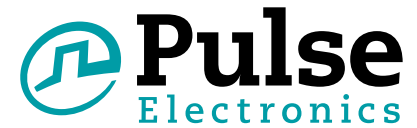
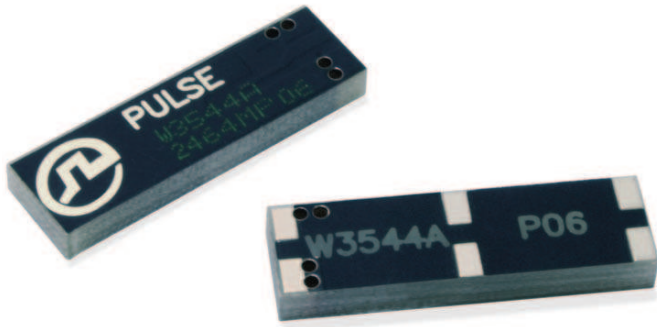


GSM/3G Penta Band Hybrid PCB Antenna



Pulse Part Number W3544A / 3544B



Pulse introduces the small hybrid surface mount pick-and-place W3544X family of GSM/3G antennas. Board connection is via 6 SMD connection points underneath the antenna. Antennas are delivered in tape and reel packaging for use in automatic SMD pick-and-place. Each antenna measures 7.65 x 26 x 3 mm and requires ground clearance on the PCB. The W3544A is optimized for a corner board location while the W3544B is for use at the end of a narrow PCB. Frequency bands are 824-960 and 1710-2170 MHz with a target of minimum 50% efficiency in all bands offering a compact high performance solution for GSM/3G applications

Features

- Frequency bands 824-960 and 1710-2170 MHz
- SMD solution
- Compact antenna size of 7.65 x 26 x 3 mm
- RoHS Compliant Product

Applications

- GSM/3G routers
- Femto Cell modems
- Industrial wireless machine to machine
- Smart Grid devices
- Mobile Hotspots

Part Number	Positioning
W3544A	Vertically mounted at board edge
W3544B	Horizontally mounted at board edge

GSM/3G Penta Band Hybrid PCB Antenna

Pulse Part Number W3544A / 3544B

Electrical Specifications

		W3544A	W3544B
Frequency 1 [MHz]		824 - 960	824 - 960
Frequency 2 [MHz]		1710 - 1880	1710 - 1880
Frequency 3 [MHz]		1850 - 1990	1850 - 1990
Frequency 4 [MHz]		1920 - 2170	1920 - 2170
Nominal Impedance [Ω]		50	50
Gain	Freq 1 [dBi avg]	-1.9 65%	-1.5 70%
	Freq 2 [dBi avg]	-1.3 74%	-1.1 77%
	Freq 3 [dBi avg]	-1.3 74%	-1.1 77%
	Freq 4 [dBi avg]	-1.66 68%	-1.5 71%
Return Loss	Frequency 1 [dB]	-4.1	-6.5
	Frequency 2 [dB]	-4.6	-5.7
	Frequency 3 [dB]	-16.3	-18.5
	Frequency 4 [dB]	-12.3	-13

Note:

Gain: Frequency detail above is all peak and given in dBi first, then efficiency.

