



5 dBic MultiBand Embedded GPS Active Antenna 824-2,170 MHz UMCX Connector

Antennas Technical Data Sheet

PE51212

Features

- Highly efficient printed circuit board (PCB) design
- Designed for omni-directional applications
- Low profile, compact size
- IPEX, U.FL, UMCX compatible connector
- Integrated active GPS/GNSS Antenna

Applications

- Integrate into self-contained wireless equipment
- Embedded applications requiring integration flexibility
- Multiband cellular frequencies
- GPS/GNSS

Description

The PE51212 is a combination cellular and active GPS omnidirectional antenna designed to integrate into devices requiring wireless capability. It includes an integrated GPS/GNSS Antenna. By embedding these antennas directly into a device, the need for external antennas is eliminated. The omni-directional radiation pattern makes it ideal for multipoint and mobile wireless systems.

Configuration

Design	GPS Active
Application Band	Cellular GPS
Band Type	Multi
Radiation Pattern	Omni Directional
Cable Type	1.13mm
Cable Length	3.937 in [100 mm]
Connector Type	UMCX Plug
Number of Ports	2

Electrical Specifications

Description	Minimum	Typical	Maximum	Units
Frequency Range	824		2,170	MHz
Gain		5		dBic

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [5 dBic MultiBand Embedded GPS Active Antenna 824-2,170 MHz UMCX Connector PE51212](#)



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Antenna	Frequencies (MHz)	Port 1	Port 2	
		1575.42-1602	824-960	1710-2200
	Polarization	RHCP	Vertical	Vertical
	Gain	5 dBic	2 dBi	3 dBi
	VSWR	<2.0:1	<2.5:1	<2.5:1
	Impedance	50 Ω		
	Axial Ratio		N/A	
LNA	Gain	28 $\pm$ 2 dB	N/A	
	Noise Figure	<1.5		
	Filter Insertion Loss	<3 dB		
	Ex-band Attenuation	12dB@CF+50MHz/16dB@CF-50MHz		
	Supply Voltage	2.2~5 VDC		
	Current Consumption	5~15 mA		

Mechanical Specifications

Size

Overall Length	1.65354 in [42 mm]
Width	1.65354 in [42 mm]
Height	0.0393701 in [1 mm]

Environmental Specifications

Temperature

Operating Range	-40 to +85 deg C
Humidity	<75%
Vibration	10 to 55Hz with 1.5mm amplitude 2hours

Compliance Certifications (see [product page](#) for current document)

Plotted and Other Data

Notes:

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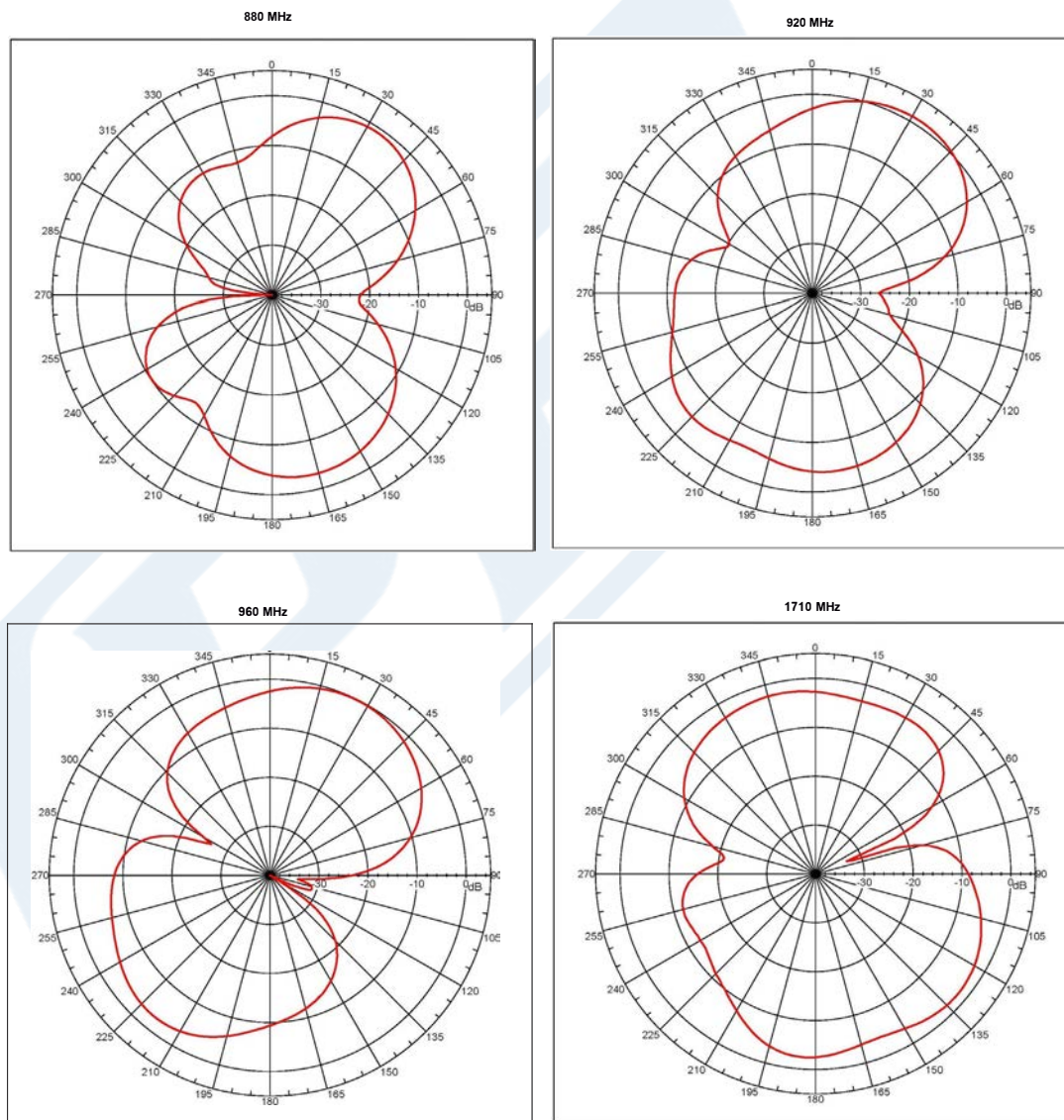


