



1. Introduction Section

The original model (FCC ID: UZ7MC330K) and the variant model (FCC ID: UZ7MC330M) has identical PCB layout, antenna, SW implementation for Bluetooth/Wi-Fi. Based on their similarity, the FCC Part 15C & 15E(equipment class: DTS, DSS, NII) test data issued for original model also apply for the variant model.

The applicant takes full responsibility that the test data as referenced in section 3 below represent compliance for this FCC ID (FCC ID: UZ7MC330M).



2. Difference Section

The original model (FCC ID: UZ7MC330K) and the variant model (FCC ID: UZ7MC330M) has identical PCB layout, antenna, SW implementation for Bluetooth/Wi-Fi. The details of similarity and difference can be found in the Operating Description.

The product specification is outlined in the following table:

FCC ID		UZ7MC330K	UZ7MC330M
Wireless Tech	Mode	Frequency (MHz)	
Wi-Fi	11b/11g/11n(HT20)/11n(HT40)	2412-2462 MHz	2412-2462 MHz
	11a/11n(HT20)/11n(HT40)/11ac(VHT20)/11ac(VHT40)/11ac(VHT80)	5180-5240 MHz	5180-5240 MHz
		5260-5320 MHz	5260-5320 MHz
		5500-5700 MHz	5500-5700 MHz
		5745-5825 MHz	5745-5825 MHz
Bluetooth	BR/EDR/LE	2402-2480 MHz	2402-2480 MHz
NFC	NFC	13.56 MHz	NA



3. Spot Check Verification Data Section

Summary of the spot check:

Test Item	Mode	UZ7MC330K Worst Result	UZ7MC330M Worst Result	Difference (dB)
Average Conducted Power (dBm)	802.11b (MIMO)	21.26	20.83	0.43
	802.11g (MIMO)	20.24	20.17	0.07
	11n HT20 (MIMO)	20.19	20.09	0.1
	11n HT40 (MIMO)	17.82	17.81	0.01
	802.11b (SISO)	18.33	18.18	0.15
	802.11g (SISO)	17.48	17.23	0.25
	11n HT20 (SISO)	17.49	17.19	0.3
	11n HT40 (SISO)	16.59	16.99	-0.4
	11n HT20 (BF)	21.46	21.46	0
	11n HT40 (BF)	19.76	19.56	0.2
	20MHz BW 5150-5250MHz (MIMO)	18.49	18.94	-0.45
	20MHz BW 5250-5350MHz (MIMO)	17.67	17.77	-0.1
	20MHz BW 5470-5725MHz (MIMO)	19.49	19.34	0.15
	20MHz BW 5725-5850MHz (MIMO)	20.25	20.21	0.04
	40MHz BW 5150-5250MHz (MIMO)	17.24	17.07	0.17
	40MHz BW 5250-5350MHz (MIMO)	17.64	17.52	0.12
	40MHz BW 5470-5725MHz (MIMO)	19.51	19.62	-0.11
	40MHz BW 5725-5850MHz (MIMO)	19.84	19.65	0.19
	80MHz BW 5150-5250MHz (MIMO)	9.49	9.07	0.42
	80MHz BW 5250-5350MHz (MIMO)	10.49	10.11	0.38
	80MHz BW 5470-5725MHz (MIMO)	18.93	18.70	0.23
	80MHz BW 5725-5850MHz (MIMO)	18.64	18.62	0.02
	20MHz BW 5150-5250MHz (SISO)	17.39	17.37	0.02
	20MHz BW 5250-5350MHz (SISO)	17.47	17.46	0.01
	20MHz BW 5470-5725MHz (SISO)	17.49	17.23	0.26
	20MHz BW 5725-5850MHz (SISO)	17.49	17.49	0
	40MHz BW 5150-5250MHz (SISO)	16.18	16.11	0.07
	40MHz BW 5250-5350MHz (SISO)	16.73	16.56	0.17
	40MHz BW 5470-5725MHz (SISO)	16.99	16.77	0.22
	40MHz BW 5725-5850MHz (SISO)	16.90	16.98	-0.08
	80MHz BW 5150-5250MHz (SISO)	8.4	8.37	0.03
	80MHz BW 5250-5350MHz (SISO)	11.4	11.32	0.08
	80MHz BW 5470-5725MHz (SISO)	16.9	16.71	0.19
	80MHz BW 5725-5850MHz (SISO)	14.96	14.86	0.10
	20MHz BW 5150-5250MHz (BF)	20.02	20.46	-0.44
	20MHz BW 5250-5350MHz (BF)	19.66	19.67	-0.01
	20MHz BW 5470-5725MHz (BF)	19.70	19.55	0.15
	20MHz BW 5725-5850MHz (BF)	20.37	20.5	-0.13
	40MHz BW 5150-5250MHz (BF)	18.20	18.11	0.09
	40MHz BW 5250-5350MHz (BF)	19.87	19.77	0.1
	40MHz BW 5470-5725MHz (BF)	20.37	20.32	0.05
	40MHz BW 5725-5850MHz (BF)	19.76	19.96	0.1
	80MHz BW 5150-5250MHz (BF)	10.77	10.57	0.2
	80MHz BW 5250-5350MHz (BF)	12.04	12.01	0.03
80MHz BW 5470-5725MHz (BF)	18.92	18.9	0.02	
80MHz BW 5725-5850MHz (BF)	18.91	18.94	-0.03	
BT (1Mbps)	3.48	3.46	0.02	
BT (2Mbps)	1.02	0.81	0.21	
BT (3Mbps)	1.02	0.87	0.15	
BT-LE	2.88	2.87	0.01	
Test date	2017/09/04 – 2017/10/14	2017/10/04 – 2017/10/16		
Peak Radiated Spurious Emission (Band Edge) (dBuV/m)	802.11b (MIMO)	57.25	57.69	-0.44
	802.11g (MIMO)	65	65.29	-0.29
	11n HT20 (MIMO)	64.47	66.38	-1.91
	11n HT40 (MIMO)	63.11	64.96	-1.85



