

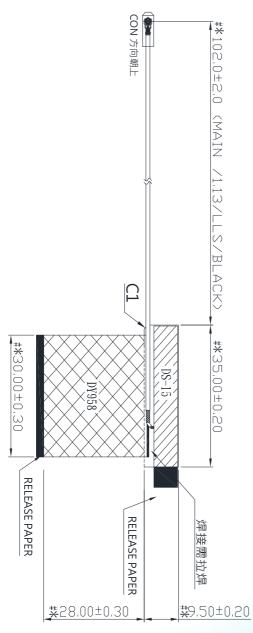
TECHNICAL DATA SHEET

Description: BR1402 MAIN ANT

G

Series: BR1402 MAIN ASUS P/N: 14008-05650200

PULSE P/N: TZ2486D



Features:

- WLAN Antenna
- Printed Circuit Board
- Adheres to plastic surface
- •1.13mm cable with NGFF
- RoHS Compliant

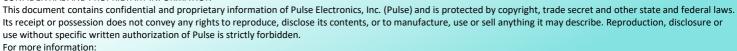
Applications:

Notebook computer

All dimensions are in mm / inches

Issue: 2032 DRAFT RALFYE

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Pulse/Larsen Antennas 18110 SE 34th St Bldg 2 Suite 250 Vancouver, WA 98683 USA Tel: 1-360-944-7551

Europe Headquarters Pulse GmbH & Do, KG Zeppelinstrasse 15 Herrenberg, Germany Tel: 49 7032 7806 0 Pulse (Suzhou) Wireless Products Co, Inc. 99 Huo Ju Road(#29 Bldg,4th Phase Suzhou New District Jiangsu Province, Suzhou 215009 PR China Tel: 86 512 6807 9998



TECHNICAL DATA SHEET

Description: BR1402 MAIN ANT

G

Series: BR1402 MAIN ASUS P/N: 14008-05650200

PULSE P/N: TZ2486D

ELECTRICAL SPECIFICATIONS

Antenna Type PCB PIFA

Frequency 2.4-2.5GHz,5.15-5.875GHz

Nominal Impedance $50~\Omega$ VSWR 3:1 Radiation Pattern Omni

Gain Refer to gain table

Polarization Linear
Power Withstanding 1W

MECHANICAL SPECIFICATIONS

Overall Length

Antenna Color / Material

Connector type

Cable type

Cable length

Adhesive tape

35x9.5 mm

Black/ PCB

See table, P3

See table, P3

HF DS15

ENVIRONMENTAL SPECIFICATIONS

Operating Temperature $-40 \sim +85^{\circ}\text{C}$ Storage Temperature $-40 \sim +85^{\circ}\text{C}$ RoHS Compliant Yes



TECHNICAL DATA SHEET

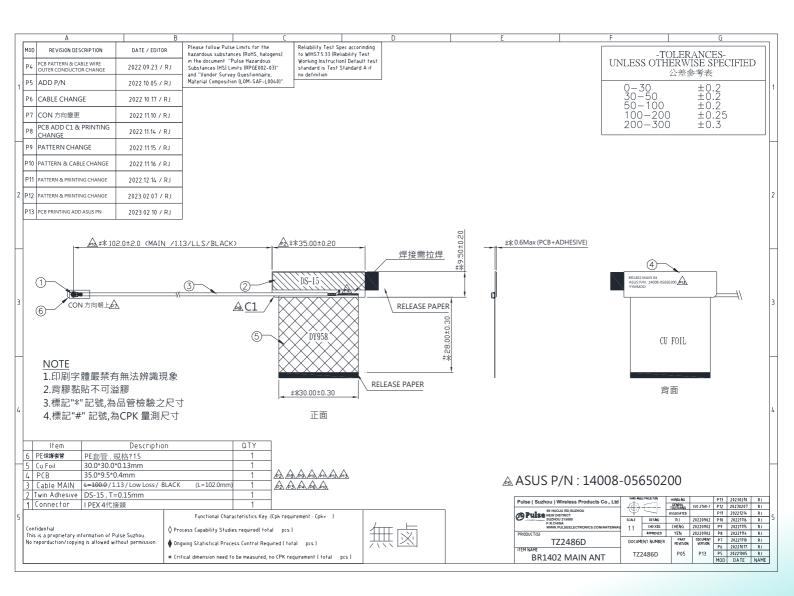
Description: BR1402 MAIN ANT

G

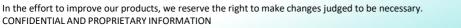
Series: BR1402 MAIN ASUS P/N: 14008-05650200

