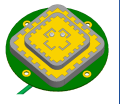


High Precision GNSS Active Patch Antenna



APXG6016GH

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Ø60.0 x 16.7 mm

RoHS Compliant

MSL Level = N/A

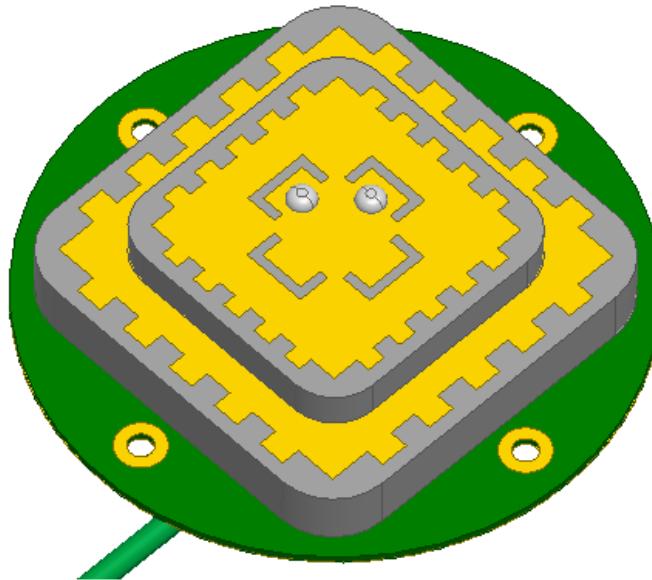
Features

- Multiband Active GNSS
 - GPS : L1/L2/L5
 - GLONASS : G1/G2/G3
 - Galileo : E1/E5a/E5b/E6
 - BeiDou : B1/B2/B3
 - QZSS : L1/L2/L5/L6
 - SBAS : L1/L5
 - IRNSS : L5
 - L-band
- Active GNSS patch with LNA max gain of 36±2 dB
- RHCP polarization
- Small size of Ø60.0 x 16.7 mm
- Light weight
- Fully customizable RF cable and connector options

Applications

- GPS/GLONASS/Galileo/BeiDou applications
- IoT
- M2M
- Remote technology monitoring
- Geofencing
- Surveying and mapping systems
- Logistics
- UAV applications

Product Image



High Precision GNSS Active Patch Antenna



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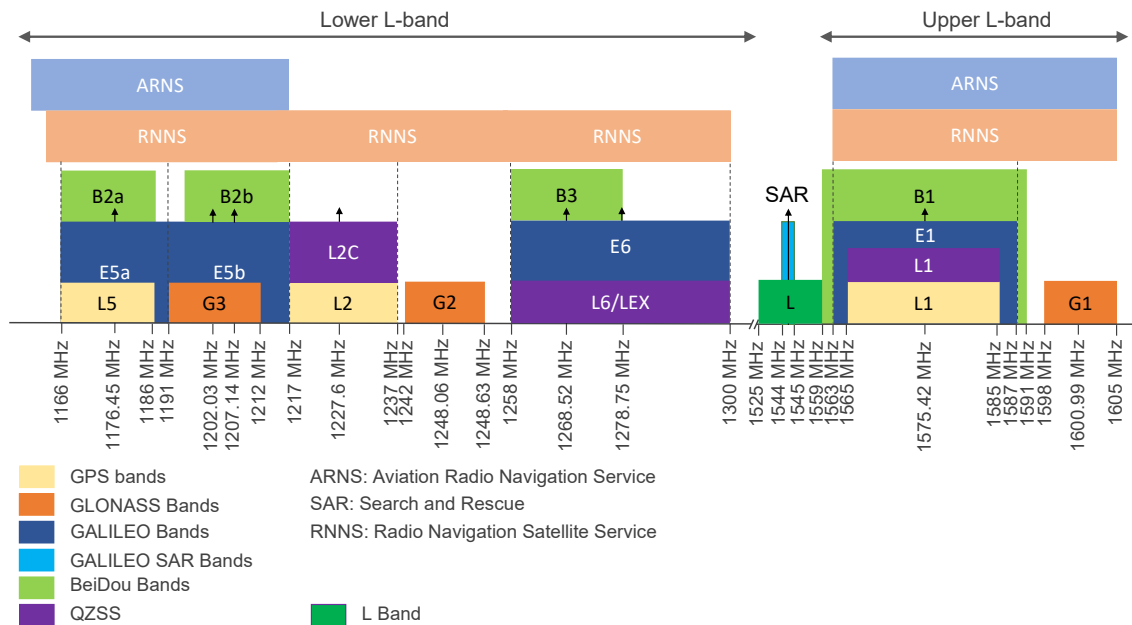
Check Inventory



