

Combined Antenna Module - Body Mount

APAMPSBJ-144**RoHS/RoHS II Compliant****MSL level: Not Applicable**

FEATURES:

- Active GPS and Multiband External Antenna,
- Covering Active GPS / GLONASS (1592 - 1610 MHz)
- Cellular: AMPS (850 MHz), GSM (900 MHz), DCS (1800 MHz), PCS (1900 MHz),
- 3G (UMTS 2.1 GHz)
- WiFi / Bluetooth (2.4GHz)
- LTE (791-960/1710-2690 MHz)
- 2 coaxial output feeds; active GNSS and Other bands
- IP67, IK09, IP69K approved
- Body Mount attachment
- LNA Gain: 23dB at 3V, 24dB at 5V
- Cellular Gain: 2dBi
- Cellular VSWR<2.5:1
- RoHS/RoHS II compliant

TYPICAL APPLICATIONS:

- Vehicle GPS/GLONASS, Cellular and UMTS (3G and LTE)
- Vehicle Cellular Routers

STANDARD SPECIFICATIONS:

Mobile (Cable1)

| Parameters | Min. | Typ. | Max. | Units | Note |
|-----------------------|--------|------|-------|-------|-----------|
| Receiving Frequency | 791 | | 960 | MHz | 4G/LTE |
| | 1710 | | 2960 | MHz | 4G/LTE |
| | | 850 | | MHz | AMPS |
| | | 900 | | MHz | GSM |
| | | 1800 | | MHz | DCS |
| | | 1900 | | MHz | PCS |
| | | 2.1 | | GHz | 3G-UMTS |
| | | 2.4 | | GHz | BLUETOOTH |
| VSWR | | | 2.5:1 | | |
| Polarization Model | Linear | | | | |
| Impedance | | 50 | | Ω | |
| Gain | | | 2 | dBi | |
| Power Handling | | 25 | | W | |
| Operating Temperature | -40 | | +85 | °C | |

Navigation (Cable 2)

| Parameters | Min. | Typ. | Max. | Units | Note |
|-----------------------|------|------|-------|-------|-------------|
| Receiving Frequency | 1572 | | 1610 | MHz | GPS+GLONASS |
| Impedance | | 50 | | Ω | |
| VSWR | | | 1.5:1 | | |
| Noise figure | 1.2 | | | dB | |
| Polarization Model | RHCP | | | | |
| Ceramic Patch Gain | 2 | | 3 | dBic | @ zenith |
| Operating Temperature | -40 | | +85 | °C | |

Combined Antenna Module - Body Mount

APAMPSBJ-144

RoHS/RoHS II Compliant



Ø 77.3mm x 66.5mm

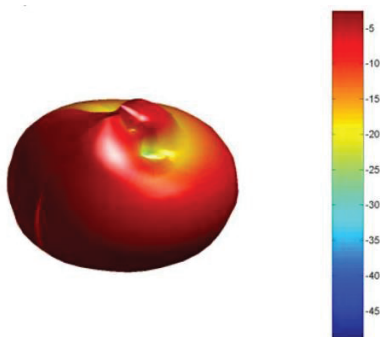
Low Noise Amplifier (LNA)

| Parameters | Min. | Typ. | Max. | Units | Note |
|-----------------------|------|------|------|-------|--------|
| DC Voltage | 2.7 | | 5.5 | V | |
| Gain | | | 23 | dB | @ 3.0V |
| | | | 24 | dB | @ 5.0V |
| Current | 15 | | 25 | mA | |
| Power | | | 138 | mW | |
| Operating Temperature | -40 | | +85 | °C | |

