



3 cable roof mounting GPS multiband antenna

698 – 3600 / 1575.42 - 1609

GPSMB301

Series : **ANTENNA**



All dimensions are in mm [inches]

Issue: 1540

In the effort to improve our products, we reserve the right to make changes judged to be necessary.

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ELECTRICAL SPECIFICATIONS

Frequency (LTE)	698 – 960 / 1695 - 2170 / 2300 – 2700 / 2900 - 3600	MHz
Frequency (GPS)	1575.42 - 1609	MHz
Nominal Impedance	50	Ω
VSWR (LTE)	< 1.7	
Gain* (LTE antenna, < 2170 MHz)	6	dBi \pm 1 dB
Gain* (LTE antenna, > 2170 MHz)	5.5	dBi \pm 1 dB
Isolation LTE to LTE**	15 or better	dB
LNA gain	31	dB \pm 1 dB
Noise Figure	2.5 (cascade)	dB
Current	8	mA \pm 2 mA
V _{dc}	3-5	V _{dc}
LNA and filter attenuation		
	@ 824 MHz	80 dB
	@ 960 MHz	78 dB
	@ 1710 MHz	58 dB
	@ 2170 MHz	57 dB
Connector type	SMA	
Cable type(s)	RG-58 (LTE) / RG-174 (GPS)	
Length	17	Feet

*Measured on 2ft GND plane and with 4 inch cables

**In free space with 17ft cables

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MECHANICAL SPECIFICATIONS

Plastic radome	ABS/PC
Radome color	Black
Ingress Protection	IP67
Weight	940 g (with cables)
Fixing system	Roof mounting Recommended (Also Magnet mounting accessory fastening torque 15- available, GPSMBMM) 18ft-lb (20-25Nm).

ENVIRONMENTAL SPECIFICATIONS

Operating temperature	MIL-STD 810G -40/+85° C
Humidity	95%RH @ +25°C for 12h and 55°C for 12h
Vibration	MIL-STD 810G, section 514.6 5-500 Hz, 60min/axis
Thermal shock	MIL-STD 810G, section 503.5 -40 to +85°C, 3 cycles
Drop test	Minimum of one drop per axis – 4 drops 1 meter

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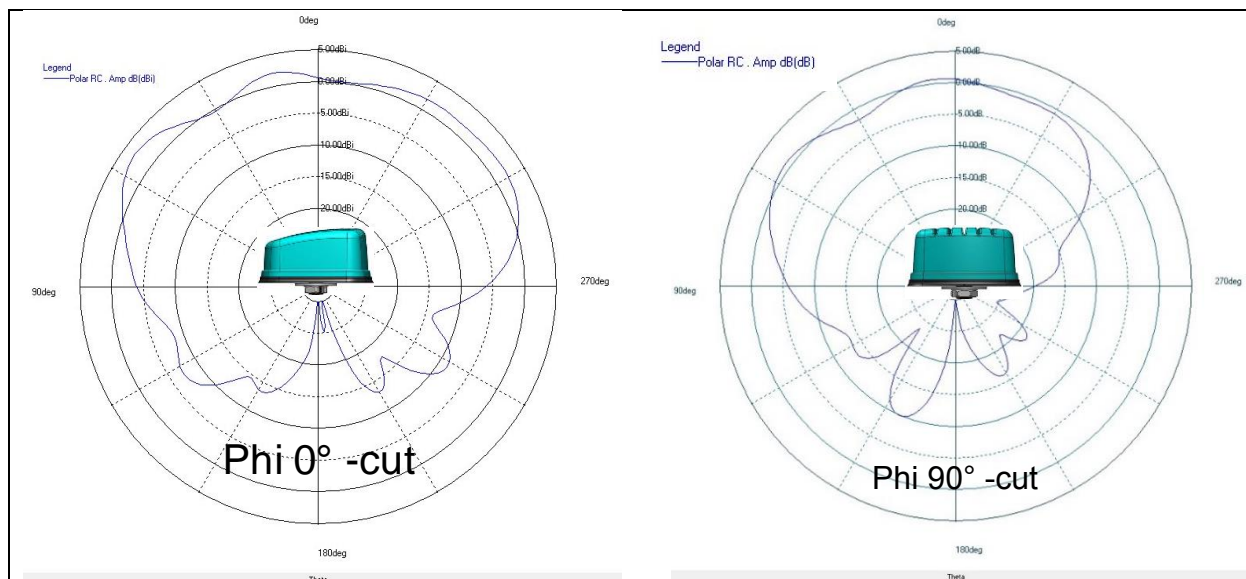
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GPSMB301

