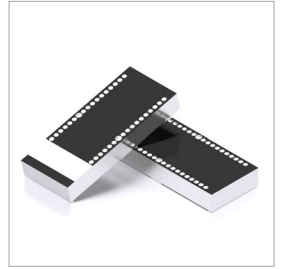


Features

- ISM
- Chip Type
- Stable And Reliable Performance
- 863-870MHz
- 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 12A4A1G IS B5

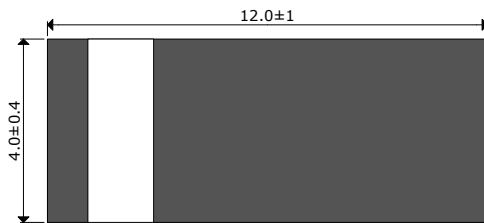


* Where letters denote decimal location (A=0, B=1, C=2, etc.); e.g. B5=0.15, 3A5=3.05, 9A=9.0

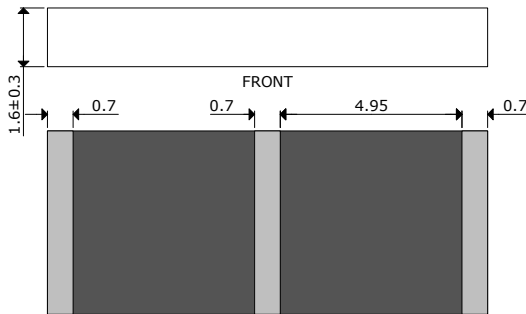
Electrical Parameters	Units	Minimum	Typical	Maximum	Remarks
Frequency Band	MHz	863		870	
Impedance	Ω		50		
Polarization			Linear		
Peak Gain	dBi		-0.6		At 868MHz
Efficiency	%		35.3		At 868MHz
VSWR				2	At Center Frequency
Operating Temperature	C	-40		85	

