



FCC SAR Test Report

Report No. : FA420703

Table with 21 columns: Model, Power, Modulation, Frequency, Bandwidth, Direction, Antenna, Antenna Type, Antenna Gain, Polarization, Exposure Scenario, SAR (Front), SAR (Back), SAR (Headset), SAR (Hand), SAR (Foot), SAR (Head), SAR (Hand), SAR (Foot), SAR (Head), SAR (Hand), SAR (Foot). Row 86 is highlighted.



Table with columns for LTE Band, Modulation, Power, and SAR values. Includes a highlighted cell with value 1.214.



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Table with 22 columns: LTE Band, Power, Modulation, Tx/Rx, Pol, Az, Az, Dist, Ant, Az, Az, Az, Az, Az, Az, Az, Az, Az, Az, Az, Az. Rows contain detailed test parameters and results for various LTE Band 41 configurations.



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Table with columns for LTE Band, Modulation, Power, Frequency, Distance, Antenna, DSI, and various SAR metrics.



Table with columns: LTE Band, Power, Modulation, Frequency, SAR (1g, 2g, 3g, 4g, 5g), Front/Back, Distance, Antenna, Exposure Type, DSI, Power Spectral Density, SAR (1g, 2g, 3g, 4g, 5g), Total SAR, and other parameters.



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Table with 21 columns: LTE Band, Power, Modulation, Max SAR, Max E1.9, Max E2.1, Orientation, Distance, Antenna, SAR Type, SAR Location, SAR Frequency, SAR Max, SAR Min, SAR Avg, SAR Max, SAR Min, SAR Avg, SAR Max, SAR Min, SAR Avg. Contains 100 rows of test data for various LTE bands and configurations.



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Table with columns for device ID, power, modulation, frequency, channel, polarization, distance, antenna, etc. containing multiple rows of test data.



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Table with columns for various parameters including model (FR1 n77_Part270), power (100M), modulation (QPSK), frequency (270), time (0), and SAR values. Row 93 is highlighted with a yellow background.



UL MIMO

Table with columns: Plot No., Band, BW (MHz), Modulation, RB Size, RB offset, Mode, Test Position, Gap (mm), Antenna, Headset, Power State, EUT Flip State, Ch., Freq. (MHz), Average Power (dBm), Tune-Up Limit (dBm), Tune-up Scaling Factor, Duty Cycle %, Duty Cycle Scaling Factor, Power Drift (dB), Measured 1g SAR (W/kg), Reported 1g SAR (W/kg). Includes a 1750MHz sub-header and multiple data rows.



Table with columns for device model (FR1 n25, FR1 n41_PC2), power (40M, 100M), modulation (QPSK), and various SAR parameters. Includes a 2600MHz section.



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Table with 22 columns: FR1 n48, 40M, QPSK, 53, 27, CP-30, Back, 5mm, Ant 4+6, -, DSI 3, Open, 645332, 3679.98, 19.59, 21.50, 1.553, -, -, 0.06, 0.653, 1.014



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Table with 22 columns: FR1 n77_Part270_PC2, 100M, QPSK, 1, 1, DFT-30, Front/Back, 5mm/16mm/22mm, Ant 3+8/3+6, -, DSI 10/3/4, Close/Open, 356000/333332, 3840, 25.25/23.68/26.71, 26.00/24.50, 1.188/1.209/1.201, 50, 1.000, 0.02/0.04/0.06/0.1, 1.000, 1.188/0.175/1.129/0.193/0.020/1.131/0.168/1.107/1.162/1.106/1.112/0.579/0.414/1.142/0.997/1.135/1.047/1.190/0.102/1.112/0.300/0.022/1.078/0.099/1.142/1.102/1.084/1.049/0.517/0.383/1.036/1.001/1.024/0.997/0.776/0.104/0.748/0.258/0.020/0.734/0.101/0.726



	WLAN 5.5GHz	802.11n-HT40 MCS0	Front	5mm	Ant 7+5	-	DSI 3	Open	134	5670	21.12	22.50	1.374	100	1.000	-0.1	0.788	1.083
97	WLAN 5.5GHz	802.11n-HT40 MCS0	Back	5mm	Ant 7+5	-	DSI 3	Open	134	5670	21.12	22.50	1.374	100	1.000	0.08	0.838	1.151
	WLAN 5.5GHz	802.11n-HT40 MCS0	Front	5mm	Ant 7+5	-	DSI 3	Open	102	5510	20.87	22.50	1.457	100	1.000	0.02	0.635	0.925
	WLAN 5.5GHz	802.11n-HT40 MCS0	Front	5mm	Ant 7+5	-	DSI 3	Open	110	5550	20.83	22.50	1.469	100	1.000	0.05	0.612	0.899
	WLAN 5.5GHz	802.11n-HT40 MCS0	Front	5mm	Ant 7+5	-	DSI 3	Open	126	5630	20.75	22.50	1.496	100	1.000	0.01	0.596	0.892
	WLAN 5.5GHz	802.11n-HT40 MCS0	Front	5mm	Ant 7+5	-	DSI 3	Open	142	5710	20.76	22.50	1.493	100	1.000	0.08	0.622	0.929
	WLAN 5.5GHz	802.11n-HT40 MCS0	Back	5mm	Ant 7+5	-	DSI 3	Open	102	5510	20.87	22.50	1.457	100	1.000	0.02	0.773	1.126
	WLAN 5.5GHz	802.11n-HT40 MCS0	Back	5mm	Ant 7+5	-	DSI 3	Open	110	5550	20.83	22.50	1.469	100	1.000	-0.03	0.745	1.094
	WLAN 5.5GHz	802.11n-HT40 MCS0	Back	5mm	Ant 7+5	-	DSI 3	Open	126	5630	20.75	22.50	1.496	100	1.000	-0.03	0.709	1.061
	WLAN 5.5GHz	802.11n-HT40 MCS0	Back	5mm	Ant 7+5	-	DSI 3	Open	142	5710	20.76	22.50	1.493	100	1.000	0.04	0.756	1.129
	WLAN 5.5GHz	802.11n-HT40 MCS0	Front	12mm	Ant 7+5(7)	-	DSI 4	Open	134	5670	18.24	20.00	1.498	100	1.000	0.04	0.287	0.430
	WLAN 5.5GHz	802.11n-HT40 MCS0	Back	13mm	Ant 7+5(7)	-	DSI 4	Open	134	5670	18.24	20.00	1.498	100	1.000	-0.05	0.250	0.375
	WLAN 5.5GHz	802.11n-HT40 MCS0	Front	5mm	Ant 7+5(7)	-	DSI 10	Close	134	5670	18.24	20.00	1.498	100	1.000	0.04	0.751	1.125
	WLAN 5.5GHz	802.11n-HT40 MCS0	Back	5mm	Ant 7+5(7)	-	DSI 10	Close	134	5670	18.24	20.00	1.498	100	1.000	-0.1	0.208	0.312
	WLAN 5.5GHz	802.11n-HT40 MCS0	Front	5mm	Ant 7+5(7)	-	DSI 10	Close	102	5510	17.57	19.50	1.558	100	1.000	-0.06	0.658	1.025
	WLAN 5.5GHz	802.11n-HT40 MCS0	Front	5mm	Ant 7+5(7)	-	DSI 10	Close	110	5550	18.18	20.00	1.519	100	1.000	0.08	0.635	0.965
	WLAN 5.5GHz	802.11n-HT40 MCS0	Front	5mm	Ant 7+5(7)	-	DSI 10	Close	126	5630	18.12	20.00	1.542	100	1.000	0.04	0.728	1.122
	WLAN 5.5GHz	802.11n-HT40 MCS0	Front	5mm	Ant 7+5(7)	-	DSI 10	Close	142	5710	18.17	20.00	1.523	100	1.000	-0.09	0.712	1.084
	WLAN 5.8GHz	802.11n-HT40 MCS0	Front	5mm	Ant 7+5	-	DSI 3	Open	151	5755	20.78	22.00	1.324	100	1.000	0.02	0.797	1.056
	WLAN 5.8GHz	802.11n-HT40 MCS0	Back	5mm	Ant 7+5	-	DSI 3	Open	151	5755	20.78	22.00	1.324	100	1.000	0.02	0.822	1.089
	WLAN 5.8GHz	802.11n-HT40 MCS0	Front	5mm	Ant 7+5	-	DSI 3	Open	159	5795	20.66	22.00	1.361	100	1.000	-0.01	0.768	1.046
98	WLAN 5.8GHz	802.11n-HT40 MCS0	Back	5mm	Ant 7+5	-	DSI 3	Open	159	5795	20.66	22.00	1.361	100	1.000	0.07	0.851	1.159
	WLAN 5.8GHz	802.11n-HT40 MCS0	Front	12mm	Ant 7+5(7)	-	DSI 4	Open	151	5755	18.14	19.50	1.366	100	1.000	0.03	0.273	0.373
	WLAN 5.8GHz	802.11n-HT40 MCS0	Back	13mm	Ant 7+5(7)	-	DSI 4	Open	159	5795	18.03	19.50	1.401	100	1.000	-0.07	0.250	0.350
	WLAN 5.8GHz	802.11n-HT40 MCS0	Front	5mm	Ant 7+5(7)	-	DSI 10	Close	151	5755	18.14	19.50	1.366	100	1.000	0.06	0.715	0.977
	WLAN 5.8GHz	802.11n-HT40 MCS0	Back	5mm	Ant 7+5(7)	-	DSI 10	Close	151	5755	18.14	19.50	1.366	100	1.000	0.09	0.200	0.273
	WLAN 5.8GHz	802.11n-HT40 MCS0	Front	5mm	Ant 7+5(7)	-	DSI 10	Close	159	5795	18.03	19.50	1.401	100	1.000	-0.03	0.701	0.982



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Table with columns: ID, Band, Power, Modulation, Channels, Frequency, Direction, Distance, Antenna, Polarization, Orientation, Frequency 1, Frequency 2, E1, E2, E3, E4, E5, E6, E7, E8, E9, E10. Includes rows for LTE Band 66, FR1 n66, and FR1 n70.



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Table with columns for Test ID, Modulation, Power, Bandwidth, Frequency, Direction, Distance, Antenna, Polarization, and SAR values. Includes sub-sections for 1900 MHz, GSM1900, WCDMA II, and LTE Band 25.



Table with columns for LTE Band 25, FR1 n25, Modulation (QPSK), Power (W), Frequency (MHz), Bandwidth (MHz), Direction, Distance (mm), Antenna, Modulation, Frequency, Power, EIRP (dBm), SAR (W/kg), and SAR (mW/kg). Row 106 is highlighted in yellow.



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Table with columns: FR1 n25, 40M, QPSK, 216, 0, DFT-15, Top Side, 0mm, Ant 3, DSI 5, Open, 376500, 1882.5, 21.93, 23.00, 1.279, -, -, -0.12, 1.870, 2.392. Includes sub-sections for 2300 MHz and FR1 n30.



Table with 20 columns: FR1 n30, 10M, QPSK, 1, 1, DFT-15, Front/Back/Top Side, 0mm, Ant 3, DSI 5, Open, 462000, 2310, 21.61, 22.50, 1.227, -, -, 0.1, 1.950, 2.394

2600 MHz

Table with 20 columns: LTE Band 7, 20M, QPSK, 1, 0, -, Back/Left Side/Bottom Side, 0mm, Ant 0/1, DSI 6/9, Open, 21100, 2535, 23.38, 24.00, 1.153, -, -, -0.13, 2.480, 2.861



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Table with columns for frequency, power, modulation, bandwidth, channel number, test method, exposure location, distance, antenna type, antenna gain, antenna separation, exposure time, SAR value, and other parameters. Includes rows for FR1 n7 and FR1 n41 series.



Table with 20 columns: Device Name, Power, Modulation, Channels, Frequency, Distance, Antenna, Radiation Type, Power Density, etc. Rows include FR1 n41 and FR1 n41_HPUE.

3-5GHz

Table with 20 columns: Band, Power, Modulation, Channels, Frequency, Distance, Antenna, Radiation Type, Power Density, etc. Rows include LTE Band 48 and LTE Band 48C.



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Table with 22 columns: Band, Modulation, Power, etc. Rows include LTE Band 48, LTE Band 48C, and FR1 n48.



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Table with columns: FR1 n48, 40M, QPSK, 50, 28, DFT-30, Back, 0mm, Ant 6, DSI 5, Open, 641666, 3624.99, 19.13, 20.00, 1.222, -0.06, 0.817, 0.998. Rows include various antenna configurations and test results.



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Table with columns for test parameters (FR1 n77_Part27Q, 100M, QPSK, etc.) and results. Row 115 is highlighted in yellow with a value of 3.052.



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Table with columns for test parameters (FR1 n25, 40M, QPSK, etc.) and SAR values. Includes a 2600MHz section at the bottom.



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Table with 20 columns: Model, Power, Modulation, Channel, Frequency, Power Density, Location, Antenna, Frequency Range, Exposure Status, Frequency, Power Density, Frequency, Power Density, Frequency, Power Density, Frequency, Power Density, Frequency, Power Density. Rows include FR1 n41_PC2, FR1 n41_PC1.5, and FR1 n41_PC2 with various configurations.

3G-4G

Table with 20 columns: Model, Power, Modulation, Channel, Frequency, Power Density, Location, Antenna, Frequency Range, Exposure Status, Frequency, Power Density, Frequency, Power Density, Frequency, Power Density, Frequency, Power Density, Frequency, Power Density. Rows include FR1 n48 with various configurations.



Table with columns for test parameters including model number, power, modulation, frequency, location, antenna, SAR, and measurement results.