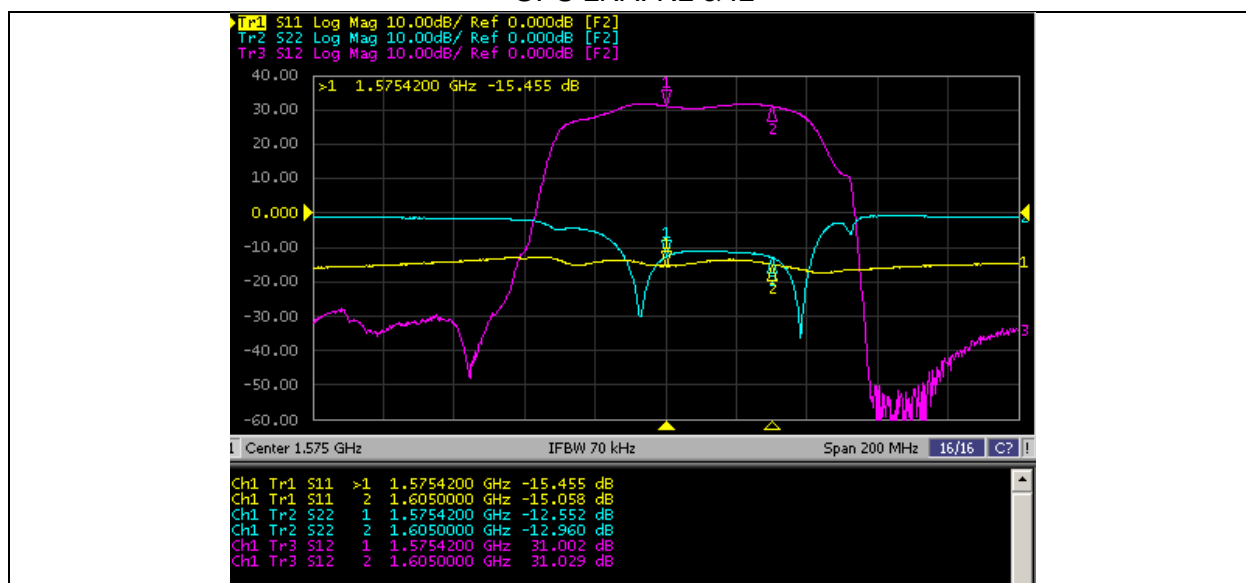
Series : **ANTENNA**

Charts

GPS RHCP patterns, measured on 2ft (dia.) GND plane



GPS LNA: RL & IL



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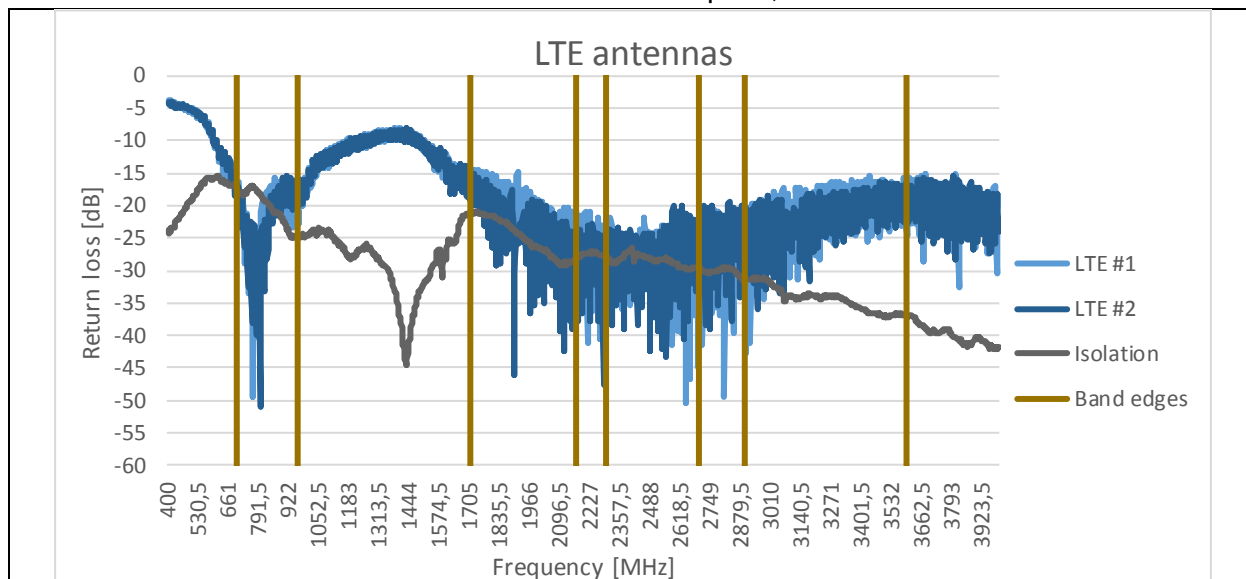
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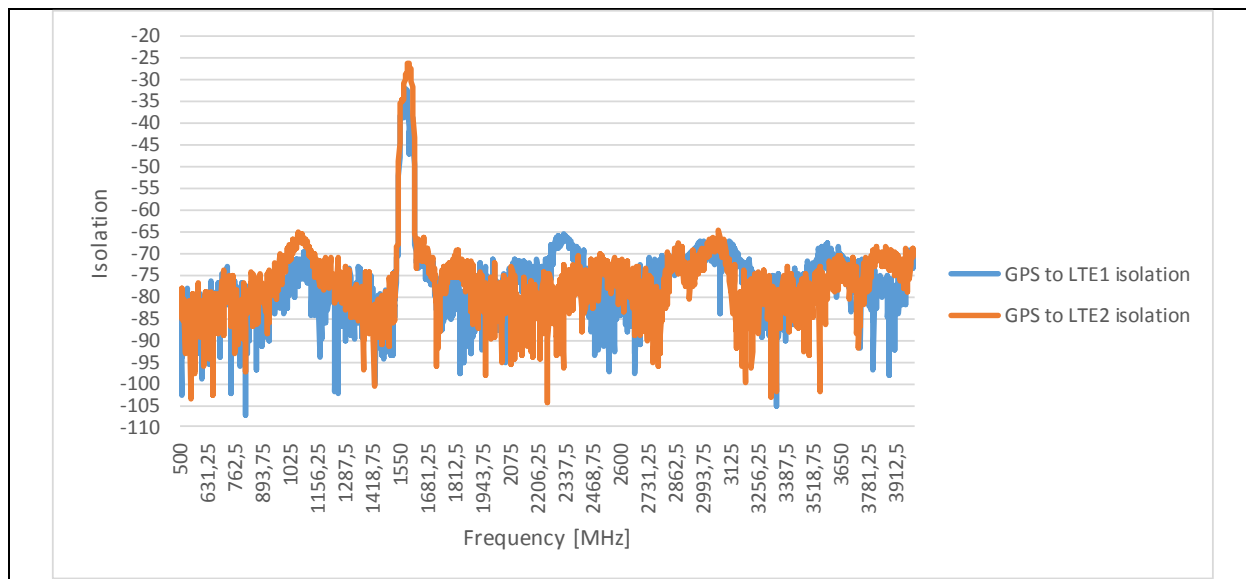
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Series : **ANTENNA**

