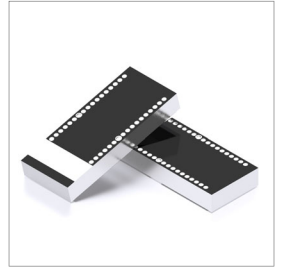


### Features

- ISM
- Chip Type
- Stable And Reliable Performance
- 902-928MHz
- SMT Process Compatible

### Applications

- ISM Band System
- Wireless Alarm And Security System
- Smart Meters
- IOT Applications
- Machine To Machine Communication



### Part Numbering Guide

**S AT CA 12A4AIG IS B7**

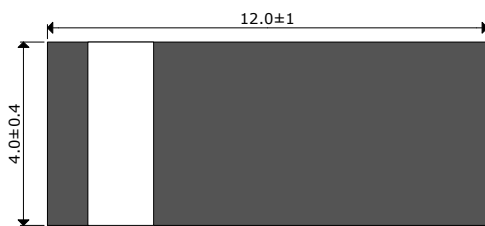


\* Where letters denote decimal location (A=0, B=1, C=2, etc.); e.g. B5=0.15, 3A5=3.05, 9A=9.0

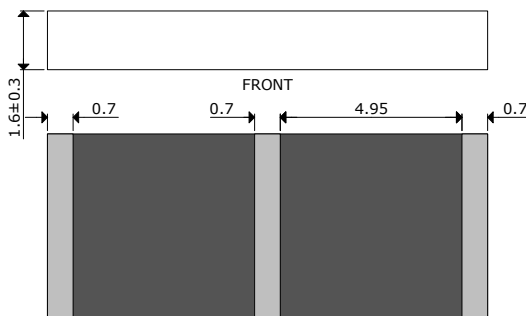
Electrical Parameters	Units	Minimum	Typical	Maximum	Remarks
Frequency Band	MHz	863		870	
Impedance	$\Omega$		50		
Polarization			Linear		
Peak Gain	dBi		-0.98		At 915MHz
Efficiency	%		32.9		At 915MHz
VSWR				2	At Center Frequency
Operating Temperature	C	-40		85	

