

Microsoft

Antenna Report

Project code name: Monaco

Date : June 30, 2006

Measured By

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1. Methodologies :

The method used was ANSI/IEEE standard 149-1979 two antenna method. The measurement was made at an antenna spacing of 1 meter, 2.4 meters above ground in vertical polarization on a non-reflecting support. Both antennas had the current matching network of a single series 3.3 nH inductor and measured a best case S11 return loss of greater than 10 dB.

2. Measurement Equipment

Equipment	S/N	Cal Date	Cal Due Date
60" Pasternack 40 GHz Coax	S/N: N/A	5/11/2006	5/11/2008
EMCO 3115 Horn Ant	S/N: 9606-4854	12/13/2005	12/13/2007
20' Heliac Cable	S/N: 36	3/16/2006	3/16/2008
10' Heliac Cable	S/N: 10	11/23/2004	11/23/2006
HP 8566B	S/N: 2209A01404	6/20/2005	6/20/2007

Use	Function	Manufacturer	Model
Main Eut	pcb "F" antenna without matching	Microsoft	Sample E1, E2 and L1, L2
Test Conditions:	+10 dBm sig gen drive, Radio board flat horizontal		

3. Max. Peak Gain

-2.1 dBi (The peak gain of the average of the two antennas tested)

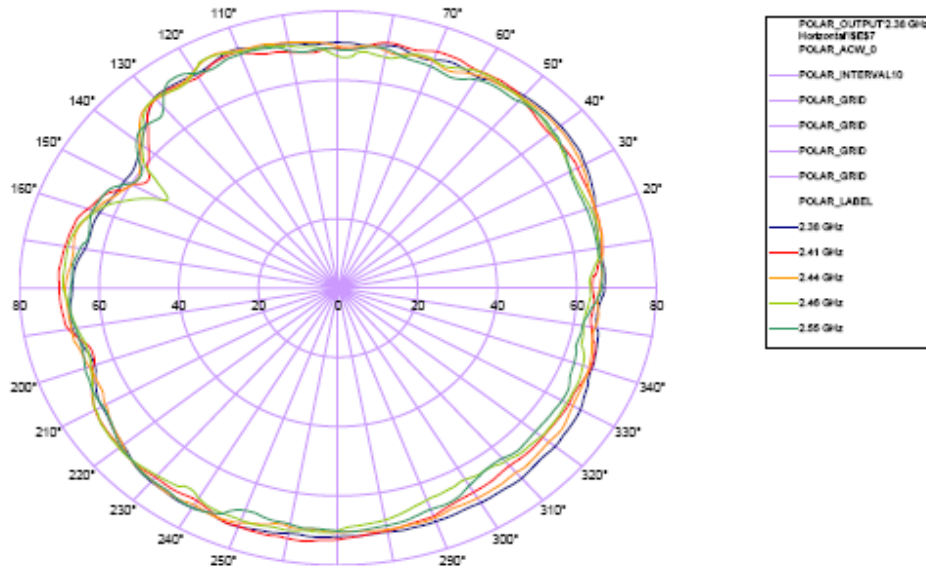
4. Antenna Type

Antenna is printed inverted F design (PCB copper) - (Omni-directional).

