

Conducted TxPout_Max		FID=> SZ17061900010									
Mode	DataRate (Mbps)	Channel	Frequency	TUP	Tx1 TxAvg	Tx1 TxPk	TeraTerm	TUP	Tx2 TxAvg	Tx2 TxPk	TeraTerm
		(L/M/H)	(MHz)	(dBm)	(dBm)	(dBm)	TxPwr Set	(dBm)	(dBm)	(dBm)	TxPwr Set
5.2GHz 802.11ac / 80MHz BW	MCS0 32.5Mbps DataRate	42	5210	12.0	11.0	20.0	11.0	10.0	10.8	19.9	11.0
	MCS1 65.0Mbps DataRate	42	5210	12.0	11.8	21.1	12.0	10.0	10.5	19.8	11.0
	MCS2 97.5Mbps DataRate	42	5210	12.0	11.6	21.2	12.0	10.0	10.2	20.4	11.0
	MCS3 130.0Mbps DataRate	42	5210	12.0	12.0	21.6	13.0	10.0	10.0	20.1	11.0
	MCS4 195.0Mbps DataRate	42	5210	12.0	12.0	21.9	13.0	10.0	9.6	19.5	11.0
	MCS5 260.0Mbps DataRate	42	5210	12.0	11.4	21.5	13.0	10.0	9.2	19.5	11.0
	MCS6 292.5Mbps DataRate	42	5210	12.0	11.5	21.8	13.0	10.0	9.1	19.4	11.0
	MCS7 325.0Mbps DataRate	42	5210	12.0	11.4	21.6	13.0	10.0	9.2	19.8	11.0
	MCS8 390.0Mbps DataRate	42	5210	12.0	11.9	22.3	14.0	10.0	9.7	20.6	12.0
	MCS9 433.3Mbps DataRate	42	5210	12.0	12.0	22.3	14.0	10.0	9.6	20.5	12.0

Conducted TxPout_Max		FID=> SZ17061900010					
Mode	DataRate (Mbps)	Channel (L/M/H)	Frequency (MHz)	TUP (dBm)	Tx1 TxAvg (dBm)	Tx1 TxPk (dBm)	TeraTerm TxPwr Set
5.8GHz 802.11n / 20MHz BW	MCS0 7.2Mbps DataRate	149	5745	20.0	19.9	24.3	19.0
		153	5765	20.0	19.2	23.8	19.0
		157	5785	20.0	19.4	23.7	19.0
		161	5805	20.0	19.4	23.9	19.0
	MCS1 14.4Mbps DataRate	149	5745	20.0	19.3	24.2	19.0
		153	5765	20.0	19.8	23.9	20.0
		157	5785	20.0	19.9	23.7	20.0
		161	5805	20.0	19.0	24.0	19.0
	MCS2 21.7Mbps DataRate	149	5745	20.0	19.4	24.3	19.0
		153	5765	20.0	19.9	23.9	20.0
		157	5785	20.0	19.9	23.7	20.0
		161	5805	20.0	19.8	24.1	19.0
	MCS3 28.9Mbps DataRate	149	5745	20.0	19.1	23.2	19.0
		153	5765	20.0	19.6	23.9	20.0
		157	5785	20.0	19.8	23.6	20.0
		161	5805	20.0	19.0	24.0	19.0
	MCS4 43.3Mbps DataRate	149	5745	20.0	18.5	23.9	19.0
		153	5765	20.0	18.6	24.3	19.0
		157	5785	20.0	20.0	23.9	21.0
		161	5805	20.0	19.4	24.2	20.0
	MCS5 57.8Mbps DataRate	149	5745	20.0	19.3	24.2	20.0
		153	5765	20.0	19.1	24.4	20.0
		157	5785	20.0	19.8	24.1	21.0
		161	5805	20.0	19.7	23.9	21.0
	MCS6 65.0Mbps DataRate	149	5745	20.0	20.0	24.3	21.0
		153	5765	20.0	19.9	24.2	21.0
		157	5785	20.0	19.2	24.4	20.0
		161	5805	20.0	19.9	24.1	21.0
	MCS7 72.2Mbps DataRate	149	5745	20.0	19.6	23.9	21.0
		153	5765	20.0	19.9	24.2	21.0
		157	5785	20.0	19.9	24.5	21.0
		161	5805	20.0	19.6	24.0	21.0
5.8GHz 802.11n / 40MHz BW	MCS0 15.0Mbps DataRate	151	5755	20.0	19.9	23.7	20.0
		159	5795	20.0	19.9	23.7	20.0
	MCS1 30.0Mbps DataRate	151	5755	20.0	19.8	23.7	20.0
		159	5795	20.0	19.6	23.7	20.0
	MCS2 45.0Mbps DataRate	151	5755	20.0	19.5	23.7	20.0
		159	5795	20.0	19.5	23.7	20.0
	MCS3 60.0Mbps DataRate	151	5755	20.0	19.1	23.8	20.0
		159	5795	20.0	19.1	23.7	20.0
	MCS4 90.0Mbps DataRate	151	5755	20.0	19.9	23.8	21.0
		159	5795	20.0	20.0	23.9	21.0
	MCS5 120.0Mbps DataRate	151	5755	20.0	19.9	23.9	21.0
		159	5795	20.0	19.6	23.9	21.0
	MCS6 135.0Mbps DataRate	151	5755	20.0	19.6	23.9	21.0
		159	5795	20.0	19.6	23.9	21.0
	MCS7 150.0Mbps DataRate	151	5755	20.0	19.5	23.9	21.0
		159	5795	20.0	19.5	23.9	21.0

