SUNTSU

Chip Antenna

SATCA-2A1CG-WFB7

2.0mm x 1.2mm x 0.6mm

Features

- WiFi/ZigBee/Bluetooth
- Chip Type
- High Performance, Small Size
- 2400-2500MHz
- SMT Process Compatible

Applications

- ISM 2.4 GHz Applications
- ZigBee/BLE Applications
- Bluetooth Earphone Systems
- Smart Hand Held Devices
- Wireless PCMCIA Cards or USB Dongles

Part Numbering Guide

S AT CA 2A1CG WF B7

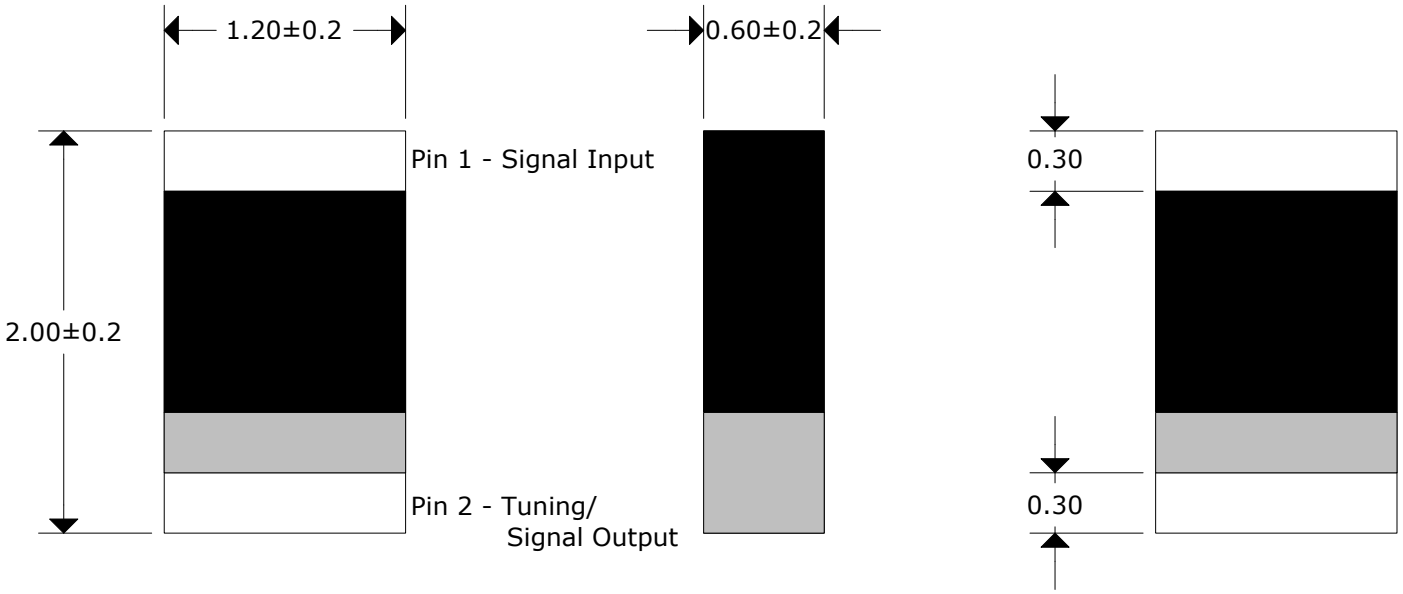
S	AT	CA	2A1CG	WF	B7
SUNTSU	ANTENNA	CHIP ANTENNA	PACKAGE SIZE 2A1CG = 2.0mm x 1.2mm x 0.6mm	APPLICATION WF = WiFi	FREQUENCY B7 = 2400-2484MHz

RoHS COMPLIANT

Electrical Parameters	Units	Minimum	Typical	Maximum	Remarks
Frequency Band	MHz	2400		2484	
Impedance	Ω		50		
Polarization			Linear		
Peak Gain	dBi		1.9		At 2442MHz
Average Gain	dB		-2.3		At 2442MHz
Efficiency	%		59.2		At 2442MHz
Operating Temperature	C	-40		85	

Outline Drawing

All dimensions are in millimeters (mm) unless otherwise noted. Drawings are not to scale.

