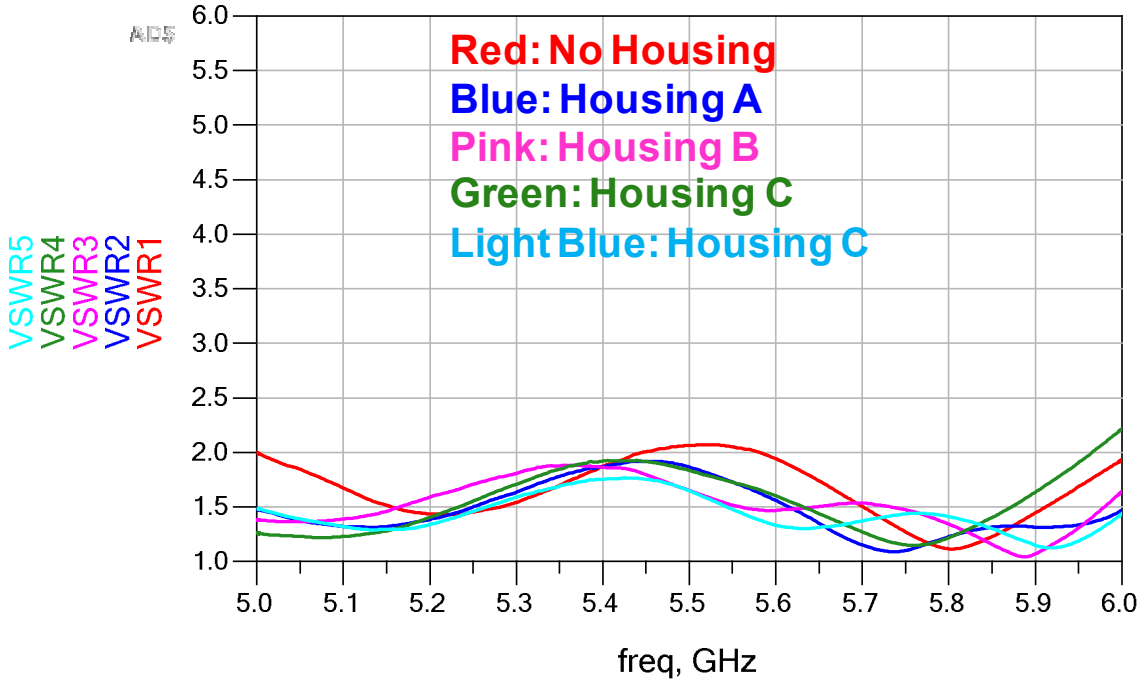
Electrical and Mechanical Specifications*

Parameter	Condition	Specification			Unit
		Min.	Typ.	Max.	
Operating Frequency		5.15		5…85	GHz
Peak Gain			2		dBi
Radiation Efficiency			TBD		%
Input VSWR	Typical Antenna Housing			2:1	
Height	H		30		mm
Width	W		12		mm
Thickness	T		0.6		mm
Weight			0.5		g

*For further details, please refer to BHWR550C EVB Test Data and AppNote.

Typical Input VSWR



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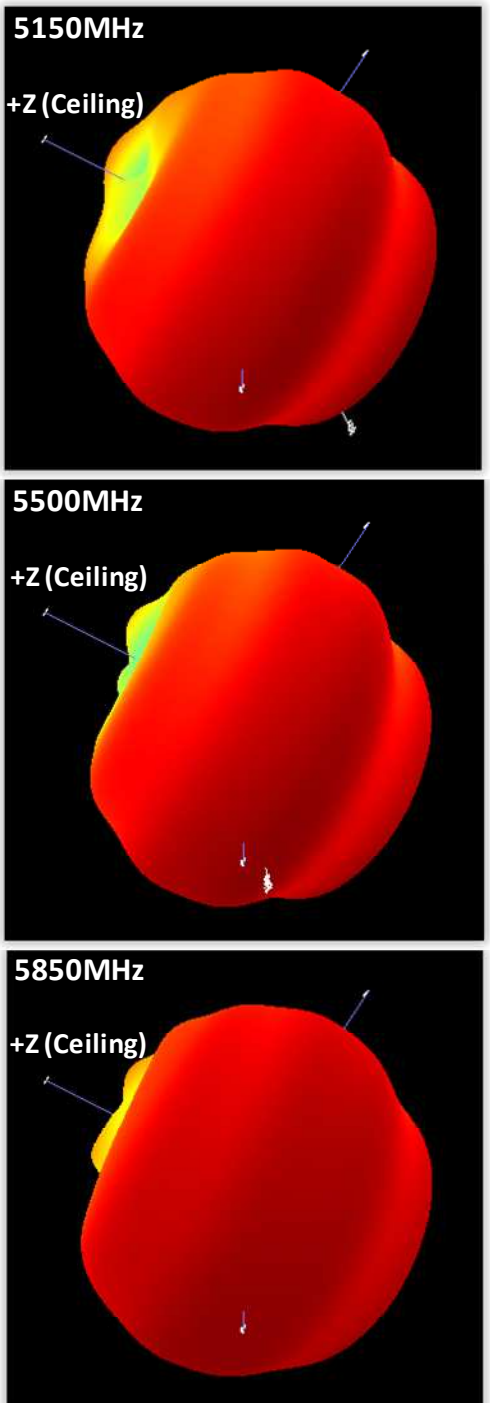
Measured Radiation Pattern



