

# ME A-3-GGL

## GPS/GLONASS/LTE ANTENNA

Part #: 189-00053-01



### Description

Maxtena's MEA-3-GGL GPS/GLONASS & 2G/3G LTE solution is a high performance antenna in one compact and secure housing. It covers GPS/GLONASS (1575-1610 MHz) and LTE (2300-2690 MHz). The MEA-3-GGL is an adhesive mount antenna with rugged ABC plastic housing and is ideal for the most demanding environment challenges. The standard MEA-3-GGL comes with 1 meters RG174 cable and SMA connectors for both GPS/GLONASS cables. Cable and connectors are customizable upon re-quest. The MEA-3-GGL provides outstanding performance for any telematics, remote monitoring, and fleet management application.

### Features

- Low power consumption
- RoHS compliant
- Low noise figure
- Customer cable length and connector
- IPX65 Waterproof

### Features

- Fleet management
- Telematics
- Monitoring

### GNSS Antenna Electrical Specifications

Frequency Range (MHz)	1575.42 / 1602 MHz
VSWR	2.0 : 1 Max
Impedance	50 Ω
Polarization	Linear
Gain @ Zenith	3.0 dBi Typ. @ 1575.42 MHz / 3.5 dBi Typ. @ 1602 MHz

### LNA Antenna Electrical Specifications

Frequency Range (MHz)	1575.42 / 1602 MHz
VSWR	2.0 : 1 Max
Impedance	50 Ω
Antenna Gain (@ 3.3V)	28 dB Typ. / 25 dB Min
DC Power Input	3~5 V
Noise Figure	2.5 dB Typ.
Power Consumption (@ 3.3V)	9 Typ. mA

### LTE Antenna Electrical Specifications

Frequency Range (MHz)	698~960 / 1710~2170 / 2300~2690 MHz
VSWR	698~960 MHz ≤ 5.5 1710~2170 / 2300~2690 MHz ≤ 4.0
Impedance	50 Ω
Peak Gain	1.5 dBi Typ. @ 698~960 MHz 0.5 dBi Typ. @ 1710~2170 MHz 0.5 dBi Typ. @ 2300~2690 MHz
Average Efficiency	698~960 MHz ≥ 25% 1710~2170 / 2300~2690 MHz ≥ 30%

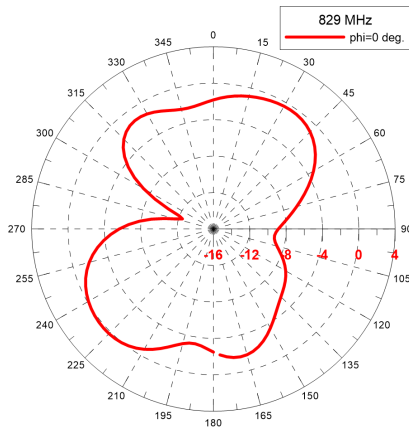
### Mechanical Specifications

Antenna Dimensions (mm)	(L) 55 x (W) 55 x (H) 20 mm
Mounting Function	Foam Adhesive
Operating Temperature	-40 °C +85 °C
Housing Material & Color	PC & Black
Cable	GPS/GLONASS (RG-174) LTE (CFD-200)
Cable Length	1 Meter or customer specification
Connector	SMA / FAKRA or customer specification
Waterproof	IPX65