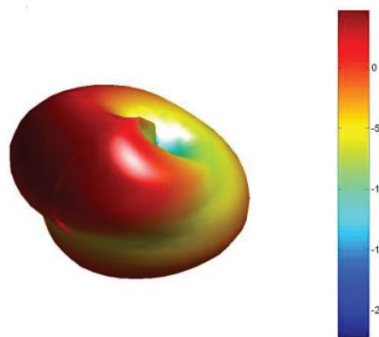
MEASUREMENTS

Radiation Patterns Azimuth 45° and Elevation 45°

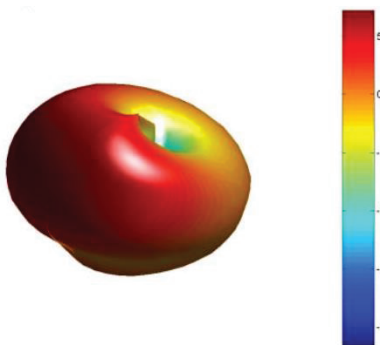
Frequency=798MHz Az=45 EL=45



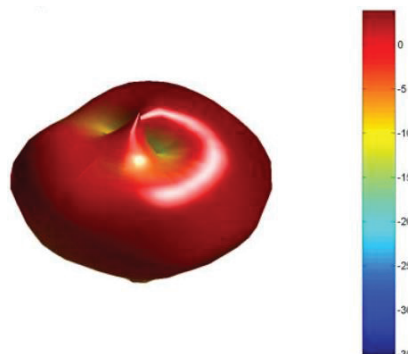
Frequency=853MHz Az=45 EL=45



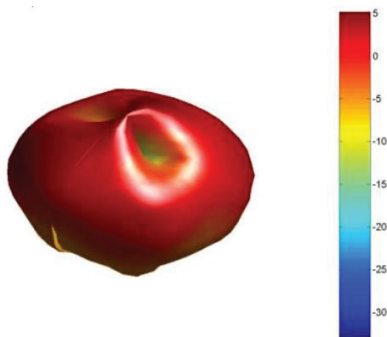
Frequency=897MHz Az=45 EL=45



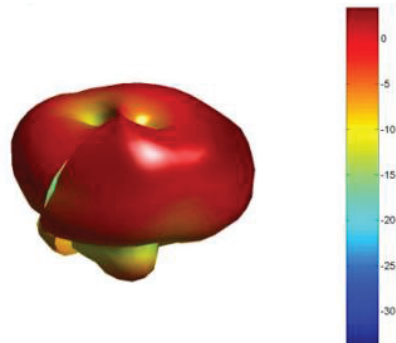
Frequency=1799MHz Az=45 EL=45



Frequency=1909MHz Az=45 EL=45



Frequency=2107MHz Az=45 EL=45



Combined Antenna Module - Body Mount

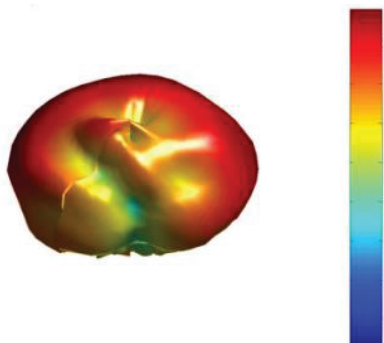
APAMPSBJ-144

RoHS/RoHS II Compliant

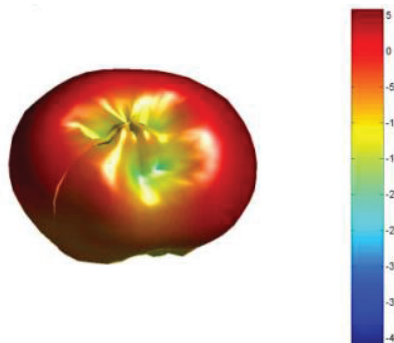


MEASUREMENTS

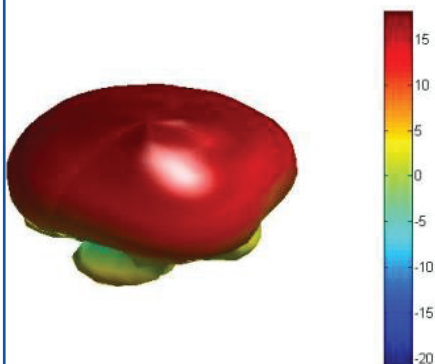
Frequency=2404MHz Az=45 EL=45



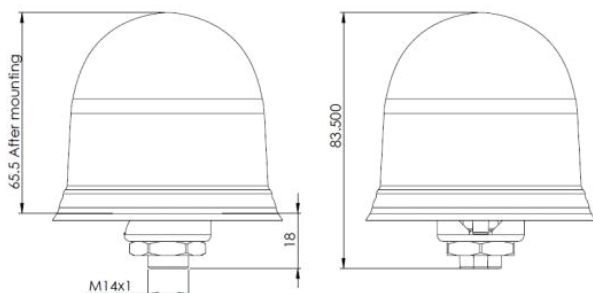
