



Samsara EM31, 010-0031 Antenna Test Report

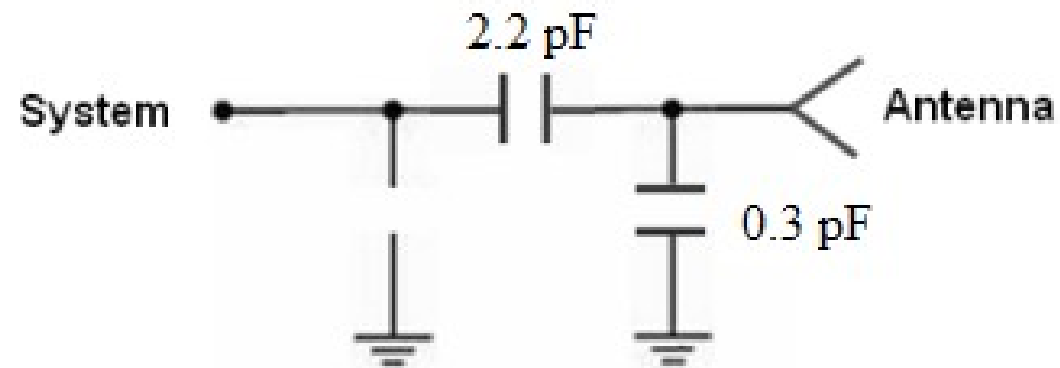
Date : Dec. 22, 2022
Prepared by : Jerry Ko



Outline

- Antenna Structure & Placement
- Return Loss
- Radiation Pattern
- Peak Gain & Efficiency

