

MICROWAVE DIELECTRIC ANTENNA

SPECIFICATION

Part Number: DAI2450B

1. Introduction

"SBtron" microwave dielectric antenna elements and its series have been to design to meet the requirements of Bluetooth & WLAN IEEE 802.11b. The surface-mount ceramic antenna has the advantage of a low profile and low return loss, etc.

2. Part Number

DAI2450A

Explanation : DAI Product Series
 2450 Working Frequency (2450MHz)
 B No. 2 Product

3. Dimension (Unit: mm)

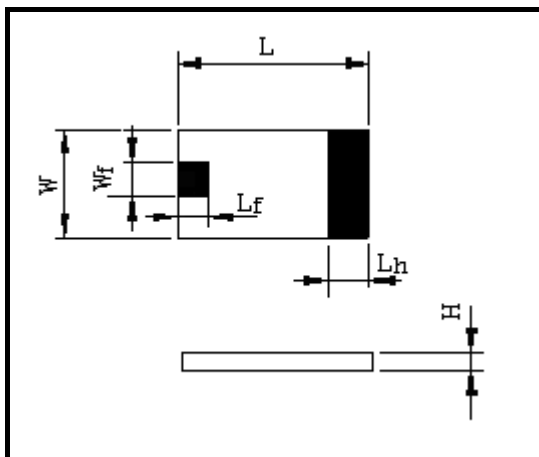


Chart 1

	Dimension
L	7.5±0.3
W	4.5±0.3
L_f	1.9±0.3
W_f	1.6±0.3
L_h	1.9±0.3
H	2.0±0.2

Tab1

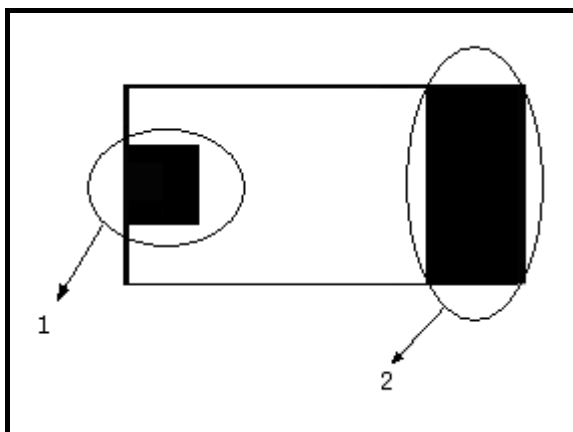


Chart 2

1	Feeding Termination
2	Solder Termination

Tab 2

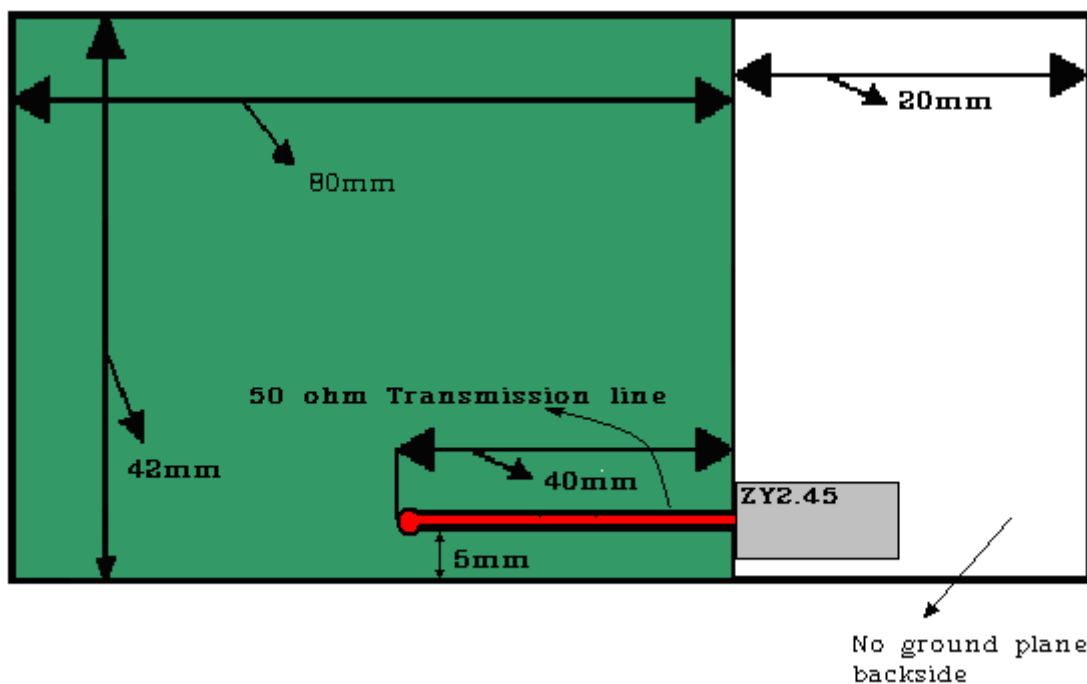
4. Electrical Characteristics

-----	-----	Post environmental tolerance
Working Frequency	2.450GHz	± 5 MHz
Bandwidth	100 MHz min	± 5 MHz
VSWR	2.0 max	-----
Gain	1.5 dBi max	-----
Polarization	Linear	-----
Impedance	50Ω	-----
Operating Temperature	-40~85	-----
Azimuth	Omni-directional	-----

表 3

5. Testing

Test Board Dimension for S11 (Return Loss)