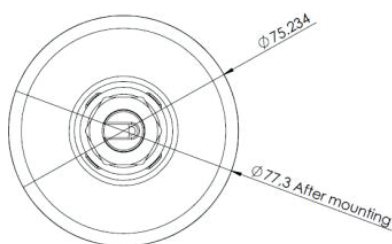
Frequency=2602MHz Az=45 EL=45



Frequency=1575.42MHz Az=45 EL=45



OUTLINE DIMENSION:



| Parameters | Description |
|--------------------|--------------------------------------|
| RF Connector | LTE (Cable 1) - SMA male |
| | GNSS (Cable 2) - SMA male |
| Weight | 150g |
| Cable Type | Cable 1 – RG174U Cable 2 - RG174U |
| Cable Length | 15cm |
| Lid | ABS |
| Base | Zamak |
| Gasket | TPE |
| Color | Black |
| Certificates | IP67, IK09, IP69K |
| Ceramic Patch Size | 24x24x4mm |

Dimension: mm

ABRACON IS
ISO9001:2008
CERTIFIED

 **ABRACON**[®]
The Power of Linking Together LLC

2 Faraday, Suite# B | Irvine | CA 92618 Revised: 08.14.15
Ph. 949.546.8000 | Fax. 949.546.8001
Visit www.abracon.com for Terms and Conditions of Sale

