



MIMO SAR verification results

N77 UL-MIMO (Ant4+6) DSI2 Head				N77 UL-MIMO (Ant4+6) DSI1 Hotspot			
SISO Ant4 Plimit (dBm)	14.4	SISO Ant4 Pmax (dBm)	23.0	SISO Ant4 Plimit (dBm)	22.2	SISO Ant4 Pmax (dBm)	23.0
SISO Ant6 Plimit (dBm)	19.1	SISO Ant6 Pmax (dBm)	22.0	SISO Ant6 Plimit (dBm)	20.3	SISO Ant6 Pmax (dBm)	22.0
Ptest (dBm)	14.4	Total uncertainty (dB)	1.0	Ptest (dBm)	20.3	Total uncertainty (dB)	1.0
SAR design target (W/kg)	0.87	Back off	0	SAR design target (W/kg)	0.87	Back off	0
Measured MIMO Ptest (dBm)	14.40	Measured MIMO SAR at meas. Ptest (W/kg)	0.569	Measured MIMO Ptest (dBm)	20.30	Measured MIMO SAR at meas. Ptest (W/kg)	0.711
Reported SAR _{MIMO}	0.716	Calc.SAR	1.466	Reported SAR _{MIMO}	0.895	Calc.SAR	1.802

N77 UL-MIMO (Ant4+6) DSI0 Body worn				N77 UL-MIMO (Ant4+6) DSI0 Extremity			
SISO Ant4 Plimit (dBm)	22.2	SISO Ant4 Pmax (dBm)	23.0	SISO Ant4 Plimit (dBm)	22.2	SISO Ant4 Pmax (dBm)	23.0
SISO Ant6 Plimit (dBm)	19.1	SISO Ant6 Pmax (dBm)	22.0	SISO Ant6 Plimit (dBm)	19.1	SISO Ant6 Pmax (dBm)	22.0
Ptest (dBm)	19.1	Total uncertainty (dB)	1.0	Ptest (dBm)	19.1	Total uncertainty (dB)	1.0
SAR design target (W/kg)	0.87	Back off	0	SAR design target (W/kg)	2.46	Back off	0
Measured MIMO Ptest (dBm)	19.10	Measured MIMO SAR at meas. Ptest (W/kg)	0.225	Measured MIMO Ptest (dBm)	19.10	Measured MIMO SAR at meas. Ptest (W/kg)	1.790
Reported SAR _{MIMO}	0.283	Calc.SAR	1.632	Reported SAR _{MIMO}	2.253	Calc.SAR	4.618



MIMO SAR Test results

Head SAR Test																		
Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Mode	Test Position	Gap (mm)	Antenna	Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
UL MIMO	FR1 n77 Part 27O PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 4+6(4)	DSI2	656000	3840	14.68	15.40	1.180	0.09	0.531	0.627
UL MIMO	FR1 n77 Part 27O PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 4+6(6)	DSI2	656000	3840	19.59	20.10	1.125	0.09	0.531	0.597
UL MIMO	FR1 n77 Part 27Q PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 4+6(4)	DSI2	633334	3500.01	14.52	15.40	1.225	0.04	0.569	0.697
UL MIMO	FR1 n77 Part 27Q PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 4+6(6)	DSI2	633334	3500.01	19.98	20.10	1.028	0.04	0.569	0.585
UL MIMO	FR1 n77 Part 96 PC3	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 4+6(4)	DSI2	641666	3624.99	14.59	15.40	1.205	-0.02	0.535	0.645
UL MIMO	FR1 n77 Part 96 PC3	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 4+6(6)	DSI2	641666	3624.99	19.47	20.10	1.156	-0.02	0.535	0.619

