

GPS + IRIDIUM Patch Antenna - Automotive Qualified



APRA2504F00Z

Request Samples



Check Inventory



25.1 x 25.1 x 4.0 mm
RoHS/RoHS II Compliant
MSL Level = 1

Features

- Complies with Automotive Qualification (AEC-Q200)
- Complies with IATF 16949 Certification
- Multiband GPS + Iridium patch
- Low VSWR ≤ 3
- RHCP polarization
- Peak Gain of 3.0 dBi
 - GPS: 2.0 dBi
 - Iridium: 3.0 dBi

Applications

- Automotive
- GPS/Iridium applications
- IoT & M2M
- Industrial IoT
- Consumer electronics
- Wireless modules
- Video and surveillance
- Broadband cellular connectivity
- Networking & Telecommunications

Product Image



5101 Hidden Creek Ln Spicewood TX 78669
Phone: 512-371-6159 | Fax: 512-351-8858
For terms and conditions of sales, please visit:
www.abracon.com

REVISED: 07-16-21

ABRACON IS
ISO9001-2015
CERTIFIED

GPS + IRIDIUM Patch Antenna - Automotive Qualified



APRA2504F00Z

Request Samples



Check Inventory



25.1 x 25.1 x 4.0 mm
RoHS/RoHS II Compliant
MSL Level = 1

Electrical Specifications

Parameter	Specification		Unit
Operating Band	GPS	Iridium	
Operating Frequency	1575.42 ± 1.023	1610 ~ 1625	MHz
Center Frequency	1595 ± 3		
Max VSWR	3		
Gain	2.0	3.0	dBi
Impedance	50		Ω
Polarization	RHCP		

Note:

- Ground Plane size: 70 x 70 mm
- Actual electrical characteristics will depend on the size of ground plane in use.

Mechanical Specifications

Parameter	Specification
Antenna Dimension	25.1 x 25.1 x 4.0 mm
Material	Ceramic
Termination	Silver
Mounting Type	Through-Hole + Adhesive Tape

Environmental Specifications

Parameter	Specification
Operating Temperature	-40°C to +105°C
Storage Temperature	
Frequency Temperature Coefficient (T _f)	-40°C to +105°C (0 ± 20 ppm/°C)
RoHS / RoHS II Compliant	Yes
MSL	1
Environmentally Friendly	Pb free
Relative Humidity	0~95%
Soldering Feed Pin Temperature	+290°C (3 seconds max)



5101 Hidden Creek Ln Spicewood TX 78669
Phone: 512-371-6159 | Fax: 512-351-8858
For terms and conditions of sales, please visit:
www.abracon.com

REVISED: 07-16-21

ABRACON IS
ISO9001-2015
CERTIFIED

GPS + IRIDIUM Patch Antenna - Automotive Qualified



APRA2504F00Z

Request Samples

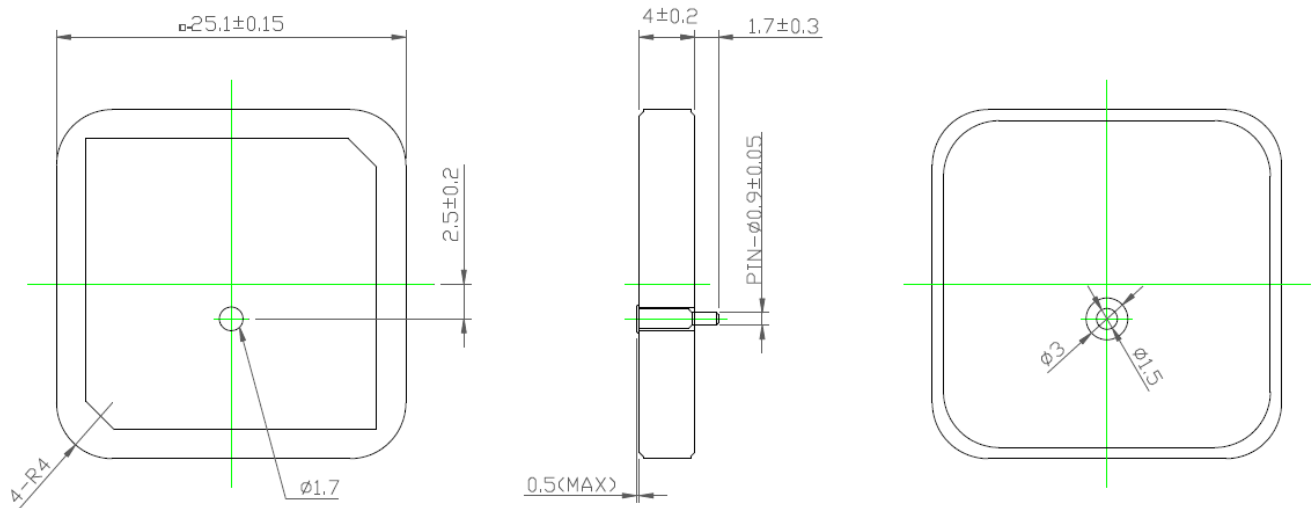


Check Inventory



25.1 x 25.1 x 4.0 mm
RoHS/RoHS II Compliant
MSL Level = 1

Product Dimension



Unit : mm

Product Marking



5101 Hidden Creek Ln Spicewood TX 78669
Phone: 512-371-6159 | Fax: 512-351-8858
For terms and conditions of sales, please visit:
www.abracon.com

