

Combined Antenna Module - Body Mount



Ø 77.3mm x 66.5mm

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	dBi	@ zenith
Operating Temperature	-40		+85	°C	

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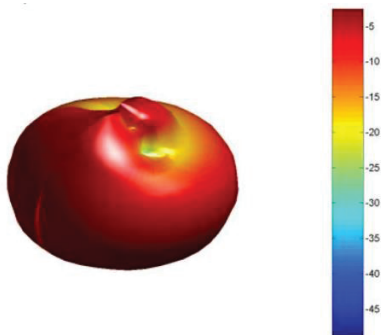
Low Noise Amplifier (LNA)

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	

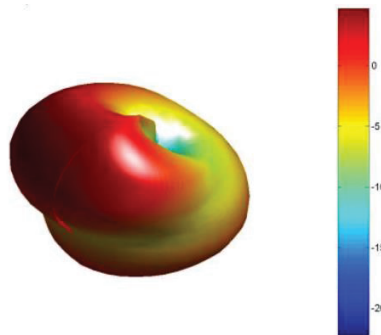
MEASUREMENTS

Radiation Patterns Azimuth 45° and Elevation 45°

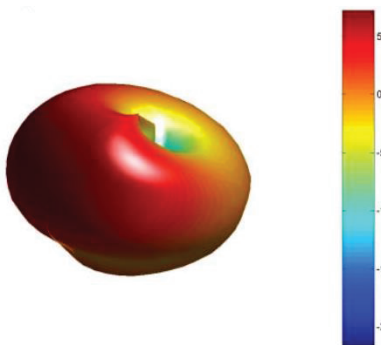
Frequency=798MHz Az=45 EL=45



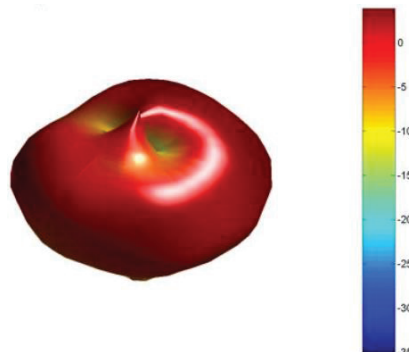
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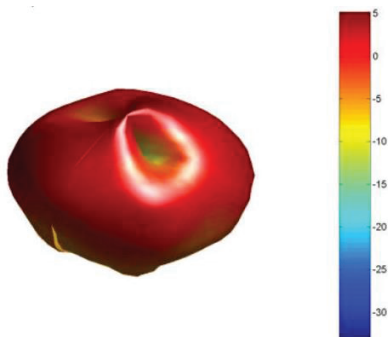
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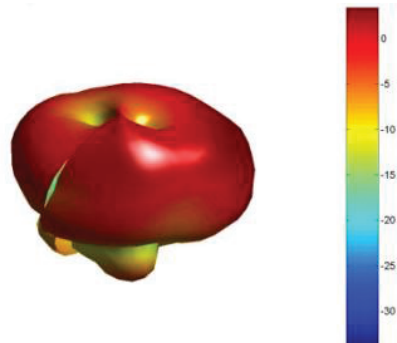
Frequency=1799MHz Az=45 EL=45



Frequency=1909MHz Az=45 EL=45



Frequency=2107MHz Az=45 EL=45



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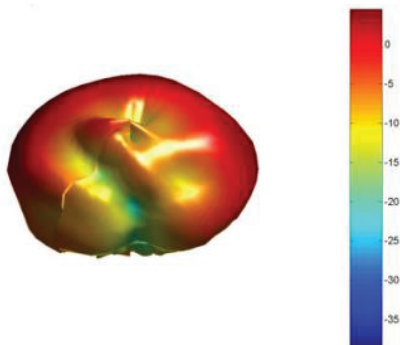
RoHS/RoHS II Compliant