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FR1 n77_Part270_PC2	100M	QPSK	270	0	DFT-30	Top Side	0mm	Ant 3+6	DSI 5	Open	356000	3840	25.63	26.50	1.222	50	1.000	-0.12	2.440	2.981
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Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Power State	EUT Flip State	Ch	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 10g SAR (W/kg)	Reported 10g SAR (W/kg)	
2450 MHz																		
116	Bluetooth	DH5 1Mbps	Front	0mm	Ant 7	DSI 5/6	Open	39	2441	16.90	18.50	1.445	77.07	1.298	-0.03	0.677	1.270	
	Bluetooth	DH5 1Mbps	Right Side	0mm	Ant 7	DSI 5/6	Open	39	2441	16.90	18.50	1.445	77.07	1.298	0.01	1.250	2.345	
	Bluetooth	DH5 1Mbps	Right Side	0mm	Ant 7	DSI 5/6	Open	0	2402	16.32	18.00	1.472	77.07	1.298	0.06	1.320	2.523	
	Bluetooth	DH5 1Mbps	Right Side	0mm	Ant 7	DSI 5/6	Open	78	2480	15.53	17.00	1.403	77.07	1.298	0.05	1.240	2.258	
	Bluetooth	DH5 1Mbps	Front	10mm	Ant 7	DSI 4	Open	39	2441	18.90	20.50	1.445	77.07	1.298	-0.01	0.128	0.240	
	Bluetooth	DH5 1Mbps	Right Side	14mm	Ant 7	DSI 4	Open	0	2402	18.50	20.00	1.413	77.07	1.298	-0.08	0.490	0.898	
	Bluetooth	DH5 1Mbps	Front	0mm	Ant 5	DSI 5	Open	39	2441	19.00	20.50	1.413	77.07	1.298	-0.06	0.606	1.111	
	Bluetooth	DH5 1Mbps	Top Side	0mm	Ant 5	DSI 5	Open	39	2441	19.00	20.50	1.413	77.07	1.298	0.03	0.689	1.263	
	Bluetooth	DH5 1Mbps	Top Side	0mm	Ant 5	DSI 5	Open	0	2402	18.50	20.00	1.413	77.07	1.298	-0.09	0.673	1.234	
	Bluetooth	DH5 1Mbps	Top Side	0mm	Ant 5	DSI 5	Open	78	2480	18.40	20.00	1.445	77.07	1.298	0.02	0.511	0.959	
	WLAN2.4GHz	802.11b 1Mbps	Front	0mm	Ant 7+5	DSI 5/6	Open	1	2412	18.31	20.00	1.476	98.53	1.015	0	0.583	0.873	
	WLAN2.4GHz	802.11b 1Mbps	Back	0mm	Ant 7+5	DSI 5/6	Open	1	2412	18.31	20.00	1.476	98.53	1.015	-0.08	0.282	0.422	
	WLAN2.4GHz	802.11b 1Mbps	Right Side	0mm	Ant 7+5	DSI 5/6	Open	1	2412	18.31	20.00	1.476	98.53	1.015	-0.09	1.570	2.352	
	WLAN2.4GHz	802.11b 1Mbps	Top Side	0mm	Ant 7+5	DSI 5/6	Open	1	2412	18.31	20.00	1.476	98.53	1.015	-0.09	0.353	0.529	
	WLAN2.4GHz	802.11b 1Mbps	Right Side	0mm	Ant 7+5	DSI 5/6	Open	6	2437	18.26	20.00	1.493	98.53	1.015	-0.09	1.710	2.591	
117	WLAN2.4GHz	802.11b 1Mbps	Right Side	0mm	Ant 7+5	DSI 5/6	Open	11	2462	18.09	20.00	1.552	98.53	1.015	0.06	1.780	2.805	
	WLAN2.4GHz	802.11b 1Mbps	Front	10mm	Ant 7+5(7)	DSI 4	Open	1	2412	20.62	22.50	1.542	98.53	1.015	0.04	0.402	0.629	
	WLAN2.4GHz	802.11b 1Mbps	Back	5mm	Ant 7+5(7)	DSI 4	Open	1	2412	20.62	22.50	1.542	98.53	1.015	-0.1	0.779	1.219	
	WLAN2.4GHz	802.11b 1Mbps	Right Side	8mm	Ant 7+5(7)	DSI 4	Open	11	2462	20.54	22.50	1.570	98.53	1.015	-0.03	1.040	1.658	
	WLAN2.4GHz	802.11b 1Mbps	Top Side	12mm	Ant 7+5(7)	DSI 4	Open	1	2412	20.62	22.50	1.542	98.53	1.015	-0.04	0.153	0.239	
5 GHz																		
118	WLAN5.2GHz	802.11n-HT40 MCS0	Right Side	0mm	Ant 7+5(7)	DSI 5/6	Open	46	5230	18.40	20.00	1.444	100	1.000	-0.1	1.700	2.455	
	WLAN5.2GHz	802.11n-HT40 MCS0	Right Side	0mm	Ant 7+5(5)	DSI 5/6	Open	38	5190	16.98	18.50	1.419	100	1.000	-0.04	1.480	2.100	
	WLAN5.3GHz	802.11n-HT40 MCS0	Front	0mm	Ant 7+5(7)	DSI 5/6	Open	54	5270	18.22	20.00	1.505	100	1.000	-0.07	1.560	2.348	
	WLAN5.3GHz	802.11n-HT40 MCS0	Back	0mm	Ant 7+5(7)	DSI 5/6	Open	54	5270	18.22	20.00	1.505	100	1.000	-0.01	0.698	1.051	
119	WLAN5.3GHz	802.11n-HT40 MCS0	Right Side	0mm	Ant 7+5(7)	DSI 5/6	Open	54	5270	18.22	20.00	1.505	100	1.000	0.1	1.710	2.574	
	WLAN5.3GHz	802.11n-HT40 MCS0	Top Side	0mm	Ant 7+5(7)	DSI 5/6	Open	54	5270	18.22	20.00	1.505	100	1.000	-0.09	1.310	1.972	
	WLAN5.3GHz	802.11n-HT40 MCS0	Front	0mm	Ant 7+5(7)	DSI 5/6	Open	62	5310	16.43	18.00	1.434	100	1.000	0	1.260	1.807	
	WLAN5.3GHz	802.11n-HT40 MCS0	Right Side	0mm	Ant 7+5(7)	DSI 5/6	Open	62	5310	16.43	18.00	1.434	100	1.000	0.01	1.460	2.094	
	WLAN5.5GHz	802.11n-HT40 MCS0	Front	0mm	Ant 7+5(7)	DSI 5/6	Open	134	5670	18.24	20.00	1.498	100	1.000	-0.04	1.310	1.963	
	WLAN5.5GHz	802.11n-HT40 MCS0	Back	0mm	Ant 7+5(7)	DSI 5/6	Open	134	5670	18.24	20.00	1.498	100	1.000	-0.03	0.723	1.083	
	WLAN5.5GHz	802.11n-HT40 MCS0	Right Side	0mm	Ant 7+5(7)	DSI 5/6	Open	134	5670	18.24	20.00	1.498	100	1.000	0	2.010	3.011	
	WLAN5.5GHz	802.11n-HT40 MCS0	Top Side	0mm	Ant 7+5(7)	DSI 5/6	Open	134	5670	18.24	20.00	1.498	100	1.000	0.06	1.650	2.472	
	WLAN5.5GHz	802.11n-HT40 MCS0	Right Side	0mm	Ant 7+5(7)	DSI 5/6	Open	102	5510	17.57	19.50	1.558	100	1.000	-0.07	1.810	2.820	
120	WLAN5.5GHz	802.11n-HT40 MCS0	Right Side	0mm	Ant 7+5(7)	DSI 5/6	Open	110	5550	18.18	20.00	1.519	100	1.000	0	2.100	3.190	
	WLAN5.5GHz	802.11n-HT40 MCS0	Right Side	0mm	Ant 7+5(7)	DSI 5/6	Open	126	5630	18.12	20.00	1.542	100	1.000	0.07	1.960	3.022	
	WLAN5.5GHz	802.11n-HT40 MCS0	Right Side	0mm	Ant 7+5(7)	DSI 5/6	Open	142	5710	18.17	20.00	1.523	100	1.000	-0.02	1.940	2.954	
	WLAN5.5GHz	802.11n-HT40 MCS0	Top Side	0mm	Ant 7+5(7)	DSI 5/6	Open	102	5510	17.57	19.50	1.558	100	1.000	0.04	1.730	2.695	
	WLAN5.5GHz	802.11n-HT40 MCS0	Top Side	0mm	Ant 7+5(7)	DSI 5/6	Open	110	5550	18.18	20.00	1.519	100	1.000	0.04	1.870	2.841	
	WLAN5.5GHz	802.11n-HT40 MCS0	Top Side	0mm	Ant 7+5(7)	DSI 5/6	Open	126	5630	18.12	20.00	1.542	100	1.000	-0.09	1.670	2.575	
	WLAN5.5GHz	802.11n-HT40 MCS0	Top Side	0mm	Ant 7+5(7)	DSI 5/6	Open	142	5710	18.17	20.00	1.523	100	1.000	-0.08	1.600	2.436	
	WLAN5.8GHz	802.11n-HT40 MCS0	Front	0mm	Ant 7+5(7)	DSI 5/6	Open	151	5755	18.14	19.50	1.366	100	1.000	0	1.340	1.831	
	WLAN5.8GHz	802.11n-HT40 MCS0	Right Side	0mm	Ant 7+5(7)	DSI 5/6	Open	151	5755	18.14	19.50	1.366	100	1.000	0	1.720	2.350	
121	WLAN5.8GHz	802.11n-HT40 MCS0	Right Side	0mm	Ant 7+5(7)	DSI 5/6	Open	159	5795	18.03	19.50	1.401	100	1.000	0.09	1.980	2.775	



16.5 Repeated SAR Measurement

<1g>

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Mode	Test Position	Gap (mm)	Antenna	Power State	EUT Flip State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Ratio	Reported 1g SAR (W/kg)
1st	FR1 n41	100M	QPSK	1	1	DFT-30	Left Cheek	0mm	Ant 2	DSI 2	Open	518598	2592.99	17.96	18.50	1.132	-	-	0.12	1.110	1	1.257
2nd	FR1 n41	100M	QPSK	1	1	DFT-30	Left Cheek	0mm	Ant 2	DSI 2	Open	518598	2592.99	17.96	18.50	1.132	-	-	0.05	0.994	1.117	1.126
1st	FR1 n77 Part270 HPUe	100M	QPSK	1	1	DFT-30	Left Cheek	0mm	Ant 8	DSI 2	Open	656000	3840	20.31	21.00	1.172	50	1.000	-0.17	1.010	1	1.184
2nd	FR1 n77 Part270 HPUe	100M	QPSK	1	1	DFT-30	Left Cheek	0mm	Ant 8	DSI 2	Open	656000	3840	20.31	21.00	1.172	50	1.000	0.01	0.943	1.071	1.105
1st	WLAN5.5GHz	-	-	-	-	802.11ac-VHT160 MCS0	Left Cheek	0mm	Ant 7+5	DSI 2	Open	114	5570	17.21	18.50	1.346	98.75	1.013	0.07	0.858	1	1.170
2nd	WLAN5.5GHz	-	-	-	-	802.11ac-VHT160 MCS0	Left Cheek	0mm	Ant 7+5	DSI 2	Open	114	5570	17.21	18.50	1.346	98.75	1.013	0.01	0.831	1.032	1.133
1st	WCDMA V	-	-	-	-	RMC 12.2Kbps	Back	5mm	Ant 0	DSI 7	Open	4132	826.4	23.38	24.00	1.153	-	-	-0.09	0.994	1	1.147
2nd	WCDMA V	-	-	-	-	RMC 12.2Kbps	Back	5mm	Ant 0	DSI 7	Open	4132	826.4	23.38	24.00	1.153	-	-	0.06	0.848	1.172	0.978
1st	FR1 n48	40M	QPSK	1	1	DFT-30	Right Side	5mm	Ant 8	DSI 7	Open	638000	3570	17.35	18.00	1.161	-	-	-0.14	1.100	1	1.278
2nd	FR1 n48	40M	QPSK	1	1	DFT-30	Right Side	5mm	Ant 8	DSI 7	Open	638000	3570	17.35	18.00	1.161	-	-	0.01	1.030	1.068	1.196
1st	WLAN5.8GHz	-	-	-	-	802.11ac-VHT80 MCS0	Right Side	5mm	Ant 7+5	DSI 11	Close	155	5775	20.14	21.50	1.368	99.26	1.007	0.1	0.861	1	1.186
2nd	WLAN5.8GHz	-	-	-	-	802.11ac-VHT80 MCS0	Right Side	5mm	Ant 7+5	DSI 11	Close	155	5775	20.14	21.50	1.368	99.26	1.007	0.07	0.842	1.023	1.160
1st	FR1 n66	40M	QPSK	1	1	DFT-15	Left Side	5mm	Ant 0+1	DSI 7	Open	349000	1745	23.56	24.00	1.106	-	-	-0.15	1.140	1	1.261
2nd	FR1 n66	40M	QPSK	1	1	DFT-15	Left Side	5mm	Ant 0+1	DSI 7	Open	349000	1745	23.56	24.00	1.106	-	-	0.09	1.090	1.046	1.206
1st	LTE Band 25	20M	QPSK	1	0	-	Back	5mm	Ant 0	DSI 3	Open	26140	1860	23.75	24.00	1.059	-	-	0.03	1.150	1	1.218
2nd	LTE Band 25	20M	QPSK	1	0	-	Back	5mm	Ant 0	DSI 3	Open	26140	1860	23.75	24.00	1.059	-	-	0.05	1.090	1.055	1.155
1st	FR1 n30	10M	QPSK	1	1	DFT-15	Back	5mm	Ant 1	DSI 3	Open	462000	2310	22.48	23.00	1.127			0.01	1.100	1	1.240
2nd	FR1 n30	10M	QPSK	1	1	DFT-15	Back	5mm	Ant 1	DSI 3	Open	462000	2310	22.48	23.00	1.127			0.08	1.030	1.068	1.161
1st	LTE Band 48	20M	QPSK	1	0	-	Back	5mm	Ant 8	DSI 3	Open	56640	3690	21.90	22.40	1.122	62.9	1.006	-0.08	1.100	1	1.242
2nd	LTE Band 48	20M	QPSK	1	0	-	Back	5mm	Ant 8	DSI 3	Open	56640	3690	21.90	22.40	1.122	62.9	1.006	0.06	0.994	1.107	1.122
1st	WLAN2.4GHz	-	-	-	-	802.11b 1Mbps	Front	5mm	Ant 7+5	DSI 3	Open	11	2462	19.17	20.50	1.358	98.53	1.015	0.08	0.864	1	1.191
2nd	WLAN2.4GHz	-	-	-	-	802.11b 1Mbps	Front	5mm	Ant 7+5	DSI 3	Open	11	2462	19.17	20.50	1.358	98.53	1.015	0.01	0.821	1.052	1.132
1st	WLAN5.3GHz	-	-	-	-	802.11n-HT40 MCS0	Front	5mm	Ant 7+5	DSI 10	Close	54	5270	20.98	22.50	1.419	100	1.000	-0.02	0.827	1	1.174
2nd	WLAN5.3GHz	-	-	-	-	802.11n-HT40 MCS0	Front	5mm	Ant 7+5	DSI 10	Close	54	5270	20.98	22.50	1.419	100	1.000	0.01	0.801	1.032	1.137



<10g>

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Mode	Test Position	Gap (mm)	Antenna	Power State	EUT Flip State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 10g SAR (W/kg)	Ratio	Reported 10g SAR (W/kg)
1st	FR1 n70	15M	QPSK	36	22	DFT-15	Left Side	0mm	Ant 2	DSI 5/6	Open	340500	1702.5	23.37	24.00	1.156	-	-	0.03	2.760	1	3.191
2nd	FR1 n70	15M	QPSK	36	22	DFT-15	Left Side	0mm	Ant 2	DSI 5/6	Open	340500	1702.5	23.37	24.00	1.156	-	-	0.06	2.630	1.049	3.041
1st	LTE Band 25	20M	QPSK	1	0	-	Bottom Side	0mm	Ant 1	DSI 6/9	Open	26590	1905	23.77	24.00	1.054	-	-	0.01	2.650	1	2.794
2nd	LTE Band 25	20M	QPSK	1	0	-	Bottom Side	0mm	Ant 1	DSI 6/9	Open	26590	1905	23.77	24.00	1.054	-	-	0.01	2.650	1.000	2.794
1st	FR1 n30	10M	QPSK	1	1	DFT-15	Bottom Side	0mm	Ant 1	DSI 6/9	Open	462000	2310	23.00	23.50	1.122	-	-	0.14	2.610	1	2.928
2nd	FR1 n30	10M	QPSK	1	1	DFT-15	Bottom Side	0mm	Ant 1	DSI 6/9	Open	462000	2310	23.00	23.50	1.122	-	-	0.02	2.490	1.048	2.794
1st	FR1 n7	40M	QPSK	1	1	DFT-15	Left Side	0mm	Ant 2	DSI 5/6	Open	507000	2535	22.88	23.50	1.153	-	-	0.05	2.740	1	3.160
2nd	FR1 n7	40M	QPSK	1	1	DFT-15	Left Side	0mm	Ant 2	DSI 5/6	Open	507000	2535	22.88	23.50	1.153	-	-	0.09	2.630	1.042	3.034
1st	FR1 n48	40M	QPSK	50	28	DFT-30	Top Side	0mm	Ant 3	DSI 5	Open	641666	3624.99	19.83	20.50	1.167	-	-	-0.13	2.560	1	2.987
2nd	FR1 n48	40M	QPSK	50	28	DFT-30	Top Side	0mm	Ant 3	DSI 5	Open	641666	3624.99	19.83	20.50	1.167	-	-	0.08	2.480	1.032	2.894
1st	FR1 n77_Part27Q	100M	QPSK	1	1	DFT-30	Top Side	0mm	Ant 6	DSI 5	Open	656000	3840	19.77	20.50	1.183	-	-	0.07	2.580	1	3.052
2nd	FR1 n77_Part27Q	100M	QPSK	1	1	DFT-30	Top Side	0mm	Ant 6	DSI 5	Open	656000	3840	19.77	20.50	1.183	-	-	0.01	2.460	1.049	2.910
1st	WLAN5.5GHz	-	-	-	-	802.11n-HT40 MCS0	Right Side	0mm	Ant 7+5(7)	DSI 5/6	Open	110	5550	18.18	20.00	1.519	100	1.000	0	2.100	1	3.190
2nd	WLAN5.5GHz	-	-	-	-	802.11n-HT40 MCS0	Right Side	0mm	Ant 7+5(7)	DSI 5/6	Open	110	5550	18.18	20.00	1.519	100	1.000	0.05	2.030	1.034	3.084
1st	FR1 n77_Part27Q	100M	QPSK	135	69	DFT-30	Top Side	0mm	Ant 3	DSI 5	Open	633332	3499.98	19.70	20.50	1.202			-0.16	2.360	1	2.837
2nd	FR1 n77_Part27Q	100M	QPSK	135	69	DFT-30	Top Side	0mm	Ant 3	DSI 5	Open	633332	3499.98	19.70	20.50	1.202			0.05	2.310	1.022	2.777

General Note:

- Per KDB 865664 D01v01r04, for each frequency band, repeated SAR measurement is required only when the measured SAR is $\geq 0.8W/kg$.
- Per KDB 865664 D01v01r04, if the ratio among the repeated measurement is ≤ 1.2 and the measured SAR $< 1.45W/kg$, only one repeated measurement is required.
- Per KDB 865664 D01v01r04, if the extremity repeated SAR is necessary, the same procedures should be adapted for measurements according to extremity and occupational exposure limits by applying a factor of 2.5 for extremity exposure and a factor of 5 for occupational exposure to the corresponding SAR thresholds.
- The ratio is the difference in percentage between original and repeated *measured SAR*.
- All measurement SAR result is scaled-up to account for tune-up tolerance and is compliant.

