



Date: Nov. 03, 2020

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: A3LSMG991U

To whom it may concern:

Samsung Electronics Co. Ltd., 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):

SPEAG test files

UID	Communication System Name	MIF (dB)
10295-AAB	CDMA2000, RC1, SO3, 1/8 th Rate 25 fr.	3.26
10021-DAC	GSM-FDD (TDMA, GMSK)	3.63
10460-AAA	UMTS-FDD (WCDMA,AMR)	-25.43
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, 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
10591-AAB	IEEE 802.11n (HT Mixed, 20MHz, MCS0, 90pc duty cycle)	-5.59
10069-CAC	IEEE 802.11a/n WiFi 5 GHz (OFDM, 54 Mbps)	-3.15
10616-AAB	IEEE 802.11ac WiFi (40MHz, MCS0, 90pc duty cycle)	-5.57
10671-AAA	IEEE 802.11ax (20MHz, MCS0, 90pc duty cycle)	-5.58
10030-CAA	IEEE 802.15.1 Bluetooth (GFSK, DH1)	1.02
10933-AAA	5G NR (DFT-s-OFDM, 1RB, 30 MHz, QPSK, 15 kHz)	-15.06
10769-AAC	5G NR (CP-OFDM, 1RB, 20 MHz, QPSK, 15 kHz)	-12.08

Sincerely,

Jenni Chun / General Manager
Samsung Electronics America, Inc.
Address: 19 Chapin Rd., Building D
Pine Brook, NJ 07058

Tel: 1-973-808-6375