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2.4/4.9-5.8 GHz 15 dBi 90° Dual Band / Dual Polarized Sector Antenna



Antennas Technical Data Sheet PE51SE1002

Features

- MIMO - Multiple-Input and Multiple-Output
- Dual polarity/dual frequency feed system in single enclosure
- Separate inputs horizontal and vertical polarization
- (2) N-Female connectors

Applications

- 802.11a, 802.11b, 802.11g 802.11n and 802.11ac access points and routers
- WiMAX, WISP and WiFi applications
- Supports 1x2 and 2x2 MIMO AP/Routers
- Homeland Security and Public Safety Services: Fire, Police, Security
- Wireless Internet Provider “cell” sites

Description

The PE51SE1002 is a high performance dual-band / dual polarized sector panel antenna, which combines high gain with a beamwidth up to 90°. Its dual-band design makes it suitable for applications in the 2.4GHz (2400-2500 MHz) and 5 GHz (4900-5850 MHz) band which and eliminates the need to purchase different antennas for each frequency. This simplifies installations since the same antenna can be used for a wide array of wireless applications.

The PE51SE1002 is actually two antennas in one, a 2.4/5 GHz horizontal polarized antenna and a 2.4/5 GHz vertical polarized antenna together in a single radome. Each polarization features separate dual band feeds, two N-Female connectors in total. This antenna incorporates advanced dual polarization technology that allows for the interoperability of two radio transmit and receive paths. This technology allows for the attenuation of unwanted signals from adjacent channels and/or co-located equipment. This dual-band / dual polarized sector antenna features a heavy-duty fiberglass radome for all-weather operation. The heavy-duty mounting system allows installation adjusts from 0 to 10 degrees down tilt.

Configuration

Design	Sector
Band Type	Multi
Radiation Pattern	Directional
Polarization	Vertical/Horizontal
Connector Type	N Female
Interface 2	N Female
Number of Ports	2

Electrical Specifications

Description	Minimum	Typical	Maximum	Units
Impedance		50		Ohms
Gain		13		
Isolation	28			dB
Front to Back Ratio		16		dB
Input Power			100	Watts

Specifications by Band

Description	Band 1	Band 2	Band 3	Band 4	Band 5	Units
Range	2,400-2,500	4,900-5,850				MHz

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Gain	13	15	dBi
Horizontal Beam Width	90	85	Degees
Vertical Beam Width	16	11	Degees
VSWR Max 1.5:1	2:1		
Maximum Input Power	100	100	Watts

Mechanical Specifications

Radome Material	Fiberglass

Size

Overall Length	61.8 in [156.97 cm]
Width	6.3 in [160.02 mm]
Height	3.2 in [81.28 mm]
Mounting Mast Diameter	1.2 to 2 in [30.48 to 50.80 mm]
Weight	12.1 lbs [5.49 kg]

Environmental Specifications

Temperature

Operating Range	-40 to +60 deg C
Wind Loading	130 MPH [209.21 KPH]

Compliance Certifications (see product page for current document)

Plotted and Other Data

Notes:

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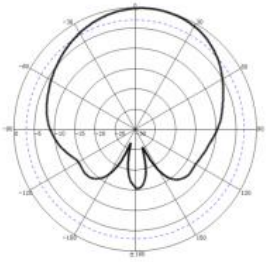
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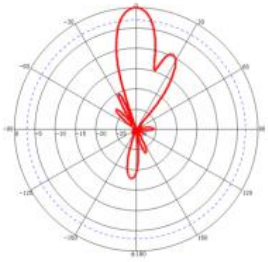
Antennas Technical Data Sheet PE51SE1002

