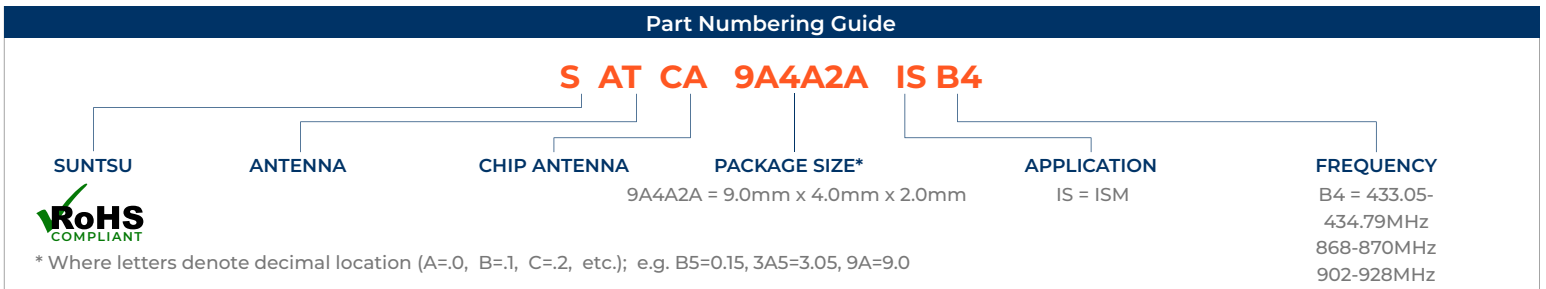
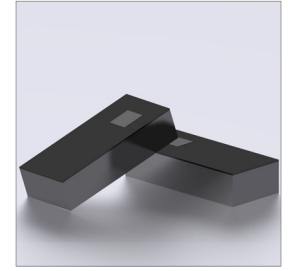


Features
<ul style="list-style-type: none"> ISM Chip Type Stable And Reliable Performance 433.05-434.79MHz, 863-870MHz & 902-928MHz SMT Process Compatible

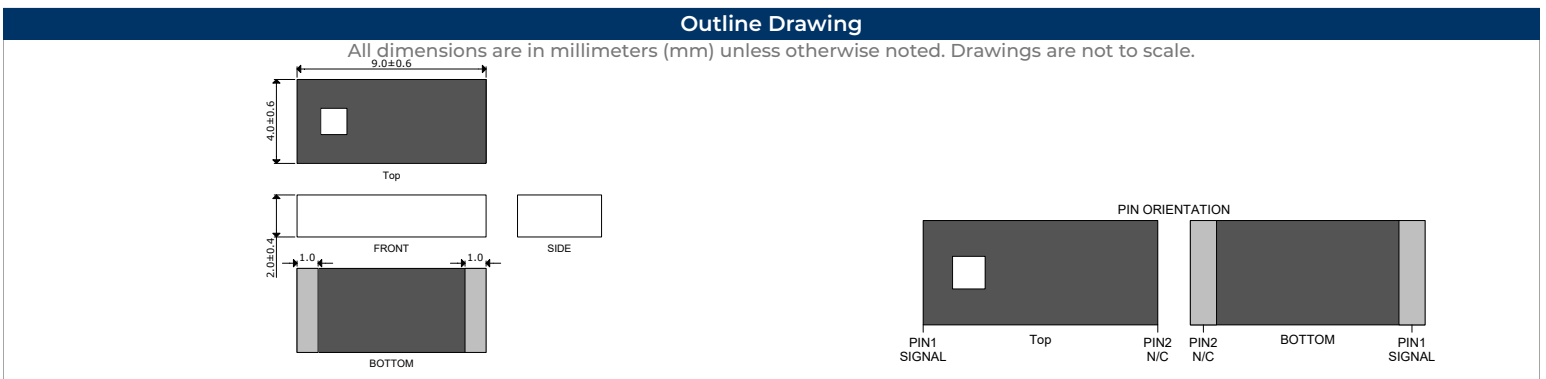
Applications
<ul style="list-style-type: none"> ISM 433/868/915 Band Short Range Devices IOT Applications Wireless Alarm and Security Systems Machine To Machine Communication