	802.11b (SISO)	58.78	57.64	1.14
	802.11g (SISO)	62.13	61.97	0.16
	11n HT20 (SISO)	59.66	61.86	-2.2
	11n HT40 (SISO)	62.55	61.93	0.62
	11n HT20 (BF)	67.21	65.92	1.29
	11n HT40 (BF)	63.94	63.93	0.01
	20MHz BW 5150-5250MHz (MIMO)	61.03	60.8	0.23
	20MHz BW 5250-5350MHz (MIMO)	57.23	56.86	0.37
	20MHz BW 5470-5725MHz (MIMO)	61.2	62.5	-1.3
	20MHz BW 5725-5850MHz (MIMO)	54.82	54.82	0
	40MHz BW 5150-5250MHz (MIMO)	59.73	59.55	0.18
	40MHz BW 5250-5350MHz (MIMO)	60.65	57.79	2.86
	40MHz BW 5470-5725MHz (MIMO)	67.11	64.28	2.83
	40MHz BW 5725-5850MHz (MIMO)	64.75	63.42	1.33
	80MHz BW 5150-5250MHz (MIMO)	57.83	58.49	-0.66
	80MHz BW 5250-5350MHz (MIMO)	57.29	56.99	0.3
	80MHz BW 5470-5725MHz (MIMO)	57.72	58.47	-0.75
	80MHz BW 5725-5850MHz (MIMO)	66.99	66.45	0.54
	20MHz BW 5150-5250MHz (SISO)	60.26	59.72	0.54
	20MHz BW 5250-5350MHz (SISO)	58.8	60.17	-1.37
	20MHz BW 5470-5725MHz (SISO)	66.91	64.75	2.16
	20MHz BW 5725-5850MHz (SISO)	54.7	54	0.7
	40MHz BW 5150-5250MHz (SISO)	60.78	59.83	0.95
	40MHz BW 5250-5350MHz (SISO)	63.94	61.51	2.43
	40MHz BW 5470-5725MHz (SISO)	61.92	61.01	0.91
	40MHz BW 5725-5850MHz (SISO)	61.1	58.23	2.57
	80MHz BW 5150-5250MHz (SISO)	58.46	59.76	-1.3
	80MHz BW 5250-5350MHz (SISO)	58.44	57.81	0.63
	80MHz BW 5470-5725MHz (SISO)	59.68	59.89	-0.21
	80MHz BW 5725-5850MHz (SISO)	65.67	63.35	2.32
	20MHz BW 5150-5250MHz (BF)	62.85	63.38	-0.53
	20MHz BW 5250-5350MHz (BF)	60.94	59.76	1.18
	20MHz BW 5470-5725MHz (BF)	66.86	64.74	2.12
	20MHz BW 5725-5850MHz (BF)	56.21	55.59	0.62
	40MHz BW 5150-5250MHz (BF)	61.54	62.16	-0.62
	40MHz BW 5250-5350MHz (BF)	61.7	63.26	-1.56
	40MHz BW 5470-5725MHz (BF)	63.63	65.05	-1.42
	40MHz BW 5725-5850MHz (BF)	59.07	61.02	-1.95
	80MHz BW 5150-5250MHz (BF)	60.2	62	-1.8
	80MHz BW 5250-5350MHz (BF)	60.43	60.58	-0.15
	80MHz BW 5470-5725MHz (BF)	60.51	61.23	-0.72
	80MHz BW 5725-5850MHz (BF)	62.79	64.73	-1.94
	BT (1Mbps)	43.47	42.8	0.67
	BT-LE	54.79	52.68	2.11
	Test date	2017/09/06 – 2017/10/16	2017/10/12 – 2017/10/17	
Average Radiated Spurious Emission (Band Edge) (dBuV/m)	802.11b (MIMO)	49.41	50.64	-1.23
	802.11g (MIMO)	52.9	51.96	0.94
	11n HT20 (MIMO)	52.87	52.14	0.73
	11n HT40 (MIMO)	52.68	52.99	-0.31
	802.11b (SISO)	51.02	50.64	0.38
	802.11g (SISO)	51.57	51.43	0.14
	11n HT20 (SISO)	48.87	49.07	-0.2
	11n HT40 (SISO)	52.97	51.99	0.98
	11n HT20 (BF)	52.37	52.18	0.19
	11n HT40 (BF)	52.66	52.99	-0.33
	20MHz BW 5150-5250MHz (MIMO)	52.27	52.76	-0.49
	20MHz BW 5250-5350MHz (MIMO)	50.42	50.24	0.18
	20MHz BW 5470-5725MHz (MIMO)	52.15	51.9	0.25
	20MHz BW 5725-5850MHz (MIMO)	NA	NA	
	40MHz BW 5150-5250MHz (MIMO)	52.25	51.55	0.7
	40MHz BW 5250-5350MHz (MIMO)	52.76	52.04	0.72
	40MHz BW 5470-5725MHz (MIMO)	52.91	52.92	-0.01
40MHz BW 5725-5850MHz (MIMO)	NA	NA		



