

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

PRODUCTS:

客户料号

PART NO:

产品型号

Spec.:

日期

Data:

YL2012F1P2G45

2024.01.06

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: 18820170917

传真 Fax: 0755-26976277

2.4GHz 2012 Chip Antenna:YL2012F1P2G45

Application:

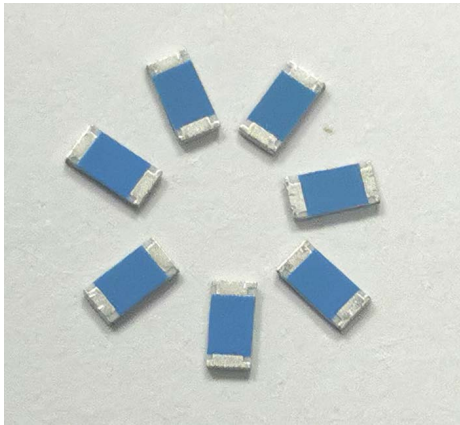
WLAN, 802.11b/g, Bluetooth, etc...

Features

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

Part number

<u>YL</u>	<u>2012</u>	-	<u>F1</u>	<u>P</u>	<u>2G45</u>
(1)	(2)		(3)	(4)	(5)
(1)Product Type		Chip Antenna			
(2)Size Code		2.0x1.2mm			
(3)Type Code		F1			
(4)Packing		Paper Tape			
(5)Frequency		2.45GHz			

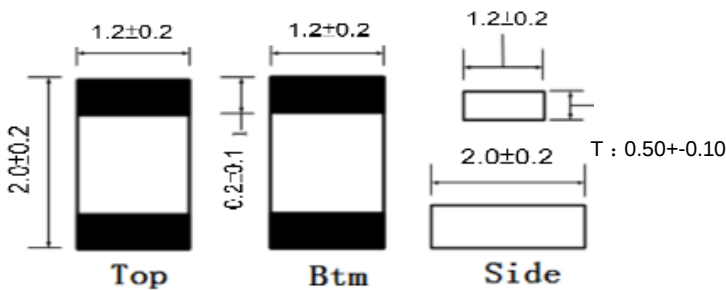


Electrical Specification

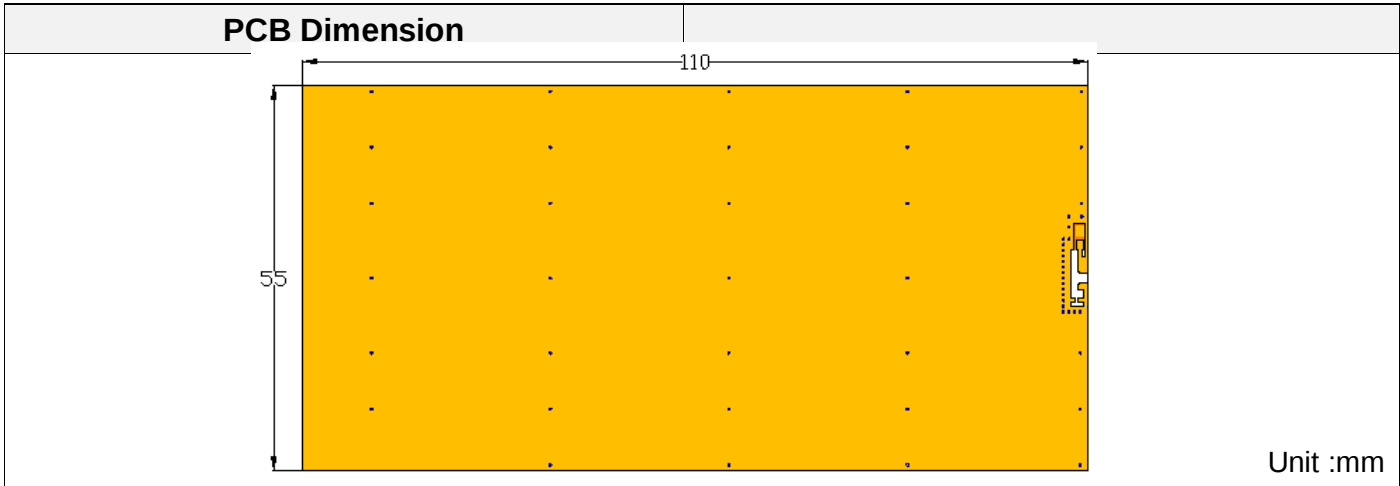
Working Frequency Range	2400 ~2484 MHz
Peak Gain	2.58dBi (Typ.)
Impedance	50 Ohm
Return loss	10 dB (Min)
Polarization	Linear
Azimuth Beamwidth	Omni-directional
Operation Temperature(℃)	-40 ~85℃