REVISED: 07-16-21

ABRACON IS
ISO9001-2015
CERTIFIED

25.1 x 25.1 x 4.0 mm
RoHS/RoHS II Compliant
MSL Level = 1

The diagram shows the top and bottom views of a PCB pad layout for a 0.95mm thru-hole component. The top view shows a circular pad with a diameter of $\phi 3$ and a central hole with a diameter of $\phi 0.95$. The bottom view shows a circular pad with a diameter of $\phi 2.5$ and a central hole with a diameter of $\phi 0.95$. Both views are labeled "Ground" and "0.95 Thru hole".

Unit : mm

Unit : mm



REVISED: 07-16-21

ABRACON IS
ISO9001-2015
CERTIFIED

GPS + IRIDIUM Patch Antenna - Automotive Qualified



APRA2504F00Z

Request Samples

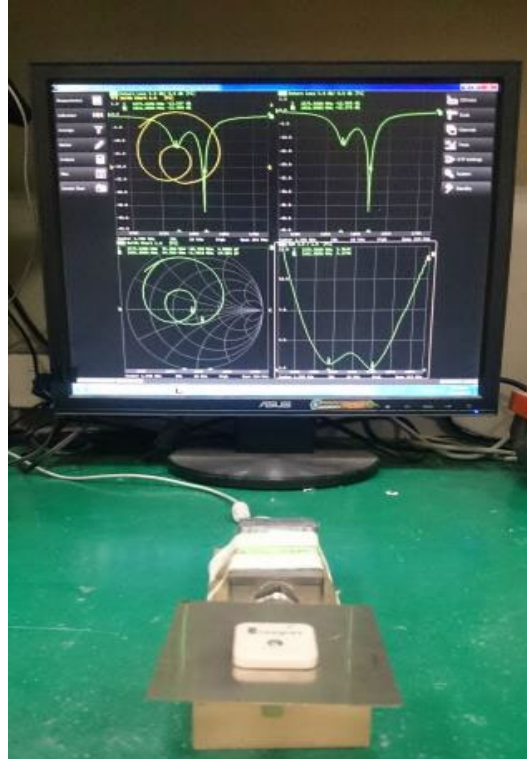


Check Inventory



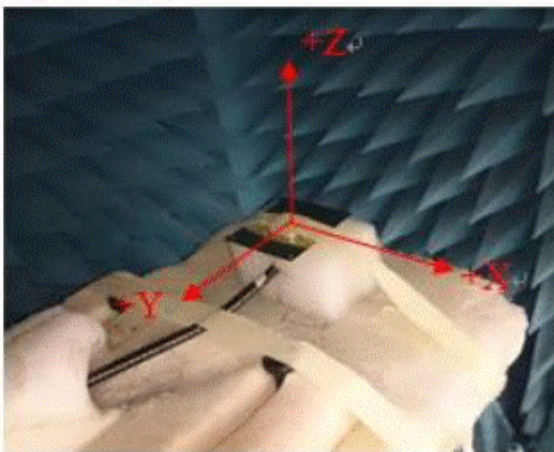
25.1 x 25.1 x 4.0 mm
RoHS/RoHS II Compliant
MSL Level = 1

VNA Test Measurement – Set up

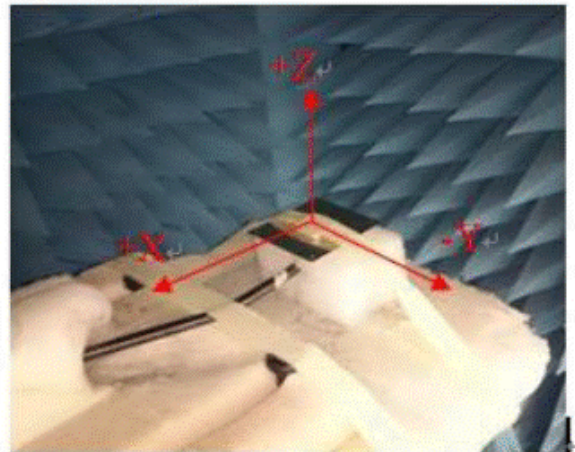


Radiation Measurement – Set up

XZ-Plane



YZ-Plane



5101 Hidden Creek Ln Spicewood TX 78669
Phone: 512-371-6159 | Fax: 512-351-8858
For terms and conditions of sales, please visit:
www.abracon.com