PULSE P/N : TZ2486D

MECHANICAL DRAWING



Issue: 2032 DRAFT RALFYE









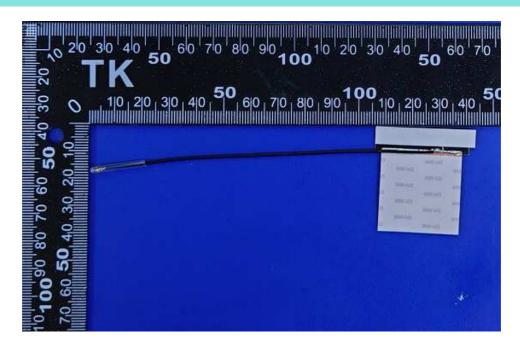
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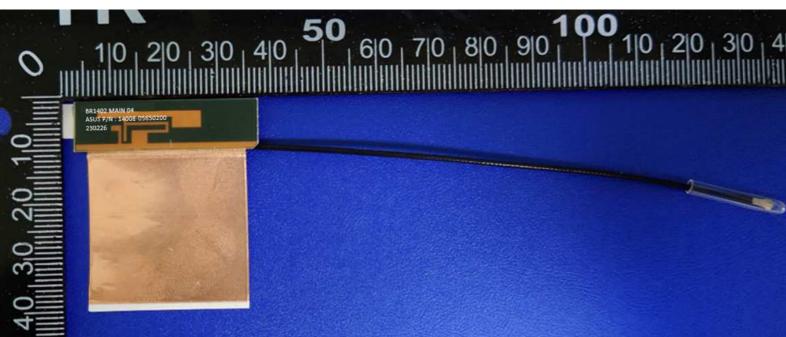
ASUS P/N: 14008-05650200

PULSE P/N : TZ2486D



ANTENNA DRAWING













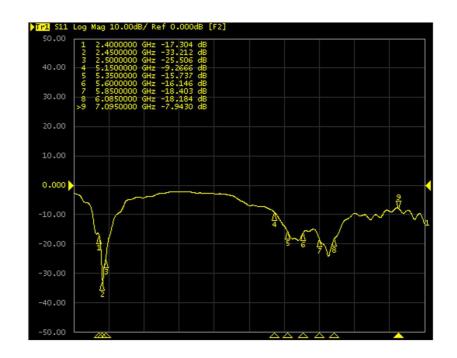
Description: BR1402 MAIN ANT

Series: BR1402 MAIN ASUS P/N: 14008-05650200

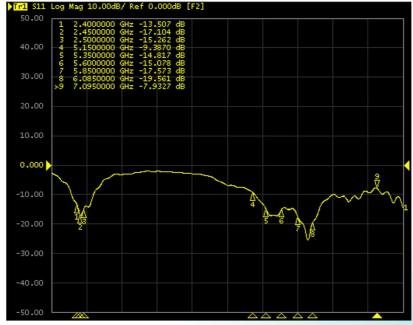
PULSE P/N: TZ2486D

TEST SETUP

NB Mode



TB Mode



Issue: 2032 DRAFT RALFYE





Description: BR1402 MAIN ANT

G

Series: BR1402 MAIN ASUS P/N: 14008-05650200

PULSE P/N: TZ2486D

EFFICIENCY

NB Mode

TB Mode

<mark>main</mark>	Frequency	Efficiency	Gain
	2400	-3.81	2.73
	2412	-3.64	2.71
	2437	-3.34	2.69
	2462	-3.27	2.67
	2500	-2.91	2.71
	5150	-3.32	3.43
	5250	-3.46	3.43
	5350	-3.26	3.42
	5470	-3.29	4.25
	5600	-3.78	4.22
	5725	-3.09	4.25
	5785	-3.44	4.42
	5850	-3.73	4.21
	5895	-3.73	4.12
	5925	-4.25	3.64
	6125	-5.31	2.51
	6425	-5.36	2.08
	6525	-5.94	1.68
	6725	-5.70	2.15
	6875	-6.12	1.41
	6925	-6.03	1.75
	7125	-6.34	1.93

main	Frequency	Efficiency	Gain
	2400	-4.10	2.68
	2412	-4.09	2.69
	2437	-4.24	2.70
	2462	-4.41	2.71
	2500	-4.07	2.70
	5150	-3.67	3.41
	5250	-4.03	3.34
	5350	-3.70	3.45
	5470	-3.65	4.24
	5600	-3.83	4.23
	5725	-3.96	4.49
	5785	-4.04	4.18
	5850	-3.98	4.15
	5895	-4.21	4.06
	5925	-4.78	3.50
	6125	-4.86	3.28
	6425	-6.11	2.60
	6525	-5.70	2.64
	6725	-5.80	3.24
	6875	-6.62	3.49
	6925	-6.91	3.23
	7125	-7.04	2.78





Description: BR1402 MAIN ANT

ASUS P/N: 14008-05650200

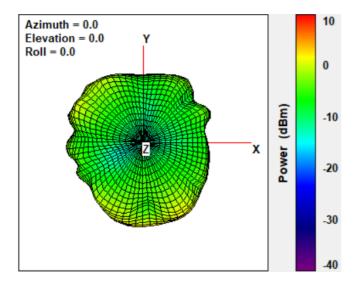
PULSE P/N: TZ2486D



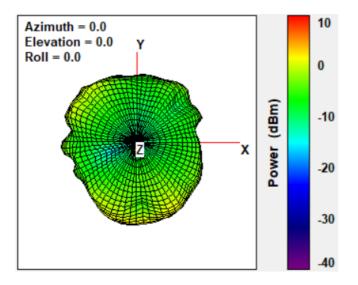
CHARTS

NB Mode

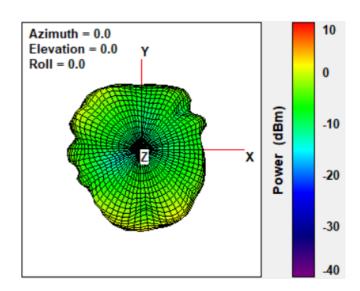
Radiation Pattern of WLAN Antenna (2400MHz)



