

Spectrum Mask Measurements

Spectrum Mask measurements using Mask D have been carried out by the client as per Section 90.210(d) as the transmitter has been modified to operate using 12.5 kHz channel spacing.

The equipment is designed to now also operate in the 406 – 430 MHz band using 12.5 kHz channel spacing using FM analogue speech.

The nearest applicable FCC band would be 421 – 512 MHz.

Using the formulas contained in Part 2.202 the necessary bandwidth calculation for the 12.5 kHz channel step emission is:

$$B_n = 2 \times D + 2 \times M$$

Where D = maximum deviation: 2.5 kHz

Where M = maximum modulation frequency: 3 kHz

$$B_n = 11 \text{ kHz}$$

This is confirmed in the emission designation, 11k0F3E, declared by the client.

Also the device complies with emission mask D.

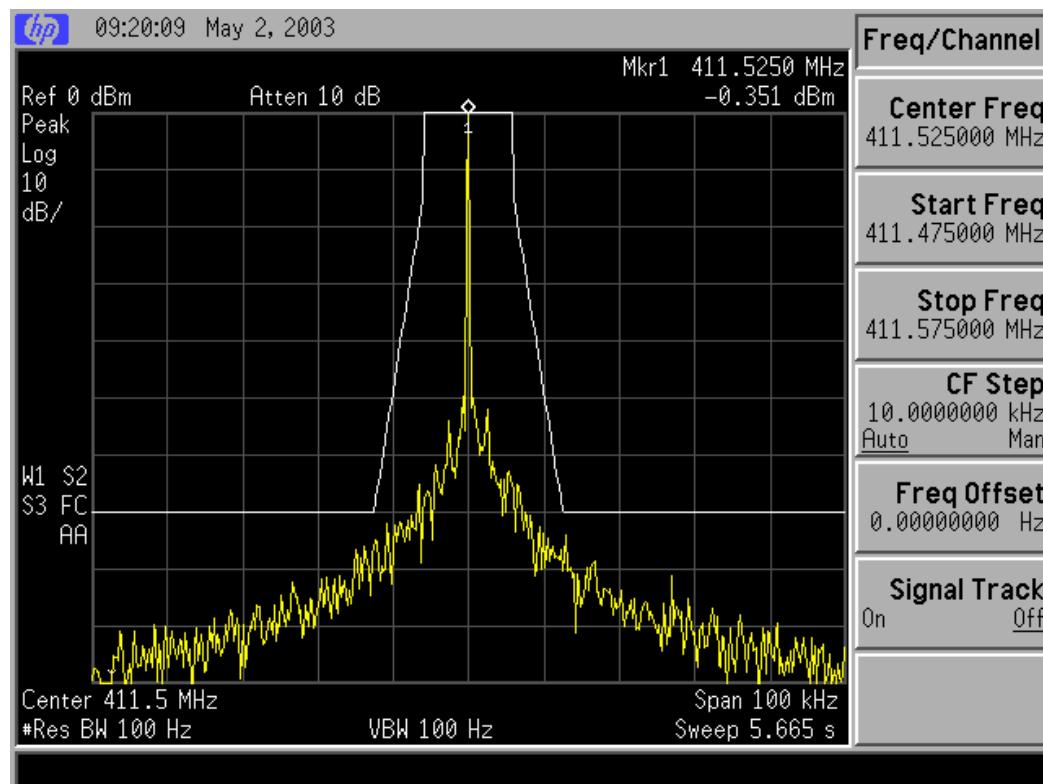
No further testing was carried out as all other parameters remain as per the original 25 kHz channel spacing submission which has the FCC identification number of KRET500A.

The following mask measurements have been made:

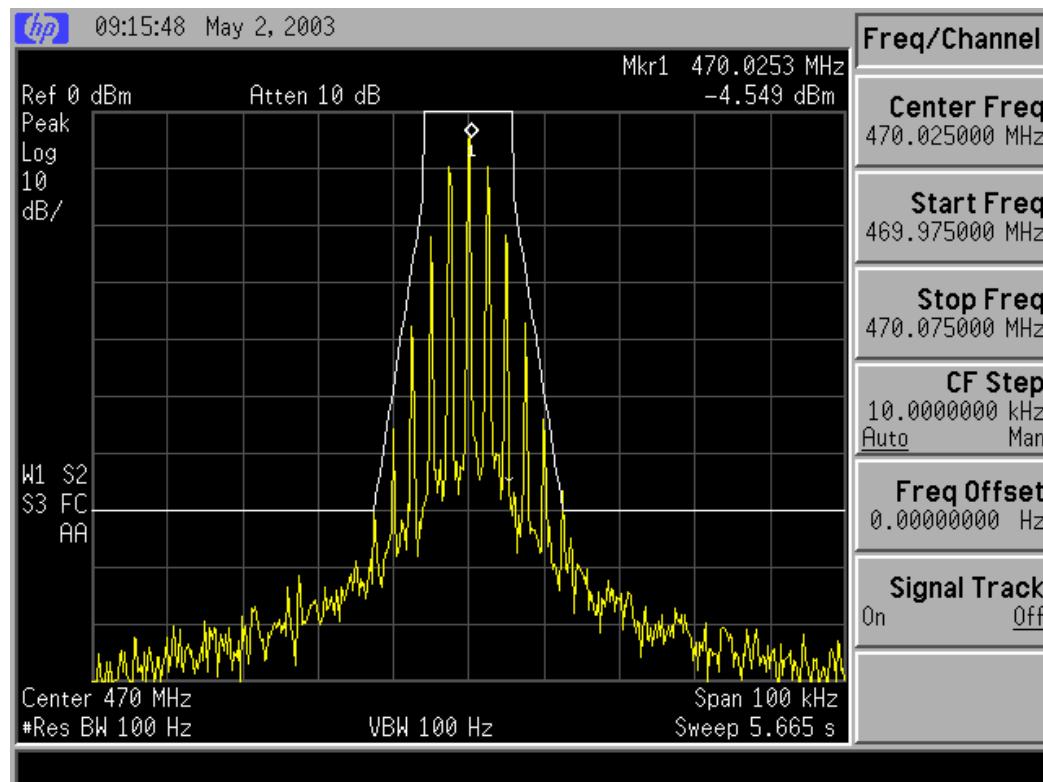
- Carrier only
- Modulated using a 2.5 kHz tone at a level 16 dB higher than the level required to achieve 50% frequency deviation (ie 1.25 kHz).
- Modulated using a 2.5 kHz tone and modulation sub tone (eg CTCSS) at a level 16 dB higher than the level required to achieve 50% frequency deviation (ie 1.25 kHz).

All emission plots comply with emission mask D.

Carrier only



Modulated by a 2500 Hz tone



Modulated by a 2500 Hz tone and a modulation sub tone (eg CTCSS)

