

APPENDIX F: DOWNLINK LTE CA RF CONDUCTED POWERS

1.1 LTE Downlink Only Carrier Aggregation Test Reduction Methodology

SAR test exclusion for LTE downlink Carrier Aggregation is determined by power measurements according to the number of component carriers (CCs) supported by the product implementation. Per April 2018 TCBC Workshop Notes, the following test reduction methodology was applied to determine the combinations required for conducted power measurements.

LTE DLCA Test Reduction Methodology:

- The supported combinations were arranged by the number of component carriers in columns.
- Any limitations on the PCC or SCC for each combination were identified alongside the combination (e.g. CA_2A-2A-4A-12A, but B12 can only be configured as a SCC).
- Power measurements were performed for "supersets" (LTE CA combinations with multiple components carriers) and any "subsets" (LTE CA combinations with fewer component carriers) that were not completely covered by the supersets.
- Only subsets that have the exact same components as a superset were excluded for measurement.
- When there were certain restrictions on component carriers that existed in the superset that were not applied for the subset, the subset configuration was additionally evaluated.
- Both inter-band and intra-band downlink carrier aggregation scenarios were considered.
- Downlink CA combinations for SISO and 4x4 Downlink MIMO operations were measured independently, per May 2017 TCBC Workshop notes.

Table 1 – Example of Exclusion Table for SISO Configurations

Index	CCC	Supported Channel Bandwidth (MHz)	Restriction	Completely Covered by Measurement Superset
CCC#1	CA [2A]	5, 10, 15, 20	B20-4A	No
CCC#2	CA [2A]-2A	5, 10, 15, 20	B20-4A	No
CCC#3	CA [2A]-2A-4A	5, 10, 15, 20	B20-4A	No
CCC#4	CA [2A]-2A-4A-12A	5, 10, 15, 20	B20-4A	No
CCC#5	CA [2A]-2A-4A-12A-12A	5, 10, 15, 20	B20-4A	No
CCC#6	CA [2A]-2A-4A-12A-12A-12A	5, 10, 15, 20	B20-4A	No
CCC#7	CA [2A]-2A-4A-12A-12A-12A-12A	5, 10, 15, 20	B20-4A	No
CCC#8	CA [2A]-2A-4A-12A-12A-12A-12A-12A	5, 10, 15, 20	B20-4A	No
CCC#9	CA [2A]-2A-4A-12A-12A-12A-12A-12A-12A	5, 10, 15, 20	B20-4A	No
CCC#10	CA [2A]-2A-4A-12A-12A-12A-12A-12A-12A-12A	5, 10, 15, 20	B20-4A	No
CCC#11	CA [2A]-2A-4A-12A-12A-12A-12A-12A-12A-12A-12A	5, 10, 15, 20	B20-4A	No
CCC#12	CA [2A]-2A-4A-12A-12A-12A-12A-12A-12A-12A-12A-12A	5, 10, 15, 20	B20-4A	No
CCC#13	CA [2A]-2A-4A-12A-12A-12A-12A-12A-12A-12A-12A-12A-12A	5, 10, 15, 20	B20-4A	No
CCC#14	CA [2A]-2A-4A-12A-12A-12A-12A-12A-12A-12A-12A-12A-12A-12A	5, 10, 15, 20	B20-4A	No
CCC#15	CA [2A]-2A-4A-12A-12A-12A-12A-12A-12A-12A-12A-12A-12A-12A-12A	5, 10, 15, 20	B20-4A	No
CCC#16	CA [2A]-2A-4A-12A-12A-12A-12A-12A-12A-12A-12A-12A-12A-12A-12A-12A	5, 10, 15, 20	B20-4A	No
CCC#17	CA [2A]-2A-4A-12A-12A-12A-12A-12A-12A-12A-12A-12A-12A-12A-12A-12A-12A	5, 10, 15, 20	B20-4A	No
CCC#18	CA [2A]-2A-4A-12A-12A-12A-12A-12A-12A-12A-12A-12A-12A-12A-12A-12A-12A-12A	5, 10, 15, 20	B20-4A	No
CCC#19	CA [2A]-2A-4A-12A-12A-12A-12A-12A-12A-12A-12A-12A-12A-12A-12A-12A-12A-12A-12A	5, 10, 15, 20	B20-4A	No
CCC#20	CA [2A]-2A-4A-12A-12A-12A-12A-12A-12A-12A-12A-12A-12A-12A-12A-12A-12A-12A-12A-12A	5, 10, 15, 20	B20-4A	No

Table 2 – Example of Exclusion Table for 4x4 Downlink MIMO Configurations

Index	CCC	Supported Channel Bandwidth (MHz)	Restriction	Completely Covered by Measurement Superset
CCC#1	CA [2A]	5, 10, 15, 20	B20-4A	No
CCC#2	CA [2A]-2A	5, 10, 15, 20	B20-4A	No
CCC#3	CA [2A]-2A-4A	5, 10, 15, 20	B20-4A	No
CCC#4	CA [2A]-2A-4A-12A	5, 10, 15, 20	B20-4A	No
CCC#5	CA [2A]-2A-4A-12A-12A	5, 10, 15, 20	B20-4A	No
CCC#6	CA [2A]-2A-4A-12A-12A-12A	5, 10, 15, 20	B20-4A	No
CCC#7	CA [2A]-2A-4A-12A-12A-12A-12A	5, 10, 15, 20	B20-4A	No
CCC#8	CA [2A]-2A-4A-12A-12A-12A-12A-12A	5, 10, 15, 20	B20-4A	No
CCC#9	CA [2A]-2A-4A-12A-12A-12A-12A-12A-12A	5, 10, 15, 20	B20-4A	No
CCC#10	CA [2A]-2A-4A-12A-12A-12A-12A-12A-12A-12A	5, 10, 15, 20	B20-4A	No
CCC#11	CA [2A]-2A-4A-12A-12A-12A-12A-12A-12A-12A-12A	5, 10, 15, 20	B20-4A	No
CCC#12	CA [2A]-2A-4A-12A-12A-12A-12A-12A-12A-12A-12A-12A	5, 10, 15, 20	B20-4A	No
CCC#13	CA [2A]-2A-4A-12A-12A-12A-12A-12A-12A-12A-12A-12A-12A	5, 10, 15, 20	B20-4A	No
CCC#14	CA [2A]-2A-4A-12A-12A-12A-12A-12A-12A-12A-12A-12A-12A-12A	5, 10, 15, 20	B20-4A	No
CCC#15	CA [2A]-2A-4A-12A-12A-12A-12A-12A-12A-12A-12A-12A-12A-12A-12A	5, 10, 15, 20	B20-4A	No
CCC#16	CA [2A]-2A-4A-12A-12A-12A-12A-12A-12A-12A-12A-12A-12A-12A-12A-12A	5, 10, 15, 20	B20-4A	No
CCC#17	CA [2A]-2A-4A-12A-12A-12A-12A-12A-12A-12A-12A-12A-12A-12A-12A-12A-12A	5, 10, 15, 20	B20-4A	No
CCC#18	CA [2A]-2A-4A-12A-12A-12A-12A-12A-12A-12A-12A-12A-12A-12A-12A-12A-12A-12A	5, 10, 15, 20	B20-4A	No
CCC#19	CA [2A]-2A-4A-12A-12A-12A-12A-12A-12A-12A-12A-12A-12A-12A-12A-12A-12A-12A-12A	5, 10, 15, 20	B20-4A	No
CCC#20	CA [2A]-2A-4A-12A-12A-12A-12A-12A-12A-12A-12A-12A-12A-12A-12A-12A-12A-12A-12A-12A	5, 10, 15, 20	B20-4A	No