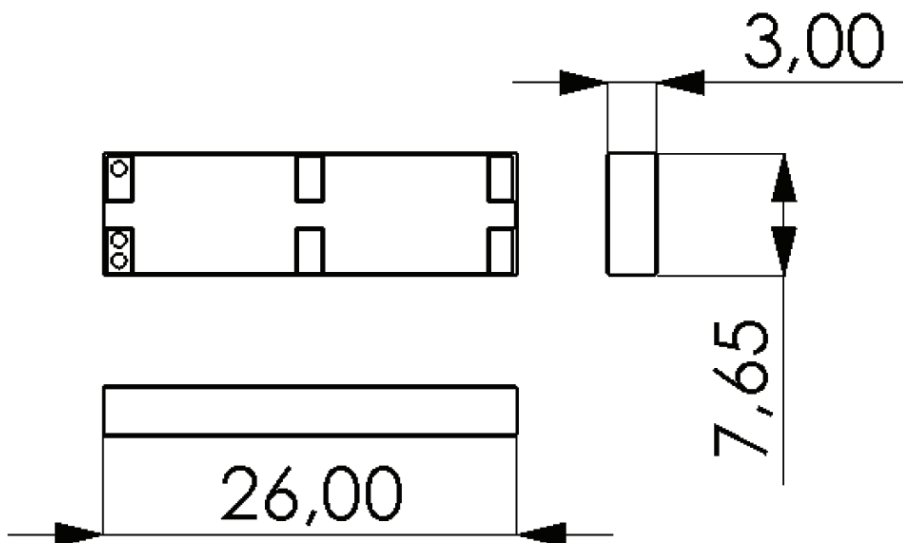
Environmental Specifications

Operating Temperature [°C]	-45 to +85
Storage Temperature [°C]	-45 to +85

Mechanical Specifications

Weight [oz/g]	.04 / 1.11
Dimensions [Inches/mm]	.38 x 1.02 x .12 / 9.65 x 26 x 3
Mounting	SMD

