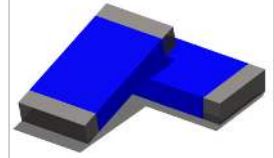


Features

- Dual Band WiFi
- Chip Type
- Stable And Reliable Performance
- 2400-2500MHz & 5150-5850MHz
- SMT Process Compatible

Applications

- Wireless Communication Devices
- WiFi Certified AC Applications
- IoT Applications
- Machine To Machine Communication
- Wireless PCMCIA Cards Or USB Dongles



Part Numbering Guide

S AT CA 3C1GF WF B3



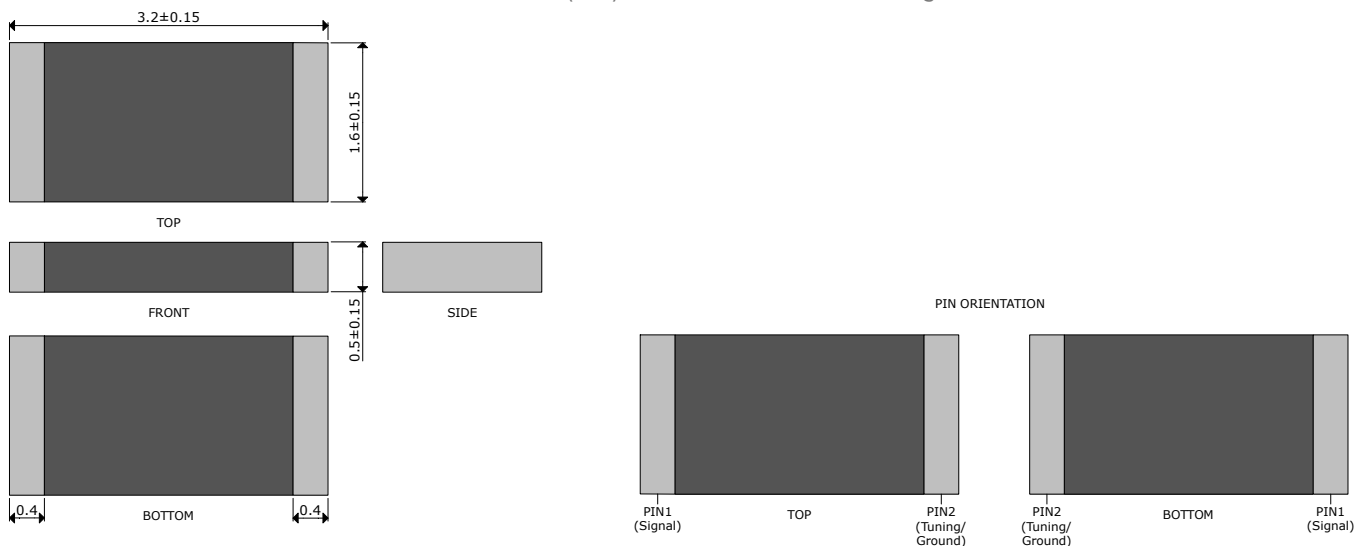
* Where letters denote decimal location (A=0, B=1, C=2, etc.); e.g. B5=0.15, 3A5=3.05, 9A=9.0

| Electrical Parameters | Units | Minimum | Typical | Maximum | Remarks |
|-----------------------|----------|---------|---------|---------|---------------------|
| Frequency Band | MHz | 2400 | | 2500 | |
| Impedance | Ω | | 50 | | |
| Polarization | | | Linear | | |
| Peak Gain | dBi | | 1.4 | | At 2442MHz |
| Efficiency | % | | 76 | | At 2442MHz |
| VSWR | | | | 2 | At Center Frequency |
| Operating Temperature | C | -40 | | 85 | |

| Electrical Parameters | Units | Minimum | Typical | Maximum | Remarks |
|-----------------------|----------|---------|---------|---------|---------------------|
| Frequency Band | MHz | 5150 | | 5800 | |
| Impedance | Ω | | 50 | | |
| Polarization | | | Linear | | |
| Peak Gain | dBi | | 2.3 | | At 5550MHz |
| Efficiency | % | | 67 | | At 5550MHz |
| 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.

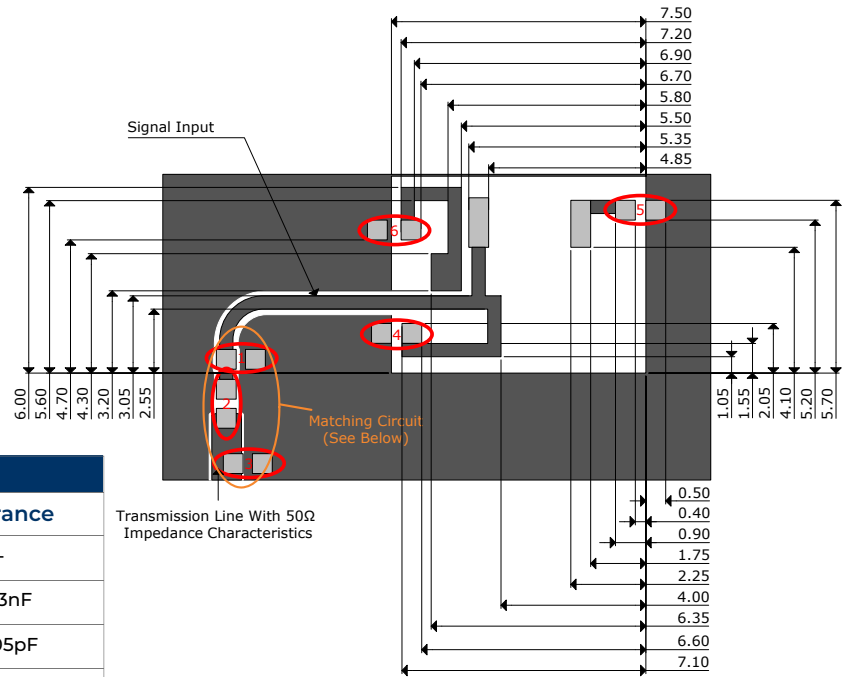
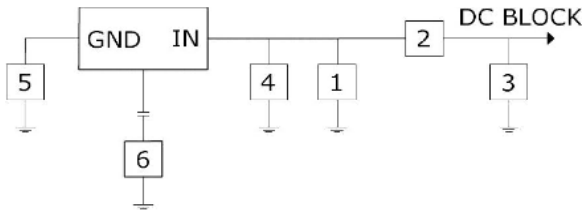


Recommended Land Pattern & Frequency Tuning Scenario Circuit

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 around 2442MHz for the lower Band and around 5550MHz for the higher on a standard 80 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.

