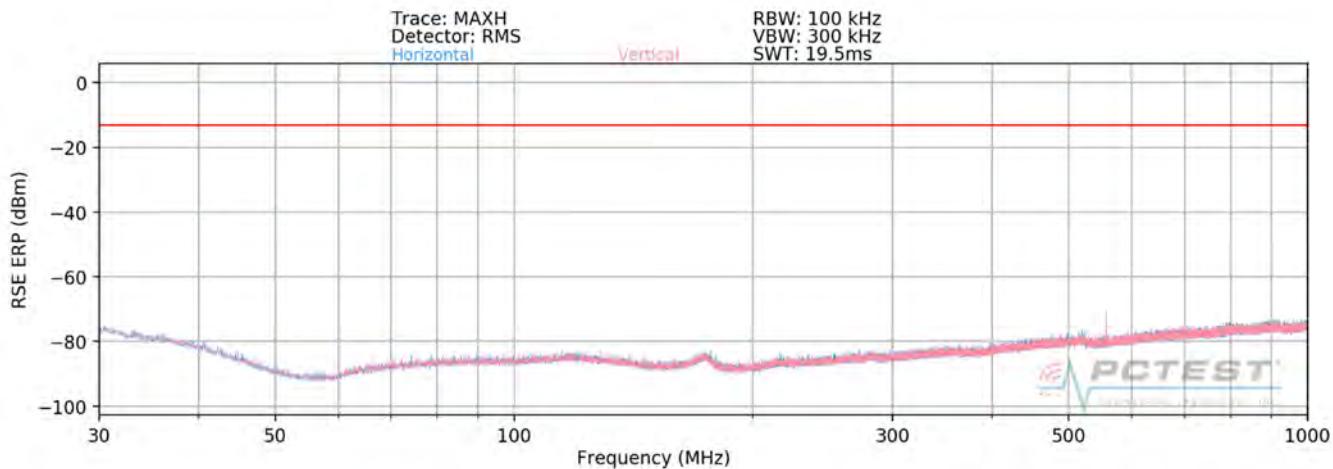
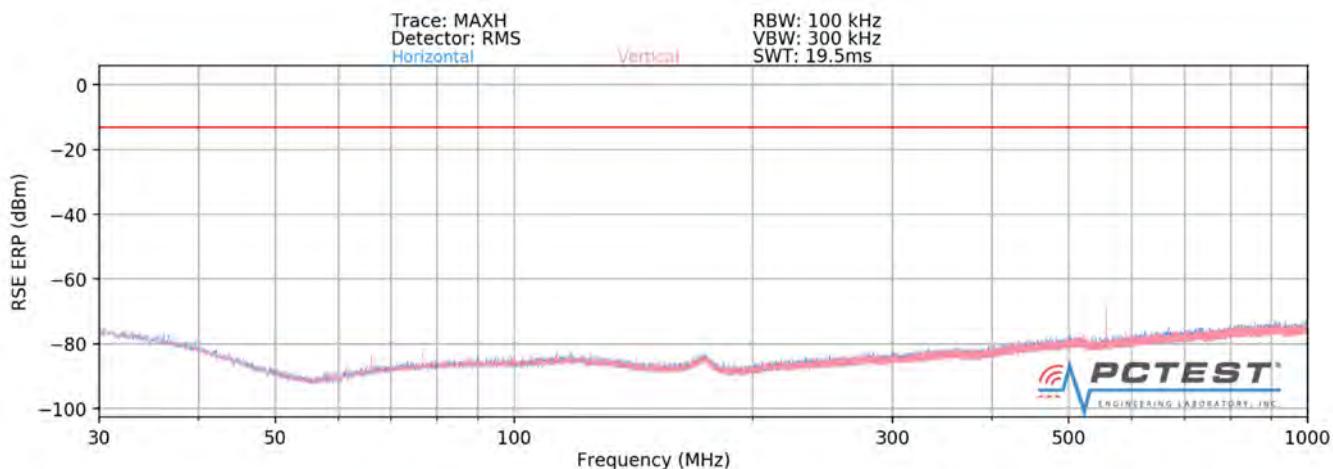


## K Patch Radiated Spurious Emissions(n261)

### 30MHz – 1GHz(n261)



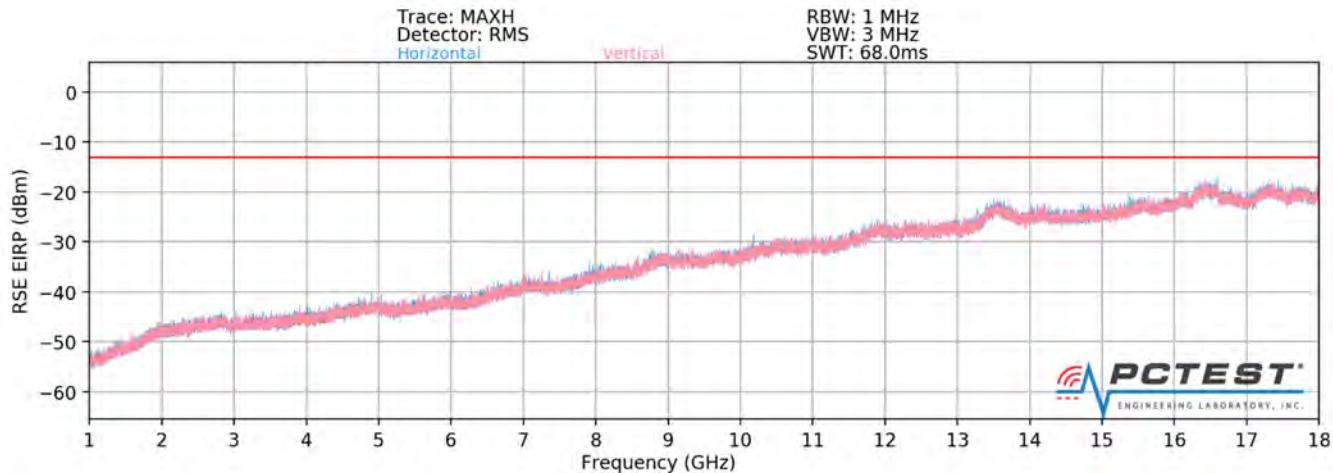
Plot 7-165. K Patch Radiated Spurious Plot 30 MHz - 1 GHz (1CC QPSK Mid Channel H Beam – n261)



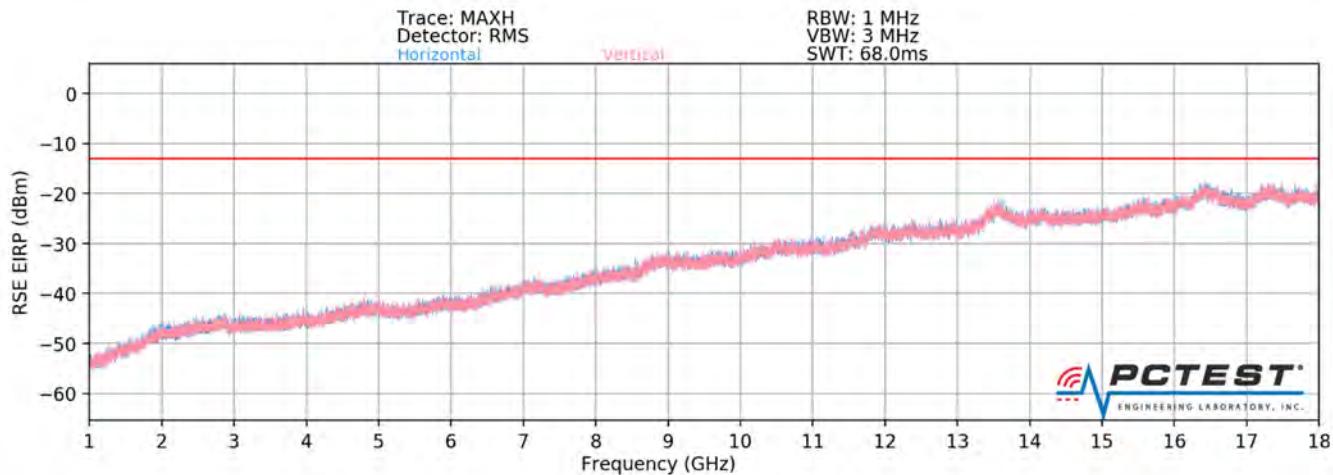
Plot 7-166. K Patch Radiated Spurious Plot 30 MHz - 1 GHz (1CC QPSK Mid Channel V Beam – n261)

FCC ID: A3LSMN976V		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1905130071-06-R1.A3L	Test Dates: 05/14 - 07/12/2019	EUT Type: Portable Handset		Page 118 of 371

1 – 18GHz



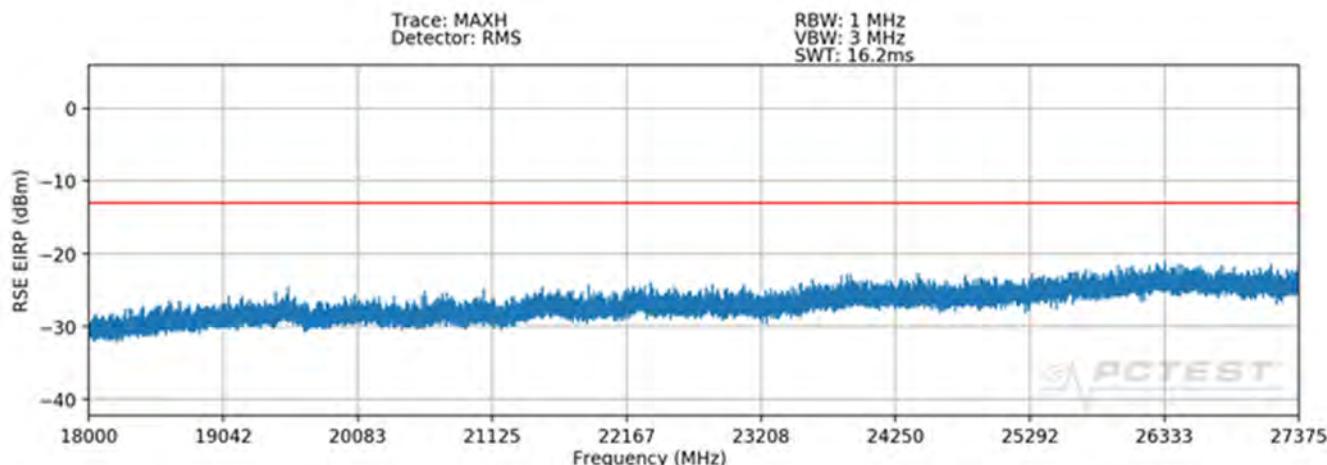
Plot 7-167. K Patch Radiated Spurious Plot 1-18 GHz (1CC QPSK Mid Channel H Beam – n261)



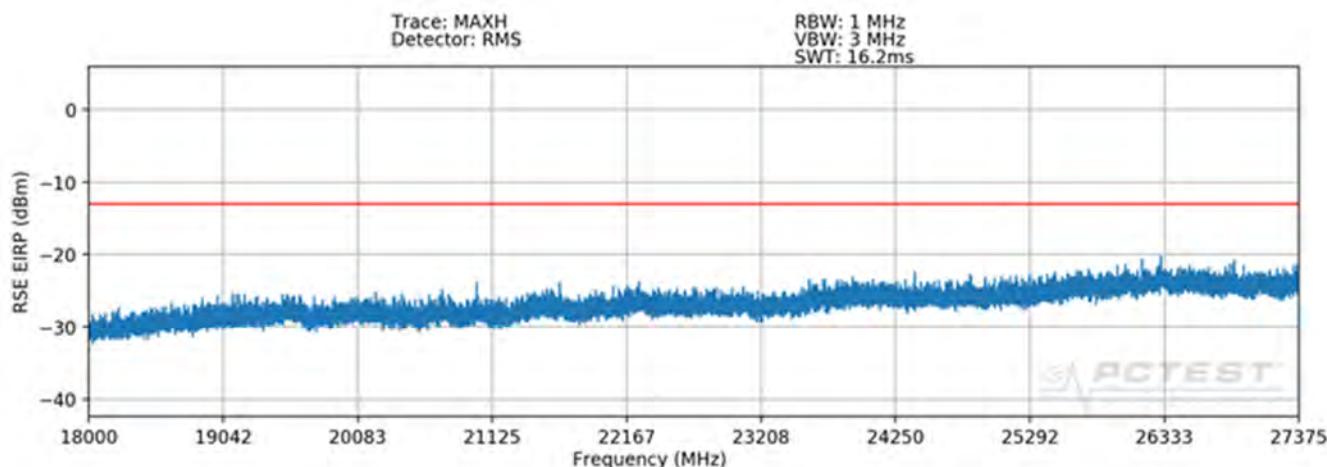
Plot 7-168. K Patch Radiated Spurious Plot 1-18 GHz (1CC QPSK Mid Channel V Beam – n261)

FCC ID: A3LSMN976V		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1905130071-06-R1.A3L	Test Dates: 05/14 - 07/12/2019	EUT Type: Portable Handset		Page 119 of 371

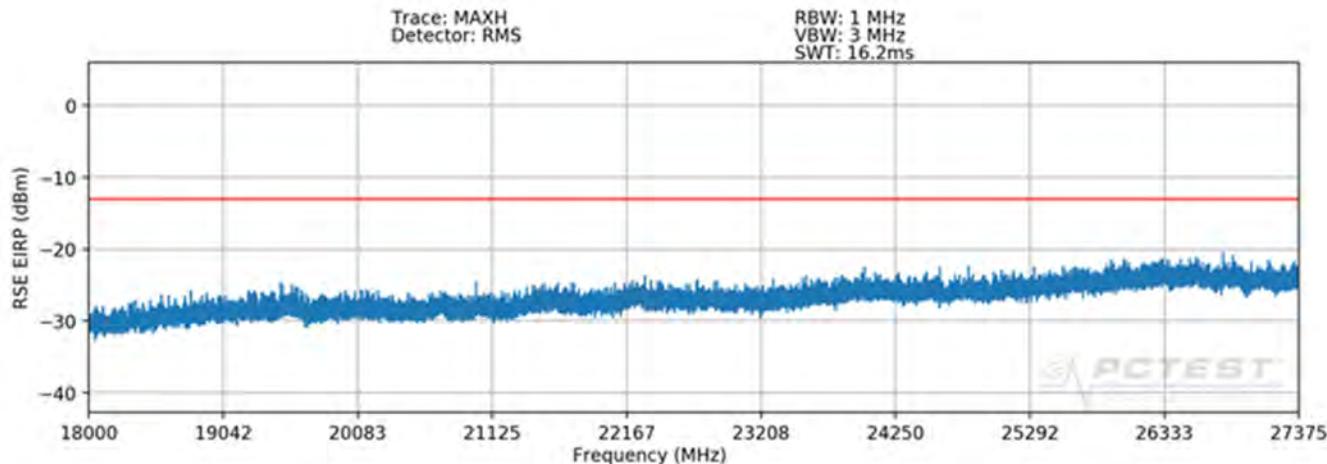
## 18 – 27.375GHz



Plot 7-169. K Patch Radiated Spurious Plot 18-27.375 GHz (1CC QPSK Low Channel H Beam – n261)

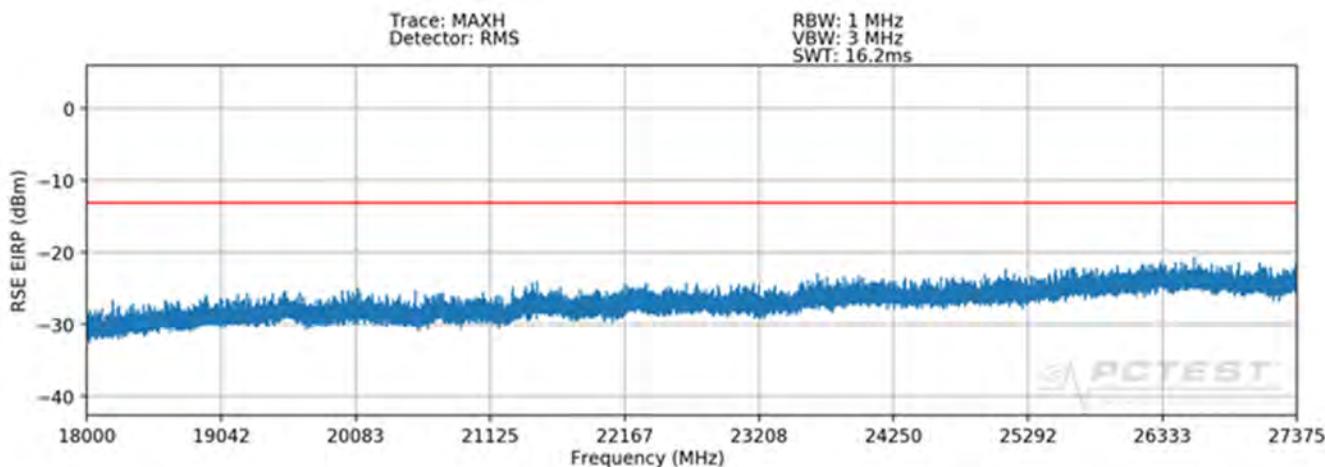


Plot 7-170. K Patch Radiated Spurious Plot 18-27.375 GHz (1CC QPSK Mid Channel H Beam – n261)

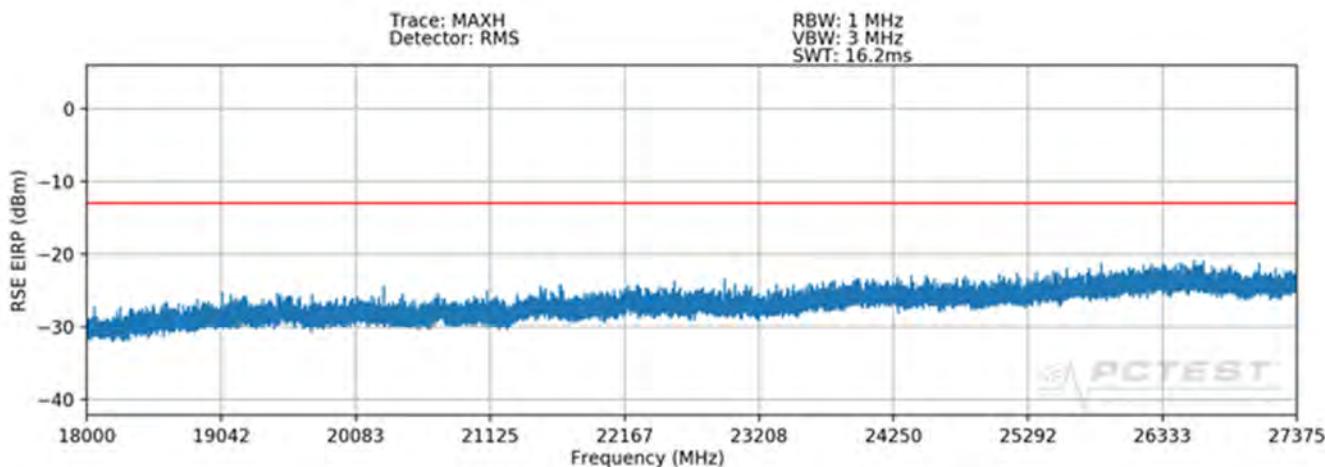


Plot 7-171. K Patch Radiated Spurious Plot 18-27.375 GHz (1CC QPSK High Channel H Beam – n261)

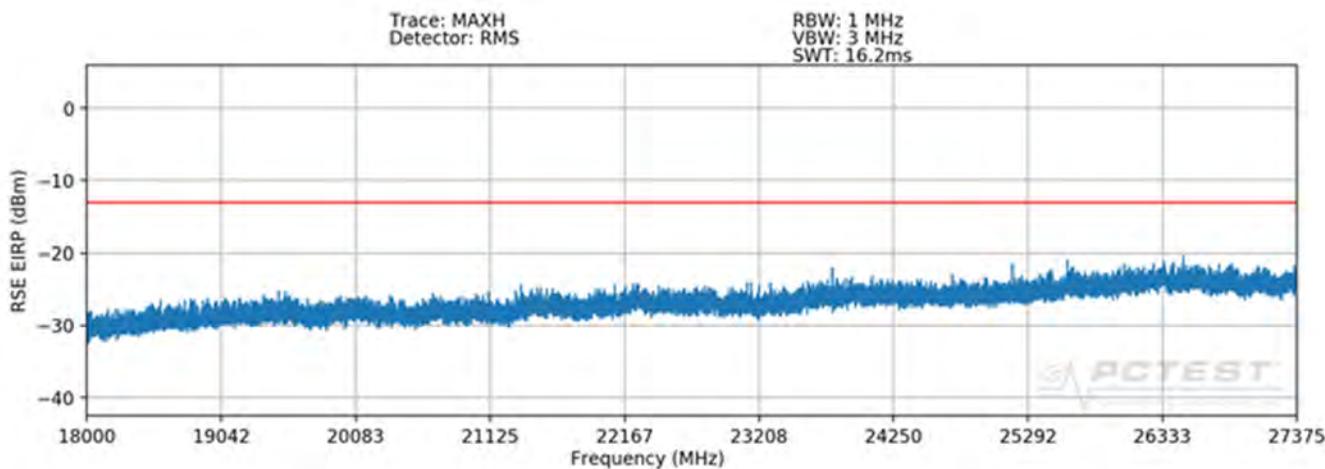
FCC ID: A3LSMN976V		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1905130071-06-R1.A3L	Test Dates: 05/14 - 07/12/2019	EUT Type: Portable Handset		Page 120 of 371



**Plot 7-172. K Patch Radiated Spurious Plot 18-27.375 GHz (1CC QPSK Low Channel V Beam – n261)**



**Plot 7-173. K Patch Radiated Spurious Plot 18-27.375 GHz (1CC QPSK Mid Channel V Beam – n261)**



**Plot 7-174. K Patch Radiated Spurious Plot 18-27.375 GHz (1CC QPSK High Channel V Beam – n261)**

FCC ID: A3LSMN976V	<b>PCTEST</b> ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1905130071-06-R1.A3L	Test Dates: 05/14 - 07/12/2019	EUT Type: Portable Handset		Page 121 of 371

## Spurious Emissions EIRP Sample Calculation (n261)

The raw radiated spurious level is converted to field strength in dB $\mu$ V/m. Then, the RSE EIRP level is calculated by applying the additional factors shown below for a test distance of 1 meter.

$$\text{RSE EIRP [dBm]} = \text{Analyzer Level [dBm]} + 107 + \text{AFCL [dB/m]} + 20\text{Log}(D_m) - 104.8$$

Frequency [MHz]	Detector/Trace	Chan.	Bandwidth (MHz)	Mod.	EUT Beam Polarization	Ant. Pos [H/V]	Turntable Azimuth [degree]	Positioner Azimuth [degree]	RSE EIRP [dBm]	Limit [dBm]	Margin [dB]
25674.80	RMS/Avg	Low	50	QPSK	H	H	-	-	-35.98	-13.00	-22.98
25645.80	RMS/Avg	Mid	50	QPSK	H	H	-	-	-36.21	-13.00	-23.21
25693.60	RMS/Avg	High	50	QPSK	H	H	-	-	-36.26	-13.00	-23.26
26266.40	RMS/Avg	Low	50	QPSK	V	V	-	-	-36.45	-13.00	-23.45
26125.30	RMS/Avg	Mid	50	QPSK	V	V	-	-	-36.98	-13.00	-23.98
25675.80	RMS/Avg	High	50	QPSK	V	V	-	-	-36.80	-13.00	-23.80

Table 7-37. K Patch Spurious Emissions Table (18-27.375GHz – n261)

### Notes

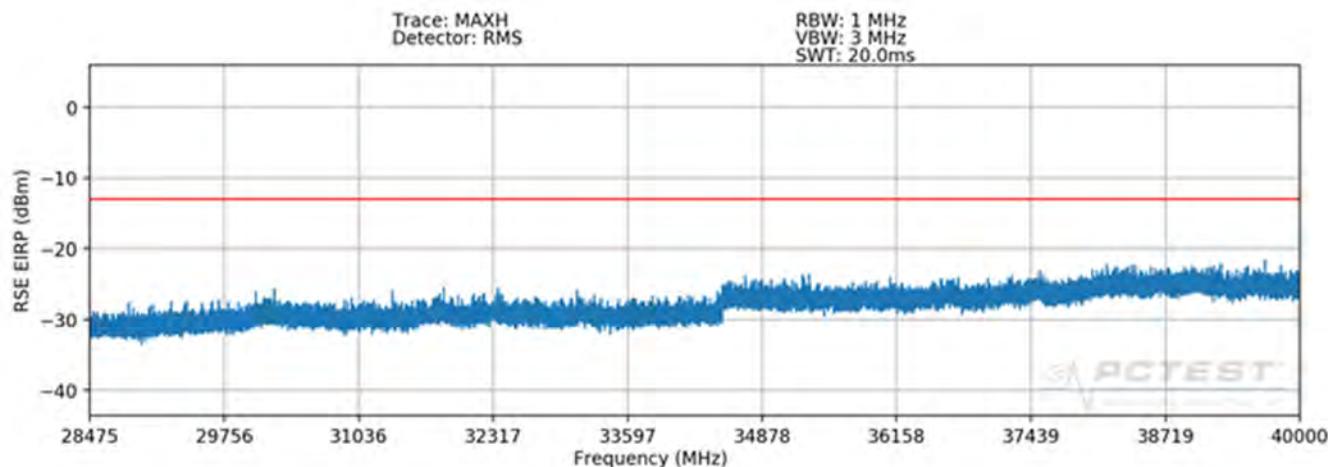
1. The RSE EIRP level is taken directly from the spectrum analyzer which includes the appropriate antenna factors, cable losses, and harmonic mixer conversion losses. Measurements were performed at a distance of 1 meter.
2. To address compliance of MIMO RSE per KDB 662911 D01, the MIMO RSE EIRP is calculated by summing the worst case H Beam EIRP and V Beam EIRP in linear powers units then converted back to dBm:

$$\text{EIRP(H Beam)} + \text{EIRP(V Beam)} = \text{EIRP(MIMO)}$$

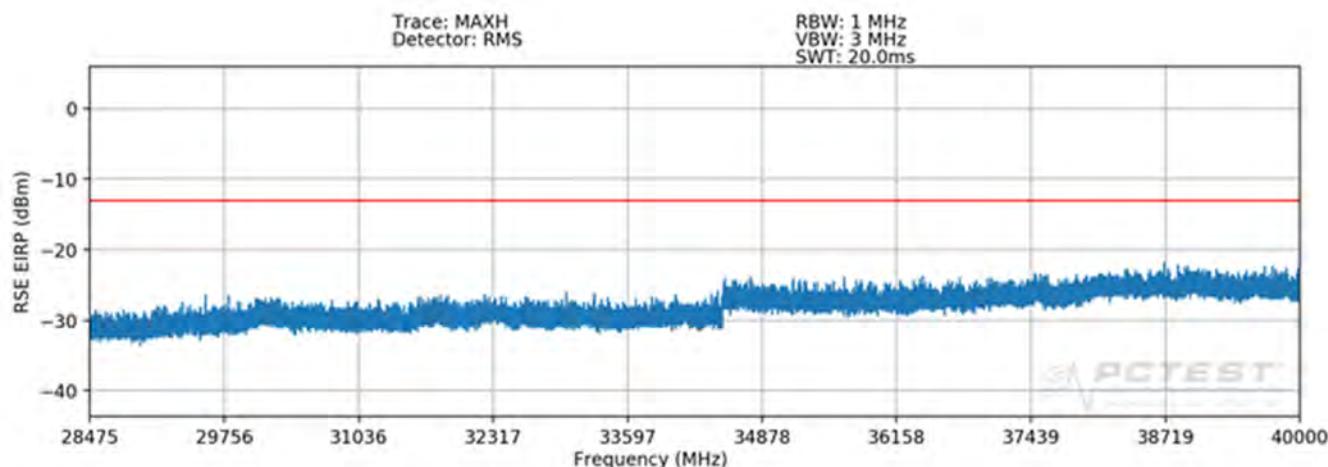
$$(-35.98 \text{ dBm} + -36.45 \text{ dBm}) = (252.35 \text{ nW} + 226.73 \text{ nW}) = (479.07 \text{ nW}) = -33.20 \text{ dBm}$$

FCC ID: A3LSMN976V		MEASUREMENT REPORT (CERTIFICATION)				Approved by: Quality Manager
Test Report S/N: 1M1905130071-06-R1.A3L	Test Dates: 05/14 - 07/12/2019	EUT Type: Portable Handset			Page 122 of 371	

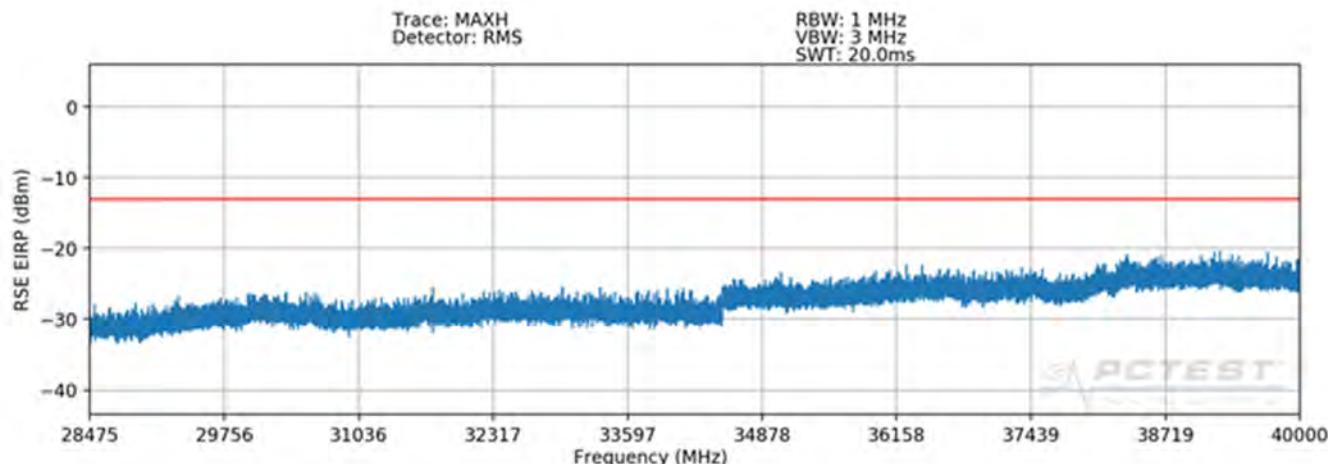
## 28.475 – 40GHz(n261)



Plot 7-175. K Patch Radiated Spurious Plot 28.475-40 GHz (1CC QPSK Low Channel H Beam – n261)

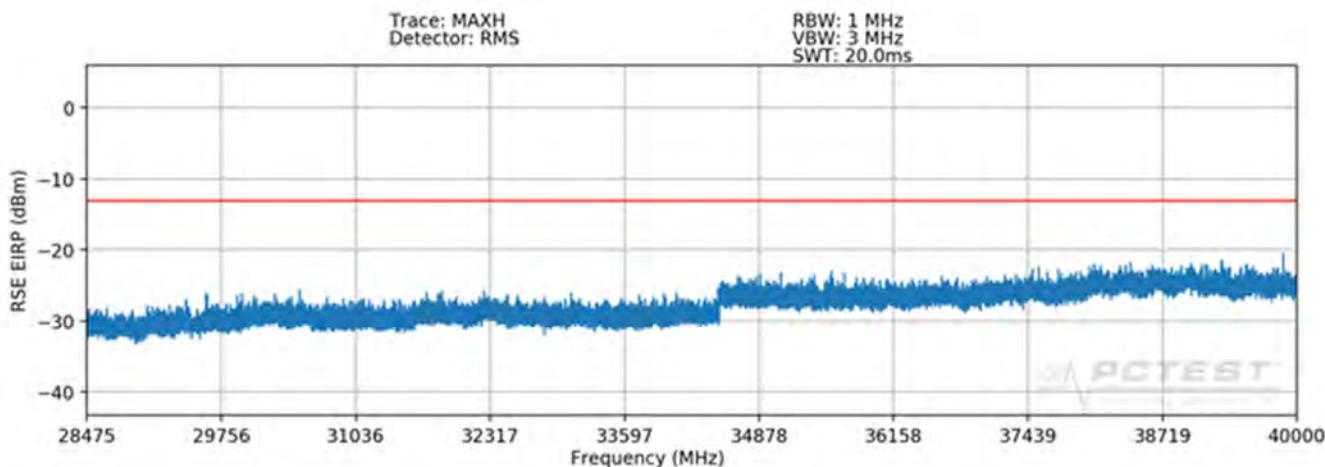


Plot 7-176. K Patch Radiated Spurious Plot 28.475-40 GHz (1CC QPSK Mid Channel H Beam – n261)

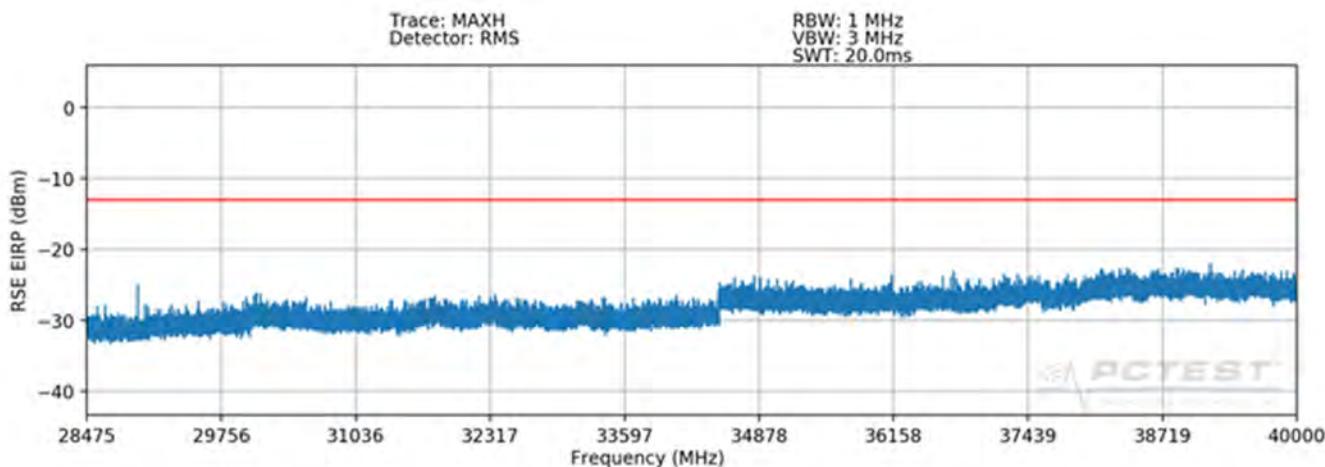


Plot 7-177. K Patch Radiated Spurious Plot 28.475-40 GHz (1CC QPSK High Channel H Beam – n261)

