MEA-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

Etotal vs. Theta

829 MHz
phi=0 deg.
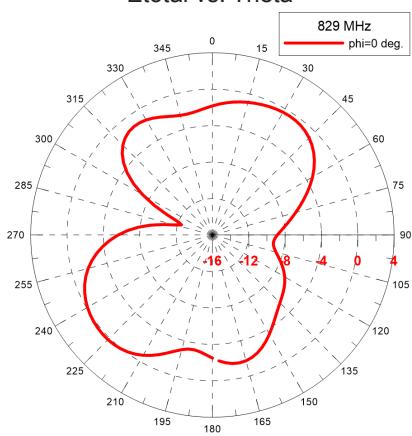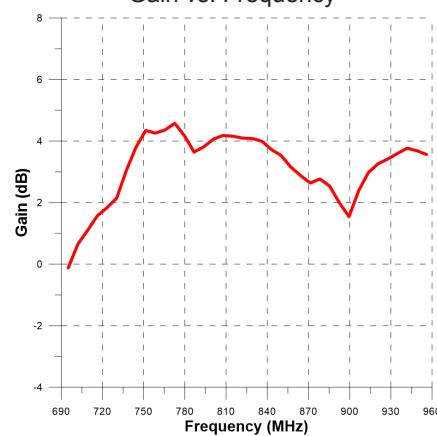
Gain vs. Frequency

Efficiency vs. Frequency
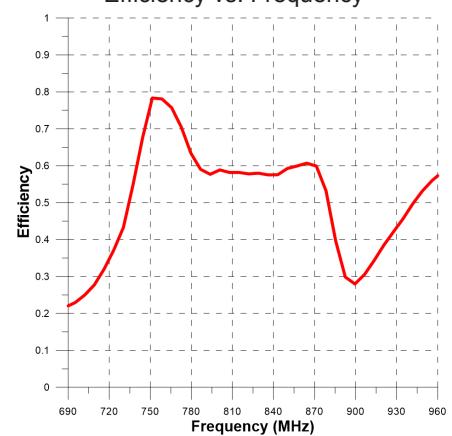
Radiation Specifications
1550~1610 MHz

Etotal vs. Theta 1575 MHz

1575 MHz
phi=0 deg.
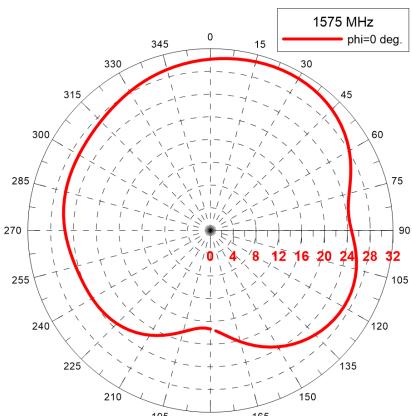
Etotal vs. Theta 1602 MHz

1602 MHz
phi=0 deg.
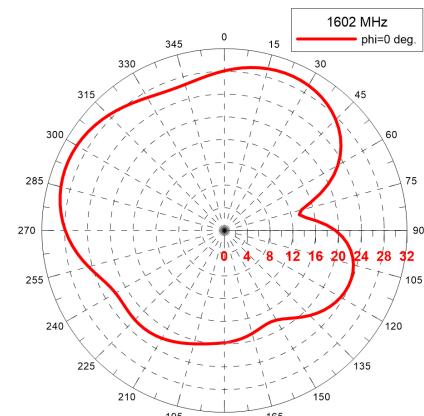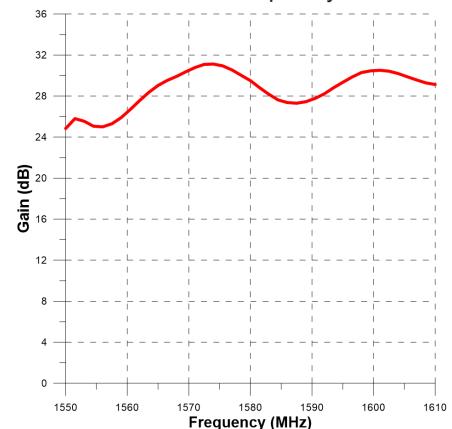
Gain vs. Frequency

Radiation Specifications
1710~2170 MHz

Efficiency vs. Frequency

Efficiency (y-axis: 0 to 1)
Frequency (MHz) (x-axis: 1715 1750 1785 1820 1855 1890 1925 1960 1995 2030 2065 2100 2135 2170)