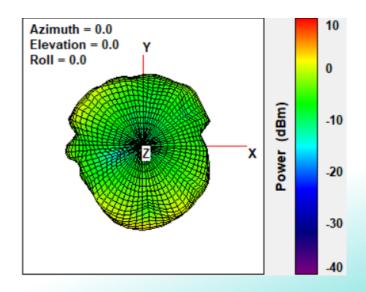
Radiation Pattern of WLAN Antenna (2437MHz)



Radiation Pattern of WLAN Antenna (2412MHz)



Radiation Pattern of WLAN Antenna (2462MHz)









Description: BR1402 MAIN ANT

ASUS P/N: 14008-05650200

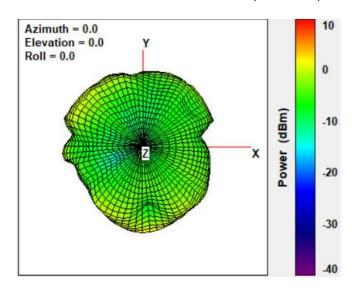
PULSE P/N: TZ2486D



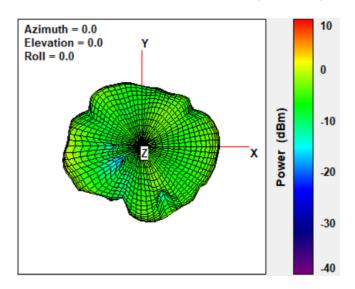
CHARTS

NB Mode

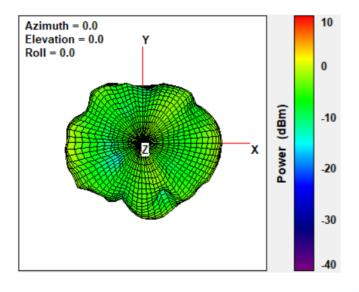
Radiation Pattern of WLAN Antenna (2500MHz)



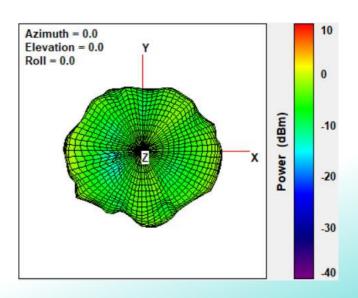
Radiation Pattern of WLAN Antenna (5150MHz)



Radiation Pattern of WLAN Antenna (5250MHz)



Radiation Pattern of WLAN Antenna (5350MHz)



Issue: 2032 DRAFT RALFYE

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TECHNICAL DATA SHEET

Description: BR1402 MAIN ANT

ASUS P/N: 14008-05650200

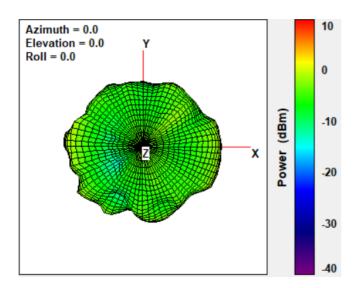
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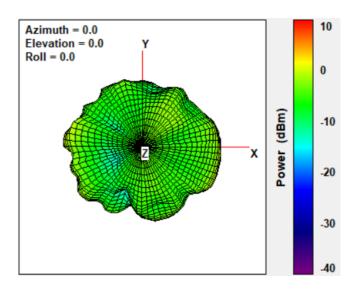
CHARTS

NB Mode

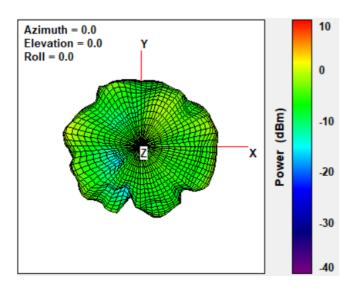
Radiation Pattern of WLAN Antenna (5470MHz)



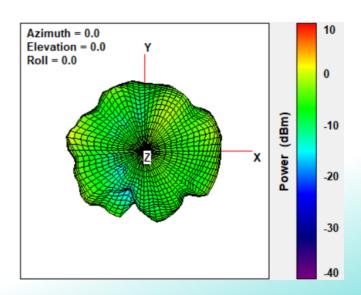
Radiation Pattern of WLAN Antenna (5600MHz)



Radiation Pattern of WLAN Antenna (5725MHz)



Radiation Pattern of WLAN Antenna (5785MHz)



Issue: 2032 DRAFT RALFYE

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Description: BR1402 MAIN ANT

C

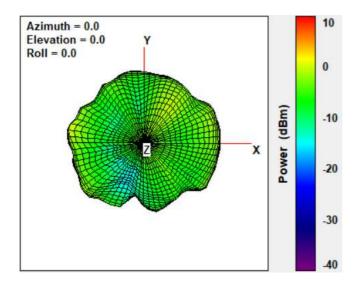
ASUS P/N: 14008-05650200

PULSE P/N : TZ2486D

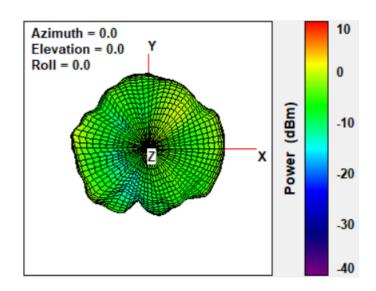
CHARTS

NB Mode

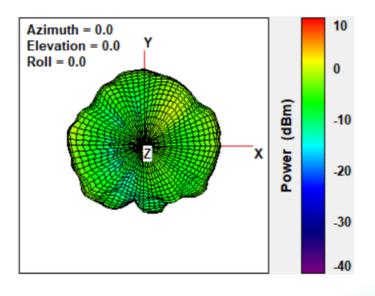
Radiation Pattern of WLAN Antenna (5850MHz)