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	80MHz BW 5150-5250MHz (MIMO)	52.14	52.68	-0.54
	80MHz BW 5250-5350MHz (MIMO)	52.01	52.2	-0.19
	80MHz BW 5470-5725MHz (MIMO)	52.4	51.98	0.42
	80MHz BW 5725-5850MHz (MIMO)	NA	NA	
	20MHz BW 5150-5250MHz (SISO)	52.57	51.8	0.77
	20MHz BW 5250-5350MHz (SISO)	52.1	51.09	1.01
	20MHz BW 5470-5725MHz (SISO)	52.08	50.46	1.62
	20MHz BW 5725-5850MHz (SISO)	NA	NA	
	40MHz BW 5150-5250MHz (SISO)	52.52	51.3	1.22
	40MHz BW 5250-5350MHz (SISO)	52.94	52.18	0.76
	40MHz BW 5470-5725MHz (SISO)	52.06	51.78	0.28
	40MHz BW 5725-5850MHz (SISO)	NA	NA	
	80MHz BW 5150-5250MHz (SISO)	52.85	52.68	0.17
	80MHz BW 5250-5350MHz (SISO)	51.21	51.03	0.18
	80MHz BW 5470-5725MHz (SISO)	52.75	52.49	0.26
	80MHz BW 5725-5850MHz (SISO)	NA	NA	
	20MHz BW 5150-5250MHz (BF)	52.9	52.63	0.27
	20MHz BW 5250-5350MHz (BF)	52.5	51.08	1.42
	20MHz BW 5470-5725MHz (BF)	NA	NA	
	20MHz BW 5725-5850MHz (BF)	NA	NA	
	40MHz BW 5150-5250MHz (BF)	52.55	50.77	1.78
	40MHz BW 5250-5350MHz (BF)	51.11	52.62	-1.51
	40MHz BW 5470-5725MHz (BF)	52.59	52.23	0.36
	40MHz BW 5725-5850MHz (BF)	NA	NA	
	80MHz BW 5150-5250MHz (BF)	52.92	52.37	0.55
	80MHz BW 5250-5350MHz (BF)	52.67	51.51	1.16
	80MHz BW 5470-5725MHz (BF)	52.43	52.04	0.39
	80MHz BW 5725-5850MHz (BF)	NA	NA	
	BT (1Mbps)	18.75	18.03	0.72
	BT-LE	43.28	42.07	1.21
	Test date	2017/09/06 – 2017/10/16	2017/10/12 – 2017/10/17	
Peak Radiated Spurious Emission (Harmonic) (dBuV/m)	802.11b (MIMO)	45.42	45.57	-0.15
	802.11g (MIMO)	45.44	44.47	0.97
	11n HT20 (MIMO)	44.4	45	-0.6
	11n HT40 (MIMO)	44.65	44.81	-0.16
	802.11b (SISO)	46.87	46.64	0.23
	802.11g (SISO)	39.28	40.87	-1.59
	11n HT20 (SISO)	39.8	39.24	0.56
	11n HT40 (SISO)	44.21	44.24	-0.03
	11n HT20 (BF)	41.45	39.3	2.15
	11n HT40 (BF)	44.84	43.95	0.89
	20MHz BW 5150-5250MHz (MIMO)	48.76	49	-0.24
	20MHz BW 5250-5350MHz (MIMO)	50.89	50.24	0.65
	20MHz BW 5470-5725MHz (MIMO)	54.71	56.36	-1.65
	20MHz BW 5725-5850MHz (MIMO)	61.84	61.14	0.7
	40MHz BW 5150-5250MHz (MIMO)	47.73	46.51	1.22
	40MHz BW 5250-5350MHz (MIMO)	50.23	48.24	1.99
	40MHz BW 5470-5725MHz (MIMO)	50.78	51.01	-0.23
	40MHz BW 5725-5850MHz (MIMO)	59.75	59.7	0.05
	80MHz BW 5150-5250MHz (MIMO)	47.18	44.62	2.56
	80MHz BW 5250-5350MHz (MIMO)	46.2	44.65	1.55
	80MHz BW 5470-5725MHz (MIMO)	53.09	51.3	1.79
	80MHz BW 5725-5850MHz (MIMO)	52.78	51.85	0.93
	20MHz BW 5150-5250MHz (SISO)	47.68	48.97	-1.29
	20MHz BW 5250-5350MHz (SISO)	48.55	50.32	-1.77
	20MHz BW 5470-5725MHz (SISO)	60.38	61.16	-0.78
	20MHz BW 5725-5850MHz (SISO)	58.36	58.34	0.02
	40MHz BW 5150-5250MHz (SISO)	47.25	49.43	-2.18
	40MHz BW 5250-5350MHz (SISO)	50.44	49.23	1.12
	40MHz BW 5470-5725MHz (SISO)	56.97	58.77	-1.8
	40MHz BW 5725-5850MHz (SISO)	53.02	51.14	-1.12
	80MHz BW 5150-5250MHz (SISO)	48.99	50.31	-1.62
	80MHz BW 5250-5350MHz (SISO)	50.72	49.46	1.26



