

# GEMINI GPS SMD Antenna

Part No. GA187016BGL01



## Product Specification



Dimension: 18mmx7mmx1.6mm

### ➤ Applications

- Smart phone
- Tablets
- Tracking Devices
- GPS modules

### ➤ Features

- Designed for GPS( 1575.42MHz), Glonass(1602MHz) and BeiDou (1561.1MHz) applications
- High efficiency
- Linear Polarization
- Omni- Directional ( *PCB dimension dependent* )
- Minimum PCB clearance
- Flexible placement on PCB edge
- SMD mounting
- Low Profile, miniature and light weight
- Tape and reel packaging
- RoHS Compliance

### ➤ Customer Services (Optional)

- EM Antenna Simulation for optimum placement of antenna on PCB.
- Lump Elements Matching for optimum antenna performance.
- Anechoic Chamber Measurement for antenna performance validation.

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## ➤ Specification

ELECTRICAL	
Frequency	1561MHz ~ 1602MHz
S11	< -10dB
VSWR	< 1.92:1
Peak Gain	3.02 dBi@1575MHz
Polarization	Linear
Impedance	50 Ohms
Efficiency	85%@1575MHz
Radiation Pattern	Omni
MECHANICAL	
Dimension	18mm x 7mm x 1.6 mm
Weight	0.4g
ENVIROMENTAL	
Temperature Range	-25°C to +80°C
Humidity	65°C 95% RH

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# GEMINI GPS SMD Antenna

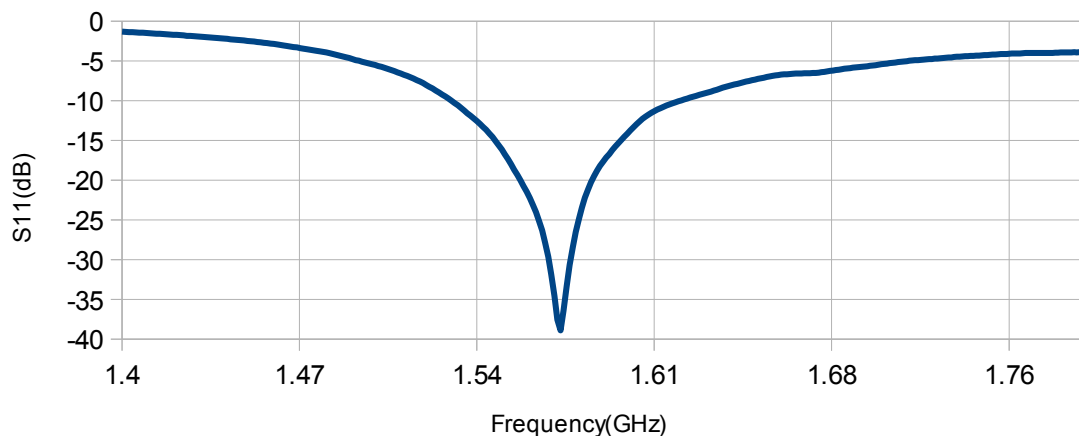
Part No. GA187016BGL01



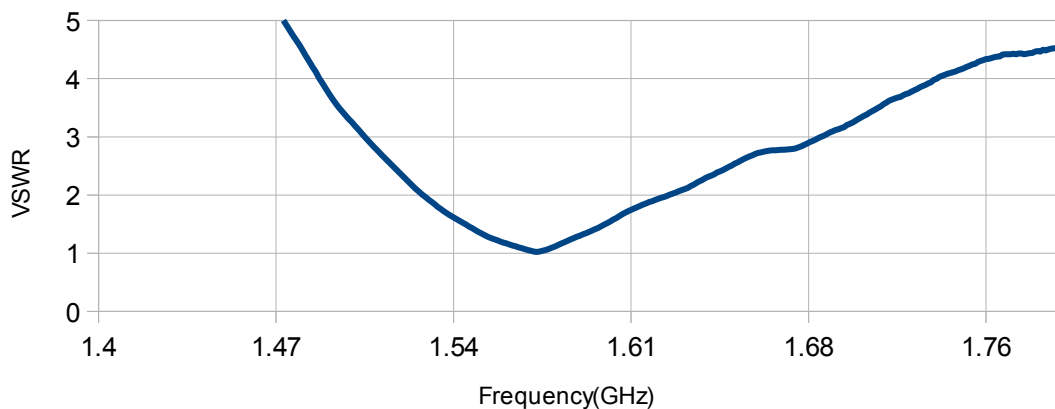
## ➤ Antenna Performance with GEMINI\_RB6020T1 Reference Board