Electrical Parameters	Units	Minimum	Typical	Maximum	Remarks
Frequency Band	MHz	433.05		434.79	
Impedance	Ω		50		
Polarization			Linear		
Peak Gain	dBi		N/A		At 433MHz
Efficiency	%		N/A		At 433MHz
VSWR				2	At Center Frequency
Operating Temperature	C	-40		85	

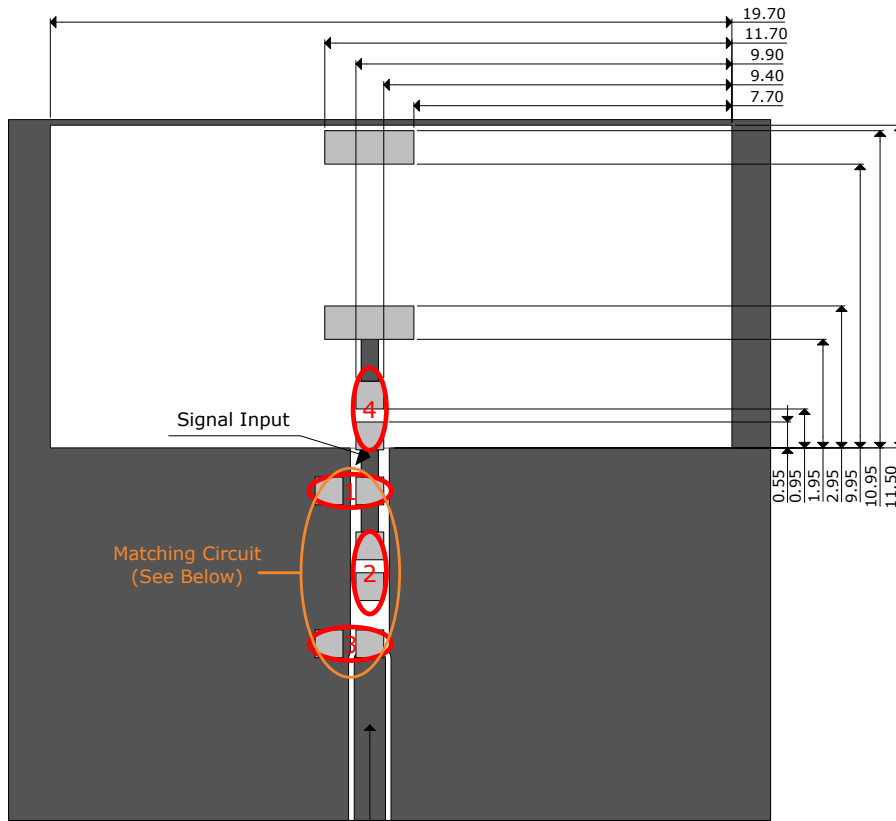
Electrical Parameters	Units	Minimum	Typical	Maximum	Remarks
Frequency Band	MHz	868		870	
Impedance	Ω		50		
Polarization			Linear		
Peak Gain	dBi		-5.6		At 868MHz
Efficiency	%		13.9		At 868MHz
VSWR				2	At Center Frequency
Operating Temperature	C	-40		85	

Electrical Parameters	Units	Minimum	Typical	Maximum	Remarks
Frequency Band	MHz	902		928	
Impedance	Ω		50		
Polarization			Linear		
Peak Gain	dBi		-2.9		At 915MHz
Efficiency	%		18		At 915MHz
VSWR				2	At Center Frequency
Operating Temperature	C	-40		85	