Return loss and isolation in free space, LTE antennas**



GPS isolation to LTE 1 and LTE 2 antenna*



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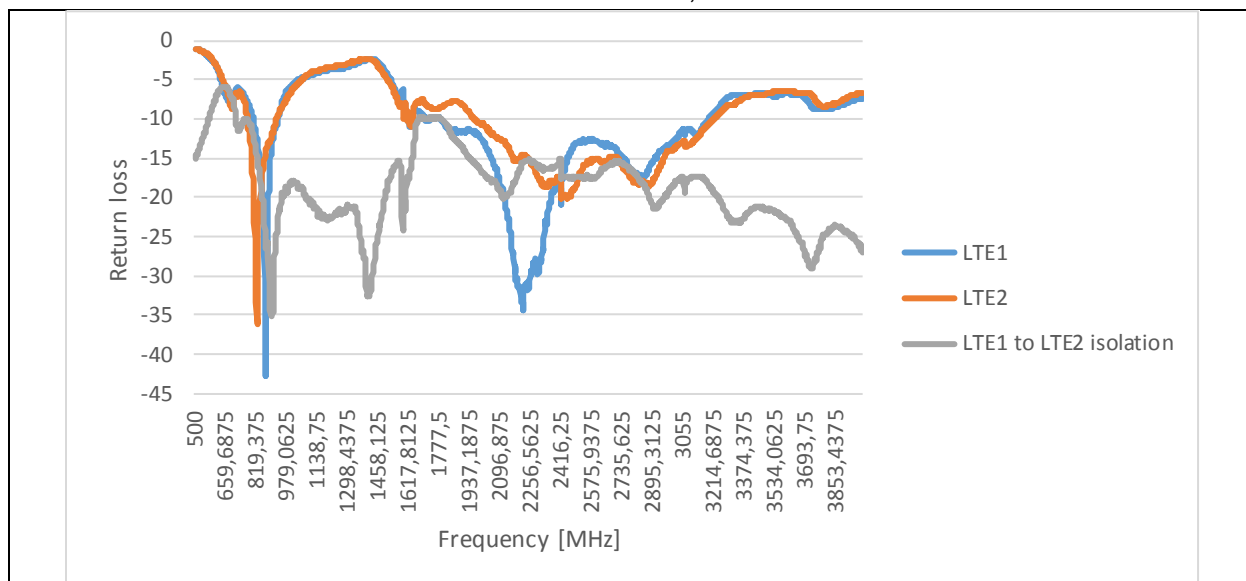
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Return loss and isolation, LTE antennas*



