

Features

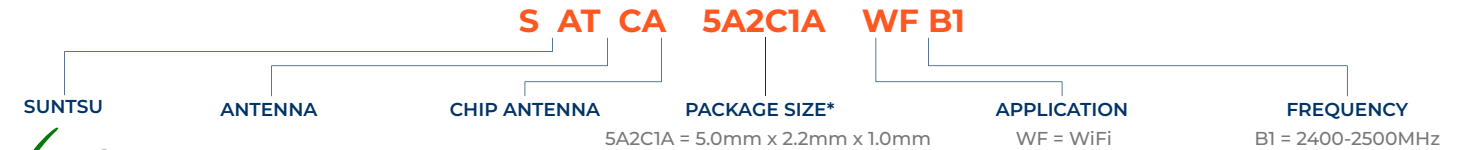
- WiFi/ZigBee/Bluetooth
- Chip Type
- Stable And Reliable Performance
- 2400-2500MHz
- SMT Process Compatible

Applications

- ISM 2.4 GHz Applications
- ZigBee/BLE Applications
- Bluetooth Earphone Systems
- Smart Hand Held Devices
- Machine To Machine Communication



Part Numbering Guide

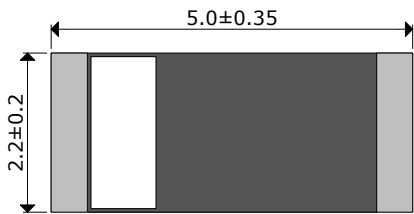


* Where letters denote decimal location (A=0, B=1, C=2, etc.); e.g. B5=0.15, 3A5=3.05, 9A=9.0

| Electrical Parameters | Units | Minimum | Typical | Maximum | Remarks |
|-----------------------|----------|---------|---------|---------|---------------------|
| Frequency Band | MHz | 2400 | | 2500 | |
| Impedance | Ω | | 50 | | |
| Polarization | | | Linear | | |
| Peak Gain | dBi | | 1.9 | | At 2442MHz |
| Efficiency | % | | 62 | | At 2442MHz |
| VSWR | | | | 2 | At Center Frequency |
| Operating Temperature | C | -40 | | 85 | |