16.6 TDD 5G NR<E Linearity Data Analysis

General Note:

This device support Power Class 2 and Power Class 3 operations for LTE Band 41 and TDD n77. The highest available duty cycle for Power Class 2 operation is 43.3% using UL-DL configuration 1. Per FCC Guidance based on the device behavior, all SAR tests were performed using Power Class 3. Power Class 2 is tested using the highest SAR test configuration in Power Class 3 for each LTE configuration and exposure condition combination, according to the highest time averaged power for all applicable uplink-downlink configurations in Power Class 2. When the reported SAR vs. output power is linearly scaled with < 10% discrepancy between power classes and all reported SAR are < 1.4 W/kg for 1g and < 3.5 W/kg for 10g, Separate SAR testing for Power Class 2 is not required.

Flip-Open Mode

Head			Hopspot		
LTE Band 41_Ant 0(HPUE)-Linearity Data for DSI 2			LTE Band 41_Ant 0(HPUE)-Linearity Data for DSI 7		
	LTE Band 41 (Power Class 3)	LTE Band 41 (Power Class 2)		LTE Band 41 (Power Class 3)	LTE Band 41 (Power Class 2)
Maximum Tune up Power (dBm)	24.00	27.00	Maximum Tune up Power (dBm)	24.00	26.30
Reported 1g SAR (W/kg)	0.569	0.706	Reported 1g SAR (W/kg)	1.094	1.182
Duty Cycle	63.30%	43.30%	Duty Cycle	63.30%	43.30%
Frame Averaged (mW)	159.00	217.01	Frame Averaged (mW)	159.00	184.71
Linearity SAR (W/kg)	0.777		Linearity SAR (W/kg)	1.271	
% deviation from expected linearity		-9.09%	% deviation from expected linearity		-6.99%
LTE Band 41_Ant 1(HPUE)-Linearity Data for DSI 2			LTE Band 41_Ant 1(HPUE)-Linearity Data for DSI 7		
	LTE Band 41 (Power Class 3)	LTE Band 41 (Power Class 2)		LTE Band 41 (Power Class 3)	LTE Band 41 (Power Class 2)
Maximum Tune up Power (dBm)	24.00	27.00	Maximum Tune up Power (dBm)	24.00	25.50
Reported 1g SAR (W/kg)	0.176	0.218	Reported 1g SAR (W/kg)	1.132	1.197
Duty Cycle	63.30%	43.30%	Duty Cycle	63.30%	43.30%
Frame Averaged (mW)	159.00	217.01	Frame Averaged (mW)	159.00	153.63
Linearity SAR (W/kg)	0.240		Linearity SAR (W/kg)	1.094	
% deviation from expected linearity		-9.25%	% deviation from expected linearity		9.44%
LTE Band 41_Ant 2(HPUE)-Linearity Data for DSI 2			LTE Band 41_Ant 2(HPUE)-Linearity Data for DSI 7		
	FR1 n41 (Power Class 3)	FR1 n41 (Power Class 2)		FR1 n41 (Power Class 3)	FR1 n41 (Power Class 2)
Maximum Tune up Power (dBm)	18.80	20.40	Maximum Tune up Power (dBm)	21.90	23.50
Reported 1g SAR (W/kg)	1.158	1.181	Reported 1g SAR (W/kg)	1.075	1.125
Duty Cycle	63.30%	43.30%	Duty Cycle	63.30%	43.30%
Frame Averaged (mW)	48.02	47.48	Frame Averaged (mW)	98.04	96.94
Linearity SAR (W/kg)	1.145		Linearity SAR (W/kg)	1.063	
% deviation from expected linearity		3.15%	% deviation from expected linearity		5.84%
LTE Band 41_Ant 3(HPUE)-Linearity Data for DSI 2			LTE Band 41_Ant 3(HPUE)-Linearity Data for DSI 7		
	FR1 n41 (Power Class 3)	FR1 n41 (Power Class 2)		FR1 n41 (Power Class 3)	FR1 n41 (Power Class 2)
Maximum Tune up Power (dBm)	16.80	18.40	Maximum Tune up Power (dBm)	17.60	19.20
Reported 1g SAR (W/kg)	0.994	1.010	Reported 1g SAR (W/kg)	1.131	1.222
Duty Cycle	63.30%	43.30%	Duty Cycle	63.30%	43.30%
Frame Averaged (mW)	30.30	29.96	Frame Averaged (mW)	36.43	36.02
Linearity SAR (W/kg)	0.983		Linearity SAR (W/kg)	1.118	
% deviation from expected linearity		2.77%	% deviation from expected linearity		9.28%
FR1 n41_Ant 0(HPUE)-Linearity Data for DSI 2			FR1 n41_Ant 0(HPUE)-Linearity Data for DSI 7		
	FR1 n41 (Power Class 3)	FR1 n41 (Power Class 2)		FR1 n41 (Power Class 3)	FR1 n41 (Power Class 2)
Maximum Tune up Power (dBm)	24.00	27.00	Maximum Tune up Power (dBm)	24.00	27.00
Reported 1g SAR (W/kg)	0.421	0.455	Reported 1g SAR (W/kg)	1.099	1.134
Duty Cycle	100.00%	50.00%	Duty Cycle	100.00%	50.00%



Frame Averaged (mW)	251.19	250.59	Frame Averaged (mW)	251.19	250.59
Linearity SAR (W/kg)	0.420		Linearity SAR (W/kg)	1.096	
% deviation from expected linearity		8.33%	% deviation from expected linearity		3.43%
FR1 n41_Ant 1(HPUE)-Linearity Data for DSI 2			FR1 n41_Ant 1(HPUE)-Linearity Data for DSI 7		
	FR1 n41 (Power Class 3)	FR1 n41 (Power Class 2)		FR1 n41 (Power Class 3)	FR1 n41 (Power Class 2)
Maximum Tune up Power (dBm)	24.00	27.00	Maximum Tune up Power (dBm)	22.00	25.00
Reported 1g SAR (W/kg)	0.200	0.216	Reported 1g SAR (W/kg)	1.246	1.232
Duty Cycle	100.00%	50.00%	Duty Cycle	100.00%	50.00%
Frame Averaged (mW)	251.19	250.59	Frame Averaged (mW)	158.49	158.11
Linearity SAR (W/kg)	0.200		Linearity SAR (W/kg)	1.243	
% deviation from expected linearity		8.26%	% deviation from expected linearity		-0.89%
FR1 n41_Ant 2(HPUE)-Linearity Data for DSI 2			FR1 n41_Ant 2(HPUE)-Linearity Data for DSI 7		
	FR1 n77 (Power Class 3)	FR1 n77 (Power Class 2)		FR1 n77 (Power Class 3)	FR1 n77 (Power Class 2)
Maximum Tune up Power (dBm)	18.50	21.50	Maximum Tune up Power (dBm)	19.00	22.00
Reported 1g SAR (W/kg)	1.257	1.268	Reported 1g SAR (W/kg)	1.144	1.249
Duty Cycle	100.00%	50.00%	Duty Cycle	100.00%	50.00%
Frame Averaged (mW)	70.79	70.63	Frame Averaged (mW)	79.43	79.24
Linearity SAR (W/kg)	1.254		Linearity SAR (W/kg)	1.141	
% deviation from expected linearity		1.11%	% deviation from expected linearity		9.44%
FR1 n41_Ant 3(HPUE)-Linearity Data for DSI 2			FR1 n41_Ant 3(HPUE)-Linearity Data for DSI 7		
	FR1 n77 (Power Class 3)	FR1 n77 (Power Class 2)		FR1 n77 (Power Class 3)	FR1 n77 (Power Class 2)
Maximum Tune up Power (dBm)	17.50	20.50	Maximum Tune up Power (dBm)	18.00	21.00
Reported 1g SAR (W/kg)	1.229	1.227	Reported 1g SAR (W/kg)	1.186	1.218
Duty Cycle	100.00%	50.00%	Duty Cycle	100.00%	50.00%
Frame Averaged (mW)	56.23	56.10	Frame Averaged (mW)	63.10	62.95
Linearity SAR (W/kg)	1.226		Linearity SAR (W/kg)	1.183	
% deviation from expected linearity		0.07%	% deviation from expected linearity		2.94%
FR1 n77_Ant 3_Part 27Q(HPUE)-Linearity Data for DSI 2			FR1 n77_Ant 3_Part 27Q(HPUE)-Linearity Data for DSI 7		
	FR1 n77 (Power Class 3)	FR1 n77 (Power Class 2)		FR1 n77 (Power Class 3)	FR1 n77 (Power Class 2)
Maximum Tune up Power (dBm)	14.50	17.50	Maximum Tune up Power (dBm)	16.50	19.50
Reported 1g SAR (W/kg)	0.810	0.809	Reported 1g SAR (W/kg)	0.815	0.853
Duty Cycle	100.00%	50.00%	Duty Cycle	100.00%	50.00%
Frame Averaged (mW)	28.18	28.12	Frame Averaged (mW)	44.67	44.56
Linearity SAR (W/kg)	0.808		Linearity SAR (W/kg)	0.813	
% deviation from expected linearity		0.11%	% deviation from expected linearity		4.91%
FR1 n77_Ant 3_Part 27Q(HPUE)-Linearity Data for DSI 2			FR1 n77_Ant 3_Part 27Q(HPUE)-Linearity Data for DSI 7		
	FR1 n77 (Power Class 3)	FR1 n77 (Power Class 2)		FR1 n77 (Power Class 3)	FR1 n77 (Power Class 2)
Maximum Tune up Power (dBm)	14.50	17.50	Maximum Tune up Power (dBm)	16.50	19.50
Reported 1g SAR (W/kg)	0.923	1.005	Reported 1g SAR (W/kg)	1.057	1.045
Duty Cycle	100.00%	50.00%	Duty Cycle	100.00%	50.00%
Frame Averaged (mW)	28.18	28.12	Frame Averaged (mW)	44.67	44.56
Linearity SAR (W/kg)	0.921		Linearity SAR (W/kg)	1.054	
% deviation from expected linearity		9.14%	% deviation from expected linearity		-0.90%
FR1 n77_Ant 4_Part 27Q(HPUE)-Linearity Data for DSI 2			FR1 n77_Ant 4_Part 27Q(HPUE)-Linearity Data for DSI 7		
	FR1 n77 (Power Class 3)	FR1 n77 (Power Class 2)		FR1 n77 (Power Class 3)	FR1 n77 (Power Class 2)
Maximum Tune up Power (dBm)	16.00	19.00	Maximum Tune up Power (dBm)	15.50	18.50
Reported 1g SAR (W/kg)	1.086	1.123	Reported 1g SAR (W/kg)	0.933	0.928
Duty Cycle	100.00%	50.00%	Duty Cycle	100.00%	50.00%



Frame Averaged (mW)	39.81	39.72	Frame Averaged (mW)	35.48	35.40
Linearity SAR (W/kg)	1.083		Linearity SAR (W/kg)	0.931	
% deviation from expected linearity		3.65%	% deviation from expected linearity		-0.30%
FR1 n77_Ant 4_Part 270(HPUE)-Linearity Data for DSI 2			FR1 n77_Ant 4_Part 270(HPUE)-Linearity Data for DSI 7		
	FR1 n77 (Power Class 3)	FR1 n77 (Power Class 2)		FR1 n77 (Power Class 3)	FR1 n77 (Power Class 2)
Maximum Tune up Power (dBm)	16.00	19.00	Maximum Tune up Power (dBm)	15.50	18.50
Reported 1g SAR (W/kg)	0.927	0.918	Reported 1g SAR (W/kg)	0.871	0.896
Duty Cycle	100.00%	50.00%	Duty Cycle	100.00%	50.00%
Frame Averaged (mW)	39.81	39.72	Frame Averaged (mW)	35.48	35.40
Linearity SAR (W/kg)	0.925		Linearity SAR (W/kg)	0.869	
% deviation from expected linearity		-0.74%	% deviation from expected linearity		3.11%
FR1 n77_Ant 6_Part 27Q(HPUE)-Linearity Data for DSI 2			FR1 n77_Ant 6_Part 27Q(HPUE)-Linearity Data for DSI 7		
	FR1 n77 (Power Class 3)	FR1 n77 (Power Class 2)		FR1 n77 (Power Class 3)	FR1 n77 (Power Class 2)
Maximum Tune up Power (dBm)	14.00	17.00	Maximum Tune up Power (dBm)	13.50	16.50
Reported 1g SAR (W/kg)	1.275	1.264	Reported 1g SAR (W/kg)	1.145	1.105
Duty Cycle	100.00%	50.00%	Duty Cycle	100.00%	50.00%
Frame Averaged (mW)	25.12	25.06	Frame Averaged (mW)	22.39	22.33
Linearity SAR (W/kg)	1.272		Linearity SAR (W/kg)	1.142	
% deviation from expected linearity		-0.63%	% deviation from expected linearity		-3.26%
FR1 n77_Ant 6_Part 27Q(HPUE)-Linearity Data for DSI 2			FR1 n77_Ant 6_Part 27Q(HPUE)-Linearity Data for DSI 7		
	FR1 n77 (Power Class 3)	FR1 n77 (Power Class 2)		FR1 n77 (Power Class 3)	FR1 n77 (Power Class 2)
Maximum Tune up Power (dBm)	14.00	17.00	Maximum Tune up Power (dBm)	13.50	16.50
Reported 1g SAR (W/kg)	0.828	0.813	Reported 1g SAR (W/kg)	0.961	1.037
Duty Cycle	100.00%	50.00%	Duty Cycle	100.00%	50.00%
Frame Averaged (mW)	25.12	25.06	Frame Averaged (mW)	22.39	22.33
Linearity SAR (W/kg)	0.826		Linearity SAR (W/kg)	0.959	
% deviation from expected linearity		-1.58%	% deviation from expected linearity		8.16%
FR1 n77_Ant 8_Part 27Q(HPUE)-Linearity Data for DSI 2			FR1 n77_Ant 8_Part 27Q(HPUE)-Linearity Data for DSI 7		
	FR1 n77 (Power Class 3)	FR1 n77 (Power Class 2)		FR1 n77 (Power Class 3)	FR1 n77 (Power Class 2)
Maximum Tune up Power (dBm)	18.00	21.00	Maximum Tune up Power (dBm)	16.00	19.00
Reported 1g SAR (W/kg)	1.039	1.028	Reported 1g SAR (W/kg)	0.809	0.796
Duty Cycle	100.00%	50.00%	Duty Cycle	100.00%	50.00%
Frame Averaged (mW)	63.10	62.95	Frame Averaged (mW)	39.81	39.72
Linearity SAR (W/kg)	1.037		Linearity SAR (W/kg)	0.807	
% deviation from expected linearity		-0.82%	% deviation from expected linearity		-1.37%
FR1 n77_Ant 8_Part 27Q(HPUE)-Linearity Data for DSI 2			FR1 n77_Ant 8_Part 27Q(HPUE)-Linearity Data for DSI 7		
	FR1 n77 (Power Class 3)	FR1 n77 (Power Class 2)		FR1 n77 (Power Class 3)	FR1 n77 (Power Class 2)
Maximum Tune up Power (dBm)	18.00	21.00	Maximum Tune up Power (dBm)	16.00	19.00
Reported 1g SAR (W/kg)	1.127	1.184	Reported 1g SAR (W/kg)	1.024	1.069
Duty Cycle	100.00%	50.00%	Duty Cycle	100.00%	50.00%
Frame Averaged (mW)	63.10	62.95	Frame Averaged (mW)	39.81	39.72
Linearity SAR (W/kg)	1.124		Linearity SAR (W/kg)	1.022	
% deviation from expected linearity		5.31%	% deviation from expected linearity		4.64%
Body-worn			Extremity		
LTE Band 41_Ant 0(HPUE)-Linearity Data for DSI 3			LTE Band 41_Ant 0(HPUE)-Linearity Data for DSI 6/9		
	LTE Band 41 (Power Class 3)	LTE Band 41 (Power Class 2)		LTE Band 41 (Power Class 3)	LTE Band 41 (Power Class 2)



