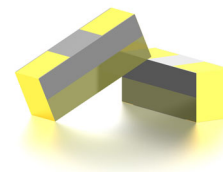


Features

- GPS
- Chip Type
- Stable And Reliable Performance
- 1575.42MHz
- SMT Process Compatible

Applications

- Navigation Systems
- Tracking Systems
- Hand-Held GPS Devices (PDA, Smart Phone, PND)
- Fleet Management
- Telematics



Part Numbering Guide

S AT CA 10A3C3J GP B4

SUNTSU

ANTENNA

CHIP ANTENNA

PACKAGE SIZE*

10A3C3J = 10.0mm x 3.2mm x 3.9mm

APPLICATION

GP = GPS

FREQUENCY

B4 = 1575.42MHz

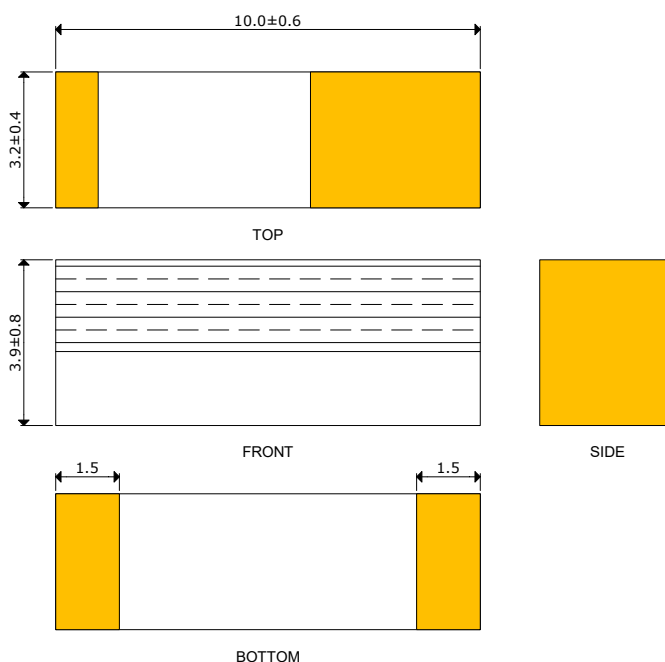


* Where letters denote decimal location (A=0, B=1, C=2, etc.); e.g. B5=0.15, 3A5=3.05, 9A=9.0

Electrical Parameters	Units	Minimum	Typical	Maximum	Remarks
Frequency Band	MHz		1575.42		
Impedence	Ω		50		
Polarization			Linear		
Peak Gain	dBi		3		At 1575MHz
Efficiency	%		83		At 1575MHz
VSWR				2	At Center Frequency
Operating Temperature	C	-40		85	

