

Date: June 14, 2022

Federal Communications Commission
Office of Engineering and Technology Laboratory Division
7435 Oakland Mills Rd.
Columbia MD 21046

Attn: Office of Engineering and Technology

HAC Attestation - FCC ID: BCG-E8138A

To whom it may concern:

Apple Inc. hereby declares that the MIF values detailed below are based on worst case operating modes for all air interfaces for which the HAC rating is provided based on the current methodology for determining MIF values.

Reference Test report Number(s): UL Verification Services Test Report 14040867-S3.

SPEAG test files

UID	Communication System Name	MIF (dB)
10021-DAC	GSM-FDD (TDMA, GMSK)	3.63
10011-CAB	UMTS-FDD (WCDMA)	-27.23
10170-CAE	LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 16QAM)	-9.76
10182-CAE	LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 16QAM)	-9.76
10176-CAG	LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 16QAM)	-9.76
10173-CAG	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 16QAM)	-1.44
10235-CAG	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 16QAM)	-1.44
10061-CAB	IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps)	-2.02
10077-CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 54 Mbps)	0.12
10069-CAD	IEEE 802.11a/n WiFi 5 GHz (OFDM, 54 Mbps)	-3.15
10671-AAC	IEEE 802.11ax (20MHz, MCS0, 90pc duty cycle)	-5.58
10866-AAD	5G NR (DFT-s-OFDM, 1 RB, 100 MHz, QPSK, 30 kHz)	-16.69
10898-AAB	5G NR (DFT-s-OFDM, 1 RB, 10 MHz, QPSK, 30 kHz)	-16.68
10903-AAB	5G NR (DFT-s-OFDM, 1 RB, 40 MHz, QPSK, 30 kHz)	-16.68
10929-AAC	5G NR (DFT-s-OFDM, 1 RB, 10 MHz, QPSK, 15 kHz)	-15.06
10930-AAC	5G NR (DFT-s-OFDM, 1 RB, 15 MHz, QPSK, 15 kHz)	-15.06
10931-AAC	5G NR (DFT-s-OFDM, 1 RB, 20 MHz, QPSK, 15 kHz)	-15.06
10934-AAC	5G NR (DFT-s-OFDM, 1 RB, 40 MHz, QPSK, 15 kHz)	-15.07

Sincerely,



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