



# MEA-3in1-SMA

4G LTE, 2.4/5.0 GHz ISM and GNSS

Part #: 100-00267-01



## Description

The MEA-3-IN-1-SMA magnet/adhesive antenna is a 3-in-1 low profile antenna solution, with a very high-performance ideal for maintaining constant network connectivity. The MEA-3-IN-1-SMA covers all 4G/LTE and 2.4/5.0GHz ISM, and GNSS standard frequencies. This is an ideal antenna for telematics systems, remote surveillance, asset tracking and any IOT system applications. Its high performance and low profile make this antenna ideal for the most challenging installations.

This magnet/Adhesive antenna is easy to install with maximum durability offering IP67 rated housing and anti-rotation mounting. The MEA-3-IN-1-SMA has a three cables with a SMA-Male standard connectors, 2m standard cable length and is fully customizable by offering additional connector types, cable lengths and cable types.

## Electrical Specifications

Cable 1 - Cellular/LTE Antenna

Parameter	Specification		
Standards	2G, 3G and 4G		
Frequency (MHz)	698-960	1710-2170	2500-2700
Return Loss (dB)	~ -11.7	~ -7.9	~ -21.6
VSWR	~ 2.1:0	~ 2.4:1	~ 1.2:1
Efficiency (%)	~ 45.5	~ 26.2	~ 31.0
Peak Gain (dB)	~ 3.5	~ 2.2	~ 4.2
Average Gain (dB)	~ -3.7	~ -5.9	~ -5.0
Impedance ( $\Omega$ )	50		
Polarization	Linear		
Radiation Pattern	Omni-Directional		
Max Input Power (W)	25		
Connector Type	SMA-Male (other connectors available)		
Cable Length	200 cm (custom length available)		
Cable Type	D302 Standard (other cable type available)		

## Features

- 4GLTE, 2.4/5.0 GHz ISM, and GPS/GLONASS frequency coverage
- High performance
- Easy mounting: Magnet/Adhesive Mount
- IP67
- Customized Cable and Connector

## Applications

- LTE applications
- Navigation and telematics systems
- IoT applications
- Automotive connectivity
- Multimedia
- Fleet management
- HD video and audio streaming

Cable 2 - 2.4/5.0/6.0 GHz ISM Antenna

Parameter	Specification	
Standards	WiFi, BT, ZigBee, ISM, SigFox, LoRa, BLE	
Band	2.4 GHz	5.0 GHz
Frequency (MHz)	2410-2490	4920-5925
Return Loss (dB)	~ -18.0	~ -12.8
VSWR	~ 1.3:1	~ 1.7:1
Efficiency (%)	~ 38.4	~ 25.6
Peak Gain (dB)	~ 3.8	~ 2.8
Average Gain (dB)	~ -4.2	~ -6.0
Impedance ( $\Omega$ )	50	
Polarization	Linear	
Radiation Pattern	Omni-Directional	
Max Input Power (W)	25	
Connector Type	SMA-Male (other connectors available)	
Cable Length	200 cm (custom length available)	
Cable Type	D302 Standard (other cable type available)	

Cable 3 - GPS/GLONASS Antenna

Parameter	Specification	
Standards	GPS/QZSS/Galileo	GLONASS
Band (MHz)	1575	1602
Frequency (MHz)	1575.42	1598-1606
Patch Size (mm)	18 x 18 x 4	
Return Loss (dB)	<= -15.0 dB	
VSWR	<= 1.4:1	
Impedance ( $\Omega$ )	50	
Polarization	RHCP	
Radiation Pattern	Hemispherical	
Saw Filter	Pre-Filter	
Active Gain (dB)	28 @ 2.7 V	
Noise Figure (dB)	1.5 Typ	
Voltage (V)	1.5 - 3.6	
Current (mA)	9 Typ	
Power Consumption (mW)	24.3 Typ	
ESD Protection	2kV	
Connector Type	SMA-Male (other connectors available)	
Cable Length	200 cm (custom length available)	
Cable Type	D100 Standard (other cable type available)	