Note: [CC] indicates component carrier with 4x4 DL MIMO antenna configuration

FCC ID: PY7-57441Y	 PCTEST Proud to be part of element	SAR EVALUATION REPORT		Reviewed by: Quality Manager
Test Dates: 08/23/20 - 09/16/20	DUT Type: Portable Handset			APPENDIX F: Page 1 of 9

1.2 LTE Downlink Only Carrier Aggregation Test Selection and Setup

SAR test exclusion for LTE downlink Carrier Aggregation is determined by power measurements according to the number component carriers (CCs) supported by the product implementation. For those configurations required by April 2018 TCBC Workshop Notes, conducted power measurements with LTE Carrier Aggregation (CA) (downlink only) active are made in accordance to KDB Publication 941225 D05Av01r02. The RRC connection is only handled by one cell, the primary component carrier (PCC) for downlink and uplink communications. After making a data connection to the PCC, the UE device adds secondary component carrier(s) (SCC) on the downlink only. All uplink communications and acknowledgements remain identical to specifications when downlink carrier aggregation is inactive on the PCC. Additional conducted output powers are measured with the downlink carrier aggregation active for the configuration with highest measured maximum conducted power with downlink carrier aggregation inactive measured among the channel bandwidth, modulation, and RB combinations in each frequency band.

This device supports LAA with downlink carrier aggregation only. It uses carrier aggregation in the downlink to combine LTE in the unlicensed spectrum (i.e. LTE Band 46) with LTE in the licensed band (served as PCC). All uplink communications and acknowledgements on the PCC remain identical to specifications when downlink carrier aggregation is inactive.

Per FCC KDB Publication 941225 D05Av01r02, no SAR measurements are required for carrier aggregation configurations when the maximum average output power with downlink only carrier aggregation active is not more than 0.25 dB higher than the average output power with downlink only carrier aggregation inactive. All bands required for SAR testing per FCC KDB procedures were considered. Based on the measured maximum powers below, no additional SAR tests were required for DLCA SAR configurations.

General PCC and SCC configuration selection procedure

- PCC uplink channel, channel bandwidth, modulation and RB configurations were selected based on section C)3)b)ii) of KDB 941225 D05 V01r02. The downlink PCC channel was paired with the selected PCC uplink channel according to normal configurations without carrier aggregation.
- To maximize aggregated bandwidth, highest channel bandwidth available for that CA combination was selected for SCC. For inter-band CA, the SCC downlink channels were selected near the middle of their transmission bands. For contiguous intra-band CA, the downlink channel spacing between the component carriers was set to multiple of 300 kHz less than the nominal channel spacing defined in section 5.4.1A of 3GPP TS 36.521. For non-contiguous intra-band CA, the downlink channel spacing between the component carriers was set to be larger than the nominal channel spacing and provided maximum separation between the component carriers.
- All selected PCC and SCC(s) remained fully within the uplink/downlink transmission band of the respective component carrier.

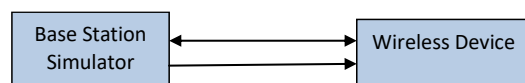


Figure 1
DL CA Power Measurement Setup

FCC ID: PY7-57441Y	 PCTEST Proud to be part of element	SAR EVALUATION REPORT	SONY	Reviewed by: Quality Manager
Test Dates: 08/23/20 - 09/16/20	DUT Type: Portable Handset			APPENDIX F: Page 2 of 9

