

FEATURES	APPLICATIONS
<ul style="list-style-type: none"> - GPS & GLONASS - Low Temperature Coefficient Of Frequency - Stable And Reliable Performance - 1575.42MHz & 1598-1606MHz - Compact Size With Efficient Reception 	<ul style="list-style-type: none"> - Satellite Navigation And Tracking Systems - Vehicle/Vessel Management Systems - Base Station Of Cellular Phone Systems - Smart Hand Held Devices - For Use With a 40mm x 40mm Ground Plate



PART NUMBERING GUIDE

SUNTSU → S AT PA - 18F18F4A - GP B9 ← FREQUENCY BAND (MHz)

ANTENNA → AT PA APPLICATION → GP B9

PATCH ANTENNA → 18F18F4A * PACKAGE SIZE → 18F18F4A

B9: 1575.42MHz Using a 40x40mm
1598-1606MHz Ground Plate

* PACKAGE SIZE
 18F18F4A: 18.5mm x 18.5mm x 4.0mm

* Where letters denote decimal location A=.0, B=.1, C=.2, etc. Ex: B5=0.15, 3A5=3.05, 9A=9.0
 To customize your parameters, contact a Suntsu representative.

ELECTRICAL PARAMETERS (FOR GPS MODE)	UNITS	MIN.	TYP.	MAX	REMARKS
Frequency Band	MHz		1575.42		
Impedance	Ω		50		
Polarization			RHCP		
Gain @Zenith	dBi		0.9		At 1575.42MHz
Gain @ 10° Elevation			-6.4		At 1575.42MHz
Frequency Temperature Coefficient	ppm/°C			0 ±20	
VSWR				2	At Center Frequency
Operating Temperature	°C	-40		85	

ELECTRICAL PARAMETERS (FOR GLONASS MODE)	UNITS	MIN.	TYP.	MAX	REMARKS
Frequency Band	MHz	1598		1606	
Impedance	Ω		50		
Polarization			RHCP		
Gain @Zenith	dBi		0.6		At Center Frequency
Gain @ 10° Elevation			-6.7		At Center Frequency
Frequency Temperature Coefficient	ppm/°C			0 ±20	
VSWR				2	At Center Frequency
Operating Temperature	°C	-40		85	

OUTLINE DRAWING (NOTE: All dimensions are in millimeters [mm], unless otherwise noted. Drawings are not to scale.)

① Top View Dimensions:
 - Outer square: 18.5 ± 0.15 mm
 - Inner square: 18.5 ± 0.15 mm
 - Pad radius: R0.6
 - Pad diameter: Ø4.0 MAX
 - Pad offset from center: 0.85 ± 0.05 mm
 - Pad thickness: 0.9 ± 0.05 mm

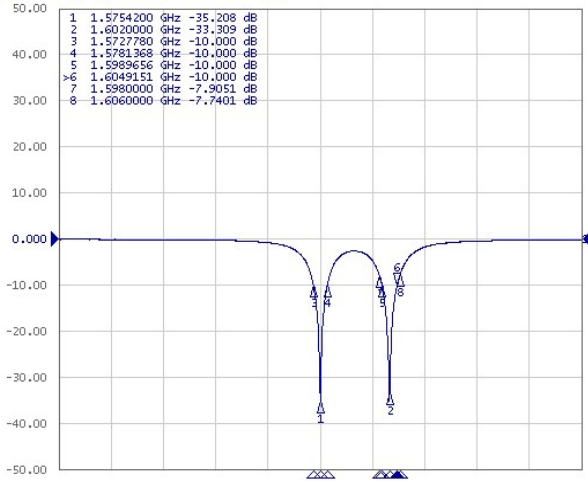
② Bottom View Dimensions:
 - Pad diameter: Ø4.0 MAX
 - Pad offset from center: 0.82 ± 0.05 mm
 - Pad thickness: 0.5 MAX mm
 - Pad diameter: 1.9 ± 0.19 mm
 - Pad offset from center: 0.125 ± 0.05 mm
 - Pad diameter: 4.0 ± 0.2 mm

Item	Material
1	Patch Antenna
2	Adhesive Tape

ELECTRICAL TEST

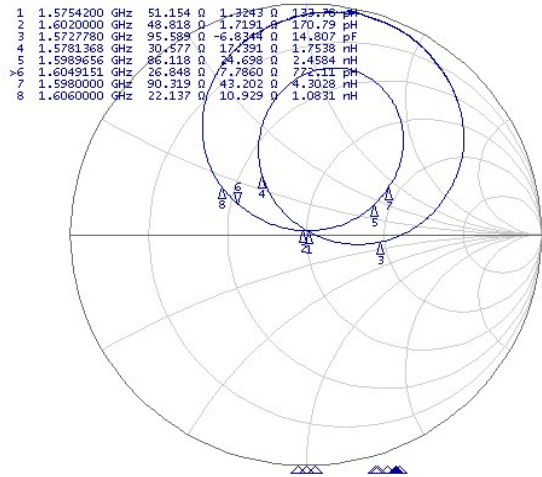
Return Loss

S11 Log Mag 10.00dB/ Ref 0.000dB [F1]



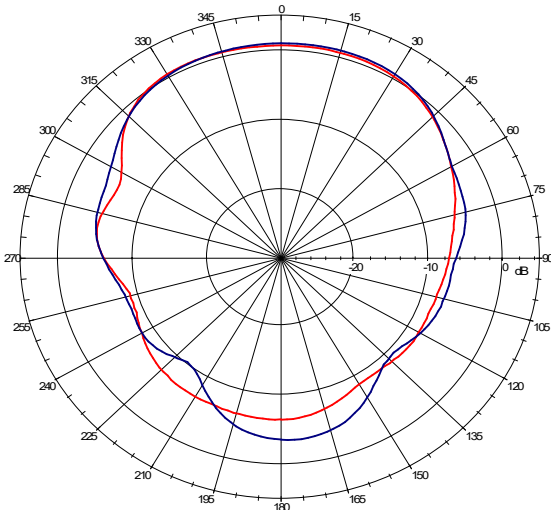
SMITH CHART

S11 Smith (R+jX) Scale 1.000U [F1]