Ø60.0 x 16.7 mm
RoHS Compliant
MSL Level = N/A

GNSS Frequency Bands Covered

GPS	L1 1575.42MHz	L2 1227.6MHz	L5 1176.45MHz	
	■	■	■	
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	
	■		■	



High Precision GNSS Active Patch Antenna



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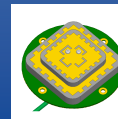
Ø60.0 x 16.7 mm
RoHS Compliant
MSL Level = N/A

Electrical Specification

Parameters	Typ.	Units	Note
Antenna			
Frequency	GPS: L1/L2/L5 GLONASS: G1/G2/G3 Galileo: E1/E5a/E5b/E6 Beidou: B1/B2/B3 QZSS: L1/L2/L5/L6 IRNSS/NAVIC: L5 SBAS: L1/E1/B1 L5/B2a/E5a L band correction service	-	
VSWR	≤ 2	-	
Polarization	RHCP	-	(Right Hand Circular Polarization)
Nominal Impedance	50	Ω	
Peak Gain	4.8	dBic	1565–1585 MHz (L1)
	5.0		1212-1242MHz (L2)
	-2.8		1166-1186MHz (L5)
Differential Propagation Delay	≤ 5	ns	
Axial Ratio	≤ 3	dB	
LNA			
Noise Figure	≤ 2	dB	
Gain	36 ± 2	dB	
Passband Ripple	± 2	dB	
Nominal Impedance	50	Ω	
VSWR	≤ 2.0	-	Max
Operating Voltage	+3.3 to 12	V	
Current Consumption	≤ 55	mA	

* With Diameter 120 mm GND Plane

High Precision GNSS Active Patch Antenna



APXG6016GH

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Ø60.0 x 16.7 mm

RoHS Compliant

MSL Level = N/A

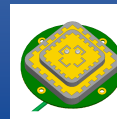
Mechanical Specifications

Parameter	Specification
Antenna Dimension	Ø60.0 x 16.7 mm
Mounting Type	4x M2.5 Through hole screws
RF Connector	MMCX (M)

Environmental Specification

Parameter	Specification
Operating Temperature	-40°C to +85°C
Storage Temperature	-55°C to +85°C
RoHS Compliance	Yes
ESD Sensitive	Yes
Pb free	Yes
MSL	N/A
Relative Humidity	Up to 95%

High Precision GNSS Active Patch Antenna



APXG6016GH

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Ø60.0 x 16.7 mm

RoHS Compliant

MSL Level = N/A

Ordering Information

Part Number	Description	Connector Option
APXG6016GH	High Precision GNSS Active Patch Antenna with MMCX (M) connector with 120mm cable length	MMCX (M)