Antenna Dimensions



GSM/3G Penta Band Hybrid PCB Antenna

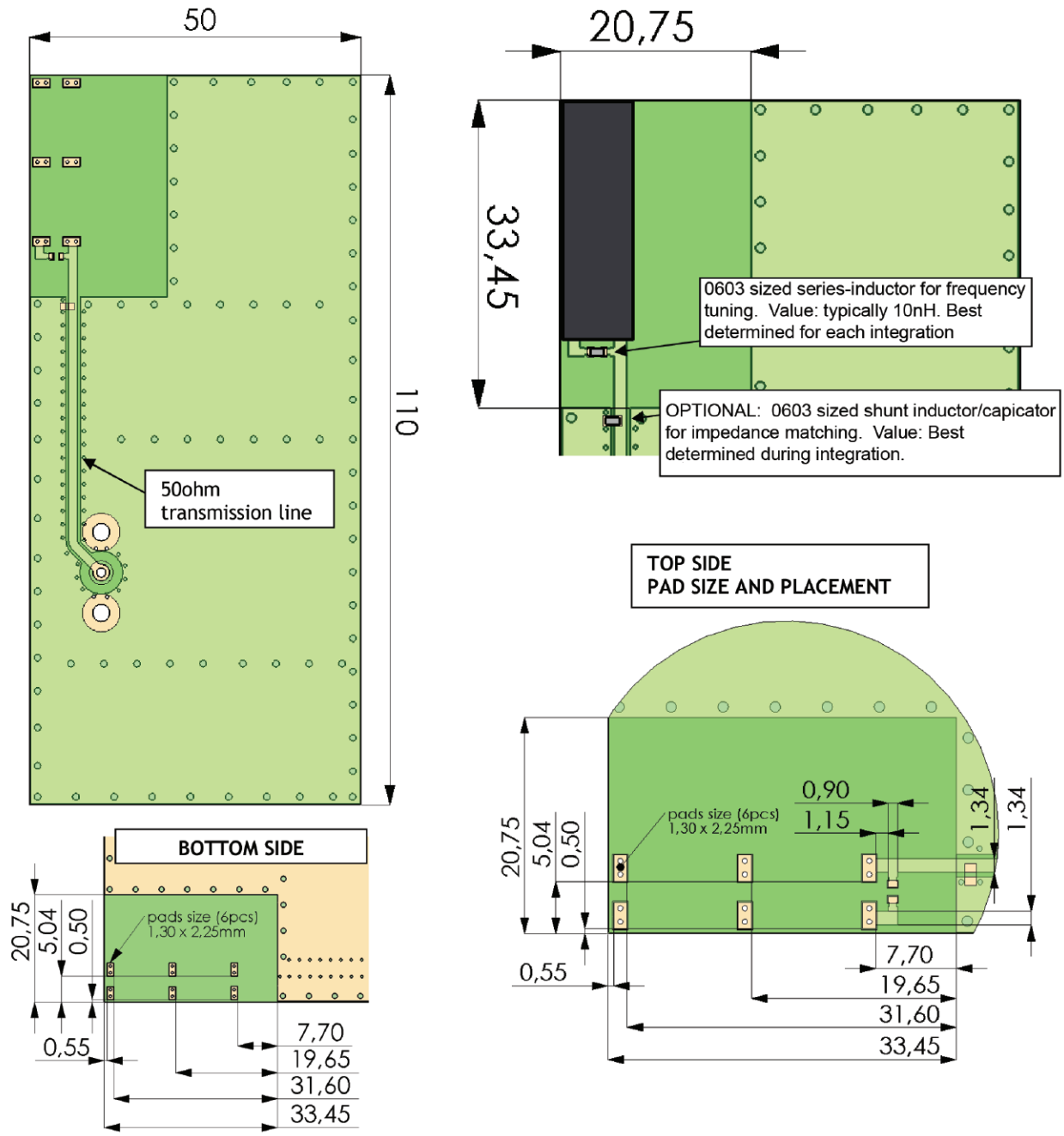
Pulse Part Number W3544A / 3544B

Test Setup for Electrical Measurements

Recommended test board layout for electrical