The specification is defined on EVB.

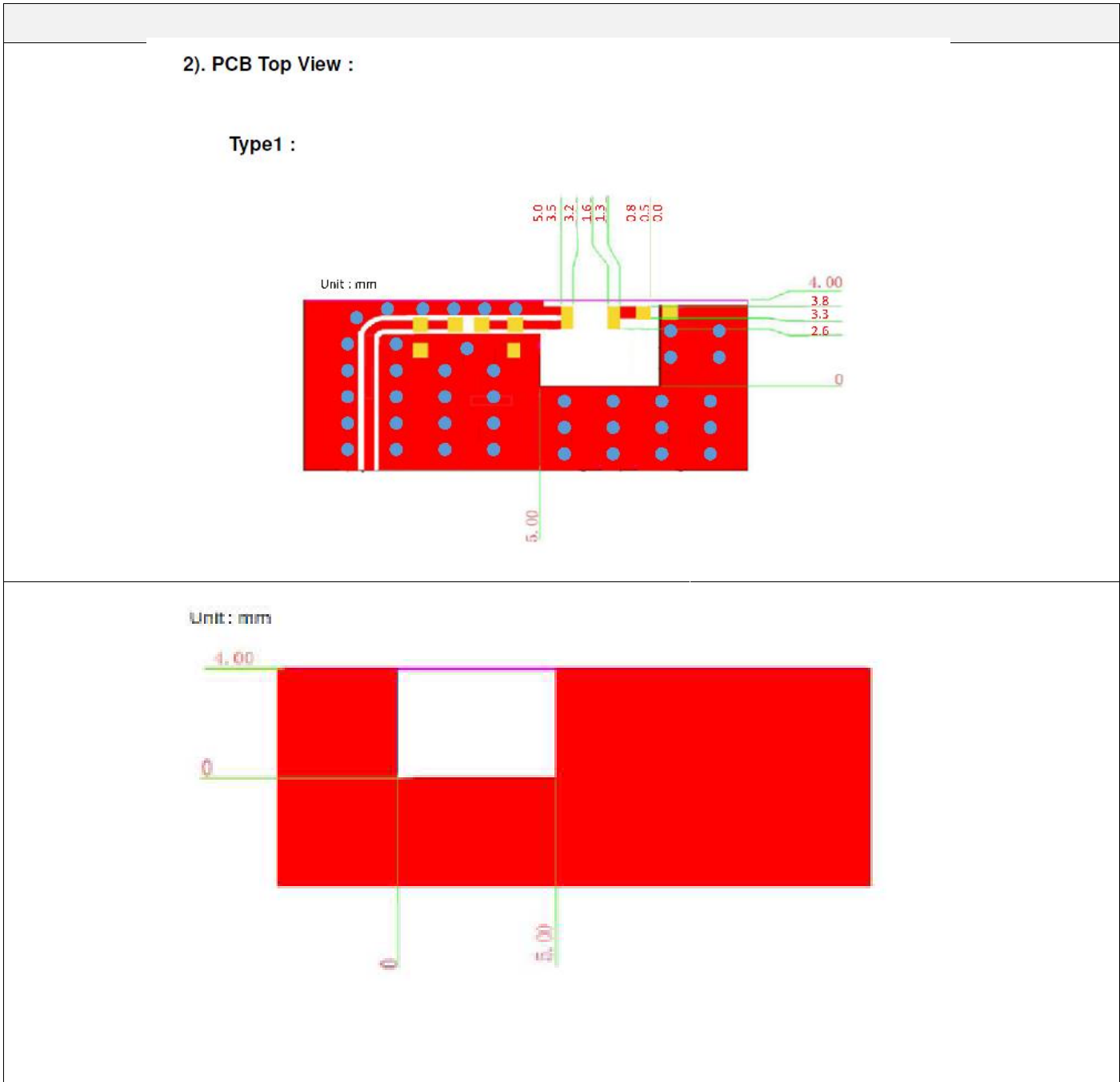
Dimension and Terminal Configuration



Evaluation Board Reference



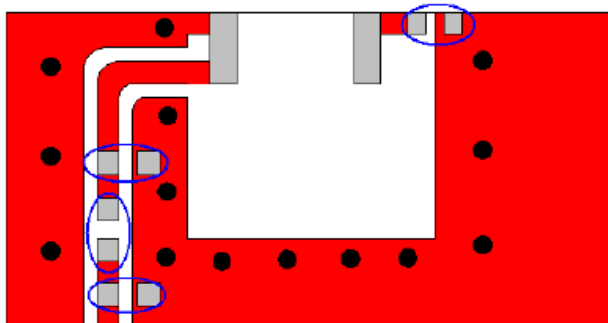
