

ZHENGZHOU LEHENG ELECTRONIC TECHNOLOGY CO.,LTD

SPECIFICATION FOR APPROVAL

CUSTOMER: IOT

CUSTOMER NO: _____

PART NAME: Chip antenna

SUPPLIER NO: SY52H2450-S85

Date: 2020.03.17

CUSTOMER APPROVED BY		
APPROVAL	CHIEF	SUPERVISOR

SUPPLIER SIGNATURE

APPROVAL	CHECK	DESIGN
Jammy	Jeff	Patrick

SH-RD-F04-A

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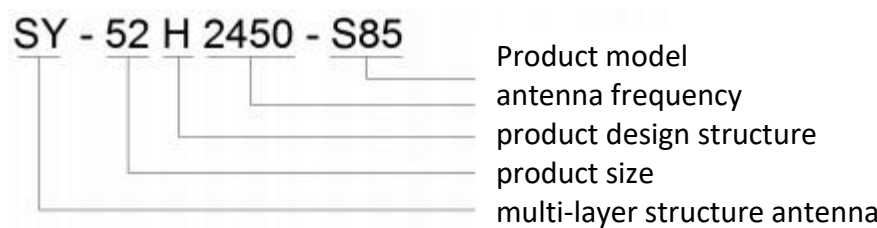
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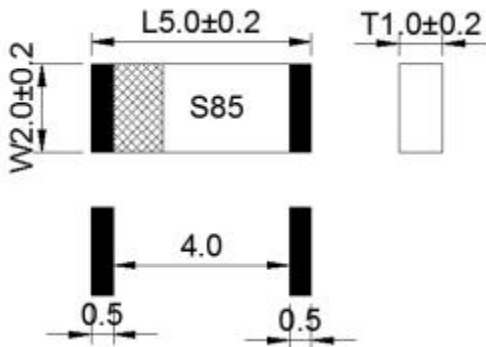
1. INTRODUCTION

SY series products are designed for SMD chip design of WLAN, WiFi, Bluetooth, PHS, mobile phone multi-frequency antenna, FM and other small body volume