characteristic measurement. Test board outline size 110 mm x 50 mm. Ground cleared under antenna.

NOTE: All measurements are in mm.

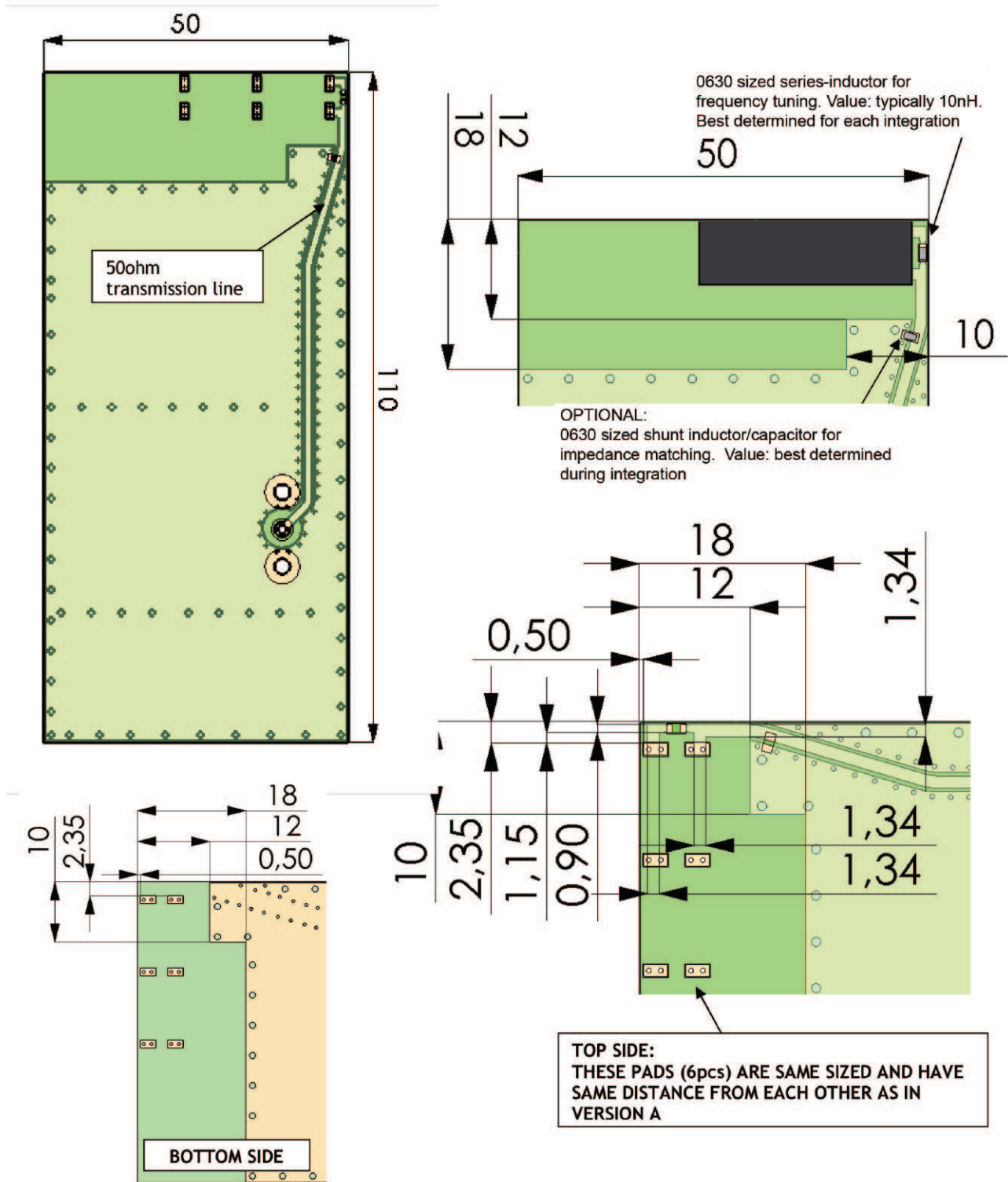
W3544A - Antenna positioned vertically on PWB corner