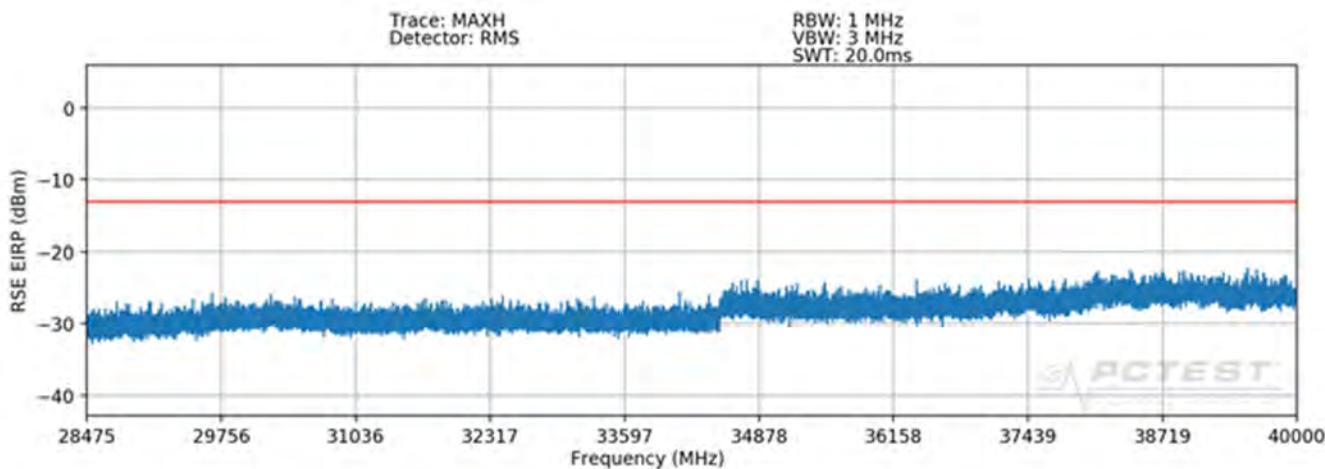
FCC ID: A3LSMN976V		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1905130071-06-R1.A3L	Test Dates: 05/14 - 07/12/2019	EUT Type: Portable Handset		Page 123 of 371



Plot 7-178. K Patch Radiated Spurious Plot 28.475-40 GHz (1CC QPSK Low Channel V Beam – n261)



Plot 7-179. K Patch Radiated Spurious Plot 28.475-40 GHz (1CC QPSK Mid Channel V Beam – n261)



Plot 7-180. K Patch Radiated Spurious Plot 28.475-40 GHz (1CC QPSK High Channel V Beam – n261)

FCC ID: A3LSMN976V	<b>PCTEST</b> ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1905130071-06-R1.A3L	Test Dates: 05/14 - 07/12/2019	EUT Type: Portable Handset		Page 124 of 371

## Spurious Emissions EIRP Sample Calculation(n261)

The raw radiated spurious level is converted to field strength in  $\text{dB}\mu\text{V/m}$ . Then, the RSE EIRP level is calculated by applying the additional factors shown below for a test distance of 1 meter.

$$\text{RSE EIRP [dBm]} = \text{Analyzer Level [dBm]} + 107 + \text{AFCL [dB/m]} + 20\text{Log}(\text{Dm}) - 104.8$$

Frequency [MHz]	Detector/Trace	Chan.	Bandwidth (MHz)	Mod.	EUT Beam Polarization	Ant. Pos [H/V]	Turntable Azimuth [degree]	Positioner Azimuth [degree]	RSE EIRP [dBm]	Limit [dBm]	Margin [dB]
38945.00	RMS/Avg	Low	50	QPSK	H	H	-	-	-29.56	-13.00	-16.56
38979.60	RMS/Avg	Mid	50	QPSK	H	H	-	-	-29.51	-13.00	-16.51
39053.00	RMS/Avg	High	50	QPSK	H	H	-	-	-29.60	-13.00	-16.60
28761.50	RMS/Avg	Low	50	QPSK	V	V	340	3	-28.36	-13.00	-15.36
28959.50	RMS/Avg	Mid	50	QPSK	V	V	33	357	-28.20	-13.00	-15.20
38928.20	RMS/Avg	High	50	QPSK	V	V	-	-	-30.92	-13.00	-17.92

Table 7-38. K Patch Spurious Emissions Table (28.475-40 GHz – n261)

### Notes

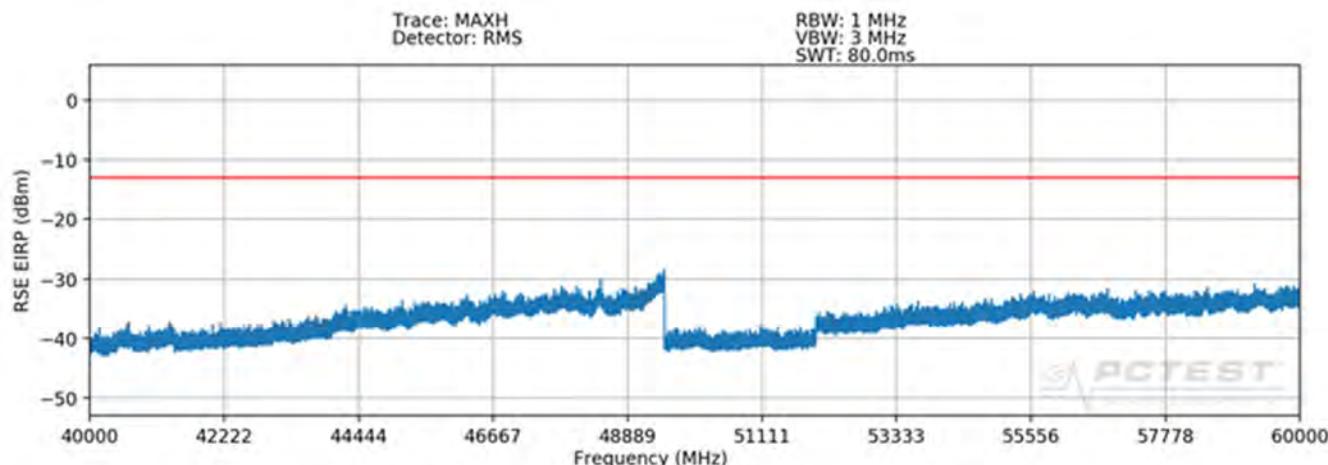
1. The RSE EIRP level is taken directly from the spectrum analyzer which includes the appropriate antenna factors, cable losses, and harmonic mixer conversion losses. Measurements were performed at a distance of 1 meter.
2. To address compliance of MIMO RSE per KDB 662911 D01, the MIMO RSE EIRP is calculated by summing the worst case H Beam EIRP and V Beam EIRP in linear powers units then converted back to dBm:

$$\text{EIRP(H Beam)} + \text{EIRP(V Beam)} = \text{EIRP(MIMO)}$$

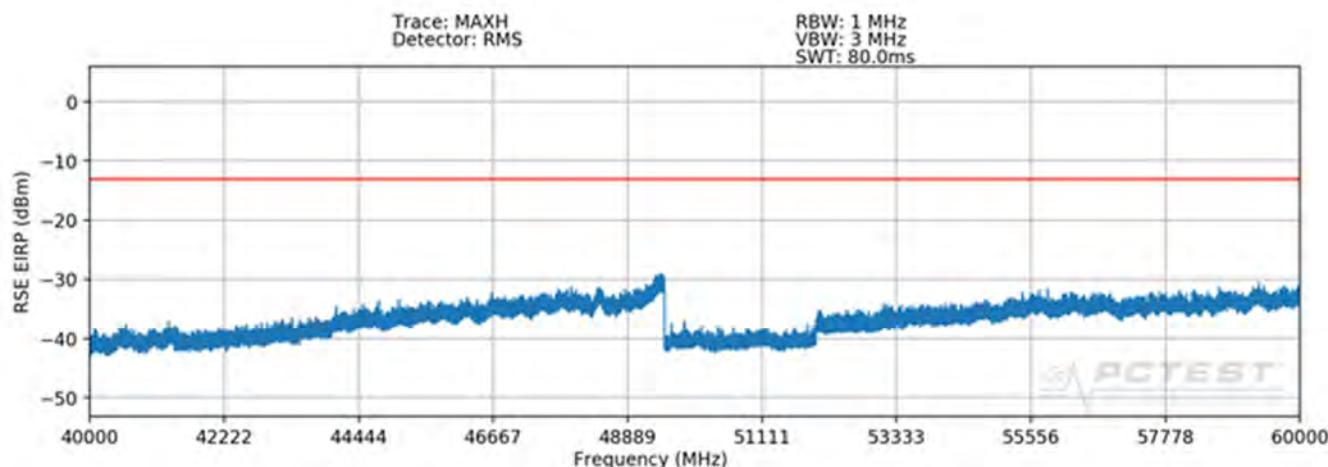
$$(-29.51 \text{ dBm} + -28.20 \text{ dBm}) = (1120.73 \text{ nW} + 1514.61 \text{ nW}) = (2635.34 \text{ nW}) = -25.79 \text{ dBm}$$

FCC ID: A3LSMN976V		MEASUREMENT REPORT (CERTIFICATION)			Approved by: Quality Manager
Test Report S/N: 1M1905130071-06-R1.A3L	Test Dates: 05/14 - 07/12/2019	EUT Type: Portable Handset		Page 125 of 371	

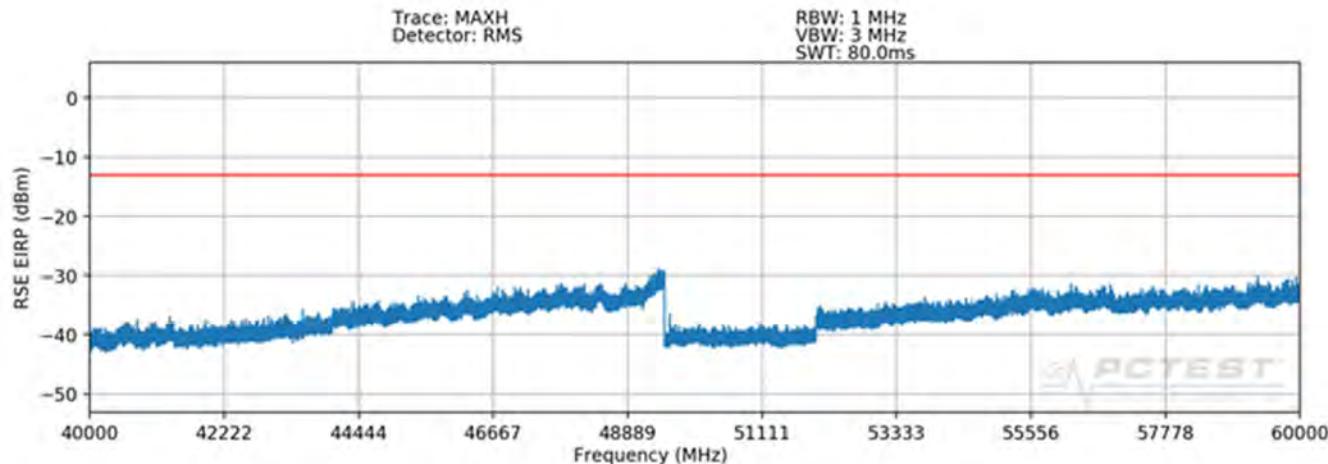
## 40 – 60GHz(n261)



Plot 7-181. K Patch Radiated Spurious Plot 40-60 GHz (1CC QPSK Low Channel H Beam – n261)

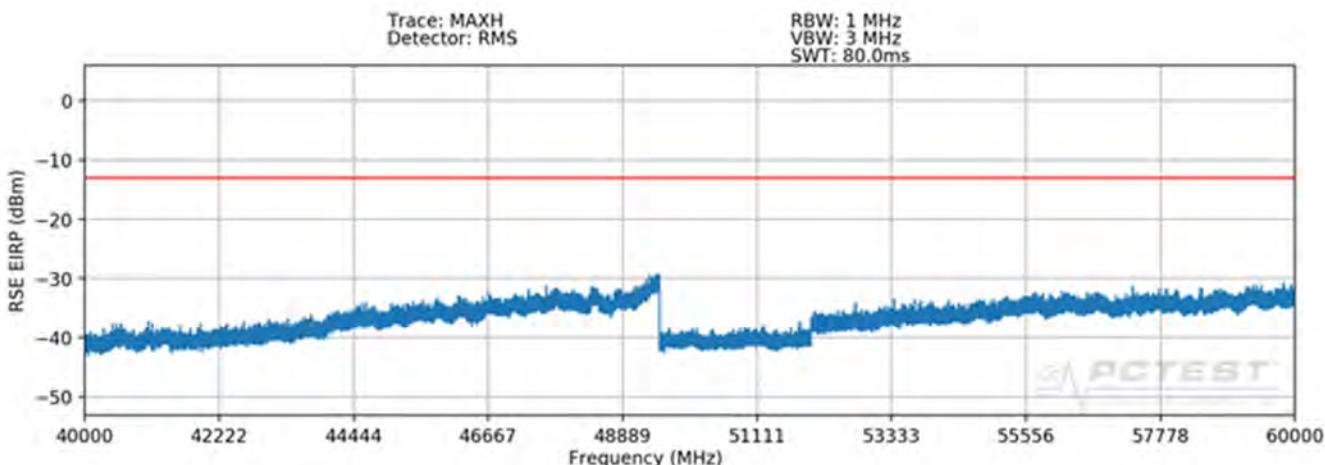


Plot 7-182. K Patch Radiated Spurious Plot 40-60 GHz (1CC QPSK Mid Channel H Beam – n261)

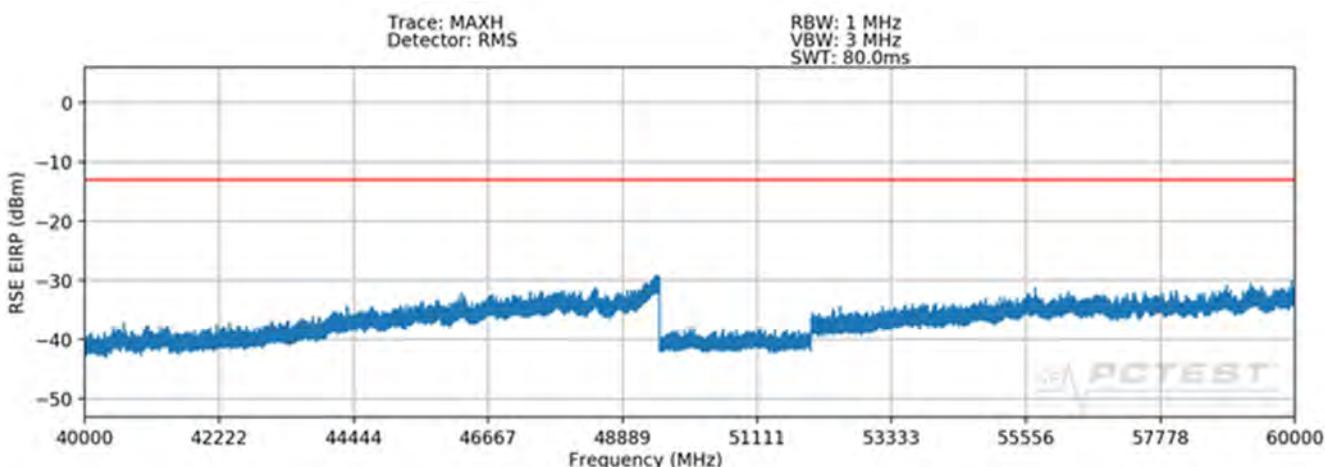


Plot 7-183. K Patch Radiated Spurious Plot 40-60 GHz (1CC QPSK High Channel H Beam – n261)

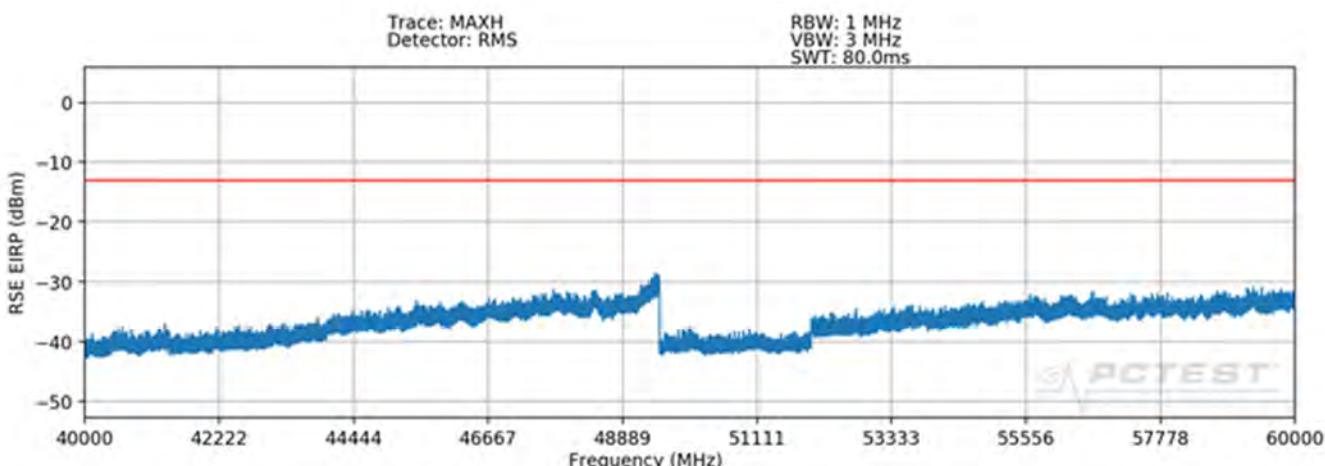
FCC ID: A3LSMN976V		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1905130071-06-R1.A3L	Test Dates: 05/14 - 07/12/2019	EUT Type: Portable Handset		Page 126 of 371



Plot 7-184. K Patch Radiated Spurious Plot 40-60 GHz (1CC QPSK Low Channel V Beam – n261)



Plot 7-185. K Patch Radiated Spurious Plot 40-60 GHz (1CC QPSK Mid Channel V Beam – n261)



Plot 7-186. K Patch Radiated Spurious Plot 40-60 GHz (1CC QPSK High Channel V Beam – n261)

FCC ID: A3LSMN976V	<b>PCTEST</b> ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1905130071-06-R1.A3L	Test Dates: 05/14 - 07/12/2019	EUT Type: Portable Handset		Page 127 of 371

## Spurious Emissions EIRP Sample Calculation(n261)

The raw radiated spurious level is converted to field strength in  $\text{dB}\mu\text{V}/\text{m}$ . Then, the RSE EIRP level is calculated by applying the additional factors shown below for a test distance of 1.5 meter.

$$\text{RSE EIRP [dBm]} = \text{Analyzer Level [dBm]} + 107 + \text{AFCL [dB/m]} + 20\text{Log}(\text{Dm}) - 104.8$$

Frequency [MHz]	Detector/Trace	Chan.	Bandwidth (MHz)	Mod.	EUT Beam Polarization	Ant. Pos [H/V]	Turntable Azimuth [degree]	Positioner Azimuth [degree]	RSE EIRP [dBm]	Limit [dBm]	Margin [dB]
49492.75	RMS/Avg	Low	50	QPSK	H	H	-	-	-37.72	-13.00	-24.72
49498.75	RMS/Avg	Mid	50	QPSK	H	H	-	-	-37.40	-13.00	-24.40
49498.75	RMS/Avg	High	50	QPSK	H	H	-	-	-37.49	-13.00	-24.49
49498.95	RMS/Avg	Low	50	QPSK	V	H	-	-	-37.50	-13.00	-24.50
49493.75	RMS/Avg	Mid	50	QPSK	V	H	-	-	-37.57	-13.00	-24.57
49497.95	RMS/Avg	High	50	QPSK	V	H	-	-	-37.70	-13.00	-24.70

Table 7-39. K Patch Spurious Emissions Table (40 - 60GHz - n261)

### Notes

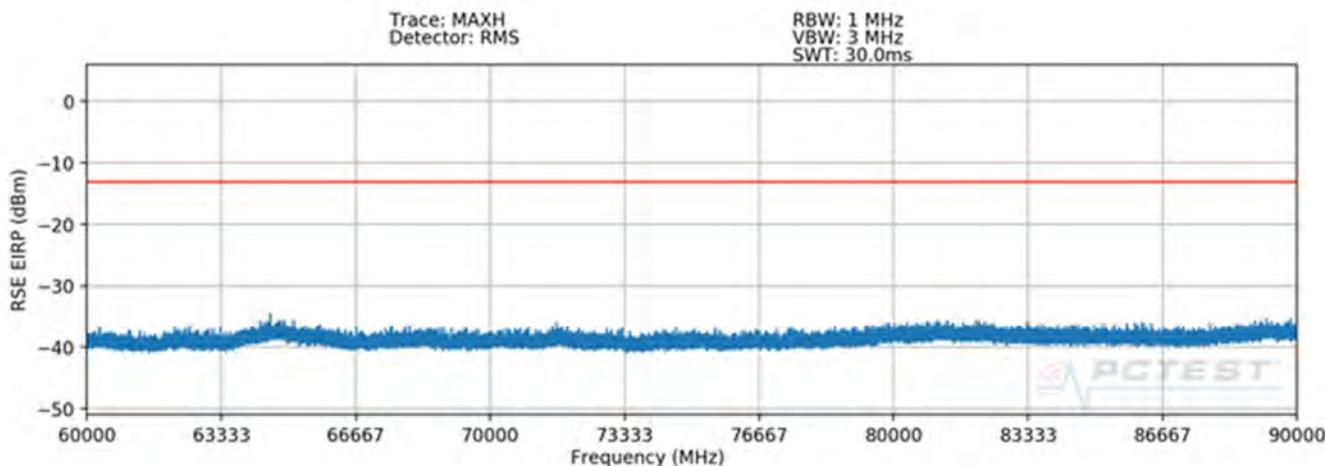
1. The RSE EIRP level is taken directly from the spectrum analyzer which includes the appropriate antenna factors, cable losses, and harmonic mixer conversion losses. Measurements were performed at a distance of 1.5 meter.
2. To address compliance of MIMO RSE per KDB 662911 D01, the MIMO RSE EIRP is calculated by summing the worst case H Beam EIRP and V Beam EIRP in linear powers units then converted back to dBm:

$$\text{EIRP(H Beam)} + \text{EIRP(V Beam)} = \text{EIRP(MIMO)}$$

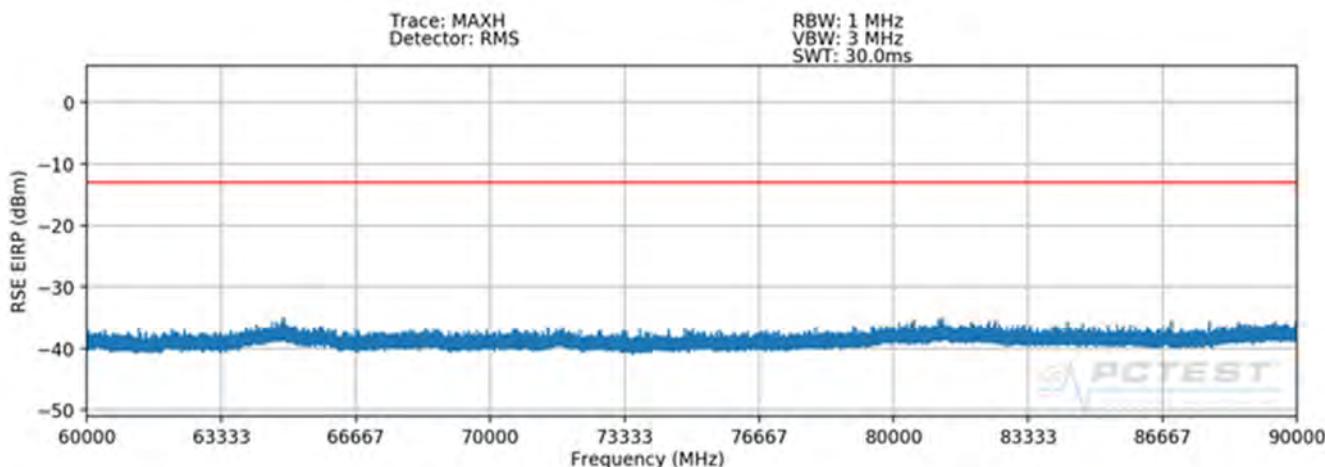
$$(-37.40 \text{ dBm} + -37.57 \text{ dBm}) = (181.97 \text{ nW} + 174.98 \text{ nW}) = (356.95 \text{ nW}) = -34.47 \text{ dBm}$$

FCC ID: A3LSMN976V		MEASUREMENT REPORT (CERTIFICATION)				Approved by: Quality Manager
Test Report S/N: 1M1905130071-06-R1.A3L	Test Dates: 05/14 - 07/12/2019	EUT Type: Portable Handset				Page 128 of 371

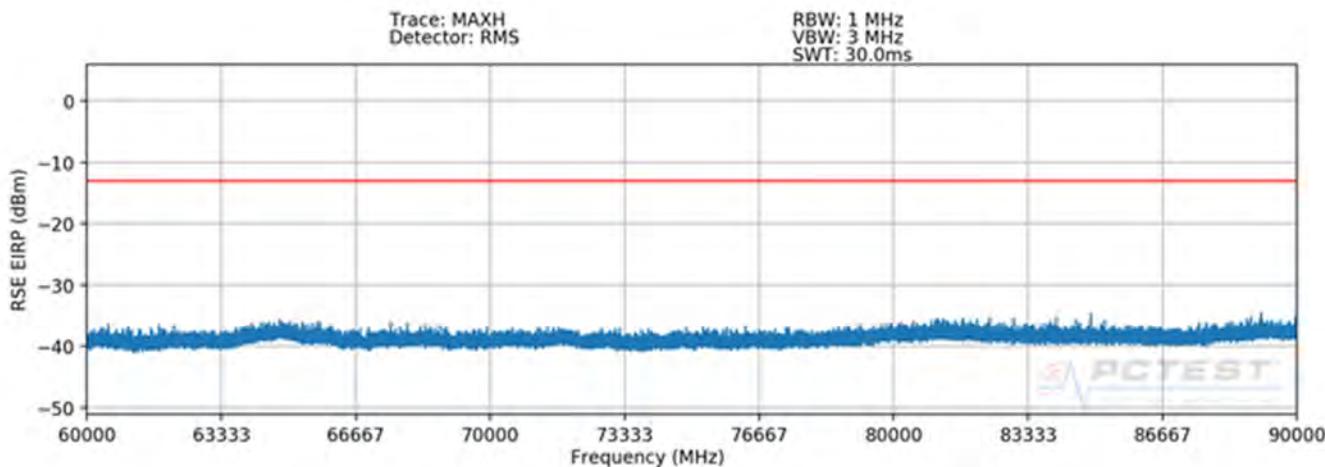
## 60 – 90GHz(n261)



Plot 7-187. K Patch Radiated Spurious Plot 60-90 GHz (1CC QPSK Low Channel H Beam – n261)

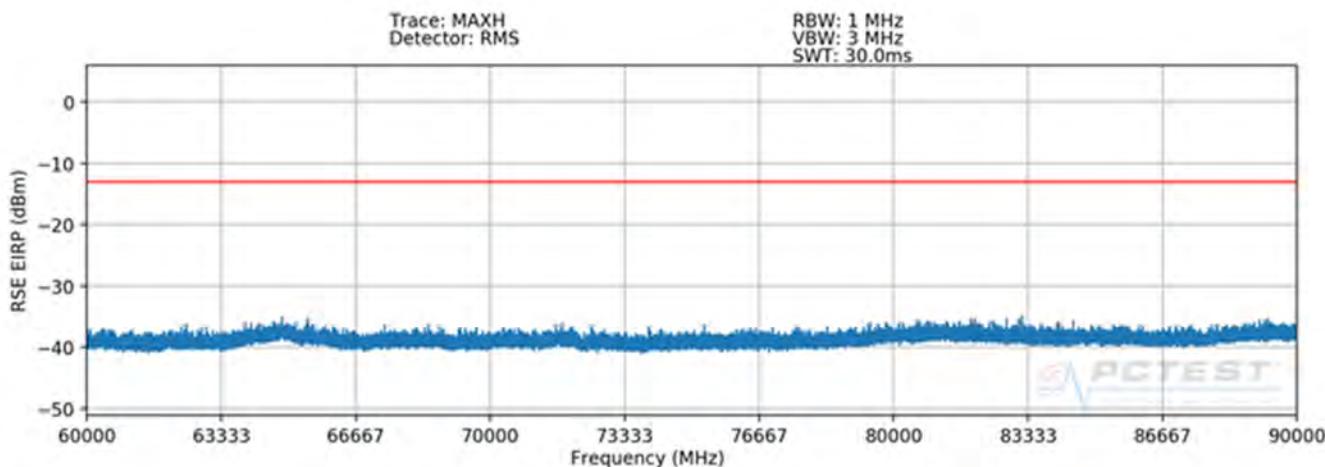


Plot 7-188. K Patch Radiated Spurious Plot 60-90 GHz (1CC QPSK Mid Channel H Beam – n261)

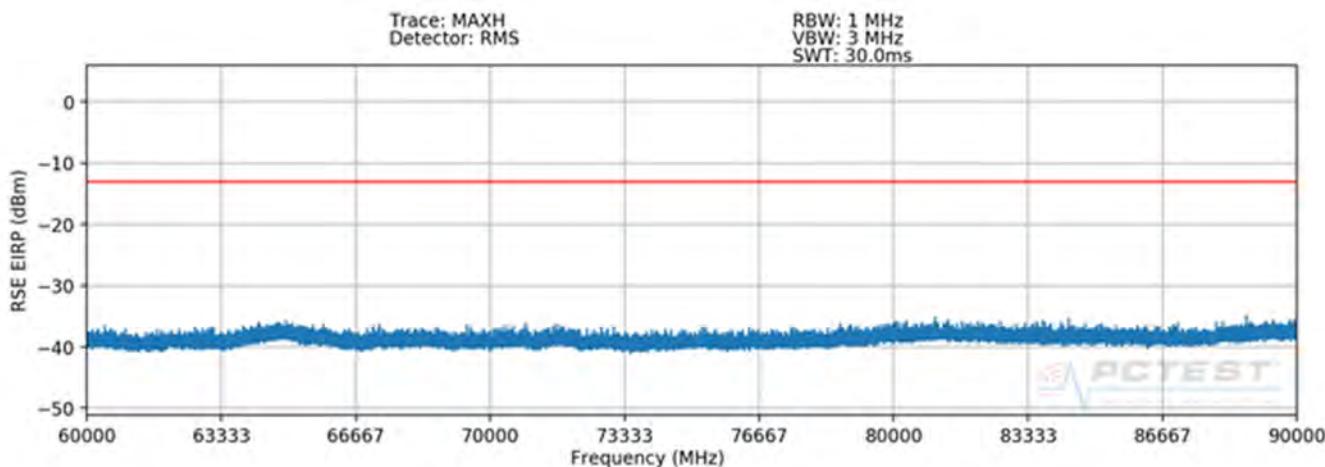


Plot 7-189. K Patch Radiated Spurious Plot 60-90 GHz (1CC QPSK High Channel H Beam – n261)

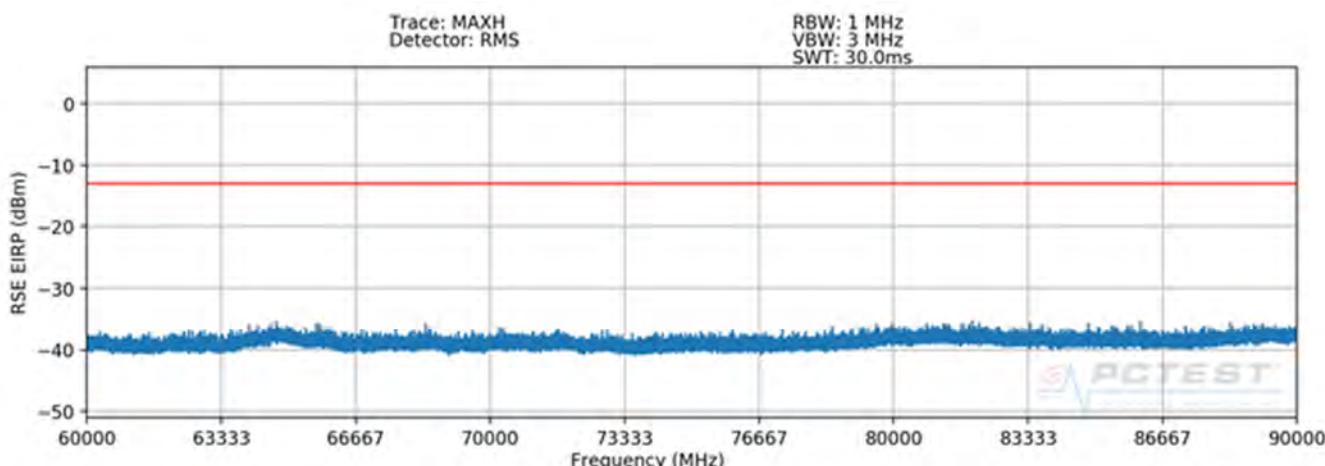
FCC ID: A3LSMN976V		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1905130071-06-R1.A3L	Test Dates: 05/14 - 07/12/2019	EUT Type: Portable Handset		Page 129 of 371



Plot 7-190. K Patch Radiated Spurious Plot 60-90 GHz (1CC QPSK Low Channel V Beam – n261)



Plot 7-191. K Patch Radiated Spurious Plot 60-90 GHz (1CC QPSK Mid Channel V Beam – n261)



Plot 7-192. K Patch Radiated Spurious Plot 60-90 GHz (1CC QPSK High Channel V Beam – n261)

FCC ID: A3LSMN976V		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1905130071-06-R1.A3L	Test Dates: 05/14 - 07/12/2019	EUT Type: Portable Handset		Page 130 of 371

## Spurious Emissions EIRP Sample Calculation(n261)

The raw radiated spurious level is converted to field strength in  $\text{dB}\mu\text{V/m}$ . Then, the RSE EIRP level is calculated by applying the additional factors shown below for a test distance of 1 meter.