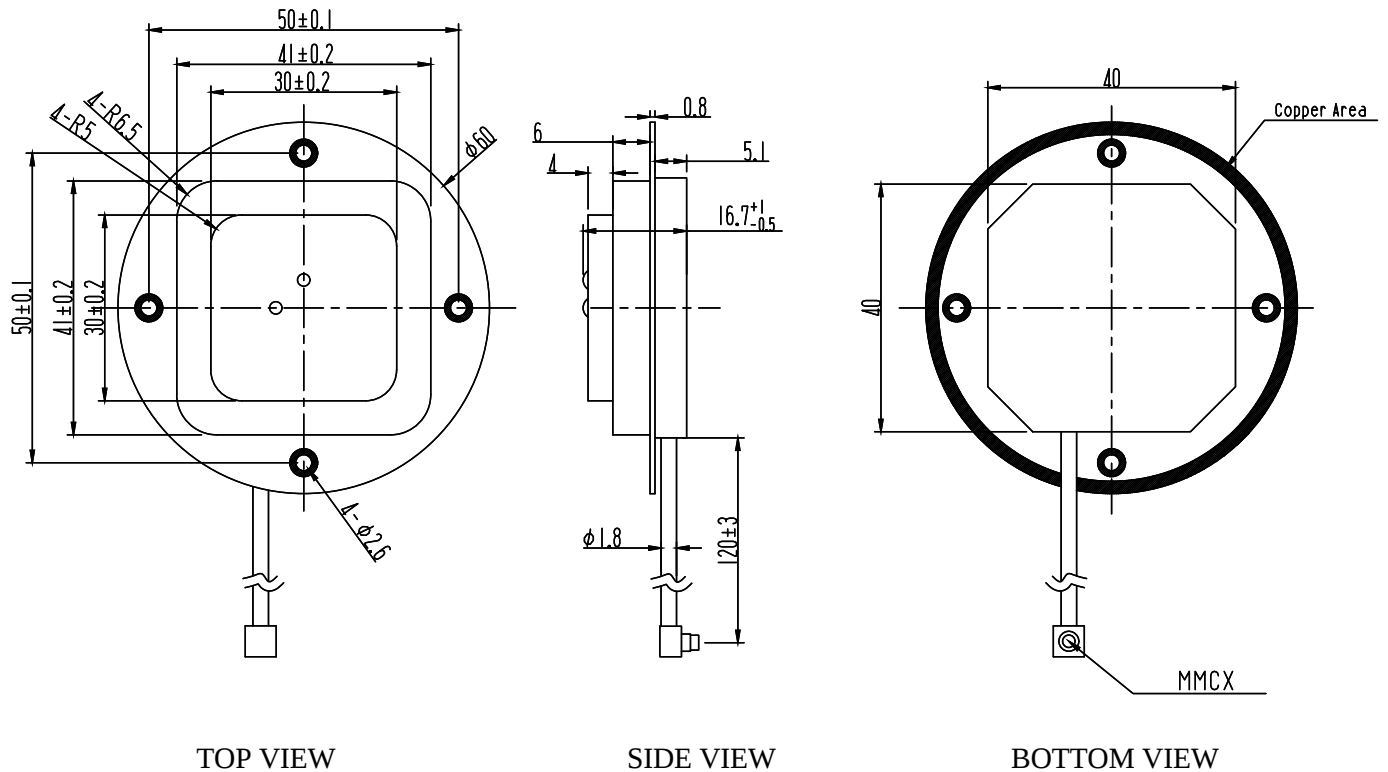
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REVISED: 12-06-23

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Ø60.0 x 16.7 mm
RoHS Compliant
MSL Level = N/A

