

FCC 21.908(d) Sample Calculations for Specification Limits Using the Relative Method in 21.908(e).

Definitions:

P = channel power in dBW normalized to 6MHz (for value, refer to Emissions Mask Data Sheet, Page NN, "Power normalized to 6MHz band" for each channel).

Pa = average power @ 100kHz (for value, refer to Emissions Mask Data Sheet, Page NN, "Pwr 100k" for each channel). This average power value is used with the average value readings at the band/channel edges for calculating the specification limits.

Puce = upper channel edge power limit

Plce = lower channel edge power limit

Formulas:

$$P_{uce} = P_a - 25 \text{ dB}$$

$$P_{lce} = P_a - 25 \text{ dB}$$

$$P_{uce} + 250 \text{ kHz} = P_a - 33 + 10 \log(P) \text{ dB}$$

$$P_{lce} - 250 \text{ kHz} = P_a - 33 + 10 \log(P) \text{ dB}$$

$$P_{uce} + 3 \text{ MHz} = P_a - 43 + 10 \log(P) \text{ dB}$$

$$P_{lce} - 3 \text{ MHz} = P_a - 43 + 10 \log(P) \text{ dB}$$

Since the all measurements were performed using RBW = 100 kHz, no bandwidth correction was necessary.

Sample calculations:

(shown for the upper channel side only— the lower side limits will be identical)

Channel = 2506 MHz

$$P = -12.40 \text{ dBW}$$

$$P_a = -11.87 \text{ dBm}$$

$$P_{uce} = -11.87 - 25 \text{ dBc} = -36.87 \text{ dBm}$$

$$P_{uce} + 250 \text{ kHz} = -11.87 - 20.60 \text{ dBc} = -32.47 \text{ dBm}$$

$$P_{uce} + 3 \text{ MHz} = -11.87 - 30.60 \text{ dBc} = -42.47 \text{ dBm}$$

Channel = 2596 MHz

$$P = -12.30 \text{ dBW}$$

$$P_a = -11.37 \text{ dBm}$$

$$P_{uce} = -11.37 - 25 \text{ dBc} = -36.37 \text{ dBm}$$

$$P_{uce} + 250 \text{ kHz} = -11.37 - 20.70 \text{ dBc} = -32.07 \text{ dBm}$$

$$P_{uce} + 3 \text{ MHz} = -11.37 - 30.70 \text{ dBc} = -42.07 \text{ dBm}$$

Channel = 2680 MHz

$$P = -12.10 \text{ dBW}$$

$$P_a = -11.03 \text{ dBm}$$

$$P_{uce} = -11.03 - 25 \text{ dBc} = -36.03 \text{ dBm}$$

$$P_{uce} + 250 \text{ kHz} = -11.03 - 20.90 \text{ dBc} = -31.93 \text{ dBm}$$

$$P_{uce} + 3 \text{ MHz} = -11.03 - 30.90 \text{ dBc} = -41.93 \text{ dBm}$$