Typical Radiation Pattern

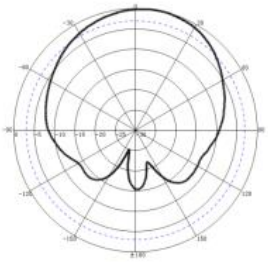
Horizontal Antenna Patterns



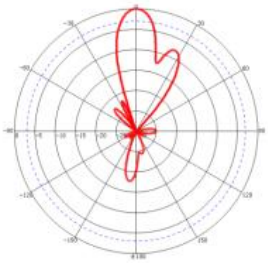
H-Plane: 2400 MHz



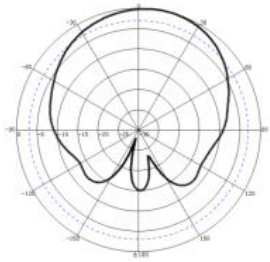
V-Plane: 2400 MHz



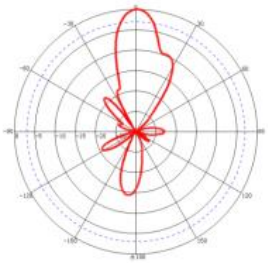
H-Plane: 2450 MHz



V-Plane: 2450 MHz



H-Plane: 2500 MHz



V-Plane: 2500 MHz

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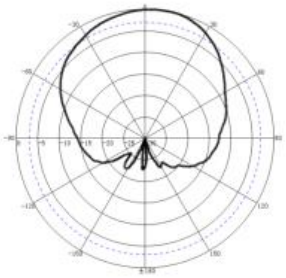
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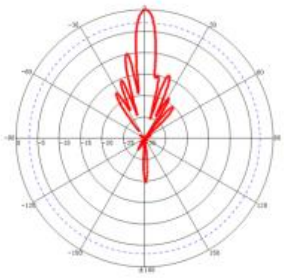
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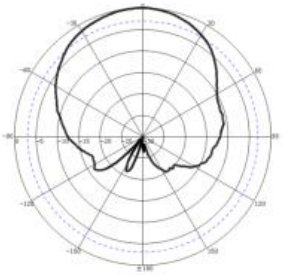
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H-Plane: 4900 MHz



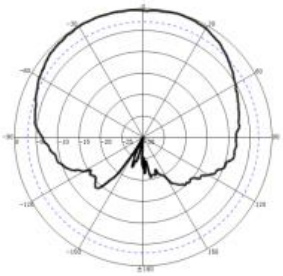
V-Plane: 4900 MHz



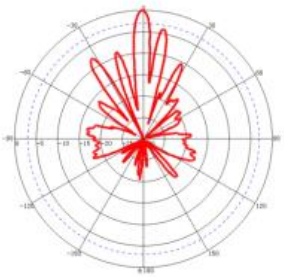
H-Plane: 5375 MHz



V-Plane: 5375 MHz



H-Plane: 5850 MHz



V-Plane: 5850 MHz

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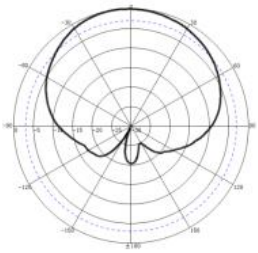
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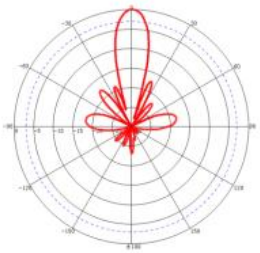


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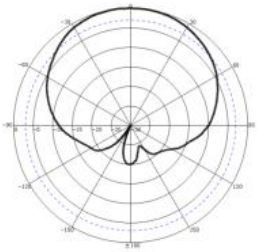
Vertical Antenna Patterns



