

深圳市永联无线科技有限公司

ShenZhen City Flink Wi Technology CO., LTD.

产品承认书

SPECIFICATION FOR APPROVED

客户

CUSTOMER: _____

产品名称

YL2012F4P2G45

PRODUCTS: _____

客户料号

PART NO: _____

产品型号

Spec. : _____

日期

Data: _____

供应商 SUPPLIER		
拟制 PREPARED BY	审核 CHECKED BY	批准 APPROVED BY

客户 CUSTOMER		
承认 ACCEPTED BY	审核 CHECKED BY	批准 APPROVED BY

备注：承认盖章后请回复一份承认书（或复印件）给我司，其余由贵公司存档

REMARK: Please send us one(or copy) of this approval with stamp after accepting, other copies filed by the customer.

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电话 Tel: 15919949736

传真 Fax: 0755-26976277

Application:

WLAN, 802.11b/g, Bluetooth, etc...

Features

SMD, high reliability, ultra Impact, Omni-directional...

Part number

YL 2012 F4 P 2G45
 (1) (2) (3) (4) (5)

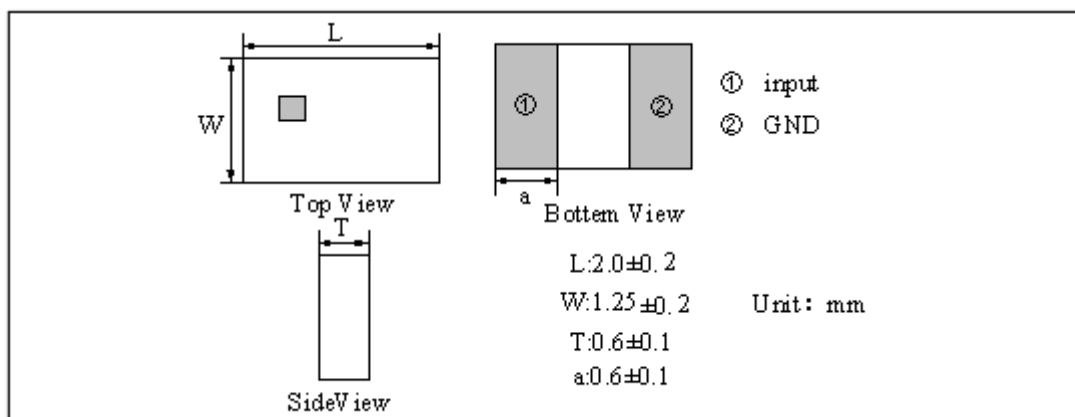
(1)Product Type	Chip Antenna
(2)Size Code	2.0x1.2mm
(3)Type Code	F4
(4)Packing	Paper &Reel
(5)Frequency	2.45GHz
(6)Internal code	

Electrical Specification

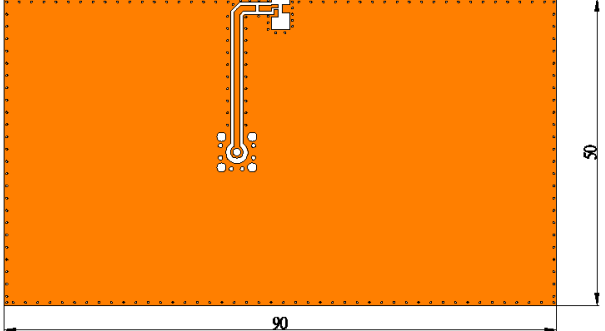
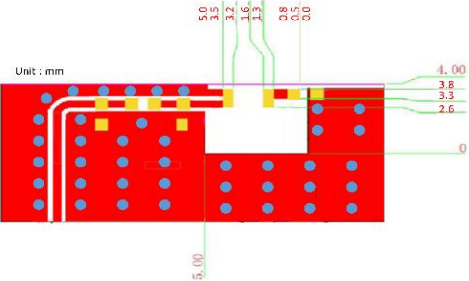
Working Frequency Range	2400 ~2484 MHz
Peak Gain	1.56 dBi (Typ.)
Impedance	50 Ohm
Return loss	10 dB (Min)
Polarization	Linear
Azimuth Beamwidth	Omni-directional
Operation Temperature(°C)	-40 ~85°C

The specification is defined on EVB.