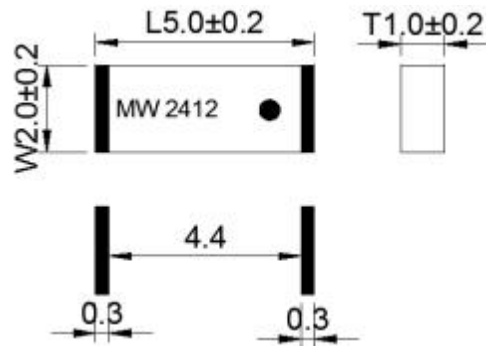
2 Part Number



3 Dimensions (Unit: mm)



Model: S85



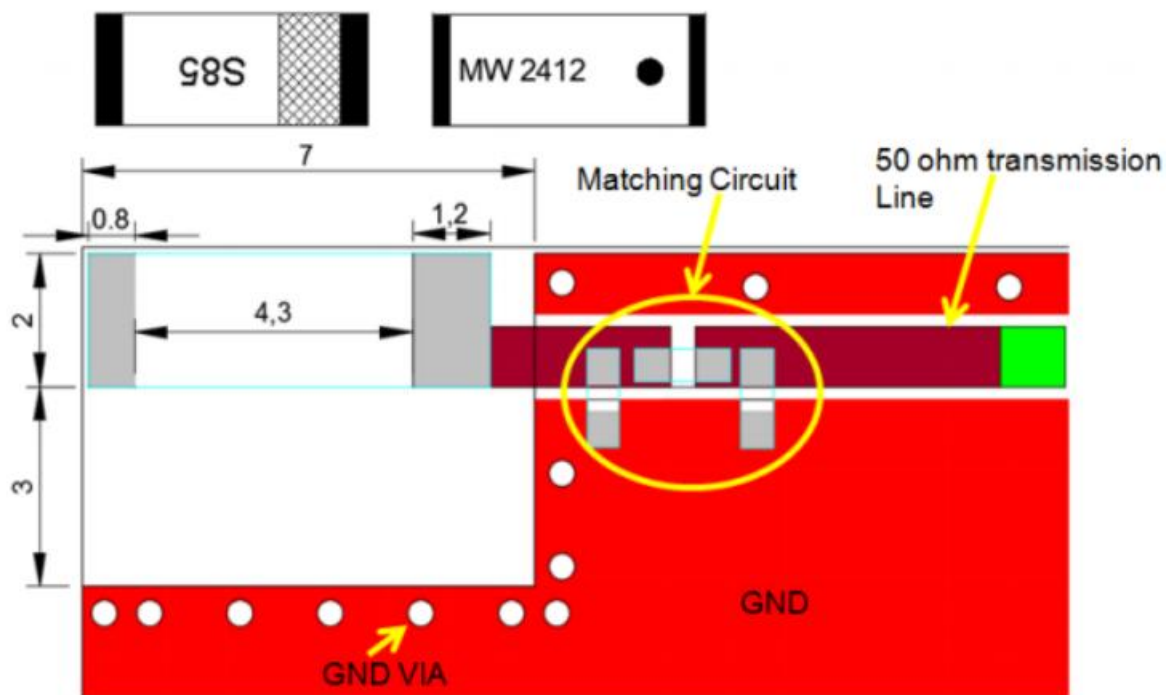
Model: 2412

Note: The features and dimensions of the two models are the same

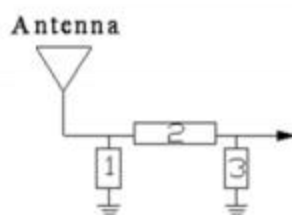
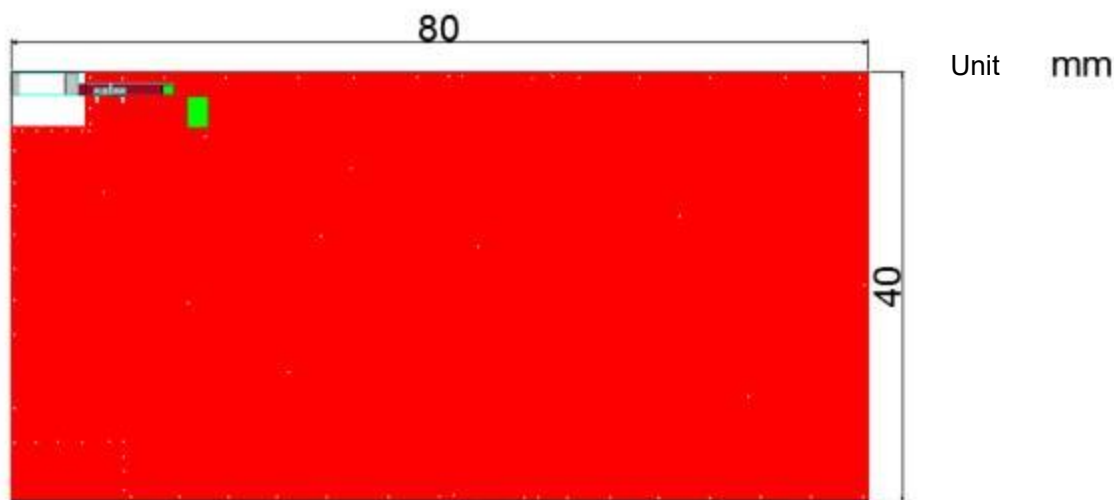
Add: Room 816-818, Block B,BLDG 18, University Science Park(East), Zhengzhou City,P.R.Henan,China.