### Outline Drawing

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



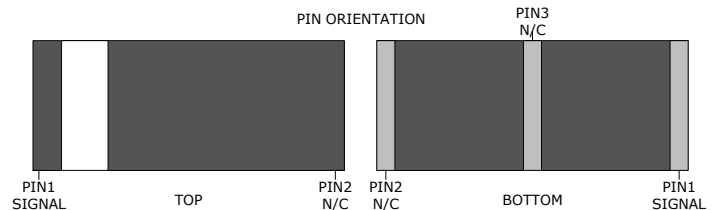
TOP



BOTTOM

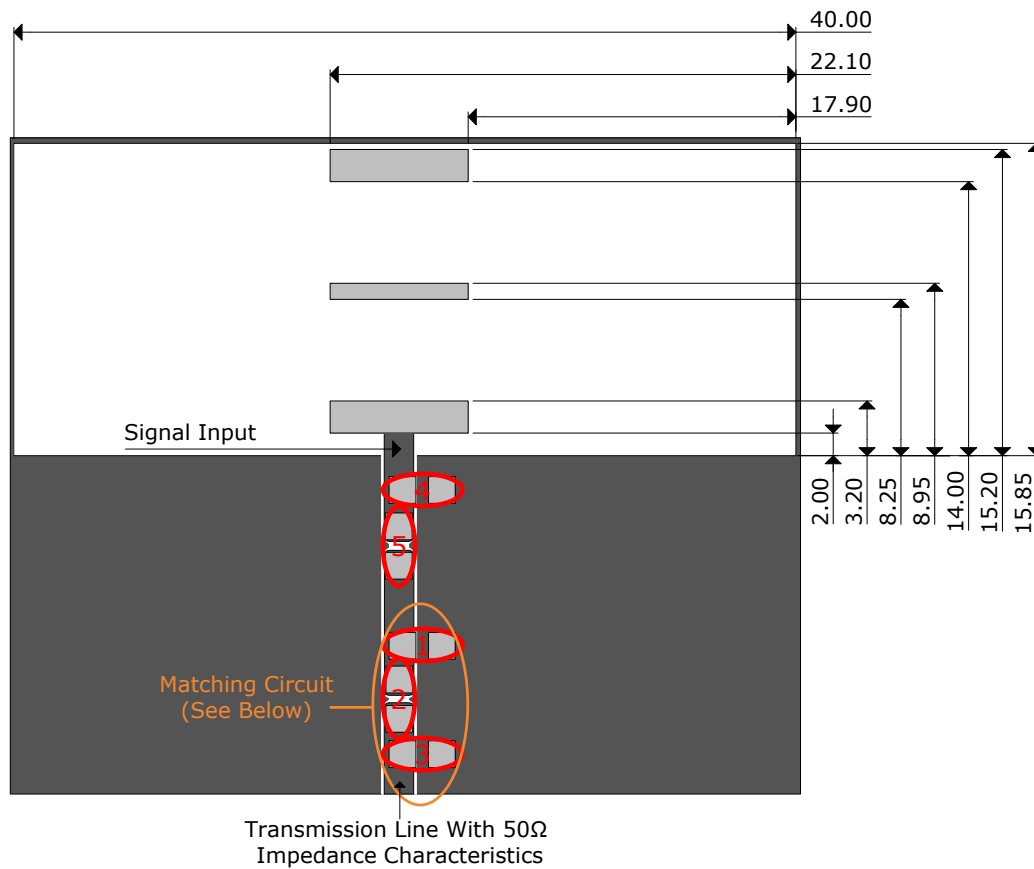


SIDE

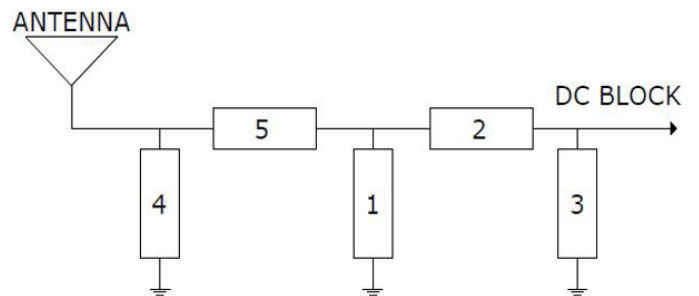