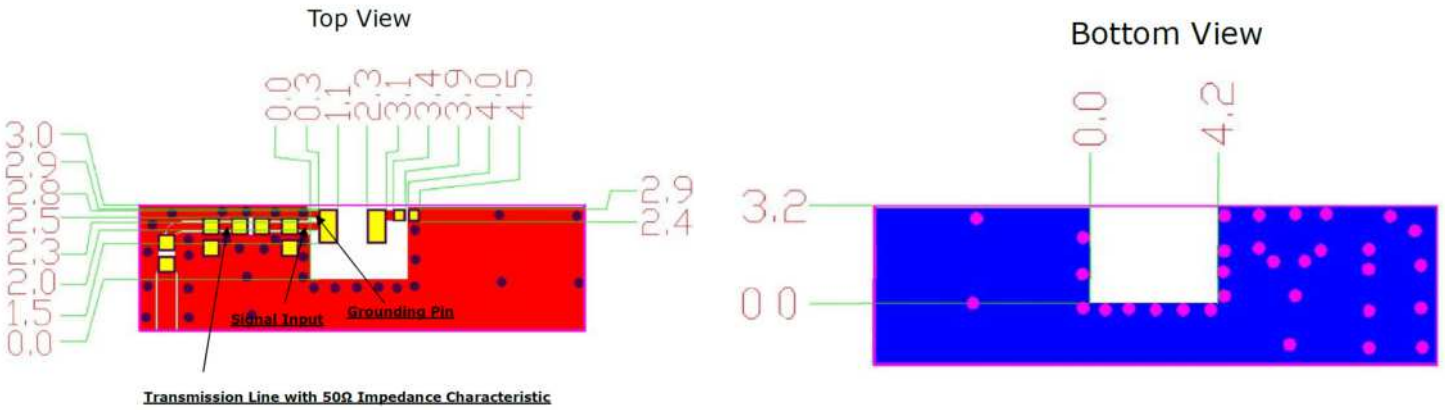


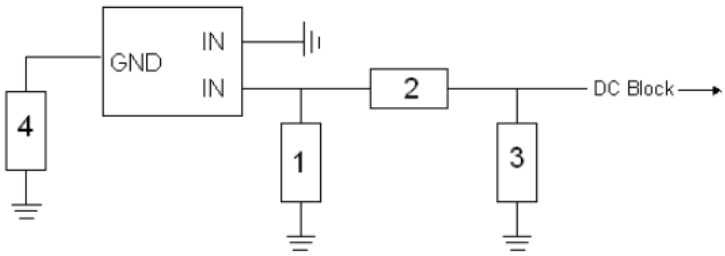
Suntsu Electronics, Inc.
142 TECHNOLOGY DR., SUITE 150
IRVINE, CA 92618

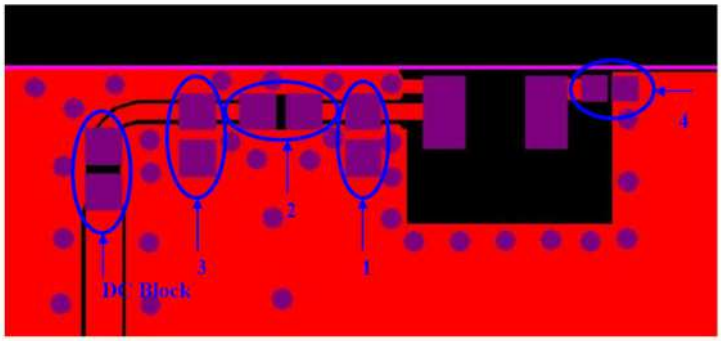
Call: +1-949-783-7300 | Fax: +1-949-783-7301

Recommended Land Pattern & Frequency Tuning Scenario Circuit

All dimensions are in millimeters (mm) unless otherwise noted. Drawings are not to scale.