	Performance	Conditions
Peak Gain	3.02 dBi@1575MHz	Results is measured on 60 x 20 mm reference board, Part NO.: GEMINI_RB6020T1 *antenna efficiency without loss of transmission line
Average 3D Gain	-0.67dBi	
*Average Efficiency	85%@1575MHz	
S11	< -10dB	
VSWR	< 1.92:1	

### ● Return Loss with GEMINI\_RB6020T1 Reference Board



### ● VSWR with GEMINI\_RB6020T1 Reference Board



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- Performance with reference board (GEMINI\_RB6020T1)

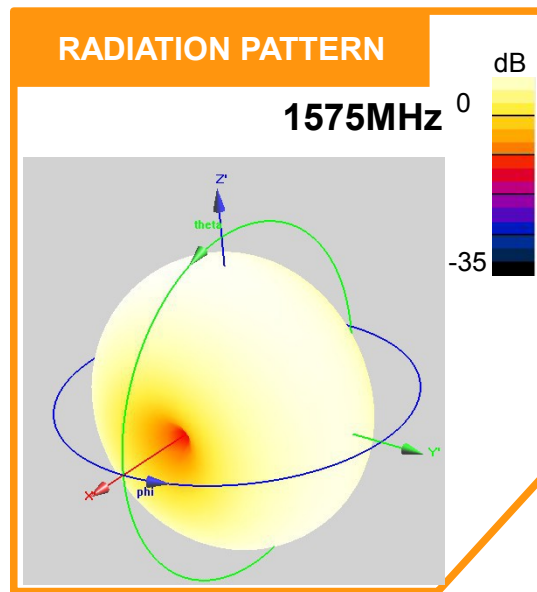
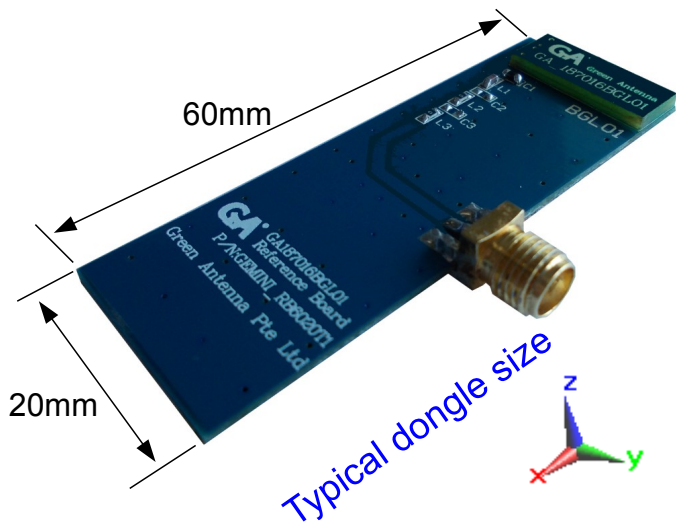
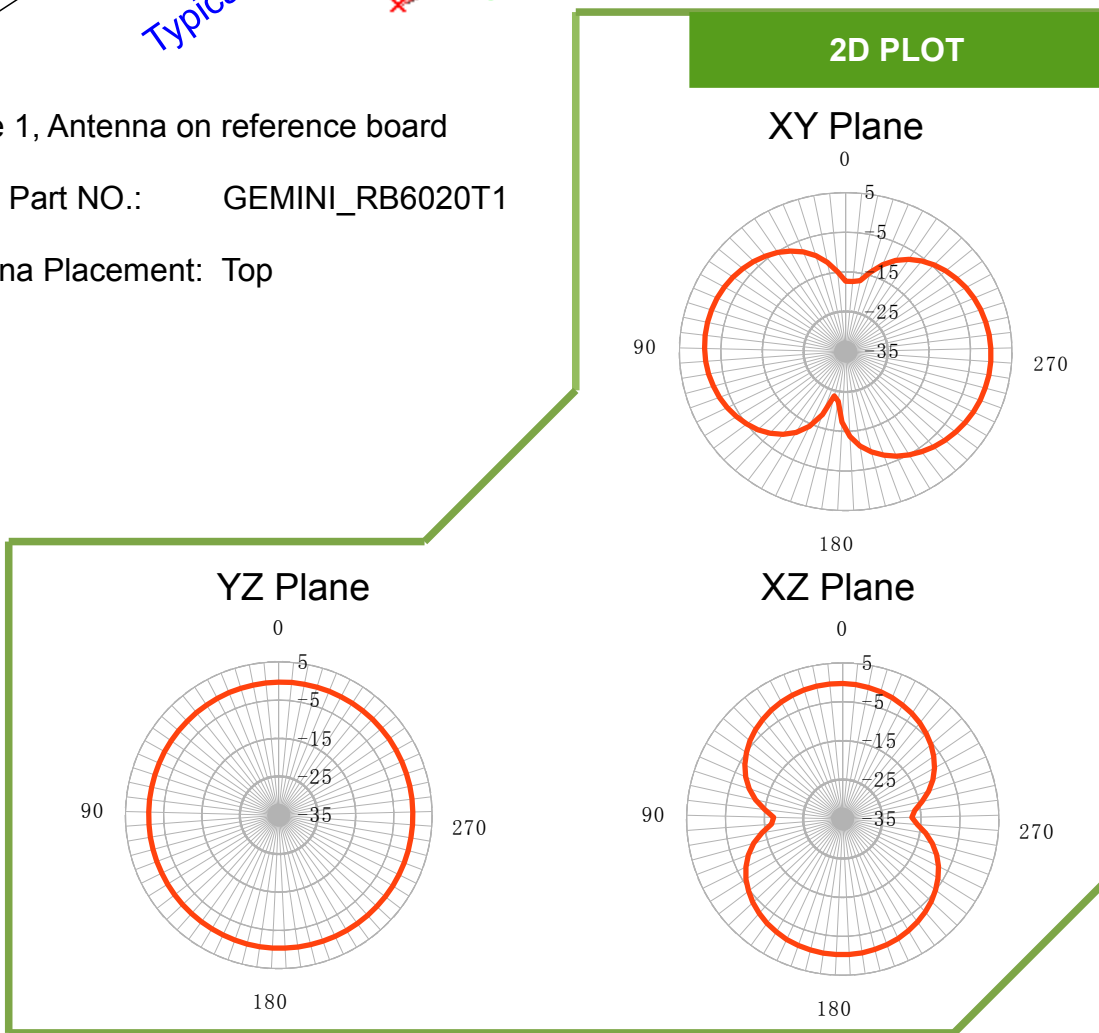