Conducted TxPout_Max		FID=> SZ17061900010					
Mode	DataRate (Mbps)	Channel (L/M/H)	Frequency (MHz)	TUP (dBm)	Tx1 TxAvg (dBm)	Tx1 TxPk (dBm)	TeraTerm TxPwr Set
5.8GHz 802.11ac / 20MHz BW	MCS0 7.2Mbps DataRate	149	5745	20.0	19.5	24.3	19.0
		153	5765	20.0	20.0	23.8	20.0
		157	5785	20.0	19.8	23.6	20.0
		161	5805	20.0	19.3	24.0	20.0
		165	5825	20.0	19.9	24.3	19.0
	MCS1 14.4Mbps DataRate	149	5745	20.0	19.3	24.3	19.0
		153	5765	20.0	19.9	239.0	20.0
		157	5785	20.0	19.7	23.7	20.0
		161	5805	20.0	19.9	24.1	20.0
		165	5825	20.0	19.8	24.0	20.0
	MCS2 21.7Mbps DataRate	149	5745	20.0	19.0	24.3	19.0
		153	5765	20.0	19.8	23.9	20.0
		157	5785	20.0	19.7	23.8	20.0
		161	5805	20.0	19.9	24.2	20.0
		165	5825	20.0	19.9	24.3	20.0
	MCS3 28.9Mbps DataRate	149	5745	20.0	19.6	24.3	20.0
		153	5765	20.0	19.3	23.9	20.0
		157	5785	20.0	19.1	23.7	20.0
		161	5805	20.0	19.5	24.2	20.0
		165	5825	20.0	19.3	24.0	20.0
	MCS4 43.3Mbps DataRate	149	5745	20.0	19.5	24.4	20.0
		153	5765	20.0	19.1	24.0	20.0
		157	5785	20.0	20.0	23.9	21.0
		161	5805	20.0	19.5	243.2	20.0
		165	5825	20.0	19.3	24.1	20.0
	MCS5 57.8Mbps DataRate	149	5745	20.0	19.1	24.5	20.0
		153	5765	20.0	19.8	24.0	20.0
		157	5785	20.0	19.7	23.9	21.0
		161	5805	20.0	20.0	24.3	21.0
		165	5825	20.0	19.9	24.2	21.0
	MCS6 65.0Mbps DataRate	149	5745	20.0	19.1	24.5	20.0
		153	5765	20.0	19.8	24.1	21.0
		157	5785	20.0	19.6	23.9	21.0
		161	5805	20.0	20.0	24.3	21.0
		165	5825	20.0	19.9	24.2	21.0
	MCS7 72.2Mbps DataRate	149	5745	20.0	19.1	24.4	20.0
		153	5765	20.0	19.7	24.1	21.0
		157	5785	20.0	19.6	23.9	21.0
		161	5805	20.0	20.0	24.3	21.0
		165	5825	20.0	19.9	24.2	21.0
	MCS8 86.7Mbps DataRate	149	5745	20.0	19.6	24.5	21.0
		153	5765	20.0	19.3	24.1	21.0
		157	5785	20.0	19.1	23.9	21.0
		161	5805	20.0	19.5	24.4	21.0
		165	5825	20.0	19.4	24.2	21.0

Conducted TxPout_Max		FID=> SZ17061900010					
Mode	DataRate (Mbps)	Channel (L/M/H)	Frequency (MHz)	TUP (dBm)	Tx1 TxAvg (dBm)	Tx1 TxPk (dBm)	TeraTerm TxPwr Set
5.8GHz 802.11ac / 40MHz BW	MCS0 15.0Mbps DataRate	151	5755	20.0	20.0	23.9	21.0
		159	5795	20.0	19.9	23.8	21.0
	MCS1 30.0Mbps DataRate	151	5755	20.0	19.5	23.9	21.0
		159	5795	20.0	19.5	23.9	21.0
	MCS2 45.0Mbps DataRate	151	5755	20.0	19.3	24.0	21.0
		159	5795	20.0	19.2	24.0	21.0
	MCS3 60.0Mbps DataRate	151	5755	20.0	19.2	24.0	21.0
		159	5795	20.0	19.2	24.0	21.0
	MCS4 90.0Mbps DataRate	151	5755	20.0	19.3	23.9	20.0
		159	5795	20.0	19.3	23.9	20.0
	MCS5 120.0Mbps DataRate	151	5755	20.0	19.3	23.9	20.0
		159	5795	20.0	19.4	23.9	20.0
	MCS6 135.0Mbps DataRate	151	5755	20.0	19.2	23.9	20.0
		159	5795	20.0	19.3	23.9	20.0
	MCS7 150.0Mbps DataRate	151	5755	20.0	19.4	23.9	20.0
		159	5795	20.0	19.4	23.9	20.0
5.8GHz 802.11ac / 80MHz BW	MCS8 180.0Mbps DataRate	151	5755	20.0	19.4	24.0	20.0
		159	5795	20.0	19.3	23.9	20.0
	MCS9 200.0Mbps DataRate	151	5755	20.0	19.2	23.9	20.0
		159	5795	20.0	19.2	23.9	20.0
	MCS0 32.5Mbps DataRate	155	5775	20.0	19.3	23.9	20.0
	MCS1 65.0Mbps DataRate	155	5775	20.0	19.4	24.1	20.0
	MCS2 97.5Mbps DataRate	155	5775	20.0	19.4	24.5	20.0
	MCS3 130.0Mbps DataRate	155	5775	20.0	19.5	24.1	20.0
	MCS4 195.0Mbps DataRate	155	5775	20.0	19.5	24.2	20.0
	MCS5 260.0Mbps DataRate	155	5775	20.0	19.5	24.2	20.0
	MCS6 292.5Mbps DataRate	155	5775	20.0	19.6	24.2	20.0
	MCS7 325.0Mbps DataRate	155	5775	20.0	19.6	24.2	20.0
	MCS8 390.0Mbps DataRate	155	5775	20.0	19.6	24.2	20.0
	MCS9 433.3Mbps DataRate	155	5775	20.0	19.3	24.1	20.0