Outline Drawing

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



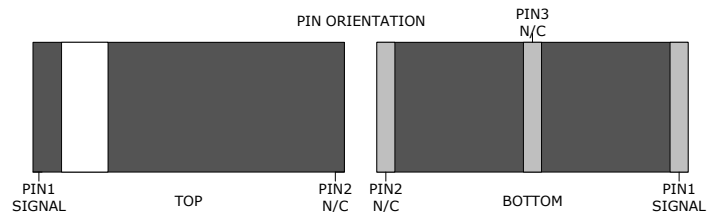
TOP



BOTTOM

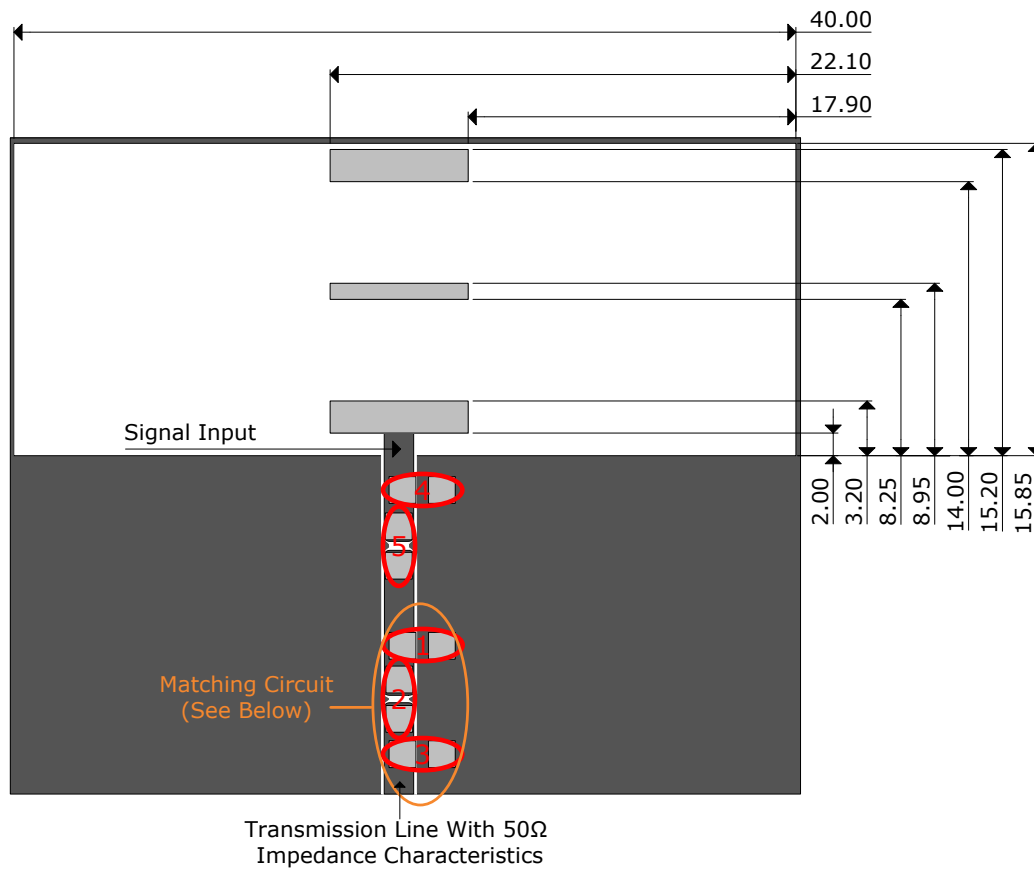


SIDE



Recommended Land Pattern & Frequency Tuning Scenario Circuit