System Matching Circuit Components			
Location	Description	Vendor	Tolerance
1	N/C	-	-
2	5.0pF	MURATA (0402)	±0.05pF
3	0.8pF	MURATA (0402)	±0.05pF
4	2.7pF	MURATA (0201)	±0.05pF
DC Block	22pF	MURATA (0402)	±5%

For these suggested values for the matching and tuning of components the center frequency will be 2442MHz on a standard 40 x 20mm² Evaluation board.

Please note, these are reference values which may need to be changed when different circuit boards or manufactures are used.

Suntsu Electronics, Inc.
142 TECHNOLOGY DR., SUITE 150
IRVINE, CA 92618

Call: +1-949-783-7300 | Fax: +1-949-783-7301

SUNTSU

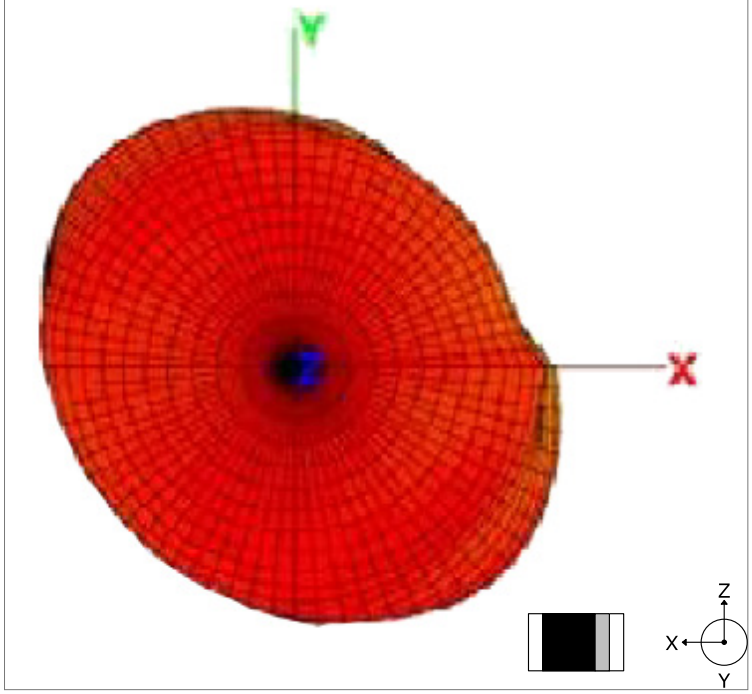
Chip Antenna

SATCA-2A1CG-WFB7

2.0mm x 1.2mm x 0.6mm

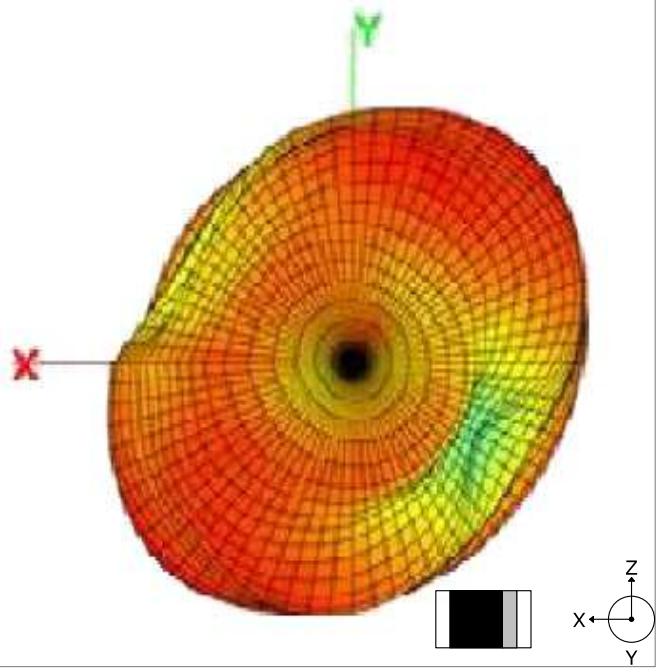
