

APARC2511X-SG3L5

Request Samples



Check Inventory



25 x 25 x 11.6 mm
RoHS Compliant
MSL Level = N/A

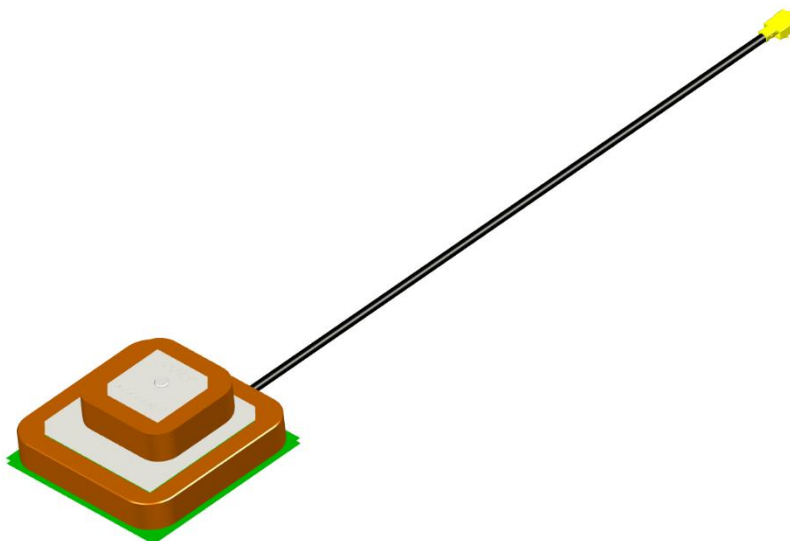
Features

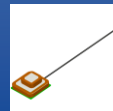
- L1(E1)/L5 Active GNSS Antenna
- Low Profile with Size 25 x 25 x 11.6 mm
- LNA Gain: 28 dB
- Noise Figure: 1 dB
- Low Current Consumption: 10 mA@ 3.3V
- Custom Cable & Connector Options Available

Applications

- RTK System
- GNSS Modules
- UAVs and Drones
- Asset Tracking & Telematics
- Intelligent Transportation
- Precision Agriculture
- Geolocation and Tracking

Product Image



**APARC2511X-SG3L5**

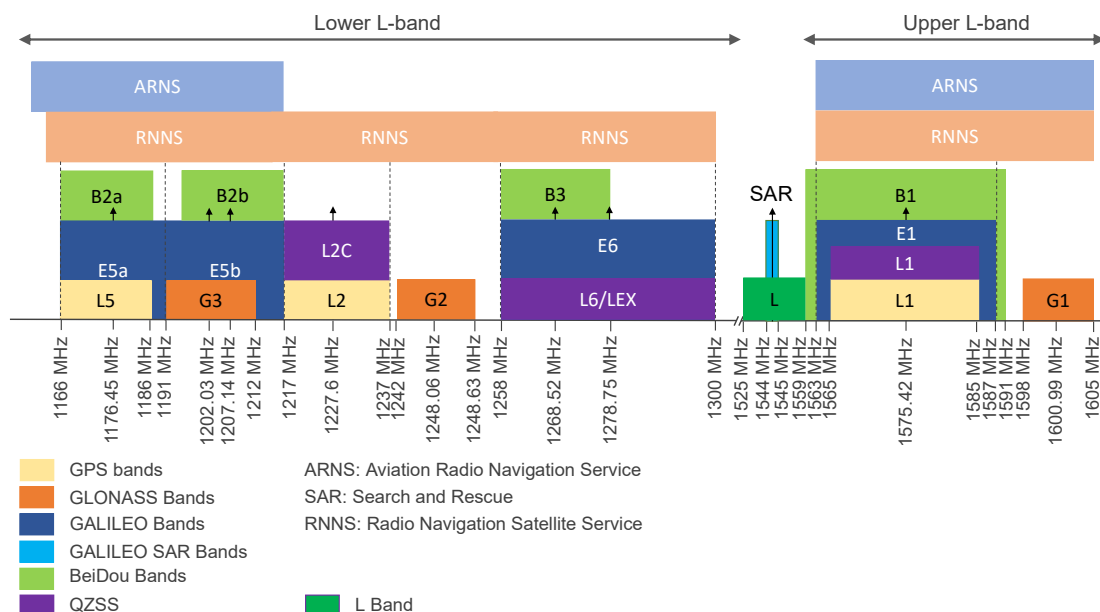
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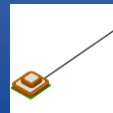
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**25 x 25 x 11.6 mm****RoHS Compliant****MSL Level = N/A****GNSS Frequency Bands Covered**