REVISED: 07-16-21

ABRACON IS
ISO9001-2015
CERTIFIED

GPS + IRIDIUM Patch Antenna - Automotive Qualified



APRA2504F00Z

Request Samples

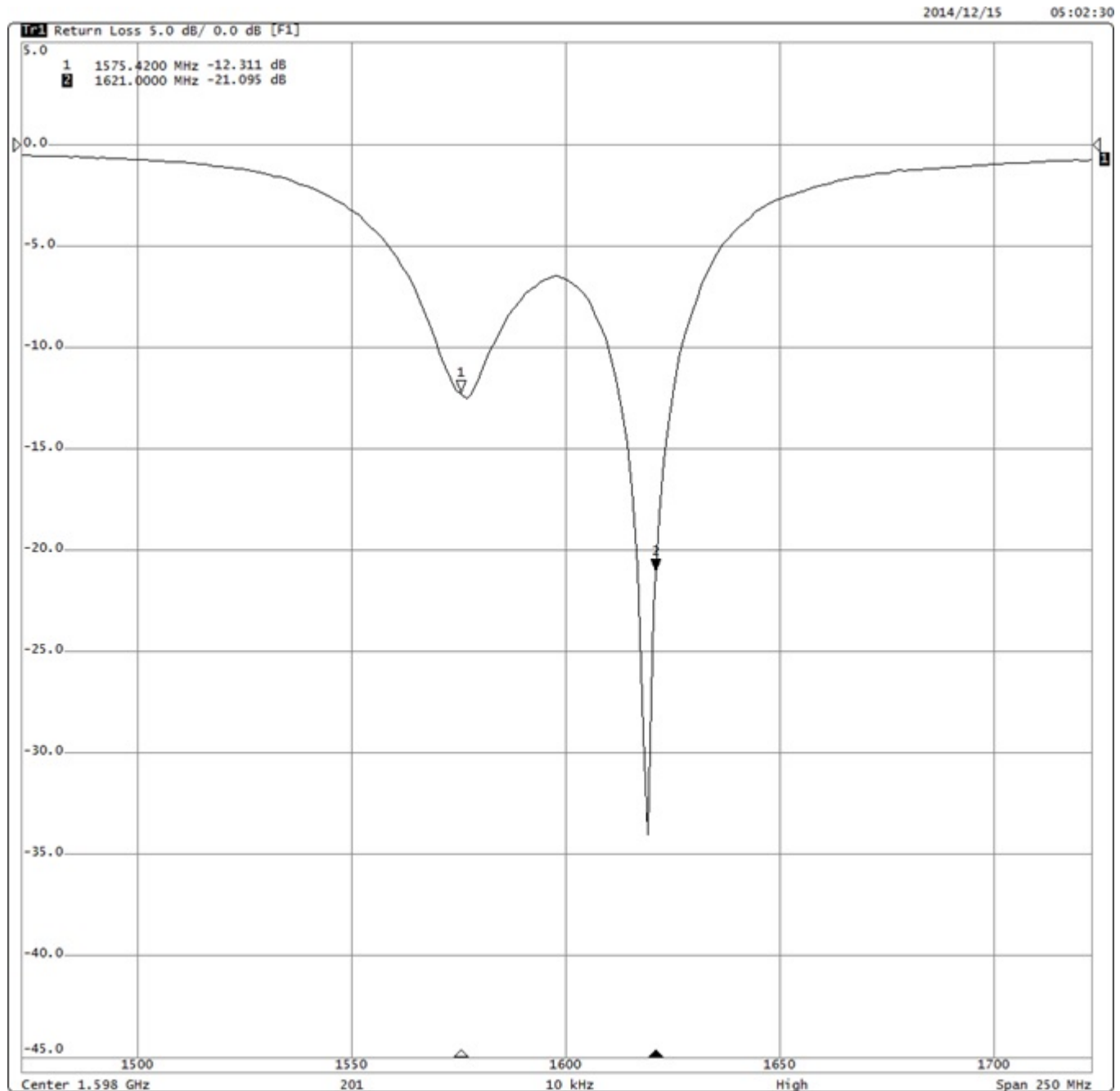


Check Inventory



25.1 x 25.1 x 4.0 mm
RoHS/RoHS II Compliant
MSL Level = 1

Test Measurement – Return Loss



5101 Hidden Creek Ln Spicewood TX 78669
Phone: 512-371-6159 | Fax: 512-351-8858
For terms and conditions of sales, please visit:
www.abracon.com

