

Features
<ul style="list-style-type: none"> GSM/3G Chip Type Stable And Reliable Performance 824-960MHz & 1710-2170MHz SMT Process Compatible

Applications
<ul style="list-style-type: none"> GSM/3G Position Routers & Tracking Systems Femto Base Stations Machine To Machine Communication Smart Outdoor Devices Mobile Systems



Part Numbering Guide

S AT CA 40E1013C CE B4



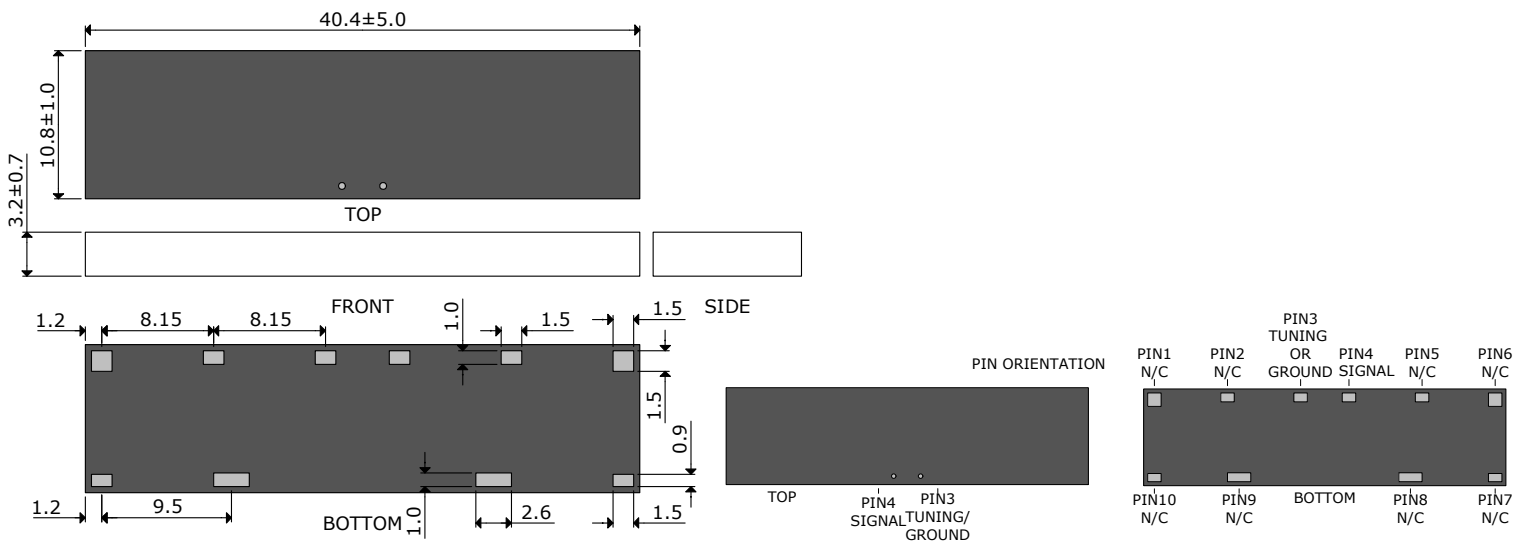
* Where letters denote decimal location (A=0, B=1, C=2, etc.); e.g. B5=0.15, 3A5=3.05, 9A=9.0

Electrical Parameters	Units	Minimum	Typical	Maximum	Remarks
Frequency Band	MHz	824		960	
Impedance	Ω		50		
Polarization			Linear		
Peak Gain	dBi		1.7		At 895MHz
Efficiency	%		80		At 895MHz
VSWR				3	At Center Frequency
Operating Temperature	C	-40		85	

Electrical Parameters	Units	Minimum	Typical	Maximum	Remarks
Frequency Band	MHz	1710		2170	
Impedance	Ω		50		
Polarization			Linear		
Peak Gain	dBi		2.9		At 1950MHz
Efficiency	%		73		At 1950MHz
VSWR				3	At Center Frequency
Operating Temperature	C	-40		85	