Electrical Characteristics



2.4GHz 2.45HHz Chip Antenna:YL2012F1P2G45

Evaluation Board Reference

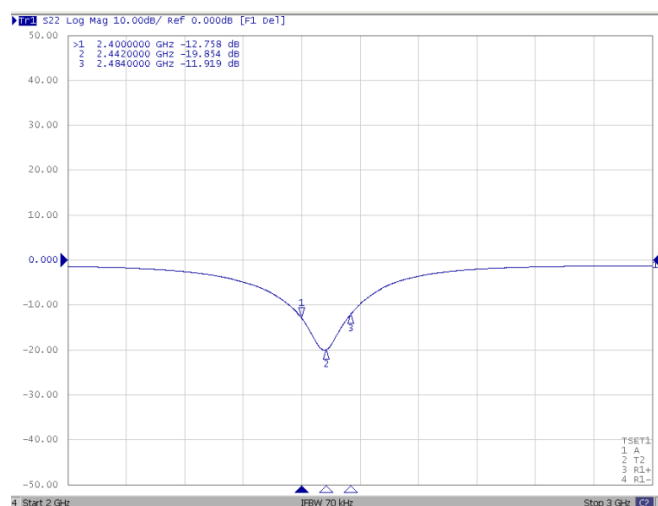
PCB Dimension & Antenna Layout Reference