**Recommended Land Pattern & Frequency Tuning Scenario Circuit**

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

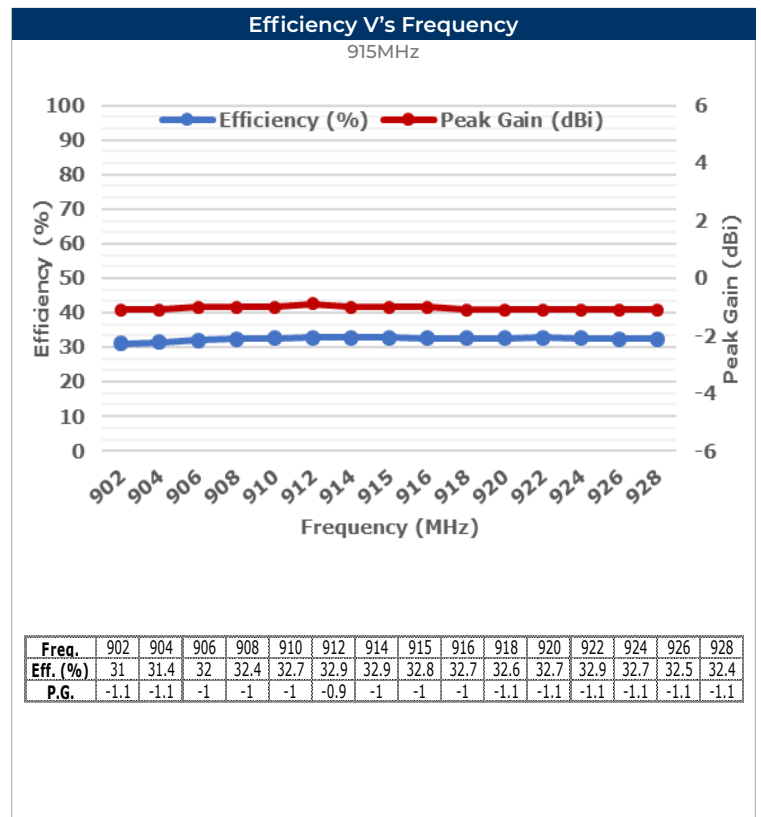
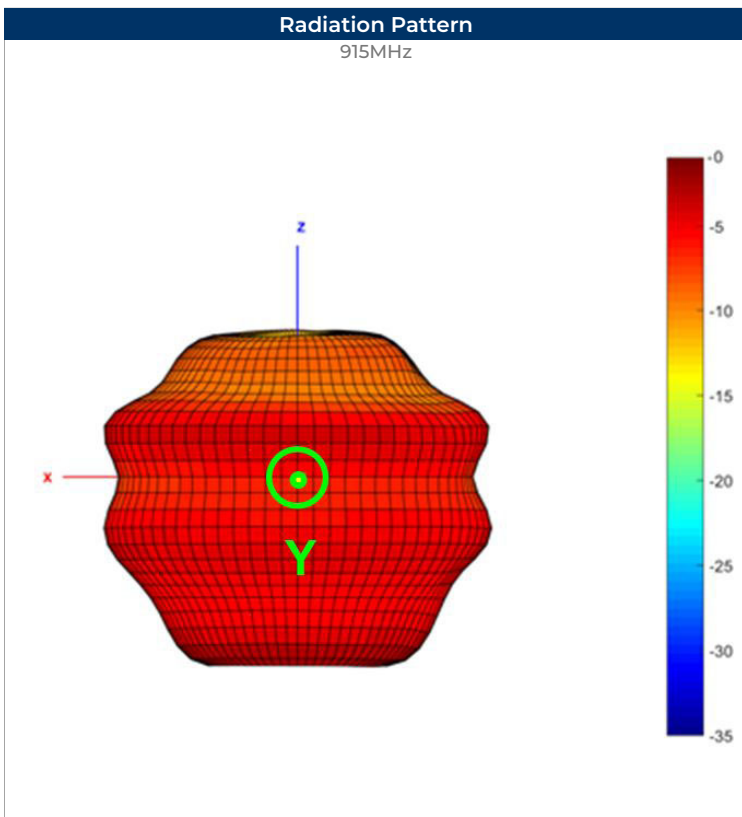
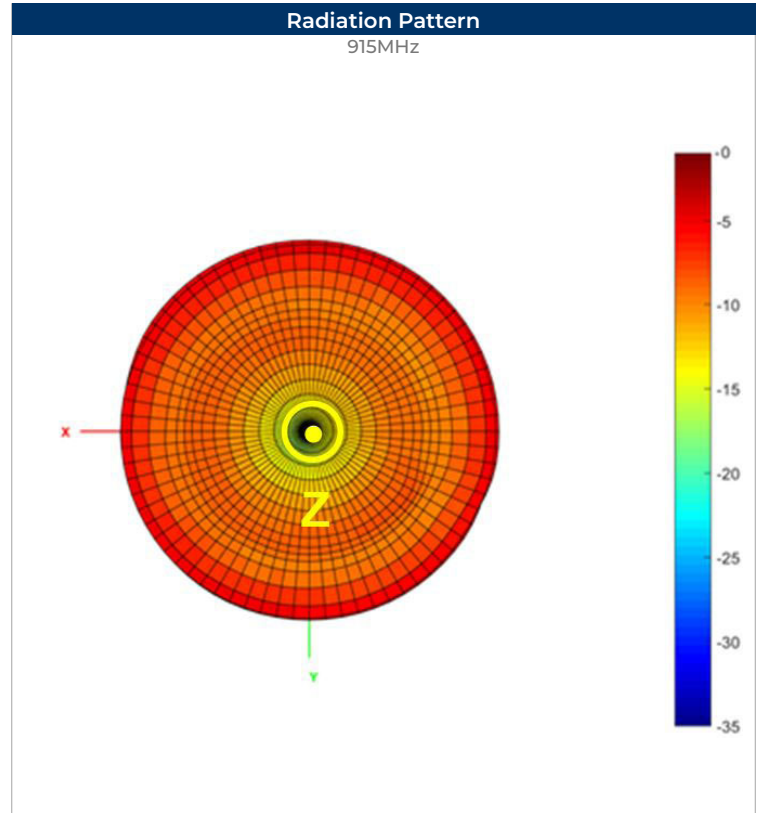
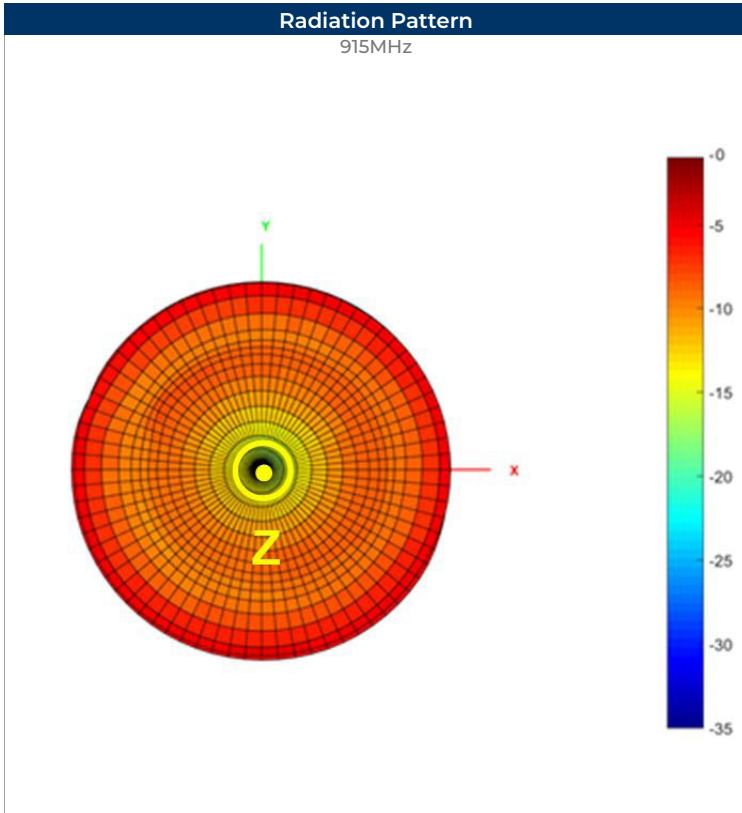