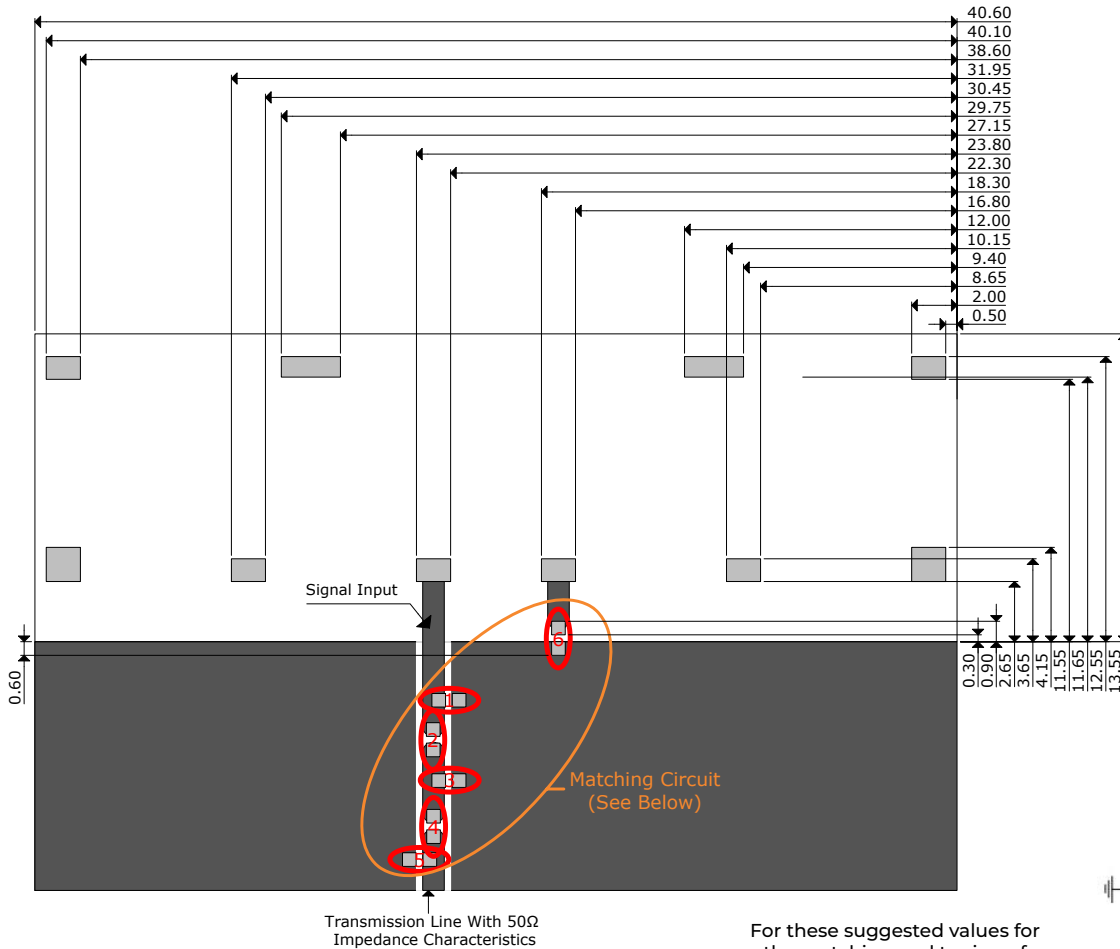
Outline Drawing

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



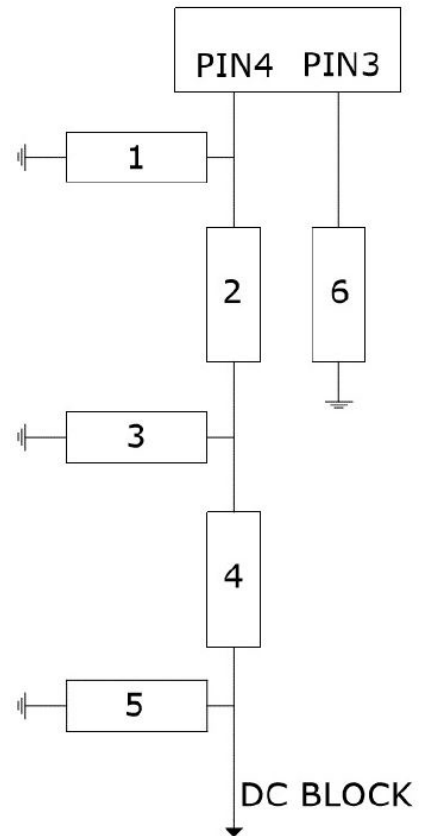
Recommended Land Pattern & Frequency Tuning Scenario Circuit