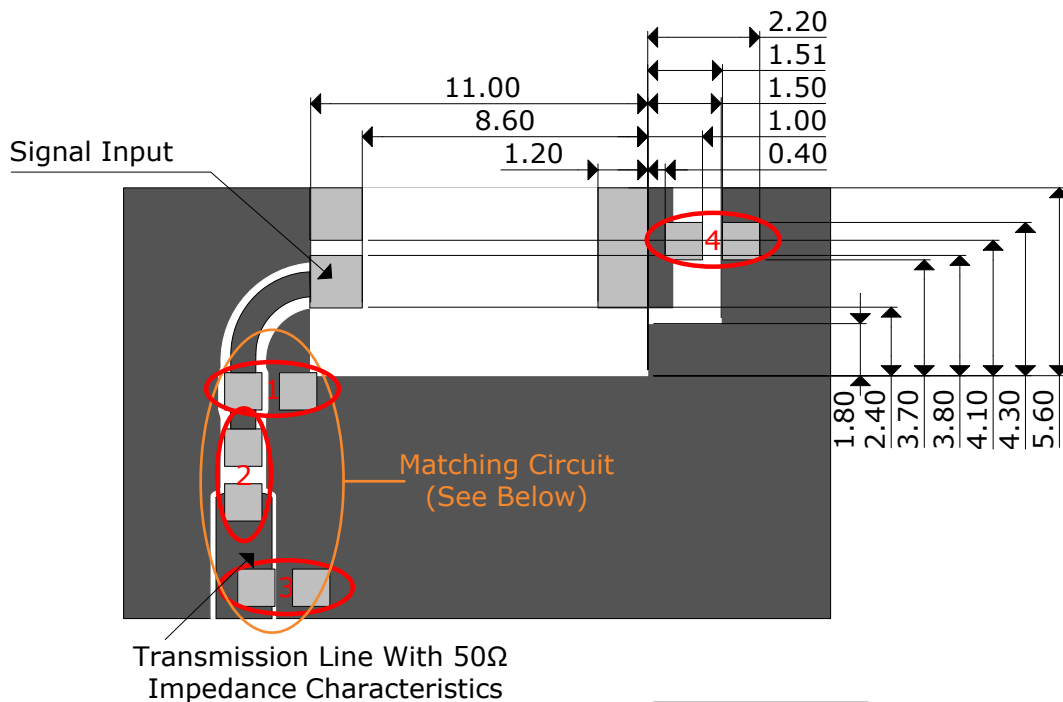
Outline Drawing

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



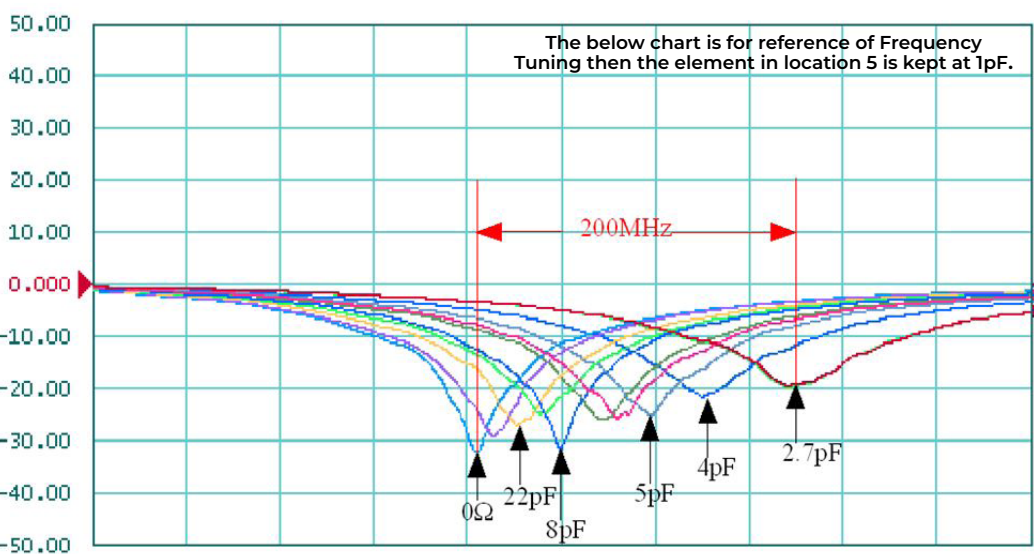
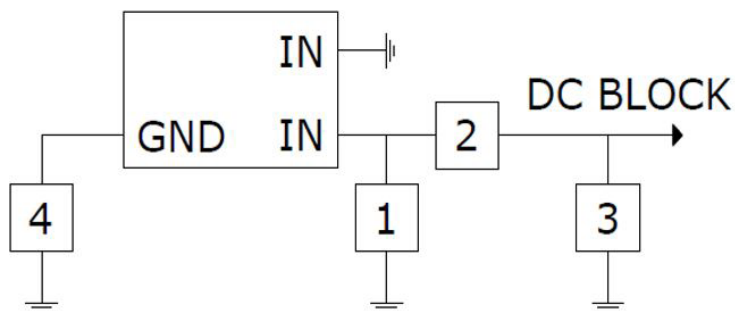
Recommended Land Pattern & Frequency Tuning Scenario Circuit

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	TDK (0402)	-
2	4.7pF	TDK (0402)	-
3	N/A	-	-
4 (Fine Tuning)	8pF, (0402)	TDK (0402)	-

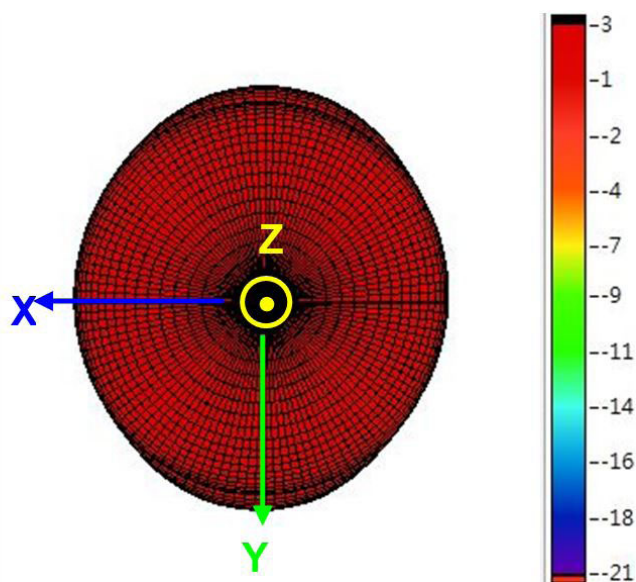


For these suggested values for the matching and tuning of components, the average frequency will be around 1575MHz on a standard 80 x 40mm² Evaluation board.