Electrical Characteristics

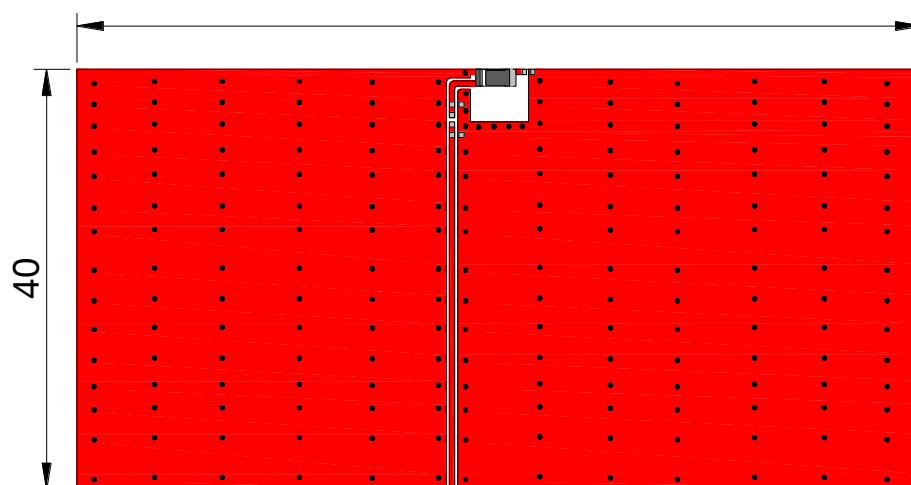
Return Loss & Radiation

Return Loss

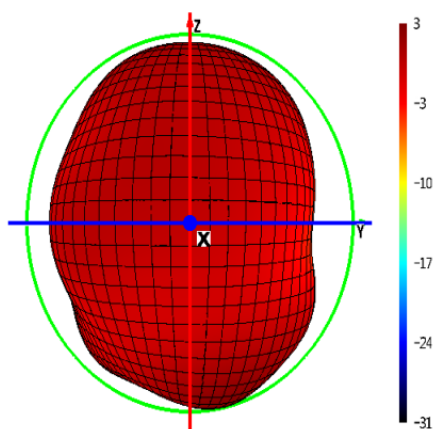


Frequency (MHz)	S11 (dB)
2400	-12.8
2442	-19.8
2484	-11.9

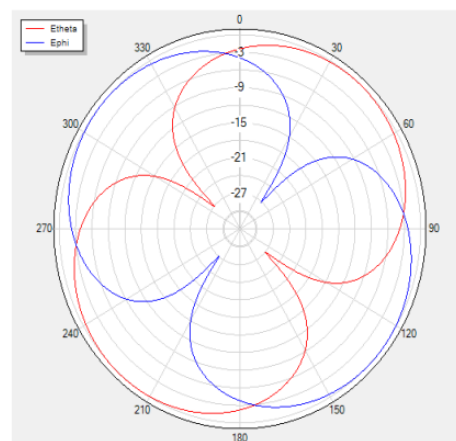
Test Board with Antenna



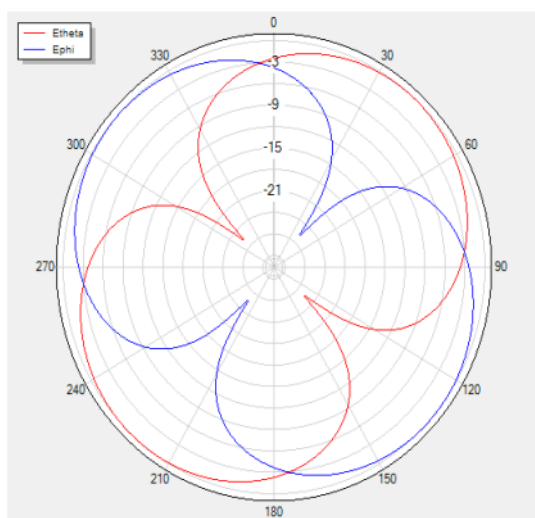
3D&2D Radiation Drawing



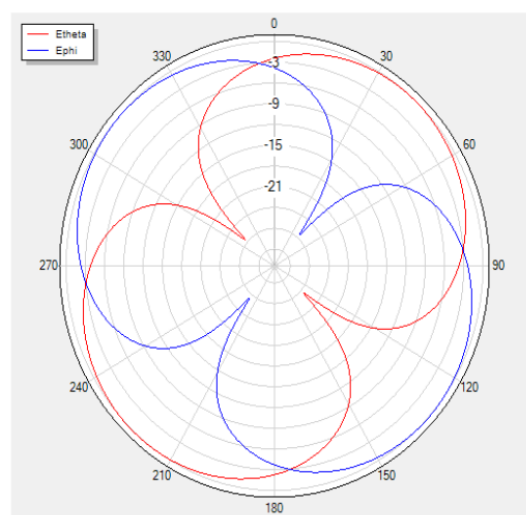
H Theta=0 freq=2400MHz



H Theta=0 freq=2450MHz



H Theta=0 freq=2480MHz

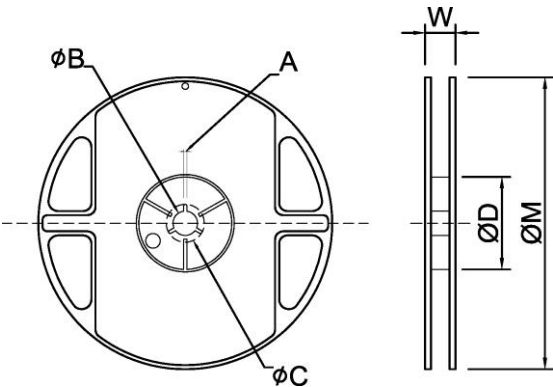


Frequency(MHz	2400	2410	2420	2430	2440	2450	2460	2470	2480	2490	2500
Efficiency (dB)	-1.4	-1.0	-0.9	-0.7	-0.7	-0.8	-0.9	-1.1	-1.2	-1.3	-1.4
Efficiency (%)	72.8	73.7	74.3	74.4	75.5	75.0	74.0	73.6	73.1	72.6	71.5
Gain (dBi)	2.15	2.24	2.30	2.41	2.58	2.56	2.42	1.95	1.86	1.67	1.68

Taping Specifications

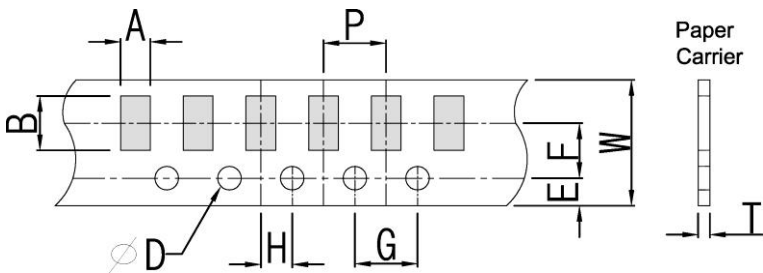
Reel and Taping Specification

Reel Specification



TYPE	SIZE		A	φ B	φ C	φ D	W	φ M
2012	7"	5K/Reel	2.0±0.5	13.5±1.0	21±1.0	60±1.0	11.5±2.0	178±2.0