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



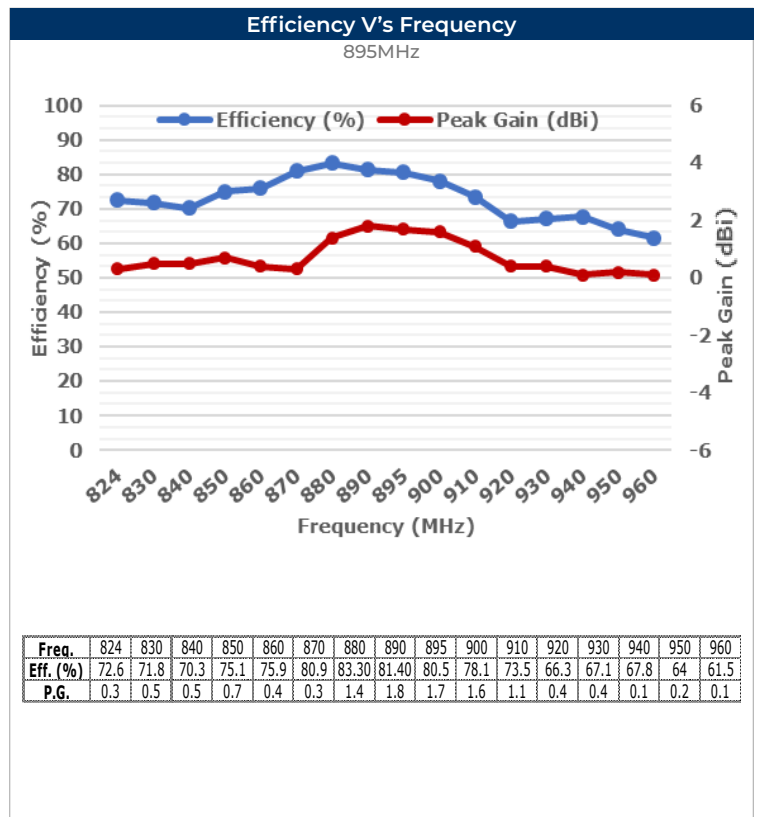
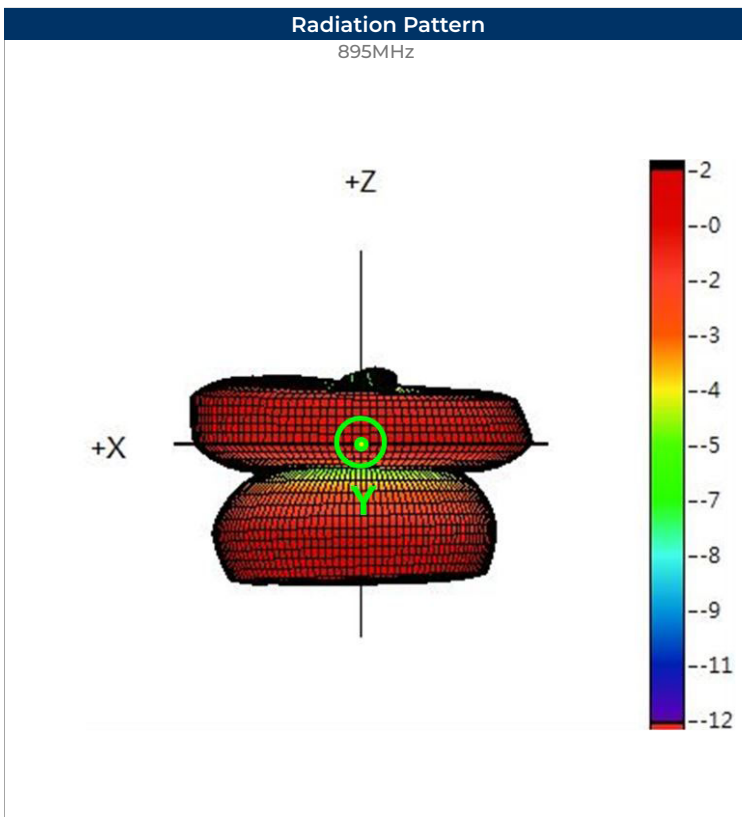
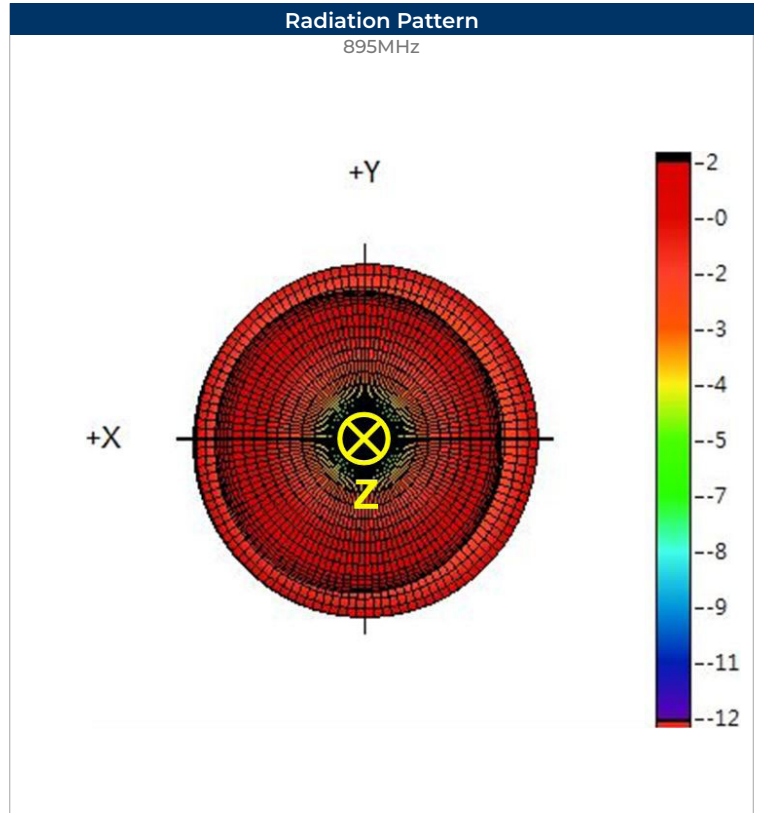