	L1 1575.42MHz	L2 1227.6MHz	L5 1176.45MHz	
GPS	■	□	■	
GLONASS	G1 1598.06-1609.31MHz	G2 1242.93-1251.68MHz	G3 1202.025MHz	
	■	□	□	
Galileo	E1 1575.42MHz	E5a 1176.45MHz	E5b 1201.5MHz	E6 1278.75MHz
	■	□	□	□
BeiDou	B1 1561MHz	B2 1207.14MHz	B3 1268.52MHz	
	□	□	□	
QZSS	L1 1575.42MHz	L2 1227.6MHz	L5 1176.45MHz	L6 1278.75MHz
	■	□	■	□
IRNSS/NAVIC			L5 1176.45MHz	
			■	
SBAS	L1/E1/B1 1575.42MHz		L5/B2a/E5a 1176.45MHz	
	■		■	



Frequency allocation: GNSS systems, upper L bands and lower L bands

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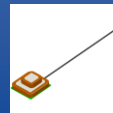


25 x 25 x 11.6 mm
RoHS Compliant
MSL Level = N/A

Electrical Specification

Parameters	Typ.			Units	Note
Antenna					
Frequency	1166.22 ~ 1186.68 (L5)	1560 ~ 1590 (L1/E1)	1598.06 ~ 1605.37 (G1)	MHz	
VSWR	≤ 2			-	
Polarization	RHCP			-	(Right Hand Circular Polarization)
Nominal Impedance	50			Ω	
Peak Gain	1.7	4.7	4.7	dBic	On 70 × 70 mm ground plane
Average Gain	-3.2	-2.2	-2.4	dBic	
Maximum Efficiency	57	81	81	%	
Average Efficiency	37	75	69	%	
Axial Ratio	3.1	6.4		dB	
LNA					
VSWR	≤ 2.0			-	
Gain	27 ± 3	28 ± 3	27 ± 3	dB	
Noise Figure	1.16	0.94	0.97	dB	
Supply Voltage	2.7	3.3	5.0	V	
Current Consumption	-	10	-	mA	

Please note: All measurement data is based on the standard configuration (conducted in free space unless otherwise specified).

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Mechanical Specification

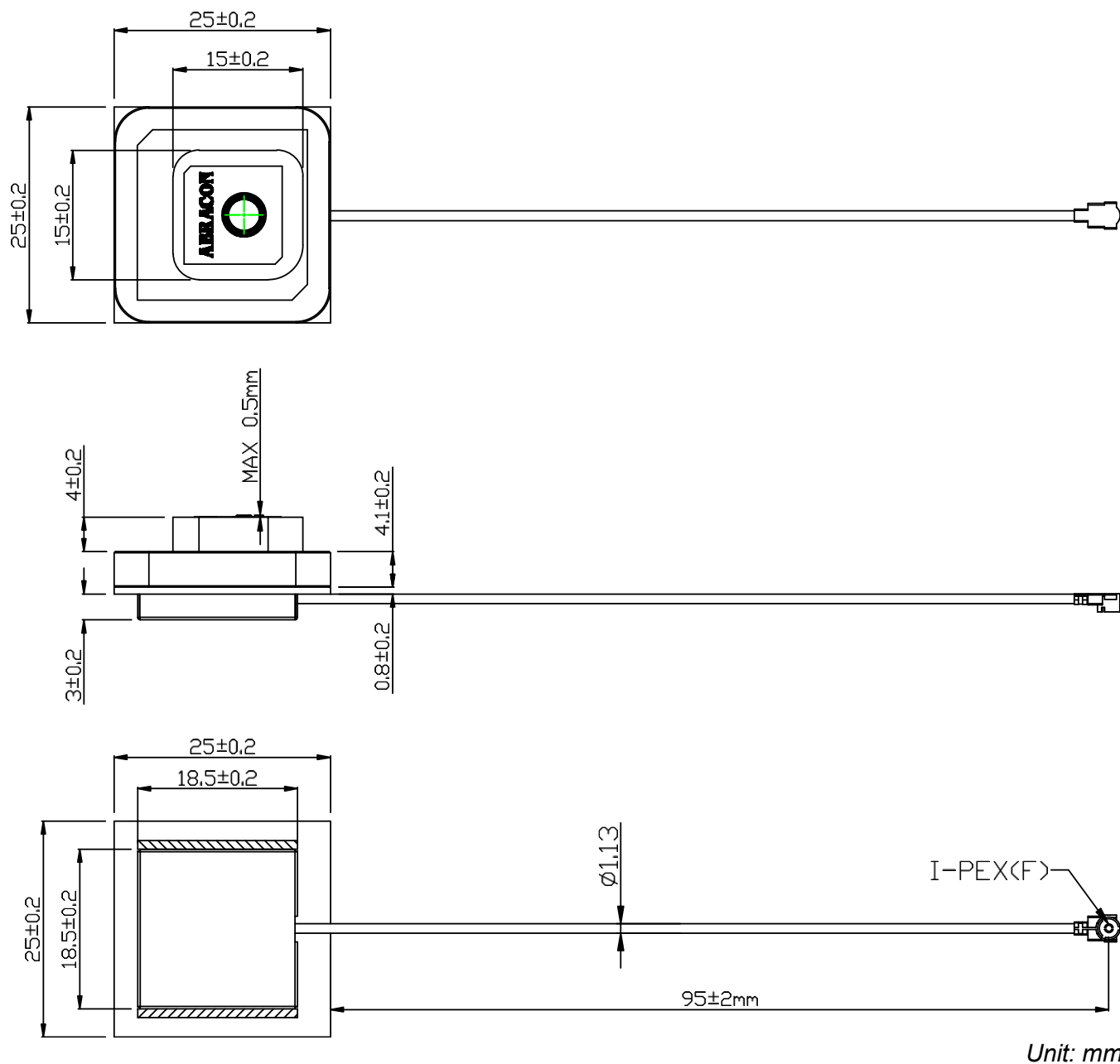
Parameter	Specification
Antenna Dimension	25 x 25 x 11.6 mm
Mounting Type	Adhesive Mount
RF Connector ⁽¹⁾	u.FL/IPEX-1/MHF1
Cable Length ⁽¹⁾	Ø 1.13mm x 100 ± 10 mm
Weight	18.4 g