Zip Code: 450051 **Tel:** 86-371-60911368 Email: sales@global-antenna.com

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4. Evaluation Board and Matching Circuits



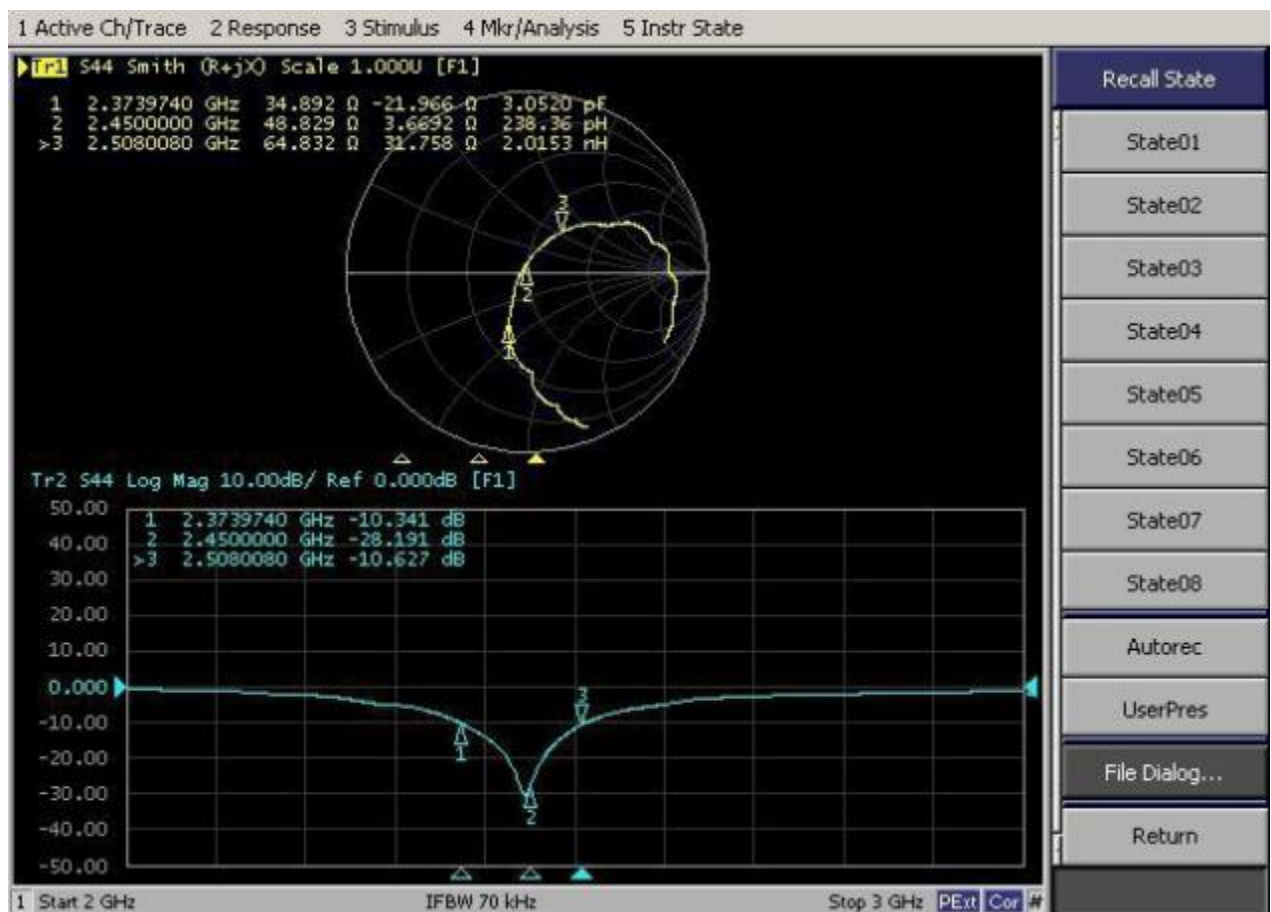
System Matching Circuit Component	
Location	Description
Antenna	S8S
1	2.0NF
2	1.5NF
3	NC

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5. Electrical Characteristics

No.	Item	Specifications
5.1	Working Central Frequency	2450 MHz
5.2	Band Width	100MHz typ.
5.3	Peak Gain	4.25 dBi
5.4	V.S.W.R	≤ 2.0
5.5	Polarization	Linear
5.6	Azimuth Beam width	Omni-directional
5.7	Impedance	50 Ω