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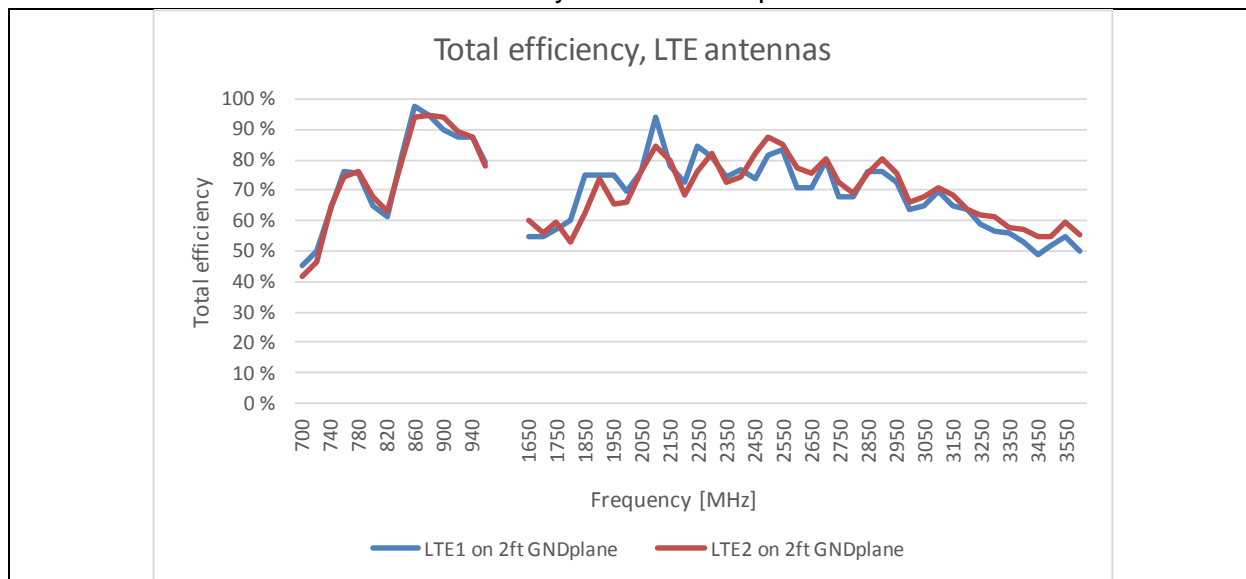
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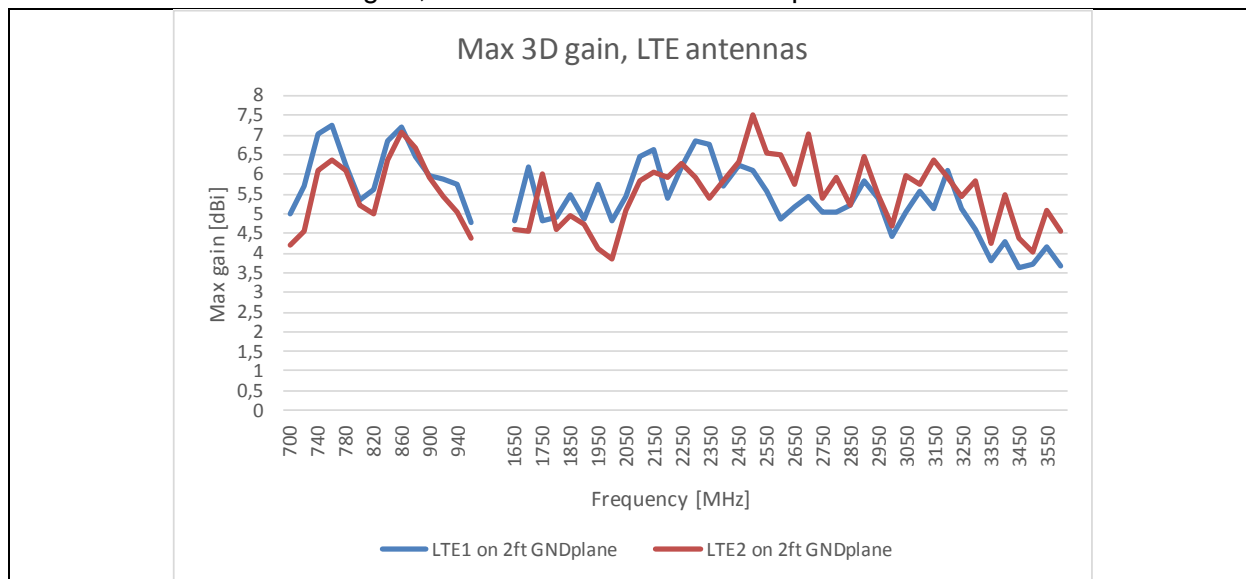
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Series : **ANTENNA**