**Antenna Measurement Conditions:**

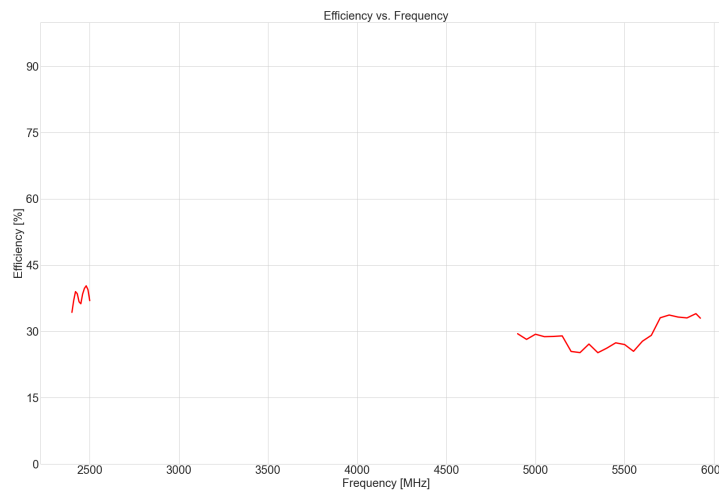
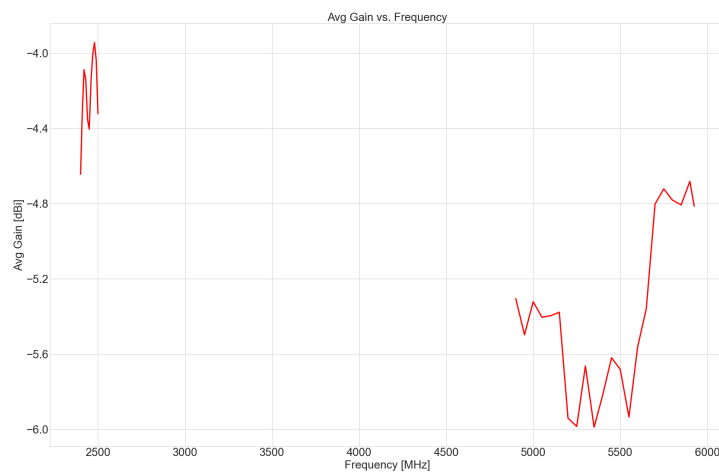
Mounted on metal plate of 30 x 30 cm  
 200 cm of cable D302  
 Measured in certified CTIA 3D anechoic chamber

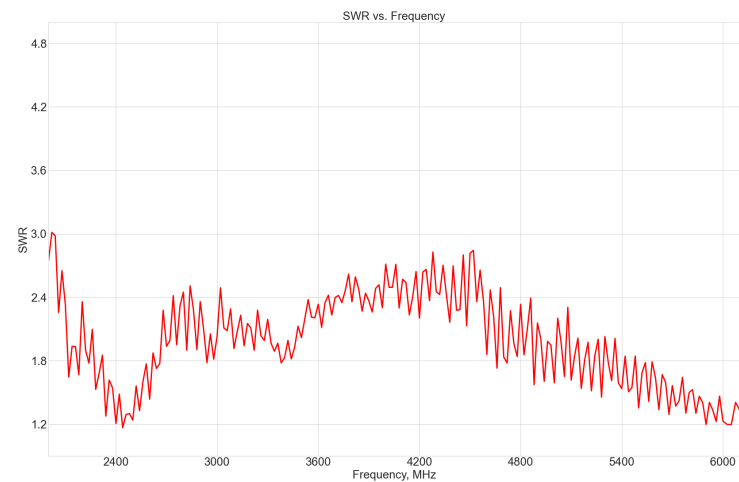
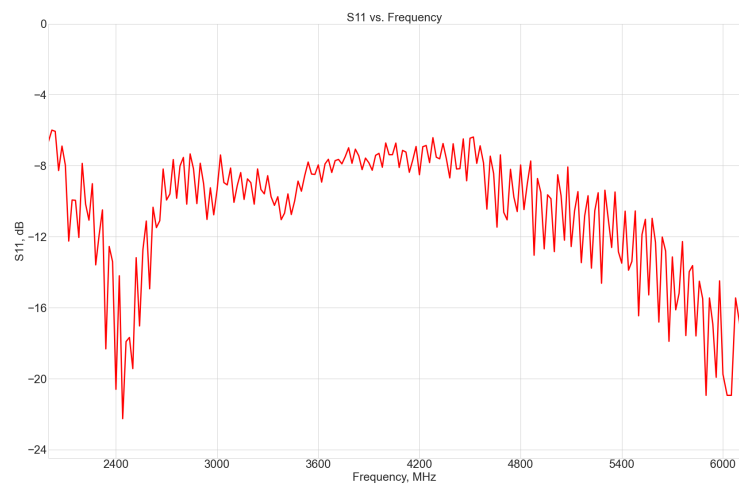
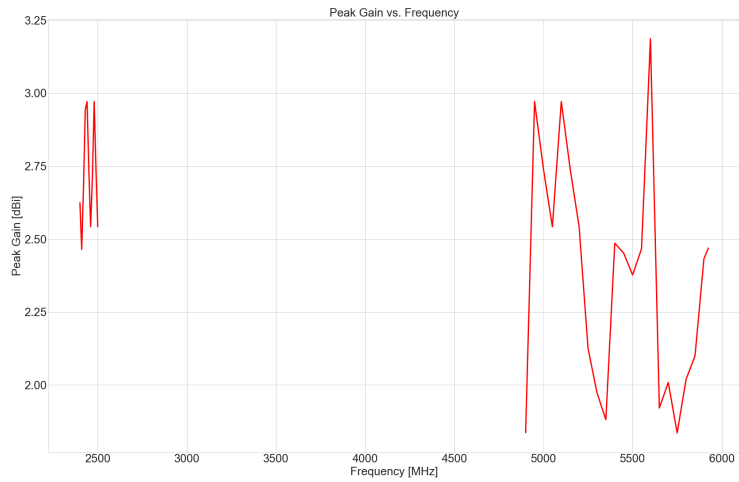
## Mechanical and Environmental Specifications