Maximum Tune up Power (dBm)	24.00	26.30	Maximum Tune up Power (dBm)	24.00	27.00
Reported 1g SAR (W/kg)	1.043	1.146	Reported 10g SAR (W/kg)	1.935	2.384
Duty Cycle	63.30%	43.30%	Duty Cycle	63.30%	43.30%
Frame Averaged (mW)	159.00	184.71	Frame Averaged (mW)	159.00	217.01
Linearity SAR (W/kg)	1.212		Linearity SAR (W/kg)	2.641	
% deviation from expected linearity		-5.42%	% deviation from expected linearity		-9.73%
LTE Band 41_Ant 1(HPUE)-Linearity Data for DSI 3			LTE Band 41_Ant 1(HPUE)-Linearity Data for DSI 6/9		
	LTE Band 41 (Power Class 3)	LTE Band 41 (Power Class 2)		LTE Band 41 (Power Class 3)	LTE Band 41 (Power Class 2)
Maximum Tune up Power (dBm)	24.00	26.40	Maximum Tune up Power (dBm)	24.00	27.00
Reported 1g SAR (W/kg)	1.145	1.277	Reported 10g SAR (W/kg)	2.535	3.132
Duty Cycle	63.30%	43.30%	Duty Cycle	63.30%	43.30%
Frame Averaged (mW)	159.00	189.01	Frame Averaged (mW)	159.00	217.01
Linearity SAR (W/kg)	1.361		Linearity SAR (W/kg)	3.460	
% deviation from expected linearity		-6.18%	% deviation from expected linearity		-9.48%
LTE Band 41_Ant 2(HPUE)-Linearity Data for DSI 3			LTE Band 41_Ant 2(HPUE)-Linearity Data for DSI 5/6		
	FR1 n41 (Power Class 3)	FR1 n41 (Power Class 2)		FR1 n41 (Power Class 3)	FR1 n41 (Power Class 2)
Maximum Tune up Power (dBm)	21.20	22.80	Maximum Tune up Power (dBm)	24.00	27.00
Reported 1g SAR (W/kg)	0.997	1.032	Reported 10g SAR (W/kg)	2.227	2.745
Duty Cycle	63.30%	43.30%	Duty Cycle	63.30%	43.30%
Frame Averaged (mW)	83.45	82.51	Frame Averaged (mW)	159.00	217.01
Linearity SAR (W/kg)	0.986		Linearity SAR (W/kg)	3.040	
% deviation from expected linearity		4.69%	% deviation from expected linearity		-9.69%
LTE Band 41_Ant 3(HPUE)-Linearity Data for DSI 3			LTE Band 41_Ant 3(HPUE)-Linearity Data for DSI 5		
	FR1 n41 (Power Class 3)	FR1 n41 (Power Class 2)		FR1 n41 (Power Class 3)	FR1 n41 (Power Class 2)
Maximum Tune up Power (dBm)	20.80	22.40	Maximum Tune up Power (dBm)	22.60	24.20
Reported 1g SAR (W/kg)	1.216	1.279	Reported 10g SAR (W/kg)	2.745	2.536
Duty Cycle	63.30%	43.30%	Duty Cycle	63.30%	43.30%
Frame Averaged (mW)	76.10	75.25	Frame Averaged (mW)	115.19	113.89
Linearity SAR (W/kg)	1.202		Linearity SAR (W/kg)	2.714	
% deviation from expected linearity		6.38%	% deviation from expected linearity		-6.56%
FR1 n41_Ant 0(HPUE)-Linearity Data for DSI 3			FR1 n41_Ant 0(HPUE)-Linearity Data for DSI 6/9		
	FR1 n41 (Power Class 3)	FR1 n41 (Power Class 2)		FR1 n41 (Power Class 3)	FR1 n41 (Power Class 2)
Maximum Tune up Power (dBm)	24.00	27.00	Maximum Tune up Power (dBm)	24.00	27.00
Reported 1g SAR (W/kg)	1.099	1.134	Reported 10g SAR (W/kg)	1.759	1.719
Duty Cycle	100.00%	50.00%	Duty Cycle	100.00%	50.00%
Frame Averaged (mW)	251.19	250.59	Frame Averaged (mW)	251.19	250.59
Linearity SAR (W/kg)	1.096		Linearity SAR (W/kg)	1.755	
% deviation from expected linearity		3.43%	% deviation from expected linearity		-2.04%
FR1 n41_Ant 1(HPUE)-Linearity Data for DSI 3			FR1 n41_Ant 1(HPUE)-Linearity Data for DSI 6/9		
	FR1 n41 (Power Class 3)	FR1 n41 (Power Class 2)		FR1 n41 (Power Class 3)	FR1 n41 (Power Class 2)
Maximum Tune up Power (dBm)	23.50	26.50	Maximum Tune up Power (dBm)	24.00	27.00
Reported 1g SAR (W/kg)	1.249	1.185	Reported 10g SAR (W/kg)	2.547	2.519
Duty Cycle	100.00%	50.00%	Duty Cycle	100.00%	50.00%
Frame Averaged (mW)	223.87	223.34	Frame Averaged (mW)	251.19	250.59
Linearity SAR (W/kg)	1.246		Linearity SAR (W/kg)	2.541	
% deviation from expected linearity		-4.90%	% deviation from expected linearity		-0.86%
FR1 n41_Ant 2(HPUE)-Linearity Data for DSI 3			FR1 n41_Ant 2(HPUE)-Linearity Data for DSI 5/6		
	FR1 n77 (Power Class 3)	FR1 n77 (Power Class 2)		FR1 n77 (Power Class 3)	FR1 n77 (Power Class 2)



	3)	Class 2)		Class 3)	Class 2)
Maximum Tune up Power (dBm)	20.00	23.00	Maximum Tune up Power (dBm)	23.50	26.50
Reported 1g SAR (W/kg)	1.139	1.094	Reported 10g SAR (W/kg)	2.704	2.959
Duty Cycle	100.00%	50.00%	Duty Cycle	100.00%	50.00%
Frame Averaged (mW)	100.00	99.76	Frame Averaged (mW)	223.87	223.34
Linearity SAR (W/kg)	1.136		Linearity SAR (W/kg)	2.698	
% deviation from expected linearity		-3.72%	% deviation from expected linearity		9.69%
FR1 n41_Ant 3(HPUE)-Linearity Data for DSI 3			FR1 n41_Ant 3(HPUE)-Linearity Data for DSI 5		
	FR1 n77 (Power Class 3)	FR1 n77 (Power Class 2)		FR1 n77 (Power Class 3)	FR1 n77 (Power Class 2)
Maximum Tune up Power (dBm)	21.00	24.00	Maximum Tune up Power (dBm)	21.50	24.50
Reported 1g SAR (W/kg)	1.067	1.005	Reported 10g SAR (W/kg)	2.719	2.780
Duty Cycle	100.00%	50.00%	Duty Cycle	100.00%	50.00%
Frame Averaged (mW)	125.89	125.59	Frame Averaged (mW)	141.25	140.92
Linearity SAR (W/kg)	1.064		Linearity SAR (W/kg)	2.713	
% deviation from expected linearity		-5.59%	% deviation from expected linearity		2.49%
FR1 n77_Ant 3_Part 27Q(HPUE)-Linearity Data for DSI 3			FR1 n77_Ant 3_Part 27Q(HPUE)-Linearity Data for DSI 5		
	FR1 n77 (Power Class 3)	FR1 n77 (Power Class 2)		FR1 n77 (Power Class 3)	FR1 n77 (Power Class 2)
Maximum Tune up Power (dBm)	19.50	22.50	Maximum Tune up Power (dBm)	20.50	23.50
Reported 1g SAR (W/kg)	0.738	0.736	Reported 10g SAR (W/kg)	2.837	2.776
Duty Cycle	100.00%	50.00%	Duty Cycle	100.00%	50.00%
Frame Averaged (mW)	89.13	88.91	Frame Averaged (mW)	112.20	111.94
Linearity SAR (W/kg)	0.736		Linearity SAR (W/kg)	2.830	
% deviation from expected linearity		-0.03%	% deviation from expected linearity		-1.92%
FR1 n77_Ant 3_Part 27Q(HPUE)-Linearity Data for DSI 3			FR1 n77_Ant 3_Part 27Q(HPUE)-Linearity Data for DSI 5		
	FR1 n77 (Power Class 3)	FR1 n77 (Power Class 2)		FR1 n77 (Power Class 3)	FR1 n77 (Power Class 2)
Maximum Tune up Power (dBm)	19.50	22.50	Maximum Tune up Power (dBm)	20.50	23.50
Reported 1g SAR (W/kg)	0.880	0.854	Reported 10g SAR (W/kg)	2.944	2.826
Duty Cycle	100.00%	50.00%	Duty Cycle	100.00%	50.00%
Frame Averaged (mW)	89.13	88.91	Frame Averaged (mW)	112.20	111.94
Linearity SAR (W/kg)	0.878		Linearity SAR (W/kg)	2.937	
% deviation from expected linearity		-2.72%	% deviation from expected linearity		-3.78%
FR1 n77_Ant 4_Part 27Q(HPUE)-Linearity Data for DSI 3			FR1 n77_Ant 4_Part 27Q(HPUE)-Linearity Data for DSI 5/6		
	FR1 n77 (Power Class 3)	FR1 n77 (Power Class 2)		FR1 n77 (Power Class 3)	FR1 n77 (Power Class 2)
Maximum Tune up Power (dBm)	19.50	22.50	Maximum Tune up Power (dBm)	21.50	24.50
Reported 1g SAR (W/kg)	1.153	1.144	Reported 10g SAR (W/kg)	2.679	2.502
Duty Cycle	100.00%	50.00%	Duty Cycle	100.00%	50.00%
Frame Averaged (mW)	89.13	88.91	Frame Averaged (mW)	141.25	140.92
Linearity SAR (W/kg)	1.150		Linearity SAR (W/kg)	2.673	
% deviation from expected linearity		-0.54%	% deviation from expected linearity		-6.39%
FR1 n77_Ant 4_Part 27Q(HPUE)-Linearity Data for DSI 3			FR1 n77_Ant 4_Part 27Q(HPUE)-Linearity Data for DSI 5/6		
	FR1 n77 (Power Class 3)	FR1 n77 (Power Class 2)		FR1 n77 (Power Class 3)	FR1 n77 (Power Class 2)
Maximum Tune up Power (dBm)	19.50	22.50	Maximum Tune up Power (dBm)	21.50	24.50
Reported 1g SAR (W/kg)	0.925	0.904	Reported 10g SAR (W/kg)	2.880	2.822
Duty Cycle	100.00%	50.00%	Duty Cycle	100.00%	50.00%
Frame Averaged (mW)	89.13	88.91	Frame Averaged (mW)	141.25	140.92
Linearity SAR (W/kg)	0.923		Linearity SAR (W/kg)	2.873	
% deviation from expected linearity		-2.04%	% deviation from expected linearity		-1.78%
FR1 n77_Ant 6_Part 27Q(HPUE)-Linearity Data for DSI 3			FR1 n77_Ant 6_Part 27Q(HPUE)-Linearity Data for DSI 5		
	FR1 n77 (Power Class 3)	FR1 n77 (Power Class 2)		FR1 n77 (Power Class 3)	FR1 n77 (Power Class 2)



	3)	Class 2)		Class 3)	Class 2)
Maximum Tune up Power (dBm)	19.00	22.00	Maximum Tune up Power (dBm)	20.50	23.50
Reported 1g SAR (W/kg)	1.216	1.153	Reported 10g SAR (W/kg)	2.694	2.589
Duty Cycle	100.00%	50.00%	Duty Cycle	100.00%	50.00%
Frame Averaged (mW)	79.43	79.24	Frame Averaged (mW)	112.20	111.94
Linearity SAR (W/kg)	1.213		Linearity SAR (W/kg)	2.688	
% deviation from expected linearity		-4.96%	% deviation from expected linearity		-3.67%
FR1 n77_Ant 6_Part 27O(HPUE)-Linearity Data for DSI 3			FR1 n77_Ant 6_Part 27O(HPUE)-Linearity Data for DSI 5		
	FR1 n77 (Power Class 3)	FR1 n77 (Power Class 2)		FR1 n77 (Power Class 3)	FR1 n77 (Power Class 2)
Maximum Tune up Power (dBm)	19.00	22.00	Maximum Tune up Power (dBm)	20.50	23.50
Reported 1g SAR (W/kg)	1.076	1.034	Reported 10g SAR (W/kg)	3.052	3.010
Duty Cycle	100.00%	50.00%	Duty Cycle	100.00%	50.00%
Frame Averaged (mW)	79.43	79.24	Frame Averaged (mW)	112.20	111.94
Linearity SAR (W/kg)	1.073		Linearity SAR (W/kg)	3.045	
% deviation from expected linearity		-3.68%	% deviation from expected linearity		-1.14%
FR1 n77_Ant 8_Part 27Q(HPUE)-Linearity Data for DSI 3			FR1 n77_Ant 8_Part 27Q(HPUE)-Linearity Data for DSI 5/6		
	FR1 n77 (Power Class 3)	FR1 n77 (Power Class 2)		FR1 n77 (Power Class 3)	FR1 n77 (Power Class 2)
Maximum Tune up Power (dBm)	21.00	24.00	Maximum Tune up Power (dBm)	21.50	24.50
Reported 1g SAR (W/kg)	1.132	1.126	Reported 10g SAR (W/kg)	2.514	2.468
Duty Cycle	100.00%	50.00%	Duty Cycle	100.00%	50.00%
Frame Averaged (mW)	125.89	125.59	Frame Averaged (mW)	141.25	140.92
Linearity SAR (W/kg)	1.129		Linearity SAR (W/kg)	2.508	
% deviation from expected linearity		-0.29%	% deviation from expected linearity		-1.60%
FR1 n77_Ant 8_Part 27O(HPUE)-Linearity Data for DSI 3			FR1 n77_Ant 8_Part 27O(HPUE)-Linearity Data for DSI 5/6		
	FR1 n77 (Power Class 3)	FR1 n77 (Power Class 2)		FR1 n77 (Power Class 3)	FR1 n77 (Power Class 2)
Maximum Tune up Power (dBm)	21.00	24.00	Maximum Tune up Power (dBm)	21.50	24.50
Reported 1g SAR (W/kg)	1.162	1.117	Reported 10g SAR (W/kg)	2.872	2.695
Duty Cycle	100.00%	50.00%	Duty Cycle	100.00%	50.00%
Frame Averaged (mW)	125.89	125.59	Frame Averaged (mW)	141.25	140.92
Linearity SAR (W/kg)	1.159		Linearity SAR (W/kg)	2.865	
% deviation from expected linearity		-3.64%	% deviation from expected linearity		-5.94%