Outline Drawing

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



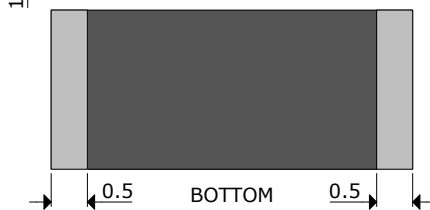
TOP



FRONT

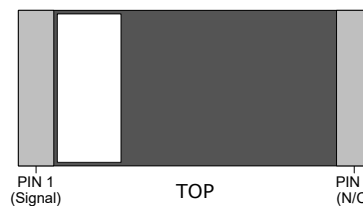


SIDE

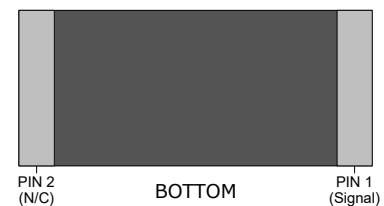


BOTTOM

PIN ORIENTATION



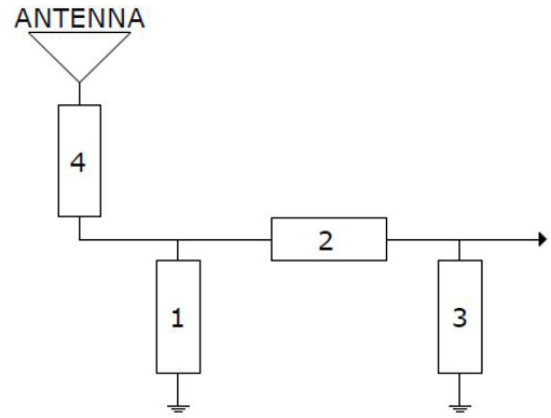
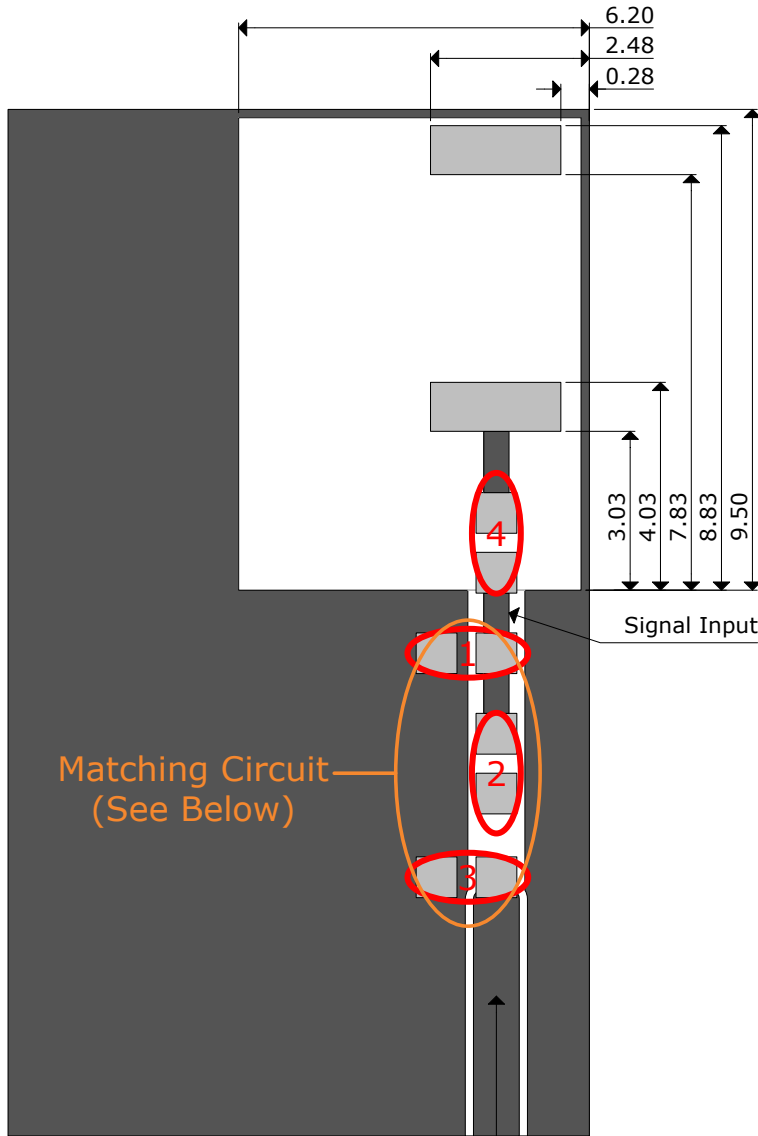
TOP