**RSE EIRP [dBm]** = Analyzer Level [dBm] + 107 + AFCL [dB/m] + 20Log(Dm) + Harmonic Mixer Loss (dB) – 104.8

Frequency [MHz]	Detector/Trace	Chan.	Bandwidth (MHz)	Mod.	EUT Beam Polarization	Ant. Pos [H/V]	Turntable Azimuth [degree]	Positioner Azimuth [degree]	RSE EIRP [dBm]	Limit [dBm]	Margin [dB]
82539.00	RMS/Avg	Low	50	QPSK	H	H	105	306	-41.06	-13.00	-28.06
83701.50	RMS/Avg	Mid	50	QPSK	H	H	102	311	-42.57	-13.00	-29.57
85538.00	RMS/Avg	High	50	QPSK	H	H	105	304	-43.81	-13.00	-30.81
82539.50	RMS/Avg	Low	50	QPSK	V	V	355	355	-41.07	-13.00	-28.07
84345.00	RMS/Avg	Mid	50	QPSK	V	V	360	353	-40.18	-13.00	-27.18
84893.50	RMS/Avg	High	50	QPSK	V	V	359	355	-41.98	-13.00	-28.98

**Table 7-40. K Patch Spurious Emissions Table (60-90GHz – n261)**

### Notes

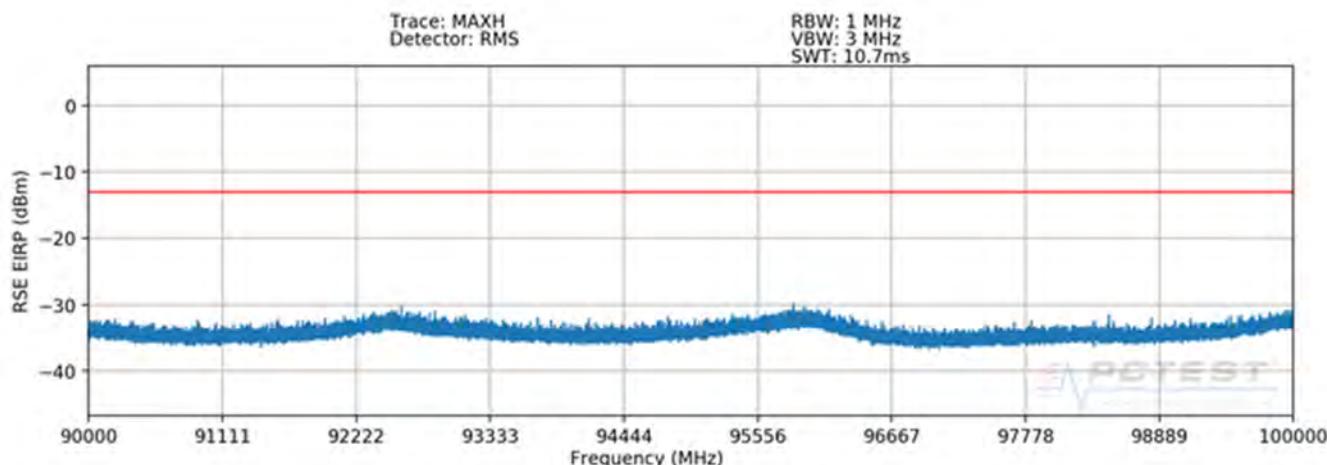
1. The RSE EIRP level is taken directly from the spectrum analyzer which includes the appropriate antenna factors, cable losses, and harmonic mixer conversion losses. Measurements were performed at a distance of 1 meter.
2. To address compliance of MIMO RSE per KDB 662911 D01, the MIMO RSE EIRP is calculated by summing the worst case H Beam EIRP and V Beam EIRP in linear powers units then converted back to dBm:

$$\text{EIRP(H Beam)} + \text{EIRP(V Beam)} = \text{EIRP(MIMO)}$$

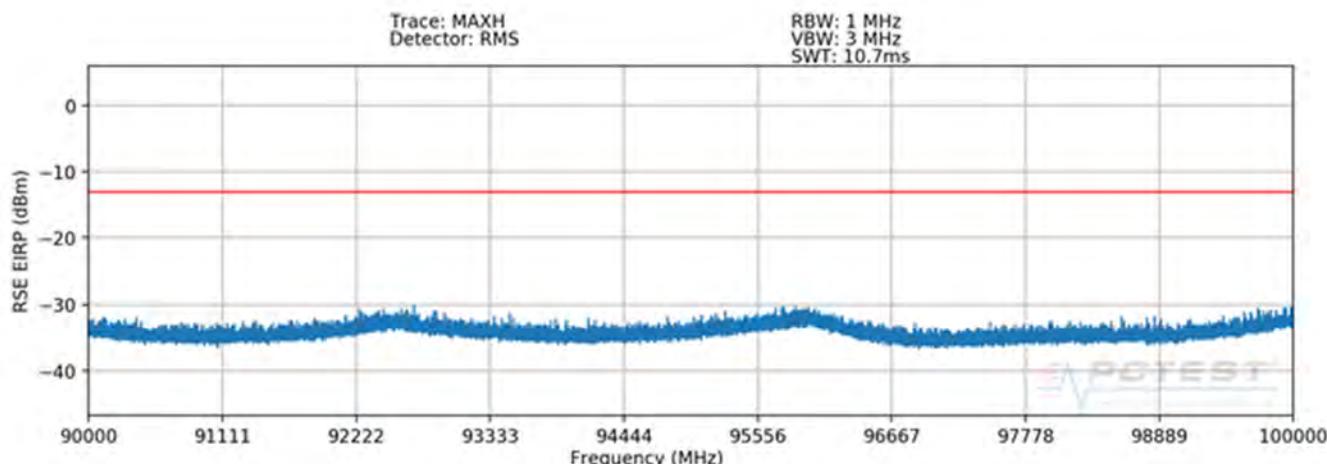
$$(-41.06 \text{ dBm} + -41.07 \text{ dBm}) = (78.36 \text{ nW} + 78.11 \text{ nW}) = (156.47 \text{ nW}) = -38.06 \text{ dBm}$$

FCC ID: A3LSMN976V		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1905130071-06-R1.A3L	Test Dates: 05/14 - 07/12/2019	EUT Type: Portable Handset		Page 131 of 371

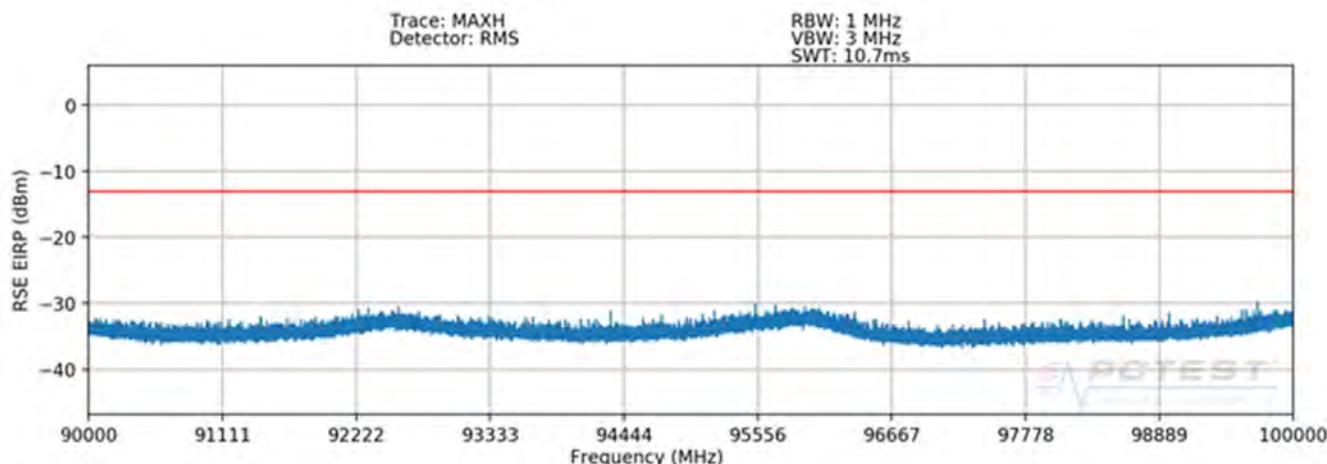
## 90 – 100GHz(n261)



Plot 7-193. K Patch Radiated Spurious Plot 90-100 GHz (1CC QPSK Low Channel H Beam – n261)

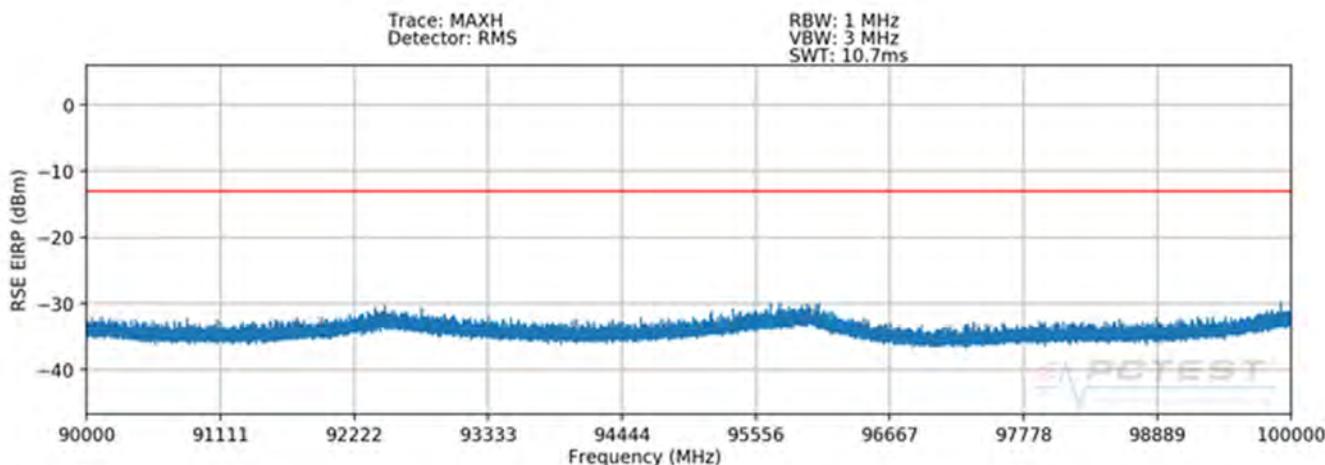


Plot 7-194. K Patch Radiated Spurious Plot 90-100 GHz (1CC QPSK Mid Channel H Beam – n261)

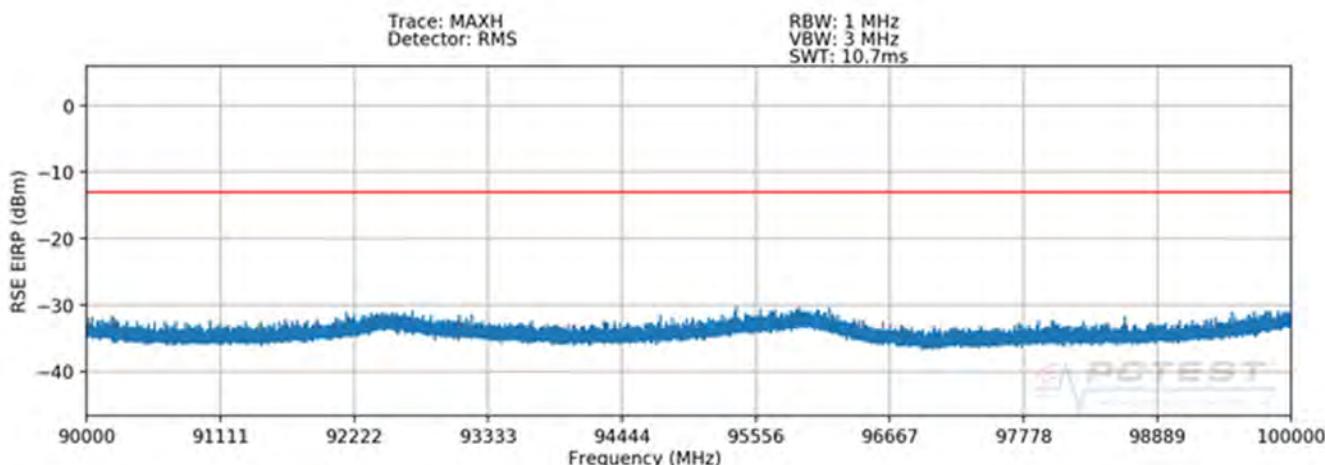


Plot 7-195. K Patch Radiated Spurious Plot 90-100 GHz (1CC QPSK High Channel H Beam – n261)

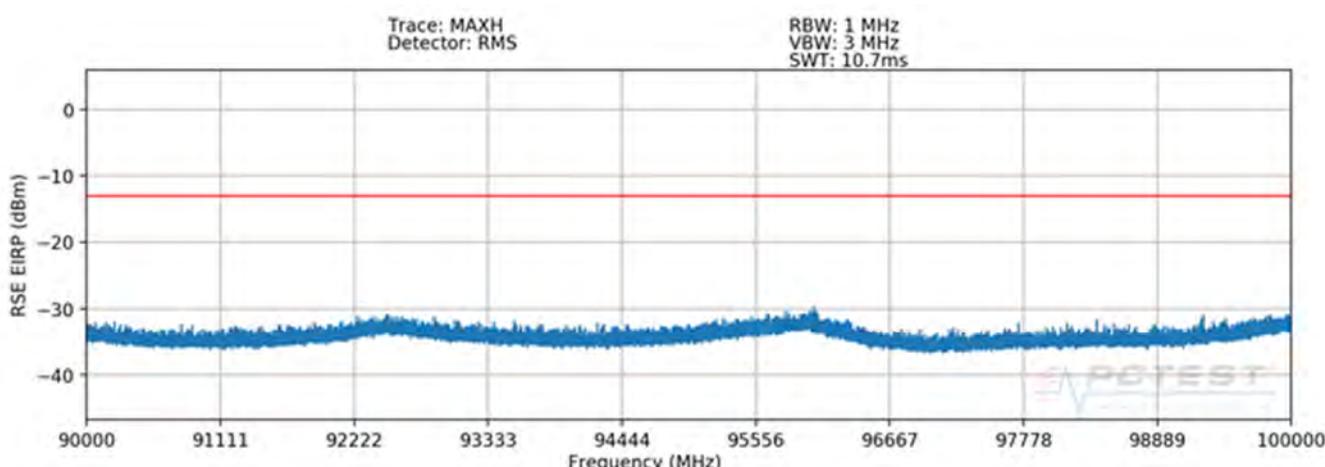
FCC ID: A3LSMN976V		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1905130071-06-R1.A3L	Test Dates: 05/14 - 07/12/2019	EUT Type: Portable Handset		Page 132 of 371



Plot 7-196. K Patch Radiated Spurious Plot 90-100 GHz (1CC QPSK Low Channel V Beam – n261)



Plot 7-197. K Patch Radiated Spurious Plot 90-100 GHz (1CC QPSK Mid Channel V Beam – n261)



Plot 7-198. K Patch Radiated Spurious Plot 90-100 GHz (1CC QPSK High Channel V Beam – n261)

FCC ID: A3LSMN976V	<b>PCTEST</b> ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1905130071-06-R1.A3L	Test Dates: 05/14 - 07/12/2019	EUT Type: Portable Handset		Page 133 of 371

## Spurious Emissions EIRP Sample Calculation(n261)

The raw radiated spurious level is converted to field strength in  $\text{dB}\mu\text{V}/\text{m}$ . Then, the RSE EIRP level is calculated by applying the additional factors shown below for a test distance of 1 meter.

**RSE EIRP [dBm]** = Analyzer Level [dBm] + 107 + AFCL[dB/m] + 20Log(Dm) + Harmonic Mixer Loss (dB) – 104.8

Frequency [MHz]	Detector/Trace	Chan.	Bandwidth (MHz)	Mod.	Beam Polarization	Ant. Pos [H/V]	Turntable Azimuth [degree]	Positioner Azimuth [degree]	RSE EIRP [dBm]	Limit [dBm]	Margin [dB]
96019.00	RMS/Avg	Low	50	QPSK	H	H	-	-	-39.73	-13.00	-26.73
96000.50	RMS/Avg	Mid	50	QPSK	H	H	-	-	-39.61	-13.00	-26.61
95989.00	RMS/Avg	High	50	QPSK	H	H	-	-	-40.11	-13.00	-27.11
95915.00	RMS/Avg	Low	50	QPSK	V	V	-	-	-39.82	-13.00	-26.82
95960.00	RMS/Avg	Mid	50	QPSK	V	V	-	-	-39.89	-13.00	-26.89
95843.50	RMS/Avg	High	50	QPSK	V	V	-	-	-39.89	-13.00	-26.89

**Table 7-41. K Patch Spurious Emissions Table (90-100GHz – n261)**

### Notes

1. The RSE EIRP level is taken directly from the spectrum analyzer which includes the appropriate antenna factors, cable losses, and harmonic mixer conversion losses. Measurements were performed at a distance of 1 meter.
2. To address compliance of MIMO RSE per KDB 662911 D01, the MIMO RSE EIRP is calculated by summing the worst case H Beam EIRP and V Beam EIRP in linear powers units then converted back to dBm:

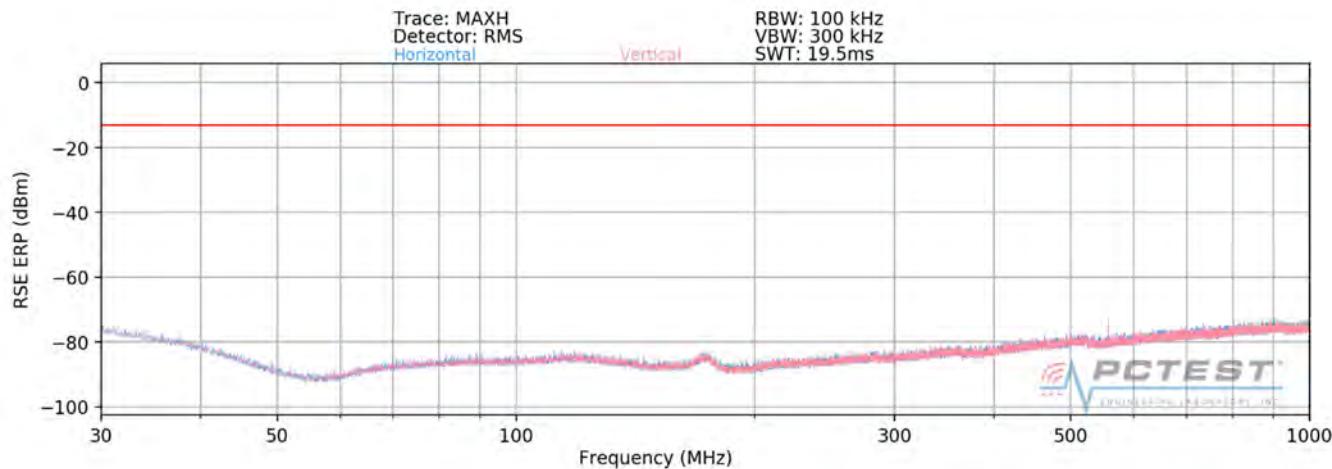
$$\text{EIRP(H Beam)} + \text{EIRP(V Beam)} = \text{EIRP(MIMO)}$$

$$(-39.61 \text{ dBm} + -39.89 \text{ dBm}) = (109.32 \text{ nW} + 102.66 \text{ nW}) = (211.98 \text{ nW}) = -36.74 \text{ dBm}$$

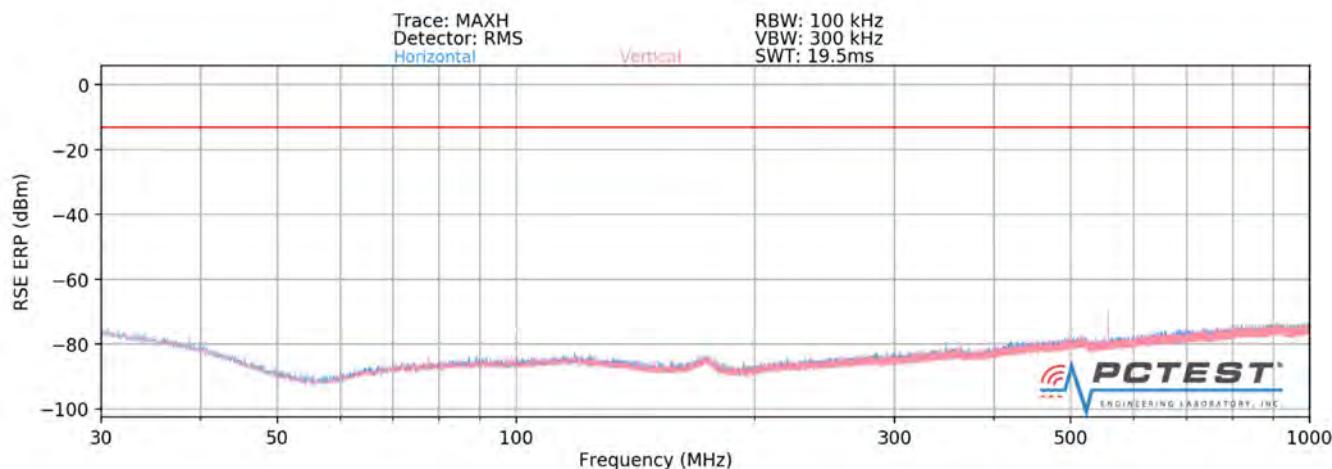
FCC ID: A3LSMN976V		MEASUREMENT REPORT (CERTIFICATION)				Approved by: Quality Manager
Test Report S/N: 1M1905130071-06-R1.A3L	Test Dates: 05/14 - 07/12/2019	EUT Type: Portable Handset				Page 134 of 371

## L Patch Radiated Spurious Emissions(n261)

### 30MHz – 1GHz(n261)



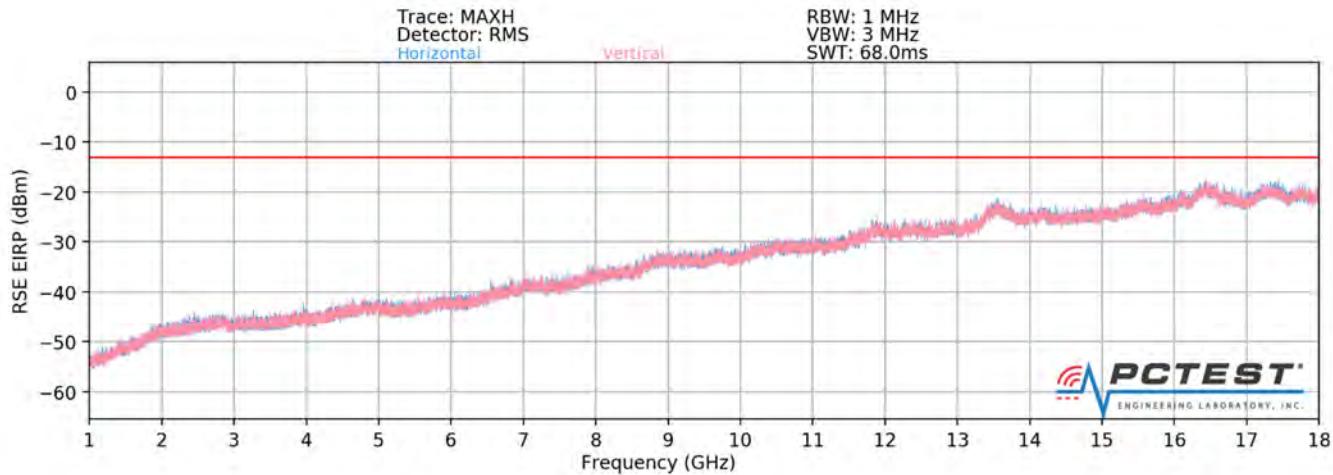
Plot 7-199. L Patch Radiated Spurious Plot 30 MHz - 1 GHz (1CC QPSK Mid Channel H Beam – n261)



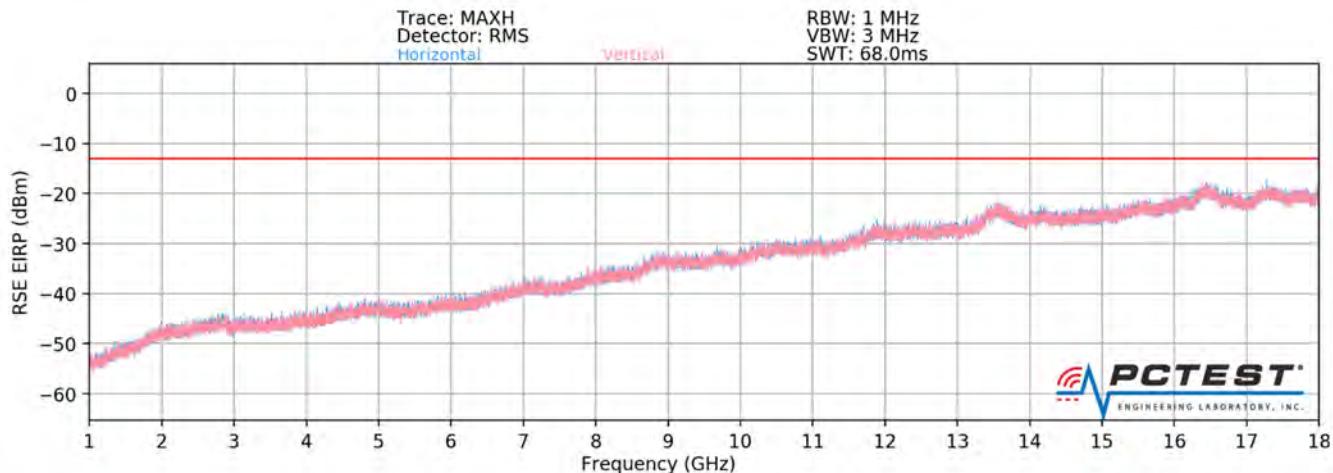
Plot 7-200. L Patch Radiated Spurious Plot 30 MHz - 1 GHz (1CC QPSK Mid Channel V Beam – n261)

FCC ID: A3LSMN976V		MEASUREMENT REPORT (CERTIFICATION)			Approved by: Quality Manager
Test Report S/N: 1M1905130071-06-R1.A3L	Test Dates: 05/14 - 07/12/2019	EUT Type: Portable Handset			Page 135 of 371

1 – 18GHz



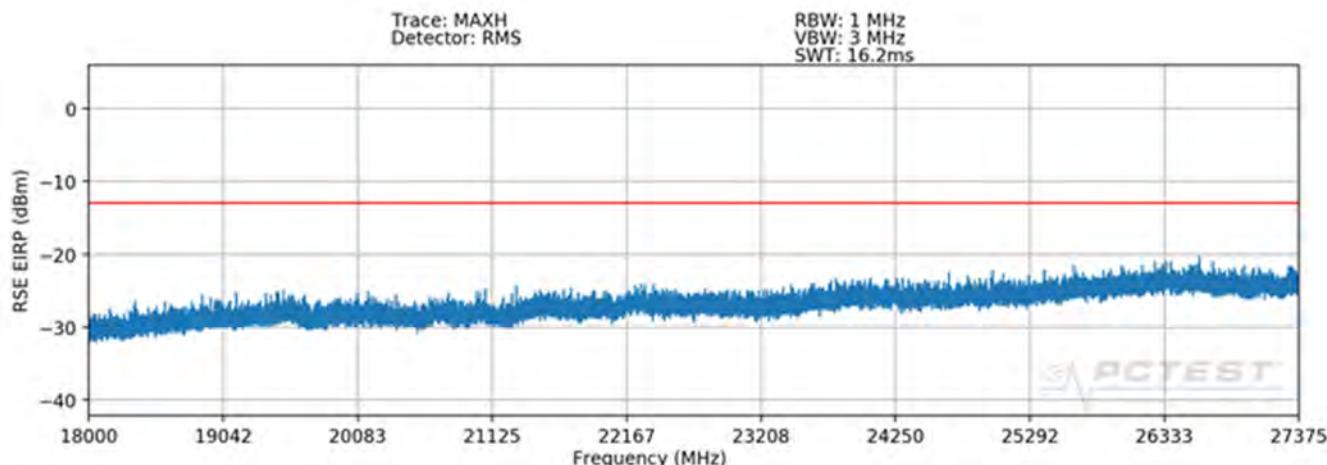
Plot 7-201. L Patch Radiated Spurious Plot 1-18 GHz (1CC QPSK Mid Channel H Beam – n261)



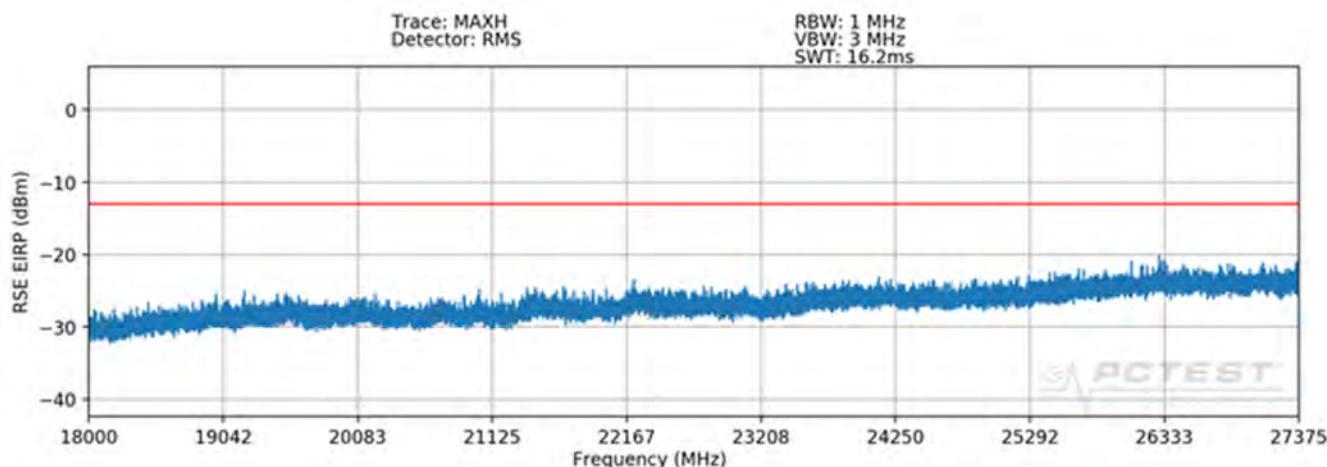
Plot 7-202. L Patch Radiated Spurious Plot 1-18 GHz (1CC QPSK Mid Channel V Beam – n261)

FCC ID: A3LSMN976V		MEASUREMENT REPORT (CERTIFICATION)			Approved by: Quality Manager
Test Report S/N: 1M1905130071-06-R1.A3L	Test Dates: 05/14 - 07/12/2019	EUT Type: Portable Handset			Page 136 of 371

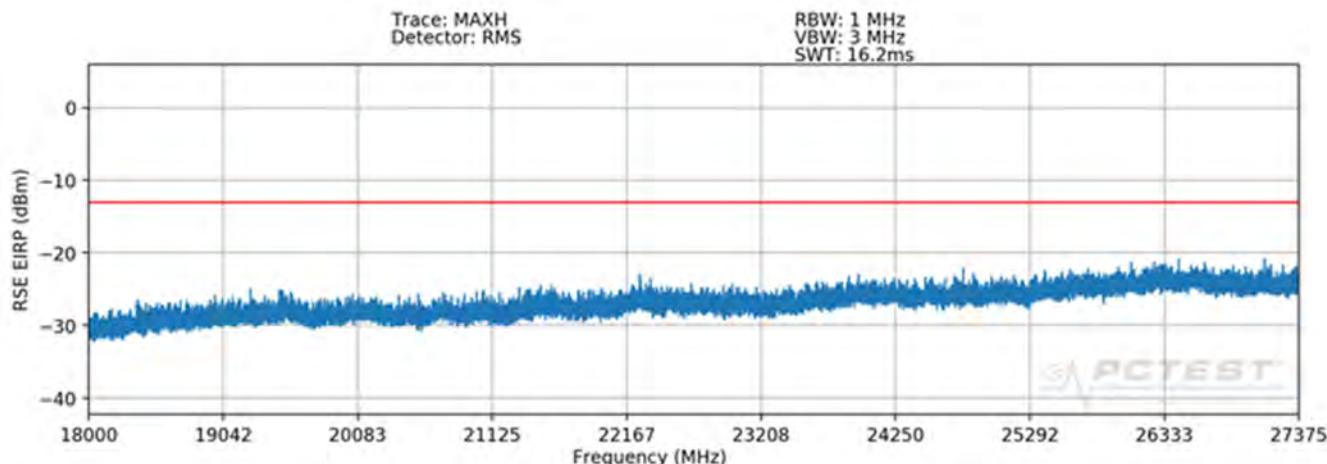
## 18 – 27.375GHz



Plot 7-203. L Patch Radiated Spurious Plot 18-27.375 GHz (1CC QPSK Low Channel H Beam – n261)