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Typical Radiation Pattern

GSM Test - Pattern



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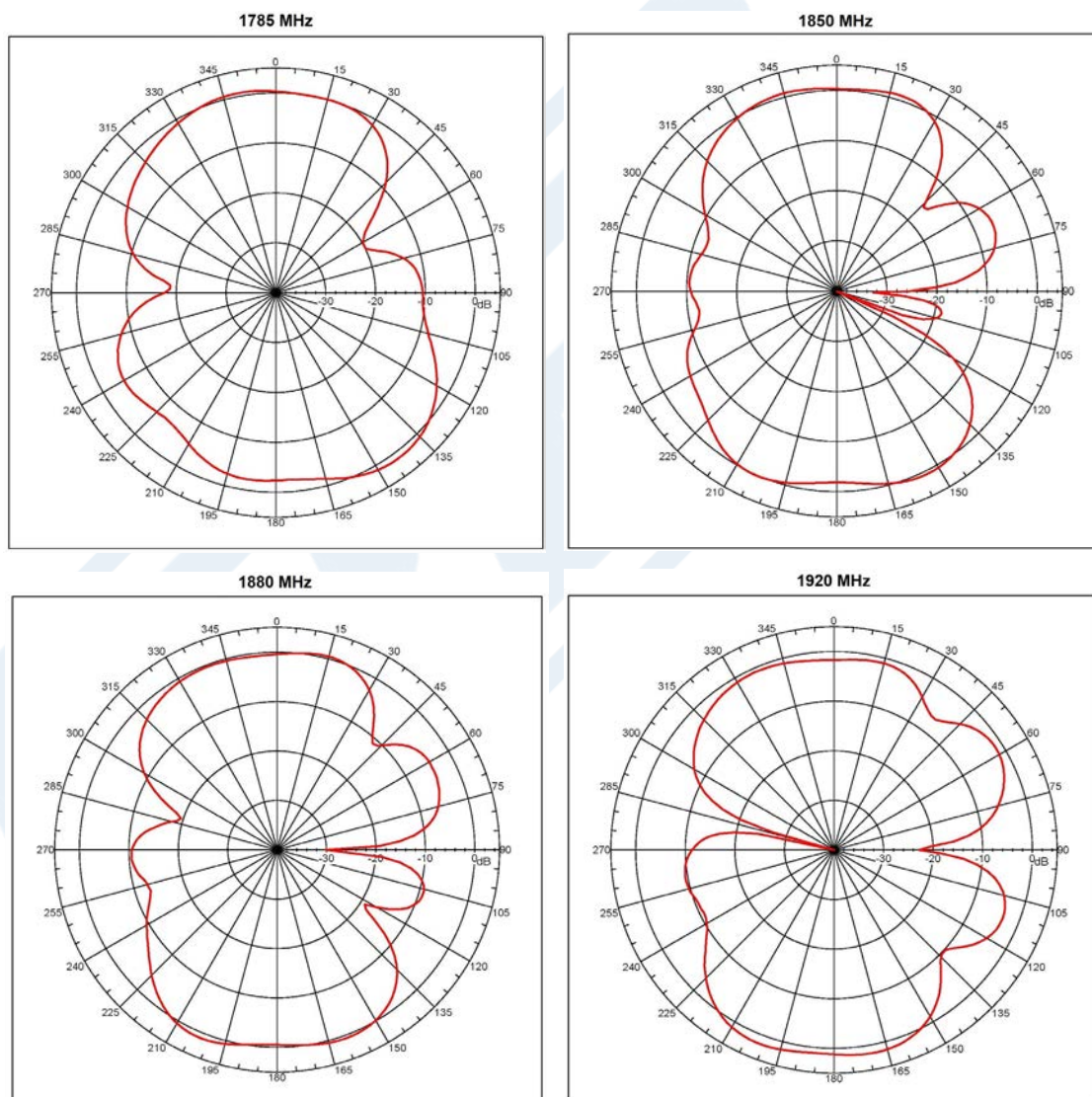
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GSM Test - Pattern



