

APPENDIX B: TEST SEQUENCES

1. Test sequence is generated based on below parameters of the DUT:
 - a. Measured maximum power (P_{max})
 - b. Measured Tx_power_at_SAR_design_target (P_{limit})
 - c. Reserve_power_margin (dB)
 - For 3G Technology: Reserve_power_margin (dB) = Reserve_power_margin_db_2g_3g_wwan; $P_{reserve}$ (dBm) = measured P_{limit} (dBm) – Reserve_power_margin_db_2g_3g_wwan
 - For 4G and 5G Technology: Reserve_power_margin (dB) = -
10*log10(total_min_exp_budget_linear_4g_5g_wwan); $P_{reserve}$ (dBm) = measured P_{limit} (dBm) – (-10*log10(total_min_exp_budget_linear_4g_5g_wwan))
 - d. SAR_time_window (100s for FCC)

2. Test Sequence 1 Waveform:

Based on the parameters above, the Test Sequence 1 is generated with one transition between high and low Tx powers. Here, high power = P_{max} ; low power = $P_{max}/2$, and the transition occurs after 80 seconds at high power P_{max} . As long as the power enforcement is taking into effect during one 100s/60s time window, the validation test with this defined test sequence 1 is valid, otherwise, select other radio configuration (band/DSI within the same technology group) having lower P_{limit} for this test. The Test sequence 1 waveform is shown below:

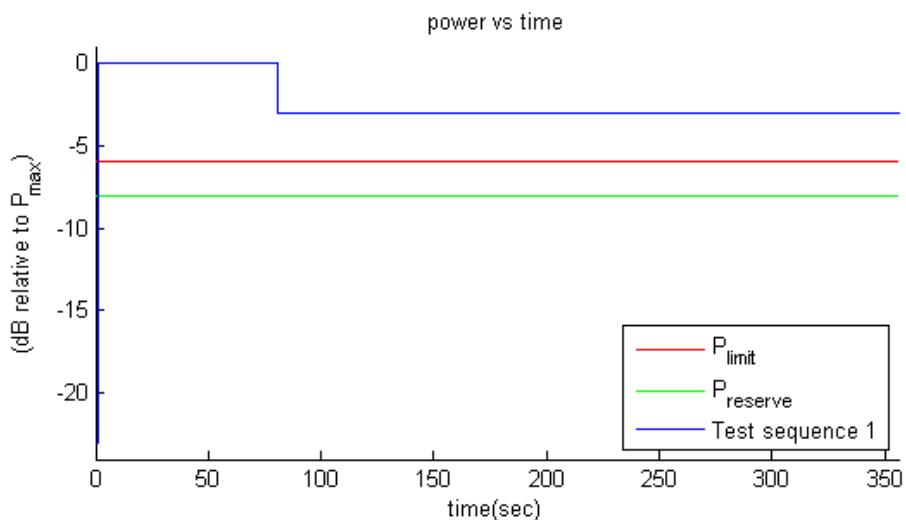


Figure B-1
Test sequence 1 waveform

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3. Test Sequence 2 Waveform:

Based on the parameters described above, the Test Sequence 2 is generated as described in Table B-1, which contains two 170-second-long sequences (yellow and green highlighted rows) that are mirrored around the center row of 20s, resulting in a total duration of 360 seconds:

Table B-1
Test Sequence 2

Time duration (seconds)	dB relative to P_{limit} or $P_{reserve}$
15	$P_{reserve} - 2$
20	P_{limit}
20	$(P_{limit} + P_{max})/2$ averaged in mW and rounded to nearest 0.1 dB step
10	$P_{reserve} - 6$
20	P_{max}
15	P_{limit}
15	$P_{reserve} - 5$
20	P_{max}
10	$P_{reserve} - 3$
15	P_{limit}
10	$P_{reserve} - 4$
20	$(P_{limit} + P_{max})/2$ averaged in mW and rounded to nearest 0.1 dB step
10	$P_{reserve} - 4$
15	P_{limit}
10	$P_{reserve} - 3$
20	P_{max}
15	$P_{reserve} - 5$
15	P_{limit}
20	P_{max}
10	$P_{reserve} - 6$
20	$(P_{limit} + P_{max})/2$ averaged in mW and rounded to nearest 0.1 dB step
20	P_{limit}
15	$P_{reserve} - 2$

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The Test Sequence 2 waveform is shown in Figure B-2.

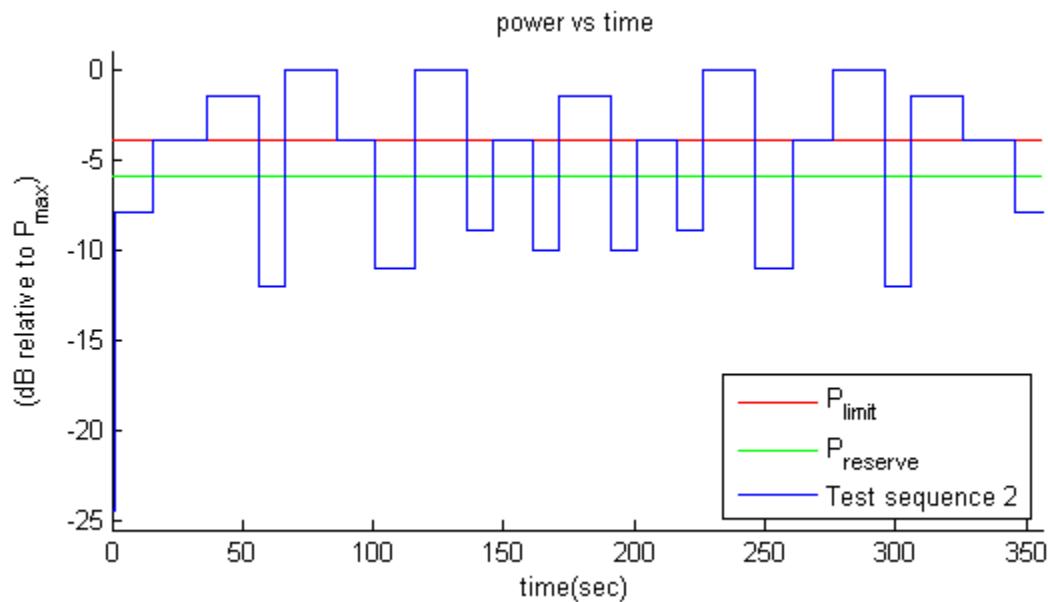


Figure B-2
Test sequence 2 waveform

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