

Applicant: LG Electronics USA
RE: 731 Confirmation Number: TC676202
FCC ID: BEJVX3300

Dear Martin:

This is in response to your email dated 6/9/05, requesting additional information for FCC ID: BEJVX3300, granted on May 27, 2005.

We have reevaluated our Quality Procedures in light of the recent FCC/TCB Workshop on HAC (May 2005) and have performed the following corrective actions:

1. We are looking for 3 Channels HAC testing per FCC Workshop guidelines.
2. We are looking for the rotation of the probe at the maximum worst-case point(s).
3. We have informed applicants as to the required HAC labeling information per FCC Workshop guidelines.

With respect to the specific items which you have mentioned, please note the following:

1309 calibration: This was an item already included in our review, and is found on page 32 and 41 for this application.

Dynamic range: This was an item already included in our review, and can be found on pages 38 and 47 for this application

Correction to peak: This was an item already included in our review, and can be found on page 15 for this application.

HAC measurement system reflections and reference location: This was an item already included in our review, and can be found on page 20 of this application. The reflection from the HAC measurement system contributes a 12% uncertainty, while the site reflections contribute a 5% uncertainty. Bodies and metallic objects are more than 5 feet away from the measurement system, reducing any significant field disturbances.

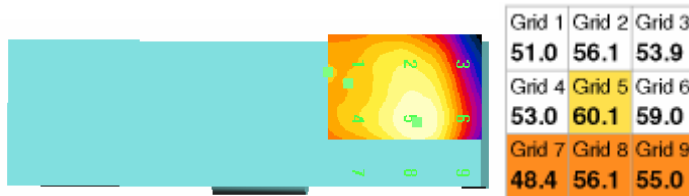
System verification: This was an item already included in our review, and can be found on Page 13 for this application.

Multiple antennas: This was an item we added to the review process. Please find attached pre-test data for a second antenna for this application.

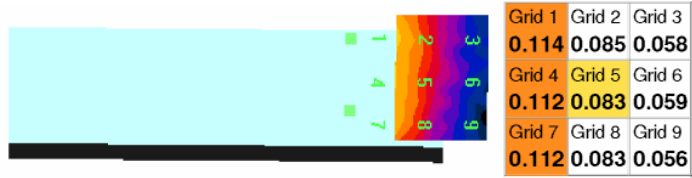
Probe description: This was an item added to the review process. Please find attached page with system probe description.

1. Please find attached contour plots in an alternate configuration that clarifies the grid configuration.
2. Please find below contour information for the exclusion blocks:

E-Field:



H-Field:

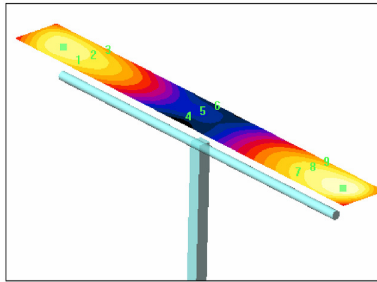


- Please find below explanation regarding the square root of two factor between RMS and Peak. After dipole verification, the values were multiplied by $\sqrt{2}$ to correlate to the mathematical values in C63.19:

From: SPEAG support [mailto:support@speag.com]
Sent: Thursday, April 14, 2005 2:22 AM
Subject: RE: [SPEAG Support - 1958] HAC inquiry

The standard is not yet finally released, and the figures for the some types of dipoles seem still being modified. I have not been involved in the standard development, but experienced that also for CW signals, some people prefer peak values. For a sinewave, you have to divide the peak value by $\sqrt{2}$ in order to get the RMS level. SPEAG probes are calibrated for RMS values, and so are the values in our dipole calibration.

The E-field patterns in air medium for $\frac{1}{4}$ wave dipoles exhibit the pattern described in Annex D (PC63.19). Please see below for measured field pattern, exhibiting two peaks on each end of the dipole. The values obtained in each maximum were averaged to determine the field strength at a fixed distance from the dipole.



- The colors on the contour plots are based on RMS average measurements.
- Please see below diagram indicating the final probe rotation location ("X"):



HAC System Probe Description:

ER3DV6 E-Field Probe Description

Construction: One dipole parallel, two dipoles normal to probe axis
Built-in shielding against static charges

Calibration: In air from 100 MHz to 3.0 GHz
(absolute accuracy $\pm 6.0\%$, $k=2$)

Frequency: 100 MHz to > 6 GHz;
Linearity: ± 0.2 dB (100 MHz to 3 GHz)

Directivity ± 0.2 dB in air (rotation around probe axis)
 ± 0.4 dB in air (rotation normal to probe axis)

Dynamic Range 2 V/m to > 1000 V/m;
Linearity: ± 0.2 dB

Dimensions Overall length: 330 mm (Tip: 16 mm)
Tip diameter: 8 mm (Body: 12 mm)
Distance from probe tip to dipole centers: 2.5 mm

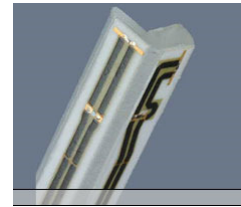


Figure A
E-field Free-space Probe

H3DV6 H-Field Probe Description

Construction: Three concentric loop sensors with 3.8 mm loop diameters
Resistively loaded detector diodes for linear response
Built-in shielding against static charges

Frequency: 200 MHz to 3 GHz (absolute accuracy $\pm 6.0\%$, $k=2$); Output linearized

Directivity ± 0.25 dB (spherical isotropy error)

Dynamic Range 10 mA/m to 2 A/m at 1 GHz

Dimensions Overall length: 330 mm (Tip: 40 mm)
Tip diameter: 6 mm (Body: 12 mm)
Distance from probe tip to dipole centers: 3 mm

E-Field Interference < 10% at 3 GHz (for plane wave)



Figure 1
H-Field Free-space Probe