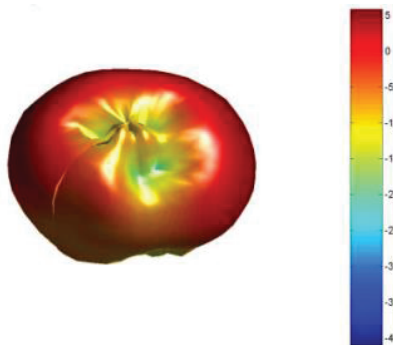
Ø 77.3mm x 66.5mm

MEASUREMENTS

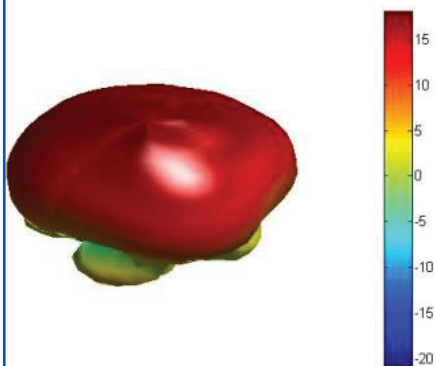
Frequency=2404MHz Az=45 EL=45



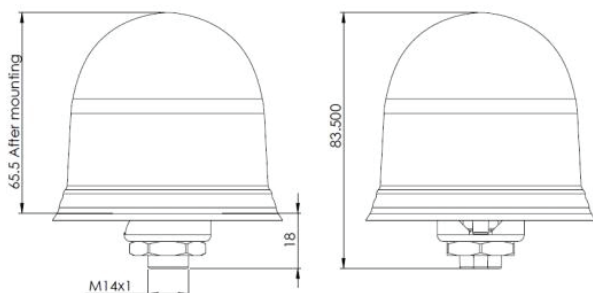
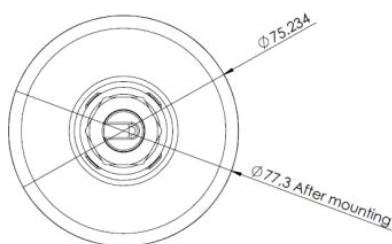
Frequency=2602MHz Az=45 EL=45



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

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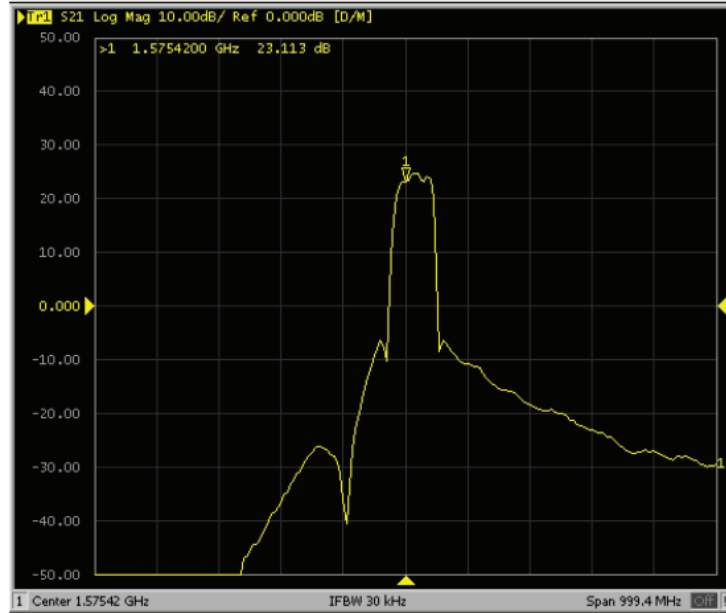
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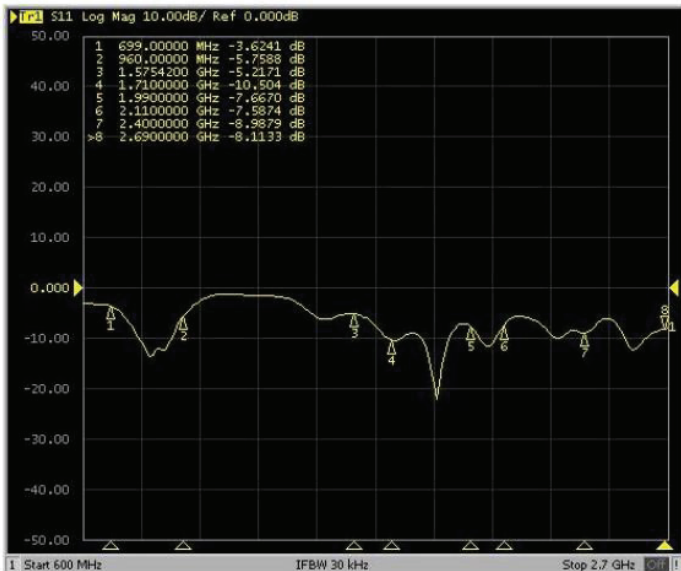
GNSS Log Mag - 1575.42MHz



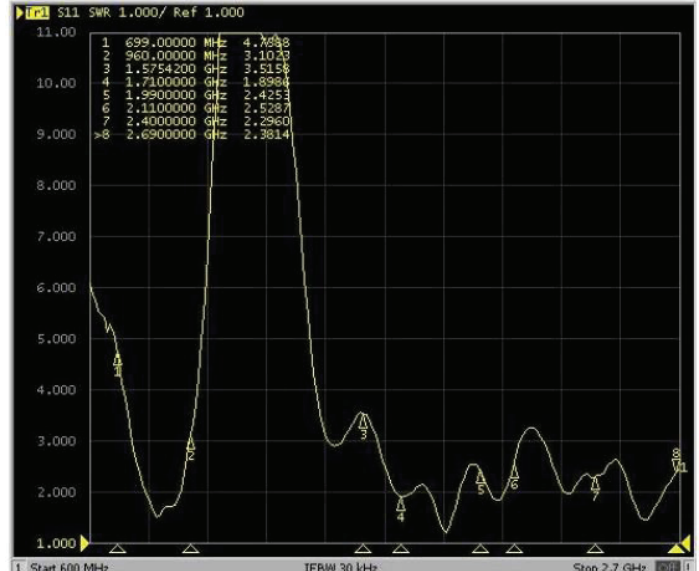
Gain at 3.0V

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

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