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6:25 PM:
To: smtp@DAN7@Servers[<timothy.ganea@cubic.com>], Mary
Washington@EMC@PSSDG

To Tim Ganea & Mary Washington,

I have examined Annex J entitled "Guidance for Determination
of Necessary
Bandwidth". I note the highest Order of Preference in
determining the
necessary bandwidth is item 1 in the General paragraph 2.1.
For FM voice,
they generally follow Carson's Rule. The particular formula
is spelled out
for this case in Table A.III.2.

CALCULATION

Following the formula for FM telephony from Table A (formula
III.2) for our
case where the deviation is 5kHz, then $D=5000$, $M=3000$ (for
average voice)
and this gives $B_n=16000\text{Hz}$. This leads to the emission
designator of
16K00F3E.

COMMENTS

I note that the measurement undertaken by TUV at the -20dB
points gives a
slightly higher bandwidth for the 1kHz test tone than 12kHz
(Carson's Rule
for the test tone). They measure 13.9kHz. This is partly due
to the
resolution bandwidth of the spectrum analyser (300Hz) which
contributes
approximately 900Hz at the -20dB points, and partly due to the
difference
between the bandwidths at -20dB (TUV's measurement point) and

-3dB

(theoretical using Carson's rule). This total error is then 1.9kHz.

We choose to follow para 2.1 section 1 and use the preferred theoretical formula. Can you please amend the certificate and forward to Tim Ganea at CCI?

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