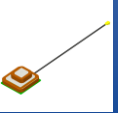
(1): Fully customizable RF Cable & Connector

Environmental Specification

Parameter	Specification
Operating Temperature	-40°C to +85°C
Storage Temperature	-40°C to +105°C
RoHS Compliance	Yes
ESD Sensitive	No
Relative Humidity	Up to 95%

Product Dimension





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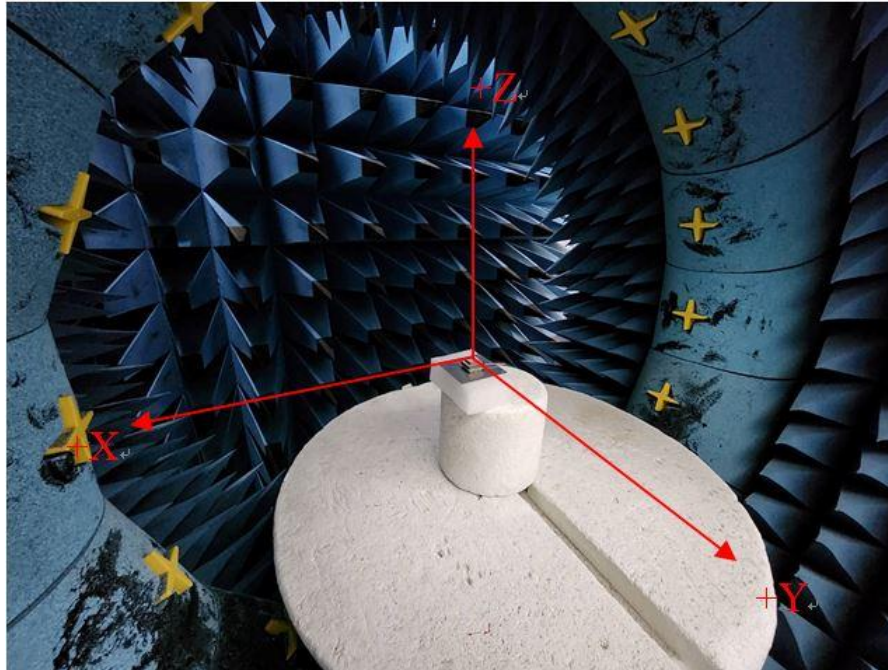


Check Inventory

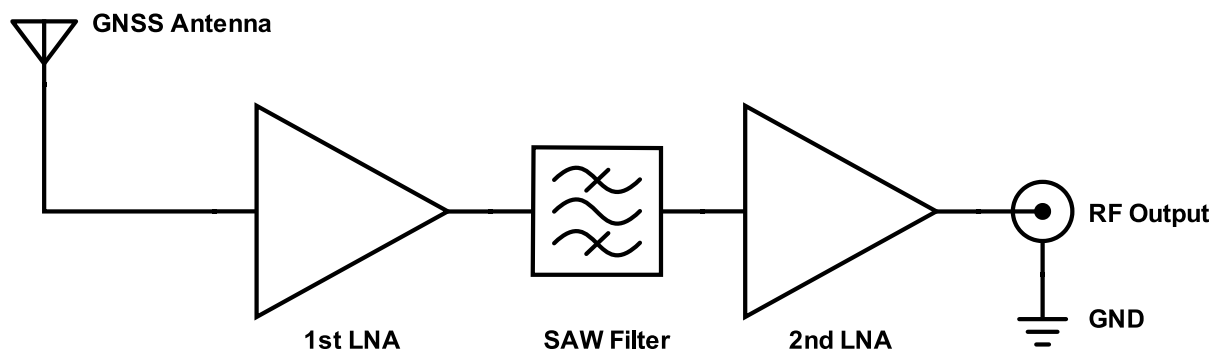


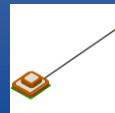
25 x 25 x 11.6 mm
RoHS Compliant
MSL Level = N/A