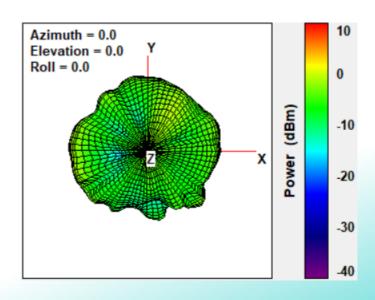
Radiation Pattern of WLAN Antenna (5895MHz)



Radiation Pattern of WLAN Antenna (5925MHz)



Radiation Pattern of WLAN Antenna (6125MHz)



Issue: 2032 DRAFT RALFYE

ROHS





Description: BR1402 MAIN ANT

ASUS P/N: 14008-05650200

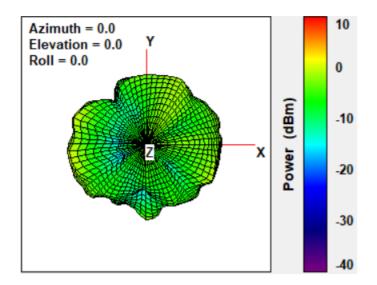
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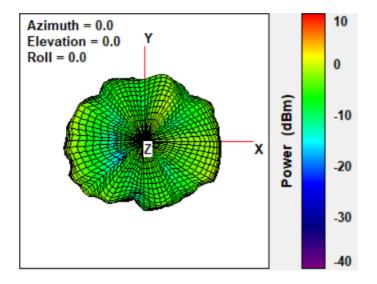
CHARTS

NB Mode

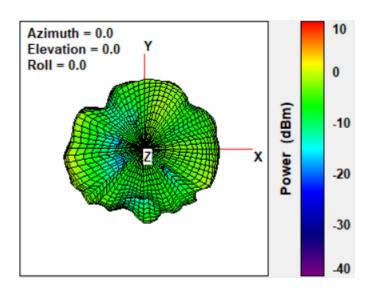
Radiation Pattern of WLAN Antenna (6425MHz)



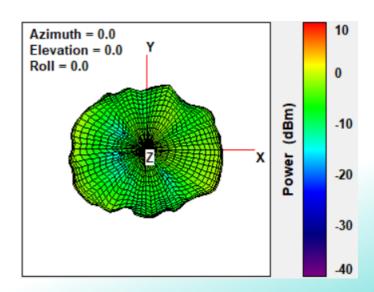
Radiation Pattern of WLAN Antenna (6725MHz)



Radiation Pattern of WLAN Antenna (6525MHz)



Radiation Pattern of WLAN Antenna (6875MHz)



Issue: 2032 DRAFT RALFYE
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Description: BR1402 MAIN ANT

ASUS P/N: 14008-05650200

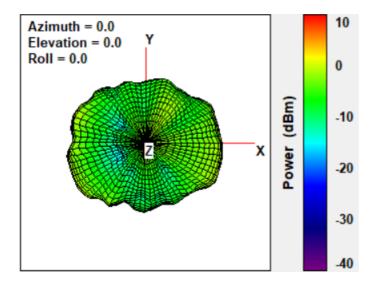
PULSE P/N: TZ2486D



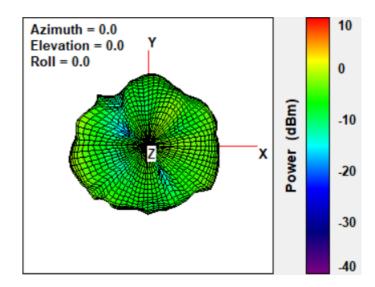
CHARTS

NB Mode

Radiation Pattern of WLAN Antenna (6925MHz)



Radiation Pattern of WLAN Antenna (7125MHz)







Description: BR1402 MAIN ANT

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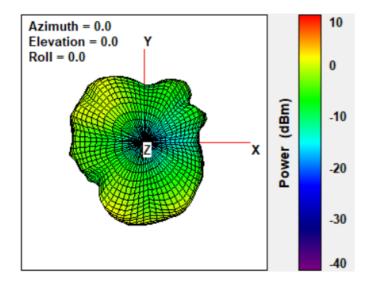
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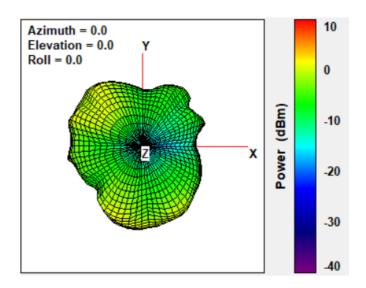
CHARTS