REVISED: 07-16-21

ABRACON IS
ISO9001-2015
CERTIFIED

GPS + IRIDIUM Patch Antenna - Automotive Qualified



APRA2504F00Z

Request Samples

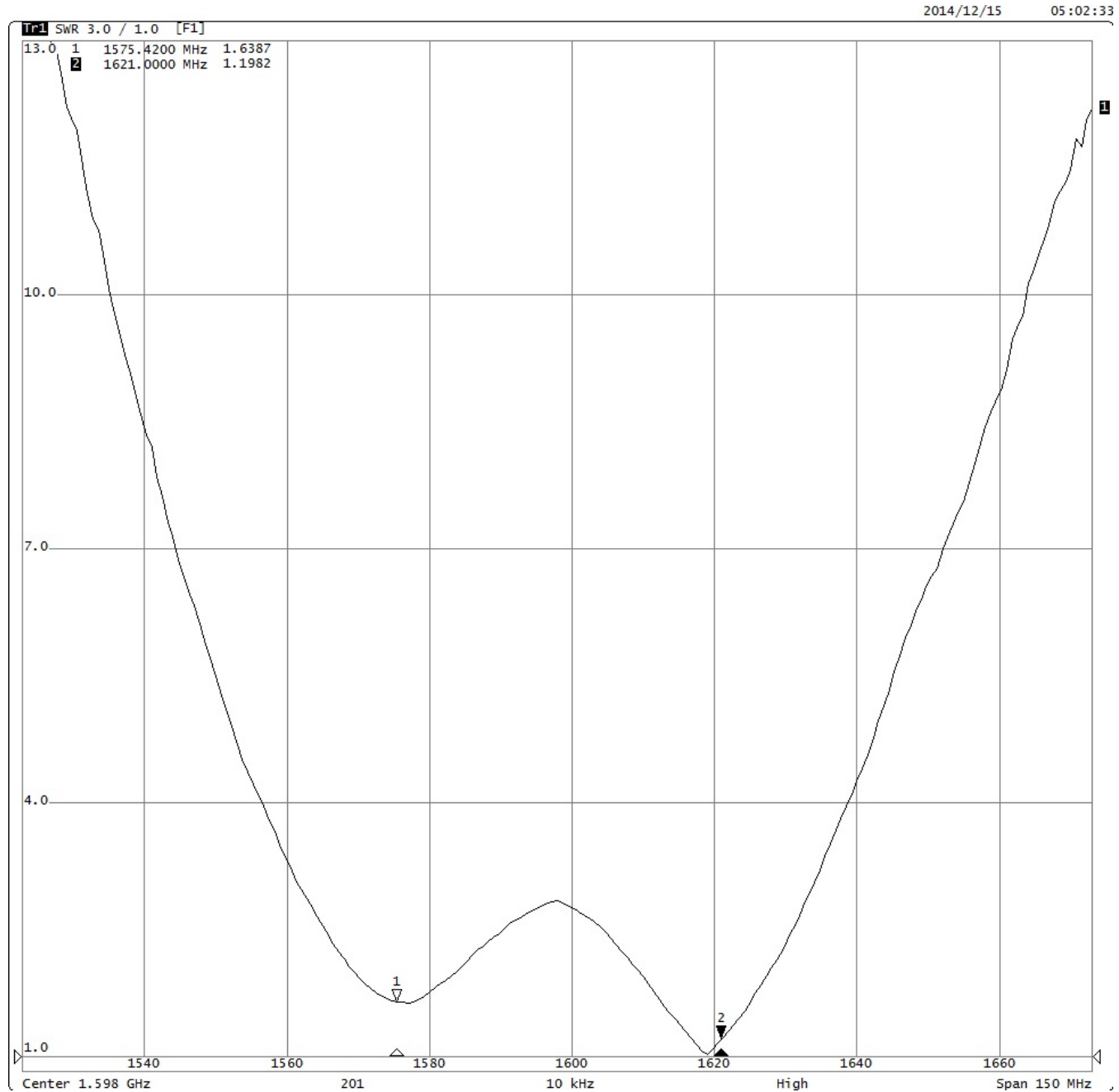


Check Inventory



25.1 x 25.1 x 4.0 mm
RoHS/RoHS II Compliant
MSL Level = 1

Test Measurement – VSWR



5101 Hidden Creek Ln Spicewood TX 78669
Phone: 512-371-6159 | Fax: 512-351-8858
For terms and conditions of sales, please visit:
www.abracon.com