BOTTOM

Recommended Land Pattern & Frequency Tuning Scenario Circuit

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



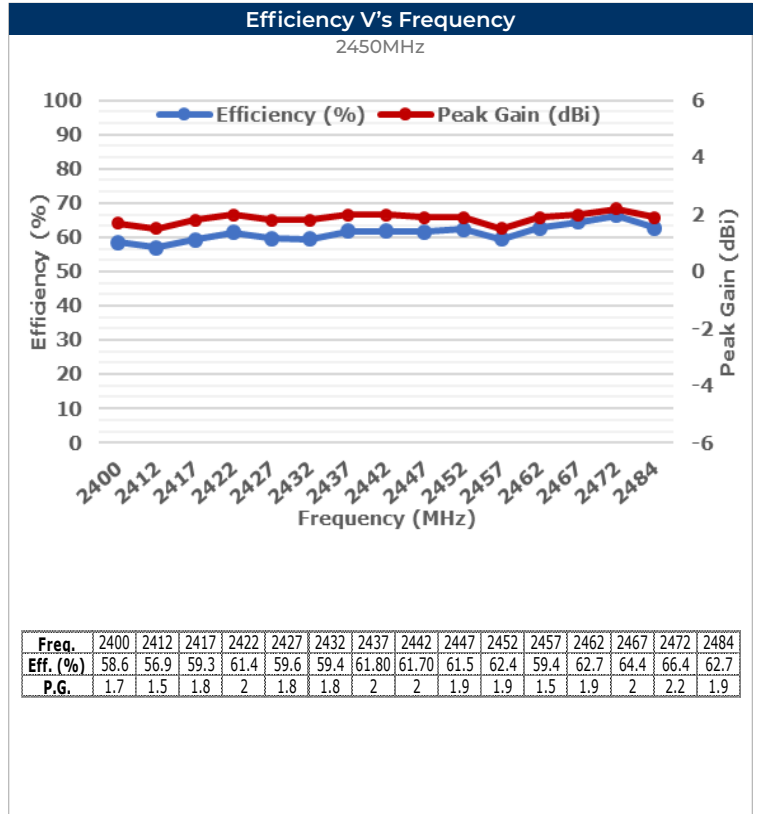
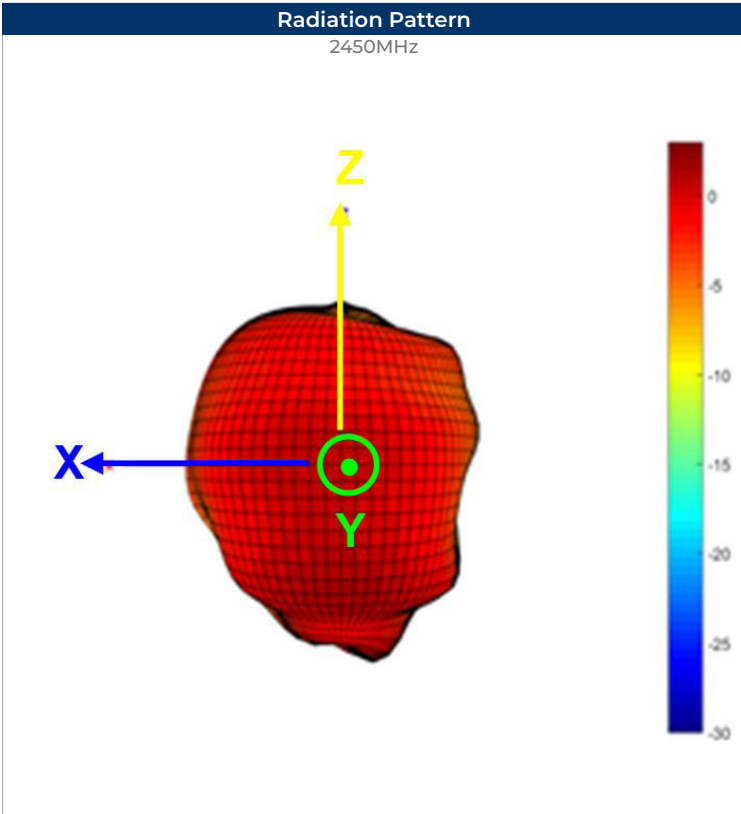
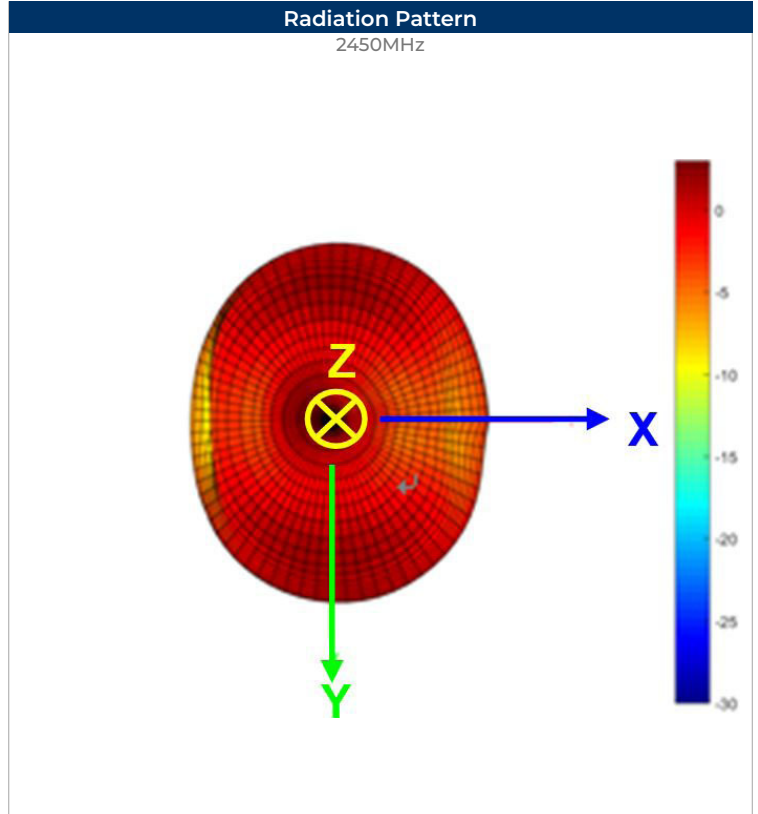
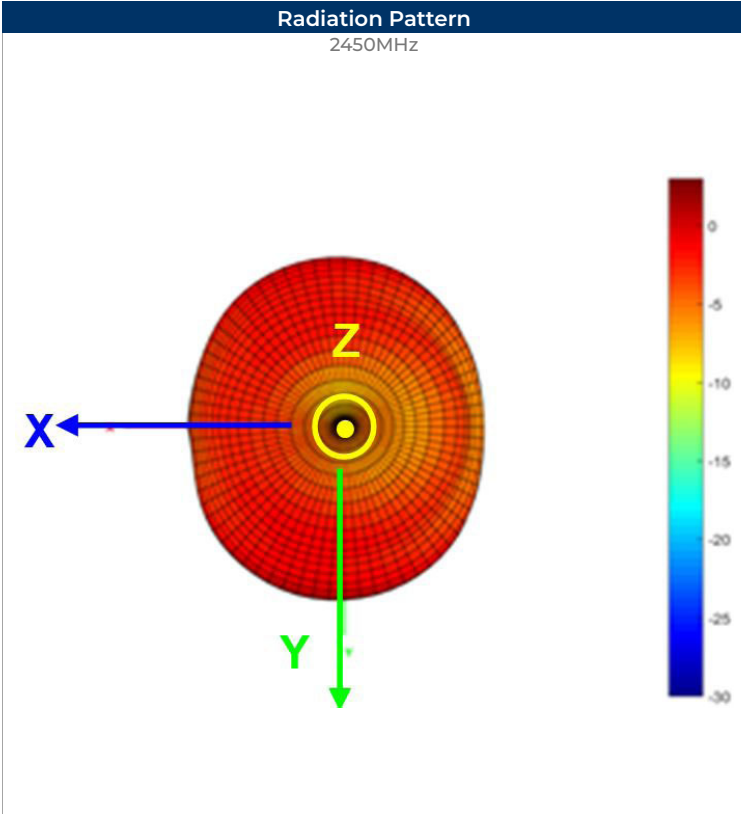
For these suggested values for the matching and tuning of components, the average frequency will be 2450MHz on a standard 40 x 40mm² Evaluation board.