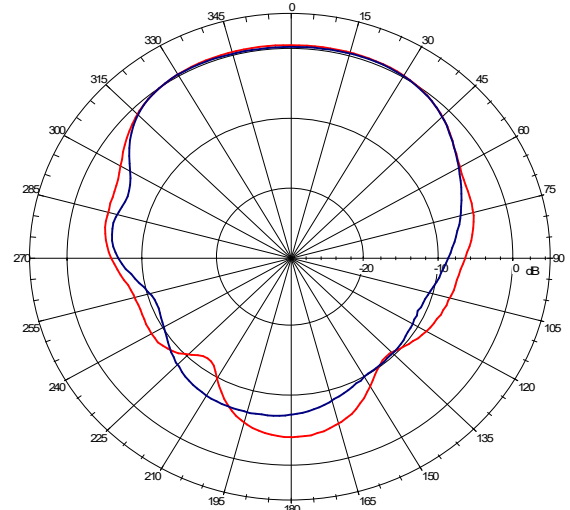


RADIATION PATTERN (UNIT: dBi)

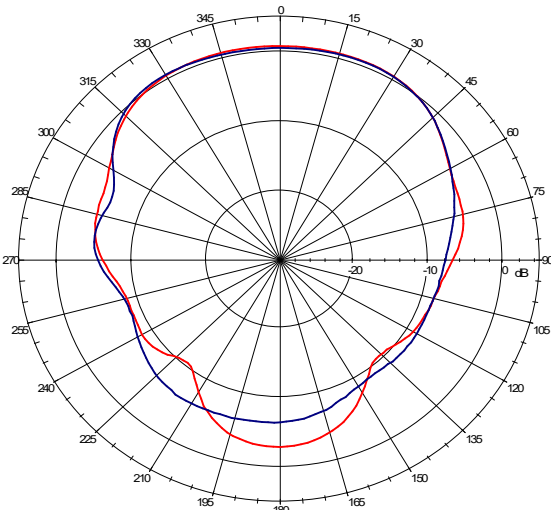
1575.42MHz



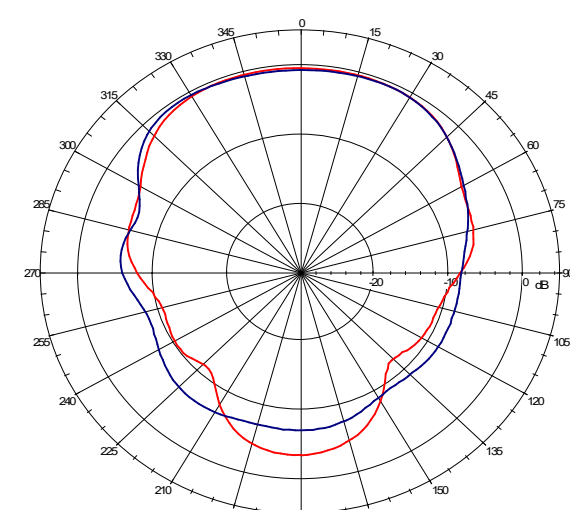
1598MHz



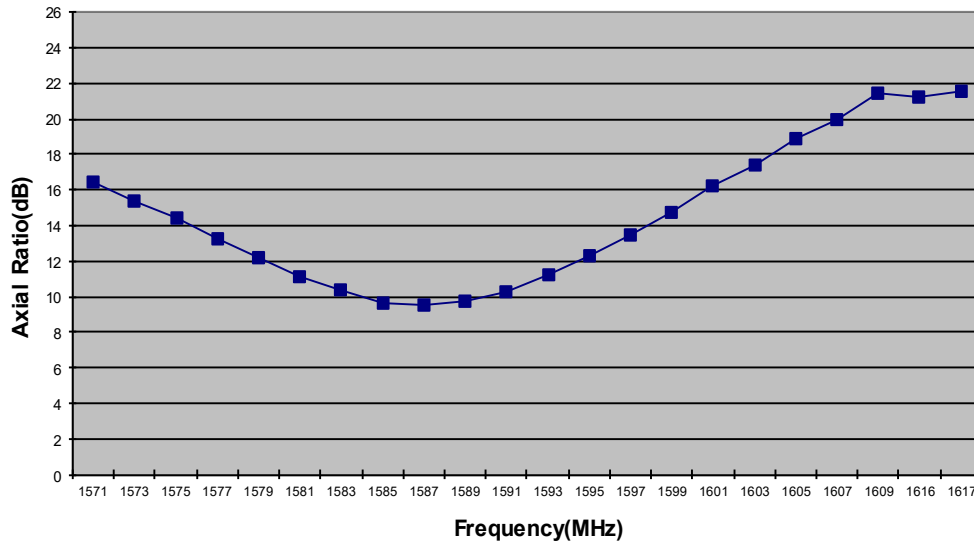
1602MHz



1606MHz



AXIAL RATIO (40MM X 40MM GROUND PLANE)



ENVIRONMENTAL & MECHANICAL SPECIFICATIONS

High Temperature Test	85°C for 240 hours, and then to normal temperature/humidity for 24hours.
Low Temperature Test	-30°C for 240 hours, and then to normal temperature/humidity for 24hours.
Humidity Test	85°C / 90-95% for 96 hours, and then to normal temperature/humidity for 24hours.