Recommended Land Pattern & Frequency Tuning Scenario Circuit

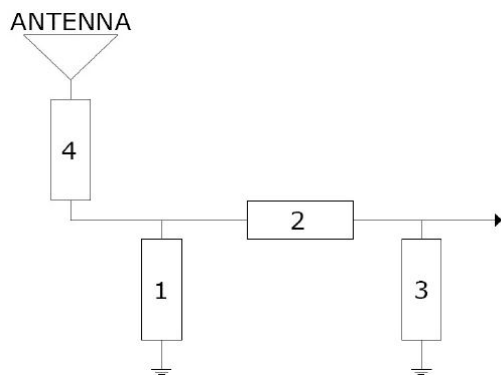
All dimensions are in millimeters (mm) unless otherwise noted. Drawings are not to scale.



Transmission Line With 50Ω Impedance Characteristics

For these suggested values for the matching and tuning of components, the average frequency will be around 433MHz or 868MHz or 915MHz on a standard 51.5 x 20mm² 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 For 433MHz Band

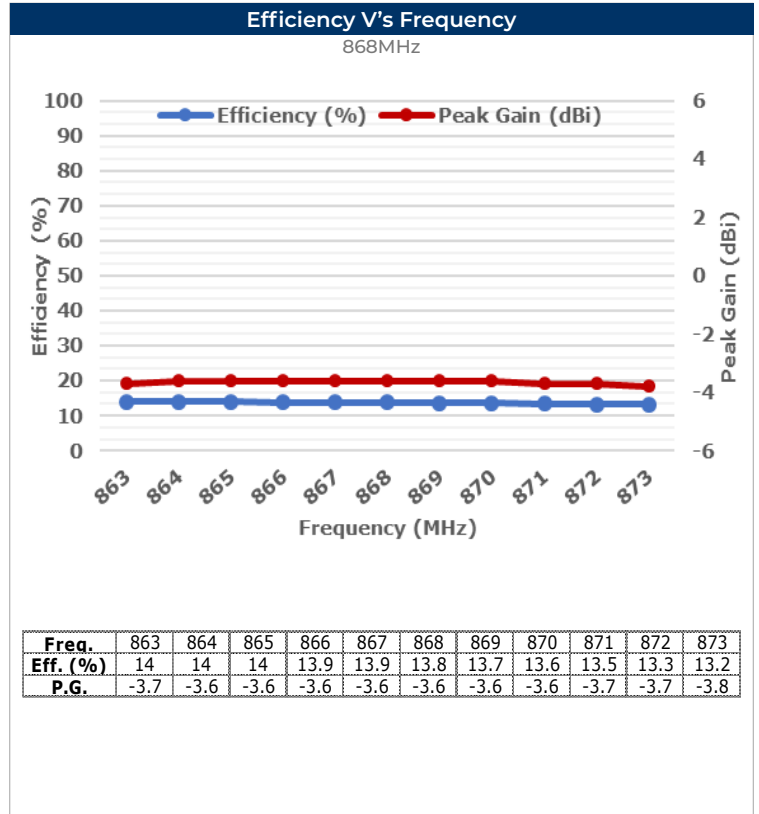
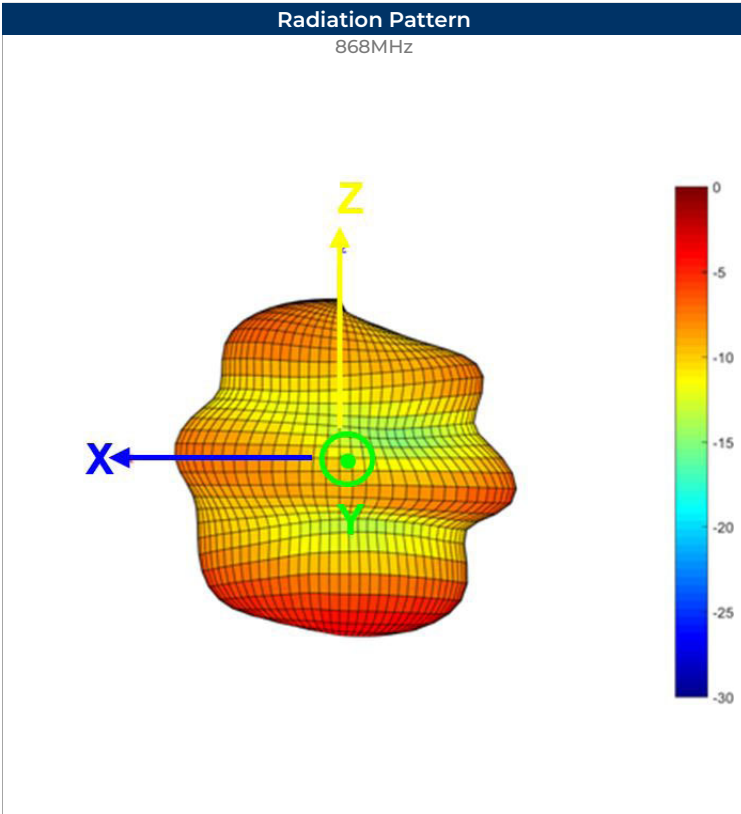
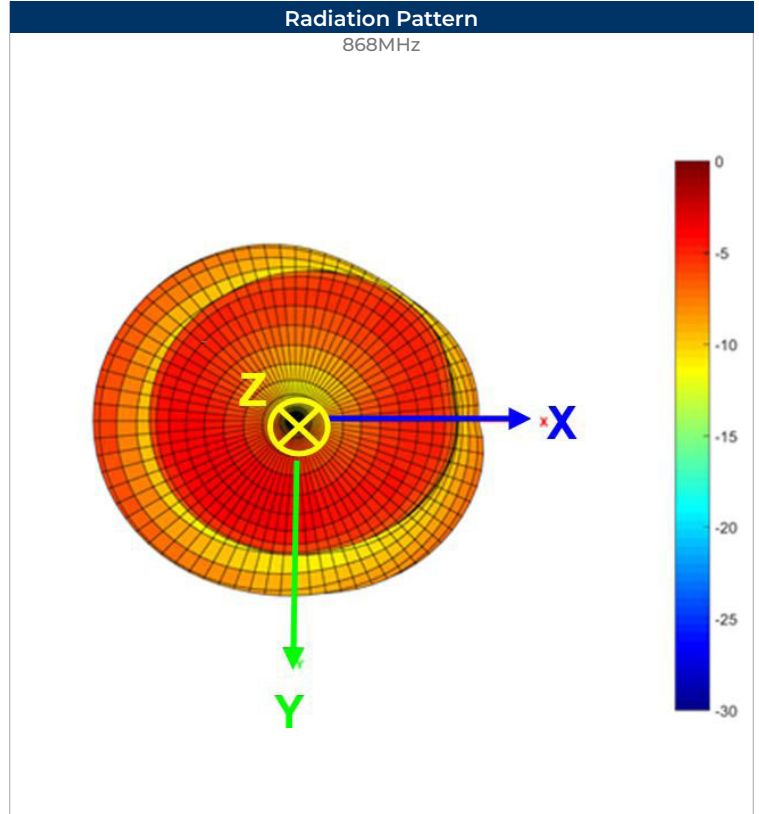
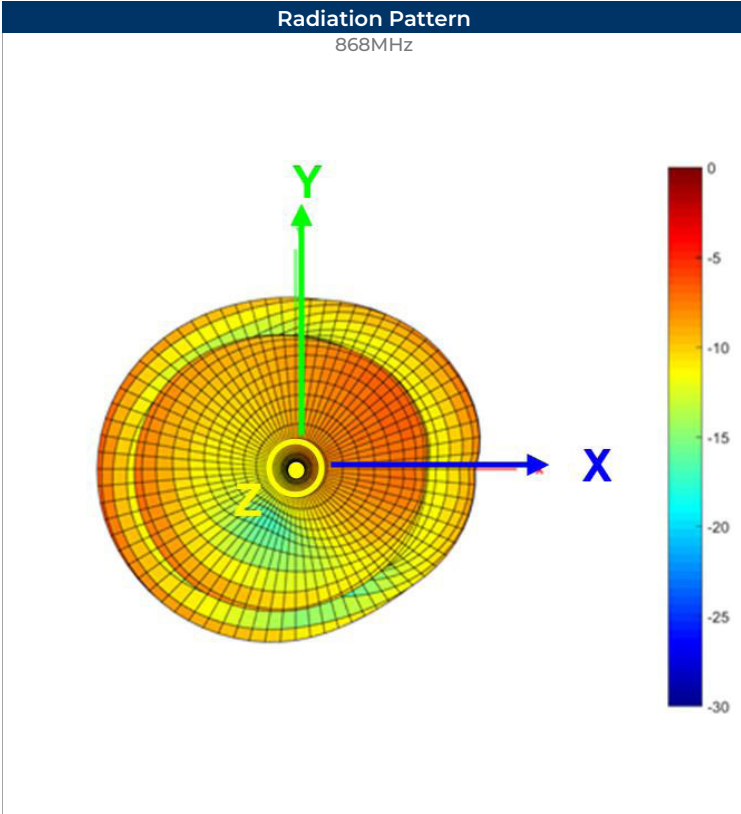
Location	Description	Vendor	Tolerance
1	8.2nH, (0402)	MURATA	±5%
2	39pF, (0402)	MURATA	±3%
3	2.2pF, (0402)	MURATA	±0.05pF
4 (Fine Tuning)	180nH, (0402)	MURATA	±5%