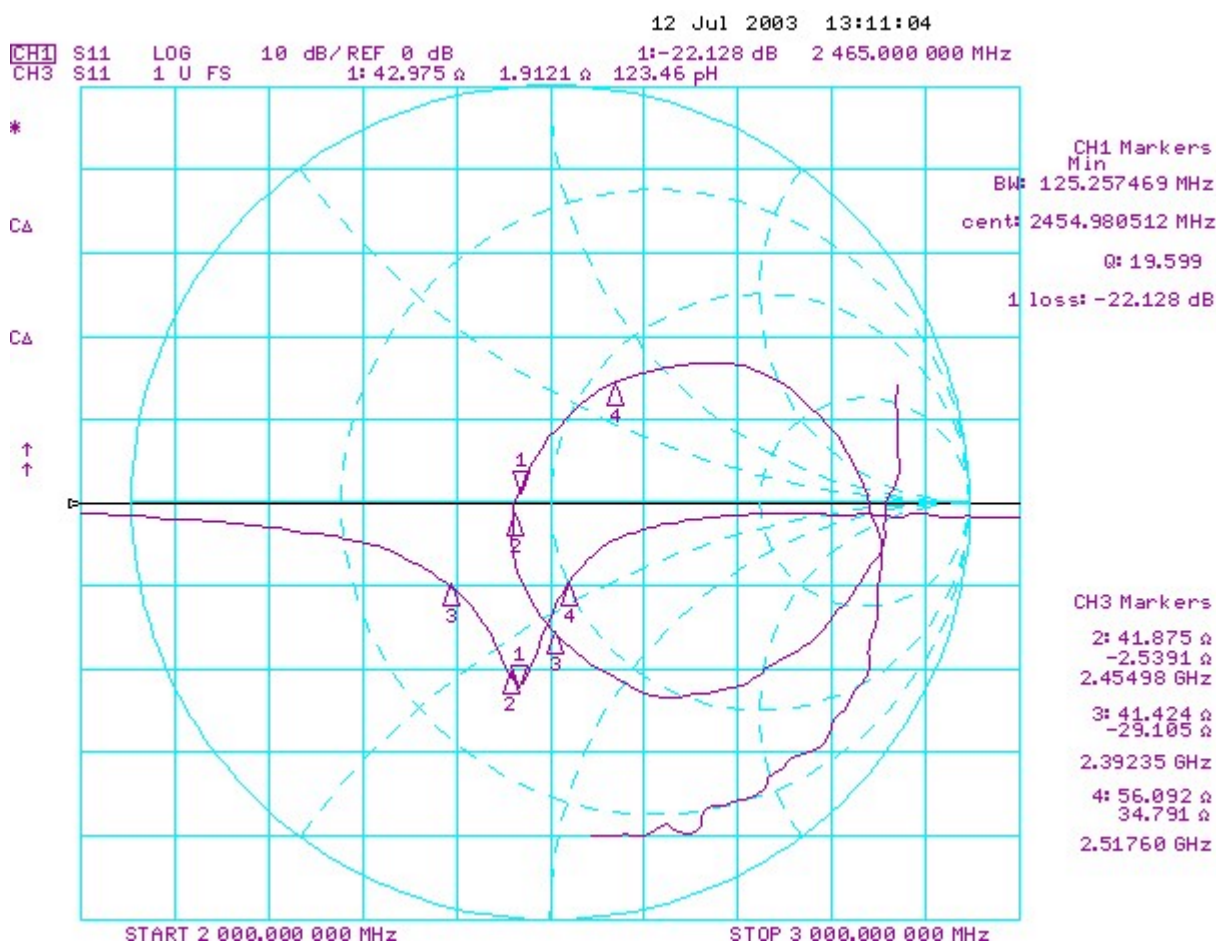


FR-4 PCB thickness = 0.8 mm

The width of transmission line = 1.56mm (depends on PCB thickness)

Chart 3

testing curve



6. Reliability: MTBF= 1×10^6 /pc.hr

Temperature: 40 ± 5

Load: DC=5V \pm 0.5 V

Quantity: 2000pcs

Sustained Time: 480h

7. Environmental specifications

Post Environmental Tolerance (Refer to the table 3)

Temperature range 25 ± 3

Relative Humidity range 55~75%RH

Operating Temperature range -40 ~+85

Storage Temperature range -40 ~+100

8.1 Moisture Proof

The device should satisfy the electrical characteristics specified in paragraph table 3

after exposed to the temperature 40 ± 2 and the relative humidity 90~95% RH for 96 hours and 1~2 hours recovery time under normal condition.

8.2 Vibration Resist

The device should satisfy the electrical characteristics specified in paragraph table 3 after applied to the vibration of 10 to 55Hz with amplitude of 1.5mm for 2 hours each in X , Y and Z directions.

8.3 Drop Shock

The device should satisfy the electrical characteristics specified in paragraph table 3 after dropping onto the hard wooden board from the height of 30cm for 3 times each facet of the 3 dimensions of the device.

8.4 High Temperature Endurance

The device should satisfy the electrical characteristics specified in paragraph table 3 after exposed to temperature 80 ± 5 for 24 ± 2 hours and 1~2 hours recovery time under normal temperature.

8.5 低温特性 Low Temperature Endurance

在温度为 -40 ± 5 低温箱中放置 24 ± 2 小时后恢复 1~2 小时测试符合表 3 规定。

The device should also satisfy the electrical characteristics specified in paragraph table 3 after exposed to the temperature -40 ± 5 for 24 ± 2 hours and to 2 hours recovery time under normal temperature.

8.6 Temperature Cycle Test

The device should also satisfy the electrical characteristics specified in paragraph table 3 after exposed to the low temperature -25 and high temperature $+85$ for 30 ± 2 min each by 5 cycles and 1 to 2 hours recovery time under normal temperature.

8.7 Resistance to soldering heat

Resistance to soldering heat : 260 ± 5 for 10 ± 0.5 sec. in a static solder bath.