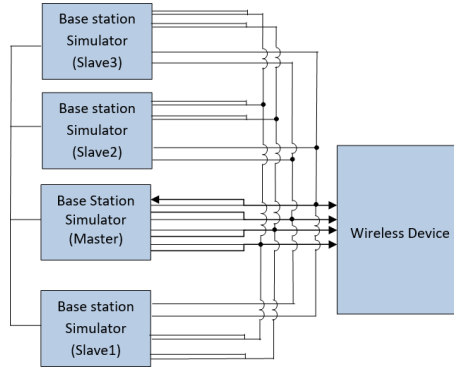


Figure 2
DL CA with DL 4x4 MIMO Power Measurement Setup

1.3 Downlink Carrier Aggregation RF Conducted Powers

1.3.1 LTE Band 12 as PCC

Table 1
Maximum Output Powers

Combination	PCC Band	PCC BW [MHz]	PCC (UL) Ch	PCC					SCC 1				SCC 2				SCC 3				SCC 4				Power		
				PCC (UL) Freq. [MHz]	Mod.	PCC UL RB	PCC UL RB Offset	PCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]	LTE Tx Power with DL CA Enabled [dBm]	LTE Single Carrier Tx Power [dBm]	
CA 2A-12A (1)	LTE B12	5	23095	707.5	QPSK	1	0	5095	737.5	LTE B2	20	900	2390	-	-	-	-	-	-	-	-	-	-	24.63	24.20		
CA 4A-12A (1)	LTE B12	5	23095	707.5	QPSK	1	0	5095	737.5	LTE B4	20	2175	2132.5	-	-	-	-	-	-	-	-	-	-	24.15	24.20		
CA 4A-12A (2)	LTE B12	5	23095	707.5	QPSK	1	0	5095	737.5	LTE B4	20	2175	2132.5	-	-	-	-	-	-	-	-	-	-	24.15	24.20		
CA 12A-66A (1)	LTE B12	5	23095	707.5	QPSK	1	0	5095	737.5	LTE B66	20	66786	2145	-	-	-	-	-	-	-	-	-	-	24.16	24.20		
CA 12A-66A (2)	LTE B12	5	23095	707.5	QPSK	1	0	5095	737.5	LTE B66	20	66786	2145	-	-	-	-	-	-	-	-	-	-	24.16	24.20		
CA 12B	LTE B12	5	23095	707.5	QPSK	1	0	5095	737.5	LTE B12	5	5047	732.7	-	-	-	-	-	-	-	-	-	-	24.26	24.20		
CA 2A-12A-12A	LTE B12	5	23095	707.5	QPSK	1	0	5095	737.5	LTE B2	20	900	2390	LTE B4	20	2175	2132.5	-	-	-	-	-	-	24.16	24.20		
CA 4A-12A-12A	LTE B12	5	23095	707.5	QPSK	1	0	5095	737.5	LTE B4	20	2175	2132.5	LTE B4	10	2390	2150	-	-	-	-	-	-	24.18	24.20		
CA 2A-12A-66A	LTE B12	5	23095	707.5	QPSK	1	0	5095	737.5	LTE B2	20	900	2390	LTE B66	20	66786	2145	-	-	-	-	-	-	24.16	24.20		
CA 4A-12A-66A-66A	LTE B12	5	23095	707.5	QPSK	1	0	5095	737.5	LTE B2	20	900	1340	LTE B2	20	1340	1340	LTE B66	20	66786	2145	LTE B66	20	67236	2190	24.17	24.20

1.3.2 LTE Band 13 as PCC

Table 2
Maximum Output Powers

Combination	PCC Band	PCC										SCC 1		SCC 2		SCC 3		SCC 4		Power				
		PCC BW [MHz]	PCC (UL) Channel	PCC (UL) Freq. [MHz]	Modulation	PCC UL RB	PCC UL RB Offset	PCC (DL) Channel	PCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]	LTE Tx Power with DL CA Enabled (dBm)	LTE Single Carrier Tx Power (dBm)	
CA 2A-4A-13A	LTE B13	10	23230	782	QPSK	1	0	5230	751	LTE B2	20	900	1960	LTE B4	20	2175	2132.5	-	-	-	-	24.48	24.46	
CA 2A-13A-66A	LTE B13	10	23230	782	QPSK	1	0	5230	751	LTE B2	20	900	1960	LTE B4	20	2175	2132.5	-	-	-	-	24.48	24.46	
CA 4A-4A-13A	LTE B13	10	23230	782	QPSK	1	0	5230	751	LTE B4	20	2175	2132.5	LTE B4	20	2175	2132.5	-	-	-	-	24.70	24.46	
CA 13A-66A-66A	LTE B13	10	23230	782	QPSK	1	0	5230	751	LTE B66	20	66786	2145	LTE B66	20	66786	2145	-	-	-	-	24.68	24.46	
CA 2A-13A-48C	LTE B13	10	23230	782	QPSK	1	0	5230	751	LTE B2	20	900	1960	LTE B48	20	50467	5517.7	-	-	-	-	24.18	24.46	
CA 2A-13A-66B	LTE B13	10	23230	782	QPSK	1	0	5230	751	LTE B2	20	900	1960	LTE B66	20	66786	2145	-	-	-	-	24.53	24.46	
CA 2A-13A-66C	LTE B13	10	23230	782	QPSK	1	0	5230	751	LTE B2	20	900	1960	LTE B66	20	66786	2145	-	-	-	-	24.51	24.46	
CA 13A-48C-66A	LTE B13	10	23230	782	QPSK	1	0	5230	751	LTE B66	20	66786	2145	LTE B66	20	66786	2145	-	-	-	-	24.71	24.46	
CA 13A-48A-66B	LTE B13	10	23230	782	QPSK	1	0	5230	751	LTE B48	20	50467	5517.7	LTE B66	20	66786	2145	-	-	-	-	24.68	24.46	
CA 2A-2A-13A-66A-66A	LTE B13	10	23230	782	QPSK	1	0	5230	751	LTE B2	20	900	1960	LTE B2	20	700	1940	LTE B66	20	66786	2145	47236	23.90	24.46
CA 2A-13A-48D	LTE B13	10	23230	782	QPSK	1	0	5230	751	LTE B2	20	900	1960	LTE B48	20	50467	5517.7	LTE B48	20	50467	5517.7	24.54	24.46	
CA 2A-13A-48A-66A-66A	LTE B13	10	23230	782	QPSK	1	0	5230	751	LTE B2	20	900	1960	LTE B48	20	50467	5517.7	LTE B66	20	66786	2145	24.63	24.46	
CA 2A-13A-48C-66A	LTE B13	10	23230	782	QPSK	1	0	5230	751	LTE B2	20	900	1960	LTE B48	20	50467	5517.7	LTE B48	20	50467	5517.7	24.57	24.46	
CA 2A-13A-48D	LTE B13	10	23230	782	QPSK	1	0	5230	751	LTE B2	20	900	1960	LTE B48	20	50467	5517.7	LTE B48	20	50467	5517.7	24.62	24.46	
CA 13A-48D-66A	LTE B13	10	23230	782	QPSK	1	0	5230	751	LTE B48	20	50467	5517.7	LTE B48	20	50467	5517.7	LTE B66	20	66786	2145	24.46	24.46	
CA 13A-48C-66A	LTE B13	10	23230	782	QPSK	1	0	5230	751	LTE B48	20	50467	5517.7	LTE B48	20	50467	5517.7	LTE B48	20	50467	5517.7	24.50	24.46	
CA 13A-48A-48D	LTE B13	10	23230	782	QPSK	1	0	5230	751	LTE B48	20	50467	5517.7	LTE B48	20	50467	5517.7	LTE B48	20	50467	5517.7	24.49	24.46	
CA 13A-48C-48C	LTE B13	10	23230	782	QPSK	1	0	5230	751	LTE B48	20	50467	5517.7	LTE B48	20	50467	5517.7	LTE B48	20	50467	5517.7	24.48	24.46	
CA 13A-48C-66B	LTE B13	10	23230	782	QPSK	1	0	5230	751	LTE B48	20	50467	5517.7	LTE B48	20	50467	5517.7	LTE B66	20	66786	2145	24.46	24.46	
CA 13A-48C-66C	LTE B13	10	23230	782	QPSK	1	0	5230	751	LTE B48	20	50467	5517.7	LTE B48	20	50467	5517.7	LTE B66	20	66786	2145	24.59	24.46	
CA 13A-48D-66A	LTE B13	10	23230	782	QPSK	1	0	5230	751	LTE B48	20	50467	5517.7	LTE B48	20	50467	5517.7	LTE B66	20	66786	2145	24.46	24.46	
CA 13A-48C	LTE B13	10	23230	782	QPSK	1	0	5230	751	LTE B48	20	50467	5517.7	LTE B48	20	50467	5517.7	LTE B48	20	50467	5517.7	24.46	24.46	