Measurement Setup



GNSS Block Diagram

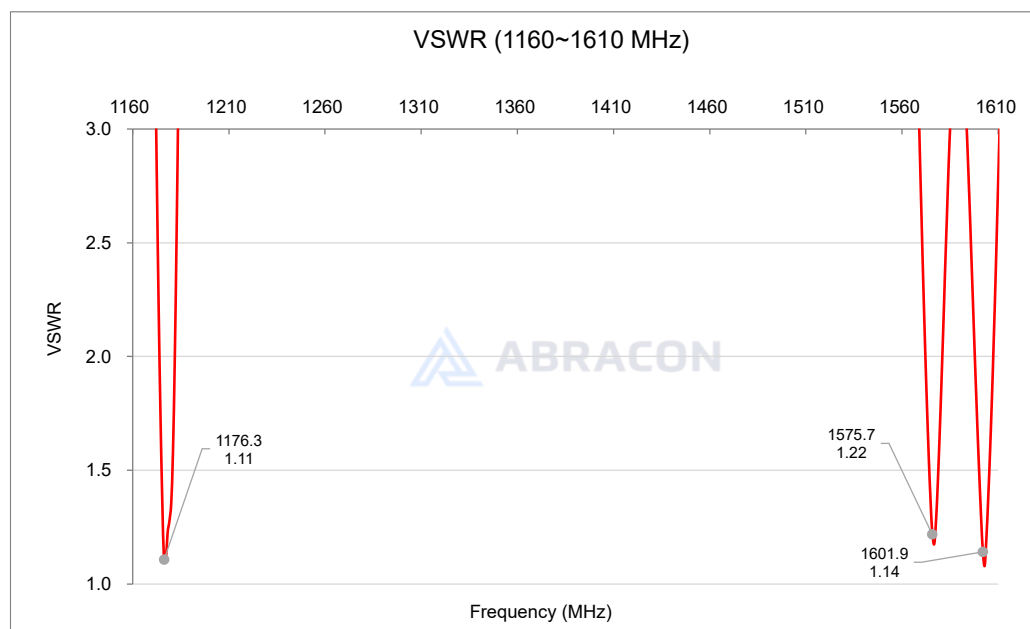
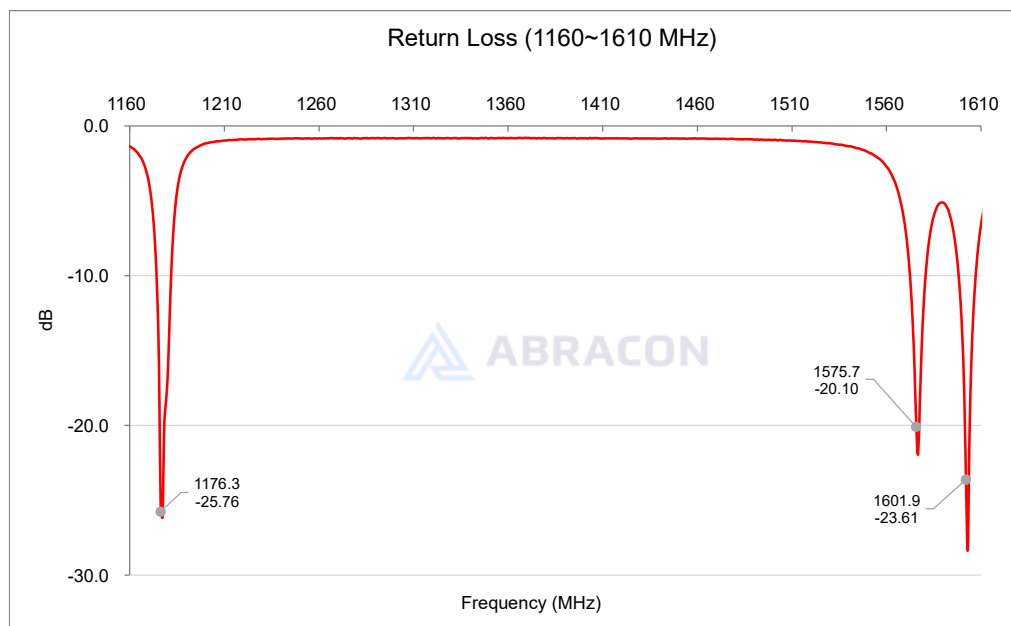