REVISED: 07-16-21

ABRACON IS
ISO9001-2015
CERTIFIED

GPS + IRIDIUM Patch Antenna - Automotive Qualified



APRA2504F00Z

Request Samples

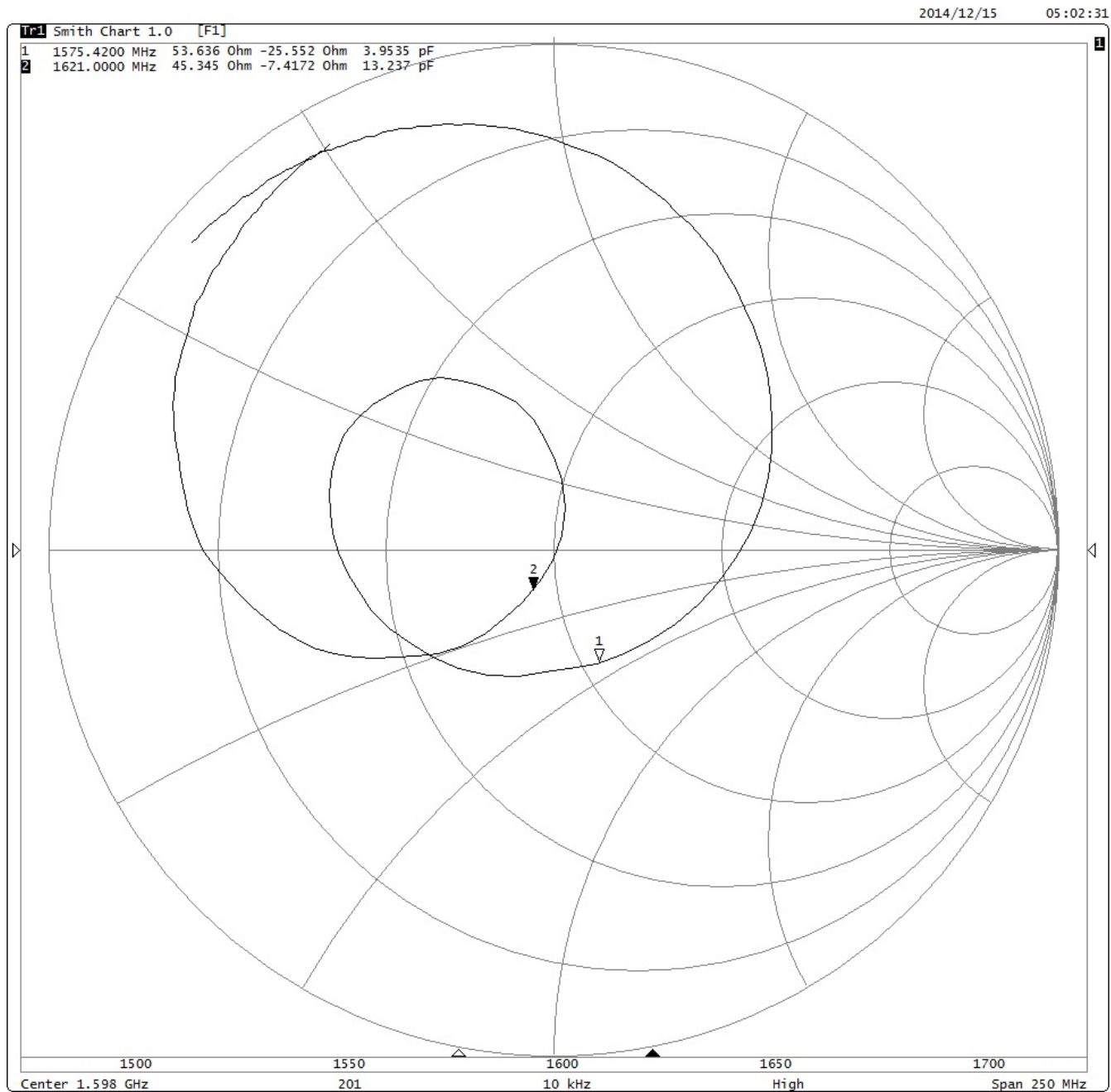


Check Inventory



25.1 x 25.1 x 4.0 mm
RoHS/RoHS II Compliant
MSL Level = 1

Test Measurement – Smith Chart



5101 Hidden Creek Ln Spicewood TX 78669
Phone: 512-371-6159 | Fax: 512-351-8858
For terms and conditions of sales, please visit:
www.abracon.com