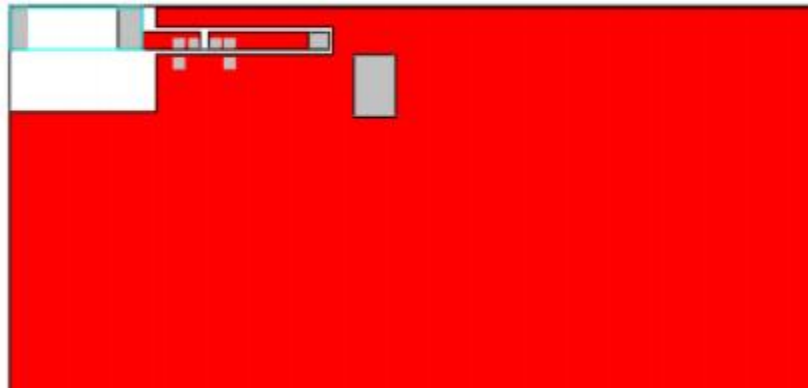
6. Characteristic curve



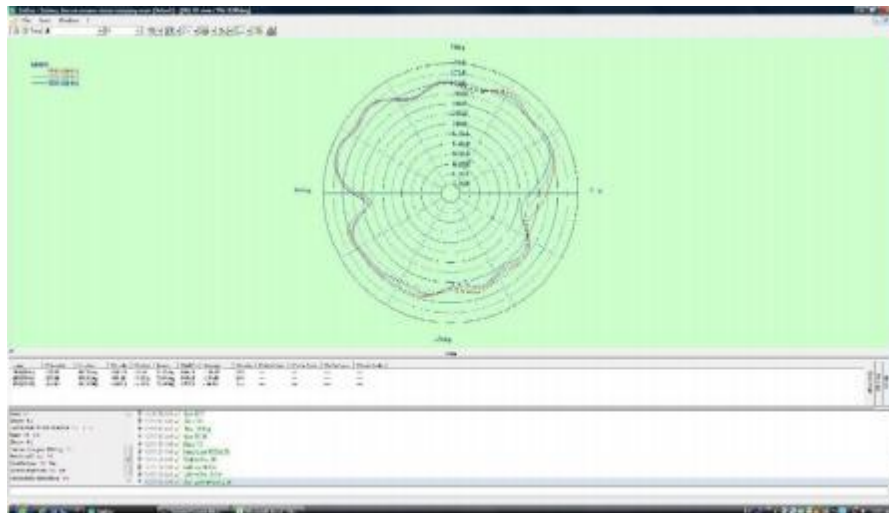
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7. Radiation Pattern & Efficiency

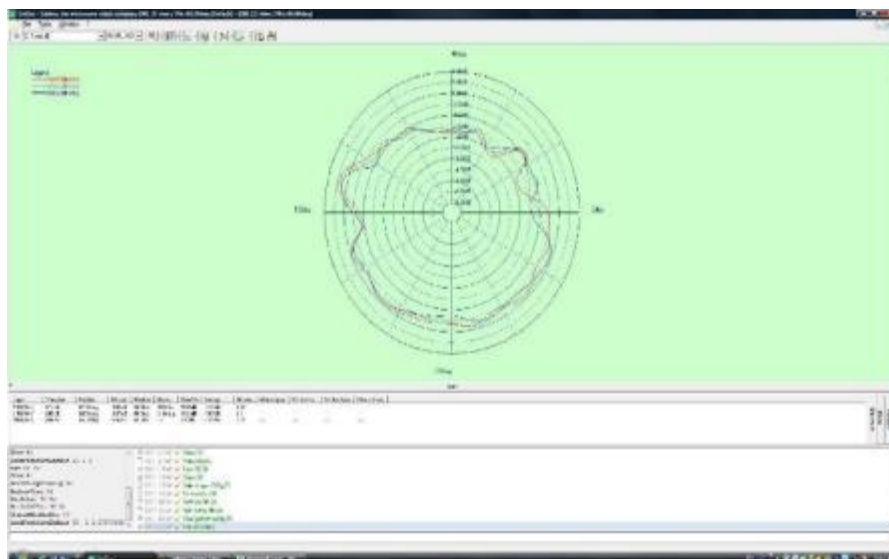
coordinates:



