

GPS+GSM Active Antenna Module

APAMS-105

RoHS/RoHS II compliant

Lead in copper alloy exemption (6c); and Lead in glass exemption (7c-I)



Ø76.8 x 15.8mm

MSL level: Not Applicable

FEATURES:

- Dual Band
- High Reliability/Sensitivity
- Compact Size, Easy to install
- ROHS Compliant

TYPICAL APPLICATIONS:

- GPS navigation
- Vehicle tracking
- Telemetry Applications
- Asset tracking
- Emergency call systems

STANDARD SPECIFICATIONS:

Antenna

Parameters	Min.	Typ.	Max.	Units	Note
Center Frequency	1574.40	1575.42	1576.44	MHz	
Bandwidth	10.0			MHz	
VSWR at Center Frequency			1.5:1		
Polarization Model	RHCP				(Right Hand Circular Polarization)
Impedance		50		Ω	
Gain		5		dBic	(Based on 70× 70mm ground plane)

Low Noise Amplifier (LNA)

Parameters	Min.	Typ.	Max.	Units	Note
Center Frequency	1574.40	1575.42	1576.44	MHz	
DC Voltage	2.5	3.0	3.5	V	
Gain	25	26	28	dB	(without cable +25°C ± 10°C)
Output VSWR			2.0		
Noise Figure			1.5		(+25°C ± 10°C)
DC current		10.5	12.5	mA	(At 3.0V)

Electrical Characteristics (GSM)

Parameters	Min.	Typ.	Max.	Units	Note
Working Frequency	806		960	MHz	
	1710		1880	MHz	
V.W.S.R			2:1		
Impedance		50		Ω	(without cable +25°C ± 10°C)
Peak Gain			-1	dB _i	(At 900)
			1	dB _i	(At 1800)
Azimuth	Omni Directional				
Polarization	Linear Polarization				



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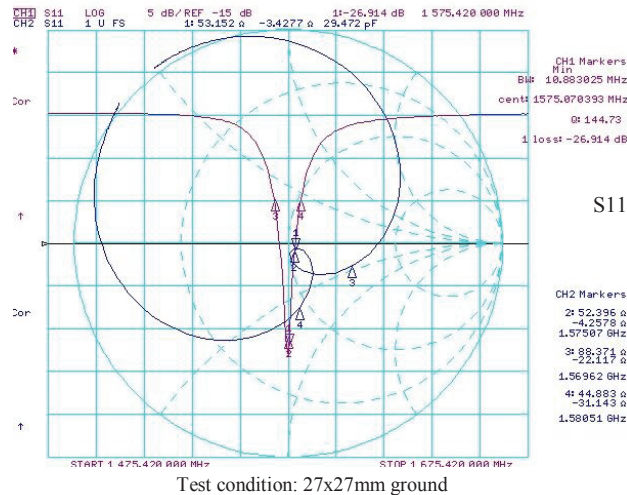
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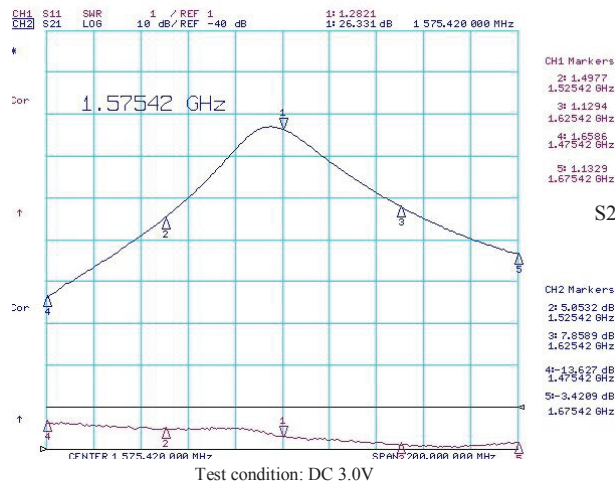
Ø76.8 x 15.8mm

ANTENNA'S IMPEDANCE AND RETURN-LOSS CHARACTERISTICS



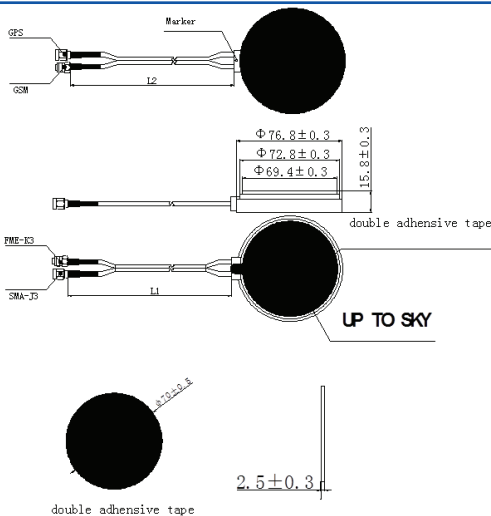
S11: Input VSWR

LNA REFLECTION PROFILE



S21: LNA Gain

OUTLINE DRAWING:



Bottom View

Side View

Top View

Parameters	Description
L1 (Cable1 Length)	300±10cm
L2 (Cable2 Length)	300±10cm
Antenna	Dielectric Ceramics
PCB	FR4
GPS RF Connector	SMA-J3
GSM RF Connector	FME-k3
Shielding	Tinplate
Thickness	15.8mm
Housing Type	E
Assemblage	Ultrasound Welding

Unit:mm

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PRODUCT IMAGE:



PACKAGING:

Each 450 x 400 x 300mm size carton includes 60 pieces of antenna



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.

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.

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