Figure 10.1 Test Reduction Table – WiFi 2.4 GHz Chain 0

Mode	Side	Required Channel	Tested/Reduced
802.11b	Side A	1 – 2412 MHz	Reduced ¹
		6 – 2437 MHz	Tested
		11 – 2462 MHz	Reduced ¹
	Side B	1 – 2412 MHz	Reduced ¹
		6 – 2437 MHz	Tested
		11 – 2462 MHz	Reduced ¹
	Side C	1 – 2412 MHz	Reduced ¹
		6 – 2437 MHz	Tested
		11 – 2462 MHz	Reduced ¹
	Side D	1 – 2412 MHz	Reduced ³
		6 – 2437 MHz	Reduced ³
		11 – 2462 MHz	Reduced ³
	Side E	1 – 2412 MHz	Reduced ³
		6 – 2437 MHz	Reduced ³
		11 – 2462 MHz	Reduced ³
	Side F	1 – 2412 MHz	Reduced ³
		6 – 2437 MHz	Reduced ³
		11 – 2462 MHz	Reduced ³
802.11g	Side A	1 – 2412 MHz	Reduced ²
		6 – 2437 MHz	Reduced ²
		11 – 2462 MHz	Reduced ²
	Side B	1 – 2412 MHz	Reduced ²
		6 – 2437 MHz	Reduced ²
		11 – 2462 MHz	Reduced ²
	Side C	1 – 2412 MHz	Reduced ²
		6 – 2437 MHz	Reduced ²
		11 – 2462 MHz	Reduced ²
	Side D	1 – 2412 MHz	Reduced ²
		6 – 2437 MHz	Reduced ²
		11 – 2462 MHz	Reduced ²
	Side E	1 – 2412 MHz	Reduced ²
		6 – 2437 MHz	Reduced ²
		11 – 2462 MHz	Reduced ²
	Side F	1 – 2412 MHz	Reduced ²
		6 – 2437 MHz	Reduced ²
		11 – 2462 MHz	Reduced ²
802.11n	Side A	1 – 2412 MHz	Reduced ²
		6 – 2437 MHz	Reduced ²
		11 – 2462 MHz	Reduced ²
	Side B	1 – 2412 MHz	Reduced ²
		6 – 2437 MHz	Reduced ²
		11 – 2462 MHz	Reduced ²
	Side C	1 – 2412 MHz	Reduced ²
		6 – 2437 MHz	Reduced ²
		11 – 2462 MHz	Reduced ²
	Side D	1 – 2412 MHz	Reduced ²
		6 – 2437 MHz	Reduced ²
		11 – 2462 MHz	Reduced ²
	Side E	1 – 2412 MHz	Reduced ²
		6 – 2437 MHz	Reduced ²
		11 – 2462 MHz	Reduced ²
	Side F	1 – 2412 MHz	Reduced ²
		6 – 2437 MHz	Reduced ²
		11 – 2462 MHz	Reduced ²

Reduced¹ – When the reported SAR is ≤ 0.4 W/kg, SAR is not required for the remaining test configuration per KDB 248227 D01 v02r02 section 5.1.1 1) page 9.

Reduced² – When the highest reported SAR for DSSS is adjusted by the ratio of OFDM to DSSS specified maximum output power and the adjusted SAR is ≤ 1.2 W/kg, SAR is not required per KDB 248227 D01 v02r02 section 5.2.2 2) page 10.

Reduced³ – When the antenna is more than 25 mm from a side, the test can be reduced per KDB447498 D01 v06 section 4.3.1 1) page 11. See below for calculations.

Maximum power: 63.1 mW

Closest Distance to Side D: 73.0 mm

Closest Distance to Side E: 72.0 mm

Closest Distance to Side F: 37.0 mm

The closest distance is from Side F. Therefore, if Side F is excluded then Side D and Side E would also be excluded.

$[(63.1 \text{ mW}) / (37 \text{ mm})]^{*2} / 2.462 = 2.68$ which is equal to or less than 3.0.