Flip-Close Mode

Hopspot			Body-worn		
LTE Band 41_Ant 0(HPUE)-Linearity Data for DSI 11			LTE Band 41_Ant 0(HPUE)-Linearity Data for DSI 10		
	LTE Band 41 (Power Class 3)	LTE Band 41 (Power Class 2)		LTE Band 41 (Power Class 3)	LTE Band 41 (Power Class 2)
Maximum Tune up Power (dBm)	24.00	27.00	Maximum Tune up Power (dBm)	24.00	27.00
Reported 1g SAR (W/kg)	0.828	1.020	Reported 1g SAR (W/kg)	0.828	1.020
Duty Cycle	63.30%	43.30%	Duty Cycle	63.30%	43.30%
Frame Averaged (mW)	159.00	217.01	Frame Averaged (mW)	159.00	217.01
Linearity SAR (W/kg)	1.130		Linearity SAR (W/kg)	1.130	
% deviation from expected linearity		-9.74%	% deviation from expected linearity		-9.74%
LTE Band 41_Ant 1(HPUE)-Linearity Data for DSI 11			LTE Band 41_Ant 1(HPUE)-Linearity Data for DSI 10		
	LTE Band 41 (Power Class 3)	LTE Band 41 (Power Class 2)		LTE Band 41 (Power Class 3)	LTE Band 41 (Power Class 2)
Maximum Tune up Power (dBm)	24.00	26.50	Maximum Tune up Power (dBm)	24.00	26.50
Reported 1g SAR (W/kg)	1.016	1.114	Reported 1g SAR (W/kg)	1.016	1.114
Duty Cycle	63.30%	43.30%	Duty Cycle	63.30%	43.30%
Frame Averaged (mW)	159.00	193.41	Frame Averaged (mW)	159.00	193.41



Linearity SAR (W/kg)	1.236		Linearity SAR (W/kg)	1.236	
% deviation from expected linearity		-9.86%	% deviation from expected linearity		-9.86%
LTE Band 41_Ant 2(HPUE)-Linearity Data for DSI 11			LTE Band 41_Ant 2(HPUE)-Linearity Data for DSI 10		
	FR1 n41 (Power Class 3)	FR1 n41 (Power Class 2)		FR1 n41 (Power Class 3)	FR1 n41 (Power Class 2)
Maximum Tune up Power (dBm)	20.60	22.20	Maximum Tune up Power (dBm)	23.10	24.70
Reported 1g SAR (W/kg)	1.097	1.136	Reported 1g SAR (W/kg)	1.129	1.132
Duty Cycle	63.30%	43.30%	Duty Cycle	63.30%	43.30%
Frame Averaged (mW)	72.68	71.86	Frame Averaged (mW)	129.24	127.79
Linearity SAR (W/kg)	1.085		Linearity SAR (W/kg)	1.116	
% deviation from expected linearity		4.73%	% deviation from expected linearity		1.41%
LTE Band 41_Ant 3(HPUE)-Linearity Data for DSI 11			LTE Band 41_Ant 3(HPUE)-Linearity Data for DSI 10		
	FR1 n41 (Power Class 3)	FR1 n41 (Power Class 2)		FR1 n41 (Power Class 3)	FR1 n41 (Power Class 2)
Maximum Tune up Power (dBm)	18.90	20.50	Maximum Tune up Power (dBm)	22.00	23.60
Reported 1g SAR (W/kg)	1.194	1.112	Reported 1g SAR (W/kg)	1.148	1.148
Duty Cycle	63.30%	43.30%	Duty Cycle	63.30%	43.30%
Frame Averaged (mW)	49.14	48.58	Frame Averaged (mW)	100.32	99.19
Linearity SAR (W/kg)	1.181		Linearity SAR (W/kg)	1.135	
% deviation from expected linearity		-5.81%	% deviation from expected linearity		1.14%
FR1 n41_Ant 0(HPUE)-Linearity Data for DSI 11			FR1 n41_Ant 0(HPUE)-Linearity Data for DSI 10		
	FR1 n41 (Power Class 3)	FR1 n41 (Power Class 2)		FR1 n41 (Power Class 3)	FR1 n41 (Power Class 2)
Maximum Tune up Power (dBm)	24.00	27.00	Maximum Tune up Power (dBm)	24.00	27.00
Reported 1g SAR (W/kg)	1.208	1.158	Reported 1g SAR (W/kg)	1.208	1.158
Duty Cycle	100.00%	50.00%	Duty Cycle	100.00%	50.00%
Frame Averaged (mW)	251.19	250.59	Frame Averaged (mW)	251.19	250.59
Linearity SAR (W/kg)	1.205		Linearity SAR (W/kg)	1.205	
% deviation from expected linearity		-3.91%	% deviation from expected linearity		-3.91%
FR1 n41_Ant 1(HPUE)-Linearity Data for DSI 11			FR1 n41_Ant 1(HPUE)-Linearity Data for DSI 10		
	FR1 n41 (Power Class 3)	FR1 n41 (Power Class 2)		FR1 n41 (Power Class 3)	FR1 n41 (Power Class 2)
Maximum Tune up Power (dBm)	19.50	22.50	Maximum Tune up Power (dBm)	23.50	26.50
Reported 1g SAR (W/kg)	0.937	1.017	Reported 1g SAR (W/kg)	1.203	1.167
Duty Cycle	100.00%	50.00%	Duty Cycle	100.00%	50.00%
Frame Averaged (mW)	89.13	88.91	Frame Averaged (mW)	223.87	223.34
Linearity SAR (W/kg)	0.935		Linearity SAR (W/kg)	1.200	
% deviation from expected linearity		8.80%	% deviation from expected linearity		-2.76%
FR1 n41_Ant 2(HPUE)-Linearity Data for DSI 11			FR1 n41_Ant 2(HPUE)-Linearity Data for DSI 10		
	FR1 n77 (Power Class 3)	FR1 n77 (Power Class 2)		FR1 n77 (Power Class 3)	FR1 n77 (Power Class 2)
Maximum Tune up Power (dBm)	19.00	22.00	Maximum Tune up Power (dBm)	20.00	23.00
Reported 1g SAR (W/kg)	1.125	1.087	Reported 1g SAR (W/kg)	0.943	1.019
Duty Cycle	100.00%	50.00%	Duty Cycle	100.00%	50.00%
Frame Averaged (mW)	79.43	79.24	Frame Averaged (mW)	100.00	99.76
Linearity SAR (W/kg)	1.122		Linearity SAR (W/kg)	0.941	
% deviation from expected linearity		-3.15%	% deviation from expected linearity		8.32%
FR1 n41_Ant 3(HPUE)-Linearity Data for DSI 11			FR1 n41_Ant 3(HPUE)-Linearity Data for DSI 10		
	FR1 n77 (Power Class 3)	FR1 n77 (Power Class 2)		FR1 n77 (Power Class 3)	FR1 n77 (Power Class 2)
Maximum Tune up Power (dBm)	19.50	22.50	Maximum Tune up Power (dBm)	22.00	25.00
Reported 1g SAR (W/kg)	1.221	1.259	Reported 1g SAR (W/kg)	1.148	1.073
Duty Cycle	100.00%	50.00%	Duty Cycle	100.00%	50.00%
Frame Averaged (mW)	89.13	88.91	Frame Averaged (mW)	158.49	158.11



Linearity SAR (W/kg)	1.218		Linearity SAR (W/kg)	1.145	
% deviation from expected linearity		3.36%	% deviation from expected linearity		-6.31%
FR1 n77_Ant 3_Part 27Q(HPUE)-Linearity Data for DSI 11			FR1 n77_Ant 3_Part 27Q(HPUE)-Linearity Data for DSI 10		
	FR1 n77 (Power Class 3)	FR1 n77 (Power Class 2)		FR1 n77 (Power Class 3)	FR1 n77 (Power Class 2)
Maximum Tune up Power (dBm)	18.50	21.50	Maximum Tune up Power (dBm)	21.00	24.00
Reported 1g SAR (W/kg)	1.174	1.164	Reported 1g SAR (W/kg)	0.971	0.967
Duty Cycle	100.00%	50.00%	Duty Cycle	100.00%	50.00%
Frame Averaged (mW)	70.79	70.63	Frame Averaged (mW)	125.89	125.59
Linearity SAR (W/kg)	1.171		Linearity SAR (W/kg)	0.969	
% deviation from expected linearity		-0.62%	% deviation from expected linearity		-0.18%
FR1 n77_Ant 3_Part 27Q(HPUE)-Linearity Data for DSI 11			FR1 n77_Ant 3_Part 27Q(HPUE)-Linearity Data for DSI 10		
	FR1 n77 (Power Class 3)	FR1 n77 (Power Class 2)		FR1 n77 (Power Class 3)	FR1 n77 (Power Class 2)
Maximum Tune up Power (dBm)	18.50	21.50	Maximum Tune up Power (dBm)	21.00	24.00
Reported 1g SAR (W/kg)	0.878	0.835	Reported 1g SAR (W/kg)	0.963	0.942
Duty Cycle	100.00%	50.00%	Duty Cycle	100.00%	50.00%
Frame Averaged (mW)	70.79	70.63	Frame Averaged (mW)	125.89	125.59
Linearity SAR (W/kg)	0.876		Linearity SAR (W/kg)	0.961	
% deviation from expected linearity		-4.67%	% deviation from expected linearity		-1.95%
FR1 n77_Ant 4_Part 27Q(HPUE)-Linearity Data for DSI 11			FR1 n77_Ant 4_Part 27Q(HPUE)-Linearity Data for DSI 10		
	FR1 n77 (Power Class 3)	FR1 n77 (Power Class 2)		FR1 n77 (Power Class 3)	FR1 n77 (Power Class 2)
Maximum Tune up Power (dBm)	16.00	19.00	Maximum Tune up Power (dBm)	20.00	23.00
Reported 1g SAR (W/kg)	1.014	0.959	Reported 1g SAR (W/kg)	1.047	1.016
Duty Cycle	100.00%	50.00%	Duty Cycle	100.00%	50.00%
Frame Averaged (mW)	39.81	39.72	Frame Averaged (mW)	100.00	99.76
Linearity SAR (W/kg)	1.012		Linearity SAR (W/kg)	1.045	
% deviation from expected linearity		-5.20%	% deviation from expected linearity		-2.73%
FR1 n77_Ant 4_Part 27Q(HPUE)-Linearity Data for DSI 11			FR1 n77_Ant 4_Part 27Q(HPUE)-Linearity Data for DSI 10		
	FR1 n77 (Power Class 3)	FR1 n77 (Power Class 2)		FR1 n77 (Power Class 3)	FR1 n77 (Power Class 2)
Maximum Tune up Power (dBm)	16.00	19.00	Maximum Tune up Power (dBm)	20.00	23.00
Reported 1g SAR (W/kg)	0.702	0.704	Reported 1g SAR (W/kg)	0.690	0.673
Duty Cycle	100.00%	50.00%	Duty Cycle	100.00%	50.00%
Frame Averaged (mW)	39.81	39.72	Frame Averaged (mW)	100.00	99.76
Linearity SAR (W/kg)	0.700		Linearity SAR (W/kg)	0.688	
% deviation from expected linearity		0.52%	% deviation from expected linearity		-2.23%
FR1 n77_Ant 6_Part 27Q(HPUE)-Linearity Data for DSI 11			FR1 n77_Ant 6_Part 27Q(HPUE)-Linearity Data for DSI 10		
	FR1 n77 (Power Class 3)	FR1 n77 (Power Class 2)		FR1 n77 (Power Class 3)	FR1 n77 (Power Class 2)
Maximum Tune up Power (dBm)	14.00	17.00	Maximum Tune up Power (dBm)	18.50	21.50
Reported 1g SAR (W/kg)	1.128	1.157	Reported 1g SAR (W/kg)	1.113	1.095
Duty Cycle	100.00%	50.00%	Duty Cycle	100.00%	50.00%
Frame Averaged (mW)	25.12	25.06	Frame Averaged (mW)	70.79	70.63
Linearity SAR (W/kg)	1.125		Linearity SAR (W/kg)	1.110	
% deviation from expected linearity		2.81%	% deviation from expected linearity		-1.38%
FR1 n77_Ant 6_Part 27Q(HPUE)-Linearity Data for DSI 11			FR1 n77_Ant 6_Part 27Q(HPUE)-Linearity Data for DSI 10		
	FR1 n77 (Power Class 3)	FR1 n77 (Power Class 2)		FR1 n77 (Power Class 3)	FR1 n77 (Power Class 2)
Maximum Tune up Power (dBm)	14.00	17.00	Maximum Tune up Power (dBm)	18.50	21.50
Reported 1g SAR (W/kg)	0.929	0.989	Reported 1g SAR (W/kg)	0.923	0.922
Duty Cycle	100.00%	50.00%	Duty Cycle	100.00%	50.00%
Frame Averaged (mW)	25.12	25.06	Frame Averaged (mW)	70.79	70.63



Linearity SAR (W/kg)	0.927		Linearity SAR (W/kg)	0.921	
% deviation from expected linearity		6.71%	% deviation from expected linearity		0.13%
FR1 n77_Ant 8_Part 27Q(HPUE)-Linearity Data for DSI 11			FR1 n77_Ant 8_Part 27Q(HPUE)-Linearity Data for DSI 10		
	FR1 n77 (Power Class 3)	FR1 n77 (Power Class 2)		FR1 n77 (Power Class 3)	FR1 n77 (Power Class 2)
Maximum Tune up Power (dBm)	18.50	21.50	Maximum Tune up Power (dBm)	22.00	25.00
Reported 1g SAR (W/kg)	0.879	0.860	Reported 1g SAR (W/kg)	1.228	1.188
Duty Cycle	100.00%	50.00%	Duty Cycle	100.00%	50.00%
Frame Averaged (mW)	70.79	70.63	Frame Averaged (mW)	158.49	158.11
Linearity SAR (W/kg)	0.877		Linearity SAR (W/kg)	1.225	
% deviation from expected linearity		-1.93%	% deviation from expected linearity		-3.03%
FR1 n77_Ant 8_Part 27O(HPUE)-Linearity Data for DSI 11			FR1 n77_Ant 8_Part 27O(HPUE)-Linearity Data for DSI 10		
	FR1 n77 (Power Class 3)	FR1 n77 (Power Class 2)		FR1 n77 (Power Class 3)	FR1 n77 (Power Class 2)
Maximum Tune up Power (dBm)	18.50	21.50	Maximum Tune up Power (dBm)	22.00	25.00
Reported 1g SAR (W/kg)	1.016	0.974	Reported 1g SAR (W/kg)	1.126	1.093
Duty Cycle	100.00%	50.00%	Duty Cycle	100.00%	50.00%
Frame Averaged (mW)	70.79	70.63	Frame Averaged (mW)	158.49	158.11
Linearity SAR (W/kg)	1.014		Linearity SAR (W/kg)	1.123	
% deviation from expected linearity		-3.91%	% deviation from expected linearity		-2.70%

Flip-Open Mode UL MIMO

Head			Hopspot		
FR1 n41_Ant 2+3(HPUE)-Linearity Data for DSI 2			FR1 n41_Ant 2+3(HPUE)-Linearity Data for DSI 7		
	FR1 n41 (Power Class 3)	FR1 n41 (Power Class 2)		FR1 n41 (Power Class 3)	FR1 n41 (Power Class 2)
Maximum Tune up Power (dBm)	23.00	26.00	Maximum Tune up Power (dBm)	24.50	27.50
Reported 1g SAR (W/kg)	0.995	1.002	Reported 1g SAR (W/kg)	1.023	0.926
Duty Cycle	50.00%	25.00%	Duty Cycle	50.00%	25.00%
Frame Averaged (mW)	99.76	99.53	Frame Averaged (mW)	140.92	140.59
Linearity SAR (W/kg)	0.993		Linearity SAR (W/kg)	1.021	
% deviation from expected linearity		0.94%	% deviation from expected linearity		-9.27%
FR1 n41_Ant 2+1(HPUE)-Linearity Data for DSI 2			FR1 n41_Ant 2+1(HPUE)-Linearity Data for DSI 7		
	FR1 n41 (Power Class 3)	FR1 n41 (Power Class 2)		FR1 n41 (Power Class 3)	FR1 n41 (Power Class 2)
Maximum Tune up Power (dBm)	23.50	26.50	Maximum Tune up Power (dBm)	24.50	27.50
Reported 1g SAR (W/kg)	1.193	1.128	Reported 1g SAR (W/kg)	1.179	1.093
Duty Cycle	50.00%	25.00%	Duty Cycle	50.00%	25.00%
Frame Averaged (mW)	111.94	111.67	Frame Averaged (mW)	140.92	140.59
Linearity SAR (W/kg)	1.190		Linearity SAR (W/kg)	1.176	
% deviation from expected linearity		-5.22%	% deviation from expected linearity		-7.07%
FR1 n41_Ant 0+3(HPUE)-Linearity Data for DSI 2			FR1 n41_Ant 0+3(HPUE)-Linearity Data for DSI 7		
	FR1 n77 (Power Class 3)	FR1 n77 (Power Class 2)		FR1 n77 (Power Class 3)	FR1 n77 (Power Class 2)
Maximum Tune up Power (dBm)	24.00	27.00	Maximum Tune up Power (dBm)	24.50	27.50
Reported 1g SAR (W/kg)	1.142	1.094	Reported 1g SAR (W/kg)	1.049	0.975
Duty Cycle	50.00%	25.00%	Duty Cycle	50.00%	25.00%
Frame Averaged (mW)	125.59	125.30	Frame Averaged (mW)	140.92	140.59
Linearity SAR (W/kg)	1.139		Linearity SAR (W/kg)	1.047	
% deviation from expected linearity		-3.98%	% deviation from expected linearity		-6.83%
FR1 n41_Ant 0+1(HPUE)-Linearity Data for DSI 2			FR1 n41_Ant 0+1(HPUE)-Linearity Data for DSI 7		
	FR1 n77 (Power Class 3)	FR1 n77 (Power Class 2)		FR1 n77 (Power Class 3)	FR1 n77 (Power Class 2)