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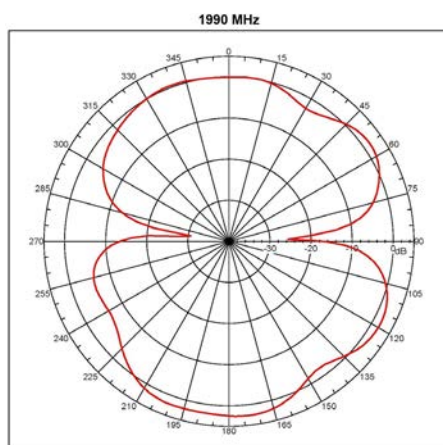


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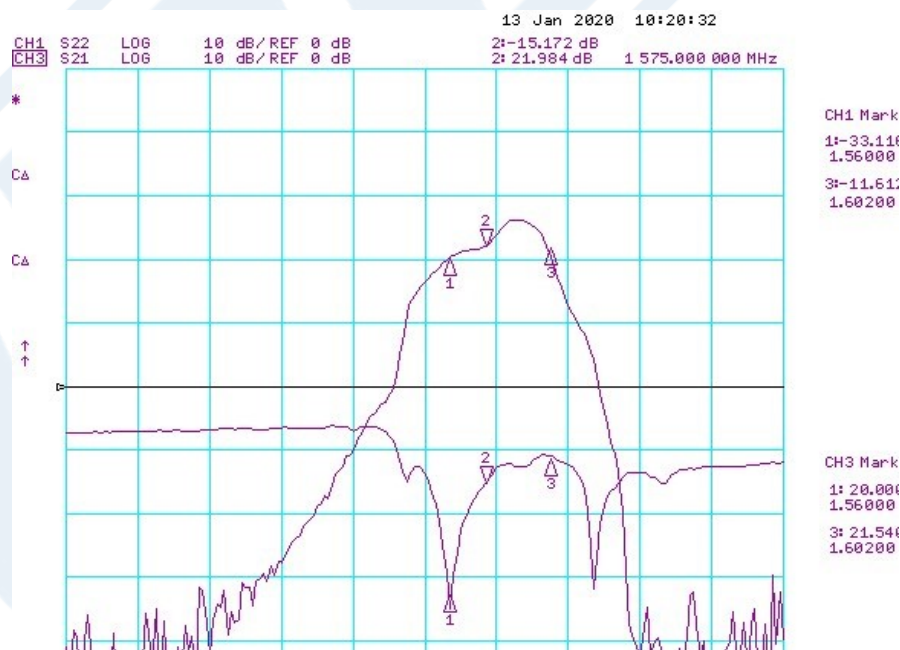
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GSM Test - Pattern



GPS and GLONASSS



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5 dBic MultiBand Embedded GPS Active Antenna 824-2,170 MHz UMCX Connector from Pasternack Enterprises has same day shipment for domestic and International orders. Our RF, microwave and millimeter wave products maintain a 99.4% availability and are part of the broadest selection in the industry.