FCC ID: PY7-57441Y	 PCTEST Proud to be part of  element	SAR EVALUATION REPORT	 SONY	Reviewed by: Quality Manager
Test Dates: 08/23/20 - 09/16/20	DUT Type: Portable Handset			APPENDIX F: Page 3 of 9

1.3.3 LTE Band 66 as PCC

Table 3
Maximum Output Powers

[illegible]

1.3.4 LTE Band 7 as PCC

Table 4
Maximum Output Powers

[illegible]

1.3.5 LTE Band 41 as PCC

Table 5
Maximum Output Powers

Combination	PCC Band	PCC								SCC 1			SCC 2			SCC 3			SCC 4			Power					
		PCC BW [MHz]	PCC [UL] Ch. Freq. [MHz]	PCC [DL] Ch. Freq. [MHz]	Mod.	PCC UL RB	PCC UL RB Offset	PCC [DL] Channel	PCC [DL] Freq. [MHz]	SCC Band	SCC [DL] Channel	SCC [DL] Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC [DL] Channel	SCC [DL] Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC [DL] Channel	SCC [DL] Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC [DL] Channel	SCC [DL] Freq. [MHz]	LTE Tx Power with CA [dBm]	LTE Single Carrier Tx Power [dBm]	
CA 42A-60C	LTE B41	5	414960	2680	QPSK	1	24	414960	2680	LTE B41	20	50695	5337.5	-	-	-	-	-	-	-	-	-	-	-	-	14.80	14.80
CA 54C-61L	LTE B41	5	414960	2680	QPSK	1	24	414960	2680	LTE B41	20	51377	2665.5	-	-	-	-	-	-	-	-	-	-	-	-	14.79	14.80
CA 45A-60C	LTE B41	5	414960	2680	QPSK	1	24	414960	2680	LTE B41	20	50695	5337.5	LTE B46	20	50467	5337.7	-	-	-	-	-	-	-	-	14.80	14.80
CA 41D	LTE B41	10	414960	2680	16QAM	1	49	414960	2680	LTE B41	20	51448	2665.6	LTE B41	20	41148	2665.8	-	-	-	-	-	-	-	-	14.80	14.71
CA 45A-60C	LTE B41	5	414960	2680	QPSK	1	24	414960	2680	LTE B46	20	50695	5337.7	LTE B46	20	50467	5337.7	LTE B46	20	50883	5337.3	-	-	-	-	14.72	14.80
CA 45A-60C	LTE B41	5	414960	2680	QPSK	1	24	414960	2680	LTE B46	20	50695	5337.7	LTE B46	20	50467	5337.7	LTE B46	20	50883	5337.3	LTE B46	20	51061	5337.1	14.80	14.80

1.3.6 LTE Band 48 as PCC

Table 6
Maximum Output Powers

	PCC										SCC 1				SCC 2				SCC 3				SCC 4				Power	
Combination	PCC Band	PCC BW [MHz]	PCC (UL) Ch.	PCC (UL) Freq. [MHz]	Mod.	PCC UL RB	PCC UL RB Offset	PCC (DL) Channel	PCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]	LTE Tx Power with CA Enabled [dBm]	LTE Single Carrier Tx Power (dBm)	
CA 48A-48A	LTE B48	5	56232	3649.2	15QAM	1	0	56232	3649.2	LTE B48	20	55340	3660	-	-	-	-	-	-	-	-	-	-	-	-	-	14.43	14.37
CA 48E	LTE B48	5	56232	3649.2	15QAM	1	0	56232	3649.2	LTE B48	20	56115	3637.5	LTE B48	20	55917	3617.7	LTE B48	20	55719	3597.9	-	-	-	-	-	14.42	14.37
CA 48C-48D	LTE B48	5	56232	3649.2	15QAM	1	0	56232	3649.2	LTE B48	20	56115	3637.5	LTE B48	20	55340	3660	LTE B48	20	55538	3579.8	LTE B48	20	55736	3599.6	14.43	14.37	
CA 48D-48C	LTE B48	5	56232	3649.2	15QAM	1	0	56232	3649.2	LTE B48	20	56115	3637.5	LTE B48	20	55917	3617.7	LTE B48	20	56640	3690	LTE B48	20	56442	3670.2	14.44	14.37	

FCC ID: PY7-57441Y	 PCTEST Proud to be part of element	SAR EVALUATION REPORT	SONY	Reviewed by: Quality Manager
Test Dates: 08/23/20 - 09/16/20	DUT Type: Portable Handset			APPENDIX F: Page 5 of 9