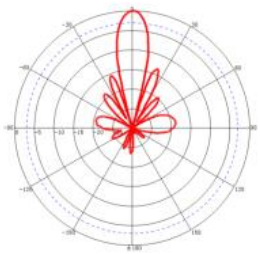
H-Plane: 2400 MHz



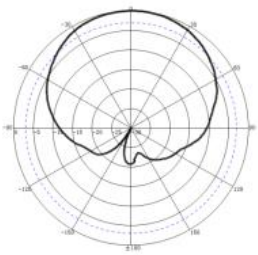
V-Plane: 2400 MHz



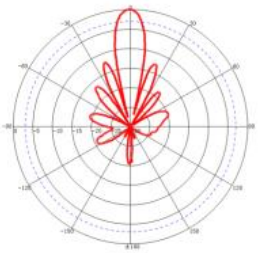
H-Plane: 2450 MHz



V-Plane: 2450 MHz



H-Plane: 2500 MHz



V-Plane: 2500 MHz

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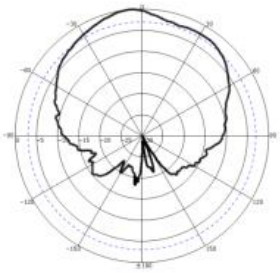
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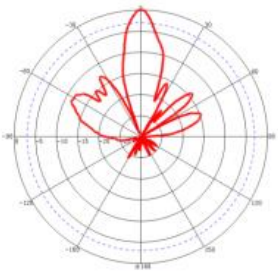
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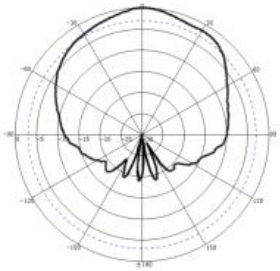
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H-Plane: 4900 MHz



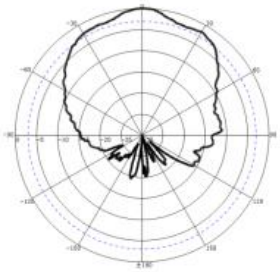
V-Plane : 4900 MHz



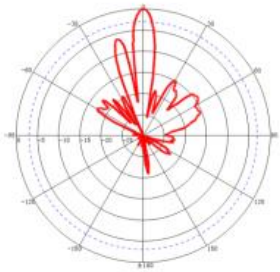
H-Plane: 5375 MHz



V-Plane: 5375 MHz



H-Plane: 5850 MHz



V-Plane: 5850 MHz

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URL: https://www.pasternack.com/multi-antenna-13-gain-n-pe51se1002-p.aspx