Product Dimensions



Unit: mm

Unspecified tolerance: ± 0.3 mm



APXG6016GH

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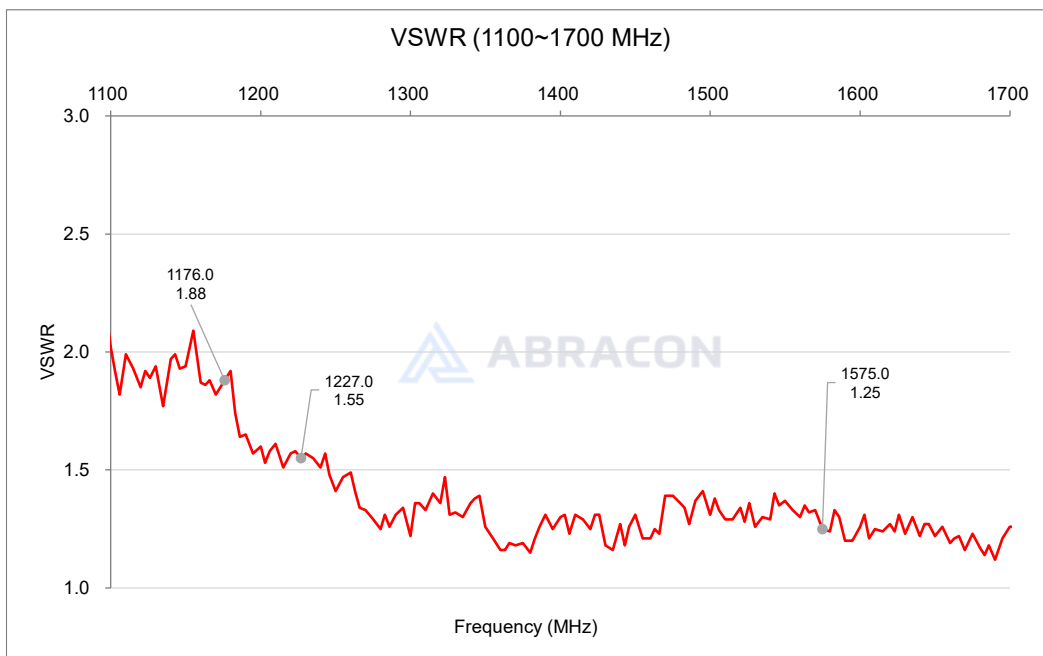
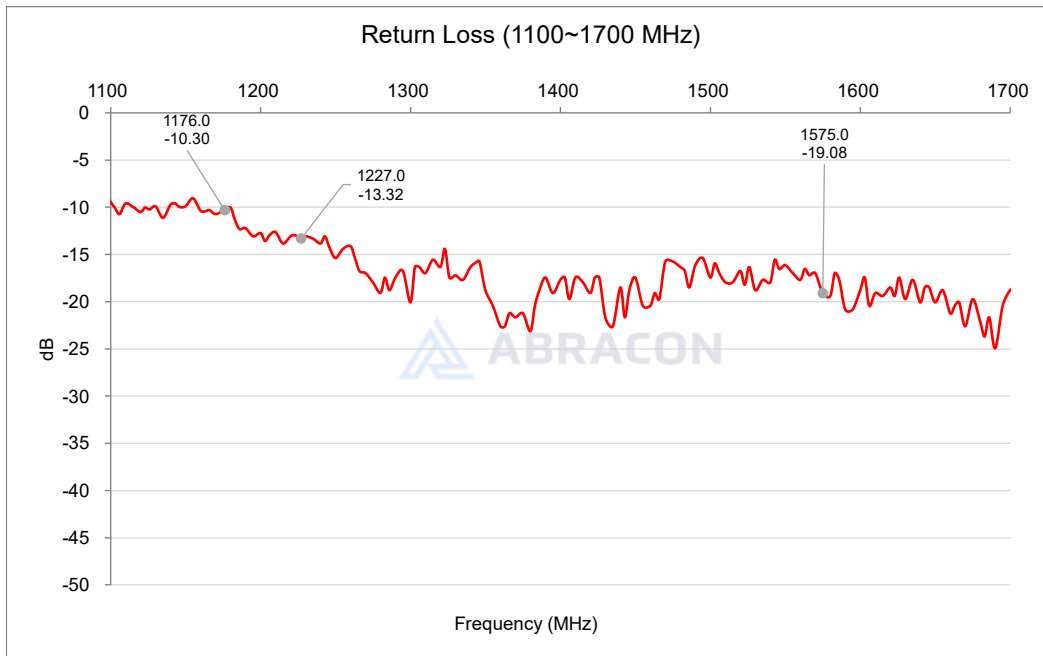