1.4.3 LTE Band 13 as PCC

Table 9
Maximum Output Powers

Combination	PCB Band	PCC				SSC 1				SSC 2				SSC 3				SSC 4				Power					
		PCB BW [MHz]	PCC [UL] Freq. [MHz]	Mod.	PCP UL RB	PCP UL RB Offset [MHz]	PCC [DL] Freq. [MHz]	DL Ant. Config.	SSC BW [MHz]	SSC [DL] Ch.	SSC [DL] Freq. [MHz]	DL Ant. Config.	SSC BW [MHz]	SSC [DL] Ch.	SSC [DL] Freq. [MHz]	DL Ant. Config.	SSC BW [MHz]	SSC [DL] Ch.	SSC [DL] Freq. [MHz]	DL Ant. Config.	SSC BW [MHz]	SSC [DL] Ch.	SSC [DL] Freq. [MHz]	DL Ant. Config.	LTE Tx Power with CA Enabled [dBm]	LTE Single Carrier Tx Power [dBm]	
CA [2A]-2A-13A	LTE B3	20230	782	QPSK	1	0	5230	751	2x2	LTE B3	20	900	1560	4x4	LTE B2	20	1940	2x2	-	LTE B4	20	5040	5137.7	2x2	24.6	24.6	
CA [2A]-4A-13A	LTE B3	20230	782	QPSK	1	0	5230	751	2x2	LTE B3	20	900	1560	4x4	LTE B4	20	2171	2152.5	2x2	-	LTE B4	20	5040	5137.7	2x2	24.6	24.6
CA [2A]-4A-13A	LTE B3	20230	782	QPSK	1	0	5230	751	2x2	LTE B3	20	900	1560	4x4	LTE B4	20	2171	2152.5	2x2	-	LTE B4	20	5040	5137.7	2x2	24.6	24.6
CA [2A]-4A-13A	LTE B3	20230	782	QPSK	1	0	5230	751	2x2	LTE B3	20	900	1560	4x4	LTE B4	20	2171	2152.5	2x2	-	LTE B4	20	5040	5137.7	2x2	24.6	24.6
CA [2A]-4A-13A	LTE B3	20230	782	QPSK	1	0	5230	751	2x2	LTE B3	20	900	1560	4x4	LTE B4	20	2171	2152.5	2x2	-	LTE B4	20	5040	5137.7	2x2	24.6	24.6
CA [2A]-4A-13A	LTE B3	20230	782	QPSK	1	0	5230	751	2x2	LTE B3	20	900	1560	4x4	LTE B4	20	2171	2152.5	2x2	-	LTE B4	20	5040	5137.7	2x2	24.6	24.6
CA [2A]-4A-13A	LTE B3	20230	782	QPSK	1	0	5230	751	2x2	LTE B3	20	900	1560	4x4	LTE B4	20	2171	2152.5	2x2	-	LTE B4	20	5040	5137.7	2x2	24.6	24.6
CA [2A]-4A-13A	LTE B3	20230	782	QPSK	1	0	5230	751	2x2	LTE B3	20	900	1560	4x4	LTE B4	20	2171	2152.5	2x2	-	LTE B4	20	5040	5137.7	2x2	24.6	24.6
CA [2A]-4A-13A	LTE B3	20230	782	QPSK	1	0	5230	751	2x2	LTE B3	20	900	1560	4x4	LTE B4	20	2171	2152.5	2x2	-	LTE B4	20	5040	5137.7	2x2	24.6	24.6
CA [2A]-4A-13A	LTE B3	20230	782	QPSK	1	0	5230	751	2x2	LTE B3	20	900	1560	4x4	LTE B4	20	2171	2152.5	2x2	-	LTE B4	20	5040	5137.7	2x2	24.6	24.6
CA [2A]-4A-13A	LTE B3	20230	782	QPSK	1	0	5230	751	2x2	LTE B3	20	900	1560	4x4	LTE B4	20	2171	2152.5	2x2	-	LTE B4	20	5040	5137.7	2x2	24.6	24.6
CA [2A]-4A-13A	LTE B3	20230	782	QPSK	1	0	5230	751	2x2	LTE B3	20	900	1560	4x4	LTE B4	20	2171	2152.5	2x2	-	LTE B4	20	5040	5137.7	2x2	24.6	24.6
CA [2A]-4A-13A	LTE B3	20230	782	QPSK	1	0	5230	751	2x2	LTE B3	20	900	1560	4x4	LTE B4	20	2171	2152.5	2x2	-	LTE B4	20	5040	5137.7	2x2	24.6	24.6
CA [2A]-4A-13A	LTE B3	20230	782	QPSK	1	0	5230	751	2x2	LTE B3	20	900	1560	4x4	LTE B4	20	2171	2152.5	2x2	-	LTE B4	20	5040	5137.7	2x2	24.6	24.6
CA [2A]-4A-13A	LTE B3	20230	782	QPSK	1	0	5230	751	2x2	LTE B3	20	900	1560	4x4	LTE B4	20	2171	2152.5	2x2	-	LTE B4	20	5040	5137.7	2x2	24.6	24.6
CA [2A]-4A-13A	LTE B3	20230	782	QPSK	1	0	5230	751																			

FCC ID: PY7-57441Y	 PCTEST Proud to be part of	SAR EVALUATION REPORT		Reviewed by: Quality Manager
Test Dates: 08/23/20 - 09/16/20	DUT Type: Portable Handset			APPENDIX F: Page 7 of 9

1.4.4 LTE Band 66 as PCC

Table 10
Maximum Output Powers

[illegible]

FCC ID: PY7-57441Y	 PCTEST Proud to be part of e element	SAR EVALUATION REPORT	 SONY	Reviewed by: Quality Manager
Test Dates: 08/23/20 - 09/16/20	DUT Type: Portable Handset			APPENDIX F: Page 8 of 9