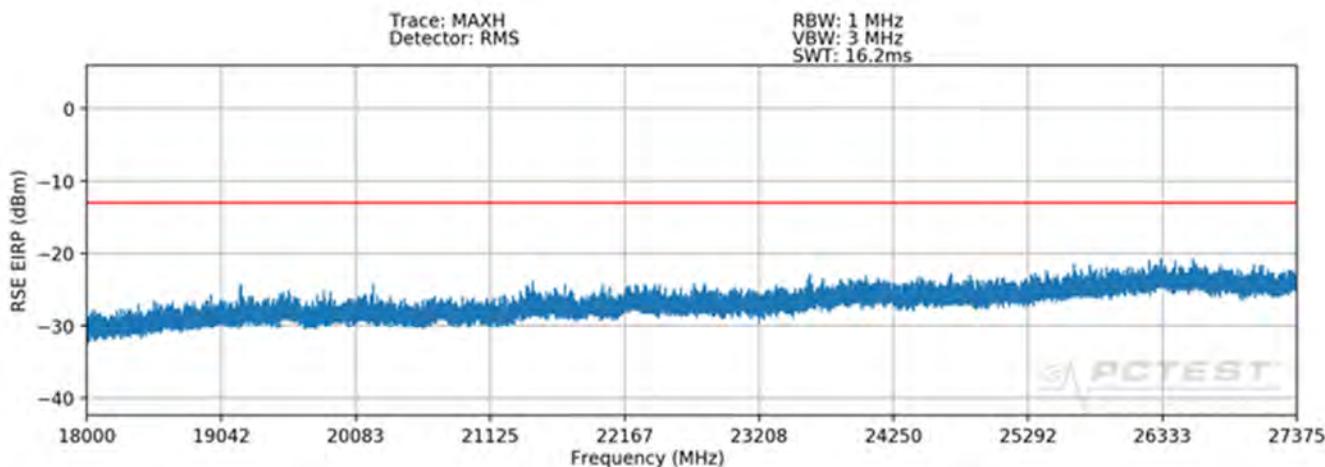


Plot 7-204. L Patch Radiated Spurious Plot 18-27.375 GHz (1CC QPSK Mid Channel H Beam – n261)

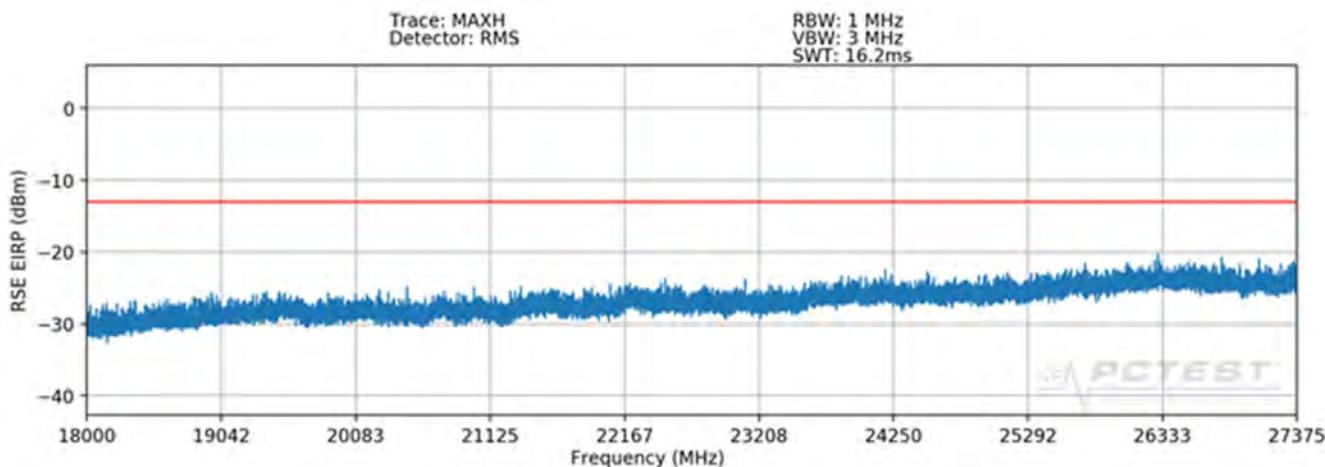


Plot 7-205. L Patch Radiated Spurious Plot 18-27.375 GHz (1CC QPSK High Channel H Beam – n261)

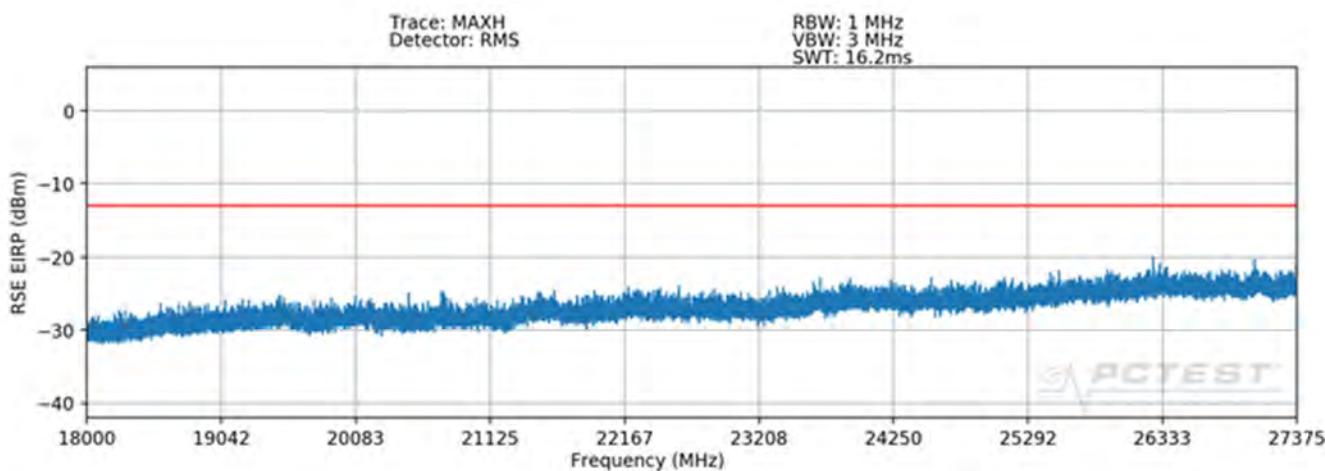
FCC ID: A3LSMN976V		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1905130071-06-R1.A3L	Test Dates: 05/14 - 07/12/2019	EUT Type: Portable Handset		Page 137 of 371



**Plot 7-206. L Patch Radiated Spurious Plot 18-27.375 GHz (1CC QPSK Low Channel V Beam – n261)**



**Plot 7-207. L Patch Radiated Spurious Plot 18-27.375 GHz (1CC QPSK Mid Channel V Beam – n261)**



**Plot 7-208. L Patch Radiated Spurious Plot 18-27.375 GHz (1CC QPSK High Channel V Beam – n261)**

FCC ID: A3LSMN976V	<b>PCTEST</b> ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)		SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1905130071-06-R1.A3L	Test Dates: 05/14 - 07/12/2019	EUT Type: Portable Handset			Page 138 of 371

## Spurious Emissions EIRP Sample Calculation (n261)

The raw radiated spurious level is converted to field strength in  $\text{dB}\mu\text{V}/\text{m}$ . Then, the RSE EIRP level is calculated by applying the additional factors shown below for a test distance of 1 meter.

$$\text{RSE EIRP [dBm]} = \text{Analyzer Level [dBm]} + 107 + \text{AFCL [dB/m]} + 20\text{Log}(\text{Dm}) - 104.8$$

Frequency [MHz]	Detector/Trace	Chan.	Bandwidth (MHz)	Mod.	EUT Beam Polarization	Ant. Pos [H/V]	Turntable Azimuth [degree]	Positioner Azimuth [degree]	RSE EIRP [dBm]	Limit [dBm]	Margin [dB]
26961.60	RMS/Avg	Low	50	QPSK	H	H	235	334	-35.65	-13.00	-22.65
27343.10	RMS/Avg	Mid	50	QPSK	H	H	233	314	-35.06	-13.00	-22.06
25601.60	RMS/Avg	High	50	QPSK	H	H	311	324	-36.13	-13.00	-23.13
25663.10	RMS/Avg	Low	50	QPSK	V	V	280	353	-35.94	-13.00	-22.94
26765.20	RMS/Avg	Mid	50	QPSK	V	V	277	350	-36.77	-13.00	-23.77
27190.80	RMS/Avg	High	50	QPSK	V	V	277	2	-35.15	-13.00	-22.15

Table 7-42. L Patch Spurious Emissions Table (18-27.375GHz – n261)

### Notes

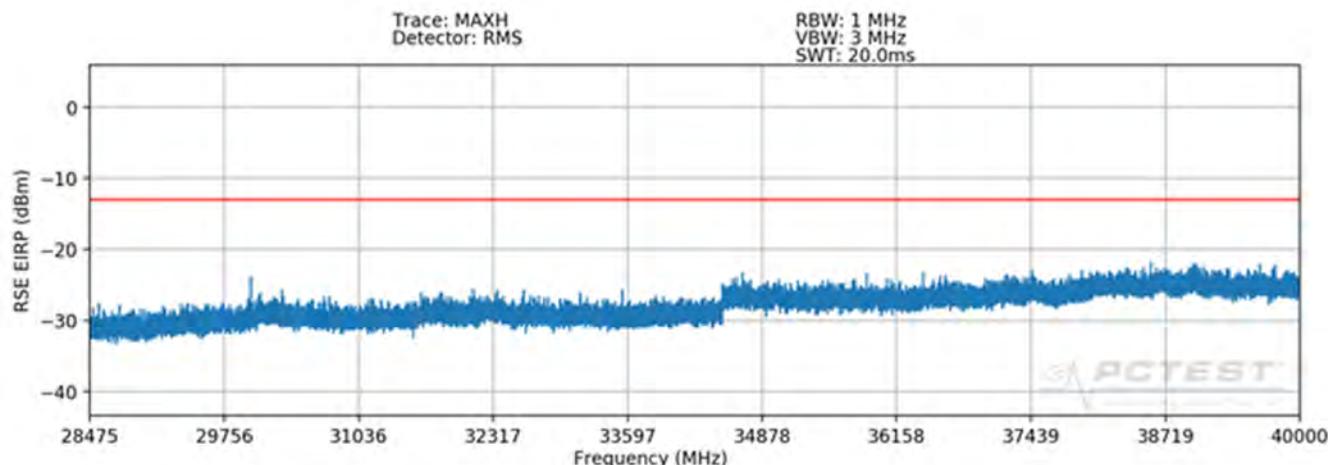
1. The RSE EIRP level is taken directly from the spectrum analyzer which includes the appropriate antenna factors, cable losses, and harmonic mixer conversion losses. Measurements were performed at a distance of 1 meter.
2. To address compliance of MIMO RSE per KDB 662911 D01, the MIMO RSE EIRP is calculated by summing the worst case H Beam EIRP and V Beam EIRP in linear powers units then converted back to dBm:

$$\text{EIRP(H Beam)} + \text{EIRP(V Beam)} = \text{EIRP(MIMO)}$$

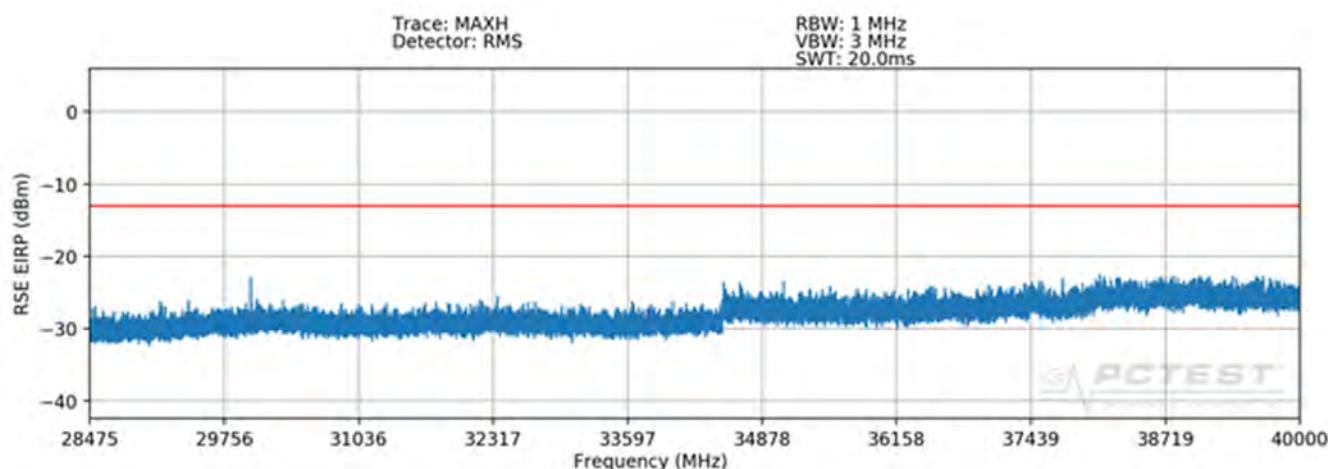
$$(-36.13 \text{ dBm} + -35.15 \text{ dBm}) = (243.67 \text{ nW} + 305.70 \text{ nW}) = (549.37 \text{ nW}) = -32.60 \text{ dBm}$$

FCC ID: A3LSMN976V		MEASUREMENT REPORT (CERTIFICATION)				Approved by: Quality Manager
Test Report S/N: 1M1905130071-06-R1.A3L	Test Dates: 05/14 - 07/12/2019	EUT Type: Portable Handset				Page 139 of 371

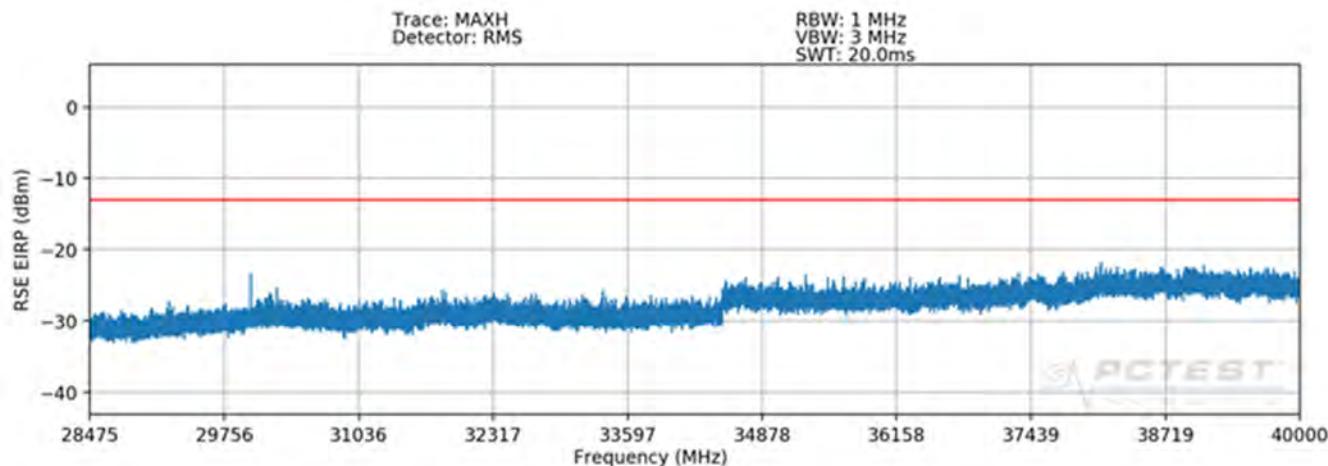
## 28.475 – 40GHz(n261)



Plot 7-209. L Patch Radiated Spurious Plot 28.475-40 GHz (1CC QPSK Low Channel H Beam – n261)

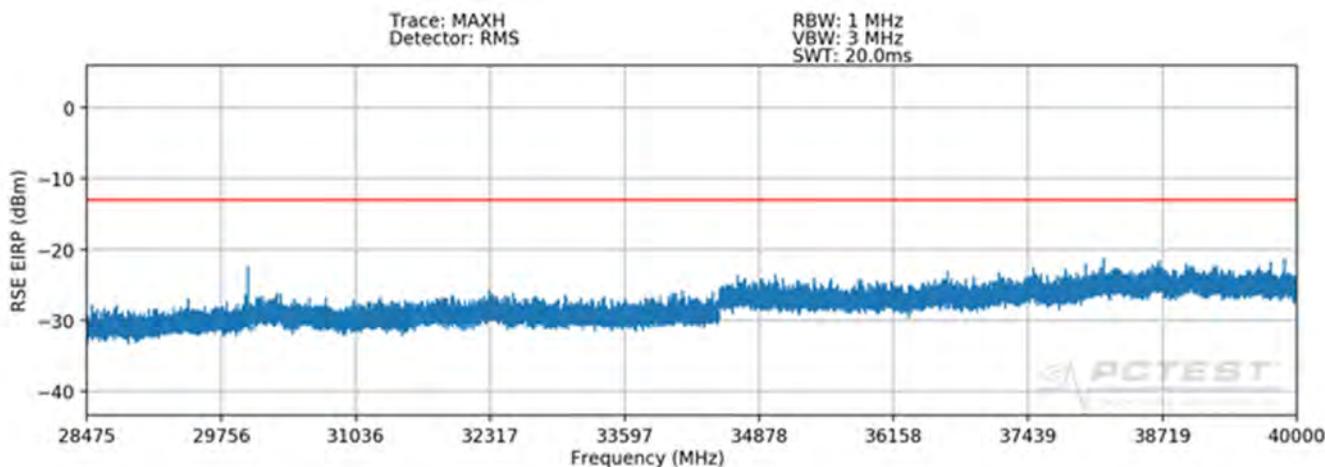


Plot 7-210. L Patch Radiated Spurious Plot 28.475-40 GHz (1CC QPSK Mid Channel H Beam – n261)

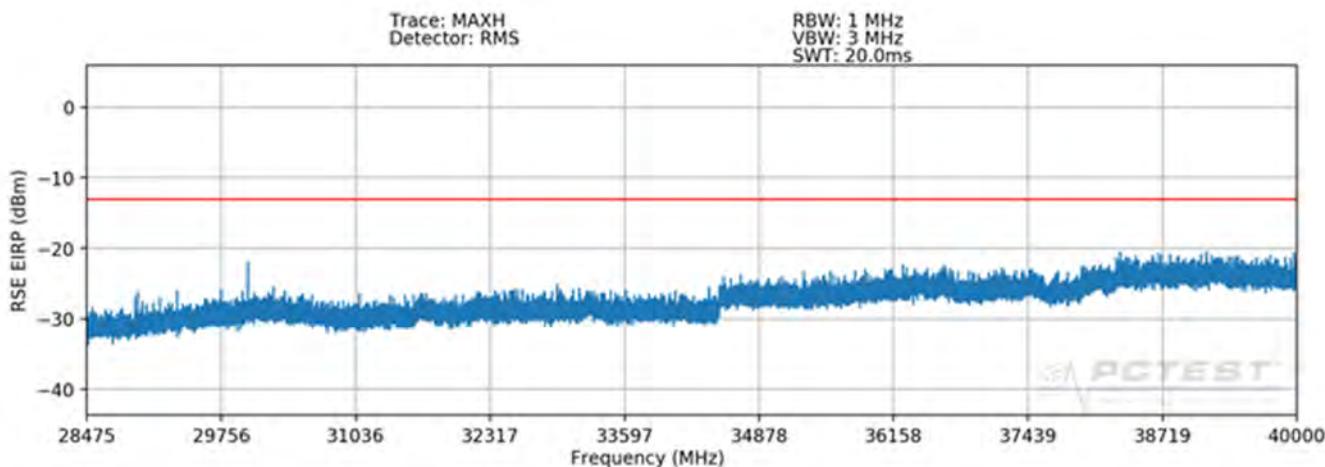


Plot 7-211. L Patch Radiated Spurious Plot 28.475-40 GHz (1CC QPSK High Channel H Beam – n261)

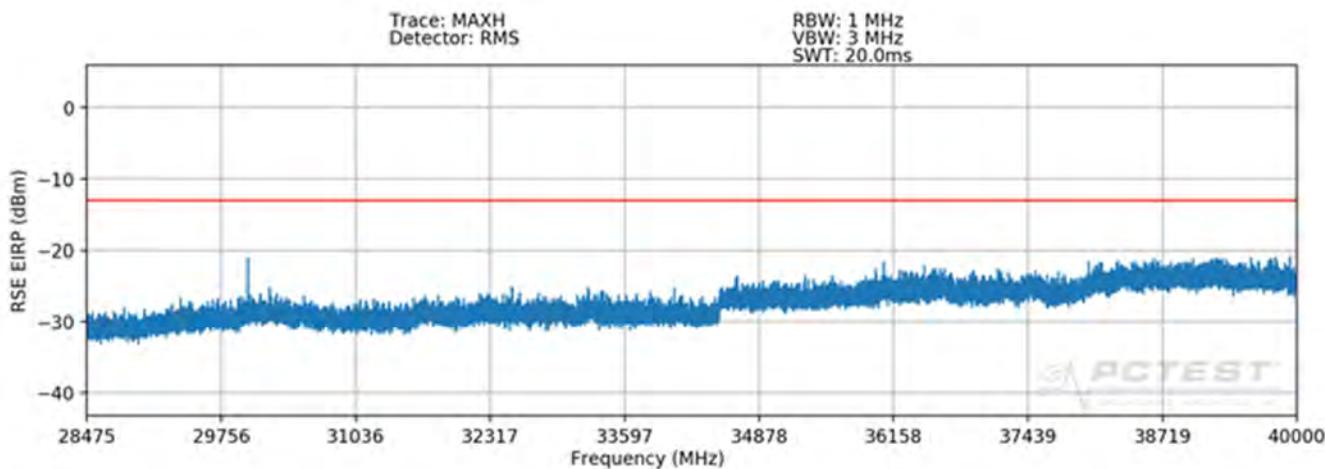
FCC ID: A3LSMN976V		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1905130071-06-R1.A3L	Test Dates: 05/14 - 07/12/2019	EUT Type: Portable Handset		Page 140 of 371



Plot 7-212. L Patch Radiated Spurious Plot 28.475-40 GHz (1CC QPSK Low Channel V Beam – n261)



Plot 7-213. L Patch Radiated Spurious Plot 28.475-40 GHz (1CC QPSK Mid Channel V Beam – n261)



Plot 7-214. L Patch Radiated Spurious Plot 28.475-40 GHz (1CC QPSK High Channel V Beam – n261)

FCC ID: A3LSMN976V		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1905130071-06-R1.A3L	Test Dates: 05/14 - 07/12/2019	EUT Type: Portable Handset		Page 141 of 371

## Spurious Emissions EIRP Sample Calculation(n261)

The raw radiated spurious level is converted to field strength in  $\text{dB}\mu\text{V/m}$ . Then, the RSE EIRP level is calculated by applying the additional factors shown below for a test distance of 1 meter.

$$\text{RSE EIRP [dBm]} = \text{Analyzer Level [dBm]} + 107 + \text{AFCL [dB/m]} + 20\text{Log}(\text{Dm}) - 104.8$$

Frequency [MHz]	Detector/Trace	Chan.	Bandwidth (MHz)	Mod.	EUT Beam Polarization	Ant. Pos [H/V]	Turntable Azimuth [degree]	Positioner Azimuth [degree]	RSE EIRP [dBm]	Limit [dBm]	Margin [dB]
28761.70	RMS/Avg	Low	50	QPSK	H	H	238	336	-31.29	-13.00	-18.29
28959.82	RMS/Avg	Mid	50	QPSK	H	H	236	314	-31.82	-13.00	-18.82
29372.65	RMS/Avg	High	50	QPSK	H	H	308	324	-31.58	-13.00	-18.58
28761.00	RMS/Avg	Low	50	QPSK	V	V	282	353	-29.71	-13.00	-16.71
28959.50	RMS/Avg	Mid	50	QPSK	V	V	279	355	-30.84	-13.00	-17.84
29373.50	RMS/Avg	High	50	QPSK	V	V	276	5	-30.61	-13.00	-17.61

Table 7-43. L Patch Spurious Emissions Table (28.475-40 GHz – n261)

### Notes

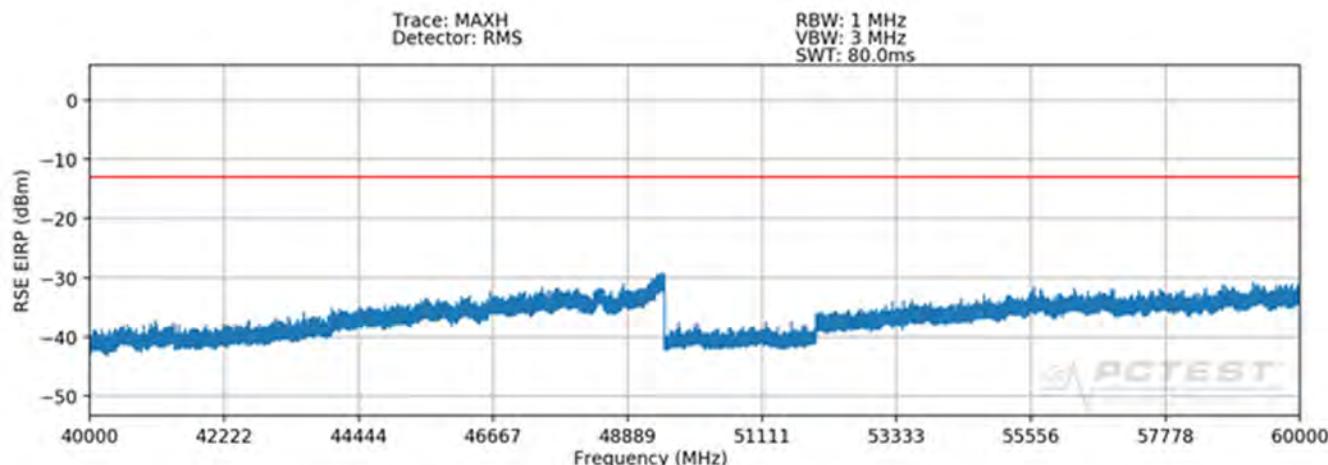
1. The RSE EIRP level is taken directly from the spectrum analyzer which includes the appropriate antenna factors, cable losses, and harmonic mixer conversion losses. Measurements were performed at a distance of 1 meter.
2. To address compliance of MIMO RSE per KDB 662911 D01, the MIMO RSE EIRP is calculated by summing the worst case H Beam EIRP and V Beam EIRP in linear powers units then converted back to dBm:

$$\text{EIRP(H Beam)} + \text{EIRP(V Beam)} = \text{EIRP(MIMO)}$$

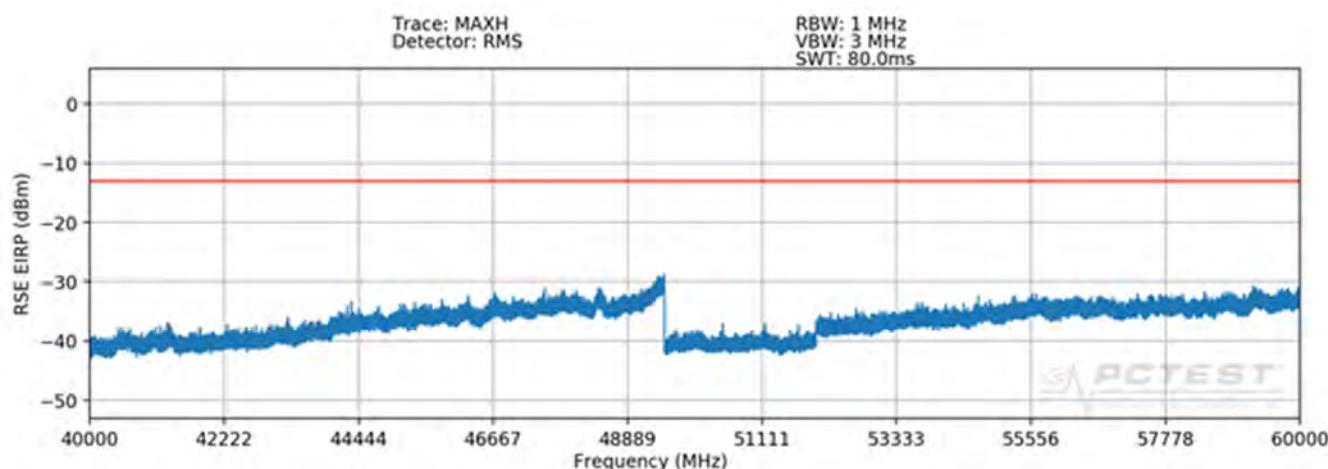
$$(-31.29 \text{ dBm} + -29.71 \text{ dBm}) = (743.02 \text{ nW} + 1069.06 \text{ nW}) = (1812.07 \text{ nW}) = -27.42 \text{ dBm}$$

FCC ID: A3LSMN976V		MEASUREMENT REPORT (CERTIFICATION)				Approved by: Quality Manager
Test Report S/N: 1M1905130071-06-R1.A3L	Test Dates: 05/14 - 07/12/2019	EUT Type: Portable Handset				Page 142 of 371

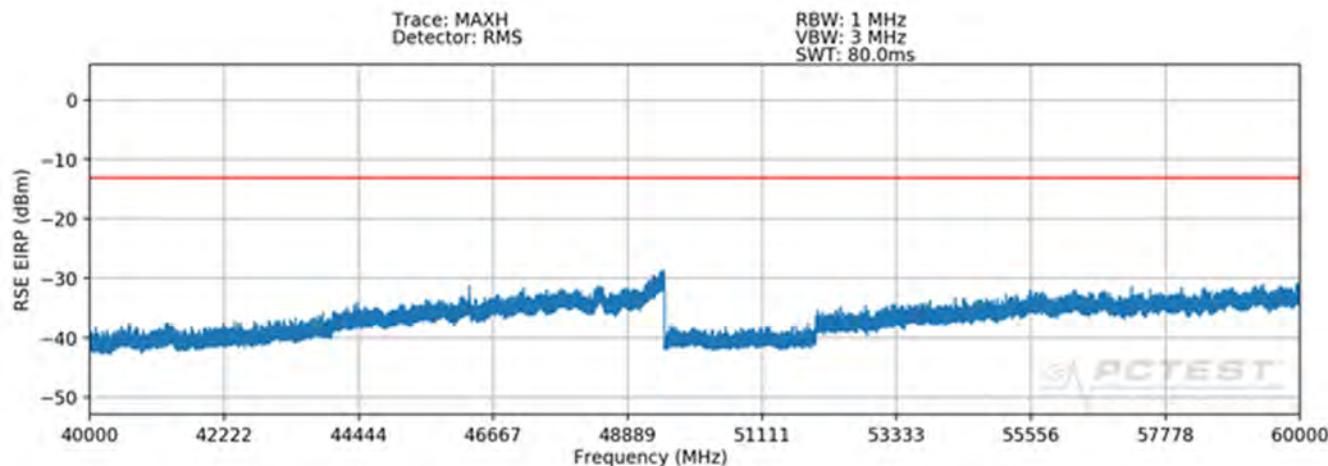
## 40 – 60GHz(n261)



Plot 7-215. L Patch Radiated Spurious Plot 40-60 GHz (1CC QPSK Low Channel H Beam – n261)

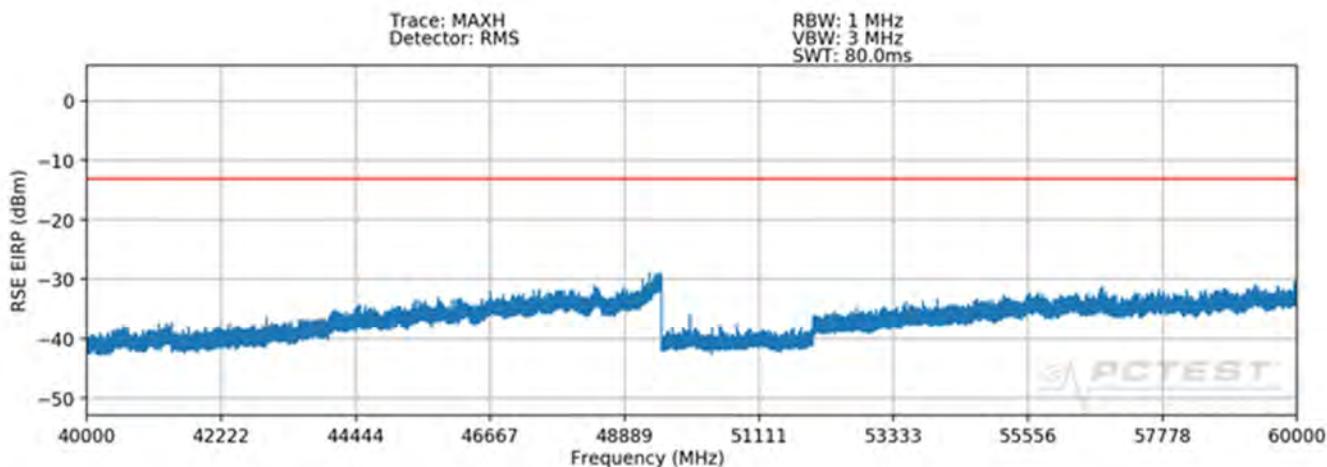


Plot 7-216. L Patch Radiated Spurious Plot 40-60 GHz (1CC QPSK Mid Channel H Beam – n261)

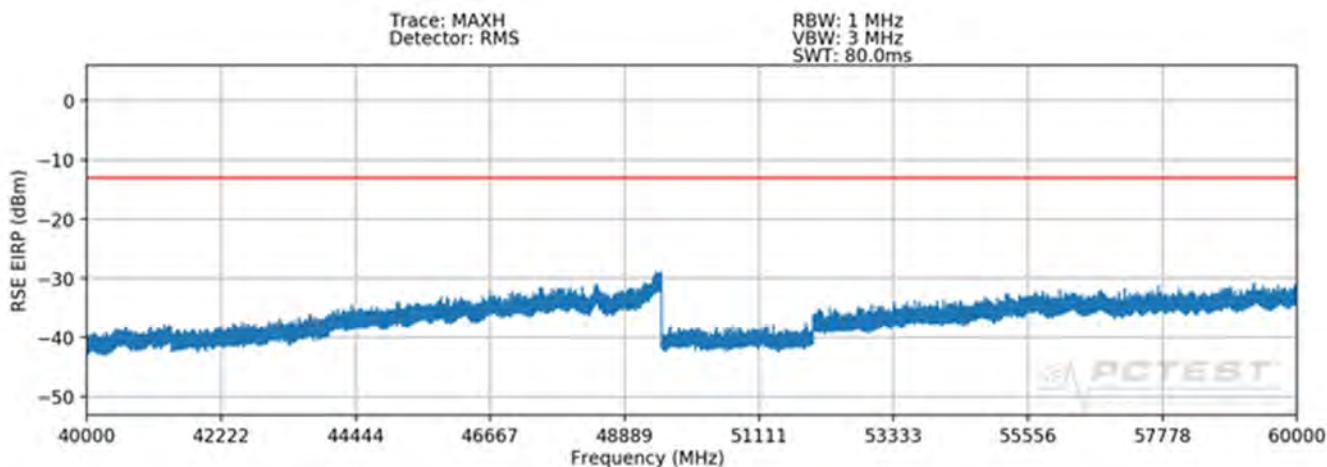


Plot 7-217. L Patch Radiated Spurious Plot 40-60 GHz (1CC QPSK High Channel H Beam – n261)