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

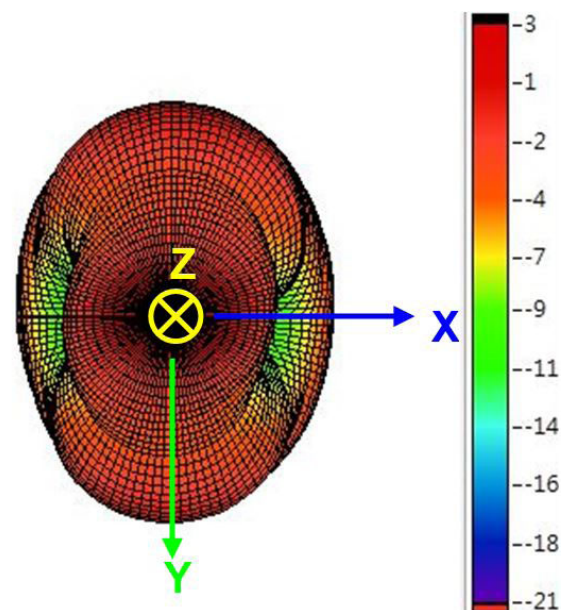
Radiation Pattern

1575MHz



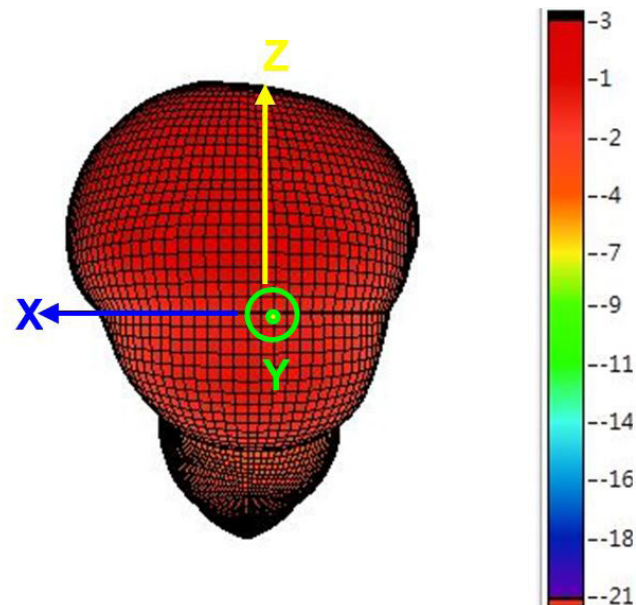
Radiation Pattern

1575MHz



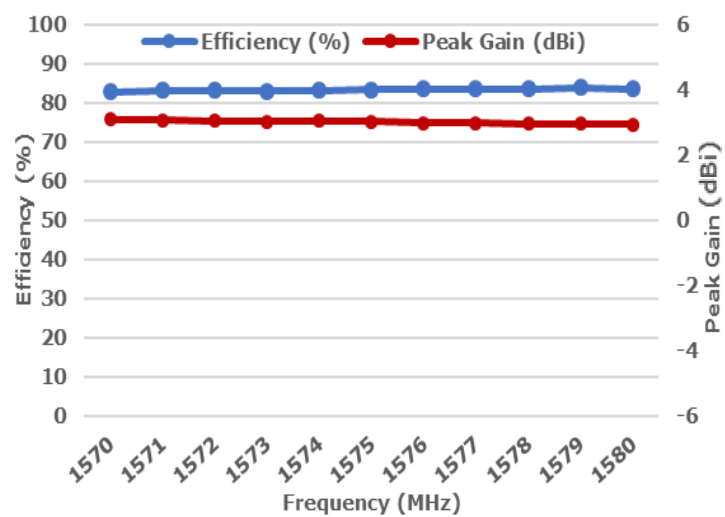
Radiation Pattern

1575MHz



Efficiency V's Frequency

1575MHz

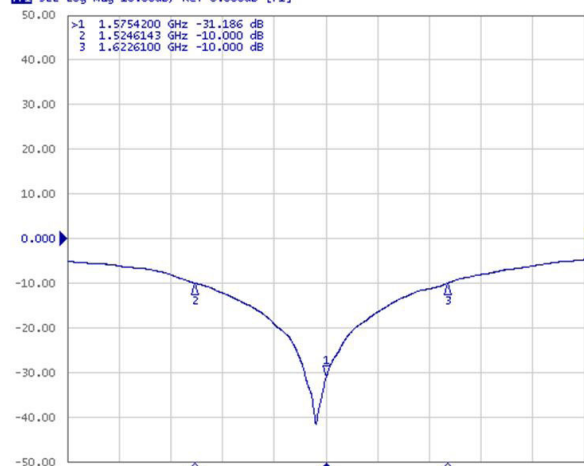


Freq.	1570	1571	1572	1573	1574	1575	1576	1577	1578	1579	1580
Eff. (%)	82.9	83.3	83.3	83.1	83.3	83.5	83.7	83.7	83.7	84	83.7