Etotal vs. Theta

1940 MHz — phi=0 deg.

Gain vs. Frequency

Gain (dB) (y-axis: -4 to 8)
Frequency (MHz) (x-axis: 1715 1750 1785 1820 1855 1890 1925 1960 1995 2030 2065 2100 2135 2170)
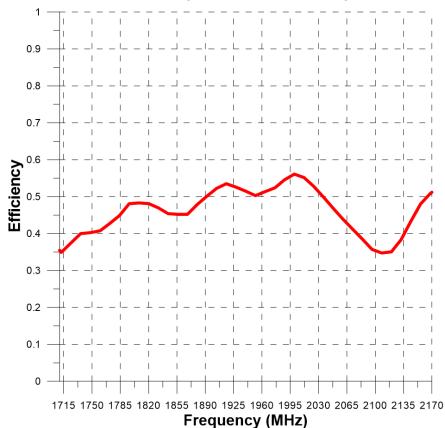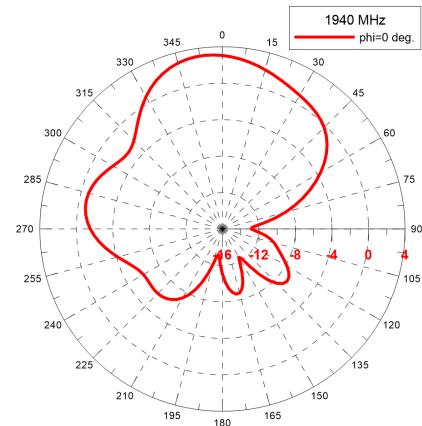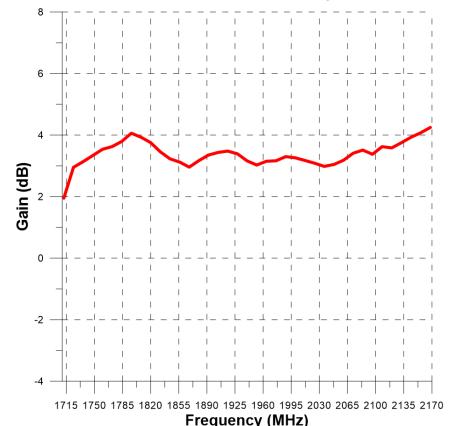
Radiation Specifications
2300~2690 MHz

Efficiency vs. Frequency
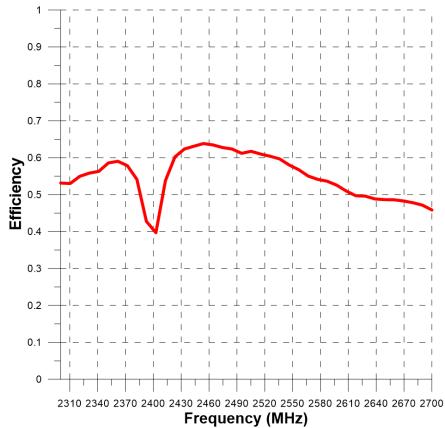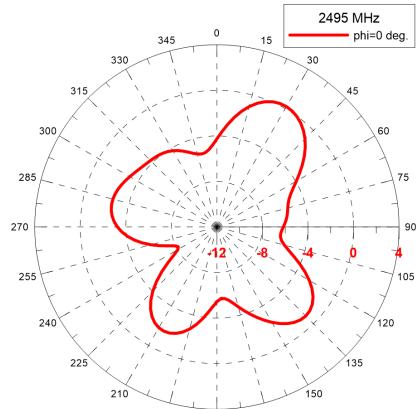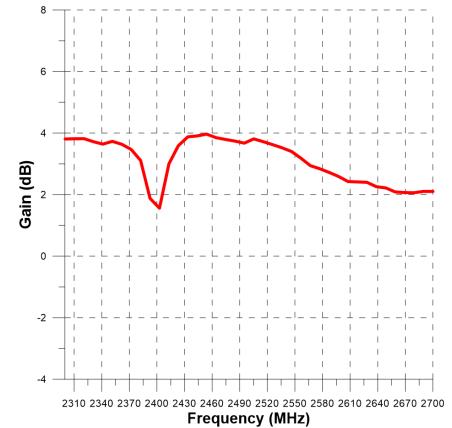
Efficiency (y-axis: 0 to 1)
Frequency (MHz) (x-axis: 2310 2340 2370 2400 2430 2460 2490 2520 2550 2580 2610 2640 2670 2700)

Etotal vs. Theta

2495 MHz — phi=0 deg.

Gain vs. Frequency

Gain (dB) (y-axis: -4 to 8)
Frequency (MHz) (x-axis: 2310 2340 2370 2400 2430 2460 2490 2520 2550 2580 2610 2640 2670 2700)

55±1

55±1

20(Ref.)