Hotspot SAR Test																		
Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Mode	Test Position	Gap (mm)	Antenna	Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
ULMIMO	FR1 n77 Part 27O PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Left Side	10mm	Ant 4+6(4)	DSI1	656000	3840	21.95	23.20	1.334	0.04	0.578	0.771
ULMIMO	FR1 n77 Part 27O PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Left Side	10mm	Ant 4+6(6)	DSI1	656000	3840	20.51	21.30	1.199	0.04	0.578	0.693
ULMIMO	FR1 n77 Part 27Q PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Left Side	10mm	Ant 4+6(4)	DSI1	633334	3500.01	21.93	23.20	1.340	-0.05	0.654	0.876
ULMIMO	FR1 n77 Part 27Q PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Left Side	10mm	Ant 4+6(6)	DSI1	633334	3500.01	20.75	21.30	1.135	-0.05	0.654	0.742
ULMIMO	FR1 n77 Part 96 PC3	100M	QPSK	1	1	DFT-SCS-30KHz	Left Side	10mm	Ant 4+6(4)	DSI1	641666	3624.99	22.06	23.20	1.300	0.02	0.711	0.924
ULMIMO	FR1 n77 Part 96 PC3	100M	QPSK	1	1	DFT-SCS-30KHz	Left Side	10mm	Ant 4+6(6)	DSI1	641666	3624.99	20.50	21.30	1.202	0.02	0.711	0.855

Body worn SAR Test																		
Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Mode	Test Position	Gap (mm)	Antenna	Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
UL MIMO	FR1 n77 Part 27O PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Front	15mm	Ant 4+6(4)	DSI0	656000	3840	21.95	23.20	1.334	0.04	0.171	0.228
UL MIMO	FR1 n77 Part 27O PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Front	15mm	Ant 4+6(6)	DSI0	656000	3840	19.54	20.10	1.138	0.04	0.171	0.195
UL MIMO	FR1 n77 Part 27Q PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Front	15mm	Ant 4+6(4)	DSI0	633334	3500.01	21.93	23.20	1.340	0.03	0.217	0.291
UL MIMO	FR1 n77 Part 27Q PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Front	15mm	Ant 4+6(6)	DSI0	633334	3500.01	19.88	20.10	1.052	0.03	0.217	0.228
UL MIMO	FR1 n77 Part 96 PC3	100M	QPSK	1	1	DFT-SCS-30KHz	Front	15mm	Ant 4+6(4)	DSI0	641666	3624.99	22.06	23.20	1.300	-0.02	0.225	0.293
UL MIMO	FR1 n77 Part 96 PC3	100M	QPSK	1	1	DFT-SCS-30KHz	Front	15mm	Ant 4+6(6)	DSI0	641666	3624.99	19.40	20.10	1.175	-0.02	0.225	0.264

Extremity SAR Test																		
Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Mode	Test Position	Gap (mm)	Antenna	Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 10g SAR (W/kg)	Reported 10g SAR (W/kg)
ULMIMO	FR1 n77 Part 27O PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Front	0mm	Ant 4+6(4)	DSI0	656000	3840	21.95	23.20	1.334	0.09	0.689	0.919
ULMIMO	FR1 n77 Part 27O PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Front	0mm	Ant 4+6(6)	DSI0	656000	3840	19.54	20.10	1.138	0.09	0.689	0.784
ULMIMO	FR1 n77 Part 27Q PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Front	0mm	Ant 4+6(4)	DSI0	633334	3500.01	21.93	23.20	1.340	0.01	0.856	1.147
ULMIMO	FR1 n77 Part 27Q PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Front	0mm	Ant 4+6(6)	DSI0	633334	3500.01	19.88	20.10	1.052	0.01	0.856	0.900
ULMIMO	FR1 n77 Part 96 PC3	100M	QPSK	1	1	DFT-SCS-30KHz	Left Side	0mm	Ant 4+6(4)	DSI0	641666	3624.99	22.06	23.20	1.300	-0.06	1.790	2.327
ULMIMO	FR1 n77 Part 96 PC3	100M	QPSK	1	1	DFT-SCS-30KHz	Left Side	0mm	Ant 4+6(6)	DSI0	641666	3624.99	19.40	20.10	1.175	-0.06	1.790	2.103