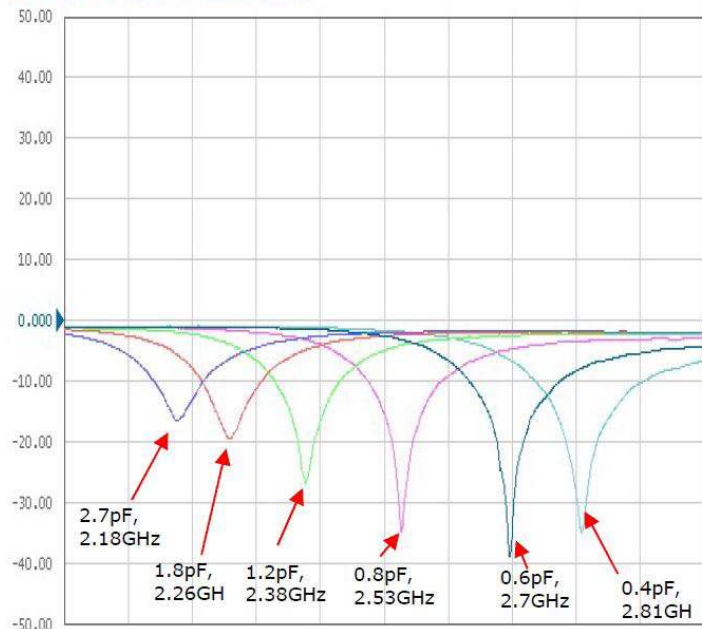


System Matching Circuit Components

| Location | Description | Vendor | Tolerance |
|-----------------|---------------|--------|-----------|
| 1 | N/A | - | - |
| 2 | 1nH, (0402) | DARFON | ±0.3nF |
| 3 | 0.2pF, (0402) | DARFON | ±0.05pF |
| 4 | 22pF, (0402) | DARFON | ±5% |
| 5 (Fine Tuning) | 1pF, (0402) | DARFON | ±0.05pF |
| 6 (Fine Tuning) | 0.2pF, (0402) | DARFON | ±0.05pF |

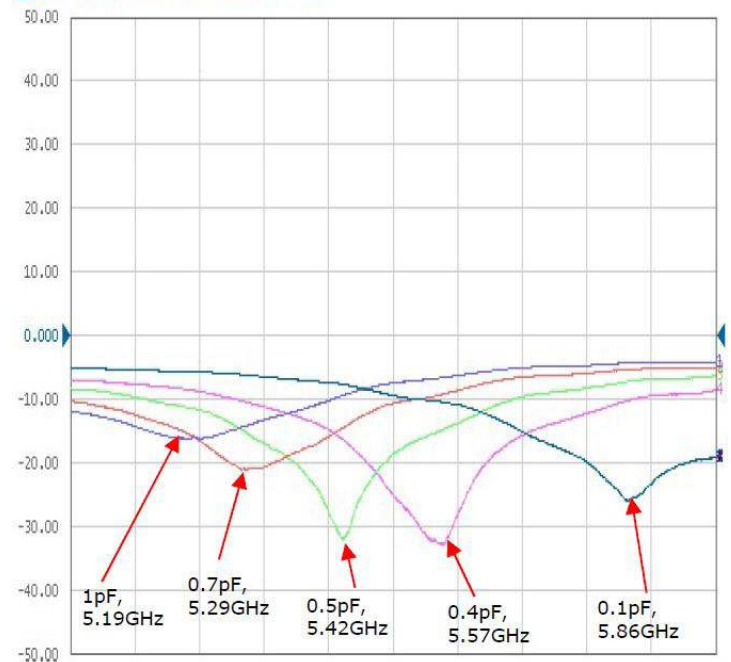
Tr1 S11 Log Mag 10.00dB/ Ref 0.000dB [F1 D&M]
 Tr2 S11 Log Mag 10.00dB/ Ref 0.000dB [F1 D&M]
 Tr3 S11 Log Mag 10.00dB/ Ref 0.000dB [F1 D&M]
 Tr4 S11 Log Mag 10.00dB/ Ref 0.000dB [F1 D&M]
 Tr5 S11 Log Mag 10.00dB/ Ref 0.000dB [F1 D&M]
 Tr6 S11 Log Mag 10.00dB/ Ref 0.000dB [F1 D&M]