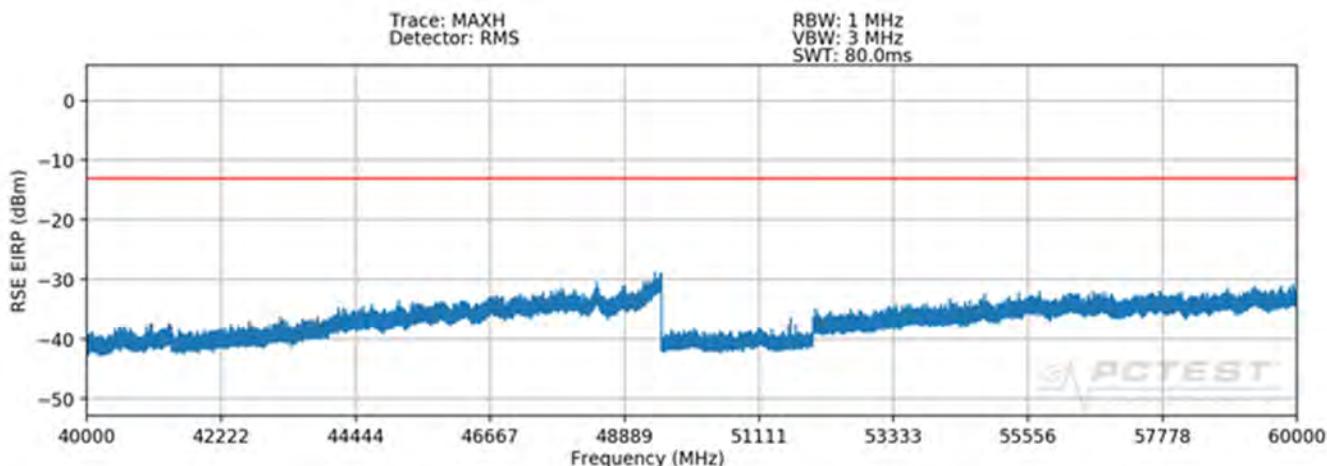
FCC ID: A3LSMN976V		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1905130071-06-R1.A3L	Test Dates: 05/14 - 07/12/2019	EUT Type: Portable Handset		Page 143 of 371



Plot 7-218. L Patch Radiated Spurious Plot 40-60 GHz (1CC QPSK Low Channel V Beam – n261)



Plot 7-219. L Patch Radiated Spurious Plot 40-60 GHz (1CC QPSK Mid Channel V Beam – n261)



Plot 7-220. L Patch Radiated Spurious Plot 40-60 GHz (1CC QPSK High Channel V Beam – n261)

FCC ID: A3LSMN976V	<b>PCTEST</b> ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)		SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1905130071-06-R1.A3L	Test Dates: 05/14 - 07/12/2019	EUT Type: Portable Handset			Page 144 of 371

## Spurious Emissions EIRP Sample Calculation(n261)

The raw radiated spurious level is converted to field strength in  $\text{dB}\mu\text{V}/\text{m}$ . Then, the RSE EIRP level is calculated by applying the additional factors shown below for a test distance of 1.5 meter.

$$\text{RSE EIRP [dBm]} = \text{Analyzer Level [dBm]} + 107 + \text{AFCL [dB/m]} + 20\text{Log}(\text{Dm}) - 104.8$$

Frequency [MHz]	Detector/Trace	Chan.	Bandwidth (MHz)	Mod.	EUT Beam Polarization	Ant. Pos [H/V]	Turntable Azimuth [degree]	Positioner Azimuth [degree]	RSE EIRP [dBm]	Limit [dBm]	Margin [dB]
49487.75	RMS/Avg	Low	50	QPSK	H	H	-	-	-37.58	-13.00	-24.58
49498.65	RMS/Avg	Mid	50	QPSK	H	H	-	-	-37.49	-13.00	-24.49
49494.55	RMS/Avg	High	50	QPSK	H	H	-	-	-37.53	-13.00	-24.53
49491.25	RMS/Avg	Low	50	QPSK	V	H	-	-	-37.77	-13.00	-24.77
49499.75	RMS/Avg	Mid	50	QPSK	V	H	-	-	-37.55	-13.00	-24.55
49490.55	RMS/Avg	High	50	QPSK	V	H	-	-	-37.51	-13.00	-24.51

Table 7-44. L Patch Spurious Emissions Table (40 - 60GHz - n261)

### Notes

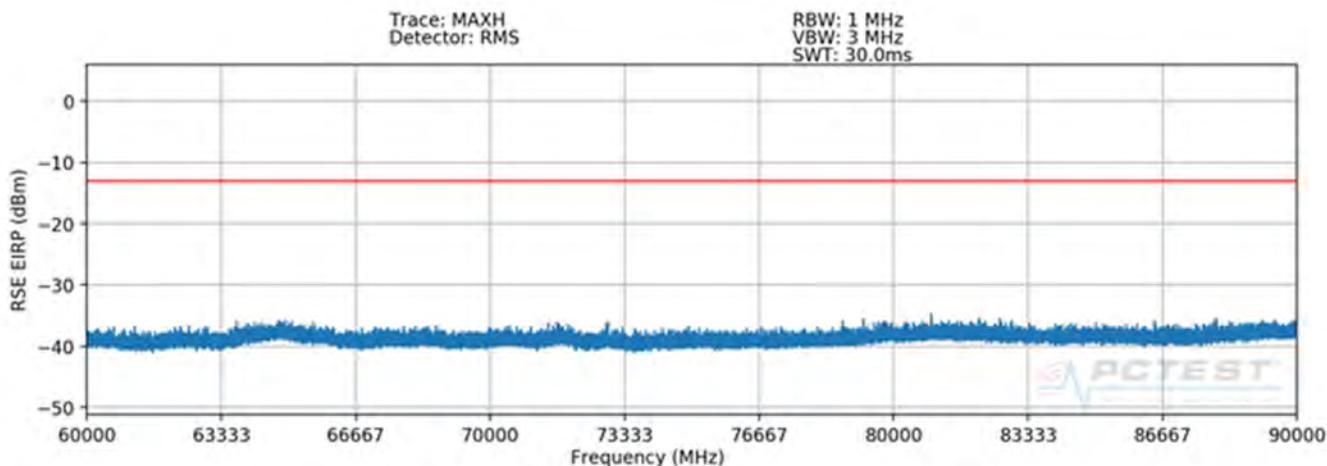
1. The RSE EIRP level is taken directly from the spectrum analyzer which includes the appropriate antenna factors, cable losses, and harmonic mixer conversion losses. Measurements were performed at a distance of 1.5 meter.
2. To address compliance of MIMO RSE per KDB 662911 D01, the MIMO RSE EIRP is calculated by summing the worst case H Beam EIRP and V Beam EIRP in linear powers units then converted back to dBm:

$$\text{EIRP(H Beam)} + \text{EIRP(V Beam)} = \text{EIRP(MIMO)}$$

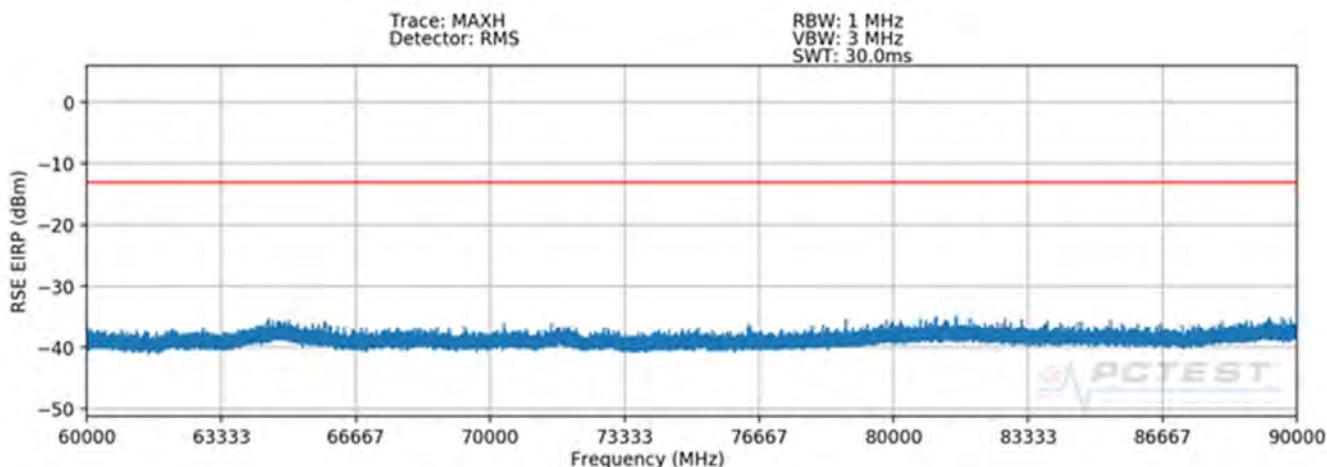
$$(-37.49 \text{ dBm} + -37.55 \text{ dBm}) = (178.24 \text{ nW} + 175.79 \text{ nW}) = (354.03 \text{ nW}) = -34.51 \text{ dBm}$$

FCC ID: A3LSMN976V		MEASUREMENT REPORT (CERTIFICATION)				Approved by: Quality Manager
Test Report S/N: 1M1905130071-06-R1.A3L	Test Dates: 05/14 - 07/12/2019	EUT Type: Portable Handset				Page 145 of 371

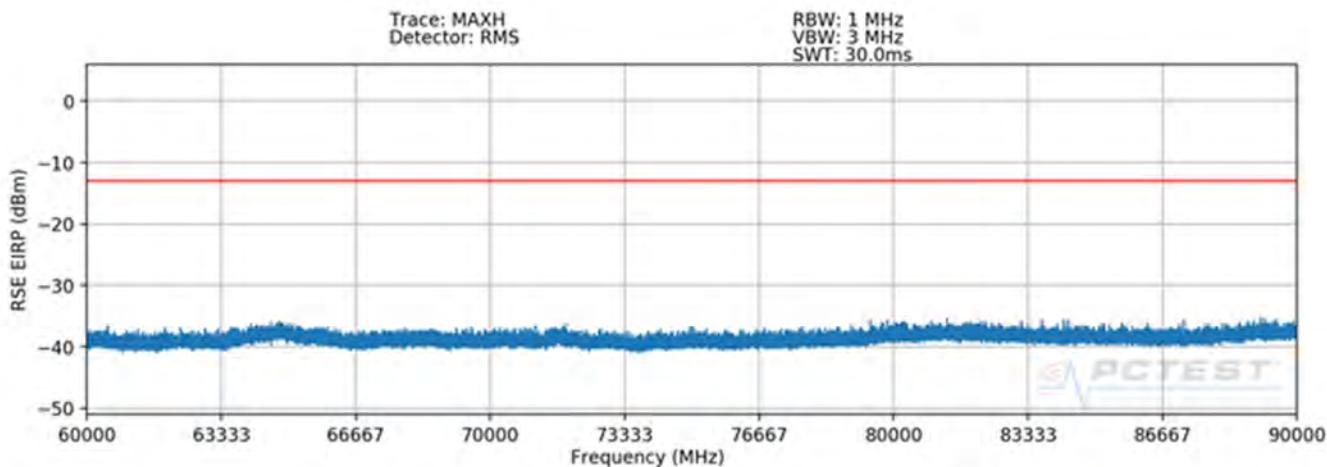
## 60 – 90GHz(n261)



Plot 7-221. L Patch Radiated Spurious Plot 60-90 GHz (1CC QPSK Low Channel H Beam – n261)

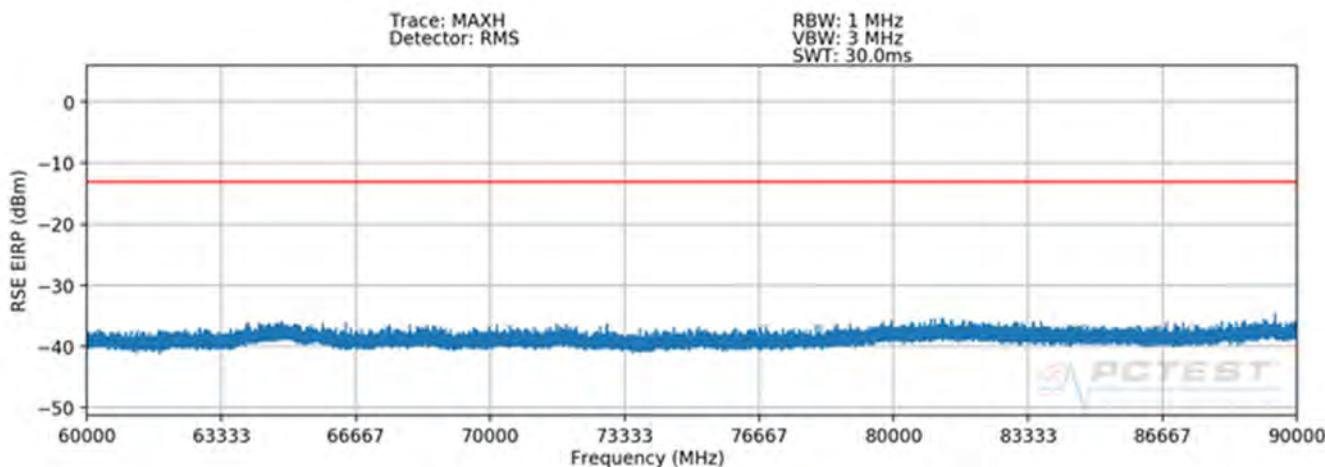


Plot 7-222. L Patch Radiated Spurious Plot 60-90 GHz (1CC QPSK Mid Channel H Beam – n261)

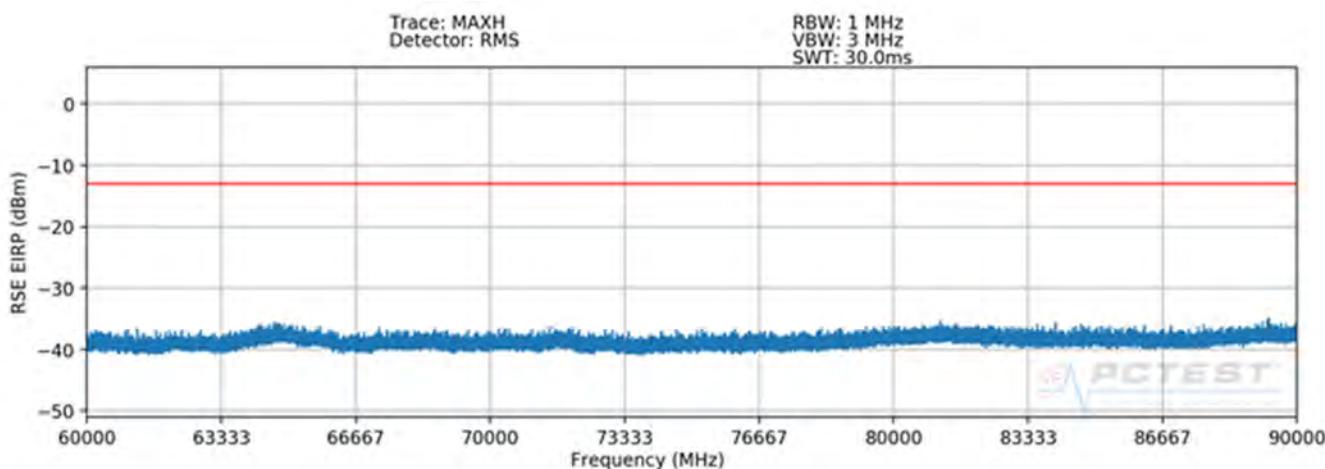


Plot 7-223. L Patch Radiated Spurious Plot 60-90 GHz (1CC QPSK High Channel H Beam – n261)

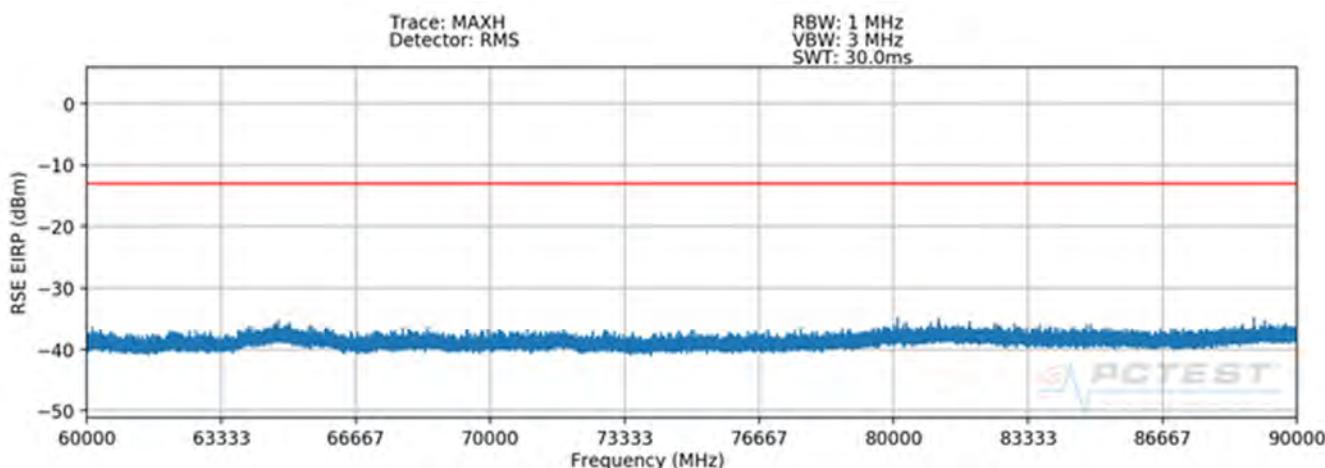
FCC ID: A3LSMN976V		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1905130071-06-R1.A3L	Test Dates: 05/14 - 07/12/2019	EUT Type: Portable Handset		Page 146 of 371



Plot 7-224. L Patch Radiated Spurious Plot 60-90 GHz (1CC QPSK Low Channel V Beam – n261)



Plot 7-225. L Patch Radiated Spurious Plot 60-90 GHz (1CC QPSK Mid Channel V Beam – n261)



Plot 7-226. L Patch Radiated Spurious Plot 60-90 GHz (1CC QPSK High Channel V Beam – n261)

FCC ID: A3LSMN976V	<b>PCTEST</b> ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1905130071-06-R1.A3L	Test Dates: 05/14 - 07/12/2019	EUT Type: Portable Handset		Page 147 of 371

## Spurious Emissions EIRP Sample Calculation(n261)

The raw radiated spurious level is converted to field strength in  $\text{dB}\mu\text{V}/\text{m}$ . Then, the RSE EIRP level is calculated by applying the additional factors shown below for a test distance of 1 meter.

**RSE EIRP [dBm]** = Analyzer Level [dBm] + 107 + AFCL [dB/m] + 20Log(Dm) + Harmonic Mixer Loss (dB) – 104.8

Frequency [MHz]	Detector/Trace	Chan.	Bandwidth (MHz)	Mod.	EUT Beam Polarization	Ant. Pos [H/V]	Turntable Azimuth [degree]	Positioner Azimuth [degree]	RSE EIRP [dBm]	Limit [dBm]	Margin [dB]
82539.00	RMS/Avg	Low	50	QPSK	H	H	235	307	-43.36	-13.00	-30.36
84346.00	RMS/Avg	Mid	50	QPSK	H	H	236	319	-43.70	-13.00	-30.70
84893.50	RMS/Avg	High	50	QPSK	H	H	250	319	-43.56	-13.00	-30.56
82539.00	RMS/Avg	Low	50	QPSK	V	V	237	20	-40.90	-13.00	-27.90
83701.50	RMS/Avg	Mid	50	QPSK	V	V	250	33	-43.39	-13.00	-30.39
84893.50	RMS/Avg	High	50	QPSK	V	V	289	28	-43.19	-13.00	-30.19

**Table 7-45. L Patch Spurious Emissions Table (60-90GHz – n261)**

### Notes

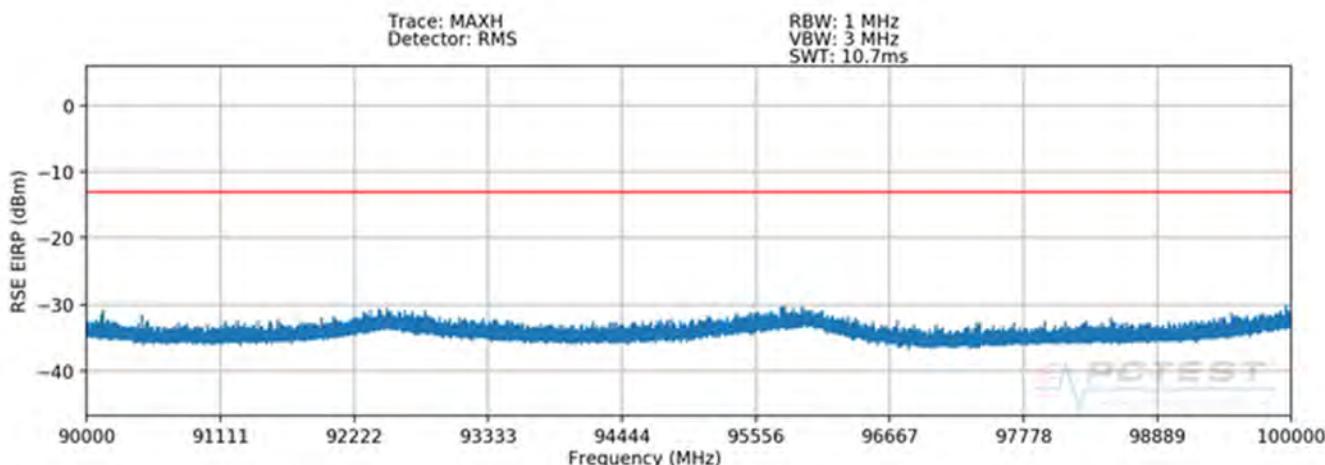
1. The RSE EIRP level is taken directly from the spectrum analyzer which includes the appropriate antenna factors, cable losses, and harmonic mixer conversion losses. Measurements were performed at a distance of 1 meter.
2. To address compliance of MIMO RSE per KDB 662911 D01, the MIMO RSE EIRP is calculated by summing the worst case H Beam EIRP and V Beam EIRP in linear powers units then converted back to dBm:

$$\text{EIRP(H Beam)} + \text{EIRP(V Beam)} = \text{EIRP(MIMO)}$$

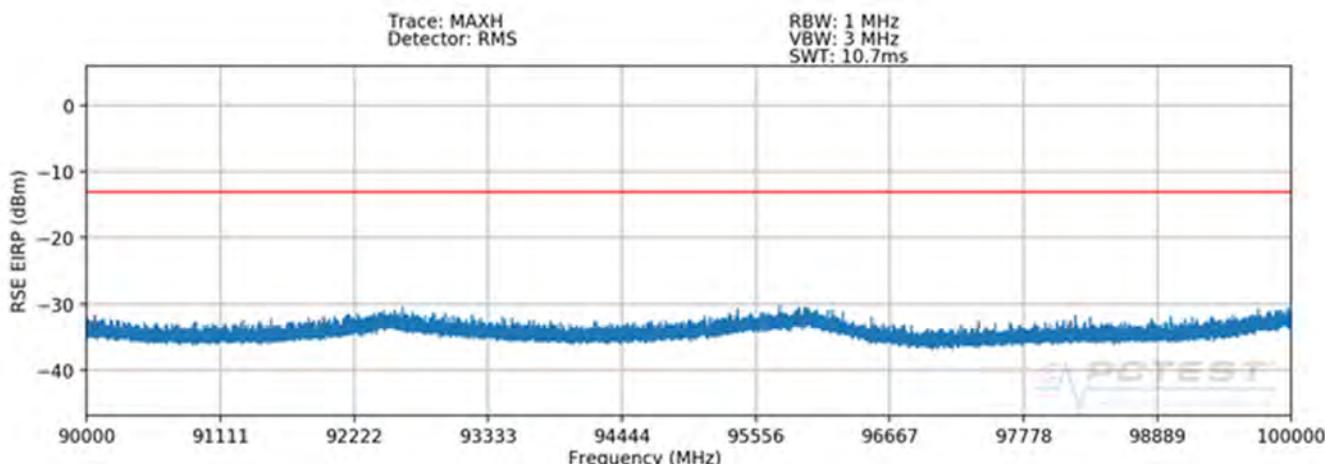
$$(-43.36 \text{ dBm} + -40.90 \text{ dBm}) = (46.10 \text{ nW} + 81.38 \text{ nW}) = (127.48 \text{ nW}) = -38.95 \text{ dBm}$$

FCC ID: A3LSMN976V		MEASUREMENT REPORT (CERTIFICATION)				Approved by: Quality Manager
Test Report S/N: 1M1905130071-06-R1.A3L	Test Dates: 05/14 - 07/12/2019	EUT Type: Portable Handset				Page 148 of 371

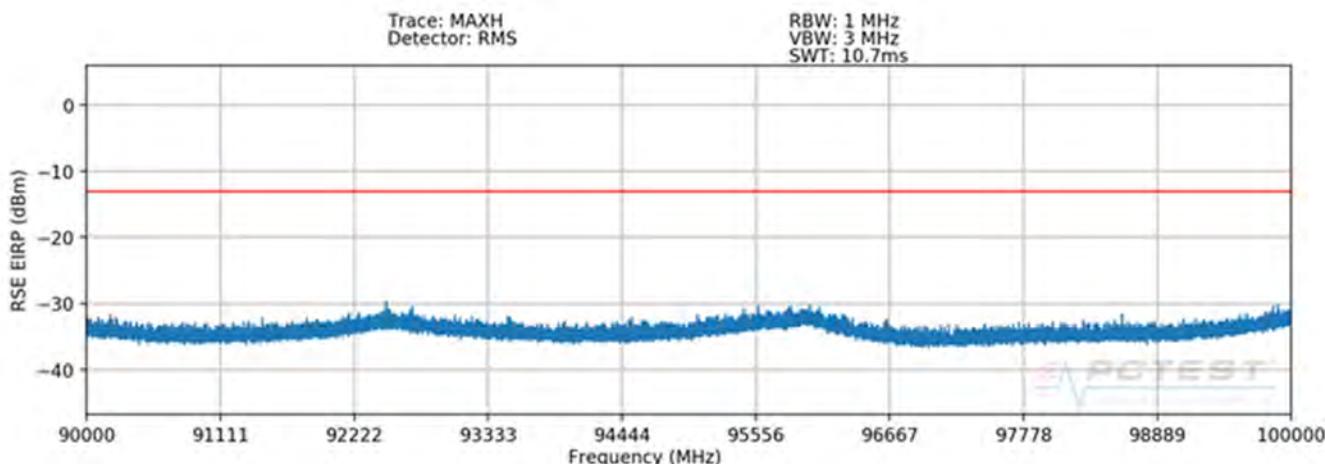
## 90 – 100GHz(n261)



Plot 7-227. L Patch Radiated Spurious Plot 90-100 GHz (1CC QPSK Low Channel H Beam – n261)

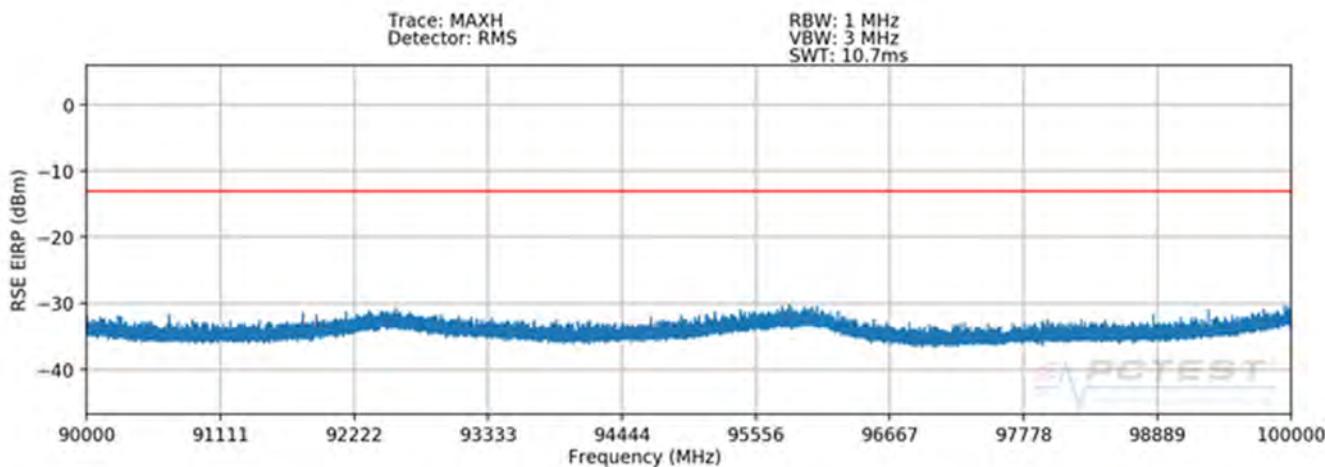


Plot 7-228. L Patch Radiated Spurious Plot 90-100 GHz (1CC QPSK Mid Channel H Beam – n261)

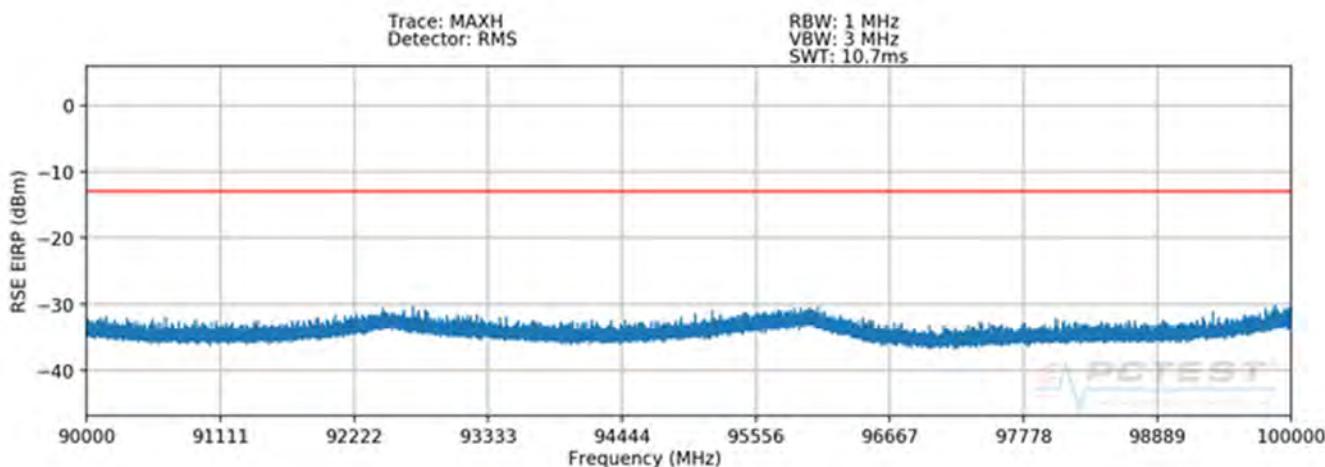


Plot 7-229. L Patch Radiated Spurious Plot 90-100 GHz (1CC QPSK High Channel H Beam – n261)

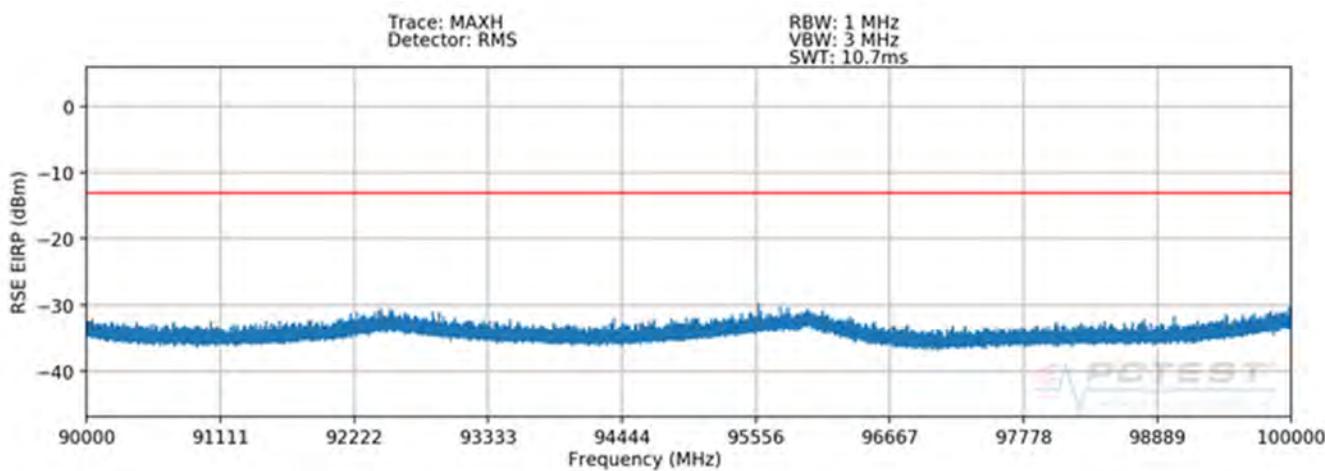
FCC ID: A3LSMN976V		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1905130071-06-R1.A3L	Test Dates: 05/14 - 07/12/2019	EUT Type: Portable Handset		Page 149 of 371



Plot 7-230. L Patch Radiated Spurious Plot 90-100 GHz (1CC QPSK Low Channel V Beam – n261)



Plot 7-231. L Patch Radiated Spurious Plot 90-100 GHz (1CC QPSK Mid Channel V Beam – n261)



Plot 7-232. L Patch Radiated Spurious Plot 90-100 GHz (1CC QPSK High Channel V Beam – n261)

FCC ID: A3LSMN976V	<b>PCTEST</b> ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1905130071-06-R1.A3L	Test Dates: 05/14 - 07/12/2019	EUT Type: Portable Handset		Page 150 of 371

## Spurious Emissions EIRP Sample Calculation(n261)

The raw radiated spurious level is converted to field strength in dB $\mu$ V/m. Then, the RSE EIRP level is calculated by applying the additional factors shown below for a test distance of 1 meter.