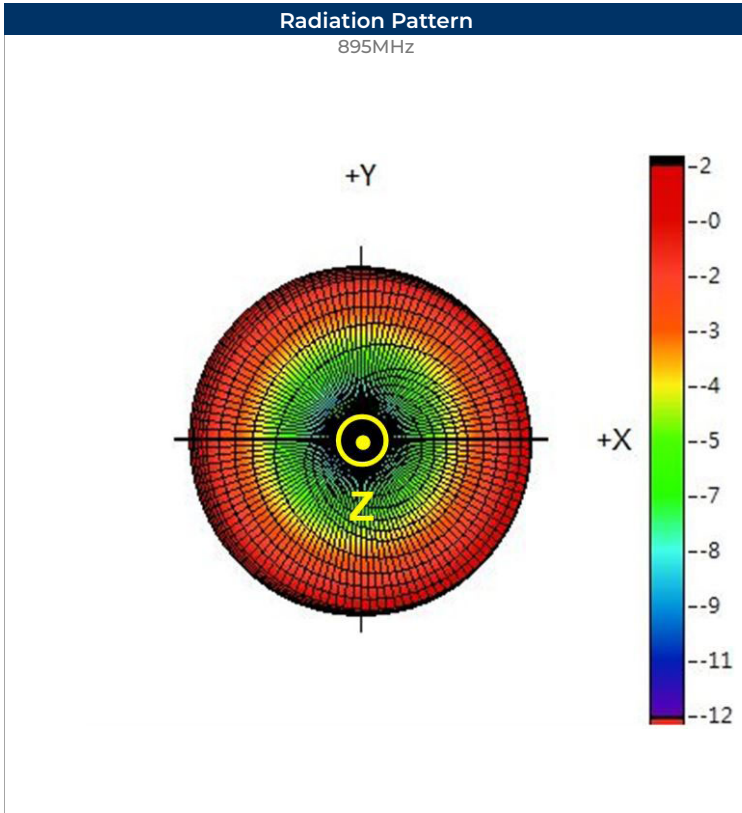
For these suggested values for the matching and tuning of components, the average frequency will be 824-960MHz & 1710-2170MHz on a standard 112.2 x 41.5mm² Evaluation board.

