

ECN/PCN No.: R0405

For Manufacturer

Product Description: GNSS L1/L5 Internal Active Patch Antenna	Abrakon Part Number / Part Series: APARC2511X-SG3L5	<input type="checkbox"/> Documentation only <input checked="" type="checkbox"/> ECN <input type="checkbox"/> EOL	<input type="checkbox"/> Series <input type="checkbox"/> Part Number
Affected Revision: IR	New Revision: A	Application:	<input type="checkbox"/> Safety <input checked="" type="checkbox"/> Non-Safety

Prior to Change:

GNSS/GPS L1+L5/GLONASS/BeiDou/Galileo-Active Stacked Patch Antenna

APARC2511X-SG3L5

Request Samples



Check Inventory



25*25*13 mm

RoHS/RoHS II Compliant

MSL Level = N/A

Features

- Multiband GNSS Coverage – GPS/GLONASS/BeiDou/Galileo
- RHCP polarization
- Easy installation using IPEX Connector (Customizable Cable and Connector Options)
- High gain LNA

Applications

- GNSS – GPS L1+L5/GLONASS/BeiDou/Galileo
- IoT
- M2M
- Remote Monitoring
- Geofencing
- Surveying and Mapping Systems
- Logistics and Tracking

Electrical Specifications

Parameter	Specification				Unit	Note
	L1:BeiDou	L1:GPS/Galileo	L1:GLONASS	L5		
Operating Frequency	1561±2.046	1575.42±1.023	1602±8	1176±10	MHz	
VSWR	6.12	1.50	1.95	2.74		
Gain	-2	0	2	-2	dBi	Zenith
Impedance	50				Ω	
Polarization	RHCP					
Radiation Pattern	Omni-directional					Azimuth
LNA						
Noise Figure	1				dB	(25°C±5°C)
Gain	28±3		27±3		dB	(25°C±5°C)
Impedance	50				Ω	
VSWR	2.0					Max

After Change:

GNSS L1/L5 Internal Active Patch Antenna



APARC2511X-SG3L5

Request Samples



Check Inventory



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).

Updated test data

Cause/Reason for Change: Updated test data

Change Plan

Effective Date:

08/27/2025

Additional Remarks:

Change Declaration:

Issued Date:

08/27/2025

Issued By:

Allan

Issued Department:

Engineering

Approval:

Saravanan Subramanian
Engineering Manager

Approval:

Reuben Quintanilla
Quality Director

Approval:

Ying Huang
Purchasing Director

For Abracon EOL only

Last Time Buy (if applicable):

Alternate Part Number / Part Series:

Additional Approval:	Additional Approval:	Additional Approval:
Customer Approval (If Applicable)		
Qualification Status:		
<input type="checkbox"/> Approved <input type="checkbox"/> Not accepted		
<i>Note: It is considered approved if there is no feedback from the customer 1 month after ECN/PCN is released.</i>		
Customer Part Number:		Customer Project:
Company Name:	Company Representative:	Representative Signature:
Customer Remarks:		