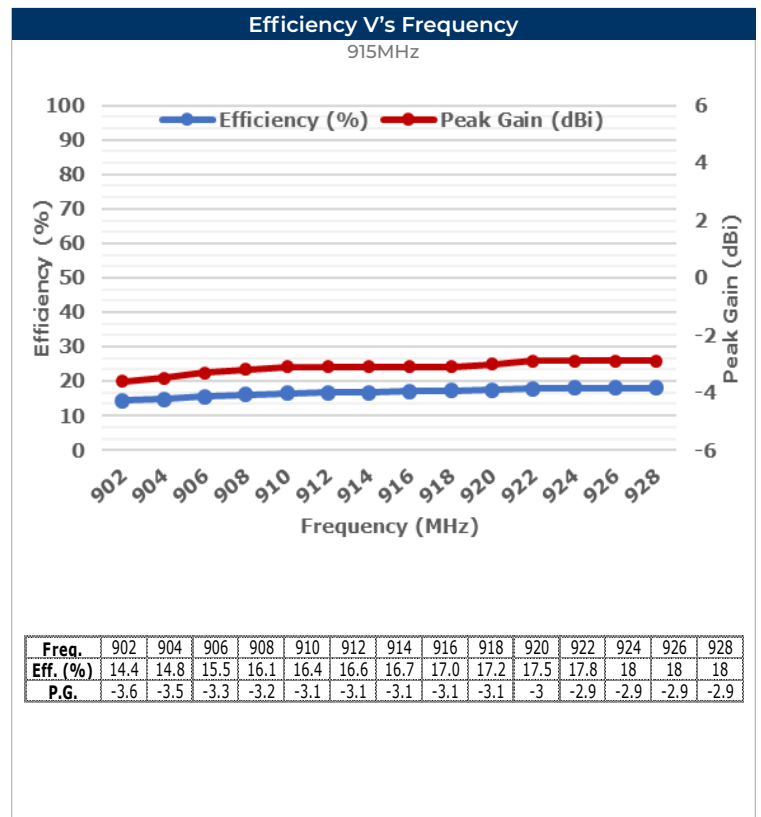
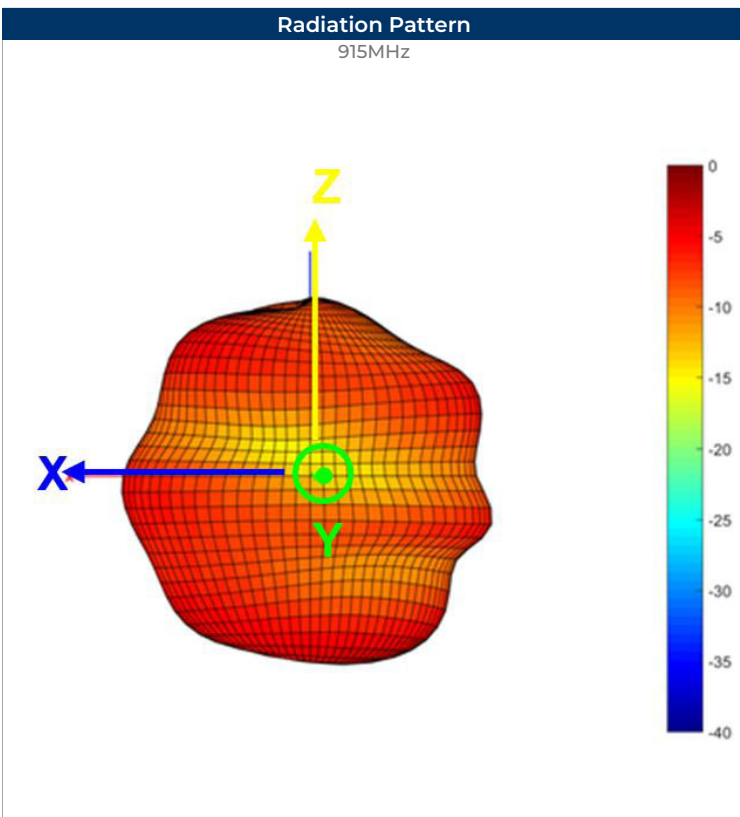
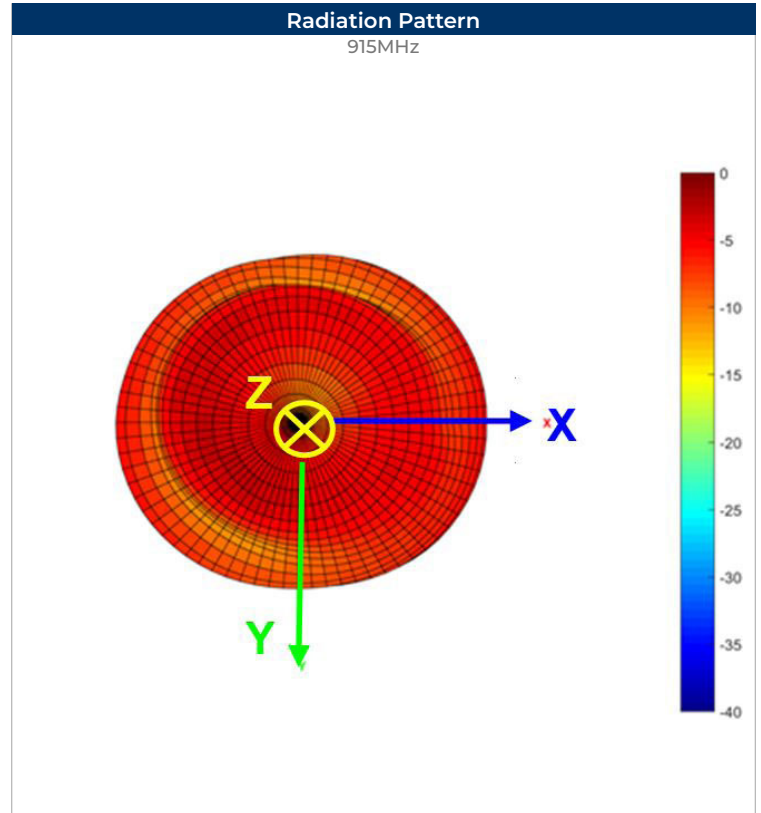