Figure 1, Antenna on reference board

Board Part NO.: GEMINI\_RB6020T1

Antenna Placement: Top



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## ➤ Antenna Dimension

### ● Overview



L	W	H
18	7	1.6

Unit : mm  
Tolerance: +/- 0.2mm

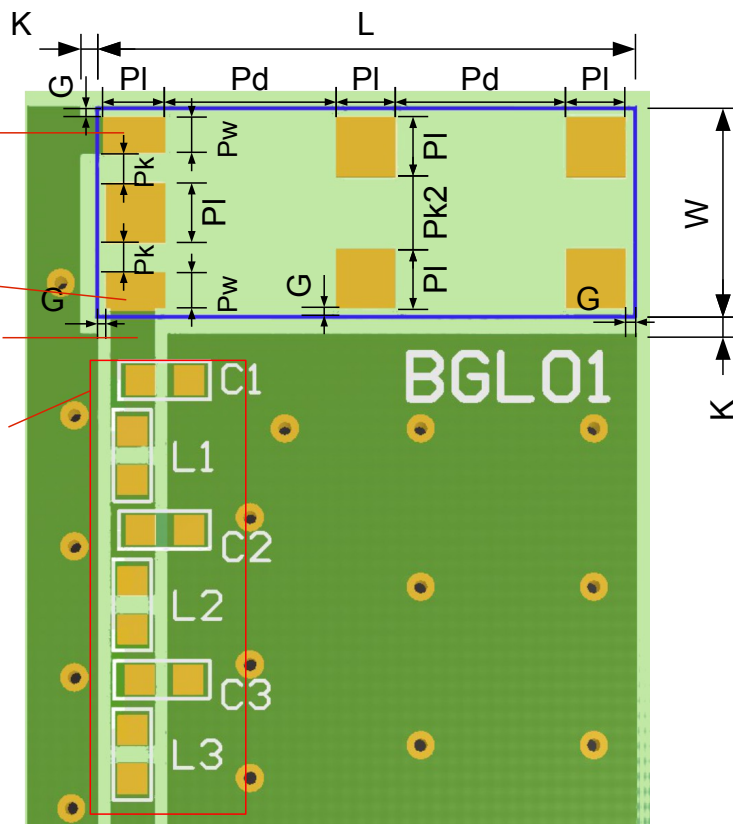
### ● Layout with side feeding

- : PCB copper
- : PCB dielectric
- : Pads
- : Antenna Area

- Ground point
- Feed point
- 50 Ohm trace line
- Matching components

L	W	K	G	PI
18	7	0.5	0.3	2
Pd	Pw	Pk	Pk2	
5.7	1.2	1	2.4	

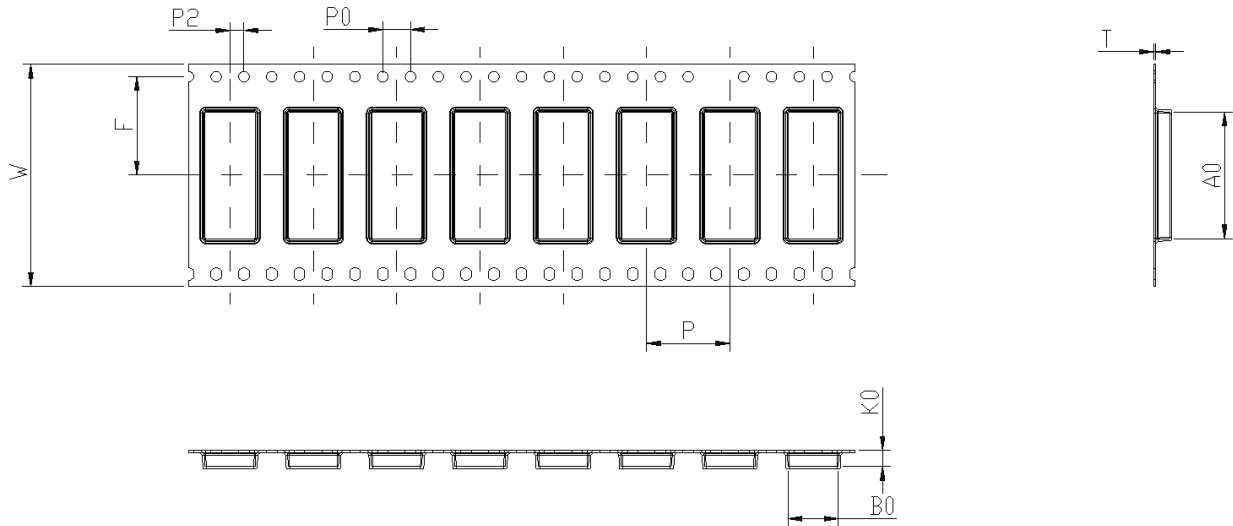
Unit : mm  
Tolerance: +/- 0.1mm