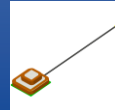
**APARC2511X-SG3L5**

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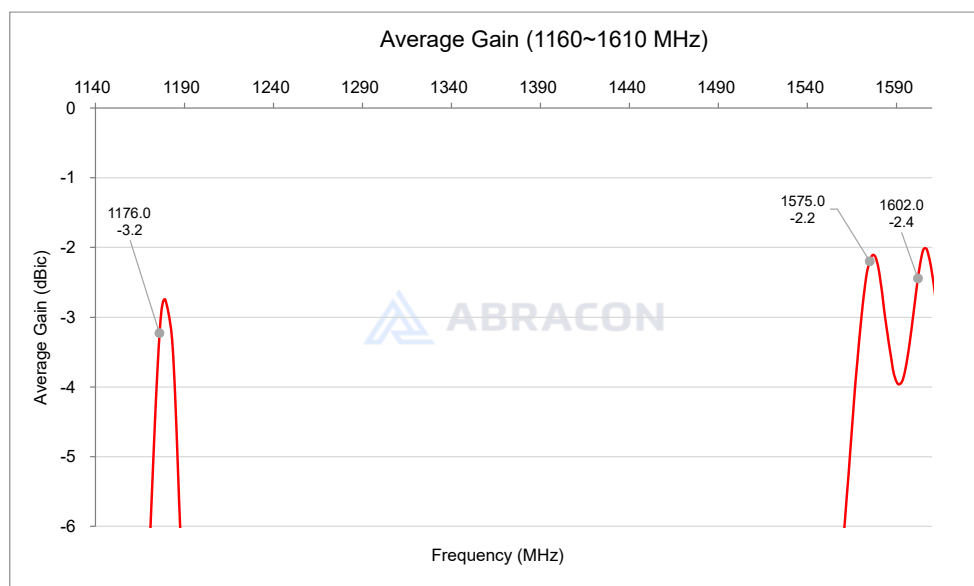
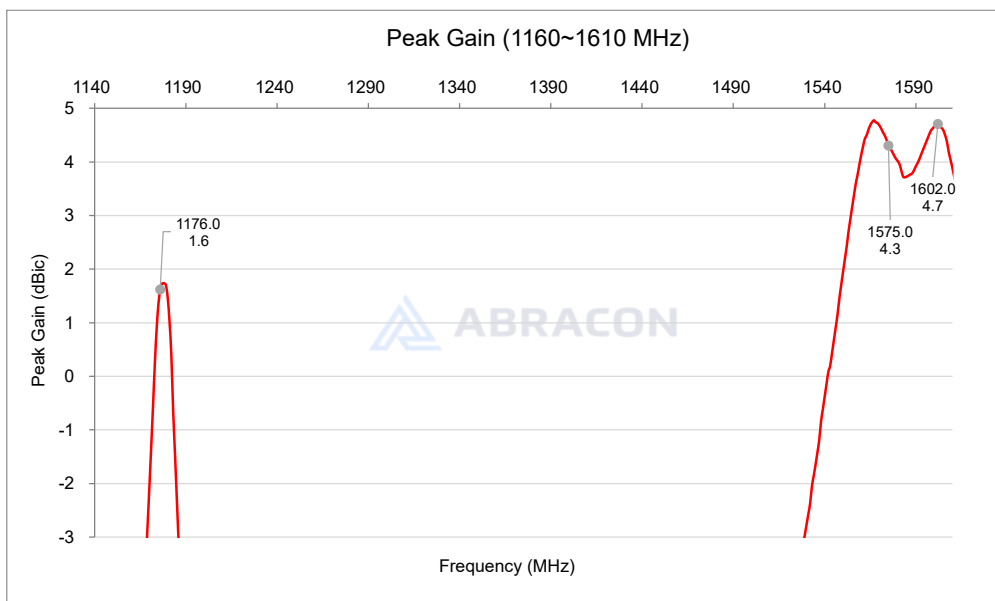
**25 x 25 x 11.6 mm**
RoHS Compliant
MSL Level = N/A**Reflection Characteristics – Return Loss & VSWR**

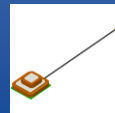
**APARC2511X-SG3L5**

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**25 x 25 x 11.6 mm**
RoHS Compliant
MSL Level = N/A**Radiation Characteristics –Passive Gain**