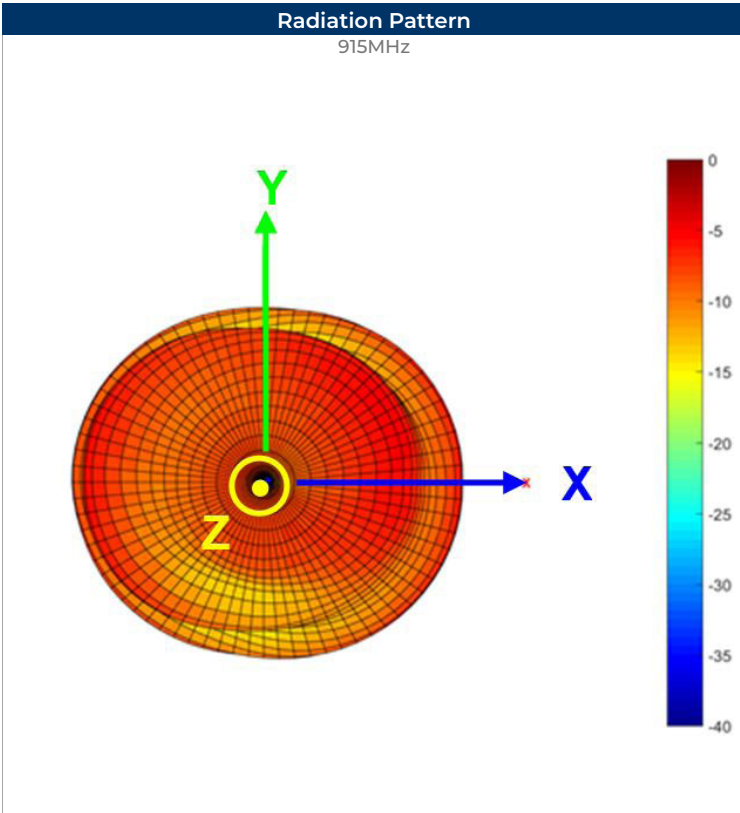
System Matching Circuit Components For 868MHz Band