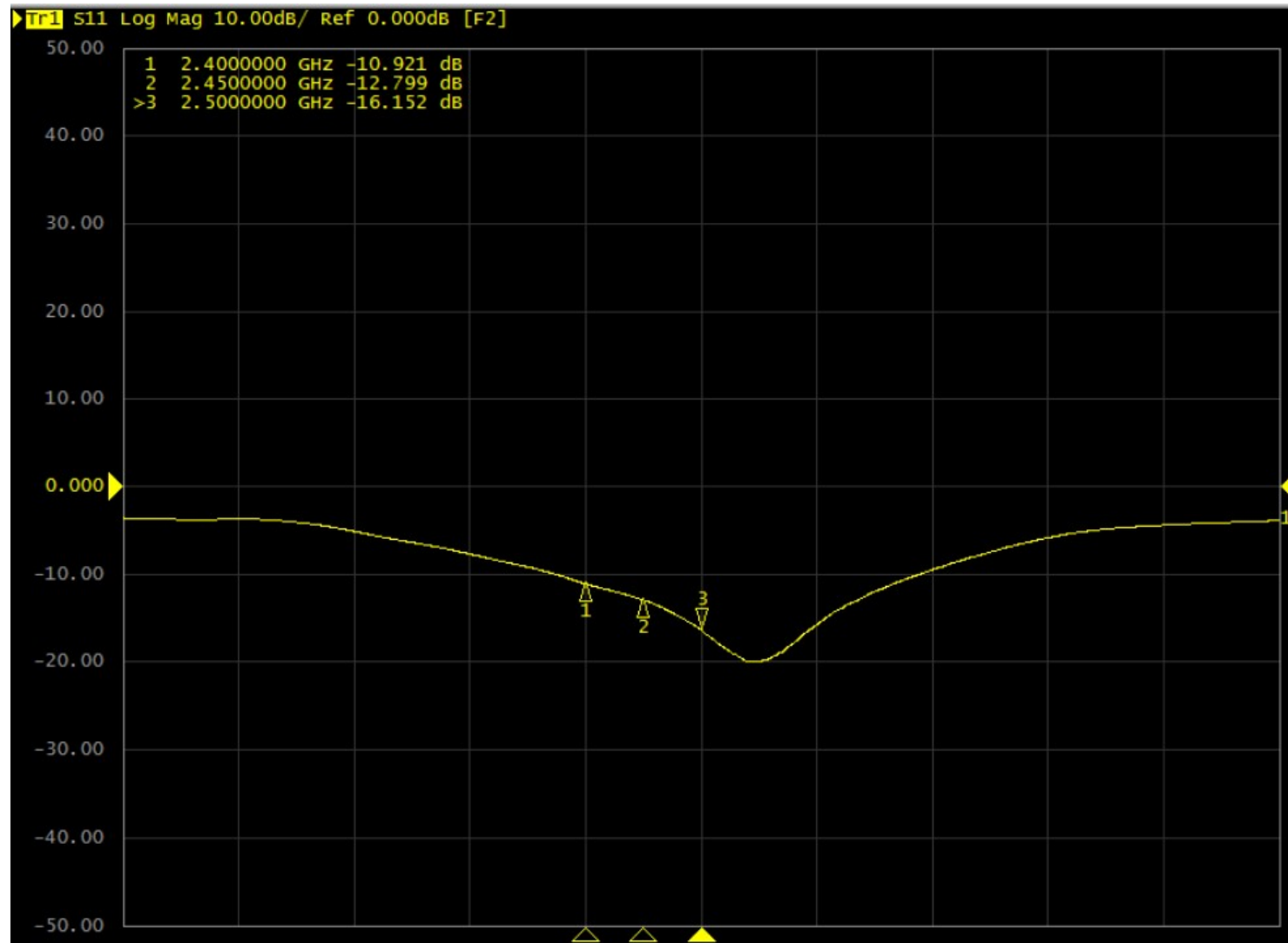
Antenna Structure & Placement



Antenna matching circuit

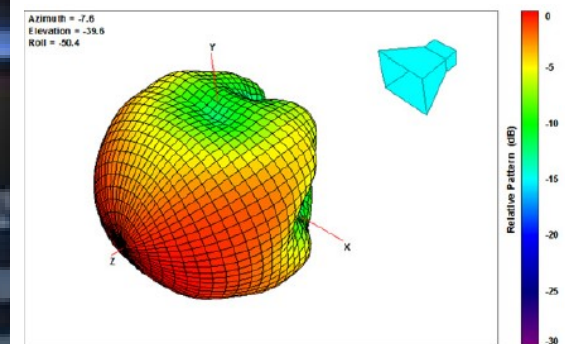
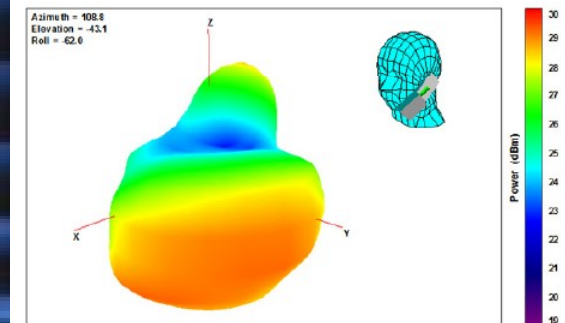
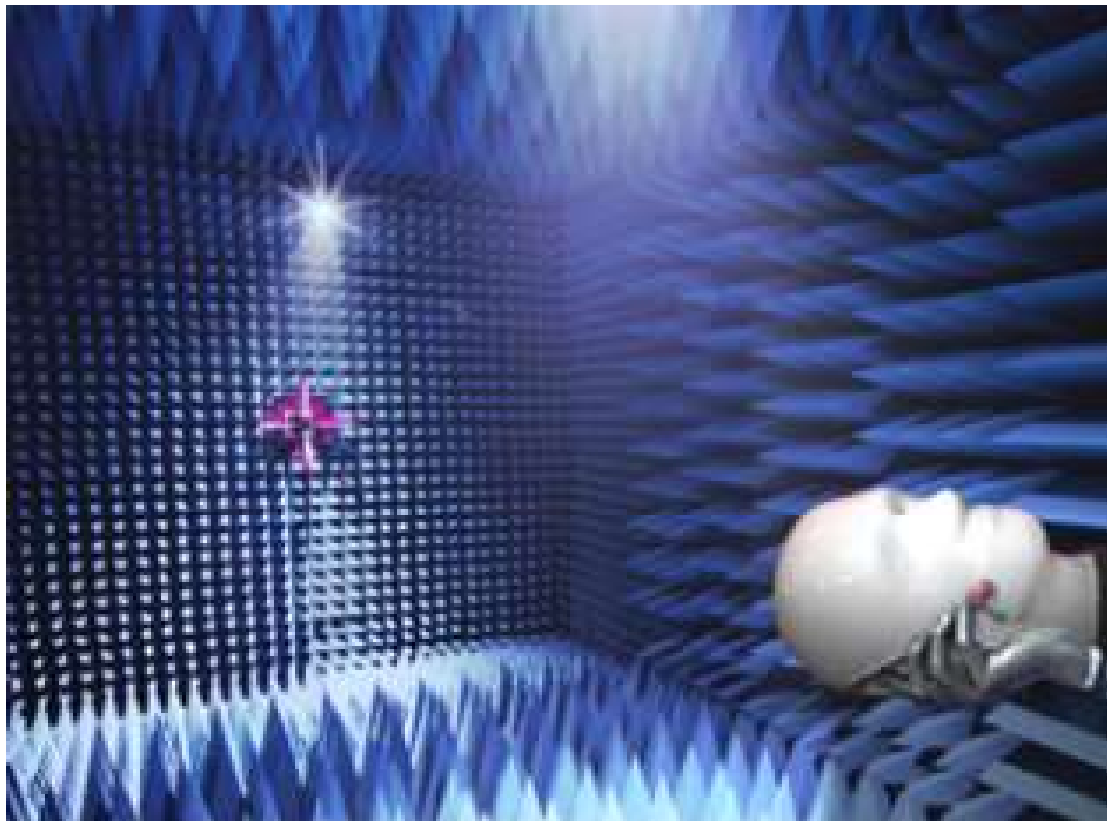
Antenna No.	Operating Frequency	Type	Material	Feeding	Size
BLE Ant	2400 MHz ~ 2500 MHz	PIFA	Printed	Trace	24(L) x 8(W) mm ²