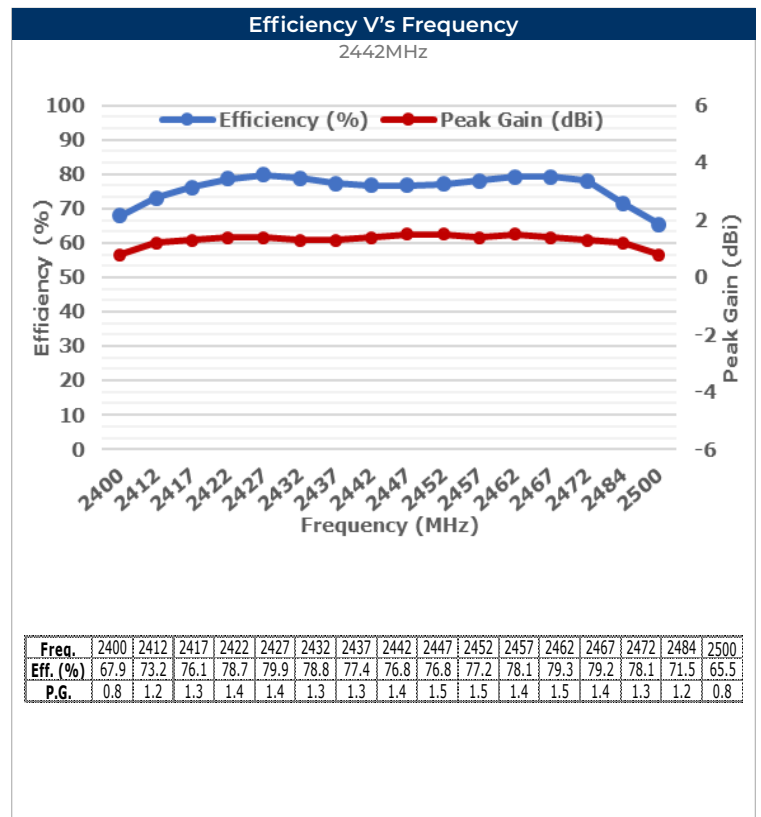
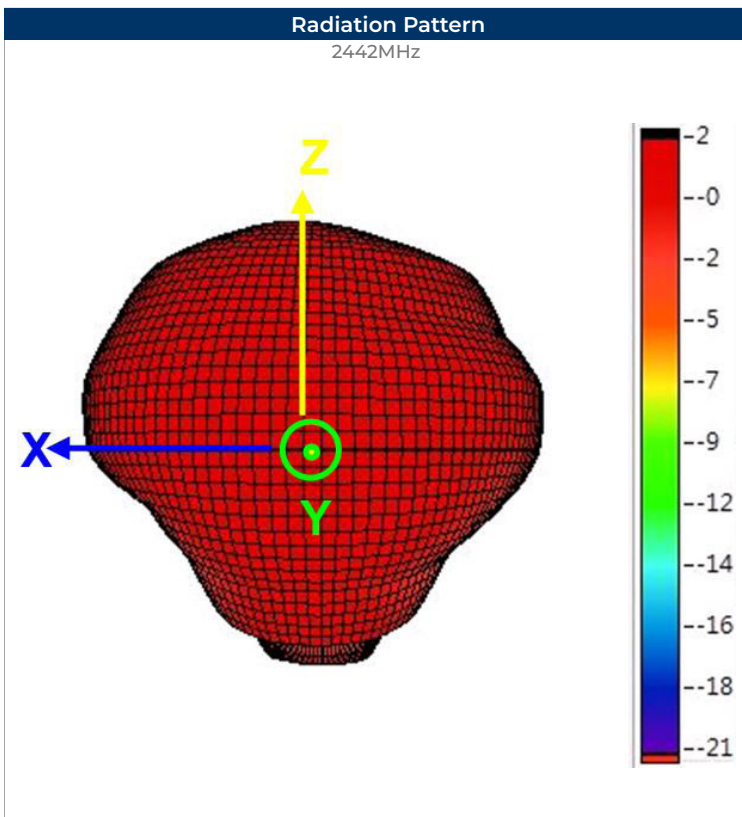
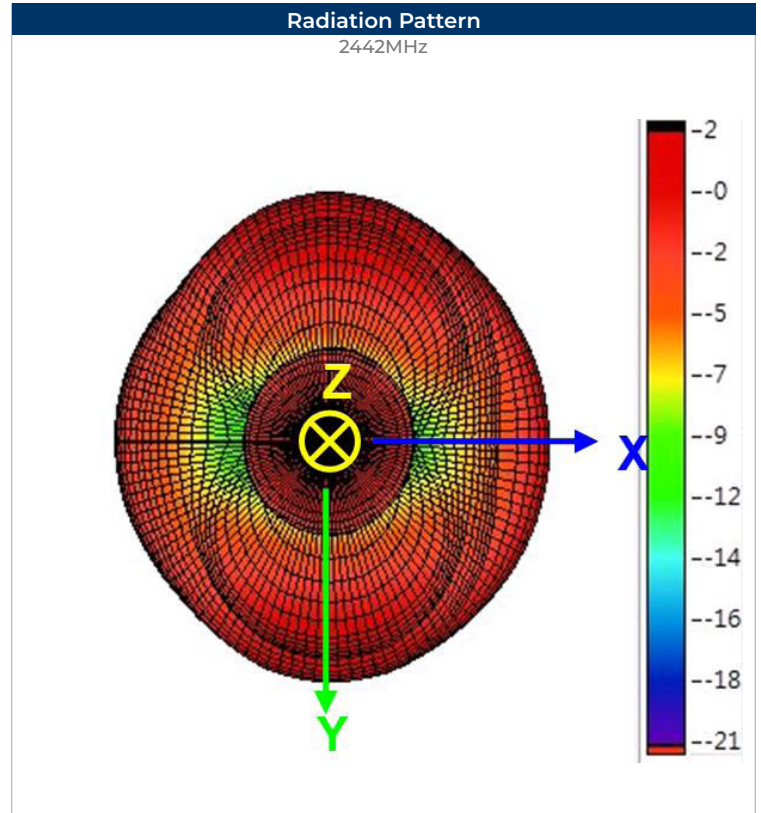
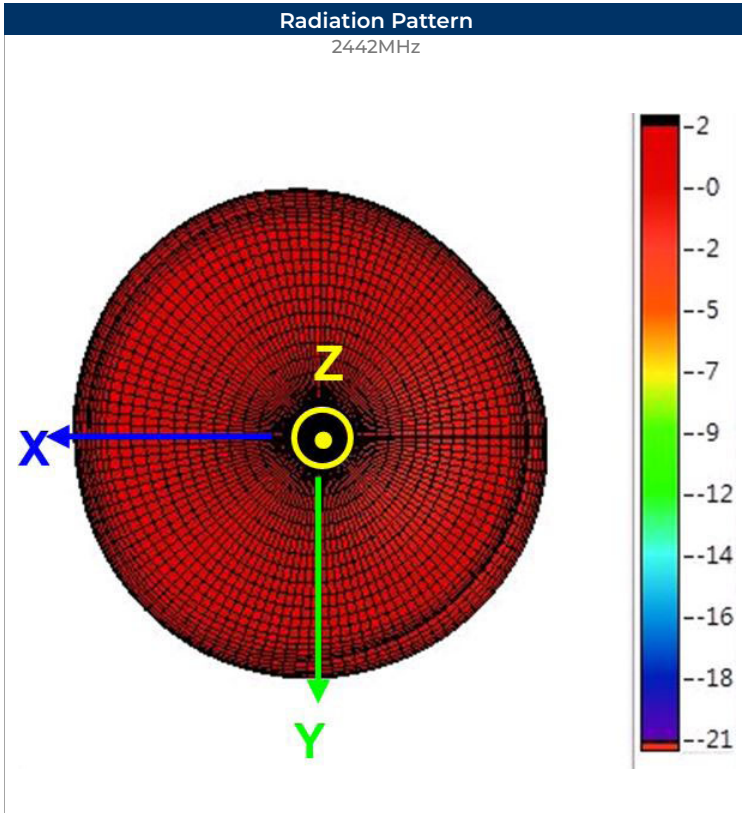
Reference chart for the
 2400-2500MHz Band