Combined Antenna Module - Body Mount

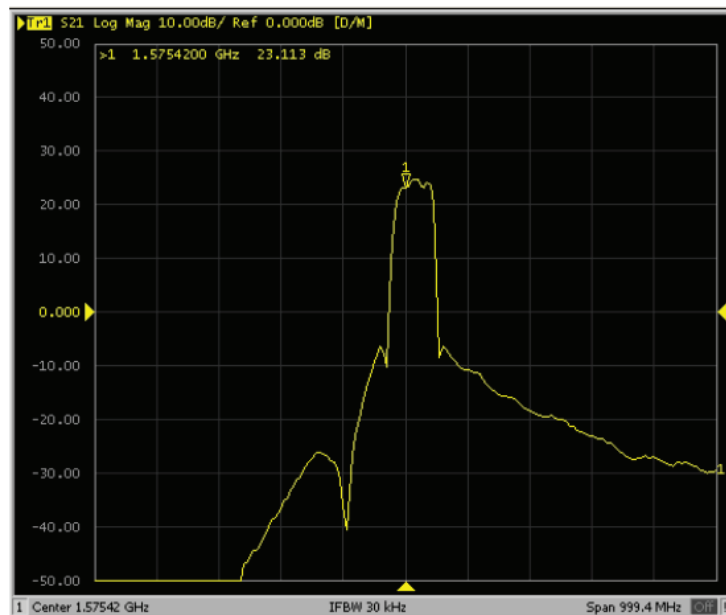
APAMPSBJ-144

RoHS/RoHS II Compliant



Ø 77.3mm x 66.5mm

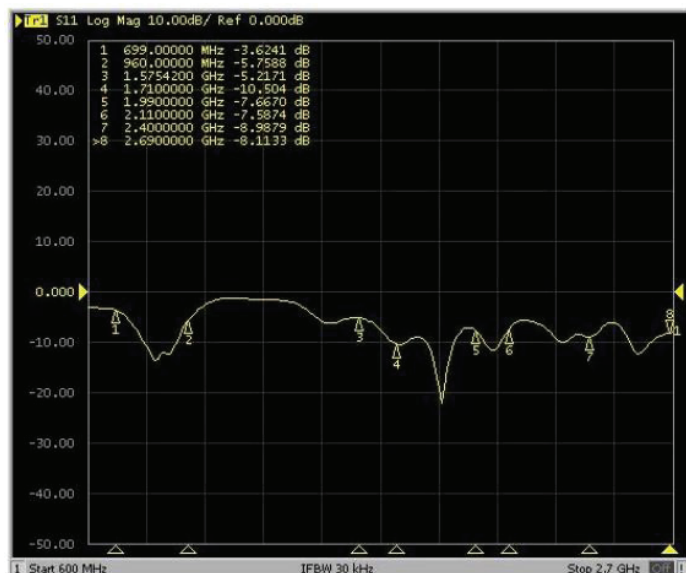
GNSS Log Mag - 1575.42MHz



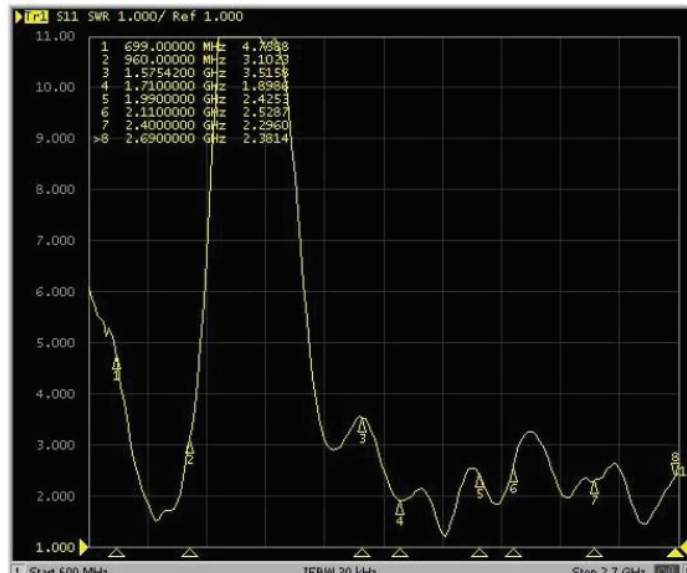
Gain at 3.0V

Note: Measurements made with Antenna mounted on 20x20cm metal ground plane, with a 15cm cable RG174 used for testing.

LTE Responses



LTE S11 (Log Mag)



LTE S11 (VSWR)

Dimension: mm

Combined Antenna Module - Body Mount

APAMPSBJ-144

RoHS/RoHS II Compliant



Ø 77.3mm x 66.5mm

PACKAGING:

Each antenna is packaged in a 140x120x81mm size box.
Each 20 boxes are packaged in one 465x310x250mm size box.
Each 30 boxes are packaged in a 590x390x230mm size box.



CAUTION:

- (1) Do not apply excess mechanical stress to the component body or terminations. Do not attempt to re-form or bend the components as this will cause damage to the component.
- (2) Do not expose the component to open flame.
- (3) This specification applies to the functionality of the component as a single unit. Please insure the component is thoroughly evaluated in the application circuit.

NOTE:

- 1) The parts are manufactured in accordance with this specification. If other conditions and specifications which are required for this specification, please contact ABRACON for more information.
- 2) ABRACON will supply the parts in accordance with this specification unless we receive a written request to modify prior to an order placement.
- 3) In no case shall ABRACON be liable for any product failure from in appropriate handling or operation of the item beyond the scope of this specification.
- 4) When changing your production process, please notify ABRACON immediately.
- 5) ABRACON Corporation'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-dependant 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 Corporation is required. Please contact ABRACON Corporation for more information.
- 6) All specifications and Marking will be subject to change without notice.

ATTENTION: Abracon Corporation'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-dependant 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 Corporation is required. Please contact Abracon Corporation for more information.

ABRACON IS
ISO9001:2008
CERTIFIED

 **ABRACON**[®] LLC
The Power of Linking Together

2 Faraday, Suite# B | Irvine | CA 92618 **Revised: 08.14.15**
Ph. 949.546.8000 | Fax. 949.546.8001
Visit www.abracon.com for Terms and Conditions of Sale

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

[ABRACON:](#)

[APAMPSBJ-144](#)