



MIMO SAR verification results

N77 UL-MIMO (Ant4+6) DSI2 Head				N77 UL-MIMO (Ant4+6) DSI1 Hotspot(RFID OFF)			
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)	0.745	Measured MIMO Ptest (dBm)	20.30	Measured MIMO SAR at meas. Ptest (W/kg)	0.745
Reported SARMIMO	0.938	Calc.SAR	1.466	Reported SARMIMO	0.938	Calc.SAR	1.802

N77 UL-MIMO (Ant4+6) DSI0 Body worn(RFID OFF)				N77 UL-MIMO (Ant4+6) DSI0 Extremity(RFID OFF)			
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)	0.245	Measured MIMO Ptest (dBm)	19.10	Measured MIMO SAR at meas. Ptest (W/kg)	2.090
Reported SARMIMO	0.308	Calc.SAR	1.632	Reported SARMIMO	2.631	Calc.SAR	4.618

N77 UL-MIMO (Ant4+6) DSI4 Hotspot(RFID On)				N77 UL-MIMO (Ant4+6) DSI5 Extremity(RFID On)			
SISO Ant4 Plimit (dBm)	20.7	SISO Ant4 Pmax (dBm)	23.0	SISO Ant4 Plimit (dBm)	20.7	SISO Ant4 Pmax (dBm)	23.0
SISO Ant6 Plimit (dBm)	18.8	SISO Ant6 Pmax (dBm)	22.0	SISO Ant6 Plimit (dBm)	17.1	SISO Ant6 Pmax (dBm)	22.0
Ptest (dBm)	18.8	Total uncertainty (dB)	1.0	Ptest (dBm)	17.1	Total uncertainty (dB)	1.0
SAR design target (W/kg)	0.64	Back off	0	SAR design target (W/kg)	1.59	Back off	0
Measured MIMO Ptest (dBm)	18.80	Measured MIMO SAR at meas. Ptest (W/kg)	0.478	Measured MIMO Ptest (dBm)	17.10	Measured MIMO SAR at meas. Ptest (W/kg)	1.430
Reported SARMIMO	0.602	Calc.SAR	1.316	Reported SARMIMO	1.800	Calc.SAR	2.873



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 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	-0.02	0.555	0.655
ULMIIMO	FR1 n77 Part 27O PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 4+6(6)	DSI2	656000	3840	19.55	20.10	1.135	-0.02	0.555	0.630
ULMIIMO	FR1 n77 Part 27Q PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 4+6(4)	DSI2	633334	3500.01	14.07	15.40	1.358	0.03	0.643	0.873
ULMIIMO	FR1 n77 Part 27Q PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 4+6(6)	DSI2	633334	3500.01	19.62	20.10	1.117	0.03	0.643	0.718
ULMIIMO	FR1 n77 Part 96 PC3	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 4+6(4)	DSI2	641666	3624.99	14.44	15.40	1.247	-0.08	0.585	0.730
ULMIIMO	FR1 n77 Part 96 PC3	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 4+6(6)	DSI2	641666	3624.99	16.97	17.70	1.183	-0.08	0.585	0.692

Hotspot SAR Test																			
Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Mode	Test Position	Gap (mm)	Antenna	Power State	Ch.	Freq. (MHz)	Power Setting	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	215	22.26	23.20	1.242	-0.02	0.654	0.812
ULMIMO	FR1 n77 Part 27O PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Left Side	10mm	Ant 4+6(6)	DSI1	656000	3840	215	20.56	21.30	1.186	-0.02	0.654	0.775
ULMIMO	FR1 n77 Part 27Q PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Left Side	10mm	Ant 4+6(4)	DSI1	633334	3500.01	215	21.77	23.20	1.390	0.02	0.704	0.979
ULMIMO	FR1 n77 Part 27Q PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Left Side	10mm	Ant 4+6(6)	DSI1	633334	3500.01	215	20.51	21.30	1.199	0.02	0.704	0.844
ULMIMO	FR1 n77 Part 96 PC3	100M	QPSK	1	1	DFT-SCS-30KHz	Left Side	10mm	Ant 4+6(4)	DSI1	641666	3624.99	215	22.02	23.20	1.312	0.01	0.745	0.978
ULMIMO	FR1 n77 Part 96 PC3	100M	QPSK	1	1	DFT-SCS-30KHz	Left Side	10mm	Ant 4+6(6)	DSI1	641666	3624.99	215	20.03	21.30	1.340	0.01	0.745	0.998

Body SAR Test																			
Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Mode	Test Position	Gap (mm)	Antenna	Power State	Ch.	Freq. (MHz)	Power Setting	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 Part 27O PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Front	15mm	Ant 4+6(4)	DSIO	656000	3840	220	22.26	23.20	1.242	0.01	0.177	0.220
ULMIIMO	FR1 n77 Part 27O PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Front	15mm	Ant 4+6(6)	DSIO	656000	3840	205	19.55	20.10	1.135	0.01	0.177	0.201
ULMIIMO	FR1 n77 Part 27Q PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Front	15mm	Ant 4+6(4)	DSIO	633334	3500.01	220	21.81	23.20	1.377	0.09	0.235	0.324
ULMIIMO	FR1 n77 Part 27Q PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Front	15mm	Ant 4+6(6)	DSIO	633334	3500.01	205	19.62	20.10	1.117	0.09	0.235	0.262
ULMIIMO	FR1 n77 Part 96 PC3	100M	QPSK	1	1	DFT-SCS-30KHz	Front	15mm	Ant 4+6(4)	DSIO	641666	3624.99	220	22.02	23.20	1.312	-0.05	0.245	0.321
ULMIIMO	FR1 n77 Part 96 PC3	100M	QPSK	1	1	DFT-SCS-30KHz	Front	15mm	Ant 4+6(6)	DSIO	641666	3624.99	205	19.01	20.10	1.285	-0.05	0.245	0.315

Extremity SAR Test																			
Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Mode	Test Position	Gap (mm)	Antenna	Power State	Ch.	Freq. (MHz)	Power Setting	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)	DSIO	656000	3840	220	22.19	23.20	1.262	-0.03	0.882	1.113
ULMIMO	FR1 n77 Part 27O PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Front	0mm	Ant 4+6(6)	DSIO	656000	3840	205	19.53	20.10	1.140	-0.03	0.882	1.006
ULMIMO	FR1 n77 Part 27Q PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Front	0mm	Ant 4+6(4)	DSIO	633334	3500.01	220	21.81	23.20	1.377	0.09	0.923	1.271
ULMIMO	FR1 n77 Part 27Q PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Front	0mm	Ant 4+6(6)	DSIO	633334	3500.01	215	19.62	20.10	1.117	0.09	0.923	1.031
ULMIMO	FR1 n77 Part 96 PC3	100M	QPSK	1	1	DFT-SCS-30KHz	Left Side	0mm	Ant 4+6(4)	DSIO	641666	3624.99	205	22.02	23.20	1.312	-0.02	1.950	2.559
ULMIMO	FR1 n77 Part 96 PC3	100M	QPSK	1	1	DFT-SCS-30KHz	Left Side	0mm	Ant 4+6(6)	DSIO	641666	3624.99	205	19.01	20.10	1.285	-0.02	1.950	2.506