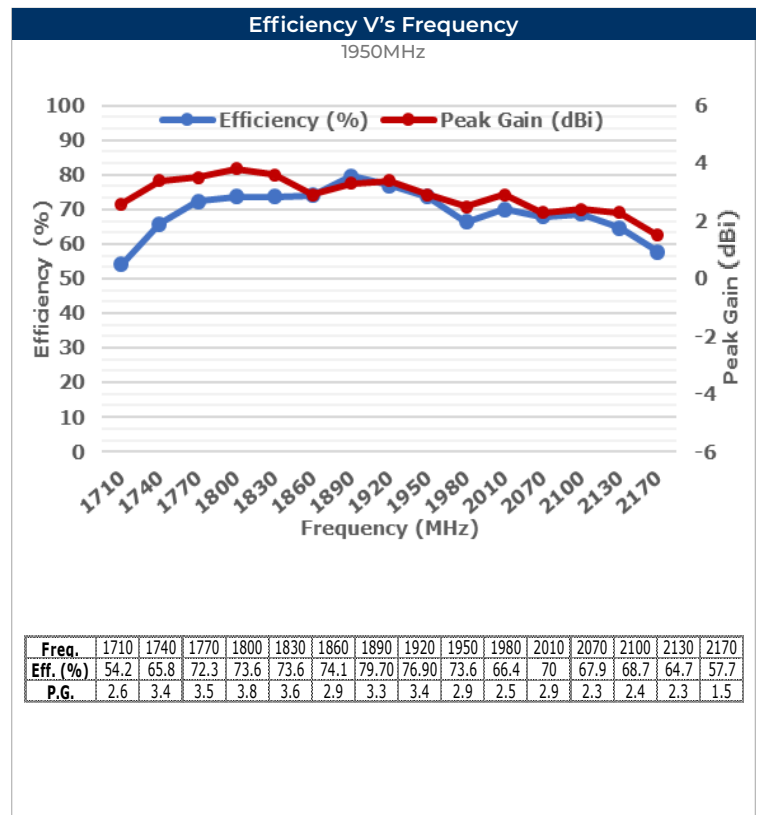
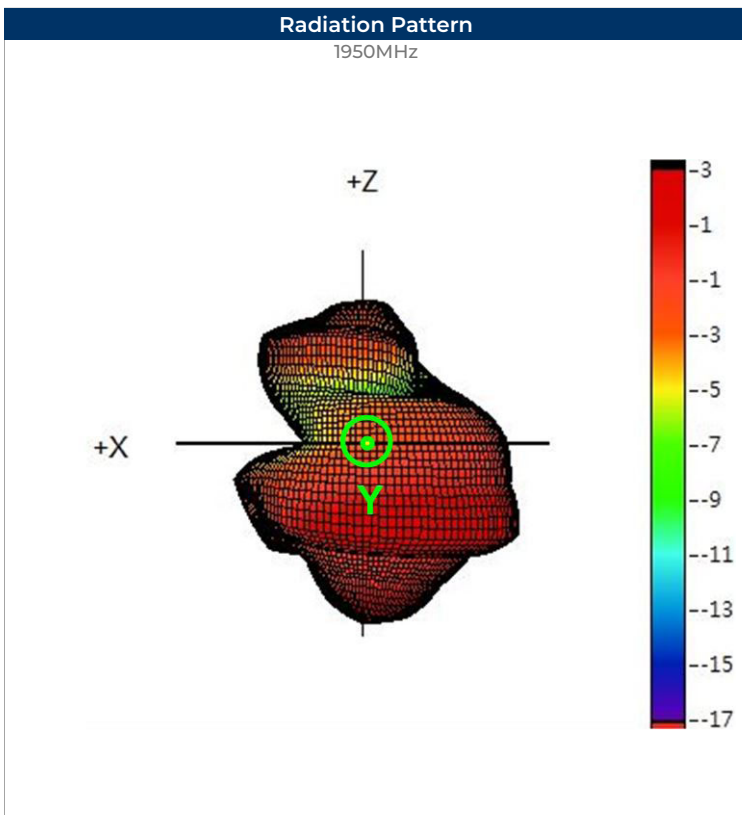
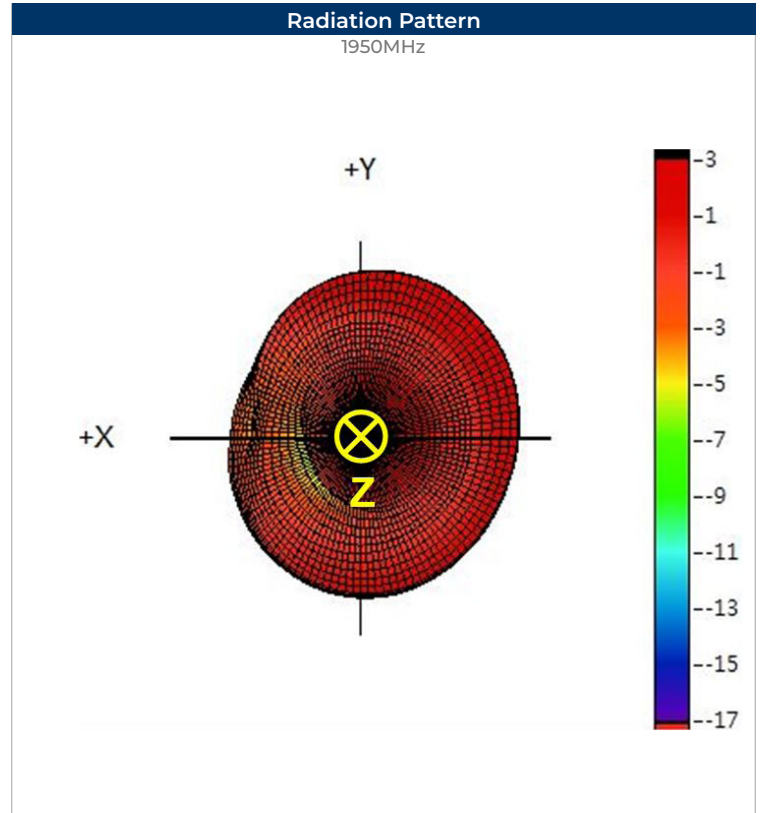
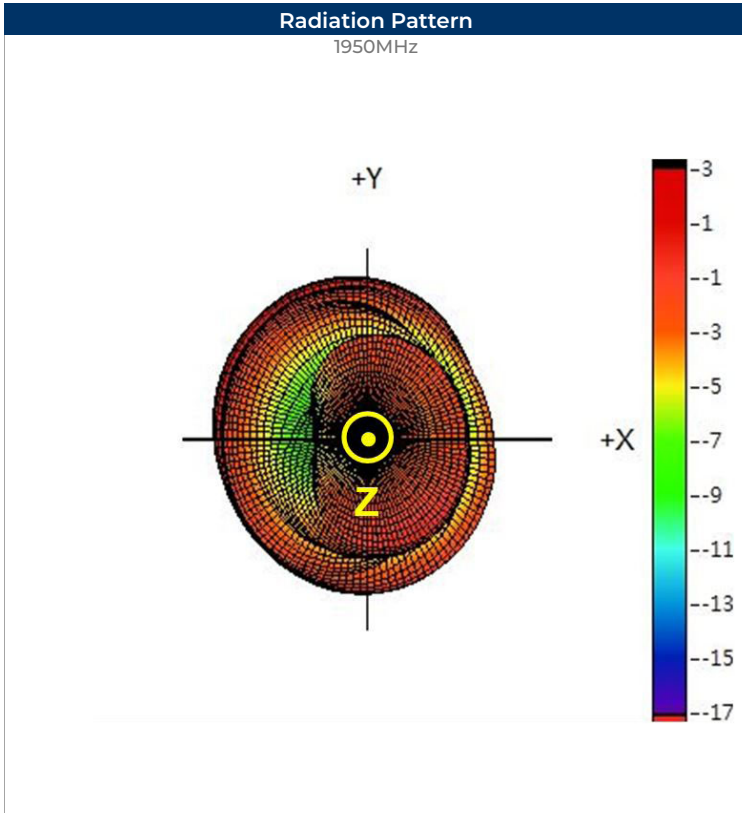
Please note, these are average reference values which may need to be changed when different circuit boards or manufactures are used.