REVISED: 07-16-21

ABRACON IS
ISO9001-2015
CERTIFIED

GPS + IRIDIUM Patch Antenna - Automotive Qualified



APRA2504F00Z

Request Samples



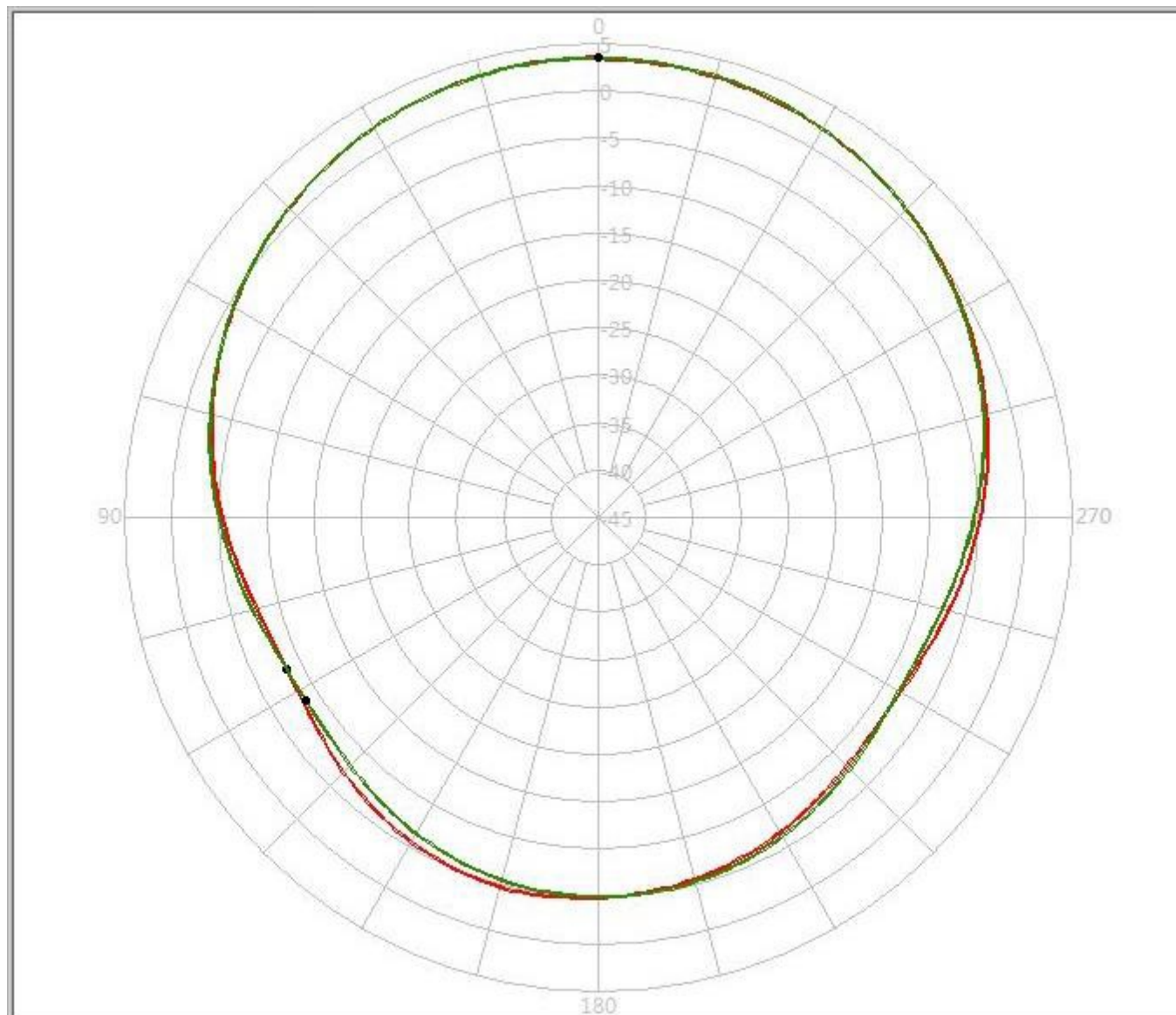
Check Inventory



25.1 x 25.1 x 4.0 mm
RoHS/RoHS II Compliant
MSL Level = 1

Radiation Measurement – 2D Pattern

XZ + YZ Plane : 1575.42 MHz



Pattern	Model No.	Test Mode	Freq(MHz)	Max Gain(dBi)	Min Gain(dBi)	Avg. Gain(dBi)	Source Polar.
1	APRA2504F00Z	XZ	1575.42	3.56 / 0.00	-8.44 / 116.00	-1.19	V+H
2	APRA2504F00Z	YZ	1575.42	3.49 / 0.00	-8.62 / 122.00	-1.21	V+H



5101 Hidden Creek Ln Spicewood TX 78669
Phone: 512-371-6159 | Fax: 512-351-8858
For terms and conditions of sales, please visit:
www.abracon.com