Return Loss – BLE Ant



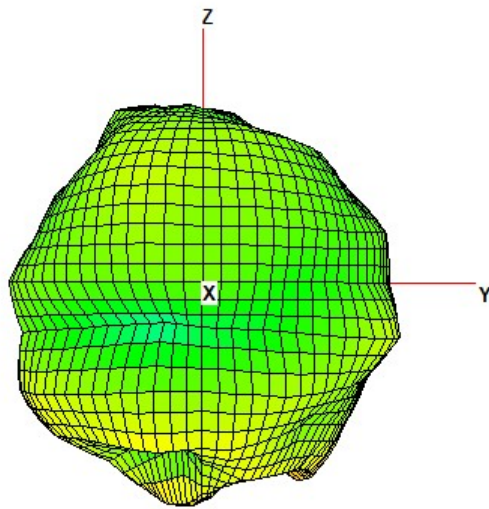
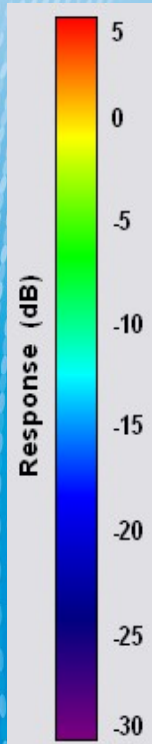
Antenna Measurement Chamber

- ETS AMS-8500 antenna measurement system
- Interior dimensions : 7.32(L)×3.66(W)×3.66(H)m³
- Operating band : 600 MHz – 10 GHz
- Support passive test & active test
- Provide graphic data display