TB Mode

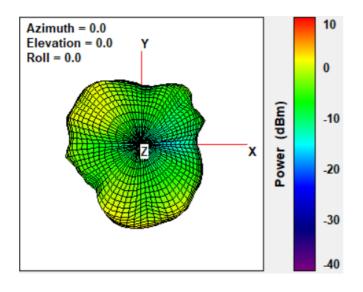
Radiation Pattern of WLAN Antenna (2400MHz)



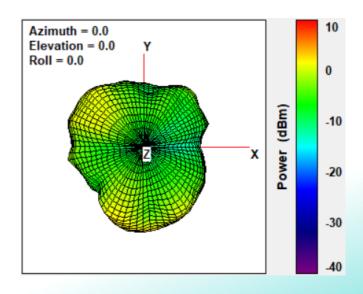
Radiation Pattern of WLAN Antenna (2412MHz)



Radiation Pattern of WLAN Antenna (2437MHz)



Radiation Pattern of WLAN Antenna (2462MHz)







13





Description: BR1402 MAIN ANT

ASUS P/N: 14008-05650200

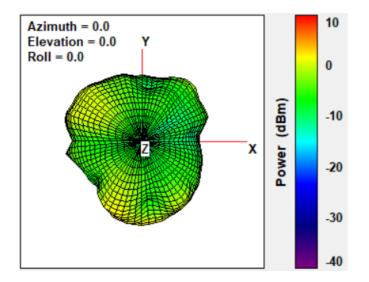
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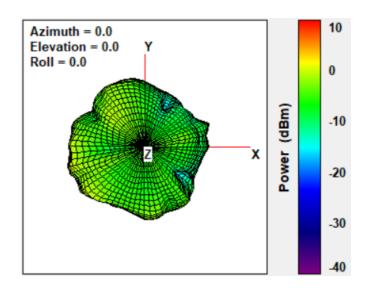
CHARTS

TB Mode

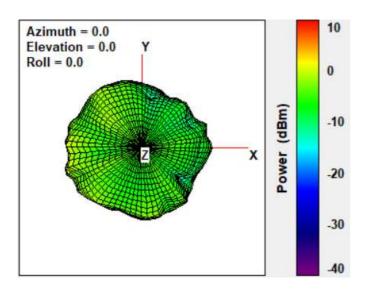
Radiation Pattern of WLAN Antenna (2500MHz)



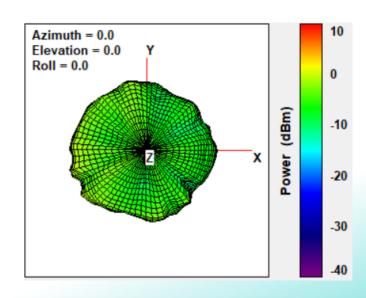
Radiation Pattern of WLAN Antenna (5150MHz)



Radiation Pattern of WLAN Antenna (5250MHz)



Radiation Pattern of WLAN Antenna (5350MHz)







Description: BR1402 MAIN ANT

ASUS P/N: 14008-05650200

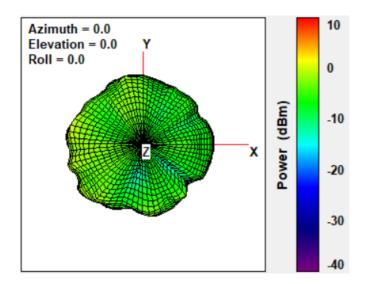
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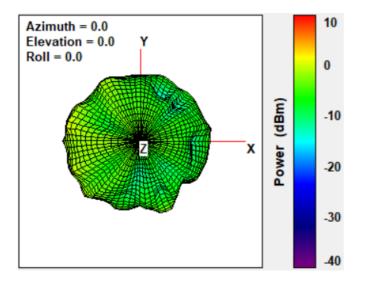
CHARTS

TB Mode

Radiation Pattern of WLAN Antenna (5470MHz)

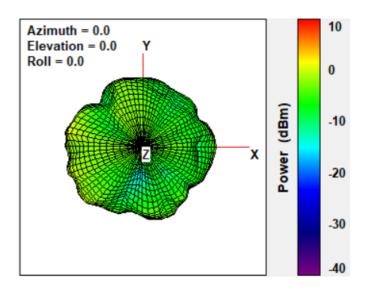


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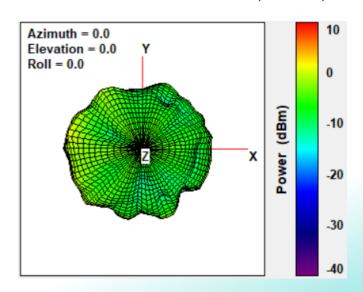


Issue: 2032 DRAFT RALFYE

Radiation Pattern of WLAN Antenna (5600MHz)



Radiation Pattern of WLAN Antenna (5785MHz)