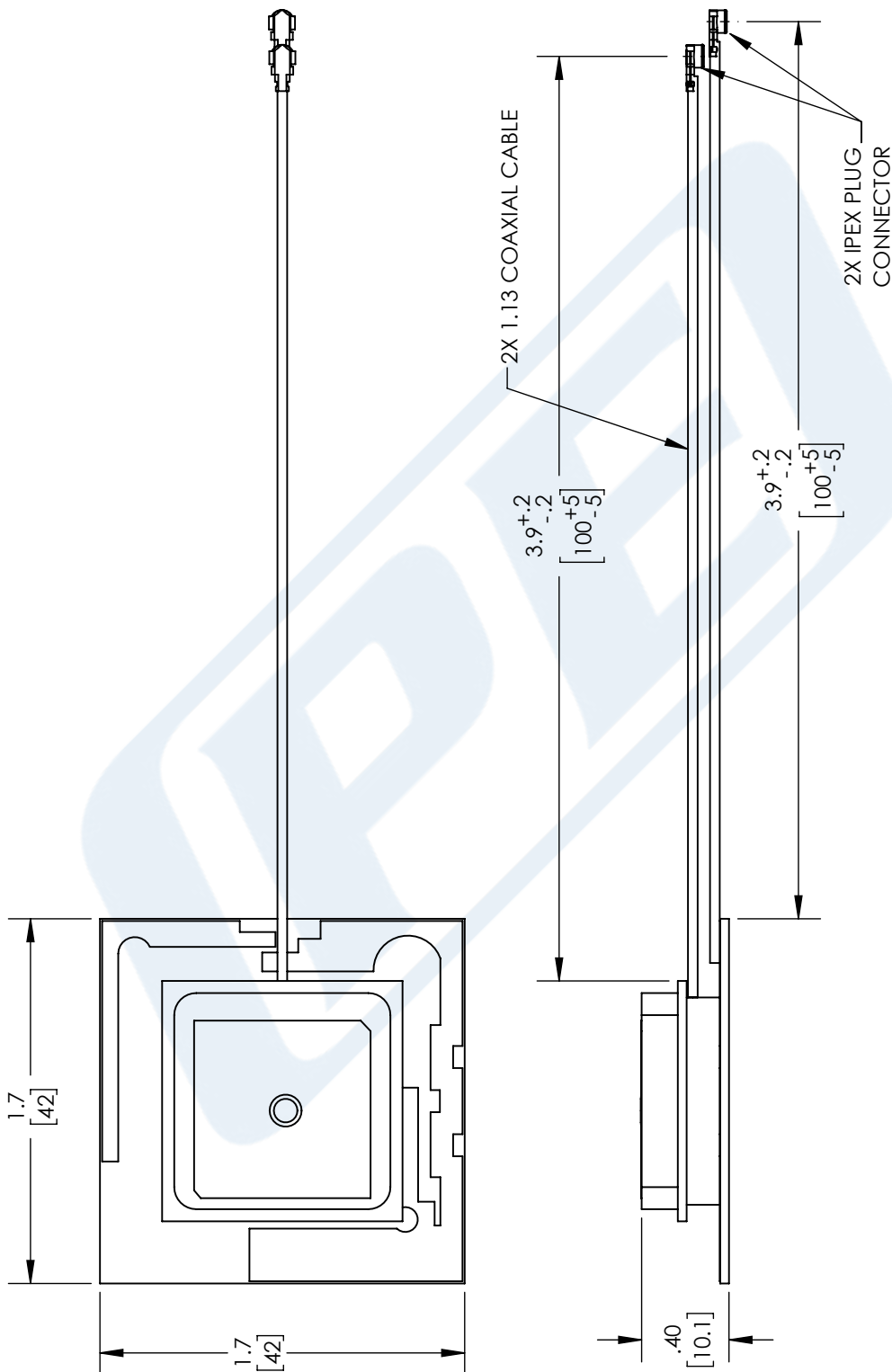
Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [5 dBic MultiBand Embedded GPS Active Antenna 824-2,170 MHz UMCX Connector PE51212](https://www.pasternack.com/multi-antenna-824-mhz-2.17-ghz-5-dbic-gain-umcx-pe51212-p.aspx)

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REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	INITIAL RELEASE	06/18/2020	KHIETPAS



UNLESS OTHERWISE SPECIFIED, LEADING DIMENSIONS ARE INCHES DIMENSIONS IN [] ARE MILLIMETERS	TOLERANCES:		FRACTIONS		THIRD-ANGLE PROJECTION
	$X \pm .2$ [.008]		$.XX \pm .02$ [.51]		
		$XXX \pm .005$ [.13]		ANGLES $\pm 1^\circ$	
		CABLE LENGTH (L) TOLERANCES:		THE INFORMATION AND DESIGN IN THIS DOCUMENT IS THE PROPERTY OF PASTERNAK CORPORATION ALL RIGHTS RESERVED	
		$L \leq 12$ [305] $\pm .1$ [.251] / -0		SHEET 1 OF 1	
		12 [305] < L $\leq$ 60 [1524] $\pm .2$ [.51] / -0		SCALE N/A	
		60 [1524] < L $\leq$ 120 [3048] $\pm .4$ [1.02] / -0		REV A	
		120 [3048] < L $\leq$ 300 [7620] $\pm .6$ [1.52] / -0		PE51212	
		300 [7620] < L $\leq$ +5% / -0		ITEM NO.	
		ALL DIMENSIONS SHOWN ARE FOR REFERENCE ONLY		SIZE A	
		CAGE CODE 53919		DRAWN BY SLI	
		PASTERNAK an INFINITE® brand		Pasternack Enterprises, Inc. P.O. Box 16759, Irvine, CA 92623 Phone: 1.949.261.1920 1.866.727.8376 Fax: 1.949.261.7451 Website: www.pasternack.com E-mail: sales@pasternack.com	

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