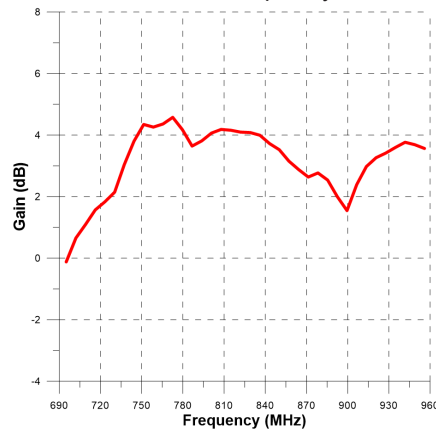
### Radiation Specifications

698~960 MHz

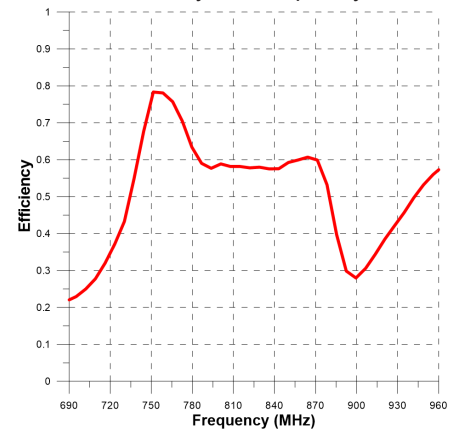
Etot vs. Theta



Gain vs. Frequency



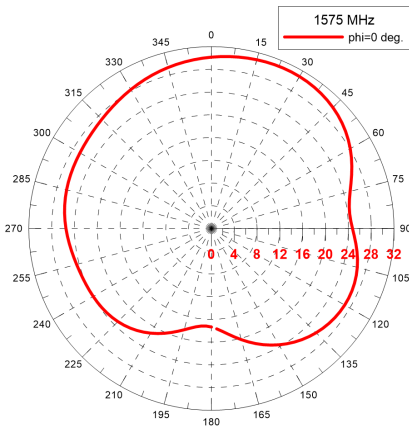
Efficiency vs. Frequency



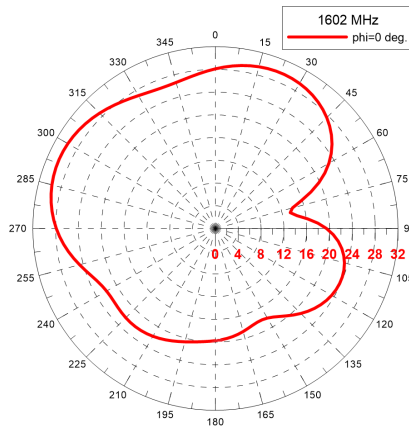
### Radiation Specifications

1550~1610 MHz

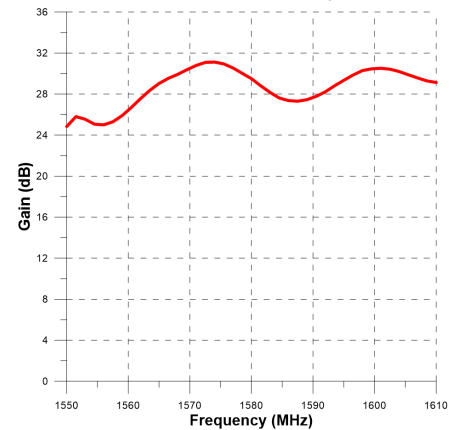
Etot vs. Theta 1575 MHz



Etot vs. Theta 1602 MHz



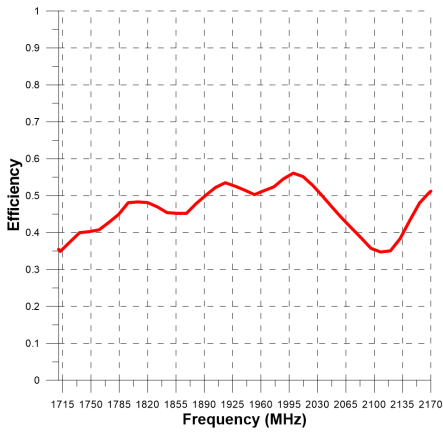
Gain vs. Frequency



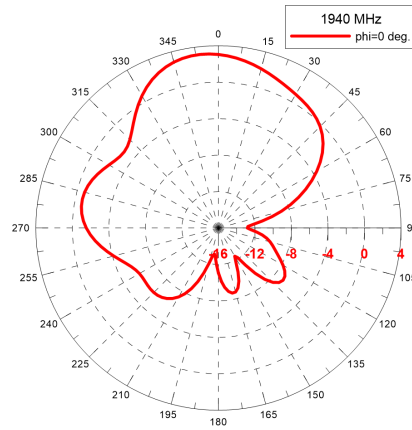
## Radiation Specifications

1710~2170 MHz

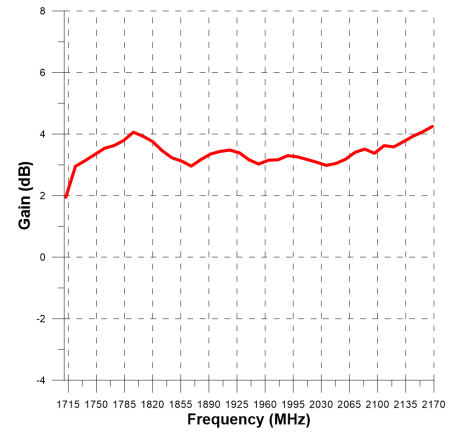
Efficiency vs. Frequency



Etotal vs. Theta



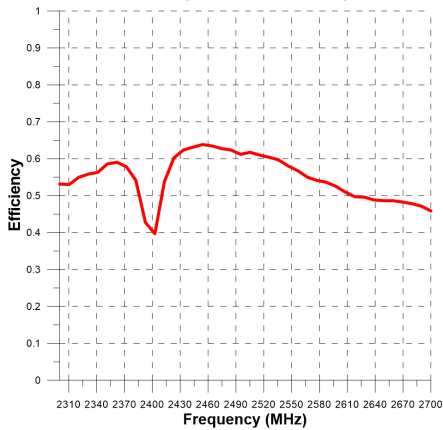
Gain vs. Frequency



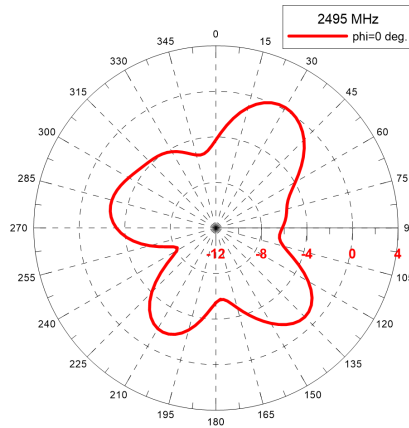