Figure 10.2 Test Reduction Table – WiFi 2.4 GHz Chain 1

Mode	Side	Required Channel	Tested/Reduced
802.11b	Side A	1 – 2412 MHz	Reduced ¹
		6 – 2437 MHz	Tested
		11 – 2462 MHz	Reduced ¹
	Side B	1 – 2412 MHz	Reduced ³
		6 – 2437 MHz	Reduced ³
		11 – 2462 MHz	Reduced ³
	Side C	1 – 2412 MHz	Reduced ¹
		6 – 2437 MHz	Tested
		11 – 2462 MHz	Reduced ¹
	Side D	1 – 2412 MHz	Reduced ¹
		6 – 2437 MHz	Tested
		11 – 2462 MHz	Reduced ¹
	Side E	1 – 2412 MHz	Reduced ³
		6 – 2437 MHz	Reduced ³
		11 – 2462 MHz	Reduced ³
	Side F	1 – 2412 MHz	Reduced ³
		6 – 2437 MHz	Reduced ³
		11 – 2462 MHz	Reduced ³
802.11g	Side A	1 – 2412 MHz	Reduced ²
		6 – 2437 MHz	Reduced ²
		11 – 2462 MHz	Reduced ²
	Side B	1 – 2412 MHz	Reduced ²
		6 – 2437 MHz	Reduced ²
		11 – 2462 MHz	Reduced ²
	Side C	1 – 2412 MHz	Reduced ²
		6 – 2437 MHz	Reduced ²
		11 – 2462 MHz	Reduced ²
	Side D	1 – 2412 MHz	Reduced ²
		6 – 2437 MHz	Reduced ²
		11 – 2462 MHz	Reduced ²
	Side E	1 – 2412 MHz	Reduced ²
		6 – 2437 MHz	Reduced ²
		11 – 2462 MHz	Reduced ²
	Side F	1 – 2412 MHz	Reduced ²
		6 – 2437 MHz	Reduced ²
		11 – 2462 MHz	Reduced ²
802.11n	Side A	1 – 2412 MHz	Reduced ²
		6 – 2437 MHz	Reduced ²
		11 – 2462 MHz	Reduced ²
	Side B	1 – 2412 MHz	Reduced ²
		6 – 2437 MHz	Reduced ²
		11 – 2462 MHz	Reduced ²
	Side C	1 – 2412 MHz	Reduced ²
		6 – 2437 MHz	Reduced ²
		11 – 2462 MHz	Reduced ²
	Side D	1 – 2412 MHz	Reduced ²
		6 – 2437 MHz	Reduced ²
		11 – 2462 MHz	Reduced ²
	Side E	1 – 2412 MHz	Reduced ²
		6 – 2437 MHz	Reduced ²
		11 – 2462 MHz	Reduced ²
	Side F	1 – 2412 MHz	Reduced ²
		6 – 2437 MHz	Reduced ²
		11 – 2462 MHz	Reduced ²

Reduced¹ – When the reported SAR is ≤ 0.4 W/kg, SAR is not required for the remaining test configuration per KDB 248227 D01 v02r02 section 5.1.1 1) page 9.

Reduced² – When the highest reported SAR for DSSS is adjusted by the ratio of OFDM to DSSS specified maximum output power and the adjusted SAR is ≤ 1.2 W/kg, SAR is not required per KDB 248227 D01 v02r02 section 5.2.2 2) page 10.

Reduced³ – When the antenna is more than 25 mm from a side, the test can be reduced per KDB447498 D01 v06 section 4.3.1 1) page 11. See below for calculations.

Maximum power: 63.1 mW

Closest Distance to Side B: 68.0 mm

Closest Distance to Side E: 75.0 mm

Closest Distance to Side F: 34.0 mm

The closest distance is from Side F. Therefore, if Side F is excluded then Side B and Side E would also be excluded.

$[(63.1 \text{ mW})/(34 \text{ mm})]^2/2.462=2.91$ which is equal to or less than 3.0.

Figure 10.3 Test Reduction Table – WiFi 5.1 GHz Chain 0

Mode	Side	Required Channel	Tested/Reduced
802.11a 5150 MHz	Side A	36 – 5180 MHz	Reduced ¹
		40 – 5200 MHz	Reduced ¹
		44 – 5220 MHz	Tested
		48 – 5240 MHz	Reduced ¹
	Side B	36 – 5180 MHz	Reduced ¹
		40 – 5200 MHz	Reduced ¹
		44 – 5220 MHz	Tested
		48 – 5240 MHz	Reduced ¹
	Side C	36 – 5180 MHz	Reduced ¹
		40 – 5200 MHz	Reduced ¹
		44 – 5220 MHz	Tested
		48 – 5240 MHz	Reduced ¹
	Side D	36 – 5180 MHz	Reduced ²
		40 – 5200 MHz	Reduced ²
		44 – 5220 MHz	Reduced ²
		48 – 5240 MHz	Reduced ²
	Side E	36 – 5180 MHz	Reduced ²
		40 – 5200 MHz	Reduced ²
		44 – 5220 MHz	Reduced ²
		48 – 5240 MHz	Reduced ²
	Side F	36 – 5180 MHz	Reduced ²
		40 – 5200 MHz	Reduced ²
		44 – 5220 MHz	Reduced ²
		48 – 5240 MHz	Reduced ²
802.11n 5150 MHz	Side A	36 – 5180 MHz	Reduced ¹
		40 – 5200 MHz	Reduced ¹
		44 – 5220 MHz	Reduced ¹
		48 – 5240 MHz	Reduced ¹
	Side B	36 – 5180 MHz	Reduced ¹
		40 – 5200 MHz	Reduced ¹
		44 – 5220 MHz	Reduced ¹
		48 – 5240 MHz	Reduced ¹
	Side C	36 – 5180 MHz	Reduced ¹
		40 – 5200 MHz	Reduced ¹
		44 – 5220 MHz	Reduced ¹
		48 – 5240 MHz	Reduced ¹
	Side D	36 – 5180 MHz	Reduced ²
		40 – 5200 MHz	Reduced ²
		44 – 5220 MHz	Reduced ²
		48 – 5240 MHz	Reduced ²
	Side E	36 – 5180 MHz	Reduced ²
		40 – 5200 MHz	Reduced ²
		44 – 5220 MHz	Reduced ²
		48 – 5240 MHz	Reduced ²
	Side F	36 – 5180 MHz	Reduced ²
		40 – 5200 MHz	Reduced ²
		44 – 5220 MHz	Reduced ²
		48 – 5240 MHz	Reduced ²

Reduced¹ – When the reported SAR is ≤ 0.4 W/kg, SAR is not required for the remaining test configuration per KDB 248227 D01 v02r02 section 5.1.1.1 1) page 9.

Reduced² – When the antenna is more than 25 mm from a side, the test can be reduced per KDB447498 D01 v06 section 4.3.1.1 1) page 11. See below for calculations.

Maximum power: 15.8 mW

Closest Distance to Side D: 73.0 mm

Closest Distance to Side E: 72.0 mm

Closest Distance to Side F: 37.0 mm

The closest distance is from Side F. Therefore, if Side F is excluded then Side D and Side E would also be excluded.