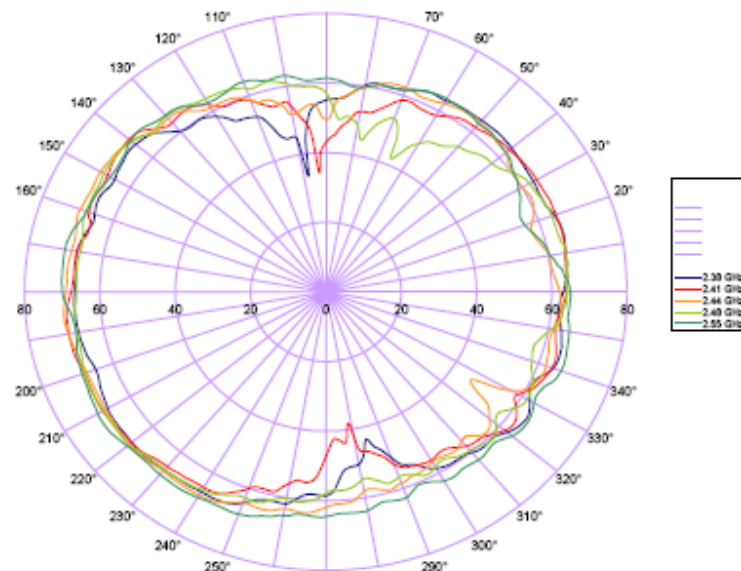
5. Antenna Part Number

X809233-003

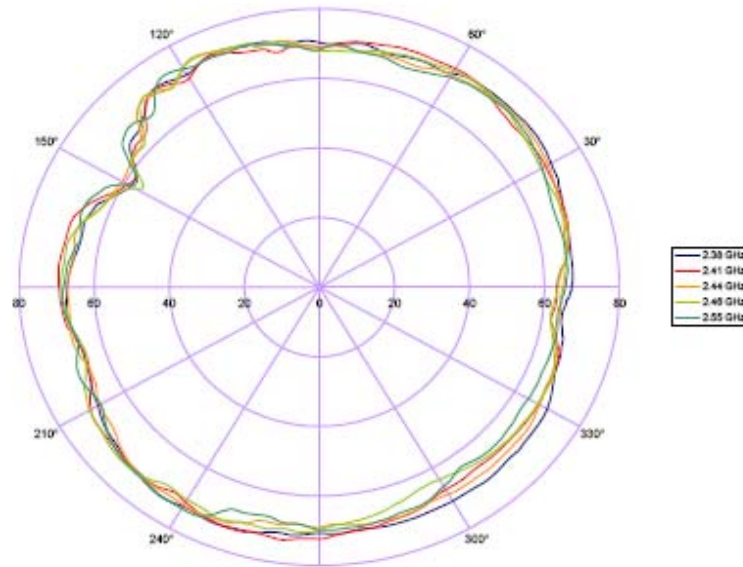
E1 Antenna (Vertical)