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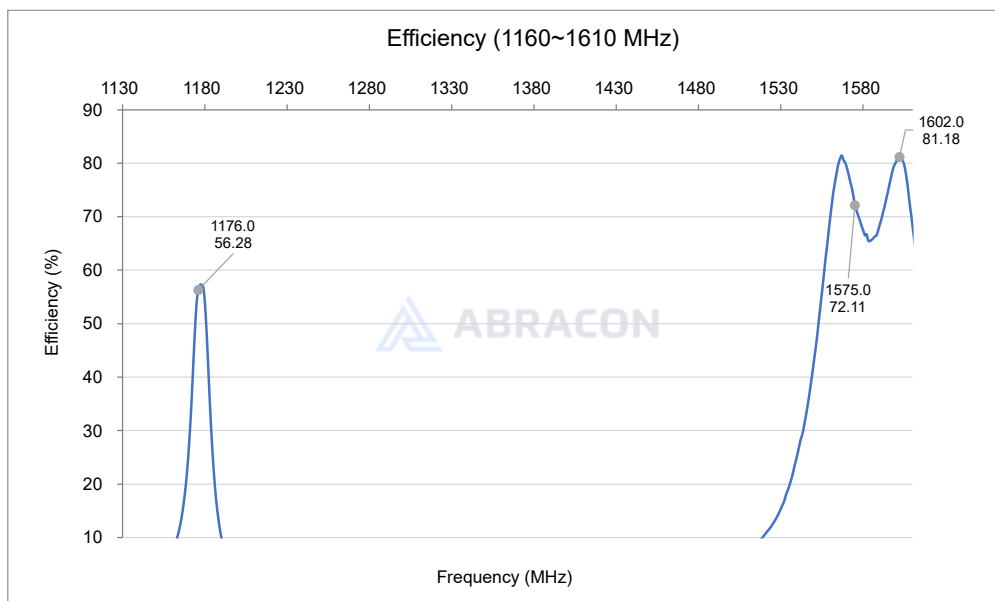
Request Samples

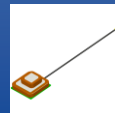


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25 x 25 x 11.6 mm
RoHS Compliant
MSL Level = N/A

Radiation Characteristics –Passive Efficiency

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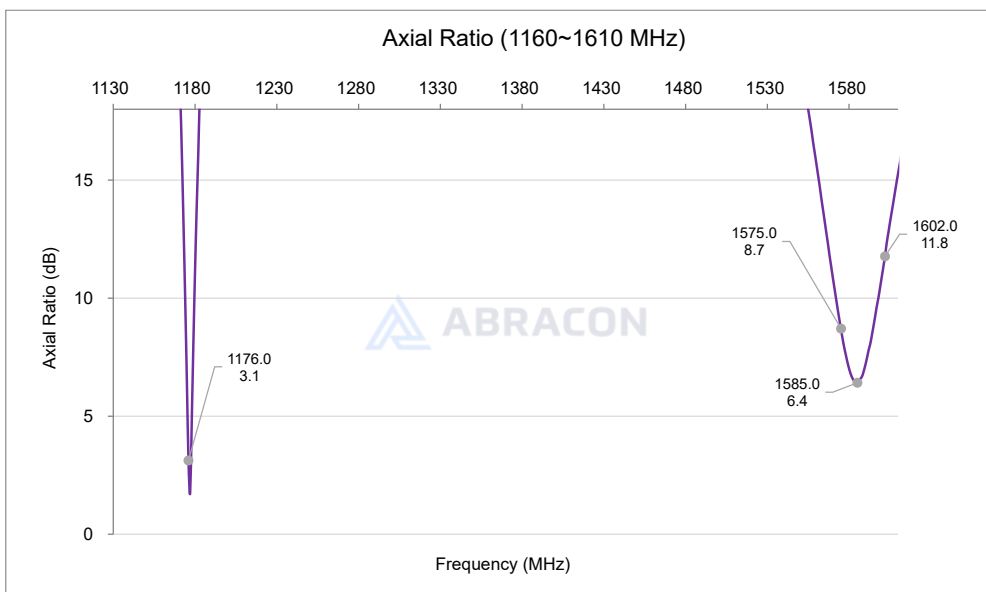
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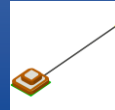


Check Inventory



25 x 25 x 11.6 mm
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MSL Level = N/A