**RSE EIRP [dBm]** = Analyzer Level [dBm] + 107 + AFCL[dB/m] + 20Log(Dm) + Harmonic Mixer Loss (dB) – 104.8

Frequency [MHz]	Detector/Trace	Chan.	Bandwidth (MHz)	Mod.	Beam Polarization	Ant. Pos [H/V]	Turntable Azimuth [degree]	Positioner Azimuth [degree]	RSE EIRP [dBm]	Limit [dBm]	Margin [dB]
95986.00	RMS/Avg	Low	50	QPSK	H	H	-	-	-39.90	-13.00	-26.90
95882.50	RMS/Avg	Mid	50	QPSK	H	H	-	-	-39.85	-13.00	-26.85
95976.00	RMS/Avg	High	50	QPSK	H	H	-	-	-39.99	-13.00	-26.99
95908.00	RMS/Avg	Low	50	QPSK	V	V	-	-	-39.62	-13.00	-26.62
99906.50	RMS/Avg	Mid	50	QPSK	V	V	-	-	-39.90	-13.00	-26.90
99994.50	RMS/Avg	High	50	QPSK	V	V	-	-	-39.93	-13.00	-26.93

**Table 7-46. L Patch Spurious Emissions Table (90-100GHz – n261)**

### Notes

1. The RSE EIRP level is taken directly from the spectrum analyzer which includes the appropriate antenna factors, cable losses, and harmonic mixer conversion losses. Measurements were performed at a distance of 1 meter.
2. To address compliance of MIMO RSE per KDB 662911 D01, the MIMO RSE EIRP is calculated by summing the worst case H Beam EIRP and V Beam EIRP in linear powers units then converted back to dBm:

$$\text{EIRP(H Beam)} + \text{EIRP(V Beam)} = \text{EIRP(MIMO)}$$

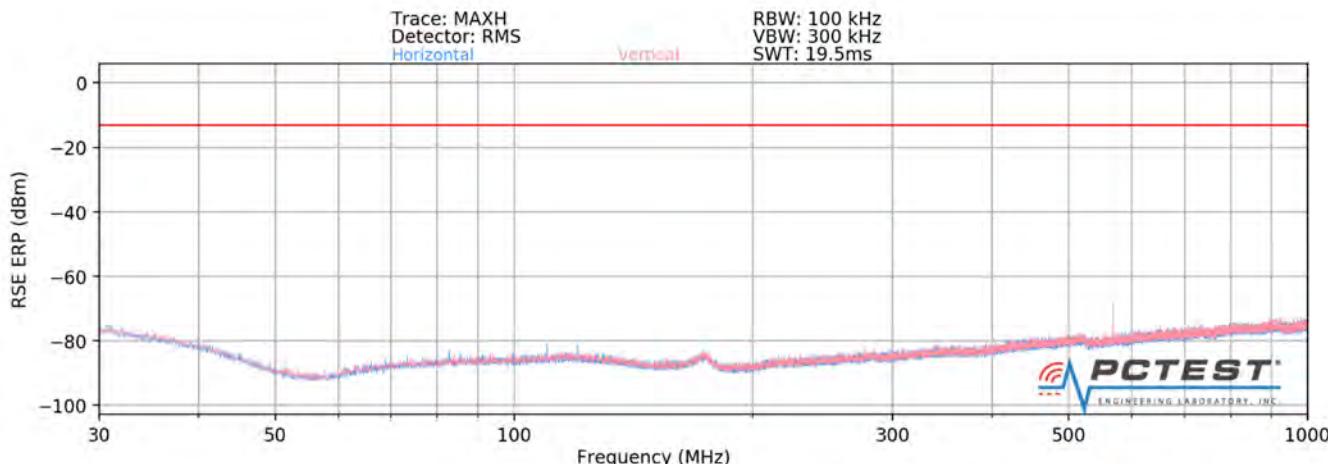
$$(-39.90 \text{ dBm} + -39.62 \text{ dBm}) = (102.33 \text{ nW} + 109.09 \text{ nW}) = (211.42 \text{ nW}) = -36.75 \text{ dBm}$$

FCC ID: A3LSMN976V		MEASUREMENT REPORT (CERTIFICATION)				Approved by: Quality Manager
Test Report S/N: 1M1905130071-06-R1.A3L	Test Dates: 05/14 - 07/12/2019	EUT Type: Portable Handset				Page 151 of 371

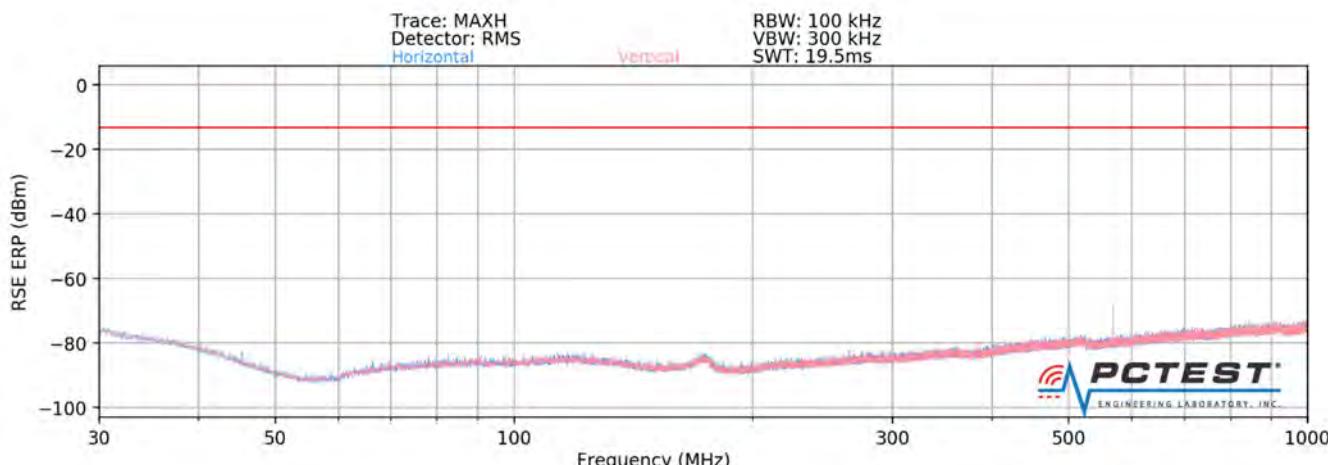
## 7.4.2 n260 Radiated Spurious Emissions

### J Dipole Radiated Spurious Emissions(n260)

30MHz – 1GHz(n260)



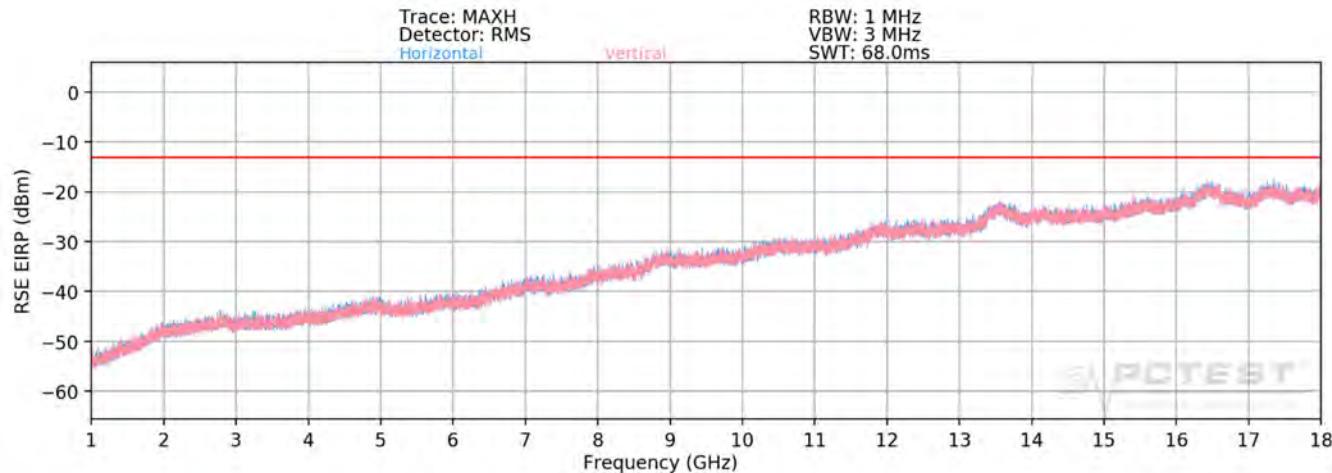
Plot 7-233. J Dipole Radiated Spurious Plot 30 MHz - 1 GHz (1CC QPSK Mid Channel H Beam – n260)



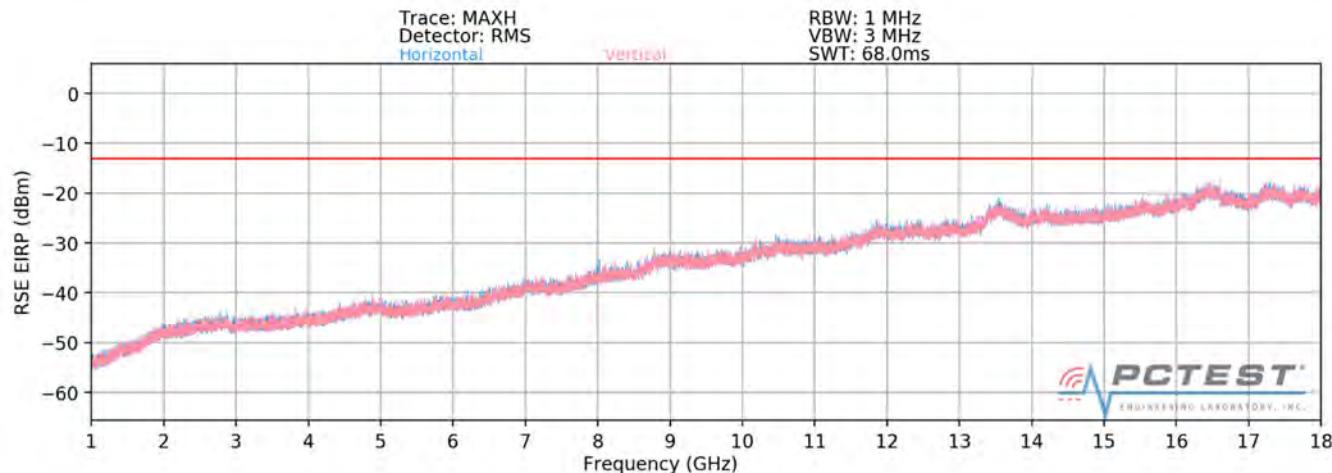
Plot 7-234. J Dipole Radiated Spurious Plot 30 MHz - 1 GHz (1CC QPSK Mid Channel V Beam – n260)

FCC ID: A3LSMN976V		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1905130071-06-R1.A3L	Test Dates: 05/14 - 07/12/2019	EUT Type: Portable Handset		Page 152 of 371

## 1 – 18GHz(n260)



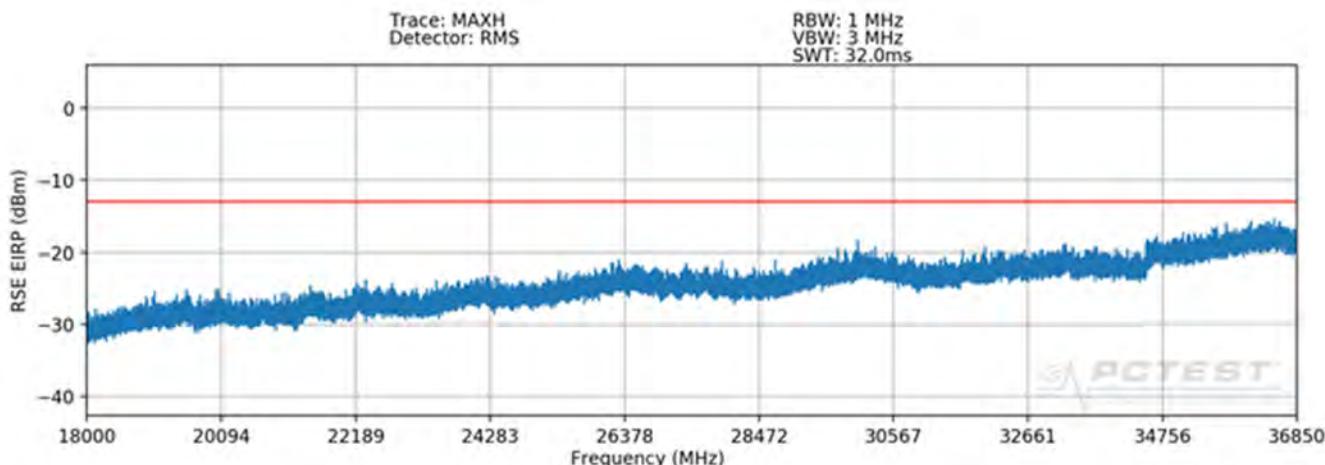
Plot 7-235. J Dipole Radiated Spurious Plot 1-18 GHz (1CC QPSK Mid Channel H Beam – n260)



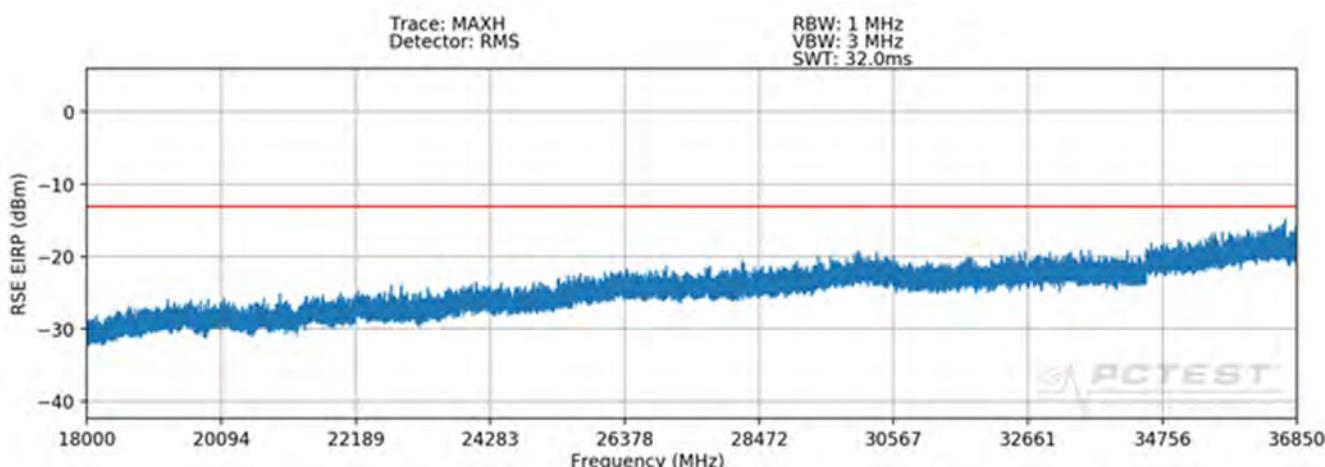
Plot 7-236. J Dipole Radiated Spurious Plot 1-18 GHz (1CC QPSK Mid Channel V Beam – n260)

FCC ID: A3LSMN976V		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1905130071-06-R1.A3L	Test Dates: 05/14 - 07/12/2019	EUT Type: Portable Handset		Page 153 of 371

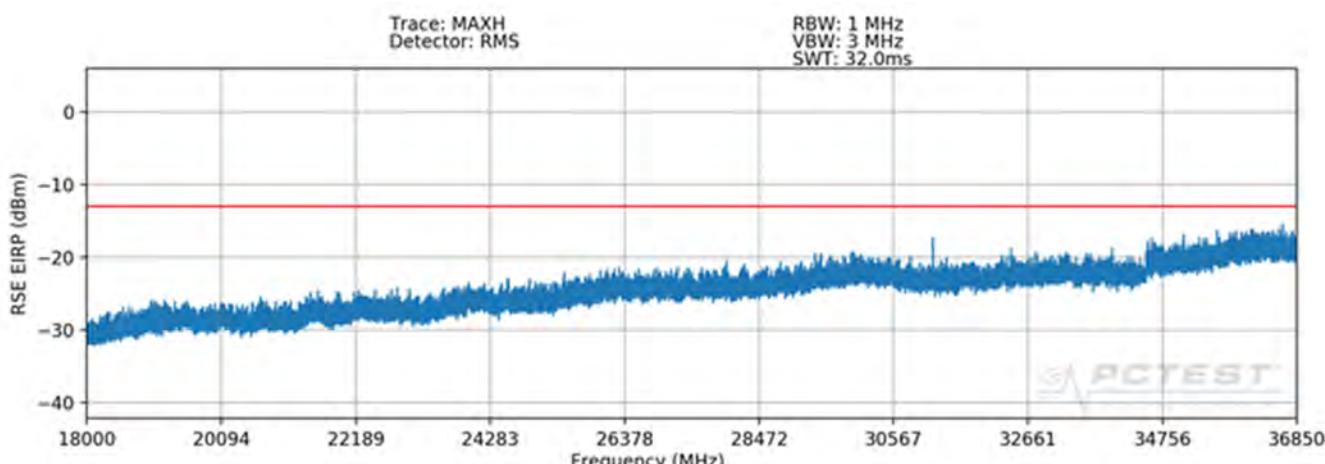
## 18 – 36.85GHz(n260)



Plot 7-237. J Dipole Radiated Spurious Plot 18-36.85 GHz (1CC QPSK Low Channel H Beam – n260)

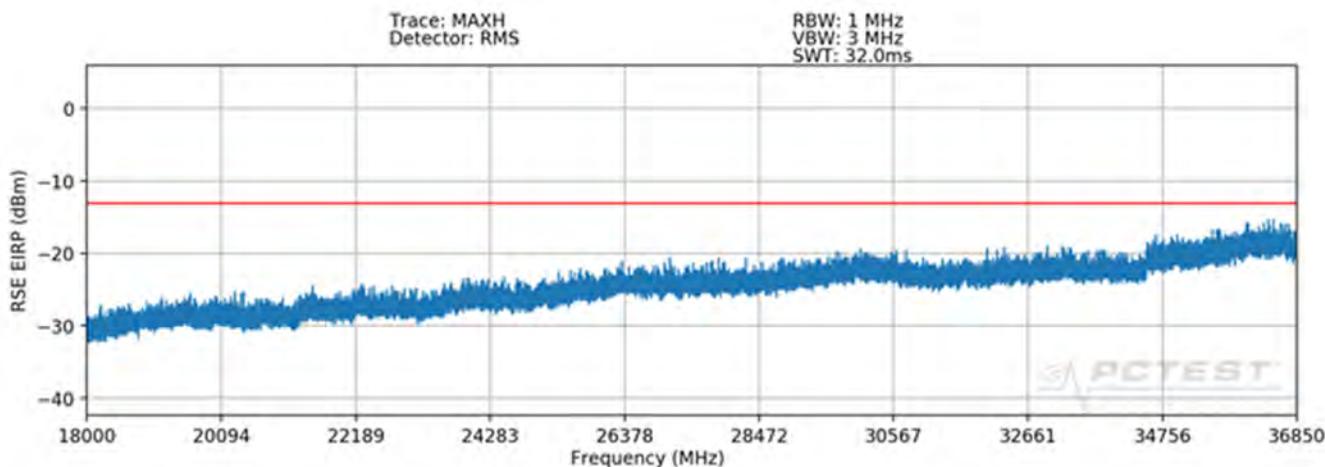


Plot 7-238. J Dipole Radiated Spurious Plot 18-36.85 GHz (1CC QPSK Mid Channel H Beam – n260)

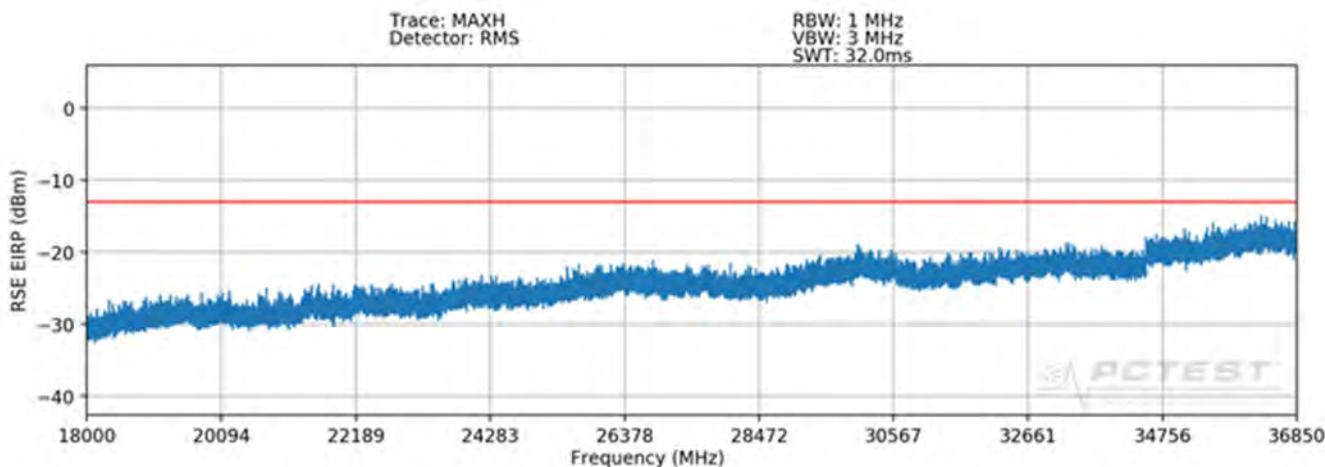


Plot 7-239. J Dipole Radiated Spurious Plot 18-36.85 GHz (1CC QPSK High Channel H Beam – n260)

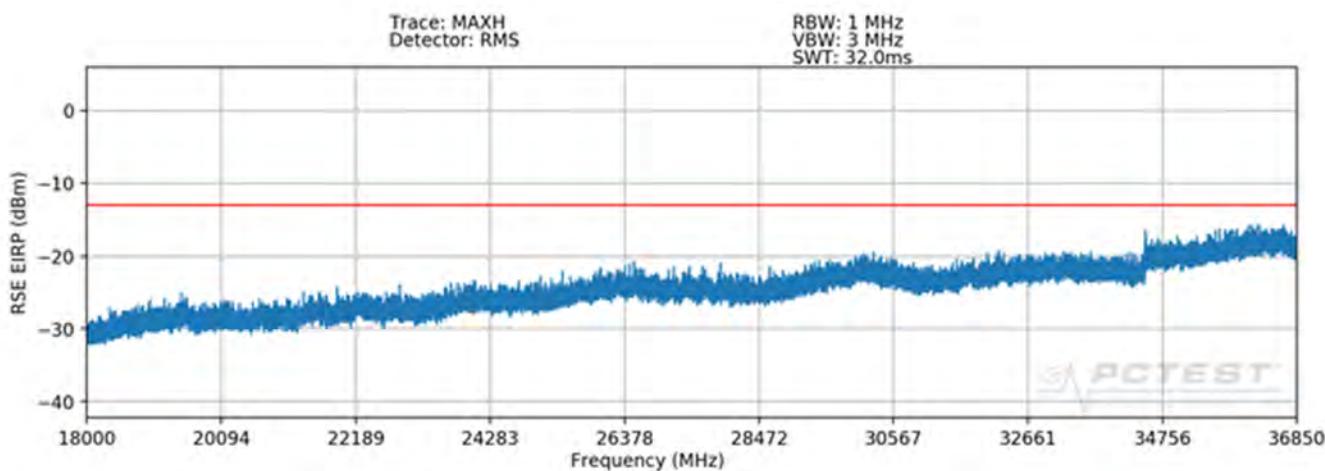
FCC ID: A3LSMN976V		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1905130071-06-R1.A3L	Test Dates: 05/14 - 07/12/2019	EUT Type: Portable Handset		Page 154 of 371



Plot 7-240. J Dipole Radiated Spurious Plot 18-36.85 GHz (1CC QPSK Low Channel V Beam – n260)



Plot 7-241. J Dipole Radiated Spurious Plot 18-36.85 GHz (1CC QPSK Mid Channel V Beam – n260)



Plot 7-242. J Dipole Radiated Spurious Plot 18-36.85 GHz (1CC QPSK High Channel V Beam – n260)

FCC ID: A3LSMN976V		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1905130071-06-R1.A3L	Test Dates: 05/14 - 07/12/2019	EUT Type: Portable Handset		Page 155 of 371

## Spurious Emissions EIRP Sample Calculation(n260)

The raw radiated spurious level is converted to field strength in  $\text{dB}\mu\text{V/m}$ . Then, the RSE EIRP level is calculated by applying the additional factors shown below for a test distance of 1 meter.

$$\text{RSE EIRP [dBm]} = \text{Analyzer Level [dBm]} + 107 + \text{AFCL [dB/m]} + 20\text{Log}(\text{Dm}) - 104.8$$

Frequency [MHz]	Detector/Trace	Chan.	Bandwidth (MHz)	Mod.	EUT Beam Polarization	Ant. Pos [H/V]	Turn Table Azimuth [degree]	Positioner Azimuth [degree]	RSE EIRP [dBm]	Limit [dBm]	Margin [dB]
28454.00	RMS/Avg	Low	50	QPSK	H	H	258	278	-33.16	-13.00	-20.16
29577.50	RMS/Avg	Mid	50	QPSK	H	H	265	280	-29.50	-13.00	-16.50
31180.50	RMS/Avg	High	50	QPSK	H	H	285	278	-17.54	-13.00	-4.54
36661.00	RMS/Avg	Low	50	QPSK	V	H	312	98	-32.27	-13.00	-19.27
29577.50	RMS/Avg	Mid	50	QPSK	V	H	312	107	-34.75	-13.00	-21.75
31180.50	RMS/Avg	High	50	QPSK	V	H	270	97	-22.89	-13.00	-9.89

Table 7-47. J Dipole Spurious Emissions Table (18-36.85GHz – n260)

### Notes

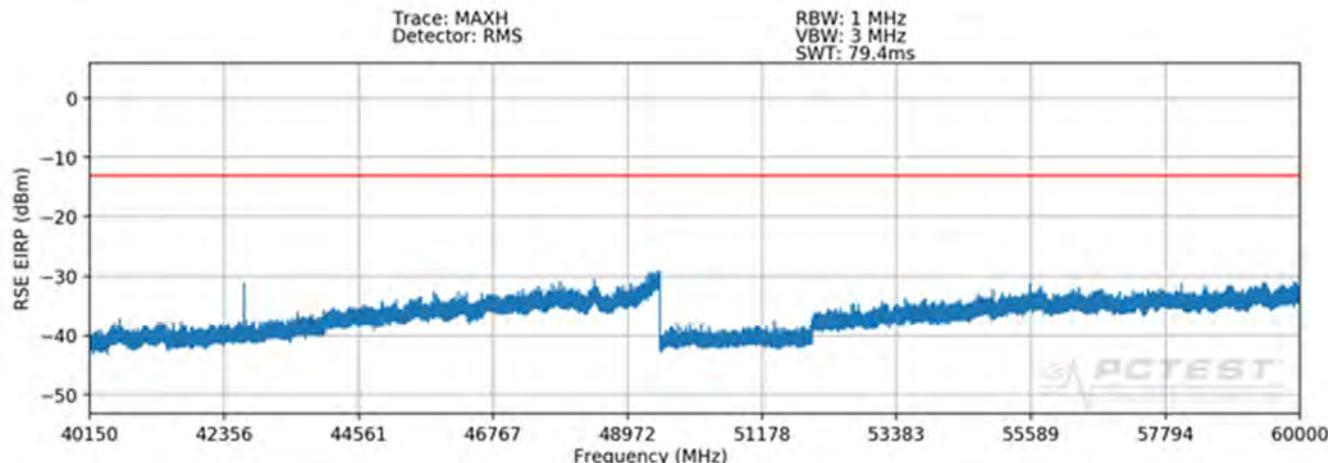
1. The RSE EIRP level is taken directly from the spectrum analyzer which includes the appropriate antenna factors, cable losses, and harmonic mixer conversion losses. Measurements were performed at a distance of 1 meter.
2. To address compliance of MIMO RSE per KDB 662911 D01, the MIMO RSE EIRP is calculated by summing the worst case H Beam EIRP and V Beam EIRP in linear powers units then converted back to dBm:

$$\text{EIRP(H Beam)} + \text{EIRP(V Beam)} = \text{EIRP(MIMO)}$$

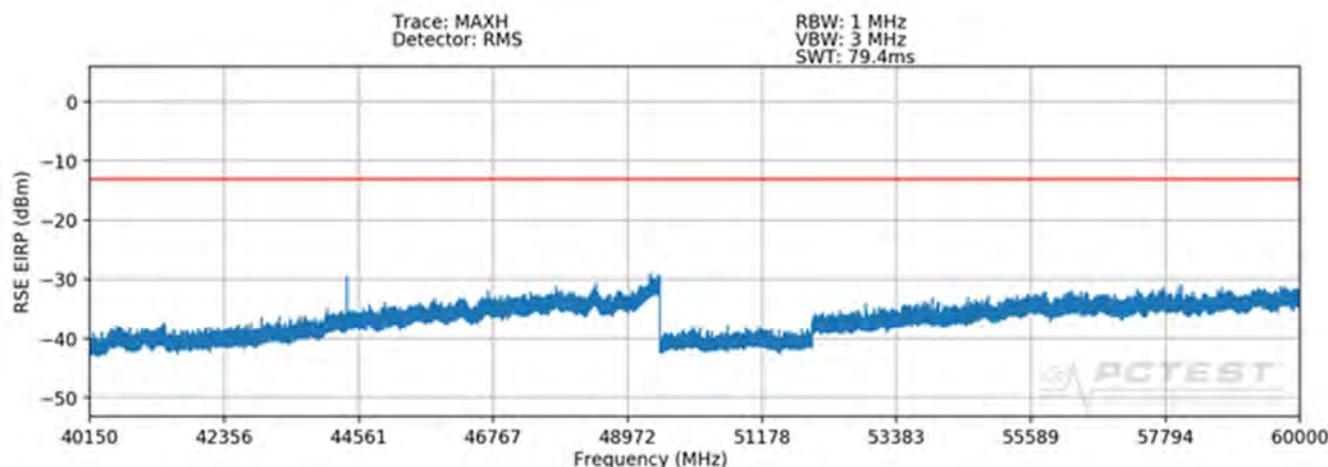
$$(-17.54 \text{ dBm} + -22.89 \text{ dBm}) = (17.62 \mu\text{W} + 5.14 \mu\text{W}) = (22.78 \mu\text{W}) = -16.43 \text{ dBm}$$

FCC ID: A3LSMN976V		MEASUREMENT REPORT (CERTIFICATION)				Approved by: Quality Manager
Test Report S/N: 1M1905130071-06-R1.A3L	Test Dates: 05/14 - 07/12/2019	EUT Type: Portable Handset			Page 156 of 371	

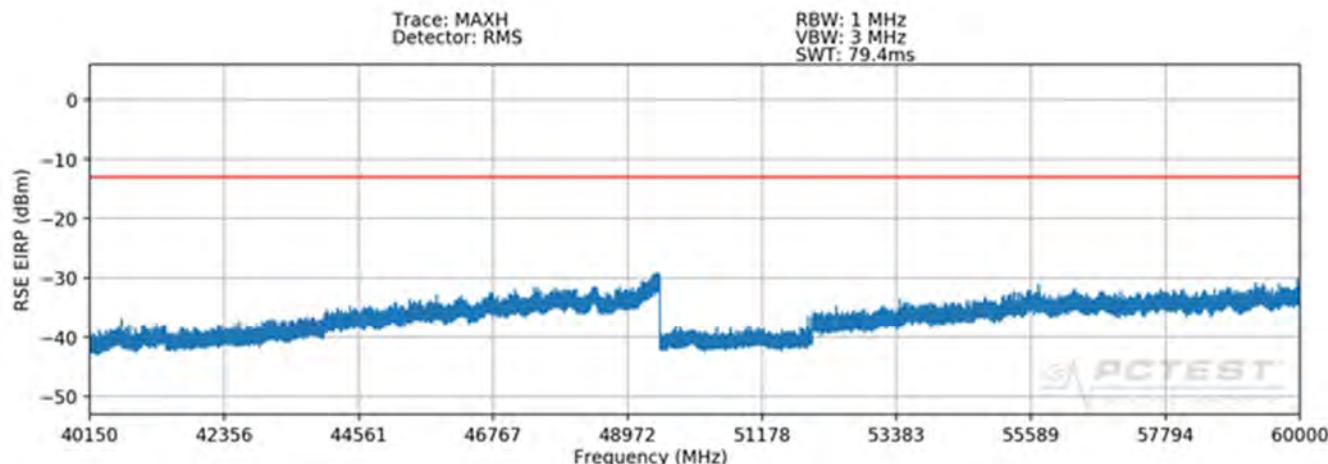
## 40.15 – 60GHz(n260)



Plot 7-243. J Dipole Radiated Spurious Plot 40.15-60 GHz (1CC QPSK Low Channel H Beam – n260)

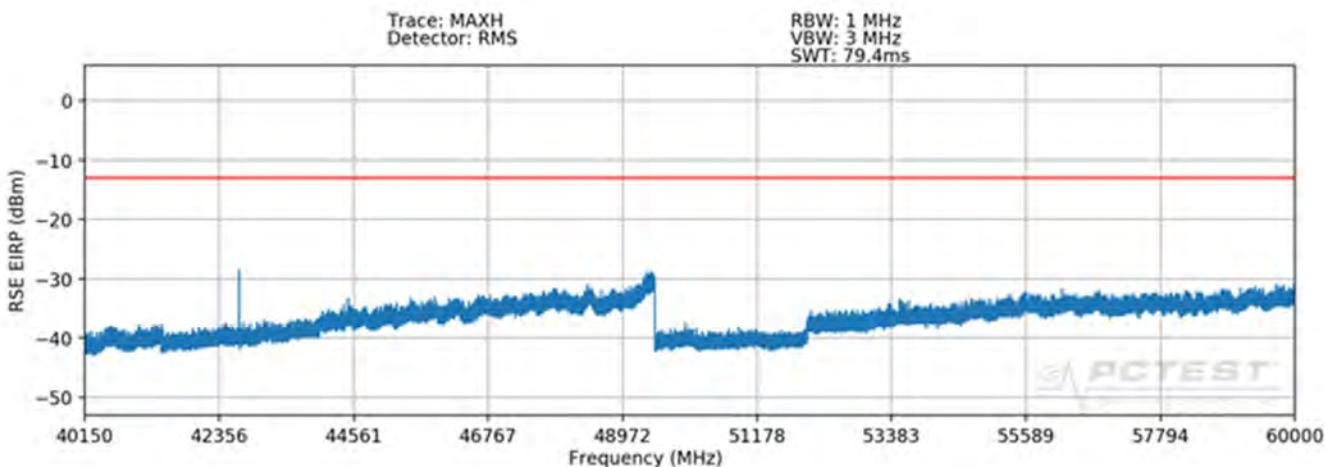


Plot 7-244. J Dipole Radiated Spurious Plot 40.15-60 GHz (1CC QPSK Mid Channel H Beam – n260)