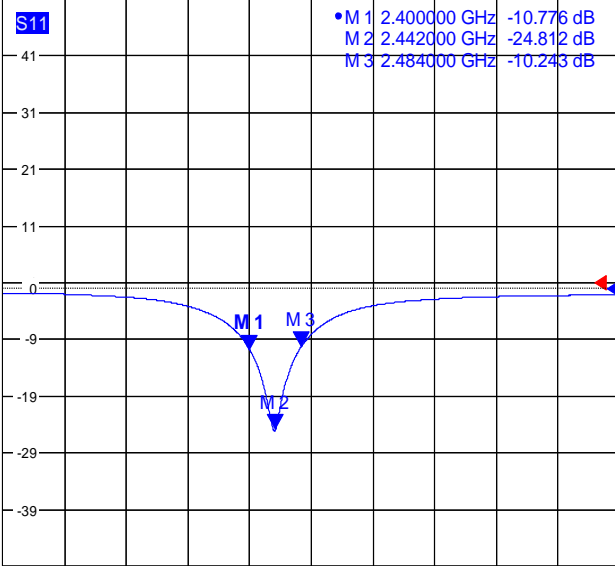
Dimension and Terminal Configuration



Evaluation Board Reference

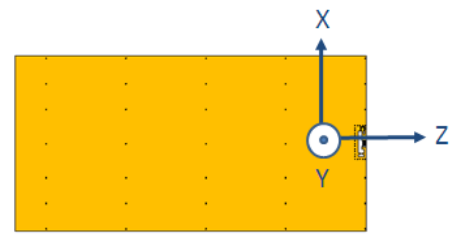
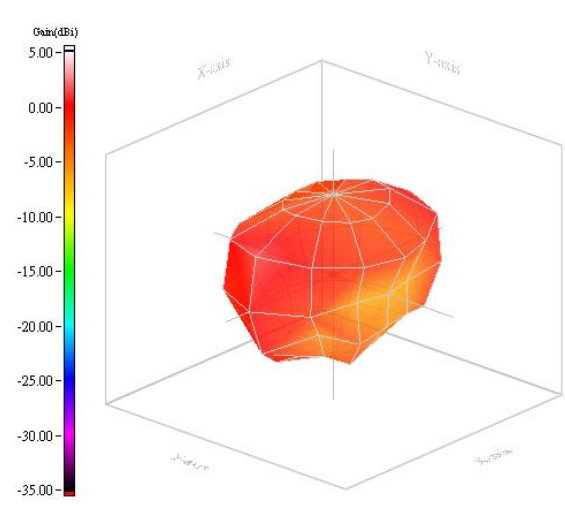
PCB Dimension	Antenna Layout Reference
 <p style="text-align: right;">Unit :mm</p>	<p>2). PCB Top View :</p> <p>Type1 :</p> 

Electrical Characteristics

Return Loss & Radiation					
R	Trc2	dB Mag 10 dB / Ref 0 dB	Invisible	1	
	Trc3	dB Mag 10 dB / Ref 0 dB	Cal int Offs		
S11				<ul style="list-style-type: none"> • M 1 2.400000 GHz -10.776 dB M 2 2.442000 GHz -24.812 dB M 3 2.484000 GHz -10.243 dB 	
					
Ch1	Start 2 GHz	Pwr 0 dBm	Stop 3 GHz		

Frequency (MHz)	S11 (dB)
2400	-10.78
2442	-24.81
2484	-10.24

Radiation

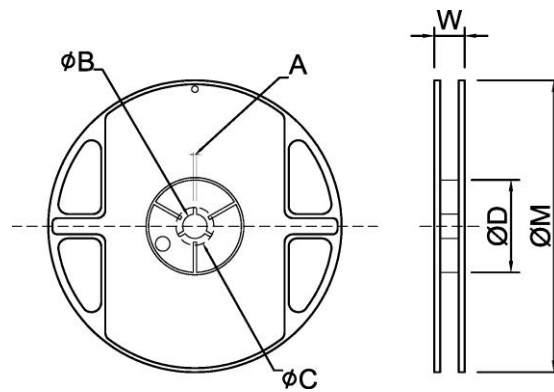


2.442GHz	
Frequency	2.442GHz
Peak gain	1.56dBi
Efficiency	78%

Taping Specifications

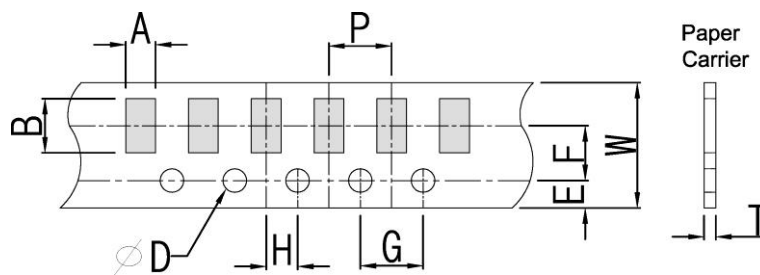
Reel and Taping Specification

Reel Specification



TYPE	SIZE		A	ϕB	ϕC	ϕD	W	ϕM
2012	7"	4K/Reel	2.0±0.5	13.5±1.0	21±1.0	60±1.0	11.5±2.0	178±2.0

Tapping Specification

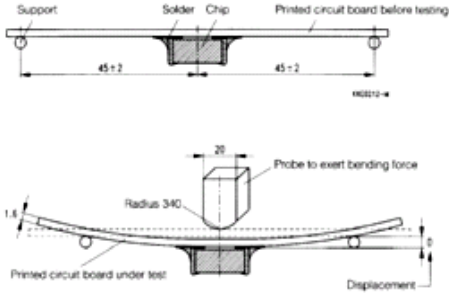
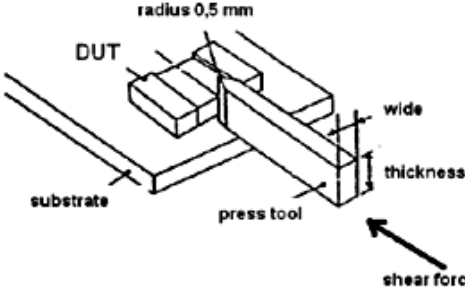