1.4.5 LTE Band 7 as PCC

Table 11
Maximum Output Powers

Combination	PCC										SCC 1				SCC 2				SCC 3				SCC 4				Power						
	PCC Band	PCC BW [MHz]	PCC [UL] Ch.	PCC [DL] Freq. [MHz]	Mod.	PCC UL# RB	PCC UL RB Offset	PCC [DL] Ch.	PCC [DL] Freq. [MHz]	DL Ant. Config.	SCC Band	SCC BW [MHz]	SCC [DL] Ch.	SCC [DL] Freq. [MHz]	DL Ant. Config.	SCC Band	SCC BW [MHz]	SCC [DL] Ch.	SCC [DL] Freq. [MHz]	DL Ant. Config.	SCC Band	SCC BW [MHz]	SCC [DL] Ch.	SCC [DL] Freq. [MHz]	DL Ant. Config.	SCC Band	SCC BW [MHz]	SCC [DL] Ch.	SCC [DL] Freq. [MHz]	DL Ant. Config.	LTE Tx Power with DL CA Enabled (dBm)	LTE Single Carrier Tx Power (dBm)	
CA 2A/7A	LTE B7	5	20775	2502.5	64QAM	1	12	2775	2622.5	4x4	LTE B2	20	900	1980	2x2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16.46	16.39	
CA 5A/7A	LTE B7	10	20800	2505	64QAM	1	0	2800	2625	4x4	LTE B5	10	2525	881.5	2x2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16.97	16.93	
CA 7A/7A (1)	LTE B7	5	20775	2502.5	64QAM	1	12	2775	2622.5	4x4	LTE B7	20	3350	2680	4x4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16.53	16.39	
CA 7A/46A (1)	LTE B7	5	20775	2502.5	64QAM	1	12	2775	2622.5	4x4	LTE B46	20	50805	5537.5	2x2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16.55	16.39	
CA 4A/7A/7A	LTE B7	5	20775	2502.5	64QAM	1	12	2775	2622.5	2x2	LTE B7	20	3350	2680	2x2	LTE B4	20	2175	2132.5	4x4	-	-	-	-	-	-	-	-	-	-	-	16.61	16.39
CA 4A/7A/7A	LTE B7	10	20800	2505	64QAM	1	0	2800	2625	4x4	LTE B7	20	3350	2680	4x4	LTE B4	20	2175	2132.5	4x4	-	-	-	-	-	-	-	-	-	-	-	16.39	16.39
CA 5A/7A/7A	LTE B7	10	20800	2505	64QAM	1	0	2800	2625	4x4	LTE B7	20	3350	2680	2x2	LTE B5	10	2525	881.5	2x2	-	-	-	-	-	-	-	-	-	-	-	16.37	16.33
CA 5A/7A/7A	LTE B7	10	20800	2505	64QAM	1	0	2800	2625	2x2	LTE B7	20	3350	2680	4x4	LTE B5	10	2525	881.5	2x2	-	-	-	-	-	-	-	-	-	-	-	16.49	16.33
CA 7A/46D (1)	LTE B7	5	20775	2502.5	64QAM	1	12	2775	2622.5	4x4	LTE B46	20	50805	5537.5	2x2	LTE B46	20	50807	5537.7	2x2	-	-	-	-	-	-	-	-	-	-	-	16.49	16.39
CA 7A/46D (1)	LTE B7	5	20775	2502.5	64QAM	1	12	2775	2622.5	4x4	LTE B46	20	50805	5537.5	2x2	LTE B46	20	50807	5537.7	2x2	LTE B46	20	50803	5537.3	2x2	-	-	-	-	-	-	16.47	16.39
CA 7A/46E	LTE B7	5	20775	2502.5	64QAM	1	12	2775	2622.5	4x4	LTE B46	20	50805	5537.5	2x2	LTE B46	20	50807	5537.7	2x2	LTE B46	20	50803	5537.3	2x2	LTE B46	20	50803	5537.3	2x2	16.47	16.39	

1.4.6 LTE Band 41 as PCC

Table 12
Maximum Output Powers

Combination	PCC										SCC 1				SCC 2				Power				
	PCC Band	PCC BW [MHz]	PCC [UL] Ch.	PCC [UL] Freq. [MHz]	Mod.	PCC UL# RB	PCC UL RB Offset	PCC [DL] Ch.	PCC [DL] Freq. [MHz]	DL Ant. Config.	SCC Band	SCC BW [MHz]	SCC [DL] Ch.	SCC [DL] Freq. [MHz]	DL Ant. Config.	SCC Band	SCC BW [MHz]	SCC [DL] Ch.	SCC [DL] Freq. [MHz]	DL Ant. Config.	LTE Tx Power with DL CA Enabled (dBm)	LTE Single Carrier Tx Power (dBm)	
CA 41C (1)	LTE B41	5	41490	2680	QPSK	1	24	41490	2680	4x4	LTE B41	20	41373	2668.3	4x4	-	-	-	-	-	-	14.78	14.80
CA 41D	LTE B41	10	41490	2680	16QAM	1	49	41490	2680	4x4	LTE B41	20	41346	2665.6	4x4	LTE B41	20	41148	2645.8	4x4	-	14.72	14.71