GSM/3G Penta Band Hybrid PCB Antenna

Pulse Part Number W3544A / 3544B

W3544B - Antenna positioned horizontally on PWB corner

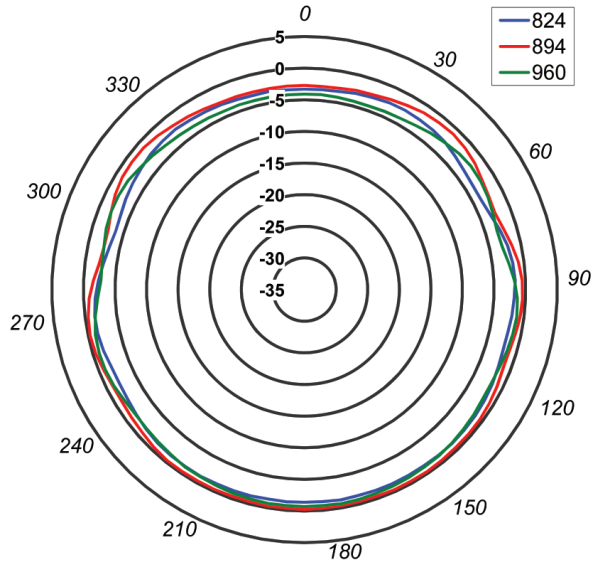


GSM/3G Penta Band Hybrid PCB Antenna

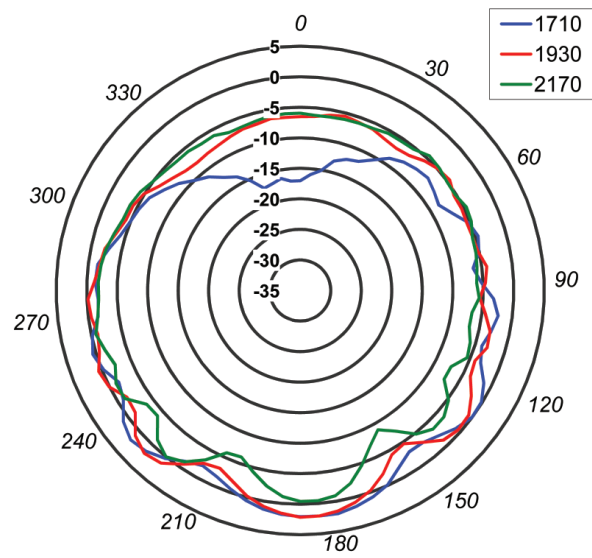
Pulse Part Number W3544A / 3544B

Radiation Patterns

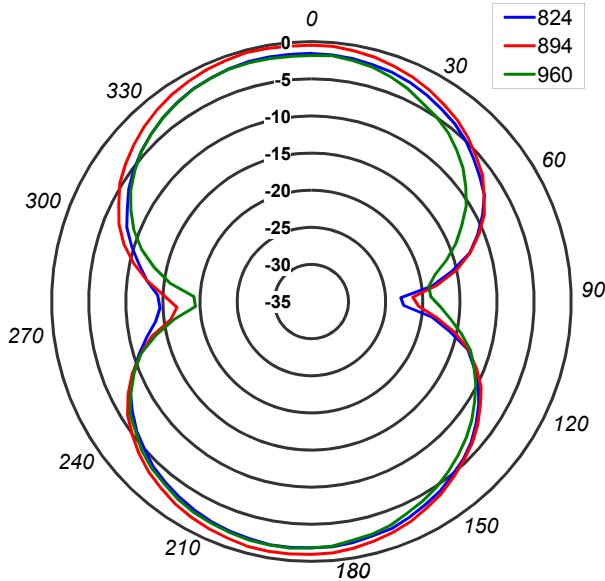
H Plane



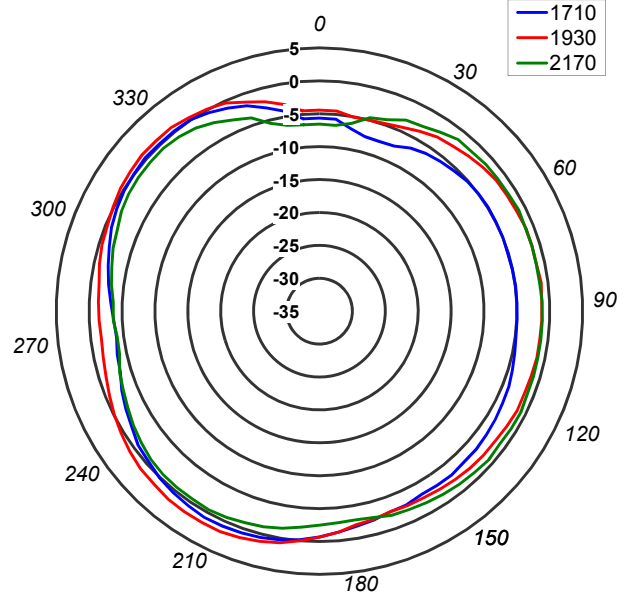
H Plane



E Plane



E Plane



For More Information

Pulse Worldwide Headquarters

12220 World Trade Drive
San Diego, CA 92128
U.S.A.

Larsen Brand Antennas

3611 NE 112th Avenue
Vancouver, WA 98682
USA

Europe Headquarters

Pulse GmbH & Co. KG
Zeppelinstrasse 15
Herrenberg
Germany

Asia Headquarters

B402, Shenzhen Academy of
Aerospace Technology Bldg,
10th Kejian Road, High-Tech Zone
Nanshan District, Shenzhen, PR China 518057

Pulse North Asia

3F, No. 198, Zhongyuan Road
Zhongli City, Taoyuan County 320
Taiwan R. O. C.

Pulse (Suzhou) Wireless Products Co., Inc.

99 Huo Ju Road, (#29 Bldg, 4th Phase)
Suzhou New District
Science & Tech Industrial Park
Jiangsu Province, Suzhou 215009 PR China

Tel: 858 674 8100
Fax: 858 674 8262

Tel: 360 944 7551
Fax: 360 944 7556

Tel: 49 7032 7806 0
Fax: 49 7032 7806 135

Tel: 86 755 33966678
Fax: 86 755 33966700

Tel: 886 3 4356768
Fax: 886 3 4356823

Tel: 86 512 6807 9998
Fax: 86 512 6809 8023

Performance warranty of products offered on this data sheet is limited to the parameters specified. Data is subject to change without notice. Other brand and product names mentioned herein may be trademarks or registered trademarks of their respective owners. © Copyright, 2010, Pulse Electronics, Inc. All rights reserved.