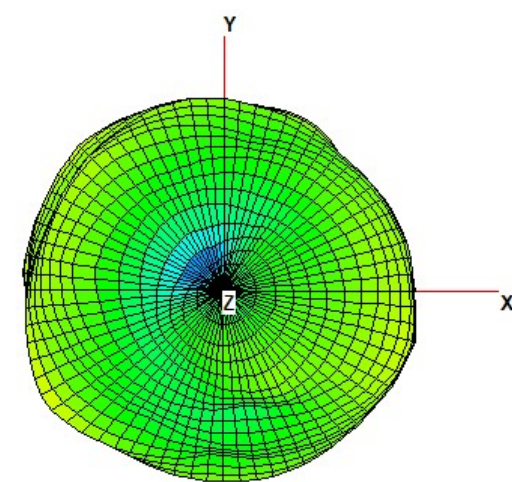
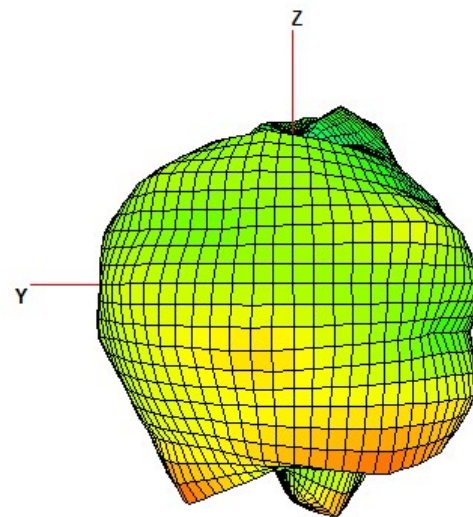


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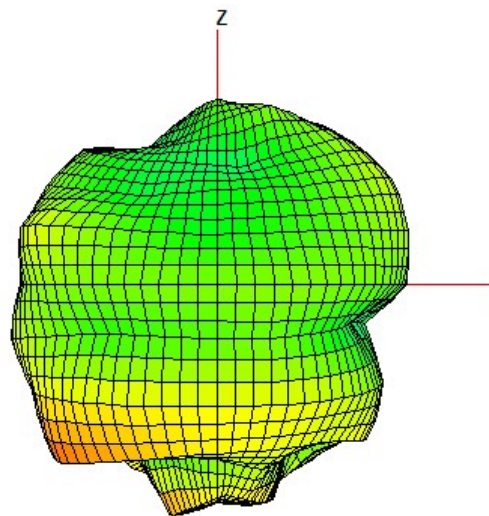
Radiation Pattern – BLE Ant



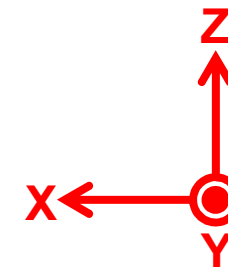
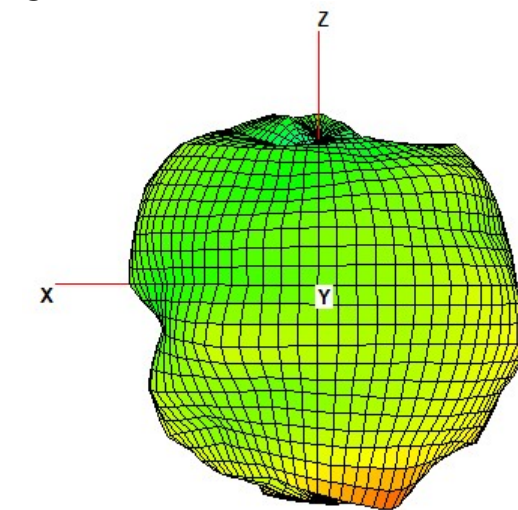
YZ-Plane



XY-Plane



XZ-Plane



Peak Gain & Efficiency

BLE Ant		
Frequency (MHz)	Peak Gain (dBi)	Efficiency (%)
2400	2.0	50
2450	2.3	50
2500	2.6	51

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