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

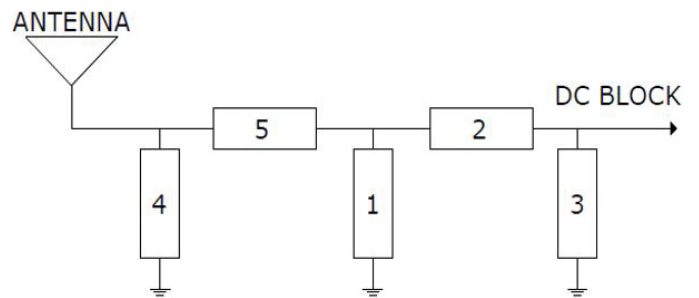


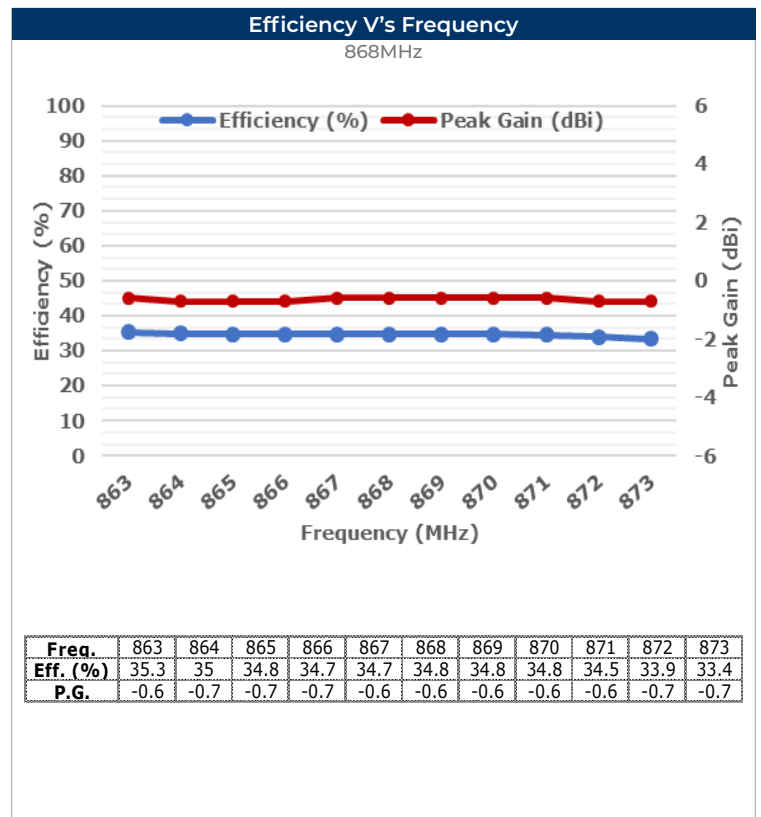
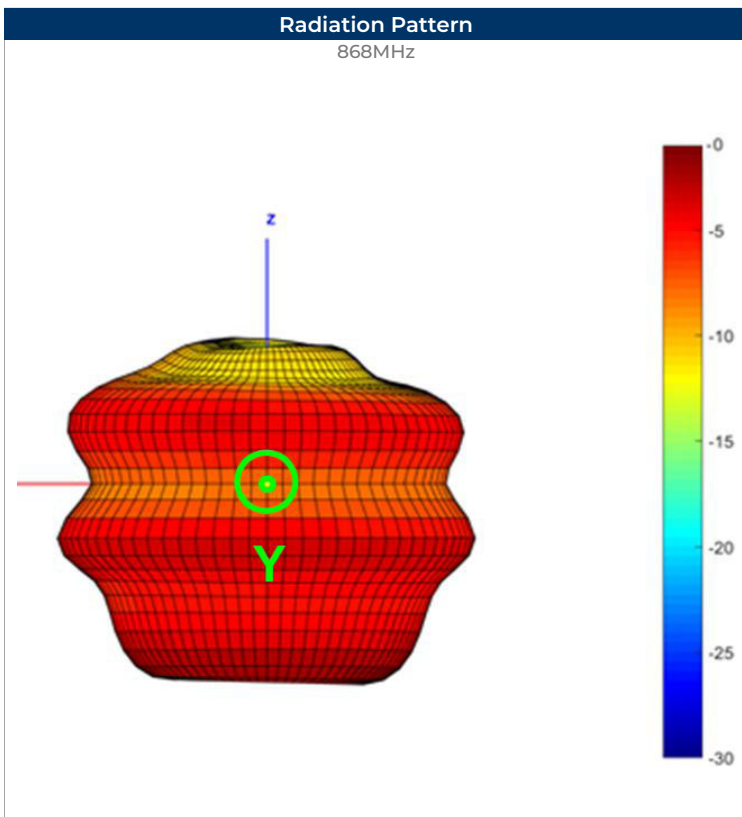
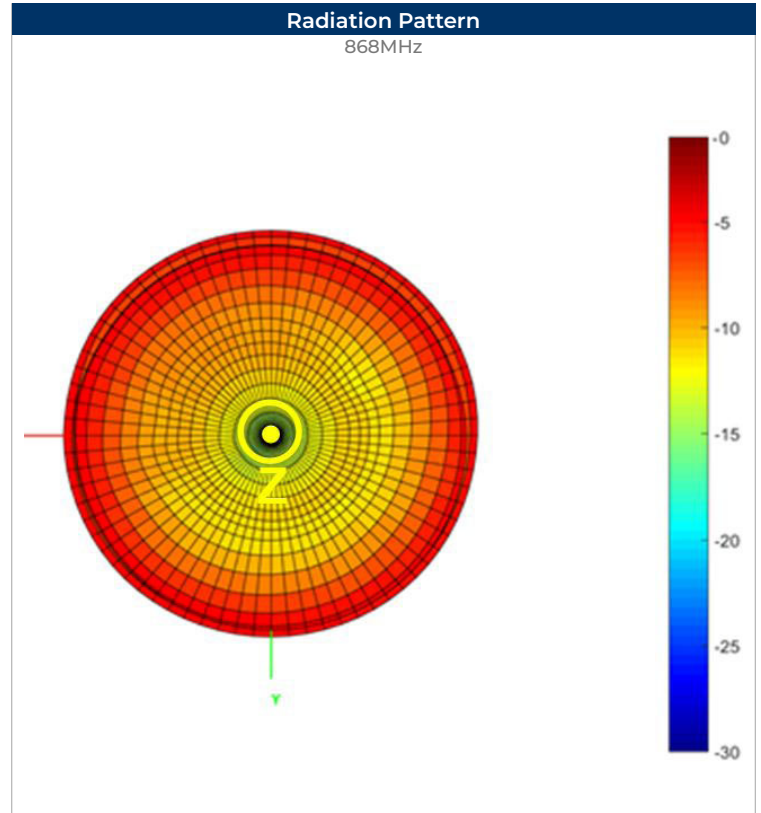
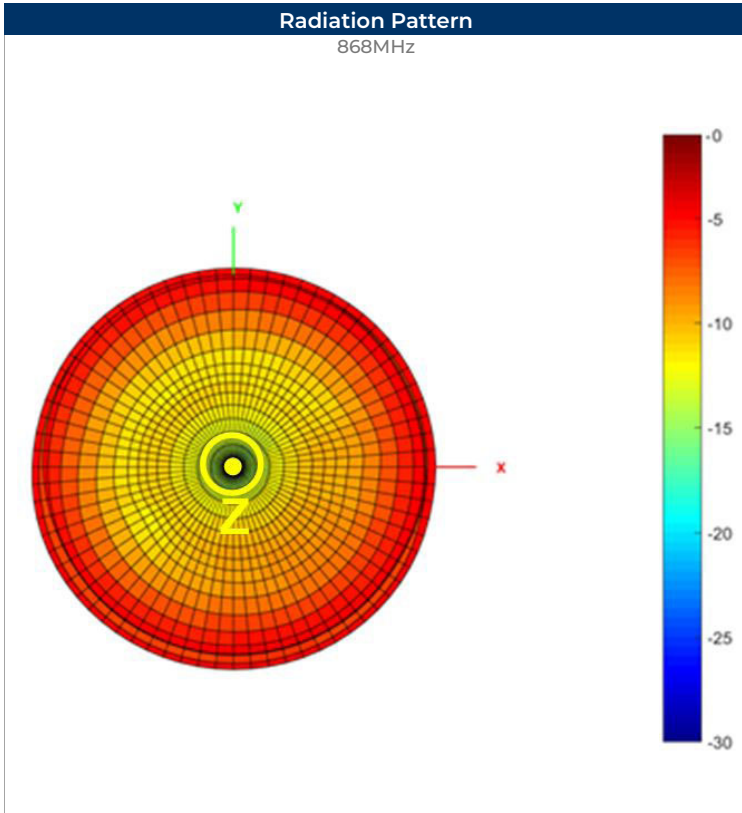
System Matching Circuit Components