$[(15.8 \text{ mW}) / (37 \text{ mm})] * \sqrt{5.24} = 0.98$ which is equal to or less than 3.0.

Figure 10.4 Test Reduction Table – WiFi 5.1 GHz Chain 1

Mode	Side	Required Channel	Tested/Reduced
802.11a 5150 MHz	Side A	36 – 5180 MHz	Reduced ¹
		40 – 5200 MHz	Reduced ¹
		44 – 5220 MHz	Tested
		48 – 5240 MHz	Reduced ¹
	Side B	36 – 5180 MHz	Reduced ²
		40 – 5200 MHz	Reduced ²
		44 – 5220 MHz	Reduced ²
		48 – 5240 MHz	Reduced ²
	Side C	36 – 5180 MHz	Reduced ¹
		40 – 5200 MHz	Reduced ¹
		44 – 5220 MHz	Tested
		48 – 5240 MHz	Reduced ¹
	Side D	36 – 5180 MHz	Reduced ¹
		40 – 5200 MHz	Reduced ¹
		44 – 5220 MHz	Tested
		48 – 5240 MHz	Reduced ¹
	Side E	36 – 5180 MHz	Reduced ²
		40 – 5200 MHz	Reduced ²
		44 – 5220 MHz	Reduced ²
		48 – 5240 MHz	Reduced ²
	Side F	36 – 5180 MHz	Reduced ²
		40 – 5200 MHz	Reduced ²
		44 – 5220 MHz	Reduced ²
		48 – 5240 MHz	Reduced ²
802.11n 5150 MHz	Side A	36 – 5180 MHz	Reduced ¹
		40 – 5200 MHz	Reduced ¹
		44 – 5220 MHz	Reduced ¹
		48 – 5240 MHz	Reduced ¹
	Side B	36 – 5180 MHz	Reduced ²
		40 – 5200 MHz	Reduced ²
		44 – 5220 MHz	Reduced ²
		48 – 5240 MHz	Reduced ²
	Side C	36 – 5180 MHz	Reduced ¹
		40 – 5200 MHz	Reduced ¹
		44 – 5220 MHz	Reduced ¹
		48 – 5240 MHz	Reduced ¹
	Side D	36 – 5180 MHz	Reduced ¹
		40 – 5200 MHz	Reduced ¹
		44 – 5220 MHz	Reduced ¹
		48 – 5240 MHz	Reduced ¹
	Side E	36 – 5180 MHz	Reduced ²
		40 – 5200 MHz	Reduced ²
		44 – 5220 MHz	Reduced ²
		48 – 5240 MHz	Reduced ²
	Side F	36 – 5180 MHz	Reduced ²
		40 – 5200 MHz	Reduced ²
		44 – 5220 MHz	Reduced ²
		48 – 5240 MHz	Reduced ²

Reduced¹ – When the reported SAR is ≤ 0.4 W/kg, SAR is not required for the remaining test configuration per KDB 248227 D01 v02r02 section 5.1.1.1 1) page 9.

Reduced² – When the antenna is more than 25 mm from a side, the test can be reduced per KDB447498 D01 v06 section 4.3.1.1 1) page 11. See below for calculations.

Maximum power: 15.8 mW

Closest Distance to Side B: 68.0 mm

Closest Distance to Side E: 75.0 mm

Closest Distance to Side F: 34.0 mm

The closest distance is from Side F. Therefore, if Side F is excluded then Side B and Side E would also be excluded.

$[(15.8 \text{ mW}) / (34 \text{ mm})] * \sqrt{5.24} = 1.06$ which is equal to or less than 3.0.

Figure 10.5 Test Reduction Table – WiFi 5.8 GHz Chain 0

Mode	Side	Required Channel	Tested/Reduced
802.11a 5800 MHz	Side A	149 – 5745 MHz	Reduced ¹
		157 – 5785 MHz	Tested
		165 – 5825 MHz	Reduced ¹
	Side B	149 – 5745 MHz	Reduced ¹
		157 – 5785 MHz	Tested
		165 – 5825 MHz	Reduced ¹
	Side C	149 – 5745 MHz	Reduced ¹
		157 – 5785 MHz	Tested
		165 – 5825 MHz	Reduced ¹
	Side D	149 – 5745 MHz	Reduced ²
		157 – 5785 MHz	Reduced ²
		165 – 5825 MHz	Reduced ²
	Side E	149 – 5745 MHz	Reduced ²
		157 – 5785 MHz	Reduced ²
		165 – 5825 MHz	Reduced ²
	Side F	149 – 5745 MHz	Reduced ²
		157 – 5785 MHz	Reduced ²
		165 – 5825 MHz	Reduced ²
802.11n 5800 MHz	Side A	149 – 5745 MHz	Reduced ¹
		157 – 5785 MHz	Reduced ¹
		165 – 5825 MHz	Reduced ¹
	Side B	149 – 5745 MHz	Reduced ¹
		157 – 5785 MHz	Reduced ¹
		165 – 5825 MHz	Reduced ¹
	Side C	149 – 5745 MHz	Reduced ¹
		157 – 5785 MHz	Reduced ¹
		165 – 5825 MHz	Reduced ¹
	Side D	149 – 5745 MHz	Reduced ²
		157 – 5785 MHz	Reduced ²
		165 – 5825 MHz	Reduced ²
	Side E	149 – 5745 MHz	Reduced ²
		157 – 5785 MHz	Reduced ²
		165 – 5825 MHz	Reduced ²
	Side F	149 – 5745 MHz	Reduced ²
		157 – 5785 MHz	Reduced ²
		165 – 5825 MHz	Reduced ²

Reduced¹ – When the reported SAR is ≤ 0.4 W/kg, SAR is not required for the remaining test configuration per KDB 248227 D01 v02r02 section 5.1.1 1) page 9.