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## ➤ Tape Characteristics



W	F	P	P0	P2	T	A0	B0	K0
32.0±0.3	14.2±0.1	12.0±0.1	4.0±0.1	2.0±0.1	0.3±0.05	18.2±0.1	7.23±0.1	2.3±0.1

Unit : mm

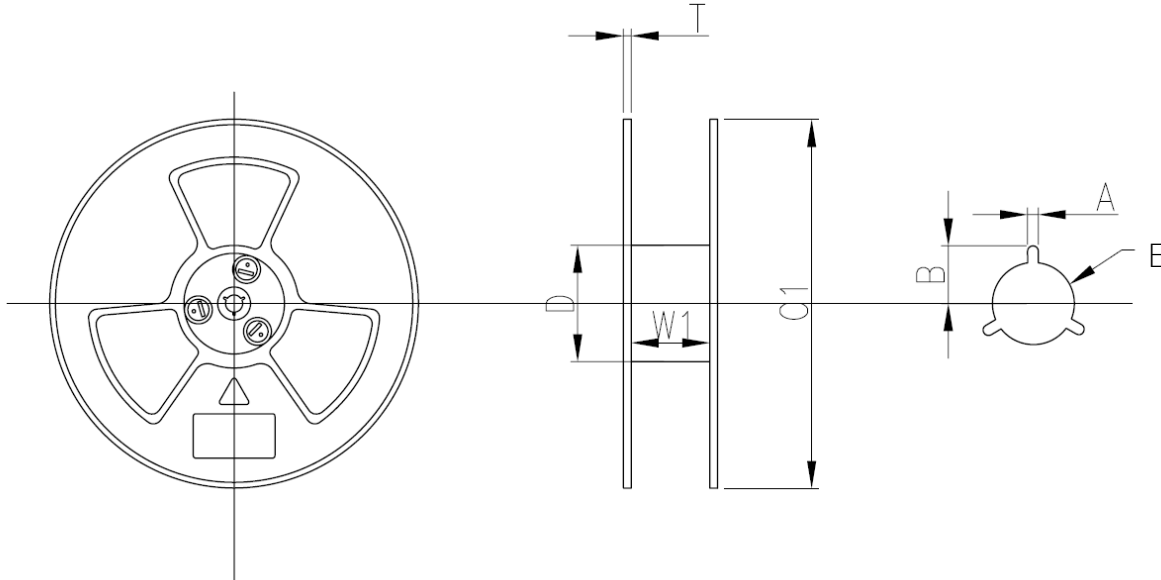
Quantity	2000 pcs/reel
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## ➤ Reel Dimensions



W1	D	T	C1	A	B	E
32.4±2.0	99.5±2.0	2.2±0.3	330±1.0	2.3±0.3	10.75±0.3	13.0±0.5

Unit : mm

## ➤ Reel Label



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Description: Gemini  
Part Number: GA187016BGL01  
Qty: 2000 pcs  
Date Code:  
Manufacturers code number:

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