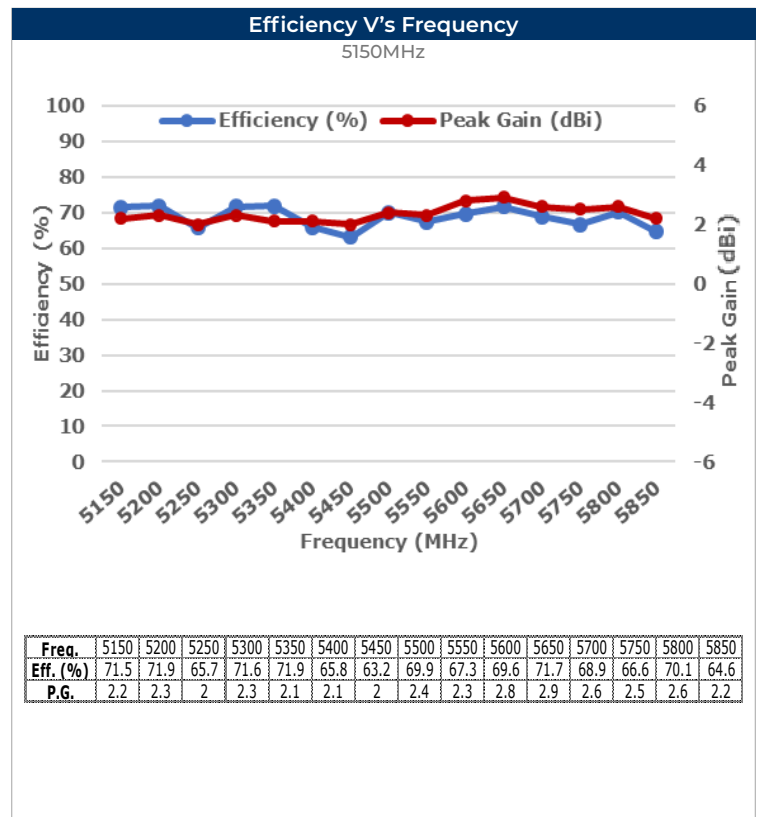
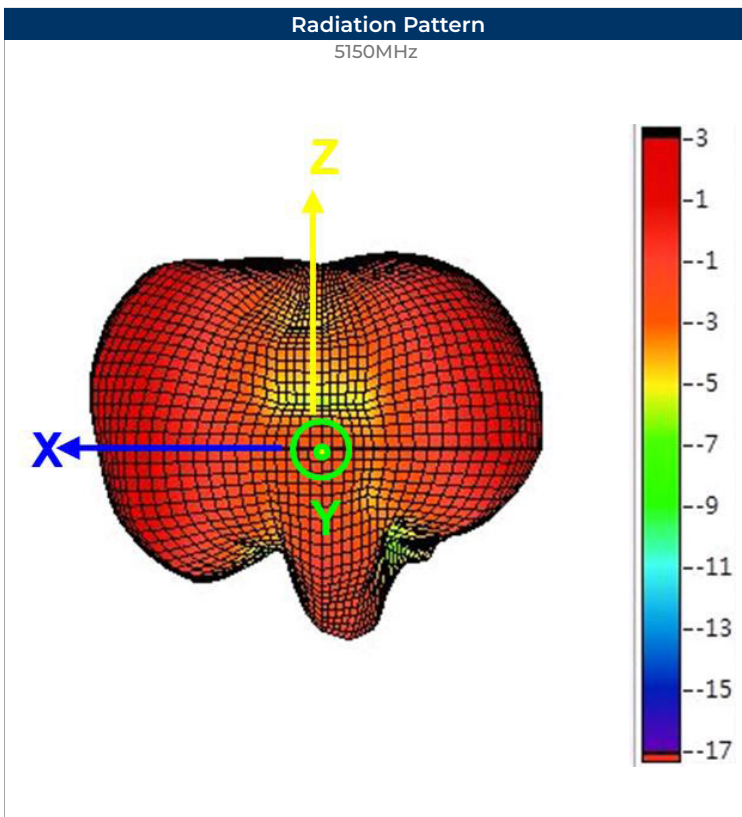
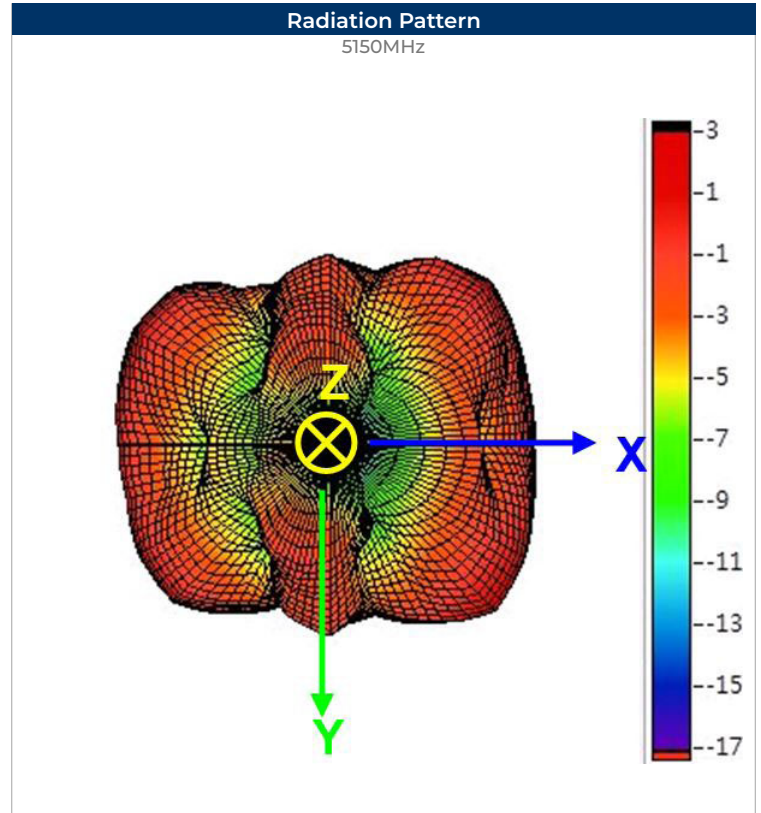
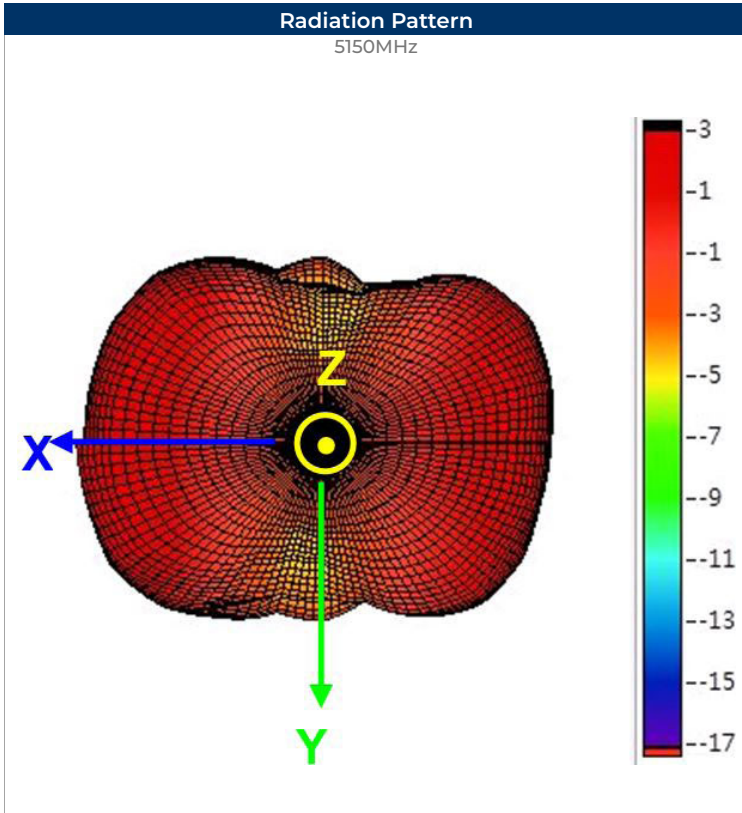