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

Transmission Line With 50Ω Impedance Characteristics

System Matching Circuit Components

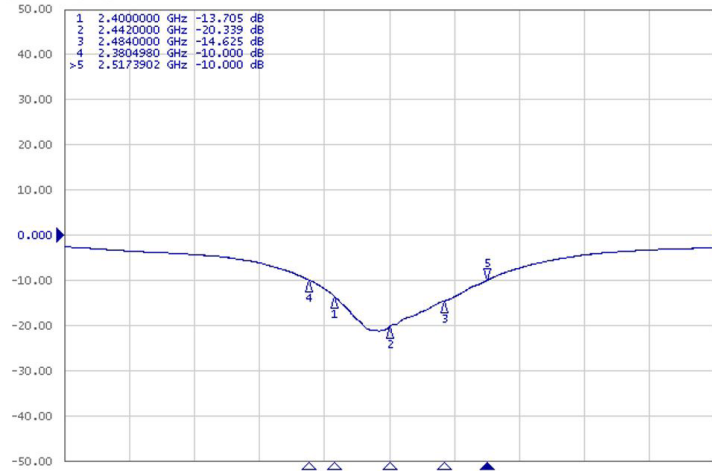
| Location | Description | Vendor | Tolerance |
|-----------------|---------------|--------|-----------|
| 1 | N/A | - | - |
| 2 | 3.3nH, (0402) | DARFON | ±0.1nH |
| 3 | 1.5pF, (0402) | MURATA | ±0.1pF |
| 4 (Fine Tuning) | 0Ω, (0402) | - | - |