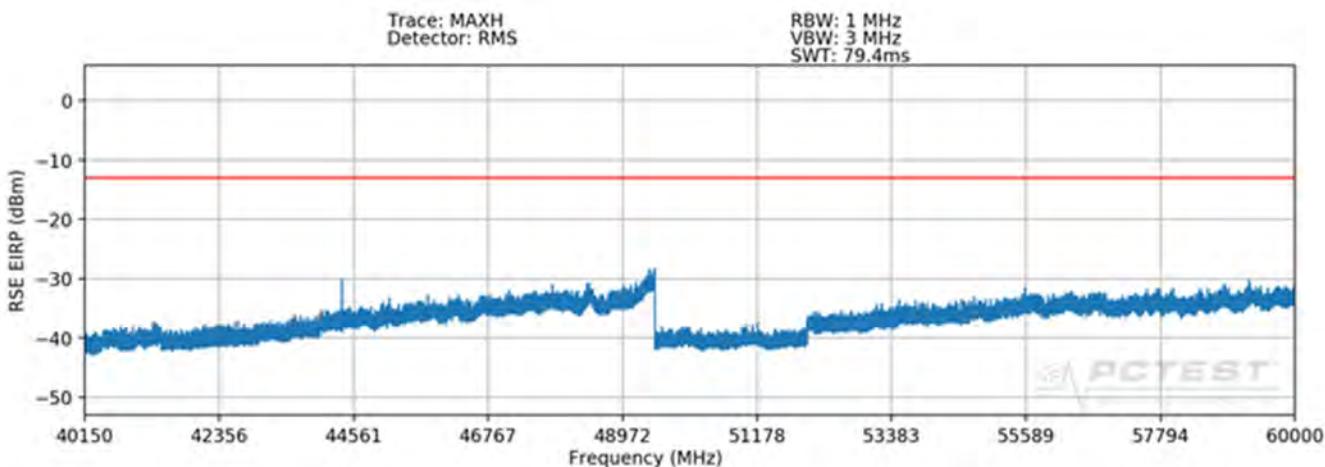


Plot 7-245. J Dipole Radiated Spurious Plot 40.15-60 GHz (1CC QPSK High Channel H Beam – n260)

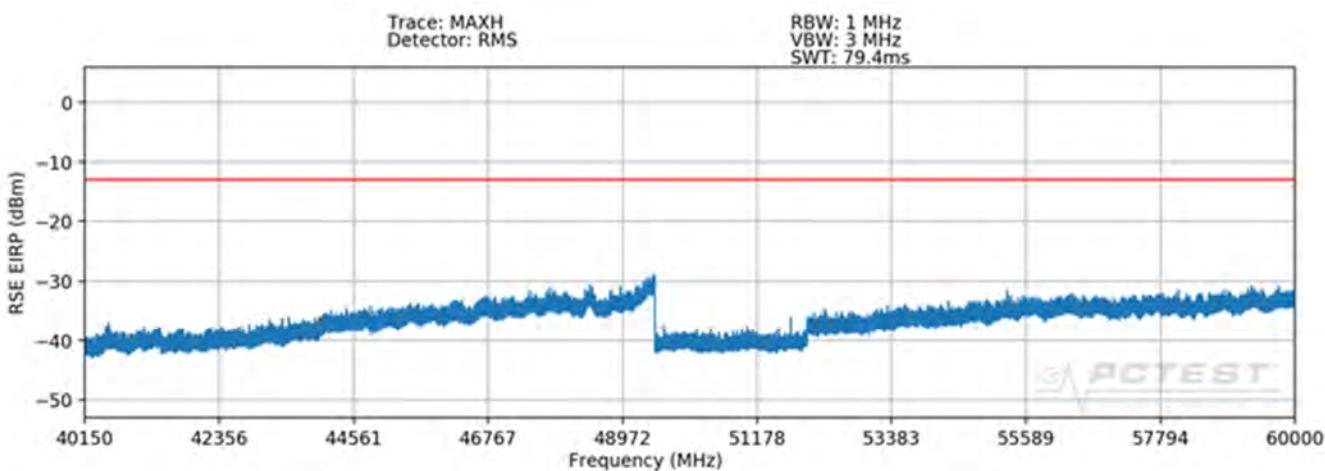
FCC ID: A3LSMN976V		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1905130071-06-R1.A3L	Test Dates: 05/14 - 07/12/2019	EUT Type: Portable Handset		Page 157 of 371



Plot 7-246. J Dipole Radiated Spurious Plot 40.15-60 GHz (1CC QPSK Low Channel V Beam – n260)



Plot 7-247. J Dipole Radiated Spurious Plot 40.15-60 GHz (1CC QPSK Mid Channel V Beam – n260)



Plot 7-248. J Dipole Radiated Spurious Plot 40.15-60 GHz (1CC QPSK High Channel V Beam – n260)

FCC ID: A3LSMN976V	<b>PCTEST</b> ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1905130071-06-R1.A3L	Test Dates: 05/14 - 07/12/2019	EUT Type: Portable Handset		Page 158 of 371

## Spurious Emissions EIRP Sample Calculation(n260)

The raw radiated spurious level is converted to field strength in  $\text{dB}\mu\text{V/m}$ . Then, the RSE EIRP level is calculated by applying the additional factors shown below for a test distance of 1.5 meter.

$$\text{RSE EIRP [dBm]} = \text{Analyzer Level [dBm]} + 107 + \text{AFCL [dB/m]} + 20\text{Log}(\text{Dm}) - 104.8$$

Frequency [MHz]	Detector/Trace	Chan.	Bandwidth (MHz)	Mod.	EUT Beam Polarization	Ant. Pos [H/V]	Turn Table Azimuth [degree]	Positioner Azimuth [degree]	RSE EIRP [dBm]	Limit [dBm]	Margin [dB]
42681.45	RMS/Avg	Low	50	QPSK	H	H	280	312	-30.94	-13.00	-17.94
44366.34	RMS/Avg	Mid	50	QPSK	H	H	235	305	-30.06	-13.00	-17.06
46771.05	RMS/Avg	High	50	QPSK	H	H	242	303	-37.76	-13.00	-24.76
42681.47	RMS/Avg	Low	50	QPSK	V	H	307	110	-26.05	-13.00	-13.05
44366.26	RMS/Avg	Mid	50	QPSK	V	H	306	109	-28.17	-13.00	-15.17
46771.24	RMS/Avg	High	50	QPSK	V	H	310	112	-36.19	-13.00	-23.19

Table 7-48. J Dipole Spurious Emissions Table (40.15-60 GHz – n260)

### Notes

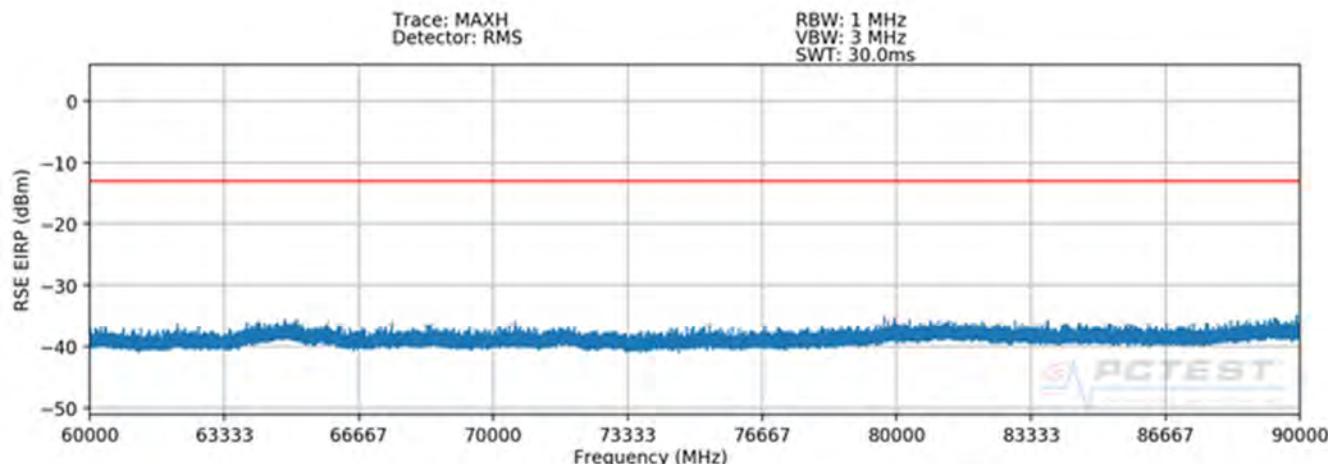
1. The RSE EIRP level is taken directly from the spectrum analyzer which includes the appropriate antenna factors, cable losses, and harmonic mixer conversion losses. Measurements were performed at a distance of 1.5 meter.
2. To address compliance of MIMO RSE per KDB 662911 D01, the MIMO RSE EIRP is calculated by summing the worst case H Beam EIRP and V Beam EIRP in linear powers units then converted back to dBm:

$$\text{EIRP(H Beam)} + \text{EIRP(V Beam)} = \text{EIRP(MIMO)}$$

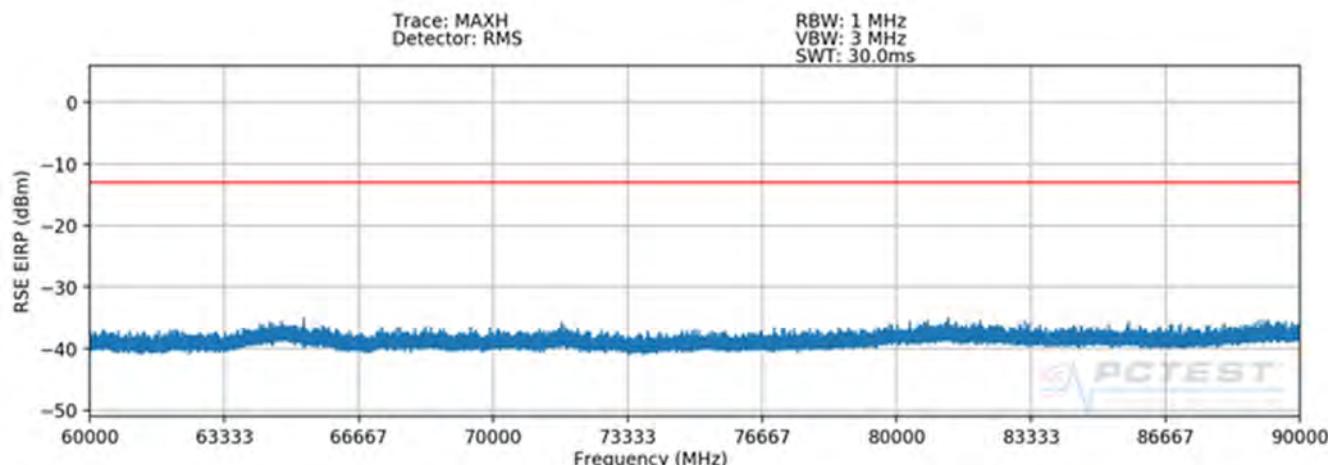
$$(-30.94 \text{ dBm} + -26.05 \text{ dBm}) = (805.38 \text{ nW} + 2483.13 \text{ nW}) = (3288.51 \text{ nW}) = -24.83 \text{ dBm}$$

FCC ID: A3LSMN976V		MEASUREMENT REPORT (CERTIFICATION)				Approved by: Quality Manager
Test Report S/N: 1M1905130071-06-R1.A3L	Test Dates: 05/14 - 07/12/2019	EUT Type: Portable Handset				Page 159 of 371

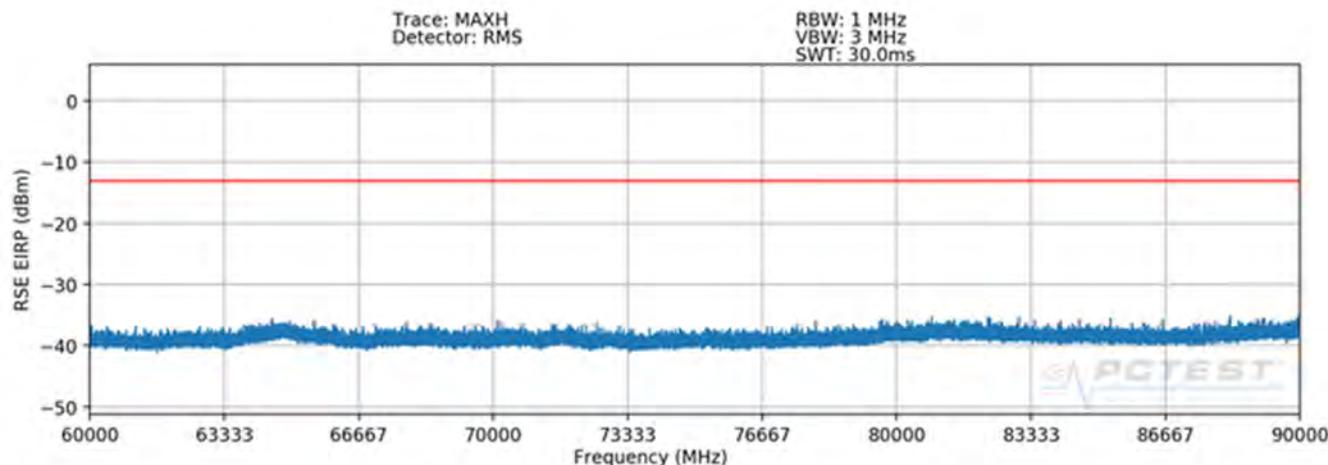
## 60 – 90GHz(n260)



Plot 7-249. J Dipole Radiated Spurious Plot 60-90 GHz (1CC QPSK Low Channel H Beam – n260)

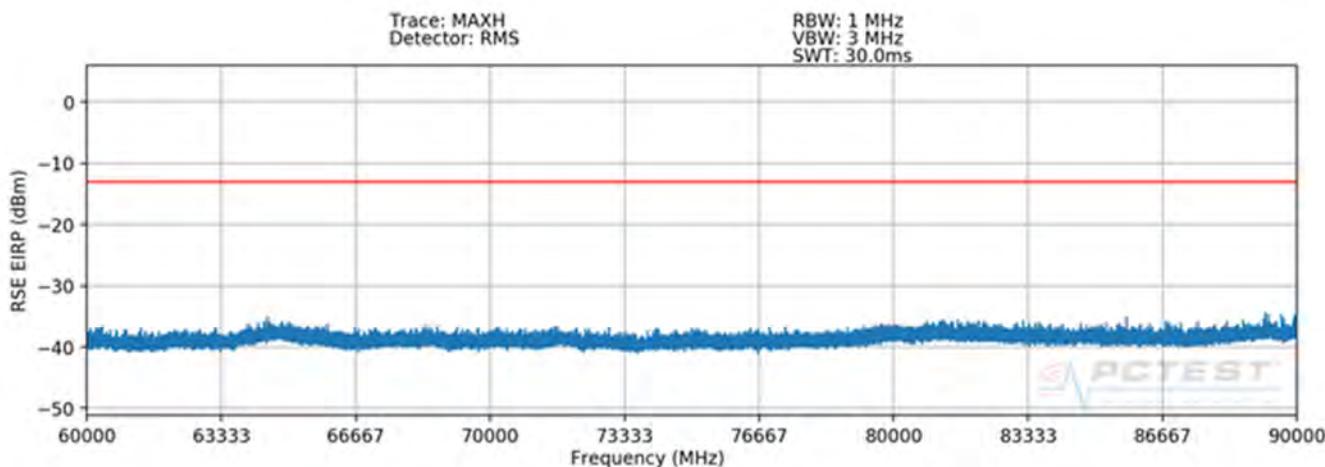


Plot 7-250. J Dipole Radiated Spurious Plot 60-90 GHz (1CC QPSK Mid Channel H Beam – n260)

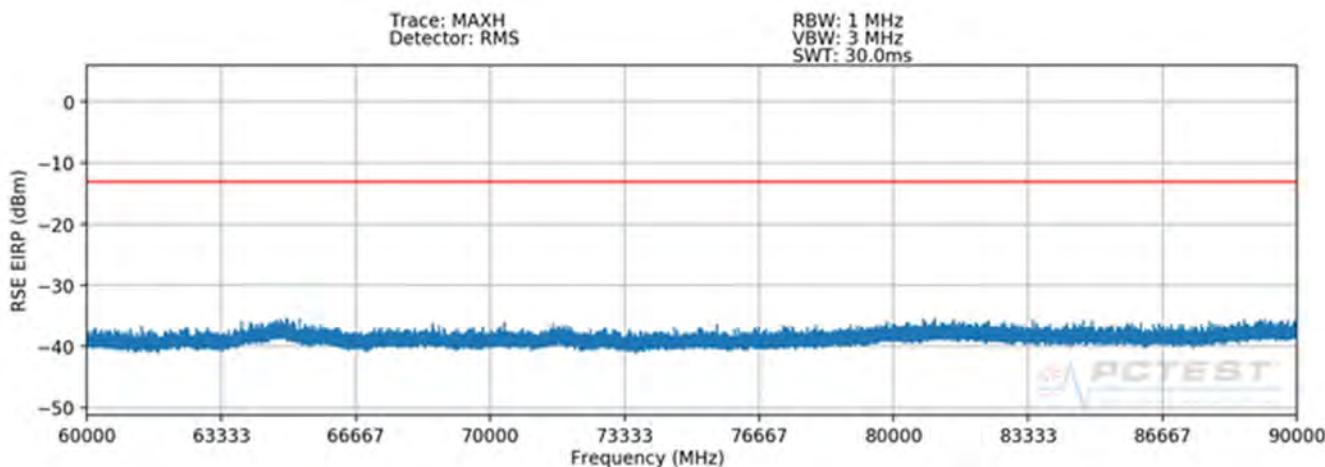


Plot 7-251. J Dipole Radiated Spurious Plot 60-90 GHz (1CC QPSK High Channel H Beam – n260)

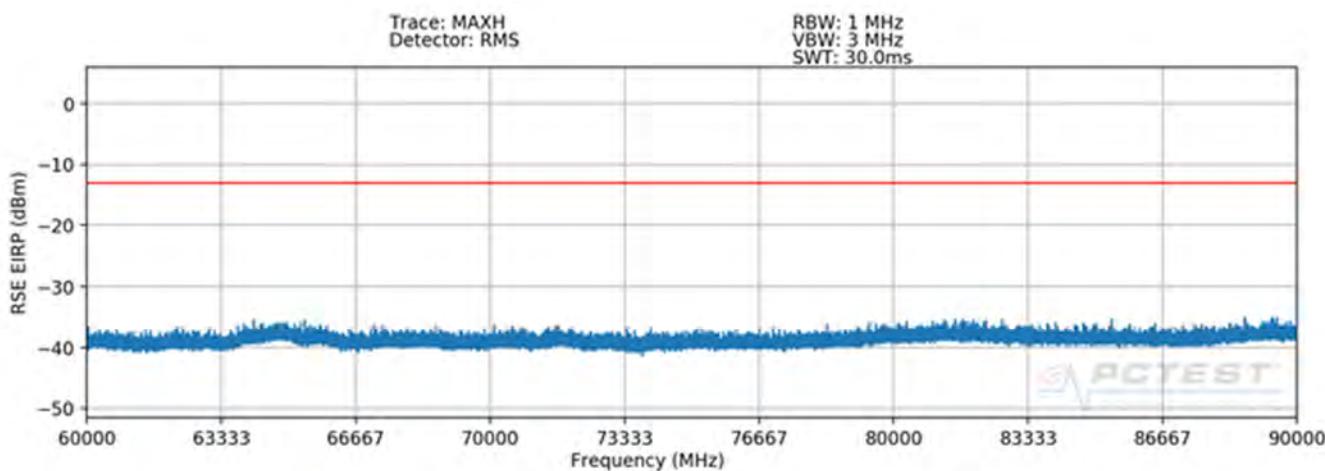
FCC ID: A3LSMN976V		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1905130071-06-R1.A3L	Test Dates: 05/14 - 07/12/2019	EUT Type: Portable Handset		Page 160 of 371



**Plot 7-252. J Dipole Radiated Spurious Plot 60-90 GHz (1CC QPSK Low Channel V Beam – n260)**



**Plot 7-253. J Dipole Radiated Spurious Plot 60-90 GHz (1CC QPSK Mid Channel V Beam – n260)**



**Plot 7-254. J Dipole Radiated Spurious Plot 60-90 GHz (1CC QPSK High Channel V Beam – n260)**

FCC ID: A3LSMN976V	 <b>PCTEST</b> ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)			Approved by: Quality Manager
Test Report S/N: 1M1905130071-06-R1.A3L	Test Dates: 05/14 - 07/12/2019	EUT Type: Portable Handset			Page 161 of 371

## Spurious Emissions EIRP Sample Calculation(n260)

The raw radiated spurious level is converted to field strength in  $\text{dB}\mu\text{V}/\text{m}$ . Then, the RSE EIRP level is calculated by applying the additional factors shown below for a test distance of 1 meter.

**RSE EIRP [dBm]** = Analyzer Level [dBm] + 107 + AFCL [dB/m] + 20Log(Dm) + Harmonic Mixer Loss (dB) – 104.8

Frequency [MHz]	Detector/Trace	Chan.	Bandwidth (MHz)	Mod.	EUT Beam Polarization	Ant. Pos [H/V]	Turn Table Azimuth [degree]	Positioner Azimuth [degree]	RSE EIRP [dBm]	Limit [dBm]	Margin [dB]
74006.00	RMS/Avg	Low	50	QPSK	H	H	256	314	-43.87	-13.00	-30.87
77591.50	RMS/Avg	Mid	50	QPSK	H	H	291	314	-43.68	-13.00	-30.68
79884.00	RMS/Avg	High	50	QPSK	H	H	254	314	-41.56	-13.00	-28.56
74006.50	RMS/Avg	Low	50	QPSK	V	H	294	100	-43.21	-13.00	-30.21
77591.50	RMS/Avg	Mid	50	QPSK	V	H	296	114	-41.06	-13.00	-28.06
79883.50	RMS/Avg	High	50	QPSK	V	H	296	109	-41.88	-13.00	-28.88

**Table 7-49. J Dipole Spurious Emissions Table (60-90GHz – n260)**

### Notes

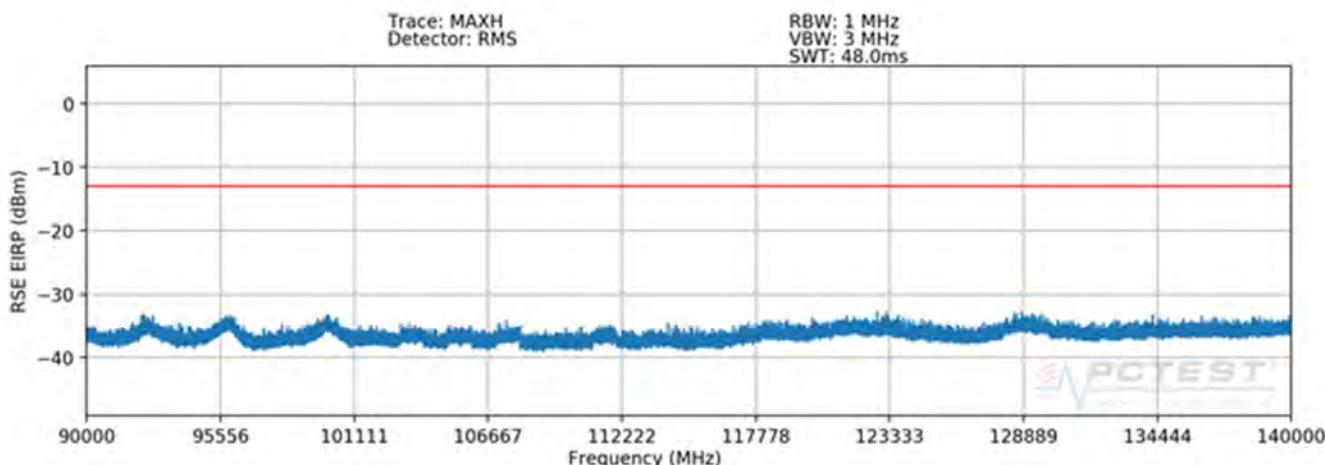
1. The RSE EIRP level is taken directly from the spectrum analyzer which includes the appropriate antenna factors, cable losses, and harmonic mixer conversion losses. Measurements were performed at a distance of 1 meter.
2. To address compliance of MIMO RSE per KDB 662911 D01, the MIMO RSE EIRP is calculated by summing the worst case H Beam EIRP and V Beam EIRP in linear powers units then converted back to dBm:

$$\text{EIRP(H Beam)} + \text{EIRP(V Beam)} = \text{EIRP(MIMO)}$$

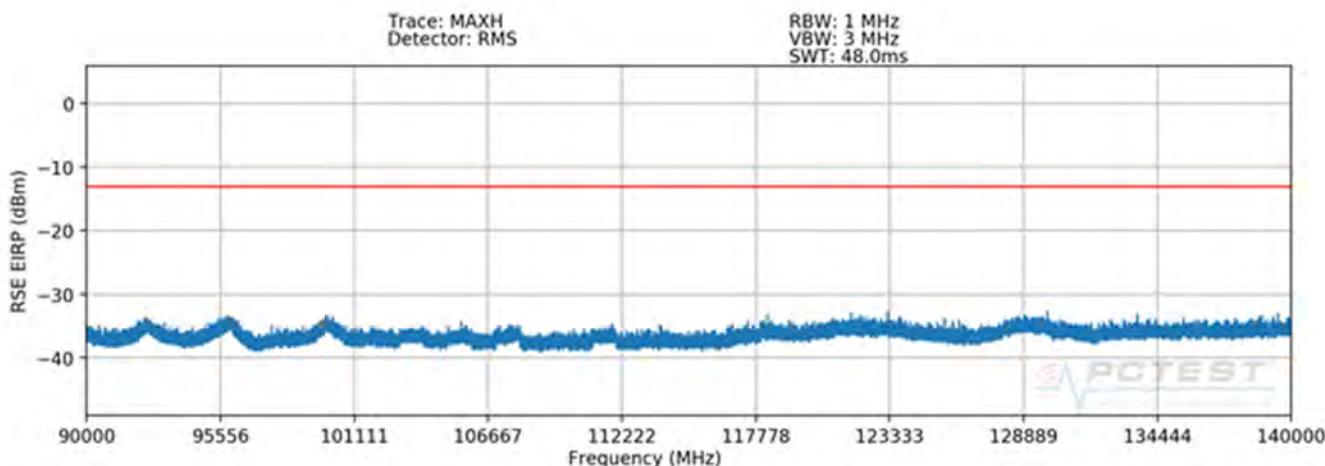
$$(-41.56 \text{ dBm} + -41.88 \text{ dBm}) = (69.79 \text{ nW} + 64.88 \text{ nW}) = (134.67 \text{ nW}) = -38.71 \text{ dBm}$$

FCC ID: A3LSMN976V		MEASUREMENT REPORT (CERTIFICATION)				Approved by: Quality Manager
Test Report S/N: 1M1905130071-06-R1.A3L	Test Dates: 05/14 - 07/12/2019	EUT Type: Portable Handset				Page 162 of 371

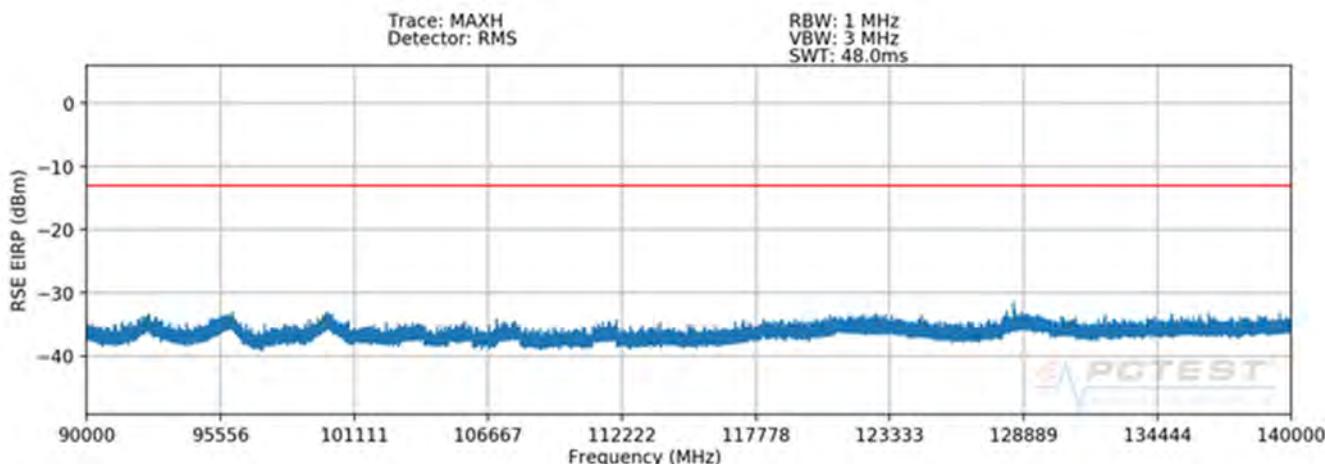
## 90 – 140GHz(n260)



Plot 7-255. J Dipole Radiated Spurious Plot 90-140 GHz (1CC QPSK Low Channel H Beam – n260)

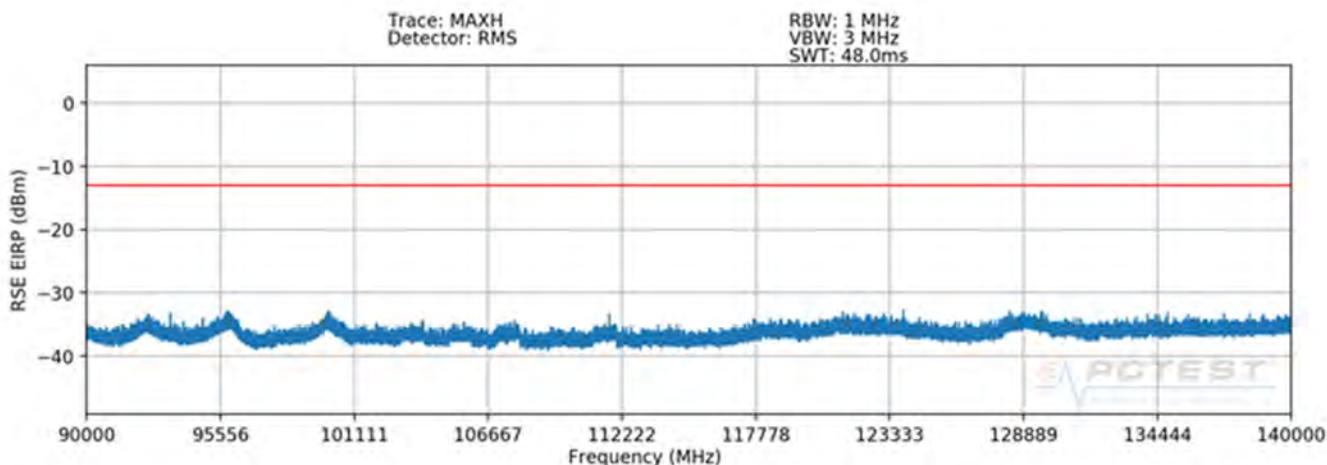


Plot 7-256. J Dipole Radiated Spurious Plot 90-140 GHz (1CC QPSK Mid Channel H Beam – n260)

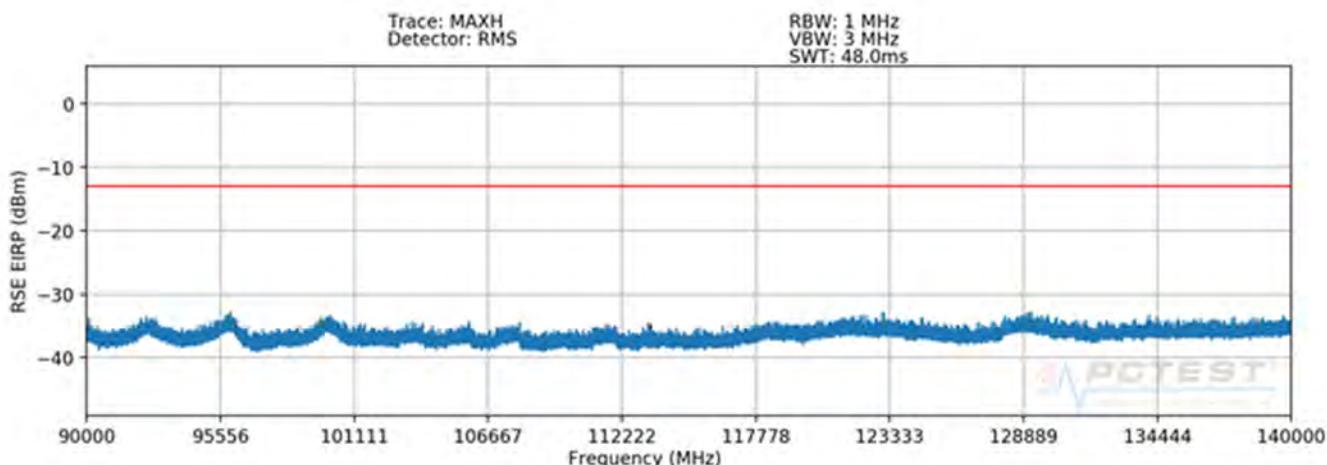


Plot 7-257. J Dipole Radiated Spurious Plot 90-140 GHz (1CC QPSK High Channel H Beam – n260)

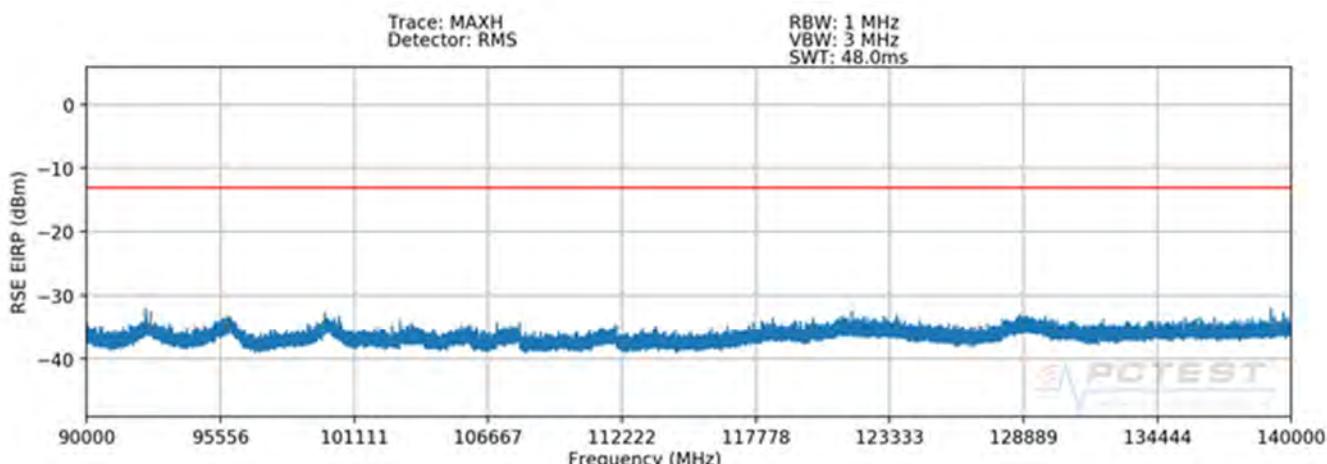
FCC ID: A3LSMN976V		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1905130071-06-R1.A3L	Test Dates: 05/14 - 07/12/2019	EUT Type: Portable Handset		Page 163 of 371



Plot 7-258. J Dipole Radiated Spurious Plot 90-140 GHz (1CC QPSK Low Channel V Beam – n260)



Plot 7-259. J Dipole Radiated Spurious Plot 90-140 GHz (1CC QPSK Mid Channel V Beam – n260)



Plot 7-260. J Dipole Radiated Spurious Plot 90-140 GHz (1CC QPSK High Channel V Beam – n260)

FCC ID: A3LSMN976V	<b>PCTEST</b> ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1905130071-06-R1.A3L	Test Dates: 05/14 - 07/12/2019	EUT Type: Portable Handset		Page 164 of 371

## Spurious Emissions EIRP Sample Calculation(n260)

The raw radiated spurious level is converted to field strength in  $\text{dB}\mu\text{V}/\text{m}$ . Then, the RSE EIRP level is calculated by applying the additional factors shown below for a test distance of 1 meter.