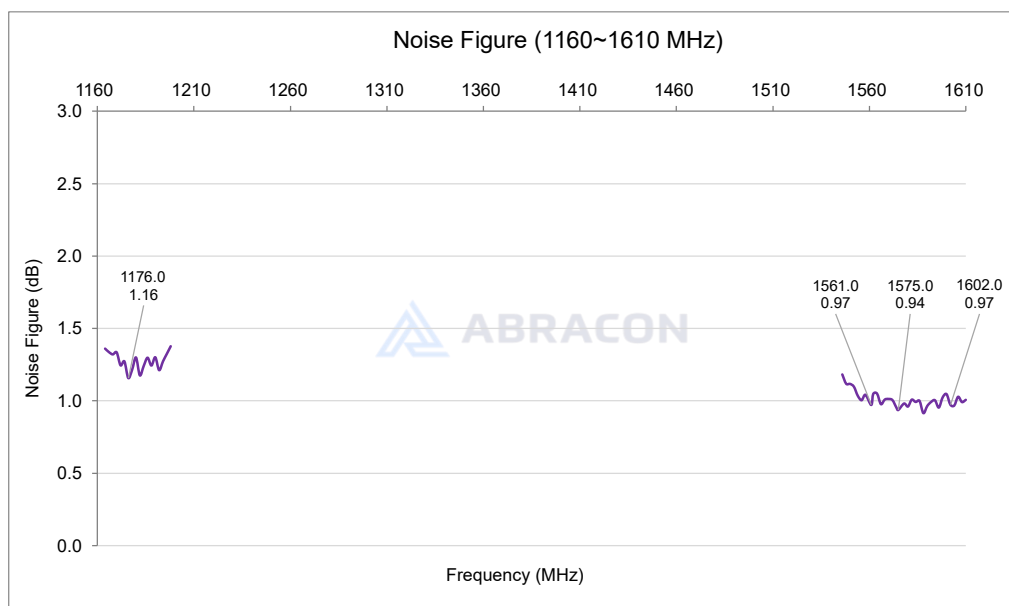
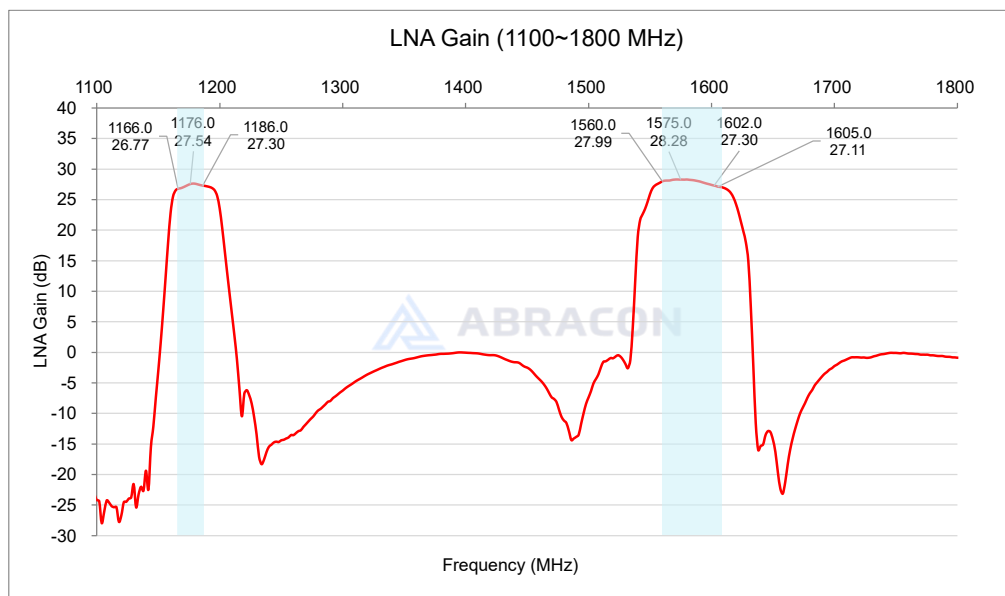
Radiation Characteristics –Axial Ratio

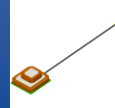
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**25 x 25 x 11.6 mm****RoHS Compliant****MSL Level = N/A****LNA Characteristics –LNA Gain & Noise Figure**

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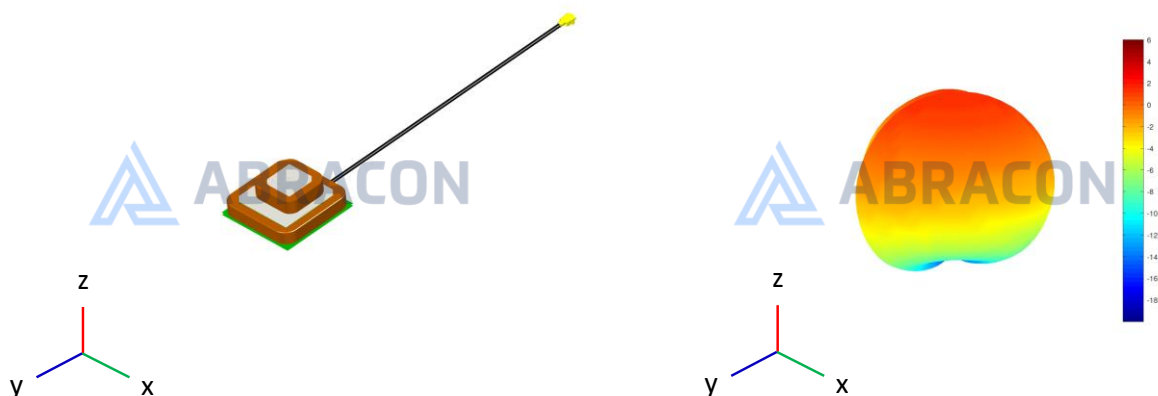
Request Samples