Reduced² – When the antenna is more than 25 mm from a side, the test can be reduced per KDB447498 D01 v06 section 4.3.1 1) page 11. See below for calculations.

Maximum power: 22.4 mW

Closest Distance to Side D: 73.0 mm

Closest Distance to Side E: 72.0 mm

Closest Distance to Side F: 37.0 mm

The closest distance is from Side F. Therefore, if Side F is excluded then Side D and Side E would also be excluded.

$[(22.4 \text{ mW}) / (37 \text{ mm})]^{1/5.825} = 1.46$ which is equal to or less than 3.0.

Figure 10.6 Test Reduction Table – WiFi 5.8 GHz Chain 1

Mode	Side	Required Channel	Tested/Reduced
802.11a 5800 MHz	Side A	149 – 5745 MHz	Reduced ¹
		157 – 5785 MHz	Tested
		165 – 5825 MHz	Reduced ¹
	Side B	149 – 5745 MHz	Reduced ²
		157 – 5785 MHz	Reduced ²
		165 – 5825 MHz	Reduced ²
	Side C	149 – 5745 MHz	Reduced ¹
		157 – 5785 MHz	Tested
		165 – 5825 MHz	Reduced ¹
	Side D	149 – 5745 MHz	Reduced ¹
		157 – 5785 MHz	Tested
		165 – 5825 MHz	Reduced ¹
	Side E	149 – 5745 MHz	Reduced ²
		157 – 5785 MHz	Reduced ²
		165 – 5825 MHz	Reduced ²
	Side F	149 – 5745 MHz	Reduced ²
		157 – 5785 MHz	Reduced ²
		165 – 5825 MHz	Reduced ²
802.11n 5800 MHz	Side A	149 – 5745 MHz	Reduced ¹
		157 – 5785 MHz	Reduced ¹
		165 – 5825 MHz	Reduced ¹
	Side B	149 – 5745 MHz	Reduced ²
		157 – 5785 MHz	Reduced ²
		165 – 5825 MHz	Reduced ²
	Side C	149 – 5745 MHz	Reduced ¹
		157 – 5785 MHz	Reduced ¹
		165 – 5825 MHz	Reduced ¹
	Side D	149 – 5745 MHz	Reduced ¹
		157 – 5785 MHz	Reduced ¹
		165 – 5825 MHz	Reduced ¹
	Side E	149 – 5745 MHz	Reduced ²
		157 – 5785 MHz	Reduced ²
		165 – 5825 MHz	Reduced ²
	Side F	149 – 5745 MHz	Reduced ²
		157 – 5785 MHz	Reduced ²
		165 – 5825 MHz	Reduced ²

Reduced¹ – When the reported SAR is ≤ 0.4 W/kg, SAR is not required for the remaining test configuration per KDB 248227 D01 v02r02 section 5.1.1.1 1) page 9.

Reduced² – When the antenna is more than 25 mm from a side, the test can be reduced per KDB447498 D01 v06 section 4.3.1 1) page 11. See below for calculations.

Maximum power: 100.0 mW

Closest Distance to Side B: 68.0 mm

Closest Distance to Side E: 75.0 mm

Closest Distance to Side F: 34.0 mm

The closest distance is from Side F. Therefore, if Side F is excluded then Side B and Side E would also be excluded.

$[(22.4 \text{ mW})/(34 \text{ mm})]^* \sqrt{5.825} = 1.59$ which is equal to or less than 3.0.

Figure 10.7 Test Reduction Table – 3G 850 MHz

Band/ Frequency (MHz)	Technology	Side	Required Channel	Tested/ Reduced
Band 5 824-849 MHz	GSM	Side A	128	Reduced ¹
			190	Tested
			251	Reduced ¹
		Side B	128	Reduced ¹
			190	Tested
			251	Reduced ¹
		Side C	128	Reduced ¹
			190	Tested
			251	Reduced ¹
		Side D	128	Reduced ¹
			190	Tested
			251	Reduced ¹
		Side E	128	Reduced ¹
			190	Tested
			251	Reduced ¹
		Side F	128	Reduced ²
			190	Reduced ²
			251	Reduced ²
	WCDMA	Side A	4132	Reduced ¹
			4183	Tested
			4233	Reduced ¹
		Side B	4132	Reduced ¹
			4183	Tested
			4233	Reduced ¹
		Side C	4132	Reduced ¹
			4183	Tested
			4233	Reduced ¹
		Side D	4132	Reduced ¹
			4183	Tested
			4233	Reduced ¹
		Side E	4132	Reduced ¹
			4183	Tested
			4233	Reduced ¹
		Side F	4132	Reduced ²
			4183	Reduced ²
			4233	Reduced ²
	CDMA	Side A	1013	Tested
			384	Tested
			777	Tested
		Side B	1013	Reduced ¹
			384	Tested
			777	Reduced ¹
		Side C	1013	Reduced ¹
			384	Tested
			777	Reduced ¹
		Side D	1013	Reduced ¹
			384	Tested
			777	Reduced ¹
		Side E	1013	Reduced ¹
			384	Tested
			777	Reduced ¹
		Side F	1013	Reduced ²
			384	Reduced ²
			777	Reduced ²

Reduced¹ – When the mid channel is 3 dB below the limit, the remaining channels are not required per KDB 447498 D01 v06 section 4.3.3 page 14.

Reduced² – When the antenna is more than 25 mm from a side, the test can be reduced per KDB447498 D01 v06 section 4.3.1 1) page 11. See below for calculations.