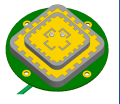
Check Inventory



Ø60.0 x 16.7 mm
RoHS Compliant
MSL Level = N/A

Reflection Characteristics – Return Loss & VSWR





APXG6016GH

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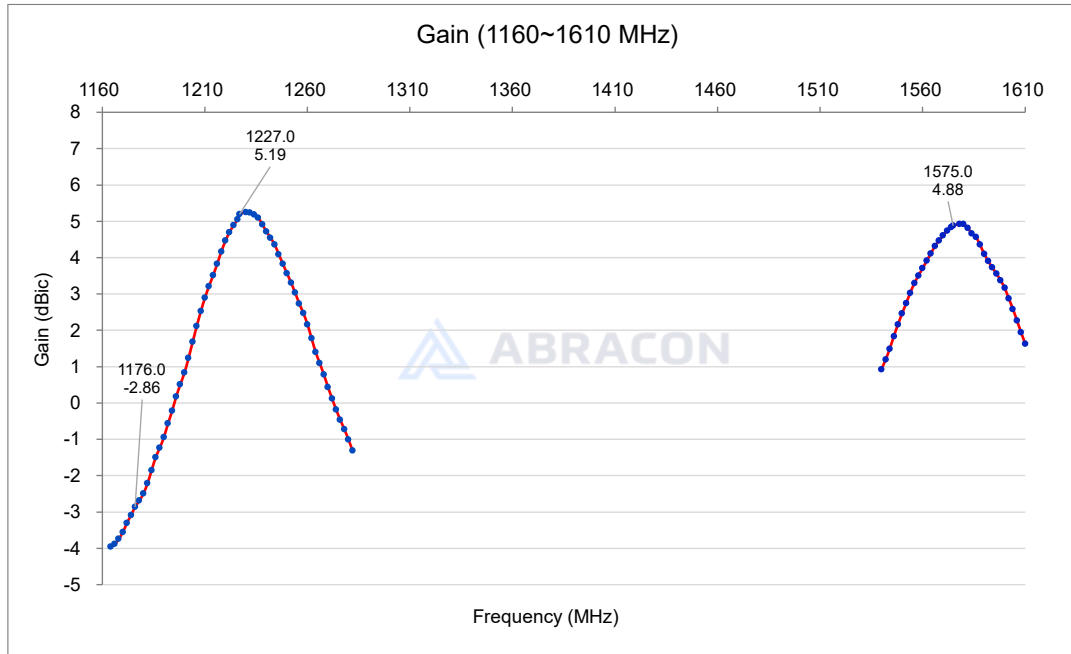
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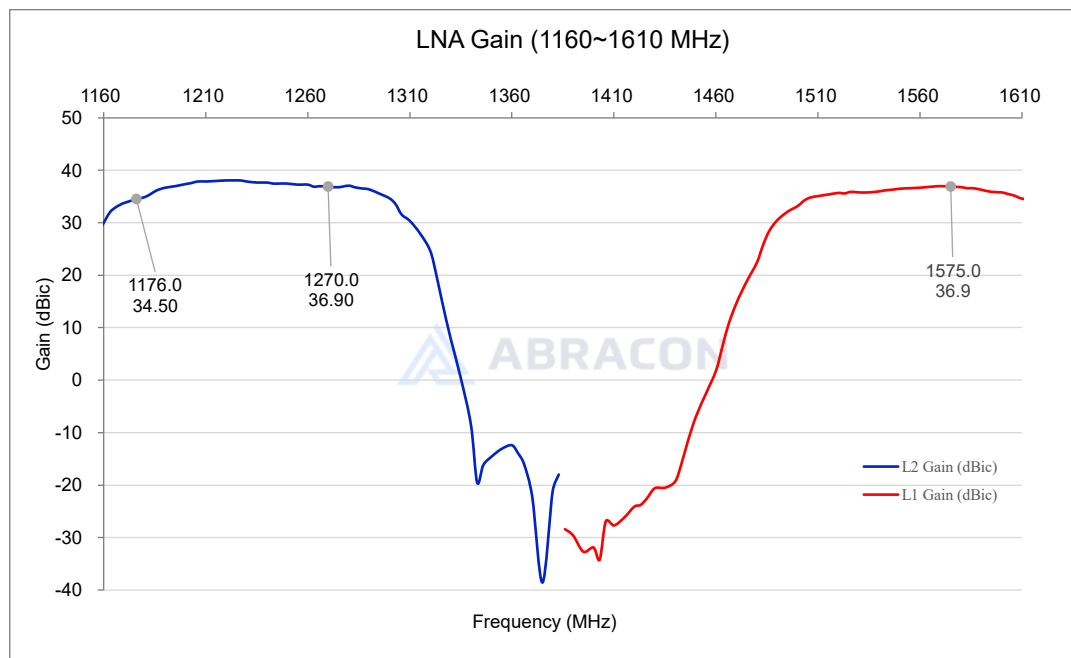
Ø60.0 x 16.7 mm
RoHS Compliant
MSL Level = N/A