1.4.7 LTE Band 48 as PCC

Table 13
Maximum Output Powers

Combination	PCC										SCC 1				SCC 2				SCC 3				SCC 4				Power					
	PCC Band	PCC BW [MHz]	PCC [UL] Ch.	PCC [DL] Freq. [MHz]	Mod.	PCC UL# RB	PCC UL RB Offset	PCC [DL] Ch.	PCC [DL] Freq. [MHz]	DL Ant. Config.	SCC Band	SCC BW [MHz]	SCC [DL] Ch.	SCC [DL] Freq. [MHz]	DL Ant. Config.	SCC Band	SCC BW [MHz]	SCC [DL] Ch.	SCC [DL] Freq. [MHz]	DL Ant. Config.	SCC Band	SCC BW [MHz]	SCC [DL] Ch.	SCC [DL] Freq. [MHz]	DL Ant. Config.	SCC Band	SCC BW [MHz]	SCC [DL] Ch.	SCC [DL] Freq. [MHz]	DL Ant. Config.	LTE Tx Power with DL CA Enabled (dBm)	LTE Single Carrier Tx Power (dBm)
CA 48A (48A)	LTE B48	5	56232	3649.2	16QAM	1	0	56232	3649.2	2x2	LTE B48	20	55340	3560	4x4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14.41	14.37
CA 48A (48A)	LTE B48	5	56232	3649.2	16QAM	1	0	56232	3649.2	4x4	LTE B48	20	55340	3560	4x4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14.48	14.37
CA 48A (48A)	LTE B48	5	56232	3649.2	16QAM	1	0	56232	3649.2	4x4	LTE B48	20	55340	3560	4x4	LTE B48	20	55340	3560	2x2	LTE B48	20	55340	3560	2x2	LTE B48	20	55340	3560	2x2	14.41	14.37
CA 48C (48C)	LTE B48	5	56232	3649.2	16QAM	1	0	56232	3649.2	4x4	LTE B48	20	55340	3560	4x4	LTE B48	20	55340	3560	2x2	LTE B48	20	55340	3560	2x2	LTE B48	20	55340	3560	2x2	14.48	14.37
CA 48C (48C)	LTE B48	5	56232	3649.2	16QAM	1	0	56232	3649.2	2x2	LTE B48	20	55340	3560	2x2	LTE B48	20	55340	3560	2x2	LTE B48	20	55340	3560	2x2	LTE B48	20	55340	3560	2x2	14.41	14.37
CA 48C (48C)	LTE B48	5	56232	3649.2	16QAM	1	0	56232	3649.2	4x4	LTE B48	20	55340	3560	4x4	LTE B48	20	55340	3560	4x4	LTE B48	20	55340	3560	4x4	LTE B48	20	55340	3560	4x4	14.48	14.37
CA 48C (48C)	LTE B48	5	56232	3649.2	16QAM	1	0	56232	3649.2	2x2	LTE B48	20	55340	3560	2x2	LTE B48	20	55340	3560	2x2	LTE B48	20	55340	3560	2x2	LTE B48	20	55340	3560	2x2	14.41	14.37
CA 48C (48C)	LTE B48	5	56232	3649.2	16QAM	1	0	56232	3649.2	4x4	LTE B48	20	55340	3560	4x4	LTE B48	20	55340	3560	4x4	LTE B48	20	55340	3560	4x4	LTE B48	20	55340	3560	4x4	14.48	14.37
CA 48C (48C)	LTE B48	5	56232	3649.2	16QAM	1	0	56232	3649.2	2x2	LTE B48	20	55340	3560	2x2	LTE B48	20	55340	3560	2x2	LTE B48	20	55340	3560	2x2	LTE B48	20	55340	3560	2x2	14.41	14.37
CA 48C (48C)	LTE B48	5	56232	3649.2	16QAM	1	0	56232	3649.2	4x4	LTE B48	20	55340	3560	4x4	LTE B48	20	55340	3560	4x4	LTE B48	20	55340	3560	4x4	LTE B48	20	55340	3560	4x4	14.48	14.37
CA 48C (48C)	LTE B48	5	56232	3649.2	16QAM	1	0	56232	3649.2	2x2	LTE B48	20	55340	3560	2x2	LTE B48	20	55340	3560	2x2	LTE B48	20	55340	3560	2x2	LTE B48	20	55340	3560	2x2	14.41	14.37
CA 48C (48C)	LTE B48	5	56232	3649.2	16QAM	1	0	56232	3649.2	4x4	LTE B48	20	55340	3560	4x4	LTE B48	20	55340	3560	4x4	LTE B48	20	55340	3560	4x4	LTE B48	20	55340	3560	4x4	14.48	14.37
CA 48C (48C)	LTE B48	5	56232	3649.2	16QAM	1	0	56232	3649.2	2x2	LTE B48	20	55340	3560	2x2	LTE B48	20	55340	3560	2x2	LTE B48	20	55340	3560	2x2	LTE B48	20	55340	3560	2x2	14.41	14.37
CA 48C (48C)	LTE B48	5	56232	3649.2	16QAM	1	0	56232	3649.2	4x4	LTE B48	20	55340	3560	4x4	LTE B48	20	55340	3560	4x4	LTE B48	20	55340	3560	4x4	LTE B48	20	55340	3560	4x4	14.48	14.37
CA 48C (48C)	LTE B48	5	56232	3649.2	16QAM	1	0	56232	3649.2	2x2	LTE B48	20	55340	3560	2x2	LTE B48	20	55340	3560	2x2	LTE B48	20	55340	3560	2x2	LTE B48	20	55340	3560	2x2	14.41	14.37
CA 48C (48C)	LTE B48	5	56232	3649.2	16QAM	1	0	56232	3649.2	4x4	LTE B48	20	55340	3560	4x4	LTE B48	20	55340	3560	4x4	LTE B48	20	55340	3560	4x4	LTE B48	20	55340	3560	4x4	14.48	14.37
CA 48C (48C)	LTE B48	5	56232	3649.2	16QAM	1	0	56232	3649.2	2x2	LTE B48	20	55340	3560	2x2	LTE B48	20	55340	3560	2x2	LTE B48	20	55340	3560	2x2	LTE B48	20	55340	3560	2x2	14.41	14.37
CA 48C (48C)	LTE B48	5	56232	3649.2	16QAM	1	0	56232	3649.2	4x4	LTE B48	20	55340	3560	4x4	LTE B48	20	55340	3560	4x4	LTE B48	20	55340	3560	4x4	LTE B48	20	55340	3560	4x4	14.48	14.37
CA 48C (48C)	LTE B48	5	56232	3649.2	16QAM	1	0	56232	3649.2	2x2	LTE B48	20	55340	3560	2x2	LTE B48	20	55340	3560	2x2	LTE B48	20	55340	3560	2x2	LTE B48	20	55340	3560	2x2	14.41	14.37