LTE antenna total efficiency with 2ft metal plate and 4 inch cables



Maximum 3D gain, LTE antenna with 2ft metal plate and 4inch cables



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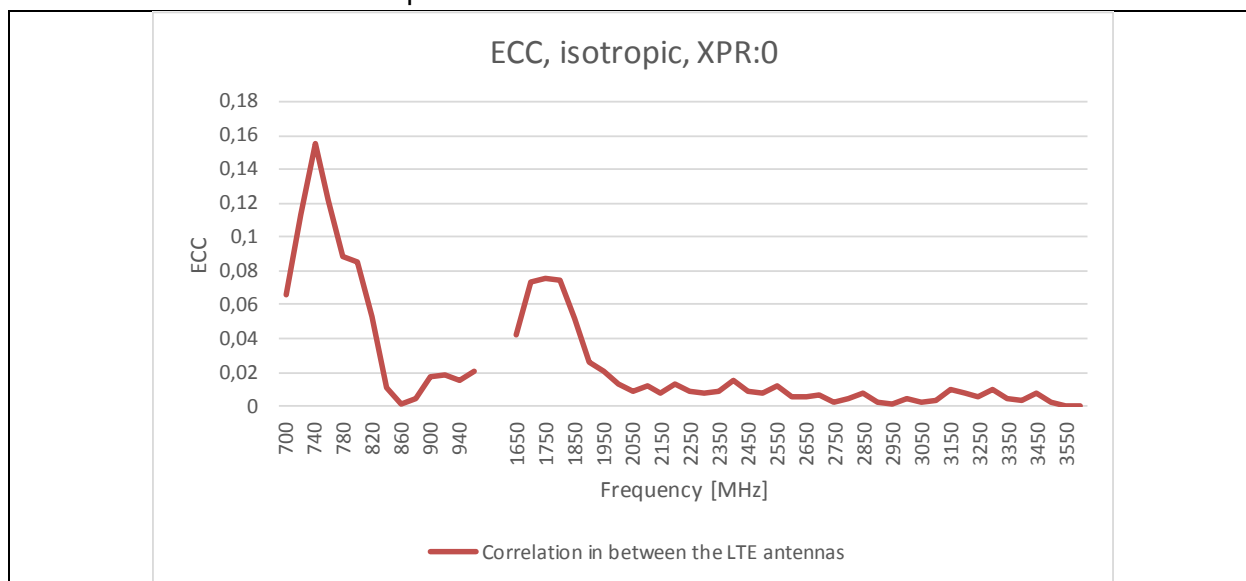
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Series : **ANTENNA**

Envelope correlation coefficient - LTE 1 to LTE 2



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