Radiation Characteristics

Passive Peak Gain



LNA Gain





APXG6016GH

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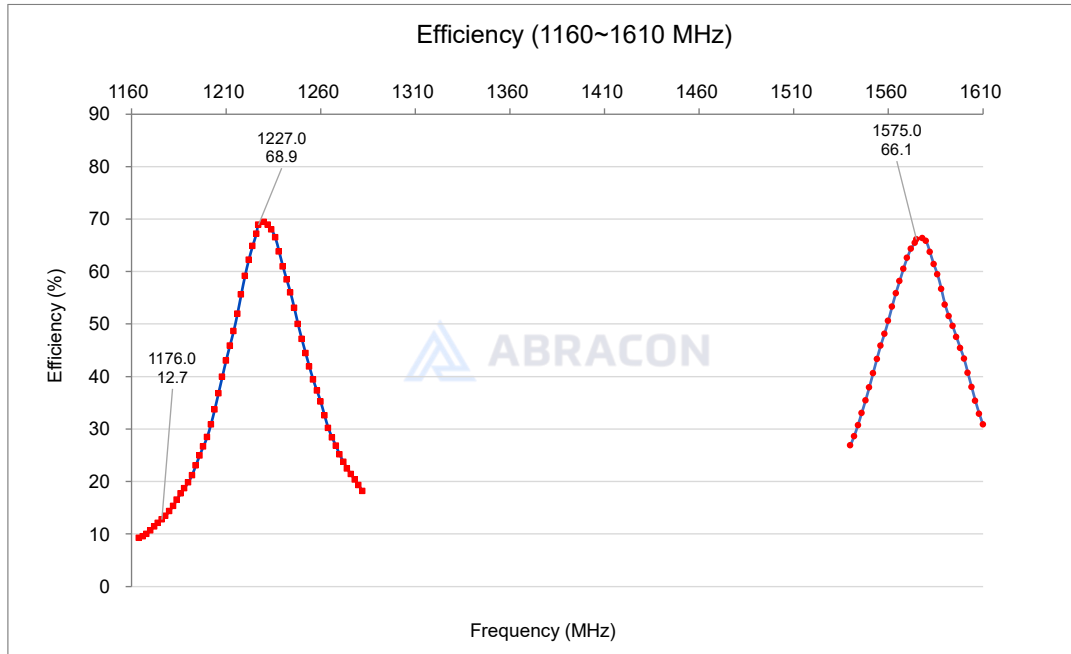