P.G.	3.09	3.08	3.06	3.03	3.04	3.02	2.99	2.98	2.97	2.96	2.95

Electrical Test

Return Loss

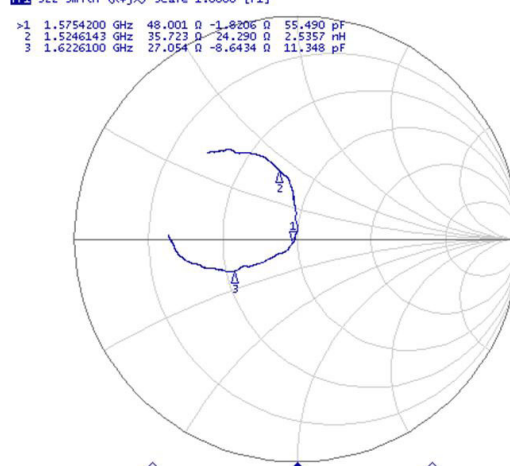
[F1] S22 Log Mag 10.00dB/ Ref 0.000dB [F1]



Electrical Test

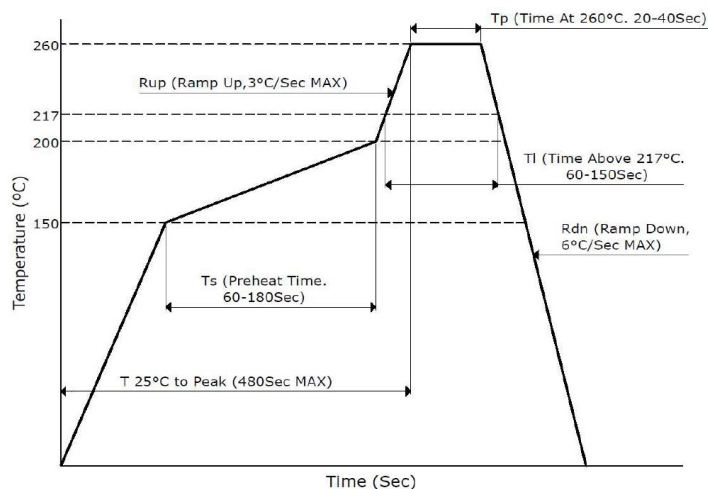
Smith Chart

[F1] S22 Smith (R+jX) Scale 1.0000 [F1]



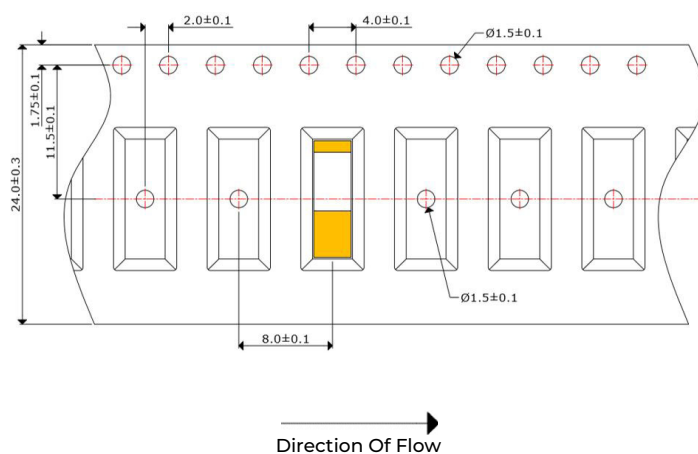
Soldering Conditions

Typical Soldering Profile For Lead-Free Process



Packaging - Tape And Reel

2000Pcs / 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.