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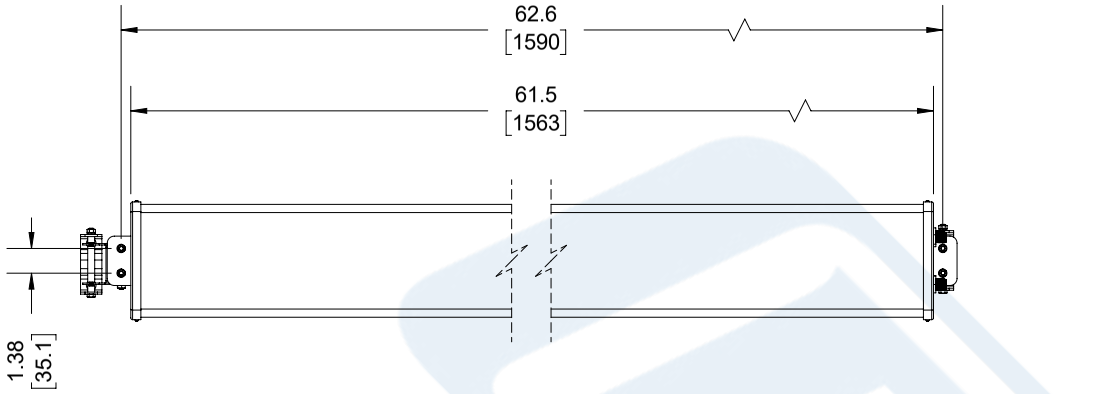
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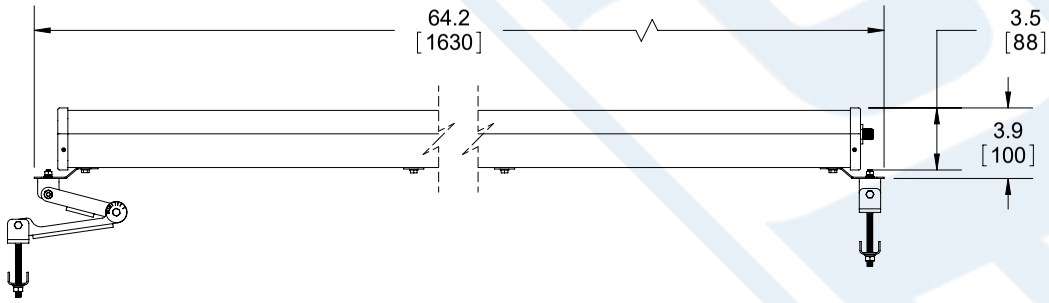
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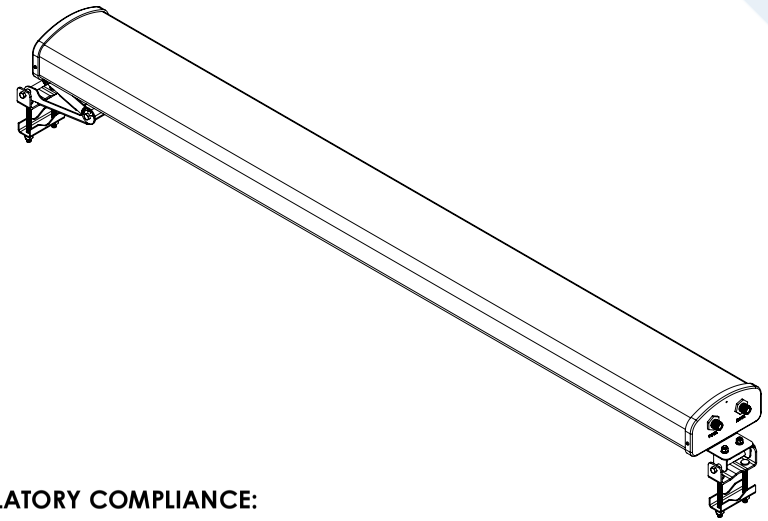
PE51SE1002 CAD Drawing

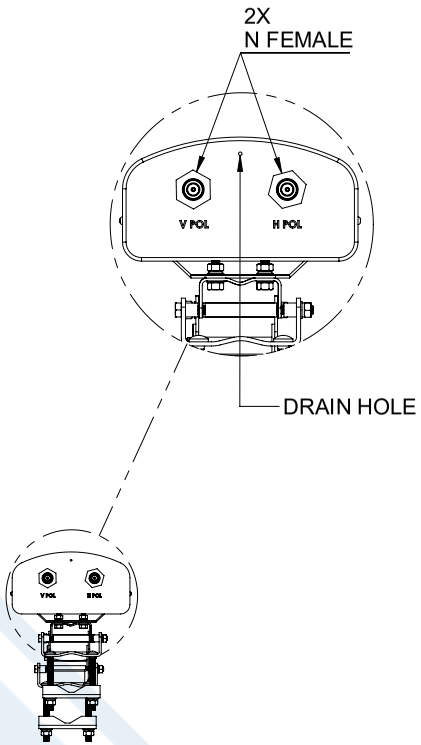
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REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	INITIAL RELEASE	2/18/2020	M.MILLER









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.X = ± .2 [5.08] | FRACTIONS ± 1/32
.XX = ± .02 [.51] | ANGLES ± 1°
.XXX = ± .005 [.13]

CABLE LENGTH (L) TOLERANCES:

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60 [1524] < L ≤ 120 [3048] = +4 [102] / -0
120 [3048] < L ≤ 300 [7620] = +6 [152] / -0
300 [7620] < L = +5%L / -0

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SHEET 1 OF 1

SCALE N/A

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