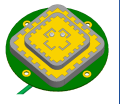
Check Inventory



Ø60.0 x 16.7 mm
RoHS Compliant
MSL Level = N/A

Radiation Characteristics –Efficiency





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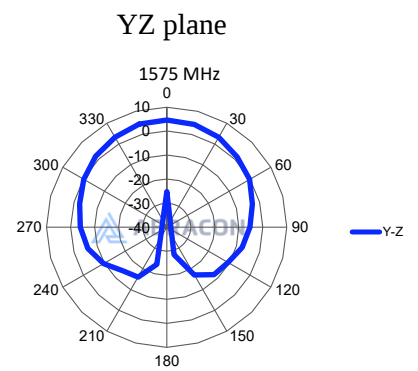
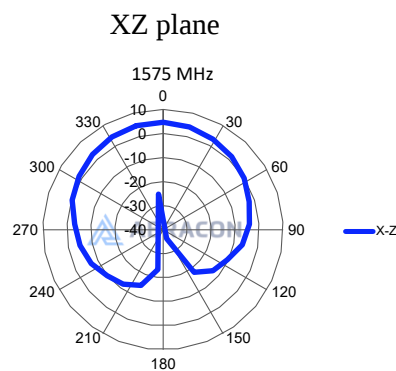
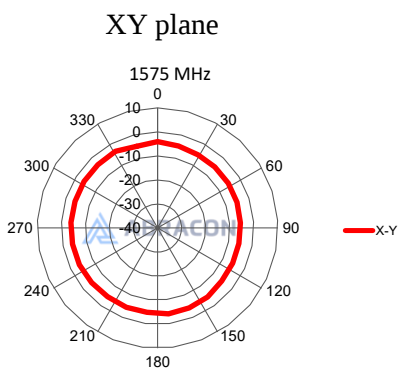
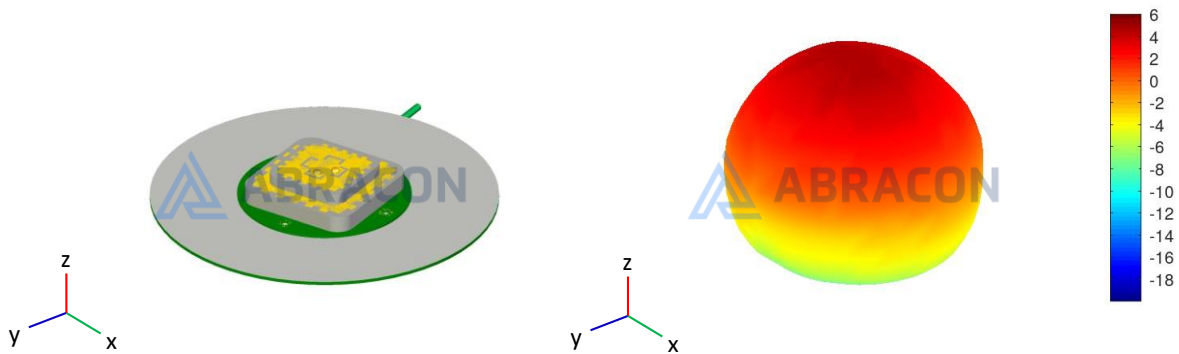
Check Inventory



Ø60.0 x 16.7 mm
RoHS Compliant
MSL Level = N/A

Radiation Characteristics – 3D & 2D Pattern

1575MHz (L1 Band)



High Precision GNSS Active Patch Antenna



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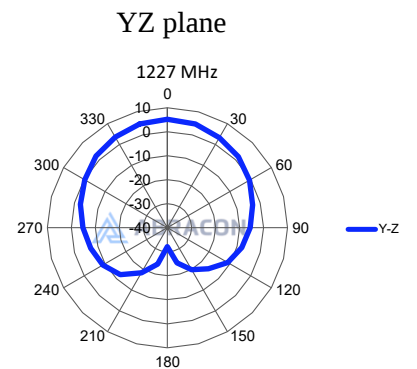
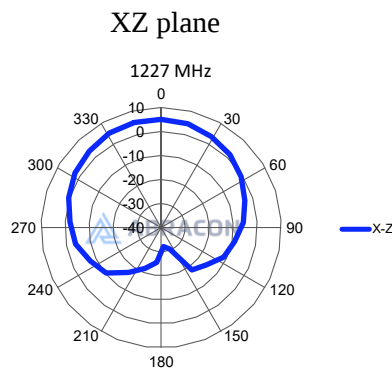
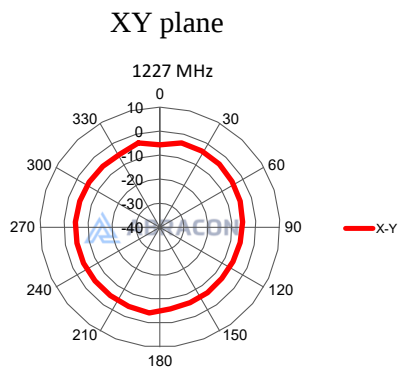
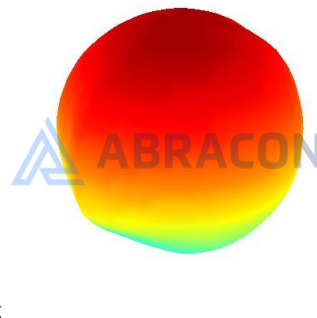
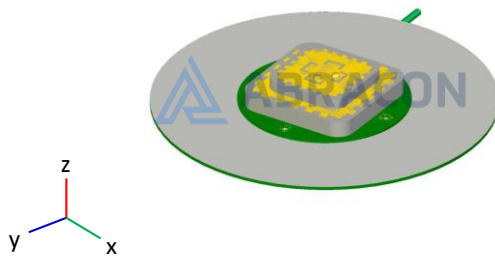