Location	Description	Vendor	Tolerance
1	3.6pF, (0402)	MURATA	±0.05pF
2	5.6nH, (0402)	MURATA	±5%
3	1pF, (0402)	MURATA	±0.05pF
4 (Fine Tuning)	39nH, (0402)	MURATA	±5%

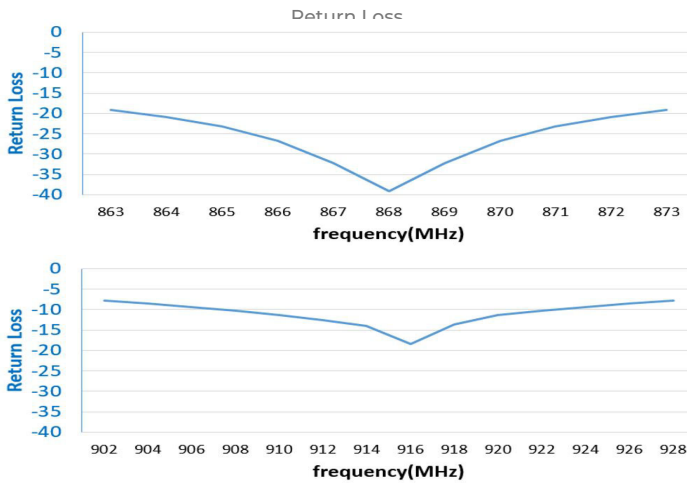
System Matching Circuit Components For 915MHz Band