Maximum Tune up Power (dBm)	27.00	30.00	Maximum Tune up Power (dBm)	26.50	29.50
Reported 1g SAR (W/kg)	0.198	0.205	Reported 1g SAR (W/kg)	1.102	1.082
Duty Cycle	50.00%	25.00%	Duty Cycle	50.00%	25.00%
Frame Averaged (mW)	250.59	250.00	Frame Averaged (mW)	223.34	222.81
Linearity SAR (W/kg)	0.198		Linearity SAR (W/kg)	1.099	
% deviation from expected linearity		3.78%	% deviation from expected linearity		-1.58%
FR1 n77_Ant 4+8_Part 27Q(HPUE)-Linearity Data for DSI 2			FR1 n77_Ant 4+8_Part 27Q(HPUE)-Linearity Data for DSI 7		
	FR1 n77 (Power Class 3)	FR1 n77 (Power Class 2)		FR1 n77 (Power Class 3)	FR1 n77 (Power Class 2)
Maximum Tune up Power (dBm)	22.50	25.50	Maximum Tune up Power (dBm)	20.50	23.50
Reported 1g SAR (W/kg)	1.084	1.012	Reported 1g SAR (W/kg)	0.891	0.969
Duty Cycle	50.00%	25.00%	Duty Cycle	50.00%	25.00%
Frame Averaged (mW)	88.91	88.70	Frame Averaged (mW)	56.10	55.97
Linearity SAR (W/kg)	1.081		Linearity SAR (W/kg)	0.889	
% deviation from expected linearity		-6.42%	% deviation from expected linearity		9.01%
FR1 n77_Ant 4+8_Part 27Q(HPUE)-Linearity Data for DSI 2			FR1 n77_Ant 4+8_Part 27Q(HPUE)-Linearity Data for DSI 7		
	FR1 n77 (Power Class 3)	FR1 n77 (Power Class 2)		FR1 n77 (Power Class 3)	FR1 n77 (Power Class 2)
Maximum Tune up Power (dBm)	22.50	25.50	Maximum Tune up Power (dBm)	20.50	23.50
Reported 1g SAR (W/kg)	0.891	0.910	Reported 1g SAR (W/kg)	0.688	0.671
Duty Cycle	50.00%	25.00%	Duty Cycle	50.00%	25.00%
Frame Averaged (mW)	88.91	88.70	Frame Averaged (mW)	56.10	55.97
Linearity SAR (W/kg)	0.889		Linearity SAR (W/kg)	0.686	
% deviation from expected linearity		2.37%	% deviation from expected linearity		-2.24%
FR1 n77_Ant 4+6_Part 27Q(HPUE)-Linearity Data for DSI 2			FR1 n77_Ant 4+6_Part 27Q(HPUE)-Linearity Data for DSI 7		
	FR1 n77 (Power Class 3)	FR1 n77 (Power Class 2)		FR1 n77 (Power Class 3)	FR1 n77 (Power Class 2)
Maximum Tune up Power (dBm)	20.00	23.00	Maximum Tune up Power (dBm)	19.50	22.50
Reported 1g SAR (W/kg)	1.152	1.139	Reported 1g SAR (W/kg)	0.963	1.044
Duty Cycle	50.00%	25.00%	Duty Cycle	50.00%	25.00%
Frame Averaged (mW)	50.00	49.88	Frame Averaged (mW)	44.56	44.46
Linearity SAR (W/kg)	1.149		Linearity SAR (W/kg)	0.961	
% deviation from expected linearity		-0.89%	% deviation from expected linearity		8.67%
FR1 n77_Ant 4+6_Part 27Q(HPUE)-Linearity Data for DSI 2			FR1 n77_Ant 4+6_Part 27Q(HPUE)-Linearity Data for DSI 7		
	FR1 n77 (Power Class 3)	FR1 n77 (Power Class 2)		FR1 n77 (Power Class 3)	FR1 n77 (Power Class 2)
Maximum Tune up Power (dBm)	20.00	23.00	Maximum Tune up Power (dBm)	19.50	22.50
Reported 1g SAR (W/kg)	0.719	0.711	Reported 1g SAR (W/kg)	0.860	0.909
Duty Cycle	50.00%	25.00%	Duty Cycle	50.00%	25.00%
Frame Averaged (mW)	50.00	49.88	Frame Averaged (mW)	44.56	44.46
Linearity SAR (W/kg)	0.717		Linearity SAR (W/kg)	0.858	
% deviation from expected linearity		-0.88%	% deviation from expected linearity		5.95%
FR1 n77_Ant 3+8_Part 27Q(HPUE)-Linearity Data for DSI 2			FR1 n77_Ant 3+8_Part 27Q(HPUE)-Linearity Data for DSI 7		
	FR1 n77 (Power Class 3)	FR1 n77 (Power Class 2)		FR1 n77 (Power Class 3)	FR1 n77 (Power Class 2)
Maximum Tune up Power (dBm)	20.50	23.50	Maximum Tune up Power (dBm)	22.00	25.00
Reported 1g SAR (W/kg)	0.996	1.027	Reported 1g SAR (W/kg)	0.876	0.948
Duty Cycle	50.00%	25.00%	Duty Cycle	50.00%	25.00%
Frame Averaged (mW)	56.10	55.97	Frame Averaged (mW)	79.24	79.06
Linearity SAR (W/kg)	0.994		Linearity SAR (W/kg)	0.874	
% deviation from expected linearity		3.36%	% deviation from expected linearity		8.48%
FR1 n77_Ant 3+8_Part 27Q(HPUE)-Linearity Data for DSI 2			FR1 n77_Ant 3+8_Part 27Q(HPUE)-Linearity Data for DSI 7		
	FR1 n77 (Power Class 3)	FR1 n77 (Power Class 2)		FR1 n77 (Power Class 3)	FR1 n77 (Power Class 2)



Maximum Tune up Power (dBm)	20.50	23.50	Maximum Tune up Power (dBm)	22.00	25.00
Reported 1g SAR (W/kg)	0.892	0.838	Reported 1g SAR (W/kg)	0.942	0.972
Duty Cycle	50.00%	25.00%	Duty Cycle	50.00%	25.00%
Frame Averaged (mW)	56.10	55.97	Frame Averaged (mW)	79.24	79.06
Linearity SAR (W/kg)	0.890		Linearity SAR (W/kg)	0.940	
% deviation from expected linearity		-5.83%	% deviation from expected linearity		3.43%
FR1 n77_Ant 8_Part 27Q(HPUE)-Linearity Data for DSI 2			FR1 n77_Ant 3+6_Part 27Q(HPUE)-Linearity Data for DSI 7		
	FR1 n77 (Power Class 3)	FR1 n77 (Power Class 2)		FR1 n77 (Power Class 3)	FR1 n77 (Power Class 2)
Maximum Tune up Power (dBm)	19.50	22.50	Maximum Tune up Power (dBm)	19.50	22.50
Reported 1g SAR (W/kg)	1.142	1.106	Reported 1g SAR (W/kg)	0.980	0.989
Duty Cycle	50.00%	25.00%	Duty Cycle	50.00%	25.00%
Frame Averaged (mW)	44.56	44.46	Frame Averaged (mW)	44.56	44.46
Linearity SAR (W/kg)	1.139		Linearity SAR (W/kg)	0.978	
% deviation from expected linearity		-2.92%	% deviation from expected linearity		1.16%
FR1 n77_Ant 8_Part 27O(HPUE)-Linearity Data for DSI 2			FR1 n77_Ant 3+6_Part 27O(HPUE)-Linearity Data for DSI 7		
	FR1 n77 (Power Class 3)	FR1 n77 (Power Class 2)		FR1 n77 (Power Class 3)	FR1 n77 (Power Class 2)
Maximum Tune up Power (dBm)	19.50	22.50	Maximum Tune up Power (dBm)	19.50	22.50
Reported 1g SAR (W/kg)	0.936	0.878	Reported 1g SAR (W/kg)	0.759	0.738
Duty Cycle	50.00%	25.00%	Duty Cycle	50.00%	25.00%
Frame Averaged (mW)	44.56	44.46	Frame Averaged (mW)	44.56	44.46
Linearity SAR (W/kg)	0.934		Linearity SAR (W/kg)	0.757	
% deviation from expected linearity		-5.97%	% deviation from expected linearity		-2.54%

Body-worn			Extremity		
FR1 n41_Ant 2+3(HPUE)-Linearity Data for DSI 3			FR1 n41_Ant 2+3(HPUE)-Linearity Data for DSI 5/6		
	FR1 n41 (Power Class 3)	FR1 n41 (Power Class 2)		FR1 n41 (Power Class 3)	FR1 n41 (Power Class 2)
Maximum Tune up Power (dBm)	26.00	29.00	Maximum Tune up Power (dBm)	27.00	30.00
Reported 1g SAR (W/kg)	1.083	1.038	Reported 10g SAR (W/kg)	2.437	2.431
Duty Cycle	50.00%	25.00%	Duty Cycle	50.00%	25.00%
Frame Averaged (mW)	199.05	198.58	Frame Averaged (mW)	250.59	250.00
Linearity SAR (W/kg)	1.080		Linearity SAR (W/kg)	2.431	
% deviation from expected linearity		-3.93%	% deviation from expected linearity		-0.01%
FR1 n41_Ant 2+1(HPUE)-Linearity Data for DSI 3			FR1 n41_Ant 2+1(HPUE)-Linearity Data for DSI 5/6/9		
	FR1 n41 (Power Class 3)	FR1 n41 (Power Class 2)		FR1 n41 (Power Class 3)	FR1 n41 (Power Class 2)
Maximum Tune up Power (dBm)	26.00	29.00	Maximum Tune up Power (dBm)	27.00	30.00
Reported 1g SAR (W/kg)	1.063	1.039	Reported 10g SAR (W/kg)	2.213	2.103
Duty Cycle	50.00%	25.00%	Duty Cycle	50.00%	25.00%
Frame Averaged (mW)	199.05	198.58	Frame Averaged (mW)	250.59	250.00
Linearity SAR (W/kg)	1.060		Linearity SAR (W/kg)	2.208	
% deviation from expected linearity		-2.03%	% deviation from expected linearity		-4.74%
FR1 n41_Ant 0+3(HPUE)-Linearity Data for DSI 3			FR1 n41_Ant 0+3(HPUE)-Linearity Data for DSI 5/6		
	FR1 n77 (Power Class 3)	FR1 n77 (Power Class 2)		FR1 n77 (Power Class 3)	FR1 n77 (Power Class 2)
Maximum Tune up Power (dBm)	27.00	30.00	Maximum Tune up Power (dBm)	27.00	30.00
Reported 1g SAR (W/kg)	1.064	0.995	Reported 10g SAR (W/kg)	1.889	1.963
Duty Cycle	50.00%	25.00%	Duty Cycle	50.00%	25.00%
Frame Averaged (mW)	250.59	250.00	Frame Averaged (mW)	250.59	250.00
Linearity SAR (W/kg)	1.061		Linearity SAR (W/kg)	1.885	
% deviation from expected linearity		-6.26%	% deviation from expected linearity		4.16%
FR1 n41_Ant 0+1(HPUE)-Linearity Data for DSI 3			FR1 n41_Ant 0+1(HPUE)-Linearity Data for DSI 6/9		



	FR1 n77 (Power Class 3)	FR1 n77 (Power Class 2)		FR1 n77 (Power Class 3)	FR1 n77 (Power Class 2)
Maximum Tune up Power (dBm)	27.00	30.00	Maximum Tune up Power (dBm)	27.00	30.00
Reported 1g SAR (W/kg)	0.921	0.991	Reported 10g SAR (W/kg)	1.726	1.888
Duty Cycle	50.00%	25.00%	Duty Cycle	50.00%	25.00%
Frame Averaged (mW)	250.59	250.00	Frame Averaged (mW)	250.59	250.00
Linearity SAR (W/kg)	0.919		Linearity SAR (W/kg)	1.722	
% deviation from expected linearity		7.86%	% deviation from expected linearity		9.65%
FR1 n77_Ant 4+8_Part 27Q(HPUE)-Linearity Data for DSI 3			FR1 n77_Ant 4+8_Part 27Q(HPUE)-Linearity Data for DSI 5/6		
	FR1 n77 (Power Class 3)	FR1 n77 (Power Class 2)		FR1 n77 (Power Class 3)	FR1 n77 (Power Class 2)
Maximum Tune up Power (dBm)	25.00	28.00	Maximum Tune up Power (dBm)	26.00	29.00
Reported 1g SAR (W/kg)	1.138	1.128	Reported 10g SAR (W/kg)	2.419	2.322
Duty Cycle	50.00%	25.00%	Duty Cycle	50.00%	25.00%
Frame Averaged (mW)	158.11	157.74	Frame Averaged (mW)	199.05	198.58
Linearity SAR (W/kg)	1.135		Linearity SAR (W/kg)	2.413	
% deviation from expected linearity		-0.64%	% deviation from expected linearity		-3.78%
FR1 n77_Ant 4+8_Part 27O(HPUE)-Linearity Data for DSI 3			FR1 n77_Ant 4+8_Part 27O(HPUE)-Linearity Data for DSI 5/6		
	FR1 n77 (Power Class 3)	FR1 n77 (Power Class 2)		FR1 n77 (Power Class 3)	FR1 n77 (Power Class 2)
Maximum Tune up Power (dBm)	25.00	28.00	Maximum Tune up Power (dBm)	26.00	29.00
Reported 1g SAR (W/kg)	1.120	1.082	Reported 10g SAR (W/kg)	2.347	2.428
Duty Cycle	50.00%	25.00%	Duty Cycle	50.00%	25.00%
Frame Averaged (mW)	158.11	157.74	Frame Averaged (mW)	199.05	198.58
Linearity SAR (W/kg)	1.117		Linearity SAR (W/kg)	2.341	
% deviation from expected linearity		-3.16%	% deviation from expected linearity		3.70%
FR1 n77_Ant 4+6_Part 27Q(HPUE)-Linearity Data for DSI 3			FR1 n77_Ant 4+6_Part 27Q(HPUE)-Linearity Data for DSI 5/6		
	FR1 n77 (Power Class 3)	FR1 n77 (Power Class 2)		FR1 n77 (Power Class 3)	FR1 n77 (Power Class 2)
Maximum Tune up Power (dBm)	24.50	27.50	Maximum Tune up Power (dBm)	26.50	29.50
Reported 1g SAR (W/kg)	1.134	1.086	Reported 10g SAR (W/kg)	2.378	2.549
Duty Cycle	50.00%	25.00%	Duty Cycle	50.00%	25.00%
Frame Averaged (mW)	140.92	140.59	Frame Averaged (mW)	223.34	222.81
Linearity SAR (W/kg)	1.131		Linearity SAR (W/kg)	2.372	
% deviation from expected linearity		-4.01%	% deviation from expected linearity		7.45%
FR1 n77_Ant 4+6_Part 27O(HPUE)-Linearity Data for DSI 3			FR1 n77_Ant 4+6_Part 27O(HPUE)-Linearity Data for DSI 5/6		
	FR1 n77 (Power Class 3)	FR1 n77 (Power Class 2)		FR1 n77 (Power Class 3)	FR1 n77 (Power Class 2)
Maximum Tune up Power (dBm)	24.50	27.50	Maximum Tune up Power (dBm)	26.50	29.50
Reported 1g SAR (W/kg)	1.197	1.133	Reported 10g SAR (W/kg)	1.944	1.838
Duty Cycle	50.00%	25.00%	Duty Cycle	50.00%	25.00%
Frame Averaged (mW)	140.92	140.59	Frame Averaged (mW)	223.34	222.81
Linearity SAR (W/kg)	1.194		Linearity SAR (W/kg)	1.939	
% deviation from expected linearity		-5.12%	% deviation from expected linearity		-5.23%
FR1 n77_Ant 3+8_Part 27Q(HPUE)-Linearity Data for DSI 3			FR1 n77_Ant 3+8_Part 27Q(HPUE)-Linearity Data for DSI 5/6		
	FR1 n77 (Power Class 3)	FR1 n77 (Power Class 2)		FR1 n77 (Power Class 3)	FR1 n77 (Power Class 2)
Maximum Tune up Power (dBm)	25.00	28.00	Maximum Tune up Power (dBm)	26.00	29.00
Reported 1g SAR (W/kg)	0.928	0.906	Reported 10g SAR (W/kg)	2.808	2.684
Duty Cycle	50.00%	25.00%	Duty Cycle	50.00%	25.00%
Frame Averaged (mW)	158.11	157.74	Frame Averaged (mW)	199.05	198.58
Linearity SAR (W/kg)	0.926		Linearity SAR (W/kg)	2.801	
% deviation from expected linearity		-2.14%	% deviation from expected linearity		-4.19%
FR1 n77_Ant 3+8_Part 27O(HPUE)-Linearity Data for DSI 3			FR1 n77_Ant 3+8_Part 27O(HPUE)-Linearity Data for DSI 5/6		