15





Description: BR1402 MAIN ANT

ASUS P/N: 14008-05650200

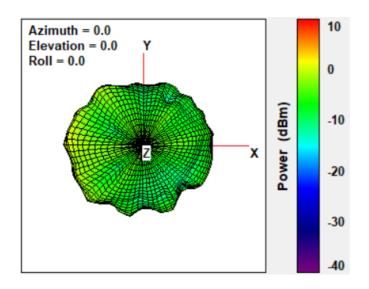
PULSE P/N: TZ2486D



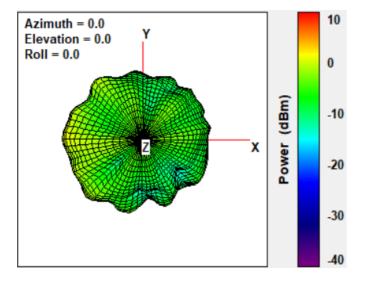
CHARTS

TB Mode

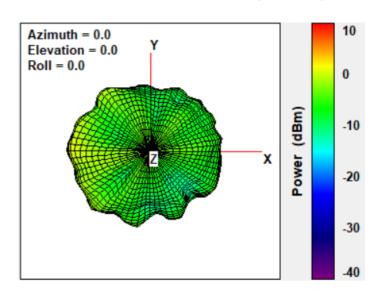
Radiation Pattern of WLAN Antenna (5850MHz)



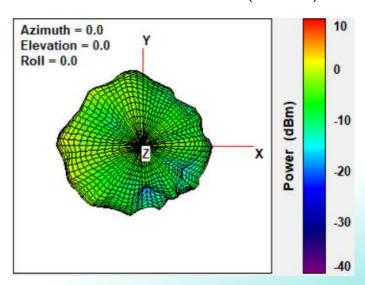
Radiation Pattern of WLAN Antenna (5925MHz)



Radiation Pattern of WLAN Antenna (5895MHz)



Radiation Pattern of WLAN Antenna (6125MHz)









Description: BR1402 MAIN ANT

ASUS P/N: 14008-05650200

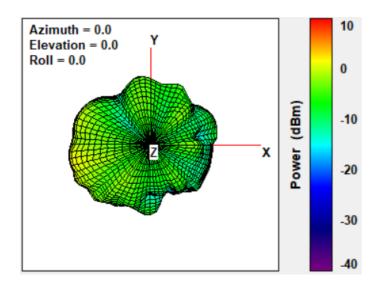
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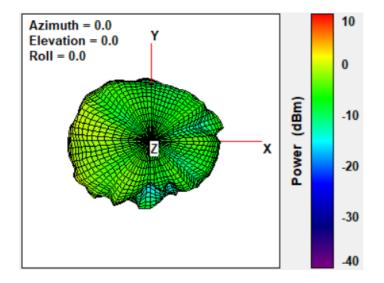
CHARTS

NB Mode

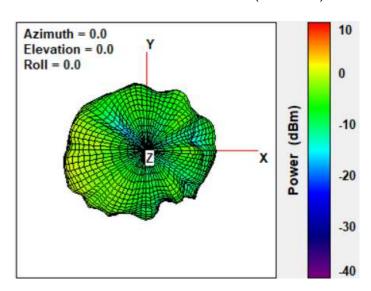
Radiation Pattern of WLAN Antenna (6425MHz)



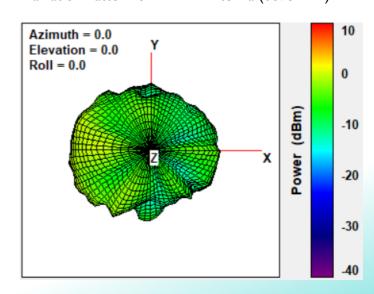
Radiation Pattern of WLAN Antenna (6725MHz)



Radiation Pattern of WLAN Antenna (6525MHz)



Radiation Pattern of WLAN Antenna (6875MHz)



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TECHNICAL DATA SHEET

Description: BR1402 MAIN ANT

C

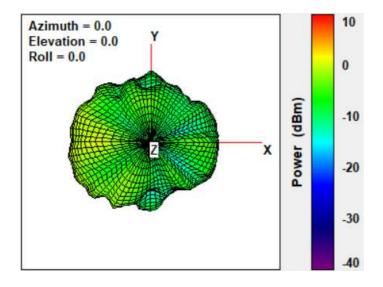
ASUS P/N: 14008-05650200

PULSE P/N: TZ2486D

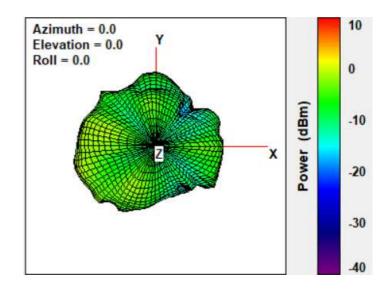
CHARTS

NB Mode

Radiation Pattern of WLAN Antenna (6925MHz)



Radiation Pattern of WLAN Antenna (7125MHz)



UL Product iQ™



E520266

ZPMV2.E520266 - Wiring, Printed - Component

Wiring, Printed - Component

Anhui Yongda Electronic Technology Co.,Ltd

Buliding 13 PCB Industrial Park Pengju Road

Guangde, 242200 China

	Cond	Width			Max					Max			
	Min	Min Edge	Cond	SS/ DS/	Area Diam	Solo			ssembly Solder cess (IPC)	Oper Temp	Flame	Meets UL796	
Туре	mm(in)	mm(in)	mic(mil)	-			sec		Cycles	٠c	Class		I
Multi	Multilayer printed wiring boards						\neg						
YD- 2	0.1 (0.004)	0.1 (0.004)	17 (0.67)	DS	25.4 (1)	288	20	-	-	130	V-0	All	*
Singl	e layer metal	base printed	wiring bo	ards, e	mploying	g meta	ıl bas	e lan	ninate				٦
YD-	0.138 (0.005)	0.414 (0.016)	18 (0.71)	SS	50.8 (2)	288	20	-	-	130	V-0	All	*
Single	Single layer printed wiring boards						П						
YD- 1	0.1 (0.004)	0.1 (0.004)	17 (0.67)	DS	25.4 (1)	288	20	-	-	130	V-0	All	*

^{* -} CTI marking is optional and may be marked on the printed wiring board.