Electrical Test

Return Loss

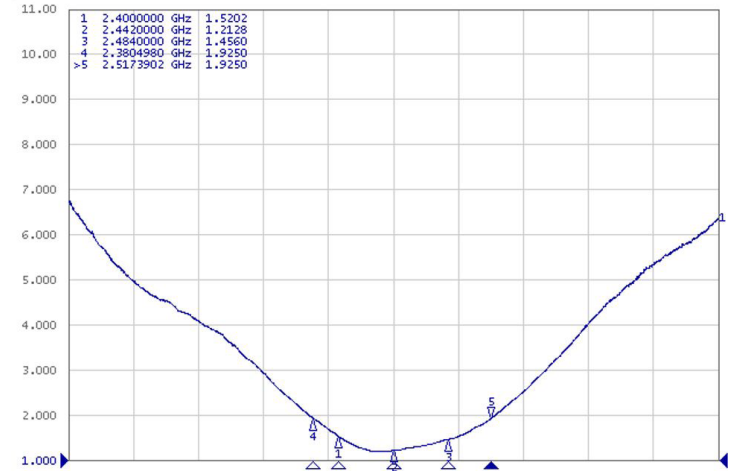
[F2] S11 Log Mag 10.00dB/ Ref 0.000dB [F2]



Electrical Test

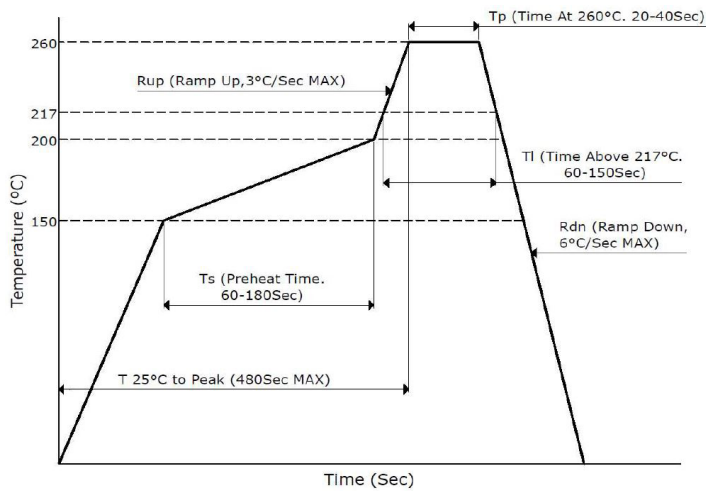
VSWR

[F2] S11 SWR 1.000/ Ref 1.000 [F2]



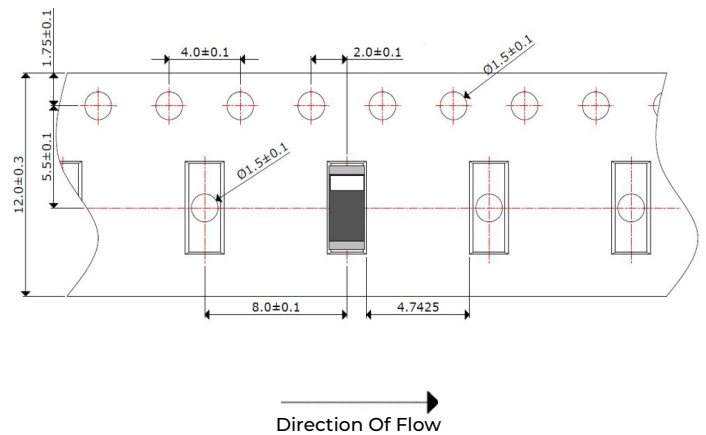
Soldering Conditions

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. |