

MIMO SAR verification results

N77 UL-MIMO (Ant4+6) DSI2 Head				N77 UL-MIMO (Ant4+6) DSI1 Hotspot			
SISO Ant4 Plimit (dBm)	15.2	SISO Ant4 Pmax (dBm)	23.0	SISO Ant4 Plimit (dBm)	22.2	SISO Ant4 Pmax (dBm)	23.0
SISO Ant6 Plimit (dBm)	24.4	SISO Ant6 Pmax (dBm)	23.0	SISO Ant6 Plimit (dBm)	19.7	SISO Ant6 Pmax (dBm)	23.0
Ptest (dBm)	15.2	Total uncertainty (dB)	1.0	Ptest (dBm)	19.7	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)	15.20	Measured MIMO SAR at meas. Ptest (W/kg)	0.631	Measured MIMO Ptest (dBm)	19.70	Measured MIMO SAR at meas. Ptest (W/kg)	0.479
Reported SARMIMO	0.794	Calc.SAR	1.227	Reported SARMIMO	0.603	Calc.SAR	1.711

N77 UL-MIMO (Ant4+6) DSI0 Body worn				N77 UL-MIMO (Ant4+6) DSI0 Extremity			
SISO Ant4 Plimit (dBm)	23.9	SISO Ant4 Pmax (dBm)	23.0	SISO Ant4 Plimit (dBm)	23.9	SISO Ant4 Pmax (dBm)	23.0
SISO Ant6 Plimit (dBm)	19.5	SISO Ant6 Pmax (dBm)	23.0	SISO Ant6 Plimit (dBm)	19.5	SISO Ant6 Pmax (dBm)	23.0
Ptest (dBm)	19.5	Total uncertainty (dB)	1.0	Ptest (dBm)	19.5	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)	19.50	Measured MIMO SAR at meas. Ptest (W/kg)	0.165	Measured MIMO Ptest (dBm)	19.50	Measured MIMO SAR at meas. Ptest (W/kg)	1.940
Reported SARMIMO	0.208	Calc.SAR	1.493	Reported SARMIMO	2.442	Calc.SAR	4.225

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)
ULMIIMO	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 4+6(4)	DSI 2	656000	3840	15.63	16.20	1.140	-0.01	0.631	0.719
ULMIIMO	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 4+6(6)	DSI 2	656000	3840	24.01	25.40	1.377	-0.01	0.631	0.869
ULMIIMO	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 4+6(4)	DSI 2	633334	3500.01	15.66	16.20	1.132	0.08	0.252	0.285
ULMIIMO	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 4+6(6)	DSI 2	633334	3500.01	24.10	25.40	1.349	0.08	0.252	0.340

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	100M	QPSK	1	1	DFT-SCS-30KHz	Front	10mm	Ant 4+6(4)	DSI 1	656000	3840	21.97	23.20	1.327	0.01	0.343	0.455
ULMIMO	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Front	10mm	Ant 4+6(6)	DSI 1	656000	3840	19.63	20.70	1.279	0.01	0.343	0.439
ULMIMO	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Side	10mm	Ant 4+6(4)	DSI 1	633334	3500.01	21.84	23.20	1.368	0.04	0.479	0.655
ULMIMO	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Side	10mm	Ant 4+6(6)	DSI 1	633334	3500.01	19.65	20.70	1.274	0.04	0.479	0.610

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)
ULMIMO	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Front	15mm	Ant 4+6(4)	DSI 0	656000	3840	23.79	24.90	1.330	0.03	0.165	0.589
ULMIMO	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Front	15mm	Ant 4+6(6)	DSI 0	656000	3840	19.44	20.50	1.256	0.03	0.165	0.200
ULMIMO	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Front	15mm	Ant 4+6(4)	DSI 0	633334	3500.01	23.56	24.90	1.387	0.09	0.153	0.714
ULMIMO	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Front	15mm	Ant 4+6(6)	DSI 0	633334	3500.01	19.33	20.50	1.291	0.09	0.153	0.156

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	100M	QPSK	1	1	DFT-SCS-30KHz	Left Side	0mm	Ant 4+6(4)	DSI 0	656000	3840	23.79	24.90	1.291	-0.09	1.710	2.208
ULMIMO	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Left Side	0mm	Ant 4+6(6)	DSI 0	656000	3840	19.44	20.50	1.276	-0.09	1.710	2.183
ULMIMO	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Left Side	0mm	Ant 4+6(4)	DSI 0	633334	3500.01	23.68	24.90	1.324	0.08	1.940	2.569
ULMIMO	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Left Side	0mm	Ant 4+6(6)	DSI 0	633334	3500.01	19.44	20.50	1.276	0.08	1.940	2.476