Marking: Company name, type designation. May be followed by a suffix to denote factory identification or burning test classification.

Last Updated on 2021-04-07

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AVLV2.E318898 **Appliance Wiring Material - Component**

Page Bottom

Appliance Wiring Material - Component

See General Information for Appliance Wiring Material - Component

SHENYU COMMUNICATION TECHNOLOGY INC

E318898

275 E Waihuan Rd Jiangyin, Jiangsu 214400 CHINA

	Table of Recognized Styles						
Single-cond	luctor, therm	oplastic insula	tion.				
<u>1007</u>	<u>1333</u>	<u>1589</u>	<u>1723</u>	<u>1858</u>	<u>1901</u>	<u>10111</u>	
<u>1226</u>	<u>1354</u>	<u>1591</u>	<u>1726</u>	<u>1859</u>	<u>1927</u>	<u>10248</u>	
<u>1227</u>	<u>1371</u>	<u>1592</u>	<u>1727</u>	<u>1860</u>	10005	<u>10362</u>	
<u>1330</u>	<u>1538</u>	<u>1708</u>	<u>1766</u>	<u>1882</u>	10011	<u>10518</u>	
<u>1331</u>	<u>1571</u>	<u>1709</u>	<u>1847</u>	<u>1886</u>	10064	<u>11149</u>	
<u>1332</u>	<u>1577</u>	<u>1710</u>	<u>1857</u>	<u>1887</u>	10072		
Multiple-conductor, thermoplastic insulation.							
2464	<u>2725</u>	20276	<u>21100</u>				

Marking: Company name, voltage rating, temperature rating, conductor size, conductor material if other than copper, and use.

Last Updated on 2016-06-13

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UL Style Page 页码,1/2

Click here to go to UL's $\mathrm{i} Q^{\mathrm{IM}}$ for Appliance Wiring Materials Database

UNDERWRITERS :	LABORATORIES APPLIANCE WIRING MATERIAL
Subj.758	Section 1 Page 1354 Issued:1964-02-19
	Revised:2009-04-30
Style 1354	Coaxial Cable.
Rating	60, 80 deg C, 30 Vac, Horizontal flame.
Conductor	44 AWG min., material not specified.
Insulation	2 mils minimum at any point, 125 mils maximum. The insulation may be: Extruded solid or cellular PE, FRPE, PP, PFA, FEP, ECTFE, PTFE, ETFE, or combination thereof with or without irradiation; or tape wrapped solid or cellular PTFE, PFA, or FEP. Applied as a spiral wrapped thread (5 mils minimum, 40 mils maximum) and enclosed in a tube of insulation.
Assembly	Insulated conductor with optional inner covering, optional inner shield, optional middle covering, required outer shield and required outer covering.
Shield	Optional. Outer Shield required.
Covering	Optional Inner Covering - Extruded PVC, PFA, Polyamide, Polyester, PVDF, FEP, PTFE, ECTFE, ETFE, PE, XLPE, XLFRPE or FRPE; lacquered braids; heat sealed PTFE, PFA or FEP tape; Polyester or Polyester-Polyethylene film. Thicknesses not specified. Optional Middle Covering - Extruded PVC, PFA, PP, Polyamide, Polyester, PVDF, FEP, PTFE, ECTFE, ETFE, PE, XLPE, XLFRPE or FRPE; lacquered braids; heat sealed PTFE, PFA or FEP tape; Polyester or Polyester-Polyethylene film. Thicknesses not specified. Required Outer Covering - Extruded Irradiated PE, Irradiated PVC, Polyurethane, PVC, PFA, PP, Polyamide, Polyester, PVDF, FEP, PTFE, ECTFE, ETFE, PE, XLPE, XLFRPE or FRPE; lacquered braids; heat sealed PTFE, PVC, PFA or FEP tape; Polyester or Polyester-Polyethylene film. Thicknesses not specified.

UL Style Page 页码,2/2

Standard	Appliance Wiring Material UL 758.
Marking	General.
Use	Internal wiring of Class 2 circuits of electronic equipment or as insulated single in jacketed multiconductor cables.

UL Product iQ™



ZPFW2.E491030 - Wiring Harnesses - Component

Note: We are enhancing our systems and you may notice duplicate entries/missing/outdated data. During this interim period, please contact our Customer Service at https://www.ul.com/about/locations.

Wiring Harnesses - Component

Pulse (Suzhou) Wireless Products Co Ltd

E491030

No.99 Huo Ju Road, Suzhou New District Suzhou, Jiangsu 215009 China

Marking: Company name and model designation.

Note: For additional marking information, refer to the **Guide Information Page**.

Model(s): Wiring Harnesses

Last Updated on 2021-11-02

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Issue Date: September 1, 2021

I-PEX Inc.