Maximum power: 281.84 mW

Closest Distance to Side F: 110.0 mm

$[(3.0/(\sqrt{0.849})) * 50 \text{ mm}] + [(110 - 50 \text{ mm}) * 10] = 762 \text{ mW}$ which is greater than 281.84 mW

Figure 10.8 Test Reduction Table – 3G 1750 MHz

Band/ Frequency (MHz)	Technology	Side	Required Channel	Tested/ Reduced
Band 4 1710-1755 MHz	WCDMA	Side A	1312	Tested
			1413	Tested
			1513	Tested
		Side B	1312	Reduced ¹
			1413	Tested
			1513	Reduced ¹
		Side C	1312	Reduced ¹
			1413	Tested
			1513	Reduced ¹
		Side D	1312	Reduced ¹
			1413	Tested
			1513	Reduced ¹
		Side E	1312	Reduced ¹
			1413	Tested
			1513	Reduced ¹
		Side F	1312	Reduced ²
			1413	Reduced ²
			1513	Reduced ²

Reduced¹ – When the mid channel is 3 dB below the limit, the remaining channels are not required per KDB 447498 D01 v06 section 4.3.3 page 14.

Reduced² – When the antenna is more than 25 mm from a side, the test can be reduced per KDB447498 D01 v06 section 4.3.1 1) page 11. See below for calculations.

Maximum power: 223.9 mW

Closest Distance to Side F: 110.0 mm

$\{[(3.0)/(\sqrt{1.91})]*50 \text{ mm}\} + \{[110-50 \text{ mm}]*10\} = 708 \text{ mW}$ which is greater than 223.9 mW

Figure 10.9 Test Reduction Table – 3G 1900 MHz

Band/ Frequency (MHz)	Technology	Side	Required Channel	Tested/ Reduced
Band 2 1850-1910 MHz	GSM	Side A	512	Reduced ¹
			661	Tested
			810	Reduced ¹
		Side B	512	Reduced ¹
			661	Tested
			810	Reduced ¹
		Side C	512	Reduced ¹
			661	Tested
			810	Reduced ¹
		Side D	512	Reduced ¹
			661	Tested
			810	Reduced ¹
		Side E	512	Reduced ¹
			661	Tested
			810	Reduced ¹
		Side F	512	Reduced ²
			661	Reduced ²
			810	Reduced ²
	WCDMA	Side A	9262	Tested
			9400	Tested
			9538	Tested
		Side B	9262	Reduced ¹
			9400	Tested
			9538	Reduced ¹
		Side C	9262	Reduced ¹
			9400	Tested
			9538	Reduced ¹
		Side D	9262	Reduced ¹
			9400	Tested
			9538	Reduced ¹
		Side E	9262	Reduced ¹
			9400	Tested
			9538	Reduced ¹
		Side F	9262	Reduced ²
			9400	Reduced ²
			9538	Reduced ²
	CDMA	Side A	25	Tested
			600	Tested
			1175	Tested
		Side B	25	Reduced ¹
			600	Tested
			1175	Reduced ¹
		Side C	25	Reduced ¹
			600	Tested
			1175	Reduced ¹
		Side D	25	Reduced ¹
			600	Tested
			1175	Reduced ¹
		Side E	25	Reduced ¹
			600	Tested
			1175	Reduced ¹
		Side F	25	Reduced ²
			600	Reduced ²
			1175	Reduced ²

Reduced¹ – When the mid channel is 3 dB below the limit, the remaining channels are not required per KDB 447498 D01 v06 section 4.3.3 page 14.

Reduced² – When the antenna is more than 25 mm from a side, the test can be reduced per KDB447498 D01 v06 section 4.3.1 1) page 11. See below for calculations.

Maximum power: 223.9 mW

Closest Distance to Side F: 110.0 mm

$[(3.0/(\sqrt{1.91})) * 50 \text{ mm}] + [(110 - 50 \text{ mm}) * 10] = 708 \text{ mW}$ which is greater than 223.9 mW

10.5 SAR Measurement Conditions for LTE Bands

10.5.1 LTE Functionality

The follow table identifies all the channel bandwidths in each frequency band supported by this device.

LTE Band Class	Bandwidth (MHz)	Frequency or Freq. Band (MHz)
2	1.4, 3, 5, 10, 15, 20	1850-1910 MHz
4	1.4, 3, 5, 10, 15, 20	1710-1755 MHz
5	1.4, 3, 5, 10	824-849 MHz
7	5,10,15,20	2500-2570 MHz
12	1.4, 3, 5, 10	699-716 MHz
13	5, 10	777-787 MHz
17	5, 10	704-716 MHz
66	1.4, 3, 5, 10, 15, 20	1710-1780 MHz

10.5.2 Test Conditions

All SAR measurements for LTE were performed using the Anritsu MT8820C. A closed loop power control setting allowed the UE to transmit at the maximum output power during the SAR measurements. The Figure 11.1 table indicates all the test reduction utilized for this report.

MPR was enabled for this device. A-MPR was disabled for all SAR test measurements.