Tapping Specification

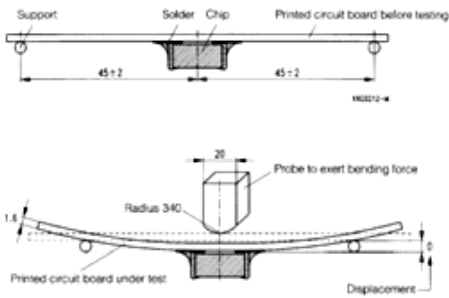
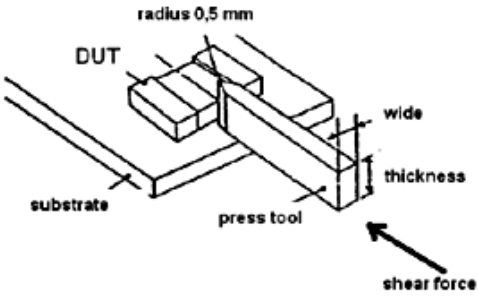


Packaging	Type	A	B	W	E	F	G	H	T	φD	P
Paper Type	2012	1.90±0.20	3.50±0.20	8.0±0.20	1.75±0.10	3.5±0.05	4.0±0.10	2.0±0.05	0.75±0.10	1.50 ^{+0.10} ₋₀	4.0±0.1

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

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Board Flex (SMD)	1. Mounting method: IR-Reflow. PCB Size (L:100 × W:40 × T:1.6mm) 2. Apply the load in direction of the arrow until bending reaches 2 mm. 	No Visible Damage.	AEC-Q200 005
Adhesion	Force of 1.8Kg for 60 seconds. 	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.	AEC-Q200 006
Physical Dimension	Any applicable method using x10 magnification, micrometers, calipers, gauges, contour projectors, or other measuring equipment, capable of determining the actual specimen dimensions.	In accordance with specification.	JESD22 JB100

Revision History

Revision	Date	Content
1	2022/1/20	New issue