Parameter	Specification
Mounting Type	Magnetic/Adhesive Mount
Dimensions (mm)	80 x 76 x 13
Radome Type	ABS UV Stable
Radome Color	White, Black
Operating Temperature (C)	-40 to +85°
Storage Temperature (C)	-40 to +85°
Certification	IP67
Substance Compliance	RoHS

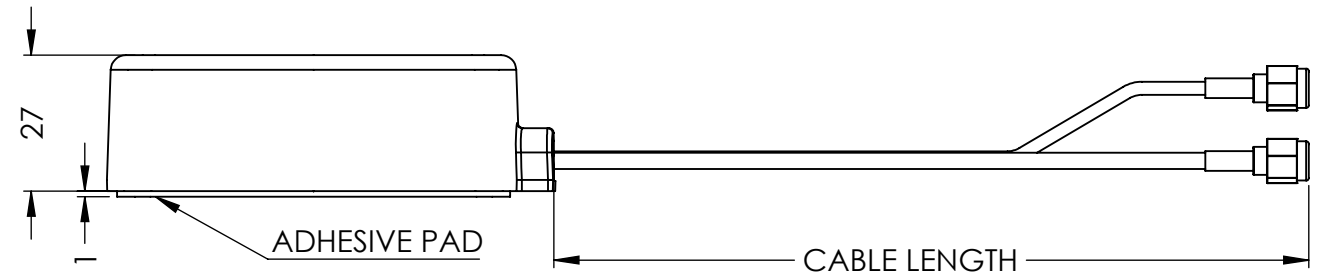
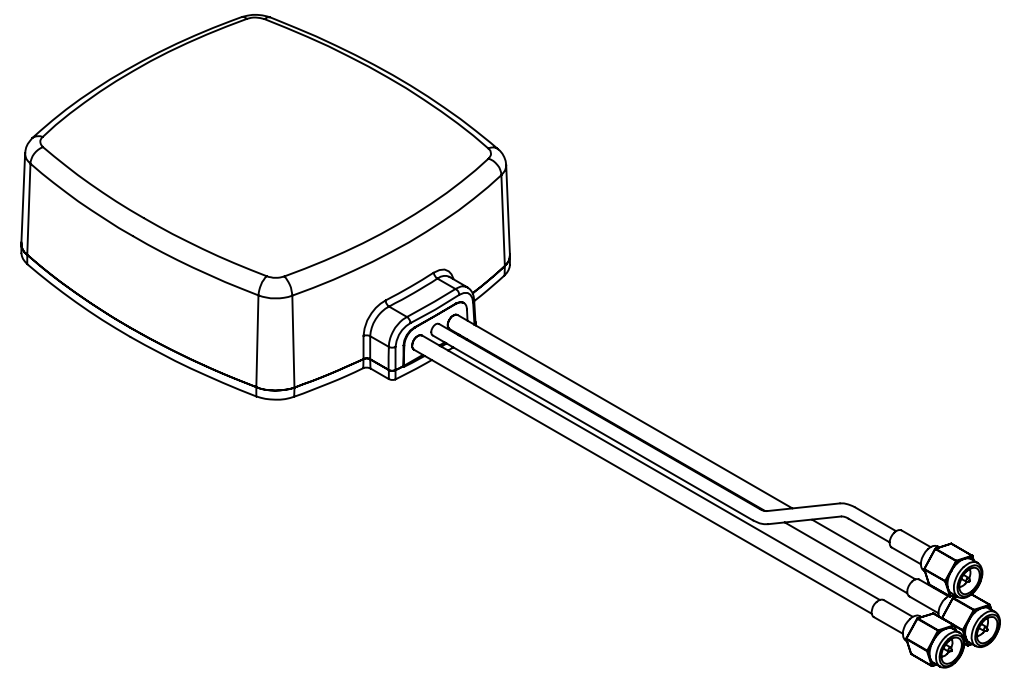
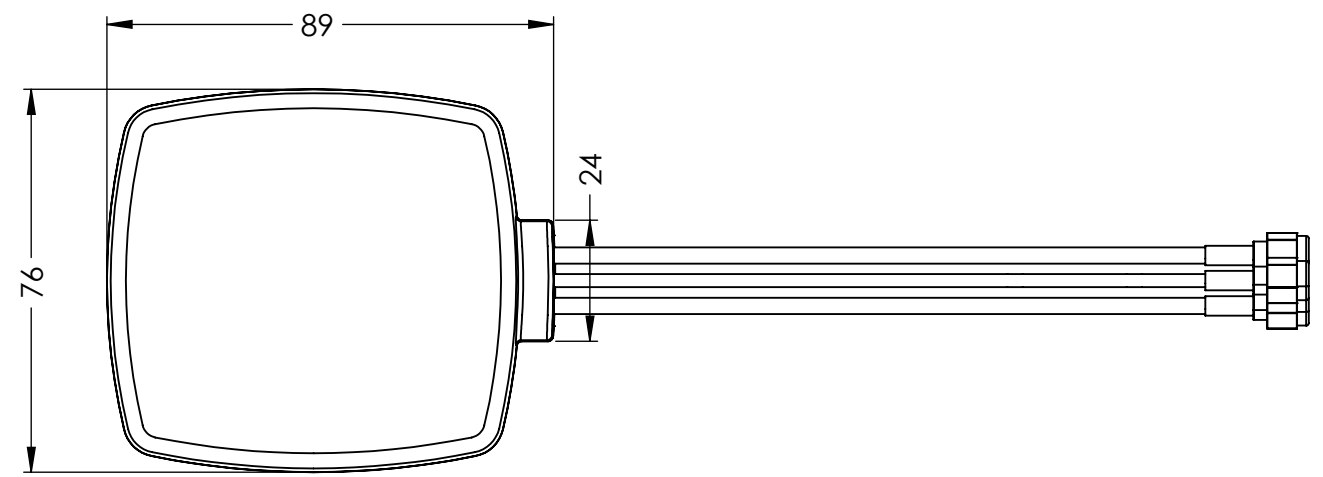
## Radiation Performance