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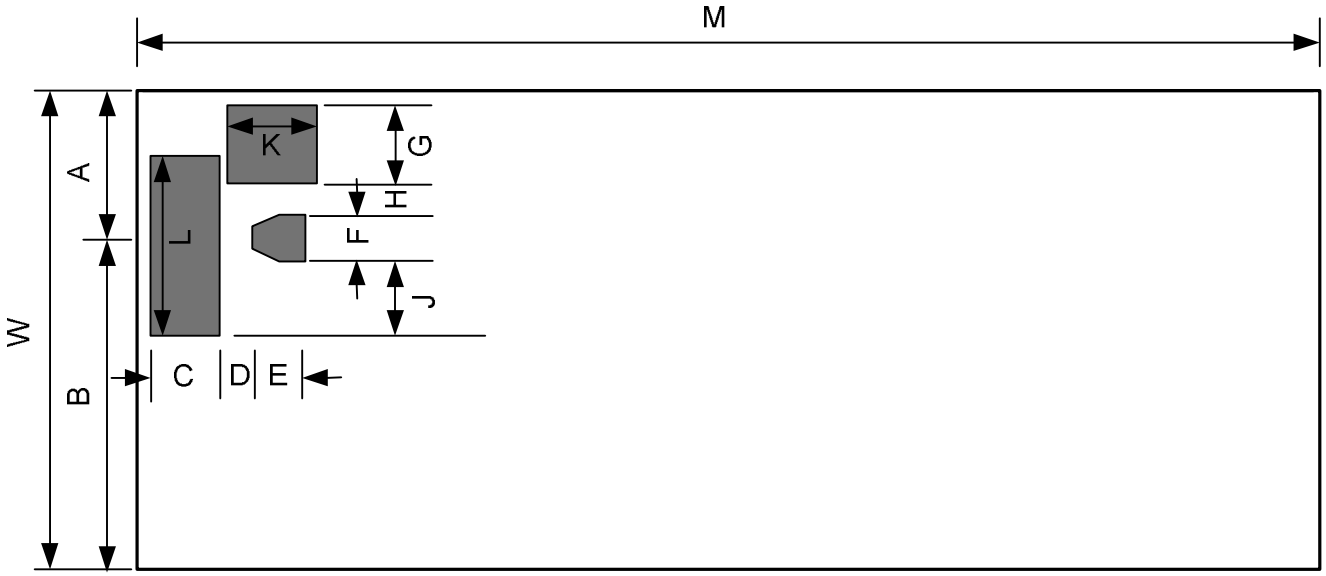
Mechanical Drawings



Symbol	Min. (mm)	Typ. (mm)	Max. (mm)
A	3.5	3.6	3.7
B	8.3	8.4	8.5
C	1.6	1.7	1.8
D	0.7	0.8	0.9
E	1.2	1.3	1.4
F	1.1	1.2	1.3
G	1.9	2.0	2.1
H	0.7	0.8	0.9
J	1.6	1.7	1.8
K	2.2	2.3	2.4
L	4.5	4.6	4.7
M	29.9	30	30.1
W	11.9	12	12.1

Note: Grey area is solder mask opening for IPX/UFL cable assembly.