System Matching Circuit Components

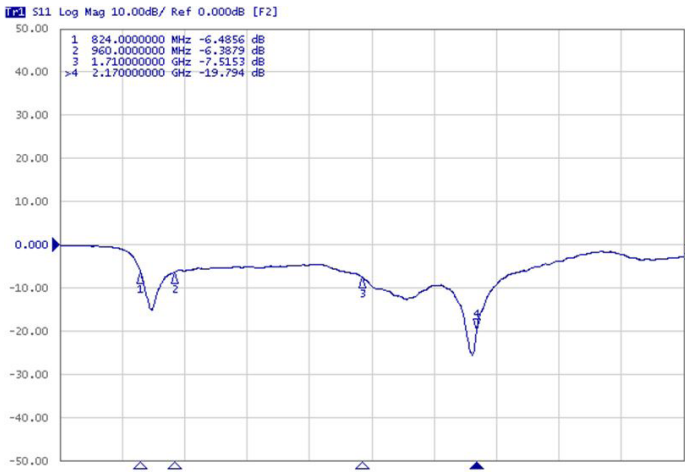
Location	Description	Vendor	Tolerance
1	N/A	-	-
2	0Ω, (0402)	-	-
3	N/A	-	-
4	0Ω, (0402)	-	-
5	N/A	-	-
6	1.8nH (0402)	MURATA	±0.1nH





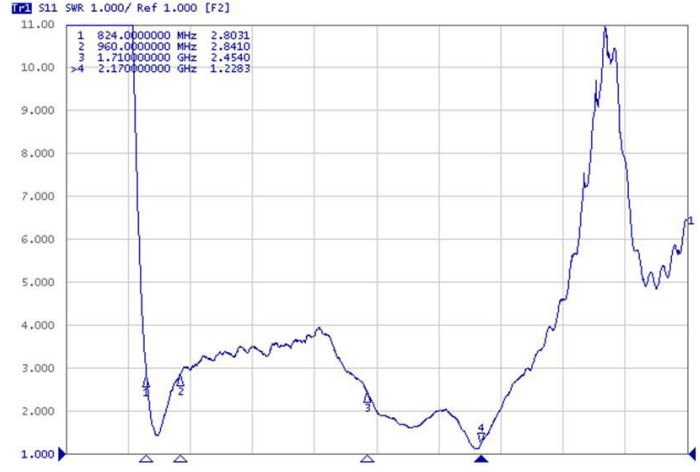
Electrical Test

Return Loss



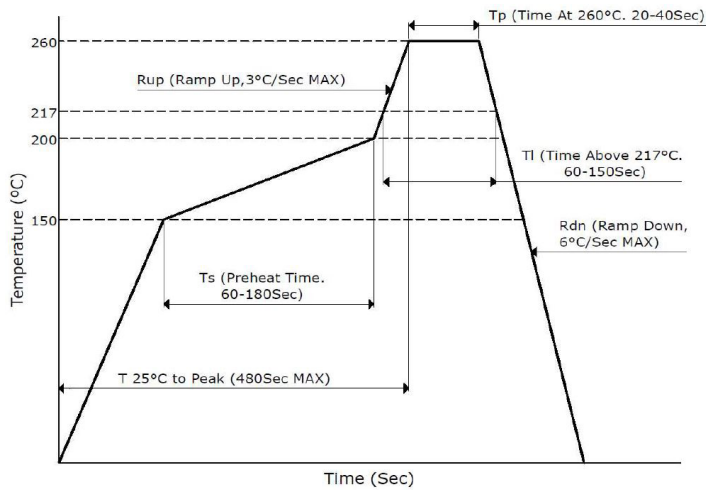
Electrical Test

VSWR



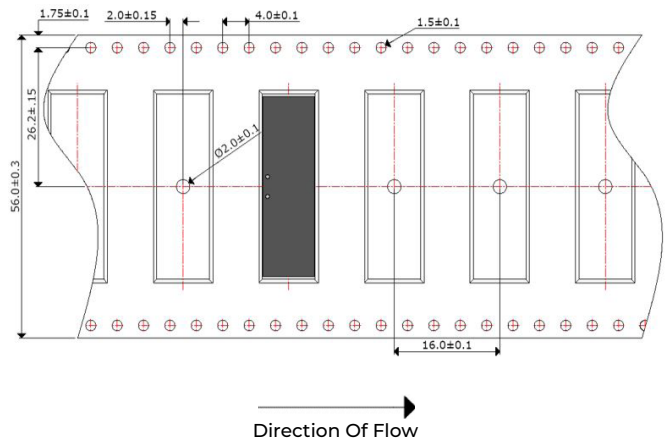
Soldering Conditions

Typical Soldering Profile For Lead-Free Process



Packaging - Tape And Reel

1000Pcs / 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.