80MHz BW 5470-5725MHz (SISO)	50.99	50.13	0.86
80MHz BW 5725-5850MHz (SISO)	51.46	53.94	-2.48
20MHz BW 5150-5250MHz (BF)	46.07	48.54	-2.47
20MHz BW 5250-5350MHz (BF)	46.63	46.15	0.48
20MHz BW 5470-5725MHz (BF)	60.61	58.29	2.32
20MHz BW 5725-5850MHz (BF)	61.81	61.38	0.43
40MHz BW 5150-5250MHz (BF)	43.02	45.83	-2.81
40MHz BW 5250-5350MHz (BF)	49.77	47.73	2.04
40MHz BW 5470-5725MHz (BF)	54.4	56.99	-2.59
40MHz BW 5725-5850MHz (BF)	50.73	51.93	-1.2
80MHz BW 5150-5250MHz (BF)	43.98	44.71	-0.73
80MHz BW 5250-5350MHz (BF)	44.19	44.58	-0.39
80MHz BW 5470-5725MHz (BF)	50.69	49.69	1
80MHz BW 5725-5850MHz (BF)	51.97	53.66	-1.69
BT (1Mbps)	45.04	43.51	1.53
BT-LE	44.93	45.58	-0.65
Test date	2017/09/06 – 2017/10/16	2017/10/12 – 2017/10/17	

Conclusion:

WLAN Radiated spurious emission test against the variant model for non-cellular part based on the worst-case condition from the original model was performed in this filing to demonstrate the test data from original model remains representative for the variant model.

Based on the spot check test result (power levels measured are within 0.5dB, and the worst case of RSE spot check verification based on the worst condition from the original model is within 3dB, and are compliance with the limits), the test data from the original model is representative for the variant model.

The unwanted, harmonics, radiated spurious emission is reported peak measurement only due to spurious lower than 20dB than the limit.

The detail test results can be found in this document, original report Appendix B1~B4, hereafter.