Table 10.5.1 LTE Power Measurements
LTE B13 (700MHz) / Setup Path Loss = 4.5 (TS9)

Bandwidth	UL Channel	UL Freq. MHz	# RBs	Offset RBs	QPSK	16QAM
5 MHz	23205	779.5	1	1	22.25	21.39
				12	22.31	21.45
				24	22.52	21.79
			12	1	21.24	20.12
				7	21.61	20.47
				13	21.65	20.58
			25	0	21.51	20.55
	23230	782.0	1	1	22.38	21.83
				12	22.52	21.93
				24	22.26	21.72
			12	1	21.62	20.70
				7	21.65	20.70
				13	21.61	20.63
			25	0	21.63	20.65
	23255	784.5	1	1	22.78	22.04
				12	22.37	21.60
				24	22.29	21.67
			12	1	21.79	20.74
				7	21.68	20.62
				13	21.70	20.66
			25	0	21.71	20.76

Bandwidth	UL Channel	UL Freq. MHz	# RBs	Offset RBs	QPSK	16QAM
10 MHz	23230	782.0	1	1	22.03	21.21
				24	22.56	21.96
				49	22.25	21.59
			25	1	21.54	20.56
				13	21.73	20.74
				25	21.58	20.57
			50	0	21.48	20.59

LTE B5 (850MHz) / Setup Path Loss = 4.7 (TS9)						
Bandwidth	UL Channel	UL Freq. MHz	# RBs	Offset RBs	QPSK	16QAM
1.4 MHz	20407	824.7	1	1	22.27	21.75
				3	22.39	21.83
				5	22.27	21.73
			3	1	22.38	21.60
				2	22.40	21.61
				3	22.34	21.53
			6	0	21.33	20.54
	20525	836.5	1	1	21.59	21.70
				3	21.63	21.78
				5	21.43	21.59
			3	1	21.66	21.56
				2	21.65	21.55
				3	21.62	21.52
			6	0	21.46	20.62
	20643	848.3	1	1	21.23	21.15
				3	21.17	21.13
				5	20.90	20.85
			3	1	21.21	20.92
				2	21.19	20.89
				3	21.02	20.70
			6	0	20.67	19.94

Bandwidth	UL Channel	UL Freq. MHz	# RBs	Offset RBs	QPSK	16QAM
3 MHz	20415	825.5	1	1	21.66	21.87
				7	21.75	22.08
				14	21.87	21.96
			7	1	21.53	21.42
				4	21.59	21.46
				8	21.46	21.35
			15	0	21.62	20.81
	20525	836.5	1	1	22.55	21.79
				7	22.61	21.86
				14	22.57	21.77
			7	1	22.12	22.06
				4	22.19	22.14
				8	22.04	22.01
			15	0	21.59	20.77
	20635	847.5	1	1	21.69	21.68
				7	21.35	21.43
				14	21.07	21.13
			7	1	21.35	21.06
				4	21.42	21.11
				8	21.21	20.98
			15	0	21.03	20.24

LTE B5 (850MHz) / Setup Path Loss = 4.7 (TS9)						
Bandwidth	UL Channel	UL Freq. MHz	# RBs	Offset RBs	QPSK	16QAM
5 MHz	20425	826.5	1	1	22.33	21.59
				12	22.56	21.83
				24	22.43	21.68
			12	1	21.69	20.64
				7	21.71	20.79
				13	21.76	20.81
			25	0	21.69	20.76
	20525	836.5	1	1	21.74	21.74
				12	21.61	21.73
				24	21.59	21.67
			12	1	21.51	20.51
				7	21.56	20.67
				13	21.68	20.72
			25	0	21.55	20.66
	20625	846.5	1	1	22.76	22.11
				12	22.16	21.74
				24	21.75	21.21
			12	1	21.69	20.77
				7	21.32	20.45
				13	20.90	20.03
			25	0	21.32	20.47

Bandwidth	UL Channel	UL Freq. MHz	# RBs	Offset RBs	QPSK	16QAM
10 MHz	20450	829.0	1	1	21.89	22.00
				24	21.72	21.90
				49	21.09	21.38
			25	1	21.69	20.00
				13	21.78	20.81
				25	21.58	20.65
			50	0	21.59	20.73
	20525	836.5	1	1	22.74	22.06
				24	22.48	21.77
				49	22.69	21.95
			25	1	21.45	20.53
				13	21.62	20.65
				25	21.72	20.87
			50	0	21.65	20.70
	20600	844.0	1	1	21.95	21.93
				24	21.66	21.83
				49	20.93	21.06
			25	1	21.97	21.04
				13	21.89	20.98
				25	21.27	20.40
			50	0	21.52	20.79

LTE B4 (1700MHz) / Setup Path Loss = 5.4 (TS9)						
Bandwidth	UL Channel	UL Freq. MHz	# RBs	Offset RBs	QPSK	16QAM
1.4 MHz	19957	1710.7	1	1	23.13	22.41
				3	23.17	22.49
				5	22.99	22.28
			3	1	23.20	22.34
				2	23.21	22.29
				3	23.11	22.15
			6	0	22.25	21.23
	20175	1732.5	1	1	23.18	22.46
				3	23.16	22.53
				5	22.99	22.32
			3	1	23.22	22.29
				2	23.19	22.25
				3	23.13	22.17
			6	0	22.24	21.26
	20393	1754.3	1	1	21.96	22.02
				3	21.89	22.02
				5	21.67	21.82
			3	1	22.01	21.83
				2	21.93	21.78
				3	21.86	21.71
			6	0	21.79	20.85

Bandwidth	UL Channel	UL Freq. MHz	# RBs	Offset RBs	QPSK	16QAM
3 MHz	19965	1711.5	1	1	22.56	21.97
				7	22.68	22.08
				14	22.57	21.93
			7	1	21.96	21.45
				4	22.08	21.68
				8	21.92	21.39
			15	0	21.78	21.05
	20175	1732.5	1	1	22.94	22.25
				7	23.14	22.54
				14	23.09	22.43
			7	1	21.59	21.2
				4	21.68	21.29
				8	21.42	21.13
			15	0	22.27	21.31
	20385	1753.5	1	1	22.78	22.07
				7	22.83	22.15
				14	22.58	21.93
			7	1	21.27	21.04
				4	21.36	21.37
				8	21.28	21.09
			15	0	21.84	20.85