X-Z Plane



Y-Z Plane



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8 Post Dependability Tolerance

Post Dependability Tolerance (Refer to the table)

No.	Item	Post Dependability Tolerance
8.1	Central Frequency	± 5 MHz
8.2	Band Width	± 5 MHz
8.3	Gain	± 0.1 dBi
8.4	V.S.W.R (in BW)	± 0.1

9 Dependability Test

基准条件: Temperature range	25 $\pm$ 5 $^{\circ}$ C
Relative Humidity range	55~75%RH
Operating Temperature range	-40 $^{\circ}$ C~+85 $^{\circ}$ C
Storage Temperature range	-40 $^{\circ}$ C~+85 $^{\circ}$ C

9.1 Vibration Resist

The device should satisfy the electrical characteristics specified in paragraph 9.1~9.4 after applied to the vibration of 10 to 55Hz with amplitude of 1.5mm for 2 hours each in X , Y and Z directions.

9.2 Drop Shock

The device should satisfy the electrical characteristics specified in paragraph 9.1~9.4 after dropping onto the hard wooden board from the height of 100cm for 3 times each facet of the 3 dimensions of the device.

9.3 Solder Heat Proof

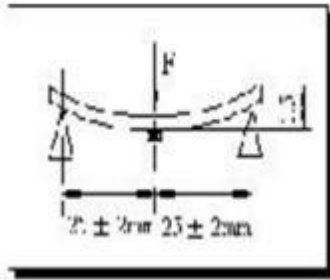
The device should be satisfied after preheating at 120 $^{\circ}$ C~150 $^{\circ}$ C for 120 seconds and dipping in soldering Sn at 255 $^{\circ}$ C+10 $^{\circ}$ C for 5 $\pm$ 0.5 seconds , or electric iron 300 $^{\circ}$ C-10 $^{\circ}$ C for 3 $\pm$ 0.5 seconds, without damnify.

9.4 Tensile Strength of Terminal

The device should not be broken after tensile force of 1.0kg is slowly applied to pull a lead pin of the fixed device in the lead axis direction for 10 $\pm$ 1 seconds.

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9.4 9.5 Bending Resist Test



Weld the product to the center part of the PCB with the thickness $11.6 \pm 0.2\text{mm}$ as the illustration shows, and keep exerting force arrow-ward on it at speed of 1mm/S , and hold for $5 \pm 1\text{s}$ at the position

of 5mm bending distance, so far, any peeling off of the product metal coating should not be detected.

9.6 Moisture Proof

The device should satisfy the electrical characteristics specified in paragraph 9.1~9.4 after exposed to the temperature $60 \pm 2^\circ\text{C}$ and the relative humidity $90 \sim 95\% \text{ RH}$ for 96 hours and 1~2 hours recovery time under normal condition.

9.5 9.7 High Temperature Endurance

The device should satisfy the electrical characteristics specified in paragraph 9.1~9.4 after exposed to temperature $85 \pm 5^\circ\text{C}$ for 96 ± 2 hours and 1~2 hours recovery time under normal temperature.

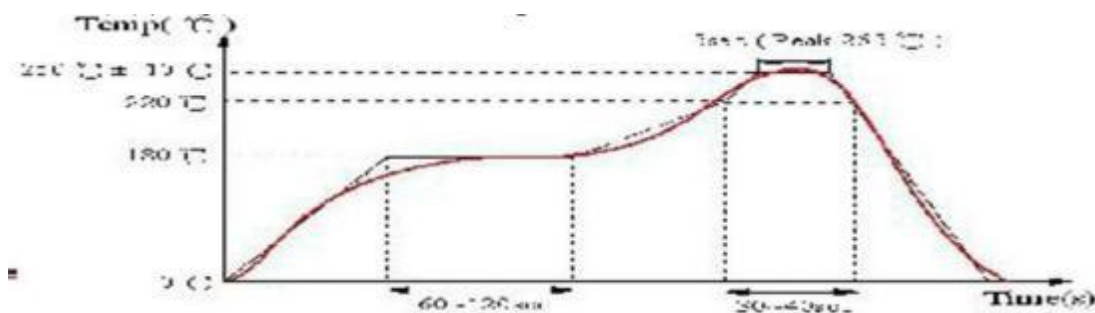
9.6 9.8 Low Temperature Endurance

The device should also satisfy the electrical characteristics specified in paragraph 9.1~9.4 after exposed to the temperature $-40^\circ\text{C} \pm 5^\circ\text{C}$ for 96 ± 2 hours and to 2 hours recovery time under normal temperature.