	FR1 n77 (Power Class 3)	FR1 n77 (Power Class 2)		FR1 n77 (Power Class 3)	FR1 n77 (Power Class 2)
Maximum Tune up Power (dBm)	25.00	28.00	Maximum Tune up Power (dBm)	26.00	29.00
Reported 1g SAR (W/kg)	1.022	0.980	Reported 10g SAR (W/kg)	2.424	2.270
Duty Cycle	50.00%	25.00%	Duty Cycle	50.00%	25.00%
Frame Averaged (mW)	158.11	157.74	Frame Averaged (mW)	199.05	198.58
Linearity SAR (W/kg)	1.020		Linearity SAR (W/kg)	2.418	
% deviation from expected linearity		-3.88%	% deviation from expected linearity		-6.13%
FR1 n77_Ant 3+6_Part 27Q(HPUE)-Linearity Data for DSI 3			FR1 n77_Ant 3+6_Part 27Q(HPUE)-Linearity Data for DSI 5		
	FR1 n77 (Power Class 3)	FR1 n77 (Power Class 2)		FR1 n77 (Power Class 3)	FR1 n77 (Power Class 2)
Maximum Tune up Power (dBm)	24.50	27.50	Maximum Tune up Power (dBm)	26.50	29.50
Reported 1g SAR (W/kg)	1.162	1.112	Reported 10g SAR (W/kg)	2.560	2.473
Duty Cycle	50.00%	25.00%	Duty Cycle	50.00%	25.00%
Frame Averaged (mW)	140.92	140.59	Frame Averaged (mW)	223.34	222.81
Linearity SAR (W/kg)	1.159		Linearity SAR (W/kg)	2.554	
% deviation from expected linearity		-4.08%	% deviation from expected linearity		-3.17%
FR1 n77_Ant 3+6_Part 27O(HPUE)-Linearity Data for DSI 3			FR1 n77_Ant 3+6_Part 27O(HPUE)-Linearity Data for DSI 5		
	FR1 n77 (Power Class 3)	FR1 n77 (Power Class 2)		FR1 n77 (Power Class 3)	FR1 n77 (Power Class 2)
Maximum Tune up Power (dBm)	24.50	27.50	Maximum Tune up Power (dBm)	26.50	29.50
Reported 1g SAR (W/kg)	1.102	1.049	Reported 10g SAR (W/kg)	2.931	2.822
Duty Cycle	50.00%	25.00%	Duty Cycle	50.00%	25.00%
Frame Averaged (mW)	140.92	140.59	Frame Averaged (mW)	223.34	222.81
Linearity SAR (W/kg)	1.099		Linearity SAR (W/kg)	2.924	
% deviation from expected linearity		-4.58%	% deviation from expected linearity		-3.49%

Flip-Close Mode UL MIMO

Hopspot			Body-worn		
FR1 n41_Ant 2+3(HPUE)-Linearity Data for DSI 11			FR1 n41_Ant 2+3(HPUE)-Linearity Data for DSI 10		
	FR1 n41 (Power Class 3)	FR1 n41 (Power Class 2)		FR1 n41 (Power Class 3)	FR1 n41 (Power Class 2)
Maximum Tune up Power (dBm)	24.00	27.00	Maximum Tune up Power (dBm)	25.50	28.50
Reported 1g SAR (W/kg)	1.021	0.969	Reported 1g SAR (W/kg)	1.089	1.080
Duty Cycle	50.00%	25.00%	Duty Cycle	50.00%	25.00%
Frame Averaged (mW)	125.59	125.30	Frame Averaged (mW)	177.41	176.99
Linearity SAR (W/kg)	1.019		Linearity SAR (W/kg)	1.086	
% deviation from expected linearity		-4.87%	% deviation from expected linearity		-0.59%
FR1 n41_Ant 2+1(HPUE)-Linearity Data for DSI 11			FR1 n41_Ant 2+1(HPUE)-Linearity Data for DSI 10		
	FR1 n41 (Power Class 3)	FR1 n41 (Power Class 2)		FR1 n41 (Power Class 3)	FR1 n41 (Power Class 2)
Maximum Tune up Power (dBm)	24.00	27.00	Maximum Tune up Power (dBm)	26.00	29.00
Reported 1g SAR (W/kg)	1.037	1.095	Reported 1g SAR (W/kg)	1.074	1.039
Duty Cycle	50.00%	25.00%	Duty Cycle	50.00%	25.00%
Frame Averaged (mW)	125.59	125.30	Frame Averaged (mW)	199.05	198.58
Linearity SAR (W/kg)	1.035		Linearity SAR (W/kg)	1.071	
% deviation from expected linearity		5.84%	% deviation from expected linearity		-3.03%
FR1 n41_Ant 0+3(HPUE)-Linearity Data for DSI 11			FR1 n41_Ant 0+3(HPUE)-Linearity Data for DSI 10		
	FR1 n77 (Power Class 3)	FR1 n77 (Power Class 2)		FR1 n77 (Power Class 3)	FR1 n77 (Power Class 2)
Maximum Tune up Power (dBm)	25.00	28.00	Maximum Tune up Power (dBm)	27.00	30.00
Reported 1g SAR (W/kg)	1.052	0.977	Reported 1g SAR (W/kg)	1.010	0.962
Duty Cycle	50.00%	25.00%	Duty Cycle	50.00%	25.00%
Frame Averaged (mW)	158.11	157.74	Frame Averaged (mW)	250.59	250.00



Linearity SAR (W/kg)	1.050		Linearity SAR (W/kg)	1.008	
% deviation from expected linearity		-6.91%	% deviation from expected linearity		-4.53%
FR1 n41_Ant 0+1(HPUE)-Linearity Data for DSI 11			FR1 n41_Ant 0+1(HPUE)-Linearity Data for DSI 10		
	FR1 n77 (Power Class 3)	FR1 n77 (Power Class 2)		FR1 n77 (Power Class 3)	FR1 n77 (Power Class 2)
Maximum Tune up Power (dBm)	26.00	29.00	Maximum Tune up Power (dBm)	27.00	30.00
Reported 1g SAR (W/kg)	0.948	0.943	Reported 1g SAR (W/kg)	0.929	0.906
Duty Cycle	50.00%	25.00%	Duty Cycle	50.00%	25.00%
Frame Averaged (mW)	199.05	198.58	Frame Averaged (mW)	250.59	250.00
Linearity SAR (W/kg)	0.946		Linearity SAR (W/kg)	0.927	
% deviation from expected linearity		-0.29%	% deviation from expected linearity		-2.24%
FR1 n77_Ant 4+8_Part 27Q(HPUE)-Linearity Data for DSI 11			FR1 n77_Ant 4+8_Part 27Q(HPUE)-Linearity Data for DSI 10		
	FR1 n77 (Power Class 3)	FR1 n77 (Power Class 2)		FR1 n77 (Power Class 3)	FR1 n77 (Power Class 2)
Maximum Tune up Power (dBm)	22.00	25.00	Maximum Tune up Power (dBm)	26.00	29.00
Reported 1g SAR (W/kg)	0.931	0.969	Reported 1g SAR (W/kg)	1.102	1.033
Duty Cycle	50.00%	25.00%	Duty Cycle	50.00%	25.00%
Frame Averaged (mW)	79.24	79.06	Frame Averaged (mW)	199.05	198.58
Linearity SAR (W/kg)	0.929		Linearity SAR (W/kg)	1.099	
% deviation from expected linearity		4.33%	% deviation from expected linearity		-6.04%
FR1 n77_Ant 4+8_Part 27Q(HPUE)-Linearity Data for DSI 11			FR1 n77_Ant 4+8_Part 27Q(HPUE)-Linearity Data for DSI 10		
	FR1 n77 (Power Class 3)	FR1 n77 (Power Class 2)		FR1 n77 (Power Class 3)	FR1 n77 (Power Class 2)
Maximum Tune up Power (dBm)	22.00	25.00	Maximum Tune up Power (dBm)	26.00	29.00
Reported 1g SAR (W/kg)	1.021	1.093	Reported 1g SAR (W/kg)	1.129	1.058
Duty Cycle	50.00%	25.00%	Duty Cycle	50.00%	25.00%
Frame Averaged (mW)	79.24	79.06	Frame Averaged (mW)	199.05	198.58
Linearity SAR (W/kg)	1.019		Linearity SAR (W/kg)	1.126	
% deviation from expected linearity		7.31%	% deviation from expected linearity		-6.07%
FR1 n77_Ant 4+6_Part 27Q(HPUE)-Linearity Data for DSI 11			FR1 n77_Ant 4+6_Part 27Q(HPUE)-Linearity Data for DSI 10		
	FR1 n77 (Power Class 3)	FR1 n77 (Power Class 2)		FR1 n77 (Power Class 3)	FR1 n77 (Power Class 2)
Maximum Tune up Power (dBm)	20.00	23.00	Maximum Tune up Power (dBm)	24.00	27.00
Reported 1g SAR (W/kg)	1.022	1.099	Reported 1g SAR (W/kg)	1.130	1.087
Duty Cycle	50.00%	25.00%	Duty Cycle	50.00%	25.00%
Frame Averaged (mW)	50.00	49.88	Frame Averaged (mW)	125.59	125.30
Linearity SAR (W/kg)	1.020		Linearity SAR (W/kg)	1.127	
% deviation from expected linearity		7.79%	% deviation from expected linearity		-3.58%
FR1 n77_Ant 4+6_Part 27Q(HPUE)-Linearity Data for DSI 11			FR1 n77_Ant 4+6_Part 27Q(HPUE)-Linearity Data for DSI 10		
	FR1 n77 (Power Class 3)	FR1 n77 (Power Class 2)		FR1 n77 (Power Class 3)	FR1 n77 (Power Class 2)
Maximum Tune up Power (dBm)	20.00	23.00	Maximum Tune up Power (dBm)	24.00	27.00
Reported 1g SAR (W/kg)	0.754	0.723	Reported 1g SAR (W/kg)	1.124	1.063
Duty Cycle	50.00%	25.00%	Duty Cycle	50.00%	25.00%
Frame Averaged (mW)	50.00	49.88	Frame Averaged (mW)	125.59	125.30
Linearity SAR (W/kg)	0.752		Linearity SAR (W/kg)	1.121	
% deviation from expected linearity		-3.88%	% deviation from expected linearity		-5.20%
FR1 n77_Ant 3+8_Part 27Q(HPUE)-Linearity Data for DSI 7			FR1 n77_Ant 3+8_Part 27Q(HPUE)-Linearity Data for DSI 10		
	FR1 n77 (Power Class 3)	FR1 n77 (Power Class 2)		FR1 n77 (Power Class 3)	FR1 n77 (Power Class 2)
Maximum Tune up Power (dBm)	24.00	27.00	Maximum Tune up Power (dBm)	26.00	29.00
Reported 1g SAR (W/kg)	1.104	1.028	Reported 1g SAR (W/kg)	0.948	0.929
Duty Cycle	50.00%	25.00%	Duty Cycle	50.00%	25.00%
Frame Averaged (mW)	125.59	125.30	Frame Averaged (mW)	199.05	198.58



Linearity SAR (W/kg)	1.101		Linearity SAR (W/kg)	0.946	
% deviation from expected linearity		-6.66%	% deviation from expected linearity		-1.77%
FR1 n77_Ant 3+8_Part 27O(HPUE)-Linearity Data for DSI 7			FR1 n77_Ant 3+8_Part 27O(HPUE)-Linearity Data for DSI 10		
	FR1 n77 (Power Class 3)	FR1 n77 (Power Class 2)		FR1 n77 (Power Class 3)	FR1 n77 (Power Class 2)
Maximum Tune up Power (dBm)	24.00	27.00	Maximum Tune up Power (dBm)	26.00	29.00
Reported 1g SAR (W/kg)	1.102	1.127	Reported 1g SAR (W/kg)	1.188	1.129
Duty Cycle	50.00%	25.00%	Duty Cycle	50.00%	25.00%
Frame Averaged (mW)	125.59	125.30	Frame Averaged (mW)	199.05	198.58
Linearity SAR (W/kg)	1.099		Linearity SAR (W/kg)	1.185	
% deviation from expected linearity		2.51%	% deviation from expected linearity		-4.74%
FR1 n77_Ant 3+6_Part 27Q(HPUE)-Linearity Data for DSI 11			FR1 n77_Ant 3+6_Part 27Q(HPUE)-Linearity Data for DSI 10		
	FR1 n77 (Power Class 3)	FR1 n77 (Power Class 2)		FR1 n77 (Power Class 3)	FR1 n77 (Power Class 2)
Maximum Tune up Power (dBm)	19.50	22.50	Maximum Tune up Power (dBm)	24.00	27.00
Reported 1g SAR (W/kg)	1.130	1.060	Reported 1g SAR (W/kg)	1.190	1.112
Duty Cycle	50.00%	25.00%	Duty Cycle	50.00%	25.00%
Frame Averaged (mW)	44.56	44.46	Frame Averaged (mW)	125.59	125.30
Linearity SAR (W/kg)	1.127		Linearity SAR (W/kg)	1.187	
% deviation from expected linearity		-5.97%	% deviation from expected linearity		-6.33%
FR1 n77_Ant 3+6_Part 27O(HPUE)-Linearity Data for DSI 11			FR1 n77_Ant 3+6_Part 27O(HPUE)-Linearity Data for DSI 10		
	FR1 n77 (Power Class 3)	FR1 n77 (Power Class 2)		FR1 n77 (Power Class 3)	FR1 n77 (Power Class 2)
Maximum Tune up Power (dBm)	19.50	22.50	Maximum Tune up Power (dBm)	24.00	27.00
Reported 1g SAR (W/kg)	0.538	0.567	Reported 1g SAR (W/kg)	0.776	0.748
Duty Cycle	50.00%	25.00%	Duty Cycle	50.00%	25.00%
Frame Averaged (mW)	44.56	44.46	Frame Averaged (mW)	125.59	125.30
Linearity SAR (W/kg)	0.537		Linearity SAR (W/kg)	0.774	
% deviation from expected linearity		5.64%	% deviation from expected linearity		-3.38%