### MEA-3in1-SMA





DRAWING REVISION HISTORY			
REV	DESCRIPTION	DATE	BY
A	INITIAL RELEASE	2022-07-08	SZ



NOTES:

- FREQUENCY:
  - CABLE 1 (2G, 3G, 4G): 698-960 MHz, 1710-2170 MHz, 2500-2700 MHz
  - CABLE 2 (2.4/5.0 GHz ISM): 2410-2490 MHz, 4920-5925 MHz
  - CABLE 3 (GPS/GLONASS): 1575 MHz, 1598-1606 MHz
- CUSTOMIZABLE CABLE AND CONNECTOR OPTIONS
- MOUNTING TYPE: MAGNETIC / ADHESIVE MOUNT (ADHESIVE PAD COMES WITH ANTENNA)
- MATERIALS:
  - RADOME TYPE: ABS UV STABLE
  - RADOME COLOR: BLACK or WHITE
- OPERATING TEMPERATURE: -40°C ~ +85°C
- STORAGE TEMPERATURE: -40°C ~ +85°C
- CERTIFICATIONS: IP67

100-00267 CONFIGURATION TABLE					
DASH NO	RADOME COLOR	CABLE	CABLE TYPE	CABLE LENGTH	CONNECTOR TYPE
-01	BLACK	CABLE 1 CABLE 2 CABLE 3	D302 D302 D100	200cm 200cm 200cm	SMA MALE RP-SMA MALE SMA MALE

ITEM 100-00267 REVISION HISTORY			
REV	DESCRIPTION	DATE	BY
1	INITIAL RELEASE	2022-07-08	SZ

UNLESS OTHERWISE SPECIFIED:  
 DIMENSIONS ARE IN MM  
 TOLERANCES:  
 FRACTIONAL: ±  
 ANGULAR: MACH ± .5° BEND ±  
 ONE PLACE DECIMAL ± 1.0  
 TWO PLACE DECIMAL ± .50

INTERPRET GEOMETRIC TOLERANCING PER:

THIRD ANGLE PROJECTION  
DO NOT SCALE DRAWING

CAD MAINTAINED. CHANGES SHALL BE INCORPORATED BY THE DESIGN ACTIVITY.

	NAME	DATE
DRAWN	SZ	2022-07-08
CHECKED	ZX	2022-07-08
ENG APPR.	NPC	2022-07-08
MFG APPR.		
Q.A.		

MAXTENA, INC

TITLE:  
 100-00267  
 MEA-3-IN-1-SMA

SIZE: B DWG. NO.: 117-00612-01 REV: A

CAGE CODE: 5KQH7 SCALE: NONE SHEET 1 OF 1

PROPRIETARY AND CONFIDENTIAL  
 THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF MAXTENA, INC. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF MAXTENA, INC IS PROHIBITED.