61 Martin Lane Elk Grove Village, IL 60007-1307 Phone: 847-228-0006

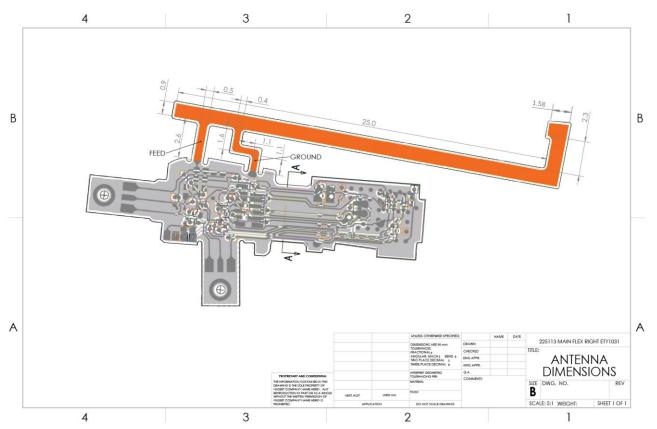
Fax: 847-228-6836 www.etymotic.com

ANTENNA TECHNICAL REPORT

Custom antenna design for TALA Hearing Aid product

Antenna Type: Omnidirectional Antenna Construction: PCB Trace

Antenna Dimensions*:



 $^{{}^{}ullet}$ Right shown, Left is mirrored

TEST RESULTS

Test Conducted	RF Active Measurement of Etymotic 2.4GHz BLE antenna in DVT
Equipment Used	3-meter anechoic antenna chamber equipped with a dual-pol quad-ridge horn receiver antenna and an EL-AZ positioner with laser positioner

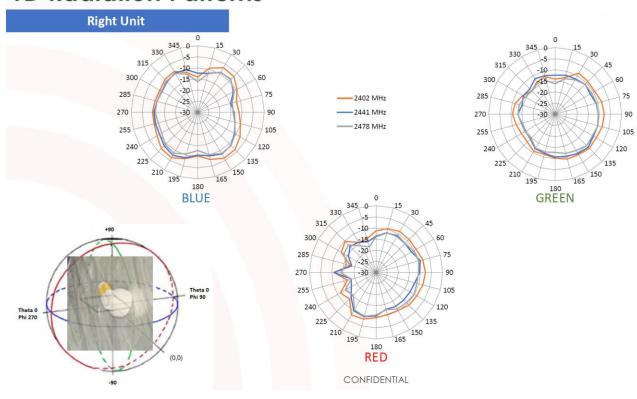
Gain vs. Frequency – Free Space

Testing Condition	Unit	Left			Right		
DVT	Frequency(MHz)	2402	2440	2480	2402	2440	2480
	. , ,	MHz	MHz	MHz	MHz	MHz	MHz
	Conducted Power (dBm)	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5
	TRP(dBm)	-7.1	-6.6	-7.7	-6.5	-5.8	-6.1
	Gain (dBi)	1.8	1.935	2.05	1.3	1.97	2.45
	System Efficiency (%)	34.67%	38.90%	30.20%	39.81%	46.77%	43.65%

Gain vs. Frequency - Phantom

Testing Condition	Unit		Left		Right		
DVT with Phantom	Frequency(MHz)	2402	2440	2480	2402	2440	2480
		MHz	MHz	MHz	MHz	MHz	MHz
	Conducted Power (dBm)	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5
	TRP(dBm)	-10.6	-12.5	-14.6	-9.24	-10.9	-11.2
	Gain (dBi)	-4.50	-6.5	-7.18	-3.6	-5.1	-5.3
	System Efficiency (%)	15.488%	10.000%	6.166%	21.184%	14.454%	13.490%

1D Radiation Patterns



1D Radiation Patterns