Electronic Components & Devices Div, Quality Assurance Department

Approved by	Prepared by
K. Narita	A. Watanabe

Certificate of Compliance with RoHS Directive and REACH Regulation

I-PEX Inc. warrants that the product complies with EU RoHS Directive and REACH Regulation.

MHF_4L

Certified Part Number

20565-001R-083	20565-001R-13	20565-001R-13A	20565-001R-13L	20572-001R-08	20572-002R-08
20579-001E	20579-001E-01	20632-001R-37			

> EU RoHS Directive (2011/65/EU, (EU)2015/863)

Cadmium (Cd)	<100ppm
Lead (Pb)	<1000ppm
Mercury (Hg)	<1000ppm
Hexavalent Chromium (Cr+6)	<1000ppm
Polybrominated biphenyls (PBB)	<1000ppm
Polybrominated diphenyl ethers (PBDE)	<1000ppm
Bis(2-ethylhexyl) phthalate (DEHP)	<1000ppm
Butyl benzyl phthalate (BBP)	<1000ppm
Dibutyl phthalate (DBP)	<1000ppm
Diisobutyl phthalate (DIBP)	<1000ppm

EU REACH Regulation

REACH SVHC (as of the date of inclusion: 08 July 2021) are not contained over 1000ppm in the product.

Please refer to ECHA website below for the detail of SVHC.

https://echa.europa.eu/candidate-list-table

塑膠材料保證書 CERTIFICATE OF COMPLIANCE OF PLASTIC MATERIAL

供應商 VENDER _ I-PEX INC.	
料號 PART NUMBER <u>20565-001R-13*</u>	品名 * PART DESCRIPTION MHF PLUG ASS'Y
數量/訂單號碼 QUANTITY/P.O. NO.	出貨日期 SHIPPING DATE
原料製造商 MATERIAL SUPPLIER POLYPL	ASTICS CO LTD
原料品名/規格 MATERIAL DESCREPTION/SPEC	XFR 4840 GF10 (w), 310NF (w)
原料 UL 號碼 MATERIAL UL FILE NUMBER	原料防火等級 MATERIAL FLAMMABILITY CLASS
E213445	UL94, V-0

供應商保證 VENDER GUARANTY

- 1. 本批產品使用之原料確實依上述規格供應,若有變更冒替,本公司願負賠償之責。 IF THERE IS ANY DEVIATION TO THE LIST ABOVE, WE WILL BE RESPONSIBLE FOR THE COST INCURRED.
- 2. 本批產品所使用的回收料(次料)不可超過50%.

THE REPROCESSED MATERIAL USED IN THIS SHIPMENT DOES NOT EXCEED 50

供應商簽章及蓋公司章

VENDER SIGNATURE & COMPANY SEAL



UL Product iQ™



XFR 4840 GF10 (w), 310NF (w) - Plastics - Component

Plastics - Component

File Number: E213445





COMPANY

POLYPLASTICS CO LTD

18-1 KONAN 2-CHOME MINATO-KU, TOKYO 108-8280 Japan

MODEL INFO

Duranex: XFR 4840 GF10 (w), 310NF (w) Polybutylene Terephthalate (PBT), furnished as pellets

--(w) Virgin and regrind up to 50% by weight inclusive, have the same flame characteristics only.

FLAMMABILITY PROPERTIES	NOMINAL VALUE	TEST METHOD
Flammability		ANSI/UL 94
0.75 mm, Color: ALL	V-0	
1.5 mm, Color: ALL	V-0	
3.0 mm, Color: ALL	5VA	
3.0 mm, Color. ALL	V-0	

ISO/IEC FLAMMABILITY PROPERTIES	NOMINAL VALUE	TEST METHOD
Flammability		IEC 60695-11-10
0.75 mm, Color: ALL	V-0	
1.5 mm, Color: ALL	V-0	
3.0 mm, Color: ALL	V-0	
Flammability	5VA	IEC 60695-11-20
(3.0 mm, Color: ALL)		

ELECTRICAL PROPERTIES	NOMINAL VALUE	TEST METHOD
Hot-wire Ignition (HWI)		UL 746A
0.75 mm	1 PLC	
1.5 mm	1 PLC	
3.0 mm	1 PLC	
High Amp Arc Ignition (HAI)		UL 746A
0.75 mm	0 PLC	
1.5 mm	0 PLC	
3.0 mm	0 PLC	
Comparative Tracking Index (CTI)	1 PLC	UL 746
Dielectric Strength	24 kV	/mm ASTM D149
High Voltage Arc Tracking Rate (HVTR)	0 PLC	
Volume Resistivity	1.0E+14 oh	ms·cm ASTM D257/IEC 60093
High Voltage, Low Current Arc Resistance	5 PLC	

THERMAL PROPERTIES	NOMINAL VALUE	TEST METHOD
Relative Thermal Index - Electrical Strength		UL 746B
0.75 mm	130 °C	
1.5 mm	130 °C	
3.0 mm	130 °C	
Relative Thermal Index - Mechanical Impact		UL 746B
0.75 mm	125 °C	
1.5 mm	125 °C	
3.0 mm	125 °C	
Relative Thermal Index - Mechanical Strength		UL 746B
0.75 mm	125 °C	
1.5 mm	125 °C	
3.0 mm	125 °C	