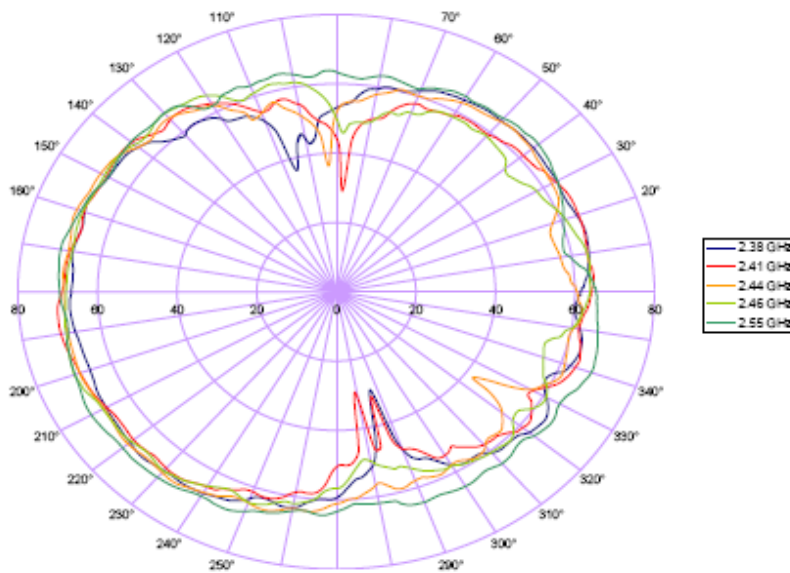
E1 Horizontal



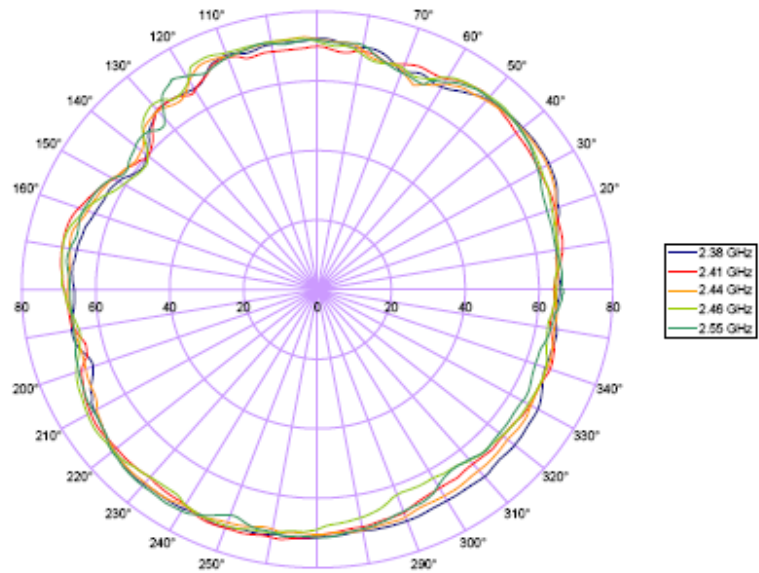
E2 Vertical



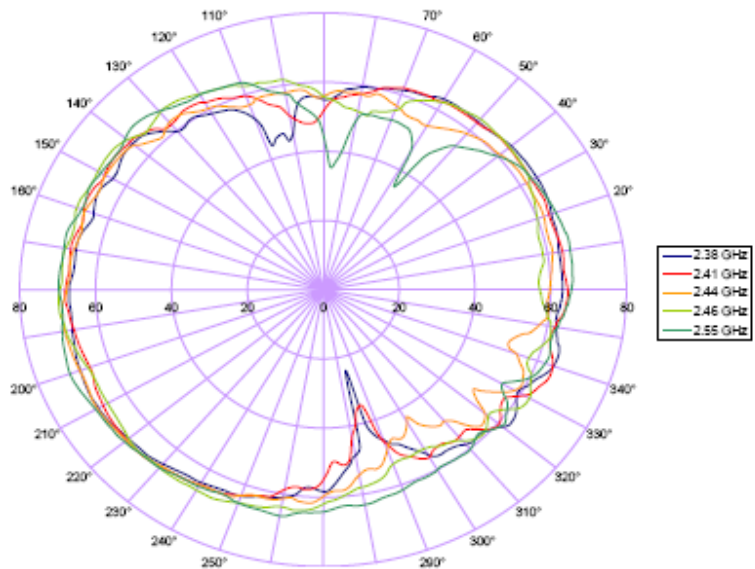
E2 Horizontal



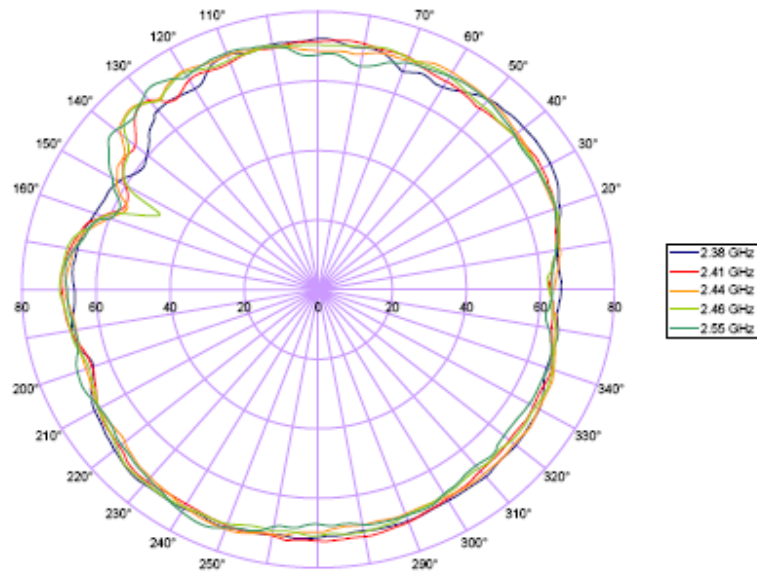
L1 Vertical



L1 Horizontal



L2 Vertical



L2 Horizontal