REVISED: 07-16-21

ABRACON IS
ISO9001-2015
CERTIFIED

GPS + IRIDIUM Patch Antenna - Automotive Qualified



APRA2504F00Z

Request Samples

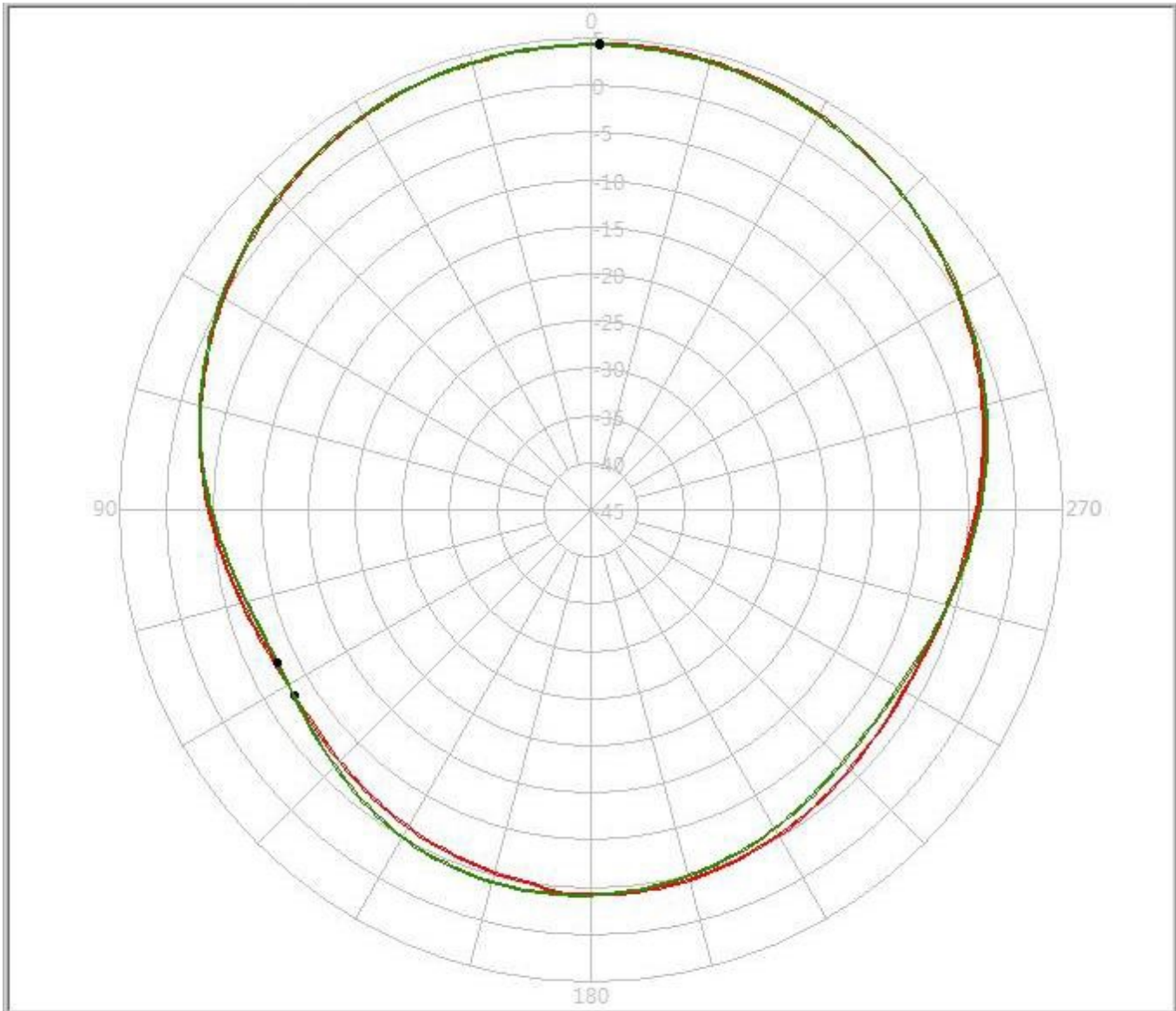


Check Inventory



25.1 x 25.1 x 4.0 mm
RoHS/RoHS II Compliant
MSL Level = 1

XZ + YZ – Plane : 1621 MHz



Pattern	Model No.	Test Mode	Freq(MHz)	Max Gain(dBi)	Min Gain(dBi)	Avg. Gain(dBi)	Source Polar.
1	APRA2504F00Z	XZ	1621.00	4.48 / 359.00	-7.91 / 122.00	-0.38	V+H
2	APRA2504F00Z	YZ	1621.00	4.32 / 359.00	-8.01 / 116.00	-0.36	V+H



5101 Hidden Creek Ln Spicewood TX 78669
Phone: 512-371-6159 | Fax: 512-351-8858
For terms and conditions of sales, please visit:
www.abracon.com

REVISED: 07-16-21

ABRACON IS
ISO9001-2015
CERTIFIED

GPS + IRIDIUM Patch Antenna - Automotive Qualified



APRA2504F00Z

Request Samples



Check Inventory



25.1 x 25.1 x 4.0 mm
RoHS/RoHS II Compliant
MSL Level = 1

Soldering Condition

- Soldering should be done in 3 seconds by a feed pin of maximum temperature +290 °C.

Precautions

- Do not direct solder onto the silver electrode of the antenna pattern.
- Do not use the patch antenna in a corrosive gaseous atmosphere for example sulfur gas, chlorine gas.