Packaging	Type	A	B	W	E	F	G	H	T	ϕD	P
Paper Type	1	1.90±0.20	3.50±0.20	8.0±0.20	1.75±0.10	3.5±0.05	4.0±0.10	2.0±0.05	0.75±0.10	1.50 +0.10 -0	4.0±0.1

Reliability Table

Test Item	Procedure	Requirements Ceramic Type	Remark (Reference)
Electrical Characterization		Fulfill the electrical specification	User Spec.
Thermal Shock	1. Preconditioning: $50 \pm 10^\circ\text{C}$ / 1 hr , then keep for 24 ± 1 hrs at room temp. 2. Initial measure: Spec: refer Initial spec. 3. Rapid change of temperature test: -30°C to $+85^\circ\text{C}$; 100 cycles; 15 minutes at Lower category temperature; 15 minutes at Upper category temperature.	No Visible Damage. Fulfill the electrical specification.	MIL-STD-202 107
Temperature Cycling	1. Initial measure: Spec: refer Initial spec. 2. 100 Cycles (-30°C to $+85^\circ\text{C}$), Soak Mode=1 (2 Cycle/hours). 3. Measurement at 24 ± 2 Hours after test condition.	No Visible Damage. Fulfill the electrical specification.	JESD22 JA104
High Temperature Exposure	1. Initial measure: Spec: refer Initial spec. 2. Unpowered; 500hours @ $T=+85^\circ\text{C}$. 3. Measurement at 24 ± 2 hours after test.	No Visible Damage. Fulfill the electrical specification.	MIL-STD-202 108
Low Temperature Storage	1. Initial measure: Spec: refer Initial spec. 2. Unpowered: 500hours @ $T= -30^\circ\text{C}$. 3. Measurement at 24 ± 2 hours after test.	No Visible Damage. Fulfill the electrical specification.	MIL-STD-202 108
Solderability (SMD Bottom Side)	Dipping method: a. Temperature: $235 \pm 5^\circ\text{C}$ b. Dipping time: $3 \pm 0.5\text{s}$	The solder should cover over 95% of the critical area of bottom side.	IEC 60384-21/22 4.10
Soldering Heat Resistance (RSH)	Preheating temperature: $150 \pm 10^\circ\text{C}$. Preheating time: 1~2 min. Solder temperature: $260 \pm 5^\circ\text{C}$. Dipping time: $5 \pm 0.5\text{s}$	No Visible Damage.	IEC 60384-21/22 4.10
Vibration	5g's for 20 min., 12 cycles each of 3 orientations Note: Use 8"X5" PCB .031" thick 7 secure points on, one long side and 2 secure points at corners of opposite sides. Parts mounted within 2" from any secure point. Test from 10-2000 Hz.	No Visible Damage.	MIL-STD-202 Method 204
Mechanical Shock	Three shocks in each direction shall be applied along the three mutually perpendicular axes of the test specimen (18 shocks) Peak value: 1,500g's Duration: 0.5ms Velocity change: 15.4 ft/s Waveform: Half-sine	No Visible Damage.	MIL-STD-202 Method 213
Humidity Bias	1. Humidity: 85% R.H., Temperature: $85 \pm 2^\circ\text{C}$. 2. Time: 500 ± 24 hours. 3. Measurement at 24 ± 2 hrs after test condition.	No Visible Damage. Fulfill the electrical specification.	MIL-STD-202 Method 106

2.4GHz 2012 Chip Antenna: YL2012F4P2G45

<p>Board Flex (SMD)</p>	<p>1. Mounting method: IR-Reflow. PCB Size (L:100 × W:40 × T:1.6mm)</p> <p>2. Apply the load in direction of the arrow until bending reaches 2 mm.</p> 	<p>No Visible Damage.</p>	<p>AEC-Q200 005</p>
<p>Adhesion</p>	<p>Force of 1.8Kg for 60 seconds.</p> 	<p>No Visible Damage Magnification of 20X or greater may be employed for inspection of the mechanical integrity of the device body terminals and body/terminal junction.</p>	<p>AEC-Q200 006</p>
<p>Physical Dimension</p>	<p>Any applicable method using x10 magnification, micrometers, calipers, gauges, contour projectors, or other measuring equipment, capable of determining the actual specimen dimensions.</p>	<p>In accordance with specification.</p>	<p>JESD22 JB100</p>

Revision History

Revision	Date	Content
1	2019/8/20	New issue
2	2020/4/20	Update detail dimension on antenna layout
3	2021/3/1	Part number and coding rule updated