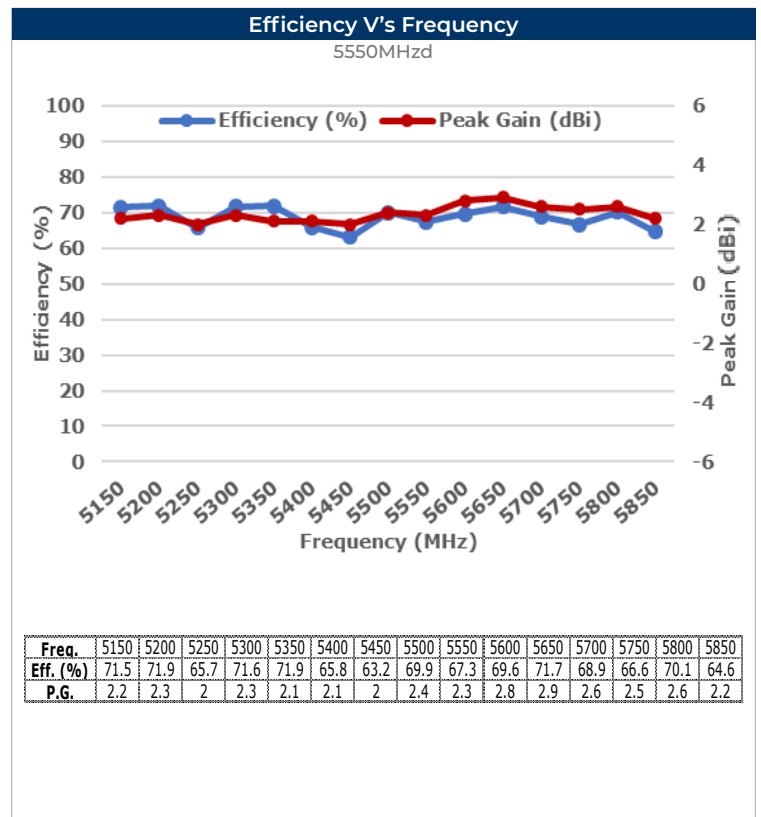
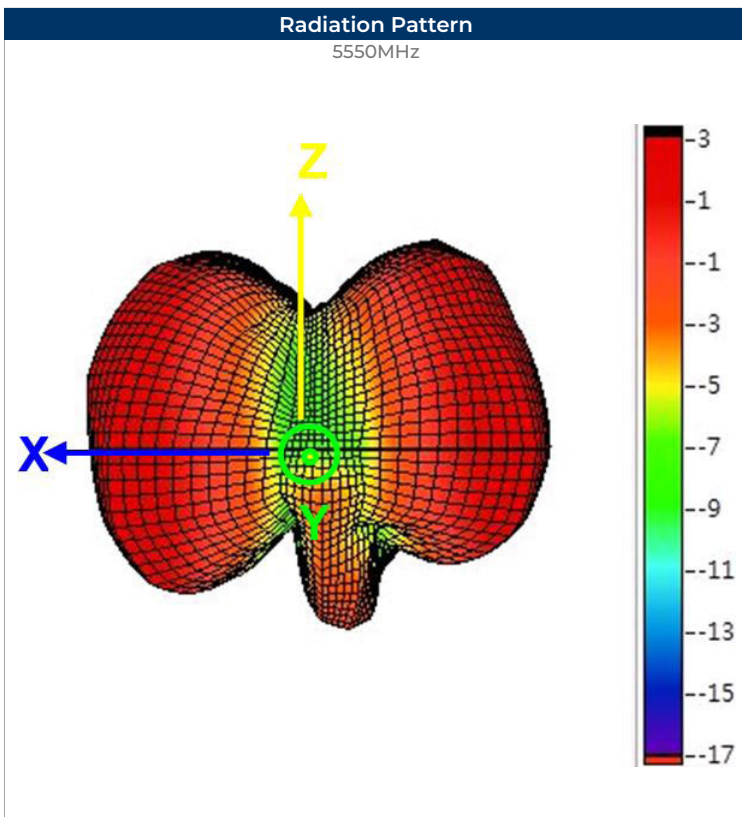
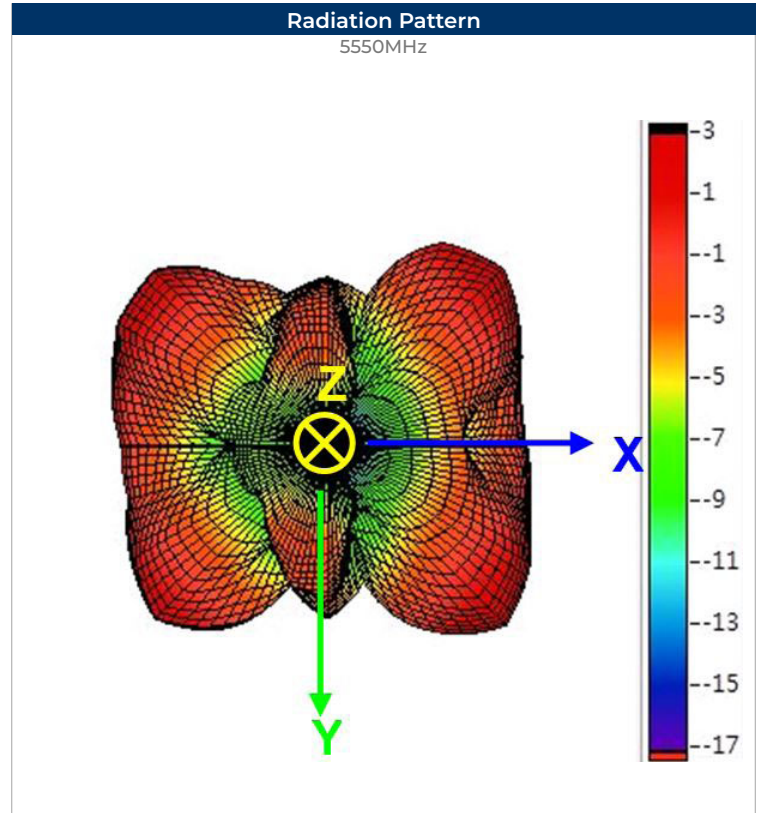
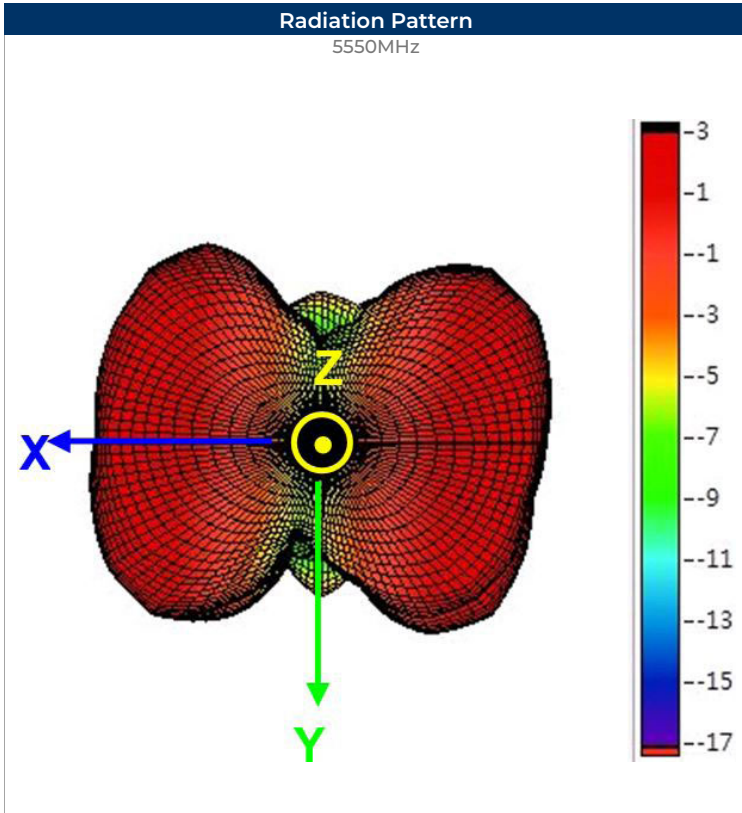
Tr1 S22 Log Mag 10.00dB/ Ref 0.000dB [F1 D&M]
 Tr2 S22 Log Mag 10.00dB/ Ref 0.000dB [F1 D&M]
 Tr3 S22 Log Mag 10.00dB/ Ref 0.000dB [F1 D&M]
 Tr4 S22 Log Mag 10.00dB/ Ref 0.000dB [F1 D&M]
 Tr5 S22 Log Mag 10.00dB/ Ref 0.000dB [F1 D&M]