Radiation Pattern

2442MHz



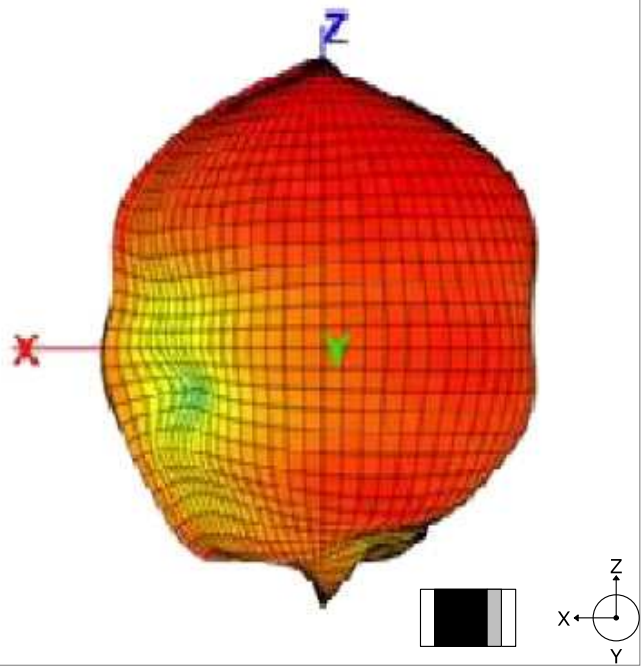
Radiation Pattern

2442MHz



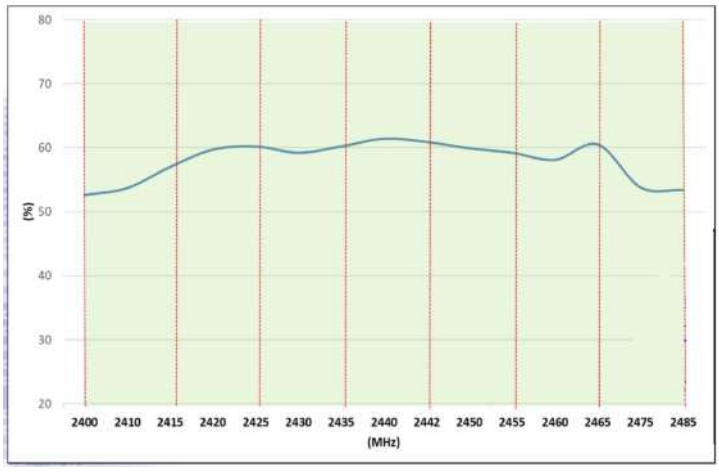
Radiation Pattern

2442MHz



Efficiency %

2442MHz



Suntsu Electronics, Inc.
142 TECHNOLOGY DR., SUITE 150
IRVINE, CA 92618

Call: +1-949-783-7300 | Fax: +1-949-783-7301

SUNTSU

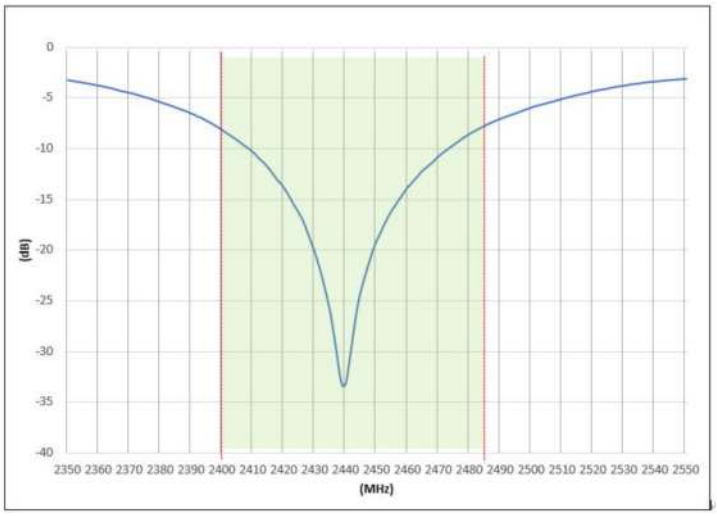
Chip Antenna

SATCA-2A1CG-WFB7

2.0mm x 1.2mm x 0.6mm

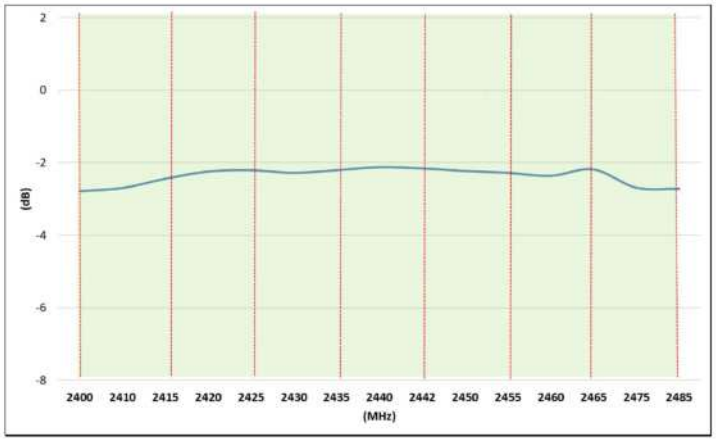
Electrical Test

Return Loss



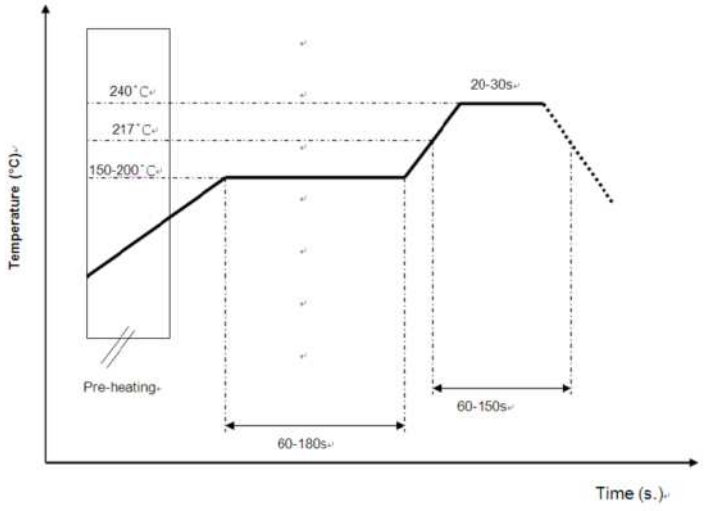
Electrical Test

VSWR



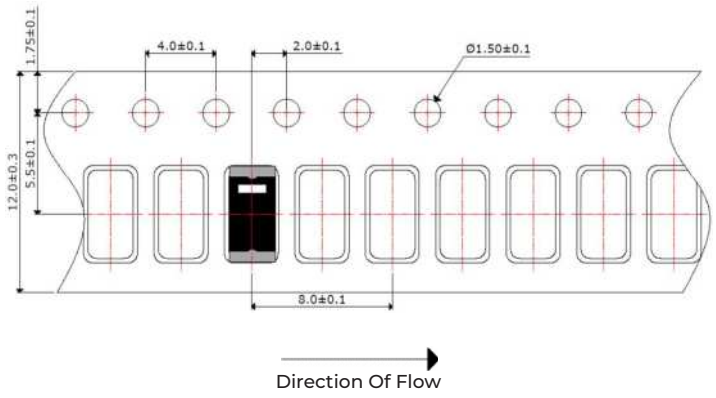
Soldering Conditions

Typical Soldering Profile For Lead-Free Process



Packaging - Tape And Reel

5000Pcs / Reel



Environmental & Mechanical Specifications

High Temperature Test	85°C for 500 hours, and then to normal temperature/humidity for 24hours.
Low Temperature Test	-30°C for 500 hours, and then to normal temperature/humidity for 24hours.
Humidity Test	85°C / 90-95%RH for 96 hours, and then to normal temperature/humidity for 24hours.
Thermal Shock Test	-30°C for 30 min and +85°C for 30 min. 5 cycles, then expose to normal temperature/humidity for 24 hours or more.
Vibration Test	5 to 200 to 5Hz, swept in 10min, 4.5G at max(2mm amplitude), in X and Y directions for 2 hours each and in Z direction for 4 hours.

Suntsu Electronics, Inc.
142 TECHNOLOGY DR., SUITE 150
IRVINE, CA 92618

Call: +1-949-783-7300 | Fax: +1-949-783-7301