Location	Description	Vendor	Tolerance
1	1.8pF, (0402)	MURATA	±0.05pF
2	0Ω, (0402)	-	-
3	N/A	-	-
4 (Fine Tuning)	N/A	-	-
5 (Fine Tuning)	8.2nH, (0402)	MURATA	±5%

For these suggested values for the matching and tuning of components, the average frequency will be 868MHz on a standard 80 x 40mm² Evaluation board.

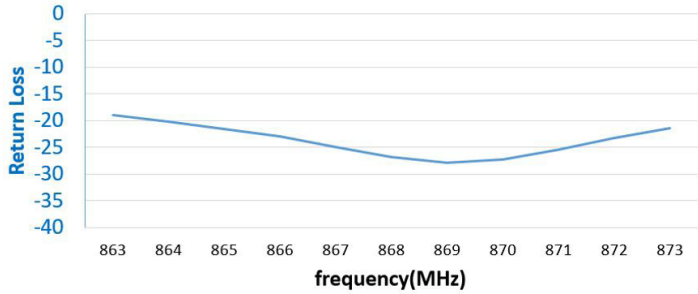
Please note, these are average reference values which may need to be changed when different circuit boards or manufacturers are used.





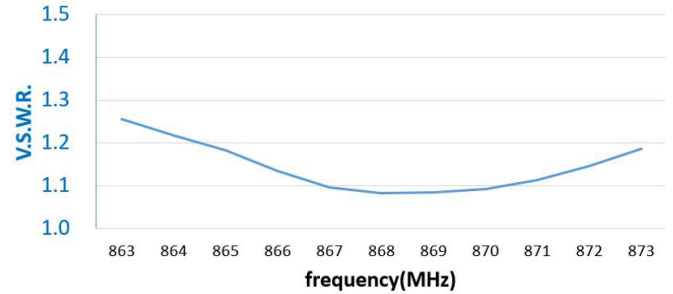
Electrical Test

Return Loss



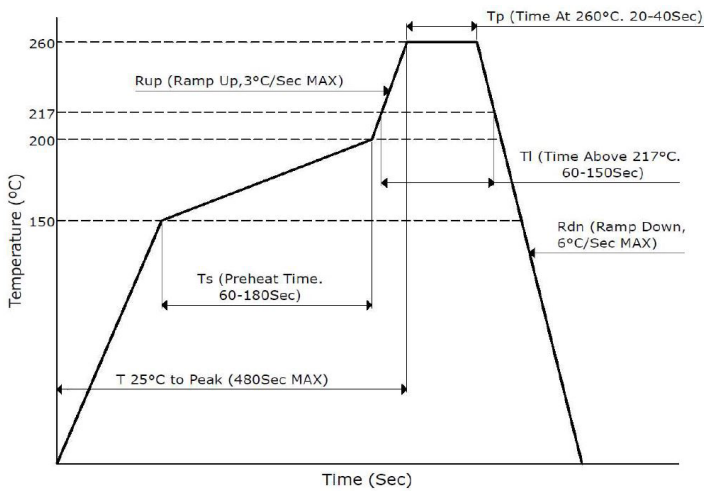
Electrical Test

VSWR



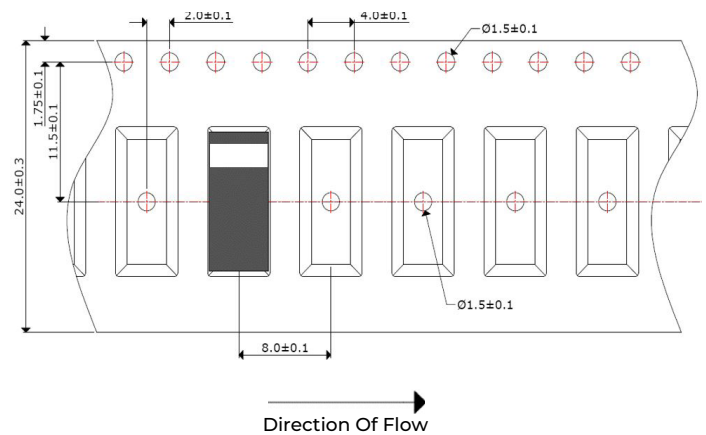
Soldering Conditions

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.