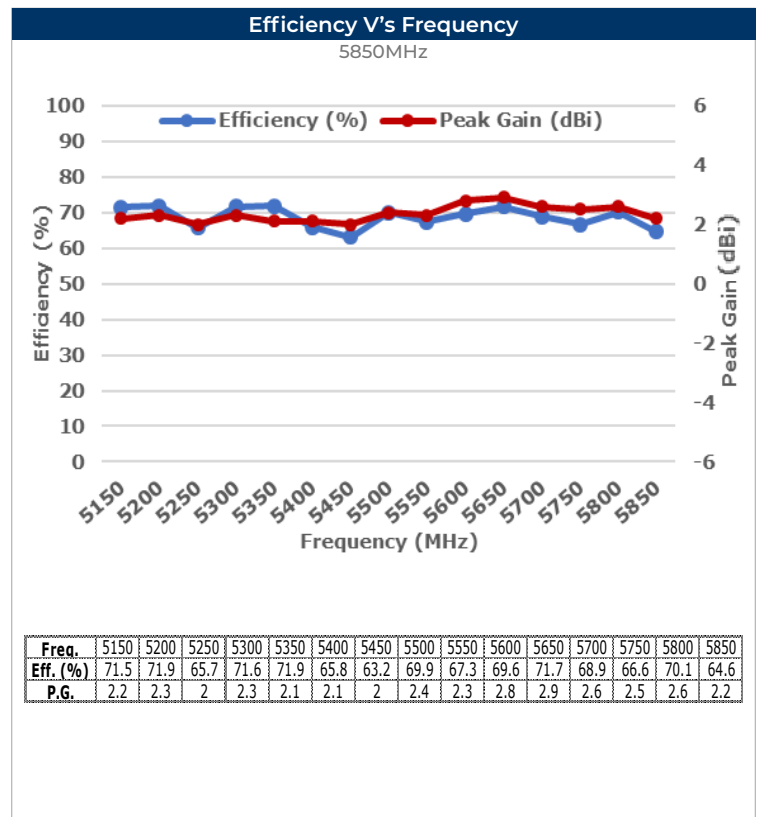
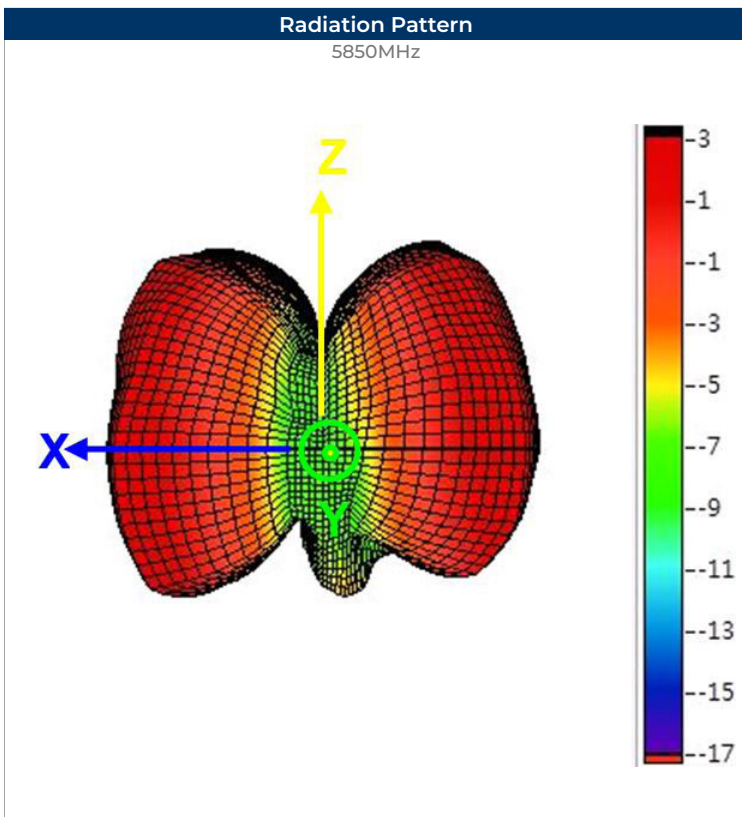
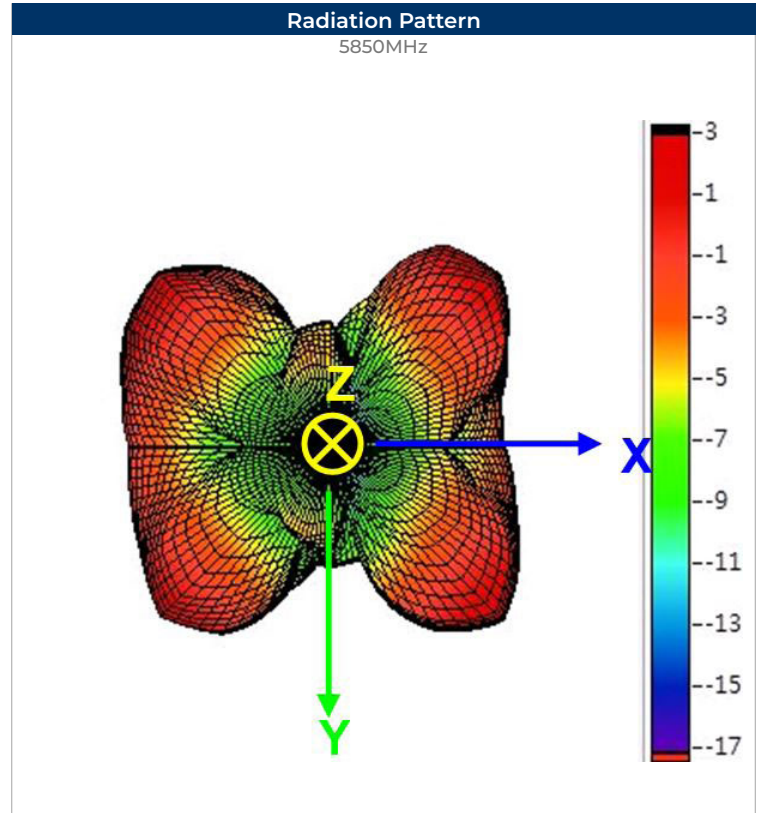
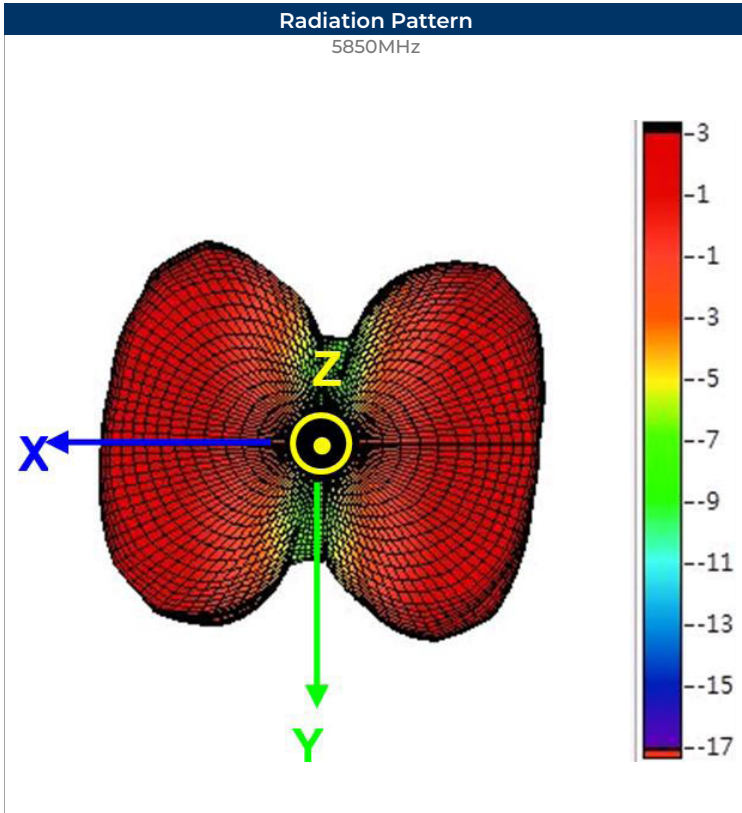
Reference chart for the
 5150-5850MHz Band