9.7 Temperature Cycle Test

The device should also satisfy the electrical characteristics specified in paragraph 9.1~9.4 after exposed to the low temperature -40°C and high temperature $+85^\circ\text{C}$ for 30 ± 2 min each by 5 cycles and 1 to 2 hours recovery time under normal temperature.

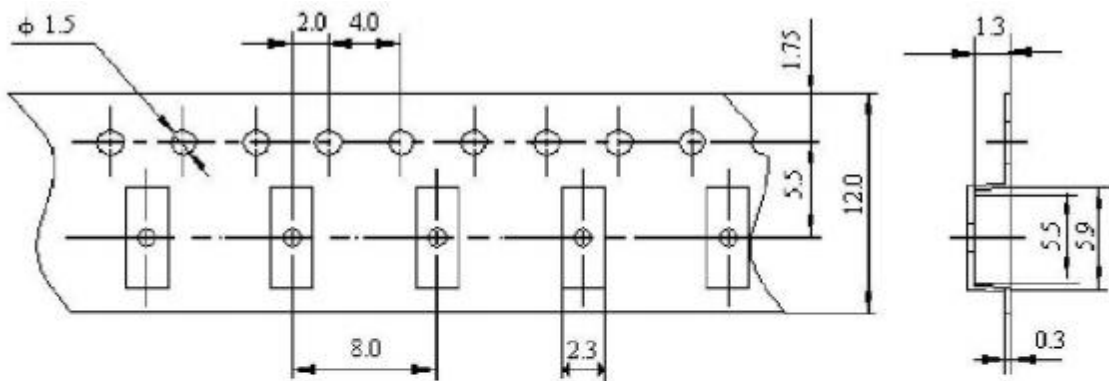
10 Reflow Soldering Standard Condition



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11 Packaging and Dimensions

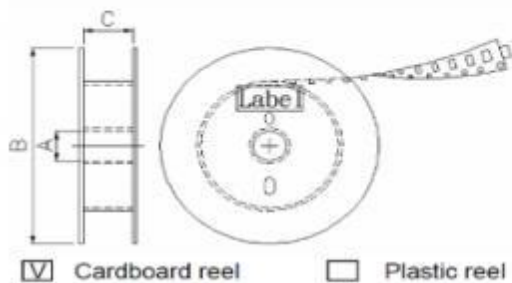
11.1 Plastic Tape



Remarks for Package

Reserve a length of 150~200mm for the trailer of the carrier and 250~300 mm for the leader of the carrier and further 250mm of cover tape at the leading part of the carrier.

11.2 Reel (5000 pcs/Reel)



Product code: 1101 - Polycarbonate natural transparent.
1201 - Polycarbonate conductive black.
Surface resistivity 10E4 to E6 ohm/sq.

Item	Specifications	Tolerances
W	12.00	±0.20
E	1.75	±0.10
F	5.50	±0.05
D0	1.50	+0.10, -0
D1	1.50	±0.10
P0	4.00	±0.05
P1	4.00	±0.10
P2	2.00	±0.05
P0 x 10	40.00	±0.20
t	0.25	±0.05
A0	2.20	±0.10
B0	5.10	±0.10
K0	1.40	±0.10

Reel Dimensions		
A	77	mm
B	560	mm
C	96	mm
Packing		
Length / Roll	700	meters
Each Carton	3	rolls
Carton Dimension (mm)		
V	575(L)*345(W)*585(H)	

11.3 Storage Period

Oxidizable, 12 months in vacuum sealed bag . Material,please repack within 168 hours by re-seal the package treatment after use them!

Storage Temperature Range : <30 degree C, Humidity : <60%RH