Check Inventory



Ø60.0 x 16.7 mm
RoHS Compliant
MSL Level = N/A

1227MHz (L2 Band)



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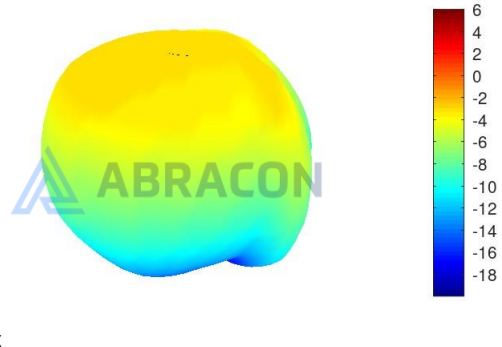
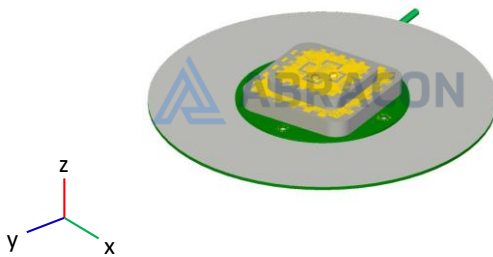


Check Inventory

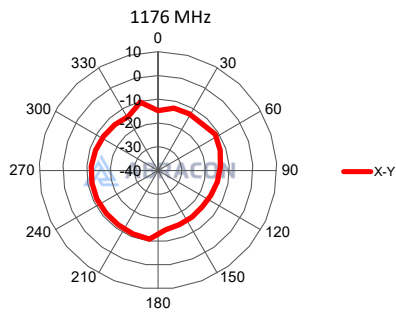


Ø60.0 x 16.7 mm
RoHS Compliant
MSL Level = N/A

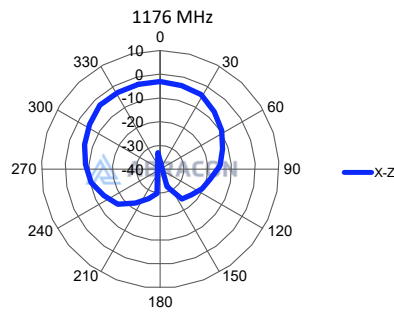
1176MHz (L5 Band)



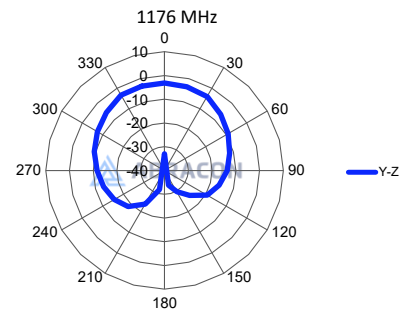
XY plane



XZ plane



YZ plane



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Ø60.0 x 16.7 mm
RoHS Compliant
MSL Level = N/A

Packaging

60 pcs per carton

Dimension of the carton: 455 x 330 x 220 mm

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