## Radiation Specifications

2300~2690 MHz

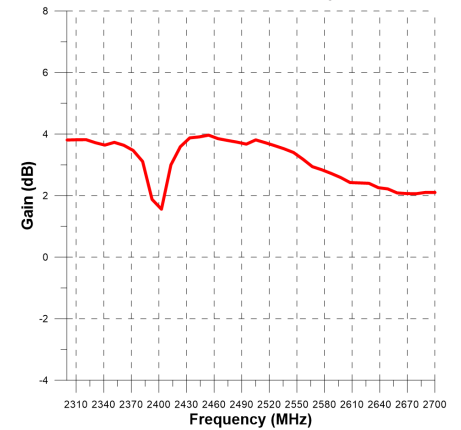
Efficiency vs. Frequency



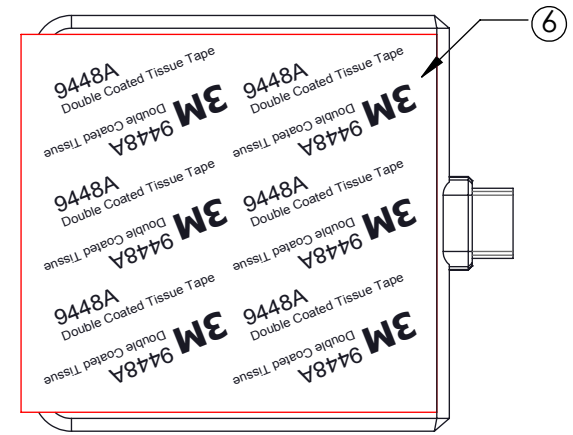
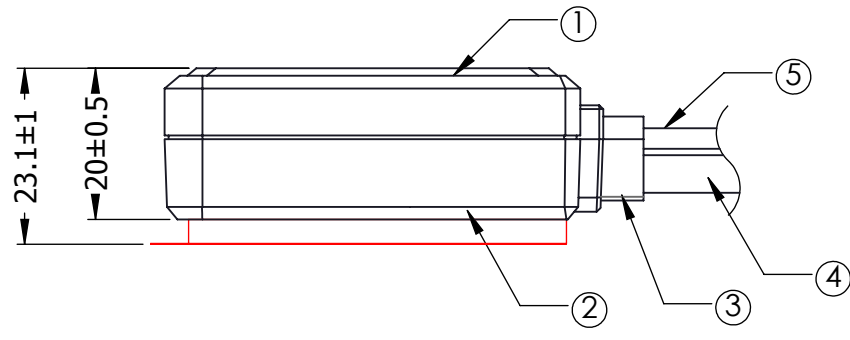
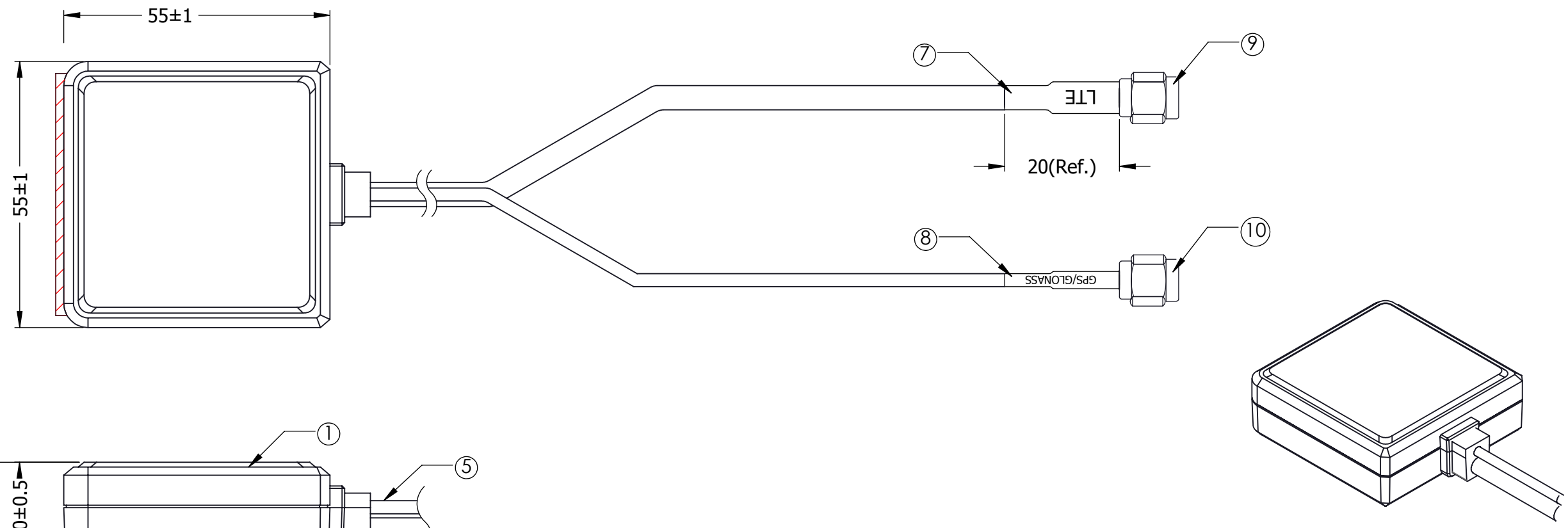
Etotal vs. Theta



Gain vs. Frequency



DRAWING REVISION HISTORY			
REV	DESCRIPTION	DATE	BY
A	INITIAL RELEASE	2019-08-06	ZX



NO	DESCRIPTION	Q'TY	REMARK
10	Connector(RG-174)	SMA(M)ST	1 Gold-Plated
9	Connector(CFD-200)	SMA(M)ST	1 Gold-Plated
8	H.S Tube(RG-174)	GPS/GLONASS	1 Blue Tube/White Text
7	H.S Tube(CFD-200)	LTE	1 Red Tube/White Text
6	Double-sided tape	3M 9448A+EVA	1
5	Cable	RG-174	1 Black
4	Cable	CFD-200	1 Black
3	Rubber	Silicone	1 Black
2	Antenna Bottom Cover	PC+ABS	1 Black
1	Antenna Top Cover	PC+ABS	1 Black

ITEM 189-00053-01 REVISION HISTORY			
REV	DESCRIPTION	DATE	BY
A	INITIAL RELEASE	2019-08-06	ZX

UNLESS OTHERWISE SPECIFIED:  
 DIMENSIONS ARE IN MM  
 TOLERANCES:  
 FRACTIONAL ±  
 ANGULAR: MACH ± .5° BEND ±  
 XX. ± 5.0 X. ± 2.0  
 .X ± 1.0 .XX ± .20

INTERPRET GEOMETRIC TOLERANCING PER:  
 THIRD ANGLE PROJECTION  
 DO NOT SCALE DRAWING

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

NAME: ZX DATE: 2019-08-06  
 CHECKED: ENG APPR. NPC DATE: 2019-08-06  
 MFG APPR. Q.A.

TITLE:  
**MAXTENA, INC**  
**189-00053-01**  
**MEA-3-GGL, GPS**  
**GLONASS LTE Antenna**

SIZE: **B** DWG. NO.: **117-00296-01** REV: **A**

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

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