17. Simultaneous Transmission Analysis

No.	Simultaneous Transmission Configurations	Portable Handset			
		Head	Body-worn	Hotspot	Product specific 10g SAR
1.	WWAN + WLAN2.4GHz	Yes	Yes	Yes	Yes
2.	WWAN + WLAN5GHz/6GHz	Yes	Yes	Yes	Yes
3.	WWAN + Bluetooth	Yes	Yes	Yes	Yes
4.	WLAN5GHz/6GHz + Bluetooth	Yes	Yes	Yes	Yes
5.	WLAN2.4GHz + WLAN5GHz/6GHz	Yes	Yes	Yes	Yes
6.	WWAN + WLAN5GHz/6GHz + Bluetooth	Yes	Yes	Yes	Yes
7.	WWAN + WLAN2.4GHz + WLAN5GHz/6GHz	Yes	Yes	Yes	Yes
8.	WWAN + WLAN2.4GHz + NFC	Yes	Yes	Yes	Yes
9.	WWAN + WLAN5GHz/6GHz + NFC				Yes
10.	WWAN + Bluetooth + NFC				Yes
11.	WLAN5GHz/6GHz + Bluetooth + NFC				Yes
12.	WLAN2.4GHz + WLAN5GHz/6GHz + NFC				Yes
13.	WWAN + WLAN5GHz/6GHz + Bluetooth + NFC				Yes
14.	WWAN + WLAN2.4GHz				Yes

General Note:

- This device supports VoIP in GPRS, EGPRS, WCDMA, LTE and 5GNR (e.g. for 3rd-party VoIP), LTE supports VoLTE operation.
- WWAN above includes 5G NR bands and EN-DC combination.
- EUT will choose each GSM, WCDMA, LTE and 5GNR according to the network signal condition; therefore, they will not operate simultaneously at any moment.
- This device 2.4GHz WLAN support hotspot operation and Bluetooth support tethering applications.
- This device 5.2GHz WLAN/5.8GHz WLAN support hotspot operation, and 5.2GHz WLAN/5.8GHz WLAN supports WLAN Direct (GC/GO), and 5.3GHz / 5.5GHz supports WLAN Direct (GC only). WLAN6GHz has no hotspot function.
- The worst case 5 GHz WLAN SAR for each configuration was used for SAR summation.
- According to the EUT characteristic, WLAN 5GHz/6GHz and Bluetooth can transmit simultaneously.
- According to the EUT characteristic, WLAN 5GHz/6GHz and WLAN 2.4GHz can't transmit simultaneously.
- According to the EUT characteristic, WLAN 5GHz and WLAN 6GHz can't transmit simultaneously.
- According to the EUT characteristic, WLAN 2.4GHz and Bluetooth cannot transmit simultaneously.
- NFC can transmit simultaneously with other Radios in extremity exposure condition.
- The maximum SAR summation is calculated based on the same configuration and test position.
- The equipment under test (EUT) contains the Qualcomm modems supporting WWAN/WLAN/BT technologies. these modems are always enabled with Qualcomm Smart Transmit feature to control and manage transmitting power in real time and to ensure the time-averaged RF exposure follows the FCC requirement. Qualcomm Smart Transmit algorithm in WWAN/WLAN/BT directly adds the time-averaged RF exposure from WWAN/WLAN/BT. Smart Transmit algorithm controls the total RF exposure from all WWAN/WLAN/BT to not exceed FCC limit. Therefore, simultaneous transmission compliance between WWAN/WLAN/BT operations is demonstrated in the Part 2 Report during algorithm validation. Simultaneous SAR for WWAN/WLAN/BT in a DSI is the worst-case reported SAR of WWAN/WLAN/BT. In addition, each antenna needs to satisfy simultaneous transmission analysis with External radios (NFC) in Part.1 report.
- For standalone WWAN/WLAN/BT at extremity exposure condition, always choose the highest SAR among all WWAN/WLAN/BT bands within all antennas for each exposure position to perform simultaneous transmission analysis with NFC. This is the worst co-located analysis and can represent each band.
- Per KDB 447498 D01v06, simultaneous transmission SAR is compliant if,
 - 1g Scalar SAR summation < 1.6W/kg and 10g Scalar SAR summation < 4.0W/kg.
 - $SPLSR = (SAR1 + SAR2)^{1.5} / (\text{min. separation distance, mm})$, and the peak separation distance is determined from the square root of $[(x1-x2)^2 + (y1-y2)^2 + (z1-z2)^2]$, where (x1, y1, z1) and (x2, y2, z2) are the coordinates of the extrapolated peak SAR locations in the zoom scan.
 - If $SPLSR \leq 0.04$ for 1g SAR and $SPLSR \leq 0.10$ for 10g SAR, simultaneously transmission SAR measurement is not necessary.
 - Simultaneously transmission SAR measurement, and the reported multi-band 1g SAR < 1.6W/kg and 10g SAR < 4.0W/kg.
- The WLAN6GHz Sim-Tx analysis guidance with other transmitters was based on SAR test results. The

simultaneous transmission and test exemption analysis were compliant with KDB 447498 D01. For the device does not support FR2 or other MPE field measurement, therefore section 17 in the SAR report has no TER analysis according to KDB 987594 requirement.

17.1 5G NR + LTE + External radio (e.g: NFC) Sim-Tx analysis

In 5G NR + LTE + external radio (e.g: NFC) simultaneous transmission, 5G NR and LTE transmission are managed and controlled by Qualcomm® Smart Transmit, while the RF exposure from external radios (e.g: NFC) is managed using legacy approach, i.e., through a fixed power back-off if needed.

Since external radios (e.g: NFC) do not employ time-averaging, 1gSAR and 10gSAR measurement for external radios (e.g: NFC) need to be conducted at their corresponding rated power following current FCC test procedures to determine reported SAR values.

Smart Transmit current implementation assumes hotspots from 5G NR and LTE are collocated. Therefore, for a total of 100% exposure margin, if LTE uses x%, then the exposure margin left for 5G NR is capped to (100-x)%. Thus, the compliance equation for LTE + 5G NR is

$$x\% * A + (100-x)\% * B \leq 1.0,$$

Where, A is normalized reported time-averaged SAR exposure ratio from LTE, and $A \leq 1.0$; B is normalized reported time-averaged exposure ratio from 5G NR (i.e. SAR exposure for 5G FR1), and $B \leq 1.0$.

Let C = normalized reported SAR exposure ratio from external radios (e.g: NFC), then for compliance,

$$x\% * A + (100-x)\% * B + C \leq 1.0 \quad (1)$$

$$x\% * A + (100-x)\% * B \leq x\% * \max(A, B) + (100-x)\% * \max(A, B) \leq \max(A, B)$$

$$x\% * A + (100-x)\% * B + C \leq \max(A, B) + C \leq 1.0 \quad (2)$$

If $A + C \leq 1.0$ and $B + C \leq 1.0$ can be proven, then " $x\% * A + (100-x)\% * B + C \leq 1.0$ ". Therefore simultaneous transmission analysis for 5G NR + LTE + external radios (e.g: NFC) can be performed in two steps

Step 1: Prove total exposure ratio (TER) of LTE + external radios (e.g: NFC) < 1

Step 2: Prove total exposure ratio (TER) of 5G NR + external radios (e.g: NFC) < 1

Else, if $A + C > 1.0$ and/or $B + C > 1.0$, then the followings need to hold true for compliance:

i. A and C are decoupled based on the SPLSR criteria, and

ii. $(100-x)\% * B + C \leq 1.0$, and

iii. $x\% * A + (100-x)\% * B \leq 1.0$

Note iii. is covered in Part 2 report; i. and ii. should be addressed in Part 2 report.

Above analysis is also apply to LTE/NR inter-band uplink CA, LTE(NR)1 + LTE(NR)2 + external radios (e.g: NFC) simultaneous transmission, so inter-band uplink CA no need to do additional simultaneously analysis again. Only required comply with total exposure ratio (TER) of LTE/NR + external radios (e.g: NFC) < 1.

17.2 MIMO SAR Test condition and verification

General Note:

1. Smart Transmit EFS v20 (or lower) uses SISO P_{limit} to calculate RF exposure from MIMO transmission scenario. Therefore, if MIMO is supported for WWAN technologies (including 5G sub6 NR), below procedure should be performed for validity of Smart Transmit operation:
 - 1) Below procedure should also be performed for Smart Transmit EFS v21 (or higher) if MIMO P_{limit} is not populated in the EFS but MIMO operation is supported for antennas belonging to the same antenna group (refer to Section 4.2.5 of Qualcomm's document 80-W2112-4).
2. Measure SAR for supported MIMO scenarios in FTM mode with each of the MIMO antennas set to transmit continuously at P_{test} = minimum {P_{limit}(i), P_{max}(i); i=1 to n MIMO antennas}, where P_{limit}(i) is the power level entered in the Smart Transmit EFS for antenna i under the corresponding tech/band/DSI. For Smart Transmit to ensure the compliance in MIMO transmission scenario, the below criteria should be met for measured MIMO SAR (i.e., highest peak spatial-average SAR from the measurement):

$$\text{reported } SAR_{MIMO} = \text{Measured MIMO } SAR_{MIMO} \text{ at } (P_{test} + \text{device total uncertainty}) \leq \text{calc. SAR}$$

$$\text{Where } \text{calc. SAR} = \sum_{i=1}^n \left[SAR_{design_target} * 10^{\left(\frac{\text{total uncertainty} + P_{test} - P_{limit}(i) - \text{backoff}(i)}{10} \right)} \right]$$

Here,

- n is number of MIMO antennas (in case of 2x2MIMO, n=2).
 - P_{limit}(i) is EFS P_{limit} for antenna i ∈ MIMO for a given tech/band/DSI. P_{limit} corresponds to SAR_{design_target}.
 - backoff(i) is backoff from SAR_{design_target} used for the ith antenna's P_{limit} to meet TER with external radios (i.e., radios outside of Smart Transmit control). If EFS P_{limit} of antenna i corresponds to SAR_{design_target}, then backoff(i) = 0 in the above equation.
 - P_{test} (i.e., power level used for MIMO SAR measurement, MIMO.SAR @P_{test}) = min {P_{limit}(i), P_{max}(i), i = 1 to n MIMO antenna}. To further clarify, P_{test} = min {P_{limit}(i), SISO.P_{max}(i), MIMO.P_{max}, i = 1 to n antenna ∈ MIMO}, where, P_{limit} corresponds to SAR_{design_target}; SISO.P_{max} and MIMO.P_{max} correspond to the maximum output power (nominal levels without device uncertainty) that device is capable; here, P_{test} is nominal power level, not measured level.
3. If the reported SAR_{MIMO} does not meet the above condition, then P_{limit}(i) for each of the MIMO antenna in the Smart Transmit EFS should be reduced by 10*log₁₀[reported SAR_{MIMO} /calc.SAR] dB.
 4. Per Qualcomm's document guideline, FR1/WLAN P_{limit} is configured in the EFS and FR1/WLAN MIMO antennas belong to the same antenna group, then SAR measurement results at MIMO P_{limit} for the corresponding FR1/WLAN MIMO transmission scenario can be referred to section 16 in this report.
 5. Per Qualcomm's document guideline, BT MIMO P_{limit} is not populated in the EFS, but MIMO operation is supported for antennas belonging to the same antenna group, the detail BT MIMO analysis results please referred to appendix H.



17.3 1g SAR Exposure Conditions

N/A.

General Note: Qualcomm Smart Transmit algorithm in WWAN/WLAN/BT directly adds the time-averaged RF exposure from WWAN/WLAN/BT. Smart Transmit algorithm controls the total RF exposure from all WWAN/WLAN/BT to not exceed FCC limit. Simultaneous SAR for WWAN/WLAN/BT in a DSI is the worst-case reported SAR of WWAN/WLAN/BT.

17.4 Product specific 10g SAR Exposure Conditions

Exposure Position	1	2	1+2 Summed 10g SAR (W/kg)
	All WWAN/WLAN/BT Bands	NFC	
	10g SAR (W/kg)	10g SAR (W/kg)	
Front	3.191		3.19
Back	3.191	0.023	3.21
Left side	3.191		3.19
Right side	3.191		3.19
Top side	3.191		3.19
Bottom side	3.191		3.19

18. Supplemental Tuner Tests Results

General Note:

1. This device implements impedance tuner (144 states) antenna tuning techniques in the GSM850/1900, WCDMA II/IV, LTE Band 2/4/5/7/12/13/14/17/25/26/30/66/71/38/41, and 5GNR n2/5/7/12/14/25/26/30/66/70/71/38/41 for ANT0.
2. This device implements impedance tuner (144 states) antenna tuning techniques in the GSM850, WCDMA V, LTE Band 2/4/5/7/12/13/14/17/25/26/30/66/71/38/41, and 5GNR n2/5/7/12/14/26/25/30/66/70/71/38/41 for ANT1.
3. This device implements impedance tuner (144 states) antenna tuning techniques in the LTE Band 2/4/7/25/30/66/38/41, and 5GNR n2/7/25/30/66/70/38/41 for ANT3.
4. This device implements impedance tuner (16 states) antenna tuning techniques in the LTE Band 2/4/7/25/38/41/66 and 5GNR n2/7/38/41/66 for ANT2.
5. LTE B17 / B5 / B4 / B2/B38 SAR test was covered by LTE B12 / B26 / B66 / B25/B41; according to April 2015 TCB workshop, SAR test for overlapping LTE bands can be reduced.
6. 5GNR n2/ n5 /n38 /n78 SAR test was covered by 5GNR n25 / n26 / n41/n77; according to April 2015 TCB workshop, SAR test for overlapping NR bands can be reduced.
7. Per 2019, April TCBC Workshop titled "RF Exposure Procedures", the following test procedure was followed to demonstrate that the SAR results in this report represent the appropriate SAR test conditions.
 - 1) SAR is measured according to required procedures with dynamic tuner active allowing device to automatically tune. Auto-tune state determined by device during normal SAR measurement verified and listed alongside the reported SAR results.
 - 2) Total number tuner states divided evenly among each supported band / air interface and exposure condition combination.
 - 3) The tuner state was established remotely through Wi-Fi so that the device is not moved for the entire series of single point SAR for the tuner states in each combination (band, mode, exposure conditions).
 - 4) Single point measurements performed at the peak SAR location of the highest measured SAR configuration for each combination. SAR probe remains stationary throughout the entire series of single point measurements for each combination.
 - 5) If any single point SAR measurement result is > 1.2 W/kg for 1gSAR (or > 3.0 W/kg for 10gSAR) for a band/exposure condition combination set, all supported tuner states are evaluated with single point SAR measurements for the combination.
8. The above test procedures were followed to demonstrate that the SAR results in section 16 represented the appropriate SAR test conditions. For bands with dynamic tuning implemented, SAR will be measured according to the required FCC SAR test procedures with the dynamic tuner active to allow the device to automatically tune to the antenna state for the respective RF exposure test configurations. Additional single point SAR time-sweep measurements will be evaluated for other tuner states to determine that the other tuner configurations would result in equivalent or lower SAR values.
9. To evaluate all of the tuner states, the 144 tuner states for ANT0/1/3 is divided evenly among band, mode and exposure combinations so that at least one single point SAR measurement is measured in each configuration. Single point time-sweep measurements will be performed at the peak SAR location determined by the zoom scan of the configuration with the highest reported SAR for each combination. The tuner state will be established remotely so that the device is not moved for the entire series of single point SAR for the tuner states in each combination. The SAR probe will remain stationary at the same position throughout the entire series of single point measurements for each combination. When the single point SAR or 1g SAR was > 1.2 W/kg or 10g SAR was > 3.0 W/kg for a particular band / mode / exposure condition, point SAR measurements were made for all 144 tuner states.
10. According to KDB 648474 D04 v01r03, in order to reduce the number of SAR tests required to demonstrate compliance for the numerous tuning states, certain SAR screening procedures were considered to identify the higher SAR between body-worn and hotspot scenarios that need normally required SAR measurements and allow SAR test reduction for the lower SAR conditions.
11. According to KDB 648474 D04 v01r03, this design will provide the highest power at different user scenarios and would not influence to the antenna characteristics other than impedance matching. The additional tuner hardware has no influence to the antenna characteristics, other than impedance matching.
12. The operational decryption contains more information about the design and implementation of the dynamic antenna tuning.

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19. Uncertainty Assessment

Per KDB 865664 D01 SAR measurement 100MHz to 6GHz, when the highest measured 1-g SAR within a frequency band is < 1.5 W/kg and the measured 10-g SAR within a frequency band is < 3.75 W/kg. The expanded SAR measurement uncertainty must be $\leq 30\%$, for a confidence interval of $k = 2$. If these conditions are met, extensive SAR measurement uncertainty analysis described in IEEE Std 1528-2013 is not required in SAR reports submitted for equipment approval. For this device, the highest measured 1-g SAR is less 1.5W/kg and highest measured 10-g SAR is less 3.75W/kg. Therefore, the measurement uncertainty table is not required in this report.

20. References

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