

ECN/PCN No.: R0517

For Manufacturer

Product Description:
4G/3G/2G External Patch Antenna

Abracon Part Number / Part Series:
APAMS-102

☐ Documentation only

☒ ECN

☐ EOL

☐ Series

☐ Part

☐ Number

Affected Revision:

B

New Revision:

C

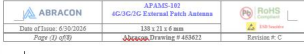
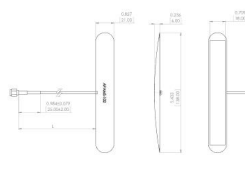
Application:

☐ Safety

☒ Non-Safety

Prior to Change:

ABRACON CORPORATION APAMS-102 GSM Antenna Module 138x21x8mm RoHS Compliant Date of Issue: Oct 14 th 2014 Page 1 of 10 Abracon Drawing # A00004 Revision # B							
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Customer Approval (Please return this copy as a certification of your approval) Approved by: _____ Approval Date: _____							
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Abracon LLC Headquarters: 11117 Van Ness Blvd., Suite 200 San Francisco, CA 94133 Tel: (415) 774-4000 Fax: (415) 774-4001 Revision History <table border="1" style="width:100%;"> <thead> <tr> <th>Revision</th> <th>ECO</th> <th>Description</th> <th>Date</th> <th>Rev'd By</th> <th>Chk'd By</th> <th>App'd By</th> <th>Abracon</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>2018</td> <td>Adding external and internal mounting options</td> <td>10/04/2018</td> <td>EPN</td> <td>SR</td> <td>CB</td> <td>SR</td> </tr> <tr> <td>B</td> <td>2021</td> <td>Revising section (Electronic) detail, antenna characteristics table, antenna dimensions table, external, internal, and internal dimensions table, and internal dimensions table</td> <td>10/04/2024</td> <td>EPN</td> <td>SR</td> <td>CB</td> <td>SR</td> </tr> <tr> <td>C</td> <td>2021</td> <td>Update dimensions table</td> <td>03/04/2024</td> <td>AM</td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	Part Description	4G/5G/2G External Patch Antenna	Customer Part Number	Abracon Part Number	Abracon Part Number	APAMS-182	Revision	ECO	Description	Date	Rev'd By	Chk'd By	App'd By	Abracon	A	2018	Adding external and internal mounting options	10/04/2018	EPN	SR	CB	SR	B	2021	Revising section (Electronic) detail, antenna characteristics table, antenna dimensions table, external, internal, and internal dimensions table, and internal dimensions table	10/04/2024	EPN	SR	CB	SR	C	2021	Update dimensions table	03/04/2024	AM				 4G/5G/2G External Patch Antenna APAMS-182 Description This weatherproof 4G/5G/2G external patch antenna delivers robust outdoor connectivity across 120-180 MHz and 1710-2170 MHz bands. It is a low-profile 130 x 215 x 6 mm, it features a high gain gain of 7 dBi, it provides high gain performance in both horizontal and vertical planes, and it is CAT 1 compliant. CAT 10, the 4G LTE-compliant, 3GPP Level 1 antenna features omnidirectional and omnidirectional. It is ideal for smart home networking, telecommunications, and traffic monitoring applications requiring durable outdoor installation. Features - Frequency Range: 120-180 MHz, 1710-2170 MHz - Low Profile with Size: 130 x 215 x 6 mm - High Gain Gain up to 7 dBi - Custom Cable Length Options Available - RoHS Compliant (MSL Level 1) Applications - LTE-M, Cat M1, Cat M2, NB-IoT - LTE CAT 1 up to CAT 20 supported - Smart Home Networking - Telecommunications - Traffic Control and Monitoring Ordering Information <table border="1" style="width:100%;"> <thead> <tr> <th>Part Number</th> <th>Description</th> <th>Quantity</th> </tr> </thead> <tbody> <tr> <td>APAMS-182</td> <td>4G/5G/2G External Patch Antenna</td> <td>100000</td> </tr> </tbody> </table> ABRACON	Part Number	Description	Quantity	APAMS-182	4G/5G/2G External Patch Antenna	100000	 4G/5G/2G External Patch Antenna APAMS-182 Electrical Specifications <table border="1" style="width:100%;"> <thead> <tr> <th>Parameters</th> <th>Typ.</th> <th>Unit</th> </tr> </thead> <tbody> <tr> <td>Frequency Range</td> <td>120-180 MHz</td> <td>MHz</td> </tr> <tr> <td>Bandwidth (Typ)</td> <td>±2.5</td> <td>dB</td> </tr> <tr> <td>VSWR (Typ)</td> <td>1.5</td> <td>-</td> </tr> <tr> <td>Gain (Typ)</td> <td>7</td> <td>dBi</td> </tr> <tr> <td>Impedance</td> <td>50</td> <td>Ω</td> </tr> <tr> <td>Return Loss</td> <td>15</td> <td>dB</td> </tr> </tbody> </table> Mechanical Specifications <table border="1" style="width:100%;"> <thead> <tr> <th>Parameters</th> <th>Specification</th> </tr> </thead> <tbody> <tr> <td>Antenna Dimensions</td> <td>130 x 215 x 6 mm</td> </tr> <tr> <td>Mounting Method</td> <td>180° Mount</td> </tr> <tr> <td>Mounting Type</td> <td>Adhesive Mount</td> </tr> <tr> <td>RF Cable Type</td> <td>RGS-14</td> </tr> <tr> <td>RF Cable Length</td> <td>1000 mm</td> </tr> <tr> <td>RF Connector</td> <td> SMA (Male)</td> </tr> </tbody> </table> Environmental Specifications <table border="1" style="width:100%;"> <thead> <tr> <th>Parameters</th> <th>Specification</th> </tr> </thead> <tbody> <tr> <td>Operating Temperature</td> <td>-40°C to +85°C</td> </tr> <tr> <td>Storage Temperature</td> <td>-40°C to +85°C</td> </tr> <tr> <td>Relative Humidity</td> <td>Up to 95%</td> </tr> </tbody> </table> ABRACON	Parameters	Typ.	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RF Connector	SMA (Male)																																																																																																									
Parameters	Specification																																																																																																									
Operating Temperature	-40°C to +85°C																																																																																																									
Storage Temperature	-40°C to +85°C																																																																																																									
Relative Humidity	Up to 95%																																																																																																									
Parameters	Description																																																																																																									
Length	130 mm																																																																																																									
Width	215 mm																																																																																																									
Height	6 mm																																																																																																									
RF Cable Type	RGS-14																																																																																																									
RF Cable Length	1000 mm																																																																																																									
RF Connector	SMA (Male)																																																																																																									
Mounting Type	Adhesive Mount																																																																																																									
Cause/Reason for Change: Update document layout																																																																																																										
Change Plan																																																																																																										
Effective Date: 06/30/2026		Additional Remarks:																																																																																																								
Change Declaration:																																																																																																										
Issued Date: 06/30/2026		Issued By: Allan																																																																																																								
Approval: Saravanan Subramanian Engineering Director		Approval: Reuben Quintanilla Quality Director																																																																																																								
Issued Department: Engineering		Approval: Ying Huang Purchasing Director																																																																																																								
For Abracon EOL only																																																																																																										
Last Time Buy (if applicable):		Alternate Part Number / Part Series:																																																																																																								
Additional Approval:		Additional Approval:																																																																																																								
Customer Approval (If Applicable)																																																																																																										
Qualification Status: ☐ Approved ☐ 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:		Representative Signature:																																																																																																								
Customer Remarks:																																																																																																										