Location	Description	Vendor	Tolerance
1	N/A	-	-
2	18nH, (0402)	MURATA	±5%
3	3.3pF, (0402)	MURATA	±0.05pF
4 (Fine Tuning)	33nH, (0402)	MURATA	±5%

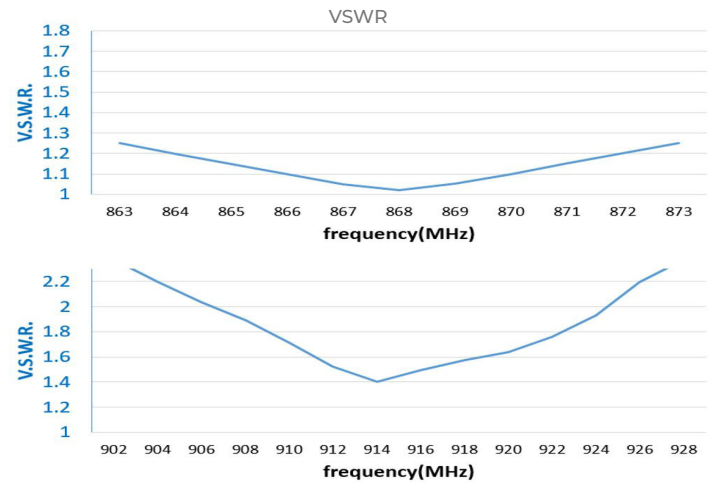




Electrical Test

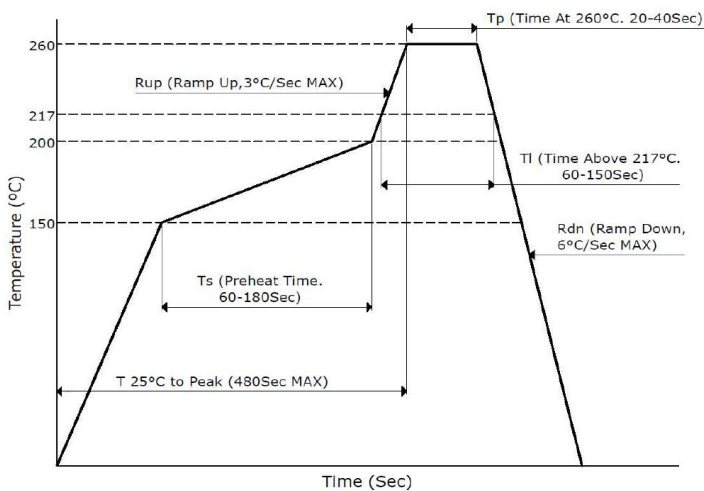


Electrical Test



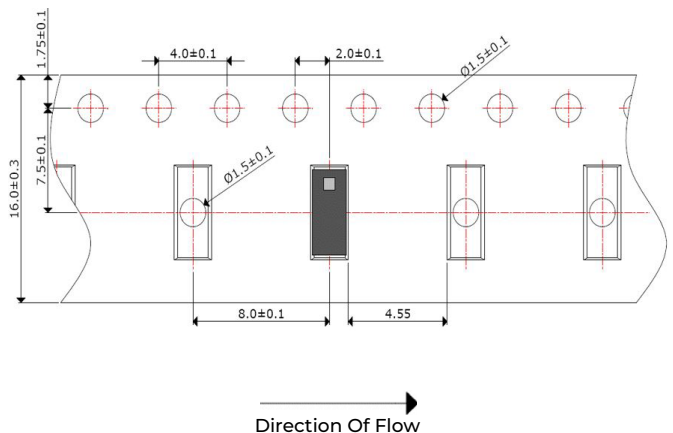
Soldering Conditions

Typical Soldering Profile For Lead-Free Process



Packaging - Tape And Reel

3,000Pcs / 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.