CA 48C (48C)	LTE B48	5	56232	3649.2	16QAM	1	0	56232	3649.2	4x4	LTE B48	20	55340	3560	4x4	LTE B48	20	55340	3560	4x4	LTE B48	20	55340	3560	4x4	LTE B48	20	55340	3560	4x4	14.48	14.37
CA 48C (48C)	LTE B48	5	56232	3649.2	16QAM	1	0	56232	3649.2	2x2	LTE B48	20	55340	3560	2x2	LTE B48	20	55340	3560	2x2	LTE B48	20	55340	3560	2x2	LTE B48	20	55340	3560	2x2	14.41	14.37
CA 48C (48C)	LTE B48	5	56232	3649.2	16QAM	1	0	56232	3649.2	4x4	LTE B48	20	55340	3560	4x4	LTE B48	20	55340	3560	4x4	LTE B48	20	55340	3560	4x4	LTE B48	20	55340	3560	4x4	14.48	14.37
CA 48C (48C)	LTE B48	5	56232	3649.2	16QAM	1	0	56232	3649.2	2x2	LTE B48	20	55340	3560	2x2	LTE B48	20	55340	3560	2x2	LTE B48	20	55340	3560	2x2	LTE B48	20	55340	3560	2x2	14.41	14.37
CA 48C (48C)	LTE B48	5	56232	3649.2	16QAM	1	0	56232	3649.2	4x4	LTE B48	20	55340	3560	4x4	LTE B48	20	55340	3560	4x4	LTE B48	20	55340	3560	4x4	LTE B48	20	55340	3560	4x4	14.48	14.37
CA 48C (48C)	LTE B48	5	56232	3649.2	16QAM	1	0	56232	3649.2	2x2	LTE B48	20	55340	3560	2x2	LTE B48	20	55340	3560	2x2	LTE B48	20	55340	3560	2x2	LTE B48	20	55340	3560	2x2	14.41	14.37
CA 48C (48C)	LTE B48	5	56232	3649.2	16QAM	1	0	56232	3649.2	4x4	LTE B48	20	55340	3560	4x4	LTE B48	20	55340	3560	4x4	LTE B48	20	55340	3560	4x4	LTE B48	20	55340	3560	4x4	14.48	14.37
CA 48C (48C)	LTE B48	5	56232	3649.2	16QAM	1	0	56232	3649.2	2x2	LTE B48	20	55340	3560	2x2	LTE B48	20	55340	3560	2x2	LTE B48	20	55340	3560	2x2	LTE B48	20	55340	3560	2x2	14.41	14.37
CA 48C (48C)	LTE B48	5	56232	3649.2	16QAM	1	0	56232	3649.2	4x4	LTE B48	20	55340	3560	4x4	LTE B48	20	55340	3560	4x4	LTE B48	20	55340	3560	4x4	LTE B48	20	55340	3560	4x4	14.48	14.37
CA 48C (48C)	LTE B48	5	56232	3649.2	16QAM	1	0	56232	3649.2	2x2	LTE B48	20	55340	3560	2x2	LTE B48	20	55340	3560	2x2	LTE B48	20	55340	3560	2x2	LTE B48	20	55340	3560	2x2	14.41	14.37
CA 48C (48C)	LTE B48	5	56232	3649.2	16QAM	1	0	56232	3649.2	4x4	LTE B48	20	55340	3560	4x4	LTE B48	20	55340	3560	4x4	LTE B48	20	55340	3560	4x4	LTE B48	20	55340	3560	4x4	14.48	14.37
CA 48C (48C)	LTE B48	5	56232	3649.2	16QAM	1	0	56232	3649.2	2x2	LTE B48	20	55340	3560	2x2	LTE B48	20	55340	3560	2x2	LTE B48	20	55340	3560	2x2	LTE B48	20	55340	3560	2x2	14.41	14.37
CA 48C (48C)	LTE B48	5	56232	3649.2	16QAM	1	0	56232	3649.2	4x4	LTE B48	20	55340	3560	4x4	LTE B48	20	55340	3560	4x4	LTE B48	20	55340	3560	4x4	LTE B48	20	55340	3560	4x4	14.48	14.37
CA 48C (48C)	LTE B48	5	56232	3649.2	16QAM	1	0	56232	3649.2	2x2	LTE B48	20	55340	3560	2x2	LTE B48	20	55340	3560	2x2	LTE B48	20	55340	3560	2x2	LTE B48	20	55340	3560	2x2	14.41	14.37
CA 48C (48C)	LTE B48	5	56232	3649.2	16QAM	1	0	56232	3649.2	4x4	LTE B48	20	55340	3560	4x4	LTE B48	20	55340	3560	4x4	LTE B48	20	55340	3560	4x4	LTE B48	20	55340	3560	4x4	14.48	14.37
CA 48C (48C)	LTE B48	5	56232	3649.2	16QAM	1	0	56232	3649.2	2x2	LTE B48	20	55340	3560	2x2	LTE B48	20	55340	3560	2x2	LTE B48	20	55340	3560	2x2	LTE B48	20	55340	3560	2x2	14.41	14.37
CA 48C (48C)	LTE B48	5	56232	3649.2	16QAM	1	0	56232	3649.2	4x4	LTE B48	20	55340	3560	4x4	LTE B48	20	55340	3560	4x4	LTE B48	20	55340	3560	4x4	LTE B48	20	55340	3560	4x4	14.48	14.37
CA 48C (48C)	LTE B48	5	56232	3649.2	16QAM	1	0	56232	3649.2	2x2	LTE B48	20	55340	3560	2x2	LTE B48	20	55340	3560	2x2	LTE B48	20	55340	3560	2x2	LTE B48	20	55340	3560	2x2	14.41	14.37
CA 48C (48C)	LTE B48	5	56232	3649.2	16QAM	1	0	56232	3649.2	4x4	LTE B48	20	55340	3560	4x4	LTE B48	20	55340	3560	4x4	LTE B48	20	55340	3560	4x4	LTE B48	20	55340	3560	4x4	14.48	14.37
CA 48C (48C)	LTE B48	5	56232	3649.2	16QAM	1	0	56232	3649.2	2x2	LTE B48	20	55340	3560	2x2	LTE B48	20	55340	3560	2x2	LTE B48	20	55340	3560	2x2	LTE B48	20	55340	3560	2x2	14.41	14.37
CA 48C (48C)	LTE B48	5	56232	3649.2	16QAM	1	0	56232	3649.2	4x4	LTE B48	20	55340	3560	4x4	LTE B48	20	55340	3560	4x4	LTE B48	20	55340	3560	4x4	LTE B48	20	55340	3560	4x4	14.48	14.37
CA 48C (48C)	LTE B48	5	56232	3649.2	16QAM	1	0	56232	3649.2	2x2	LTE B48	20	55340	3560	2x2	LTE B48	20	55340	3560	2x2	LTE B48	20	55340	3560	2x							

FCC ID: PY7-57441Y



SAR EVALUATION REPORT

SONY

Reviewed by:
Quality Manager

Test Dates:
08/23/20 - 09/16/20

DUT Type:
Portable Handset

APPENDIX F:
Page 9 of 9