5101 Hidden Creek Ln Spicewood TX 78669
Phone: 512-371-6159 | Fax: 512-351-8858
For terms and conditions of sales, please visit:
www.abracon.com

REVISED: 07-16-21

ABRACON IS
ISO9001-2015
CERTIFIED

GPS + IRIDIUM Patch Antenna - Automotive Qualified



APRA2504F00Z

Request Samples



Check Inventory



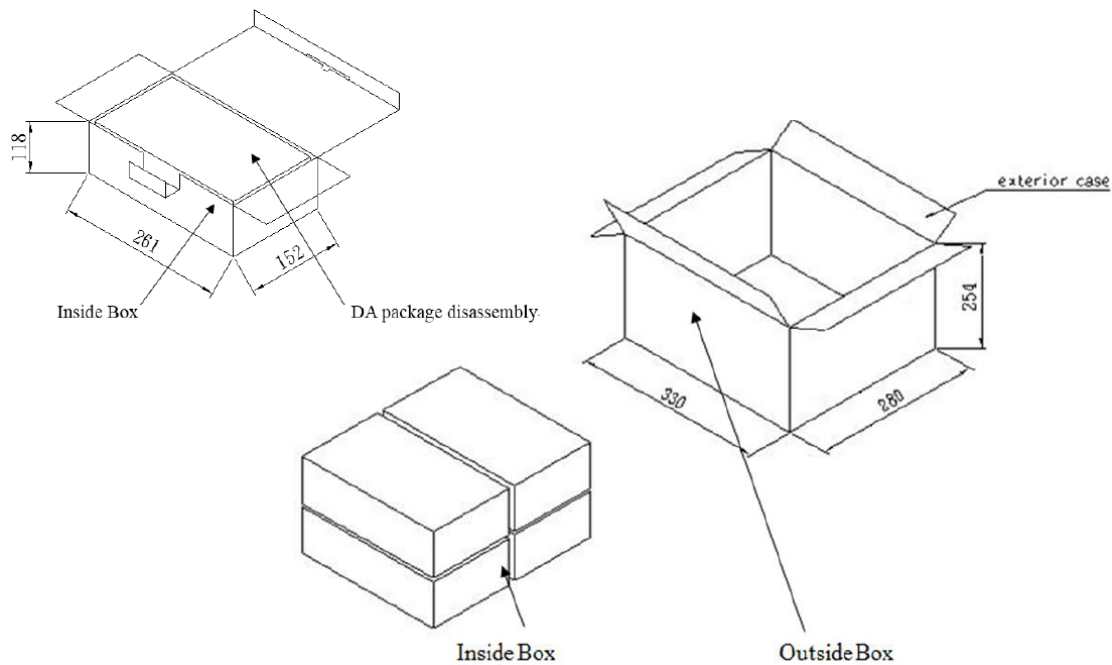
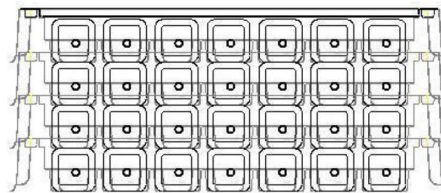
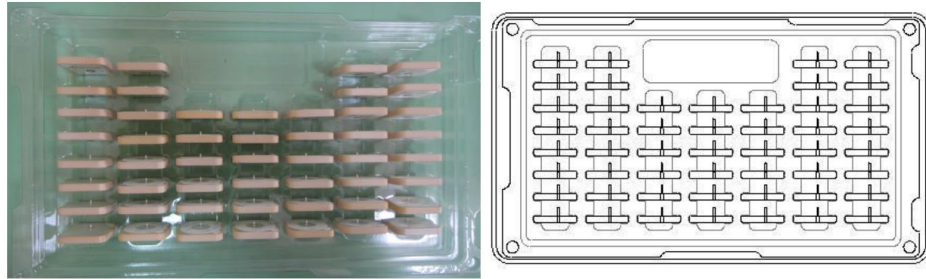
25.1 x 25.1 x 4.0 mm
RoHS/RoHS II Compliant
MSL Level = 1

Packaging Information

Dimensions of the inner carton : 261 x 152 x 118 mm

Dimensions of the outer Carton : 330 x 280 x 254 mm

Number of pcs per outer Carton : 800



ATTENTION: Abracon LLC's products are COTS – Commercial-Off-The-Shelf products; suitable for Commercial, Industrial and, where designated, Automotive Applications. Abracon's products are not specifically designed for Military, Aviation, Aerospace, Life-dependent Medical applications or any application requiring high reliability where component failure could result in loss of life and/or property. For applications requiring high reliability and/or presenting an extreme operating environment, written consent and authorization from Abracon LLC is required. Please contact Abracon LLC for more information.



5101 Hidden Creek Ln Spicewood TX 78669
Phone: 512-371-6159 | Fax: 512-351-8858
For terms and conditions of sales, please visit:
www.abracon.com

REVISED: 07-16-21

ABRACON IS
ISO9001-2015
CERTIFIED