System Matching Circuit Components			
Location	Description	Vendor	Tolerance
1	6.8nH, (0402)	MURATA	±3%
2	1.5nH, (0402)	MURATA	±0.1nF
3	N/A	-	-
4 (Fine Tuning)	0.4pF, (0402)	MURATA	±0.05pF
5 (Fine Tuning)	8.2nH, (0402)	MURATA	±5%



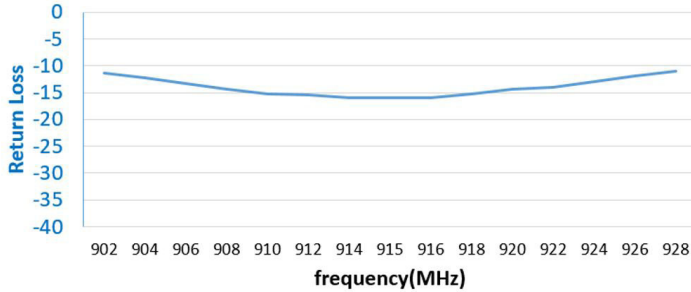
For these suggested values for the matching and tuning of components, the average frequency will be 915MHz on a standard 80 x 40mm<sup>2</sup> Evaluation board.

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



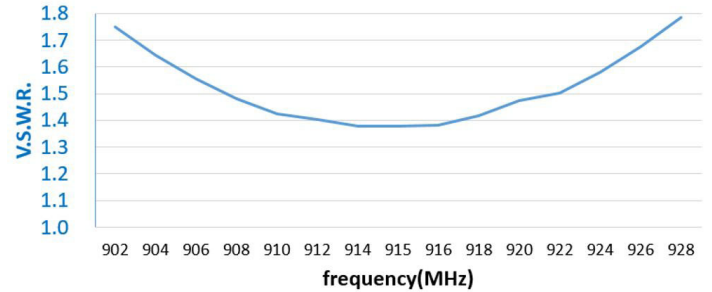
**Electrical Test**

Return Loss



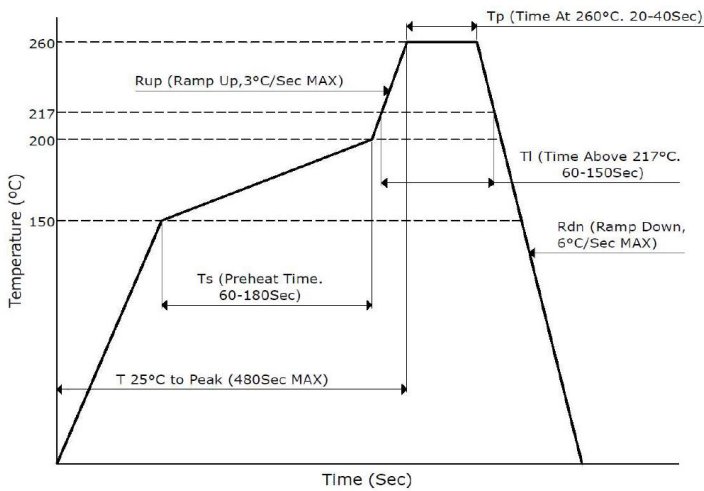
**Electrical Test**

VSWR



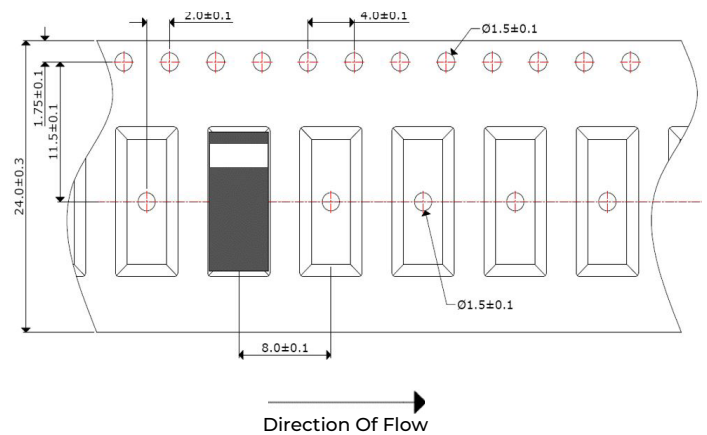
**Soldering Conditions**

Typical Soldering Profile For Lead-Free Process



**Packaging - Tape And Reel**

3500Pcs / 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.