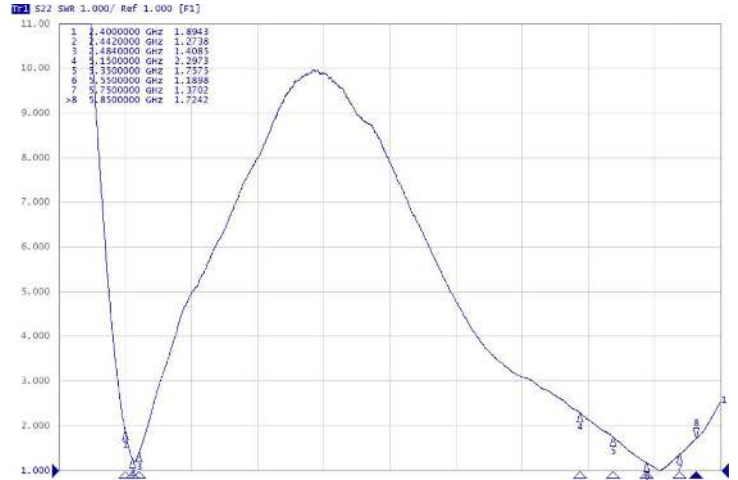
Electrical Test

Return Loss



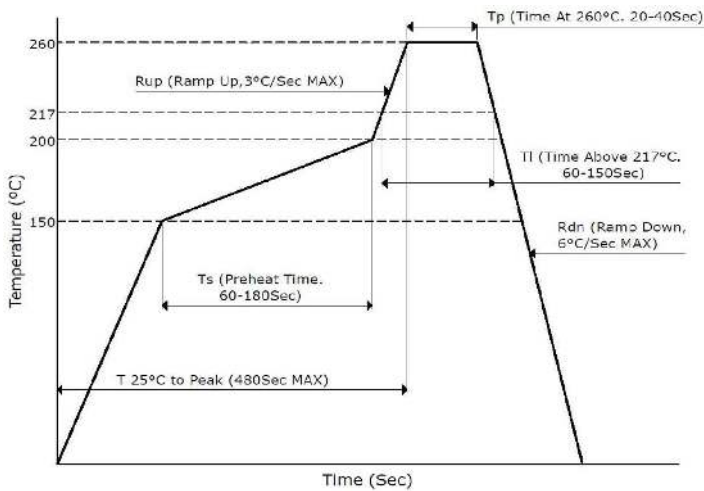
Electrical Test

VSWR



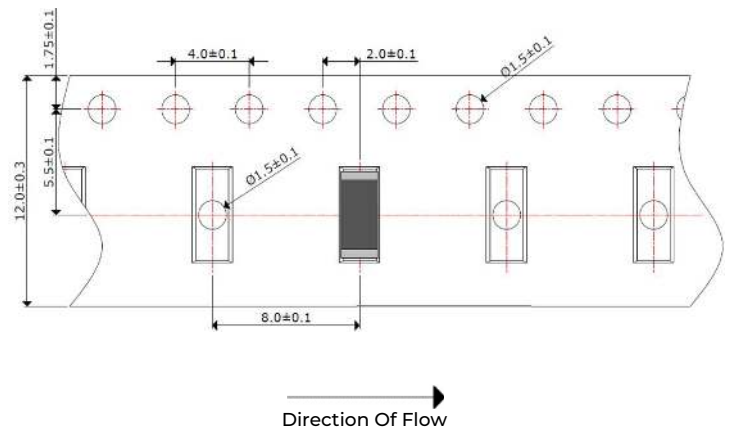
Soldering Conditions

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. |