LTE

GPS/GLONASS

⑦ ⑨ ⑧ ⑩

23.1±1
20±0.5

① ⑤ ② ③ ④

⑥

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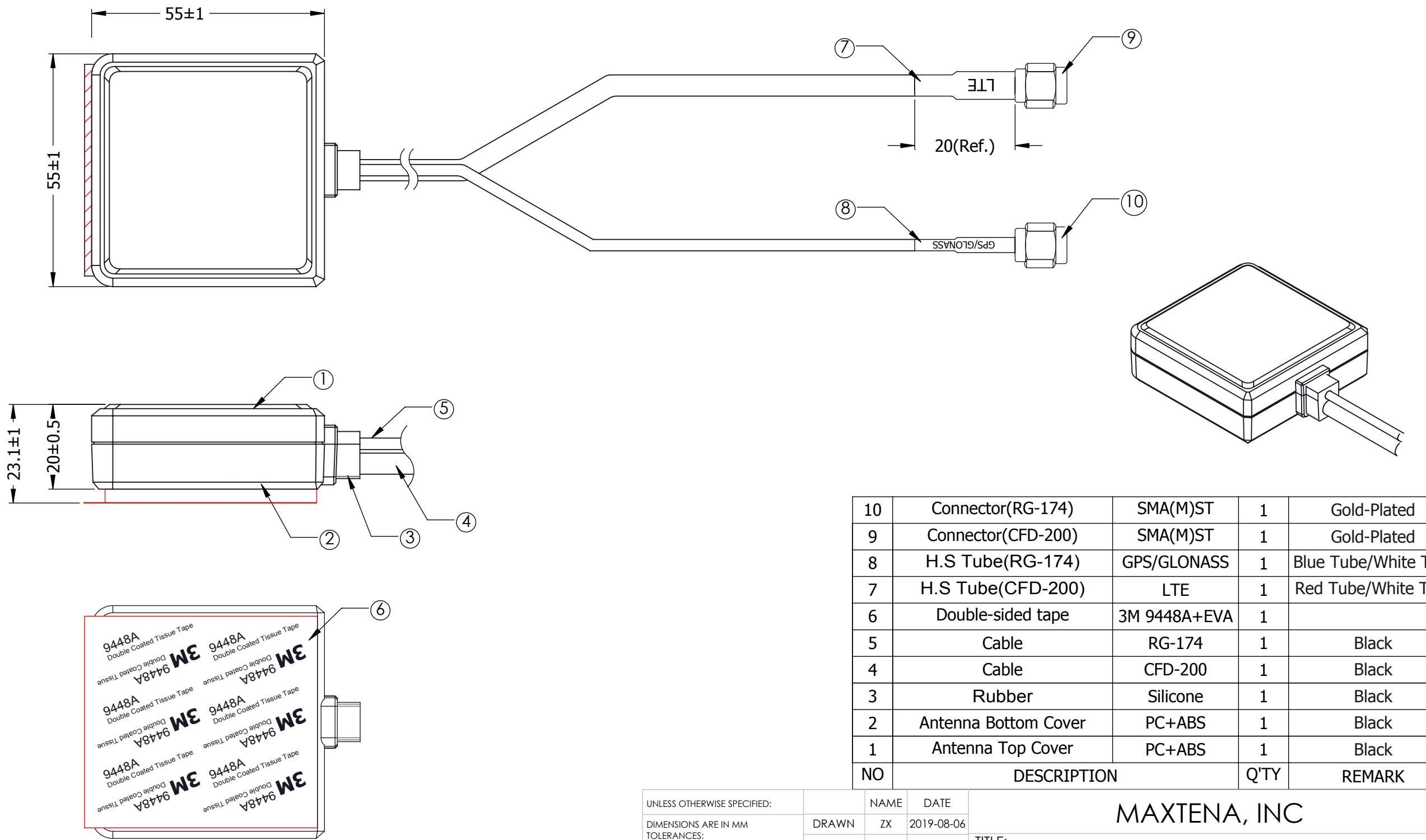
NO	DESCRIPTION		Q'TY	REMARK
10	Connector(RG-174)	SMA(M)ST	1	Gold-Plated
9	Connector(CFD-200)	SMA(M)ST	1	Gold-Plated
8	H.S Tube(RG-174)	GPS/GLONASS	1	Blue Tube/White Text
7	H.S Tube(CFD-200)	LTE	1	Red Tube/White Text
6	Double-sided tape	3M 9448A+EVA	1	
5	Cable	RG-174	1	Black
4	Cable	CFD-200	1	Black
3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

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

	NAME	DATE
DRAWN	ZX	2019-08-06
CHECKED		
ENG APPR.	NPC	2019-08-06
MFG APPR.		
Q.A.		
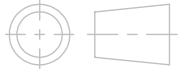
CAD MAINTAINED. CHANGES SHALL BE INCORPORATED BY THE DESIGN ACTIVITY.

MAXTENA, INC

TITLE:
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

Mouser Electronics

Authorized Distributor

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