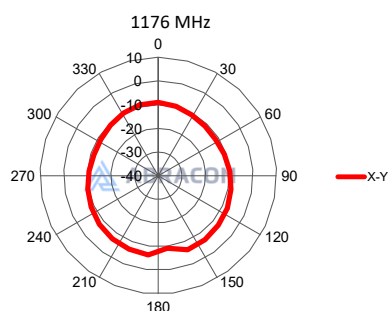
Check Inventory

**25 x 25 x 11.6 mm**
RoHS Compliant
MSL Level = N/A**Radiation Characteristics – 3D & 2D Pattern**

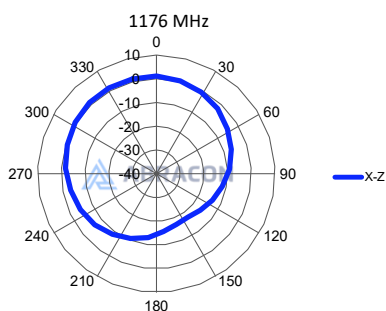
1176MHz



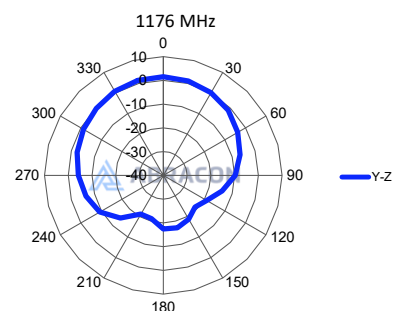
XY plane

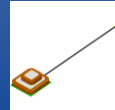


XZ plane



YZ plane





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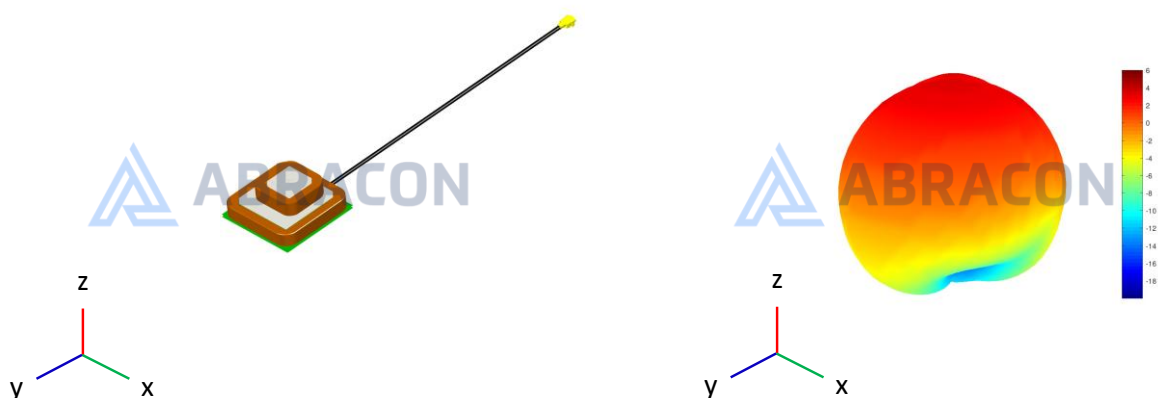


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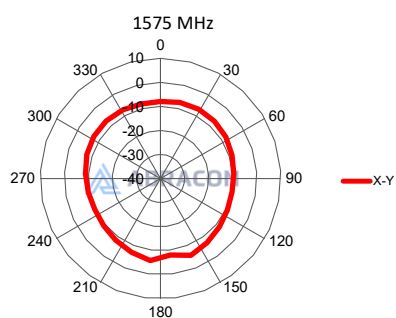


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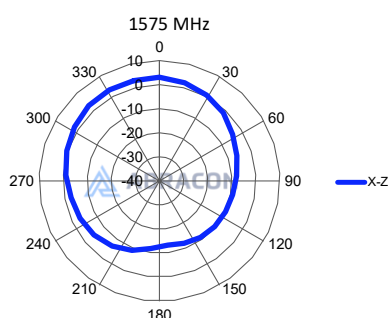
1575MHz



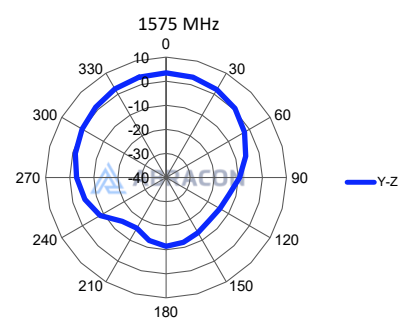
XY plane

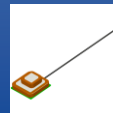


XZ plane



YZ plane





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25 x 25 x 11.6 mm
RoHS Compliant
MSL Level = N/A

Packaging

30 pcs antennas per vacuum

120 pcs antennas per batch

360 pcs antennas per carton

ATTENTION: Abracon LLC's products are Commercial-Off-The-Shelf ('COTS'), which are designed, intended, and validated for use in commercial, industrial, and automotive applications. The customer is responsible for testing and verifying the performance of an Abracon solution to meet their system-level requirements.



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www.abracon.com

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