**RSE EIRP [dBm]** = Analyzer Level [dBm] + 107 + AFCL[dB/m] + 20Log(Dm) + Harmonic Mixer Loss (dB) – 104.8

Frequency [MHz]	Detector/Trace	Chan.	Bandwidth (MHz)	Mod.	EUT Beam Polarization	Ant. Pos [H/V]	Turn Table Azimuth [degree]	Positioner Azimuth [degree]	RSE EIRP [dBm]	Limit [dBm]	Margin [dB]
100001.00	RMS/Avg	Low	50	QPSK	H	H	-	-	-41.11	-13.00	-28.11
95999.00	RMS/Avg	Mid	50	QPSK	H	H	-	-	-39.73	-13.00	-26.73
128533.50	RMS/Avg	High	50	QPSK	H	H	-	-	-39.58	-13.00	-26.58
100026.50	RMS/Avg	Low	50	QPSK	V	H	-	-	-40.09	-13.00	-27.09
128536.50	RMS/Avg	Mid	50	QPSK	V	H	-	-	-39.94	-13.00	-26.94
96089.50	RMS/Avg	High	50	QPSK	V	H	-	-	-40.06	-13.00	-27.06

**Table 7-50. J Dipole Spurious Emissions Table (90-140GHz – n260)**

### Notes

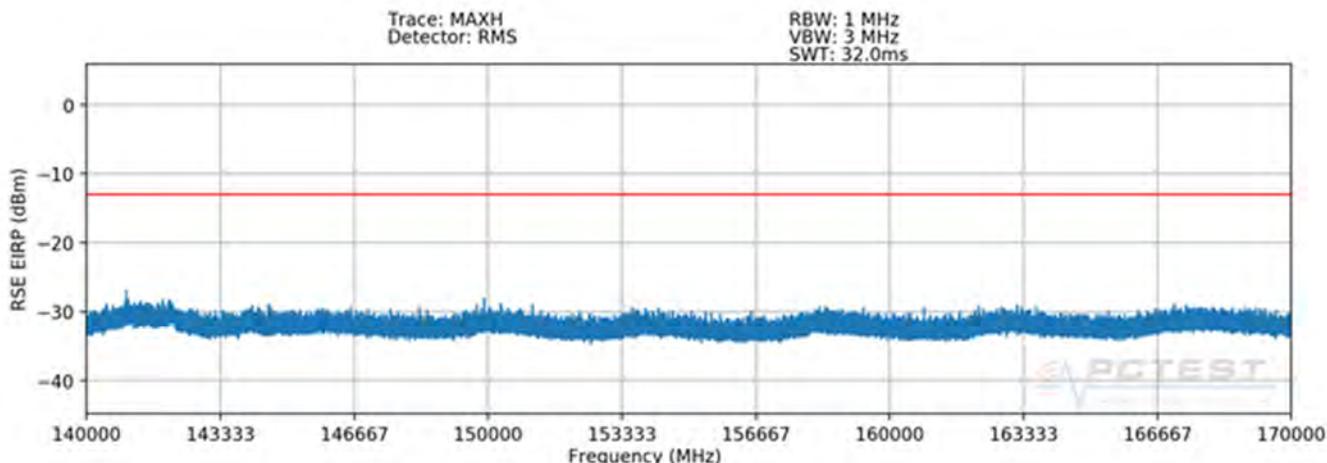
1. The RSE EIRP level is taken directly from the spectrum analyzer which includes the appropriate antenna factors, cable losses, and harmonic mixer conversion losses. Measurements were performed at a distance of 1 meter.
2. To address compliance of MIMO RSE per KDB 662911 D01, the MIMO RSE EIRP is calculated by summing the worst case H Beam EIRP and V Beam EIRP in linear powers units then converted back to dBm:

$$\text{EIRP(H Beam)} + \text{EIRP(V Beam)} = \text{EIRP(MIMO)}$$

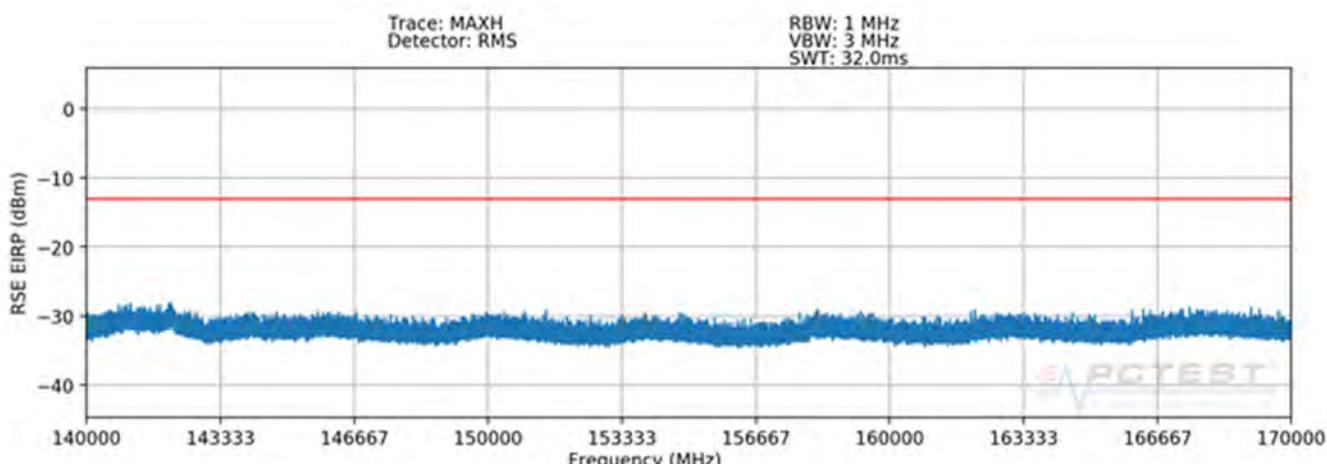
$$(-39.58 \text{ dBm} + -40.06 \text{ dBm}) = (110.20 \text{ nW} + 98.74 \text{ nW}) = (208.95 \text{ nW}) = -36.80 \text{ dBm}$$

FCC ID: A3LSMN976V		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1905130071-06-R1.A3L	Test Dates: 05/14 - 07/12/2019	EUT Type: Portable Handset		Page 165 of 371

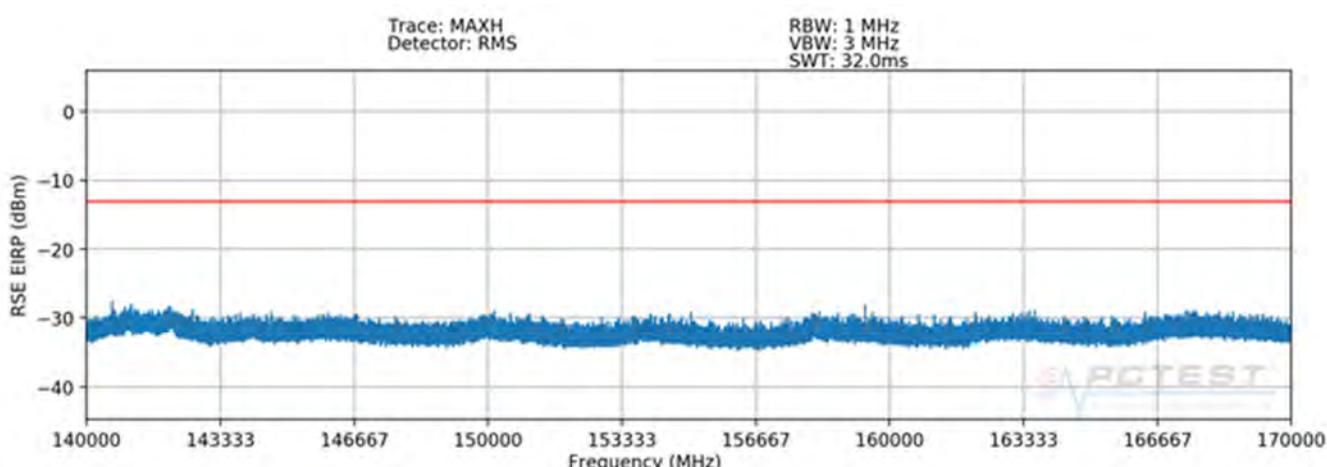
## 140 – 170GHz(n260)



Plot 7-261. J Dipole Radiated Spurious Plot 140-170 GHz (1CC QPSK Low Channel H Beam – n260)

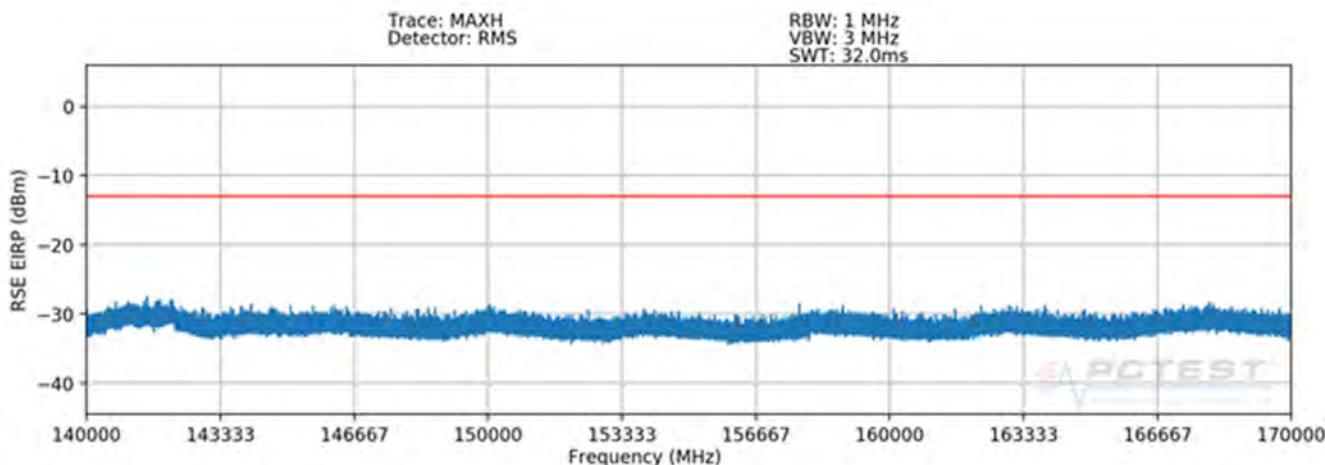


Plot 7-262. J Dipole Radiated Spurious Plot 140-170 GHz (1CC QPSK Mid Channel H Beam – n260)

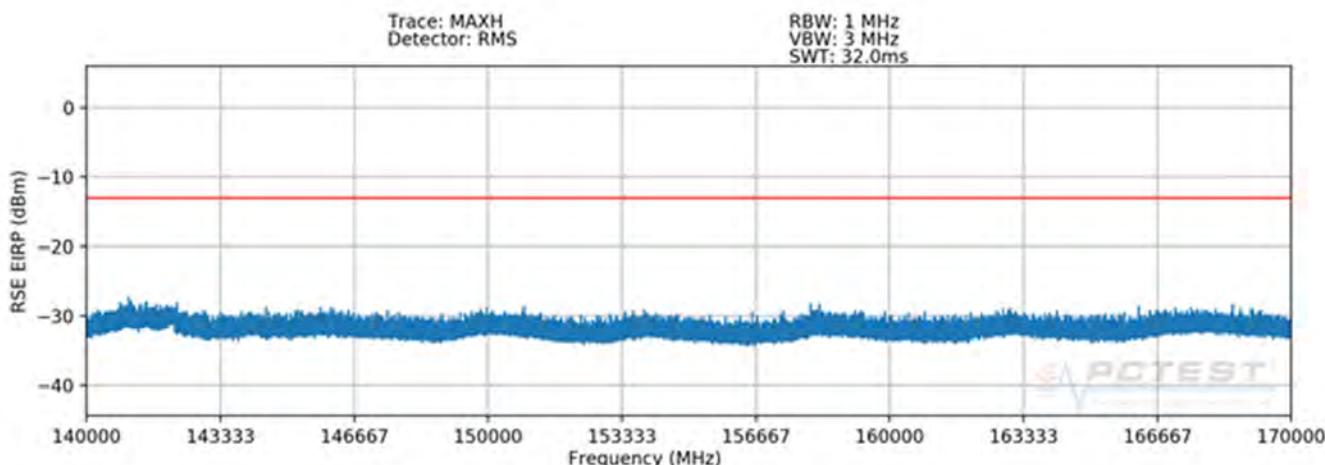


Plot 7-263. J Dipole Radiated Spurious Plot 140-170 GHz (1CC QPSK High Channel H Beam – n260)

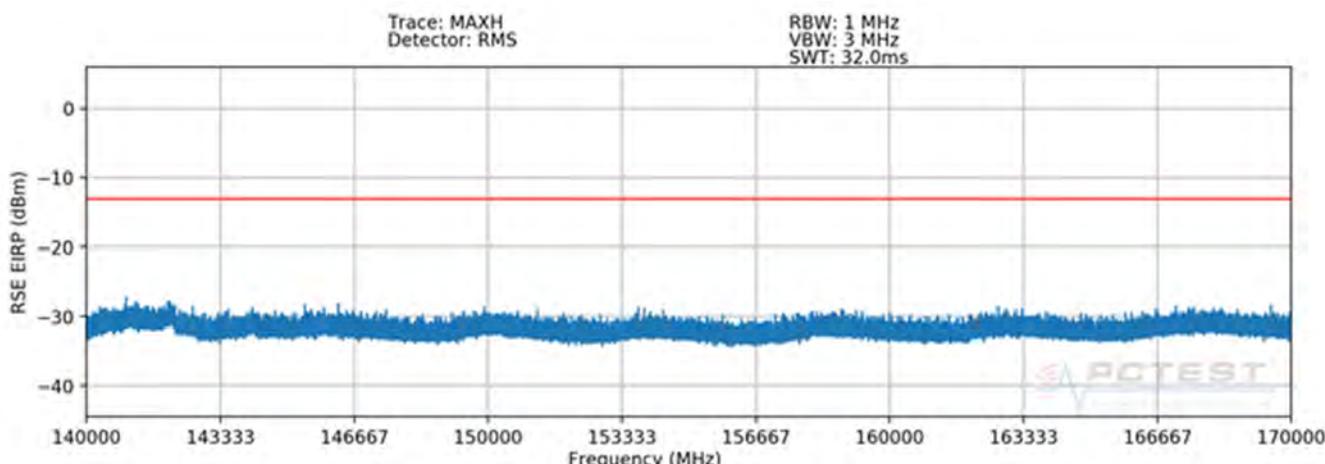
FCC ID: A3LSMN976V		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1905130071-06-R1.A3L	Test Dates: 05/14 - 07/12/2019	EUT Type: Portable Handset		Page 166 of 371



Plot 7-264. J Dipole Radiated Spurious Plot 140-170 GHz (1CC QPSK Low Channel V Beam – n260)



Plot 7-265. J Dipole Radiated Spurious Plot 140-170 GHz (1CC QPSK Mid Channel V Beam – n260)



Plot 7-266. J Dipole Radiated Spurious Plot 140-170 GHz (1CC QPSK High Channel V Beam – n260)

FCC ID: A3LSMN976V	<b>PCTEST</b> ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1905130071-06-R1.A3L	Test Dates: 05/14 - 07/12/2019	EUT Type: Portable Handset		Page 167 of 371

## Spurious Emissions EIRP Sample Calculation(n260)

The raw radiated spurious level is converted to field strength in  $\text{dB}\mu\text{V}/\text{m}$ . Then, the RSE EIRP level is calculated by applying the additional factors shown below for a test distance of 1 meter.

**RSE EIRP [dBm]** = Analyzer Level [dBm] + 107 + AFCL[dB/m] + 20Log(Dm) + Harmonic Mixer Loss (dB) – 104.8

Frequency [MHz]	Detector/Trace	Chan.	Bandwidth (MHz)	Mod.	EUT Beam Polarization	Ant. Pos [H/V]	Turn Table Azimuth [degree]	Positioner Azimuth [degree]	RSE EIRP [dBm]	Limit [dBm]	Margin [dB]
142116.00	RMS/Avg	Low	50	QPSK	H	H	-	-	-35.53	-13.00	-22.53
142103.00	RMS/Avg	Mid	50	QPSK	H	H	-	-	-34.73	-13.00	-21.73
142122.00	RMS/Avg	High	50	QPSK	H	H	-	-	-34.78	-13.00	-21.78
142085.00	RMS/Avg	Low	50	QPSK	V	H	-	-	-34.97	-13.00	-21.97
142149.00	RMS/Avg	Mid	50	QPSK	V	H	-	-	-34.72	-13.00	-21.72
142071.00	RMS/Avg	High	50	QPSK	V	H	-	-	-34.69	-13.00	-21.69

**Table 7-51. J Dipole Spurious Emissions Table (140-170GHz – n260)**

### Notes

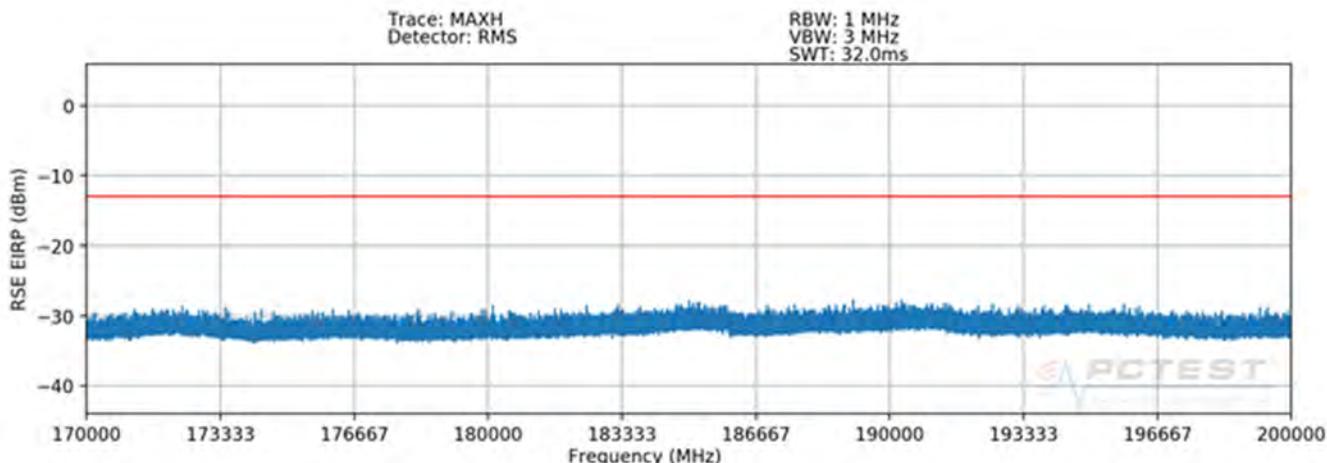
1. The RSE EIRP level is taken directly from the spectrum analyzer which includes the appropriate antenna factors, cable losses, and harmonic mixer conversion losses. Measurements were performed at a distance of 1 meter.
2. To address compliance of MIMO RSE per KDB 662911 D01, the MIMO RSE EIRP is calculated by summing the worst case H Beam EIRP and V Beam EIRP in linear powers units then converted back to dBm:

$$\text{EIRP(H Beam)} + \text{EIRP(V Beam)} = \text{EIRP(MIMO)}$$

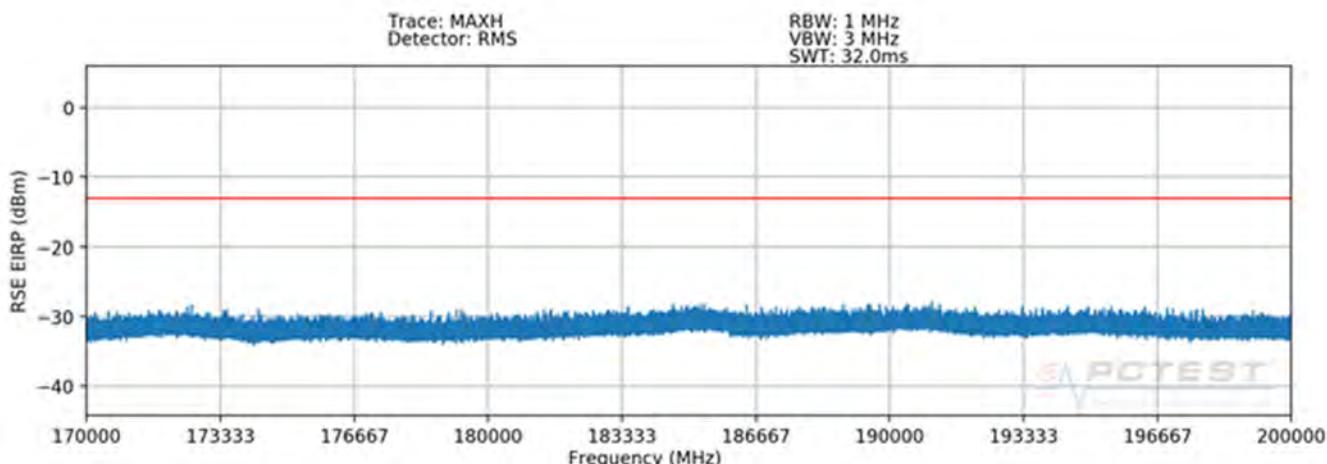
$$(-34.73 \text{ dBm} + -34.72 \text{ dBm}) = (336.90 \text{ nW} + 337.21 \text{ nW}) = (674.11 \text{ nW}) = -31.71 \text{ dBm}$$

FCC ID: A3LSMN976V		MEASUREMENT REPORT (CERTIFICATION)			Approved by: Quality Manager
Test Report S/N: 1M1905130071-06-R1.A3L	Test Dates: 05/14 - 07/12/2019	EUT Type: Portable Handset			Page 168 of 371

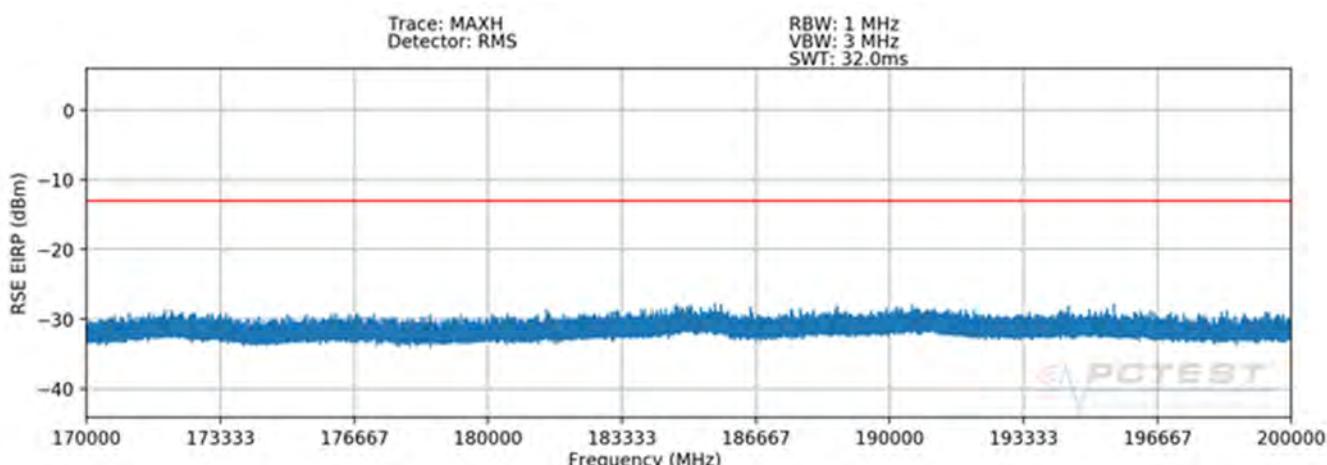
## 170 – 200GHz(n260)



Plot 7-267. J Dipole Radiated Spurious Plot 170-200 GHz (1CC QPSK Low Channel H Beam – n260)

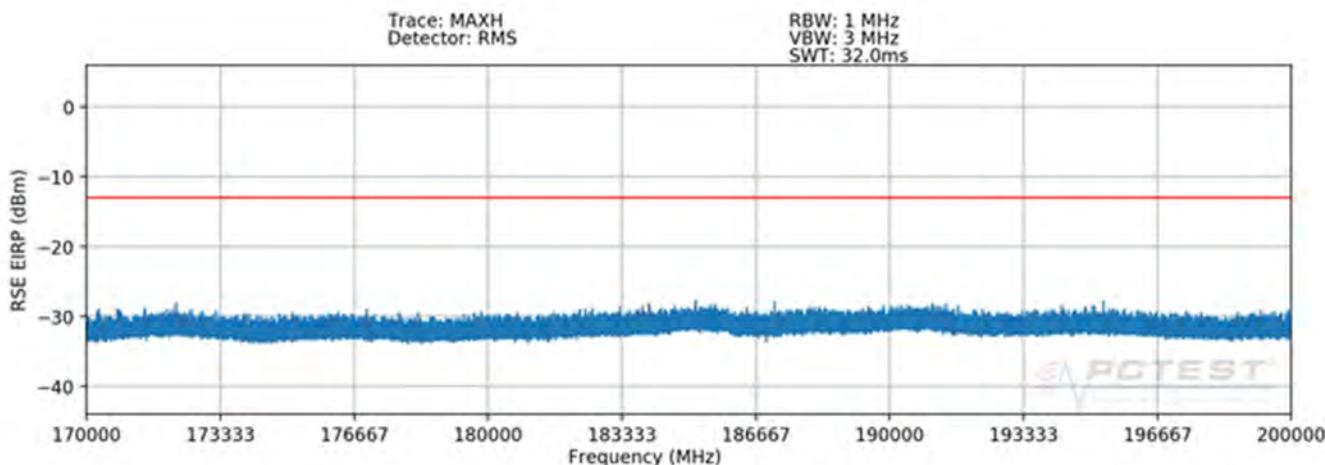


Plot 7-268. J Dipole Radiated Spurious Plot 170-200 GHz (1CC QPSK Mid Channel H Beam – n260)

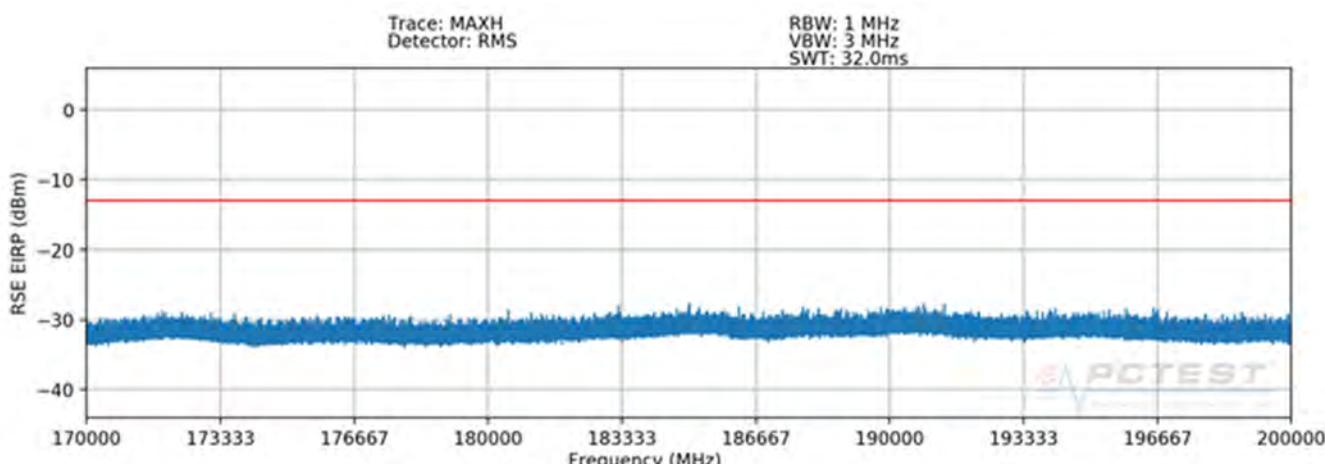


Plot 7-269. J Dipole Radiated Spurious Plot 170-200 GHz (1CC QPSK High Channel H Beam – n260)

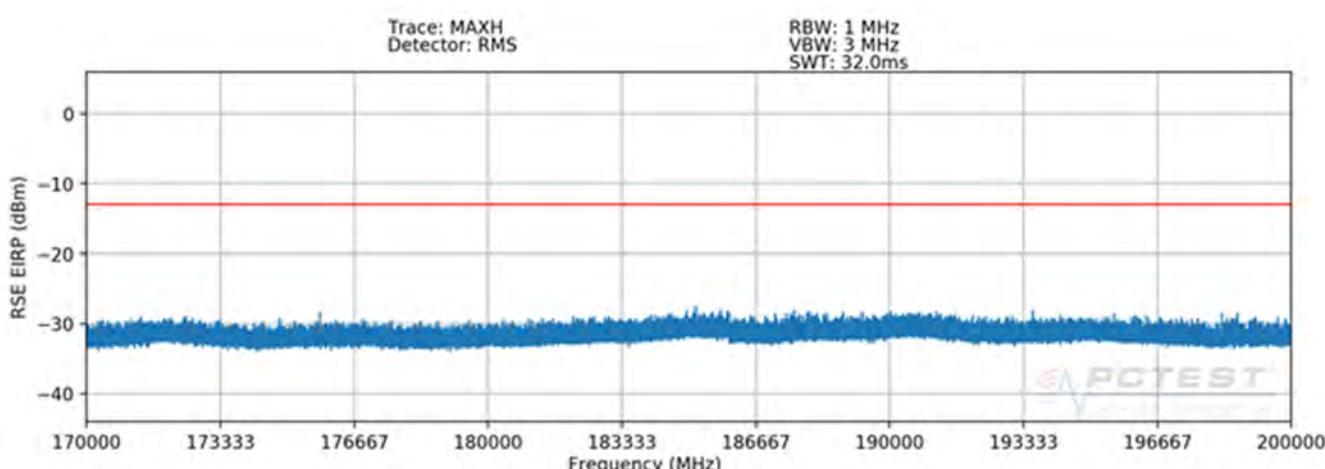
FCC ID: A3LSMN976V		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1905130071-06-R1.A3L	Test Dates: 05/14 - 07/12/2019	EUT Type: Portable Handset		Page 169 of 371



Plot 7-270. J Dipole Radiated Spurious Plot 170-200 GHz (1CC QPSK Low Channel V Beam – n260)



Plot 7-271. J Dipole Radiated Spurious Plot 170-200 GHz (1CC QPSK Mid Channel V Beam – n260)



Plot 7-272. J Dipole Radiated Spurious Plot 170-200 GHz (1CC QPSK High Channel V Beam – n260)

FCC ID: A3LSMN976V	<b>PCTEST</b> ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1905130071-06-R1.A3L	Test Dates: 05/14 - 07/12/2019	EUT Type: Portable Handset		Page 170 of 371

## Spurious Emissions EIRP Sample Calculation(n260)

The raw radiated spurious level is converted to field strength in  $\text{dB}\mu\text{V}/\text{m}$ . Then, the RSE EIRP level is calculated by applying the additional factors shown below for a test distance of 1 meter.

**RSE EIRP [dBm]** = Analyzer Level [dBm] + 107 + AFCL[dB/m] + 20Log(Dm) + Harmonic Mixer Loss (dB) – 104.8

Frequency [MHz]	Detector/Trace	Chan.	Bandwidth (MHz)	Mod.	EUT Beam Polarization	Ant. Pos [H/V]	Turn Table Azimuth [degree]	Positioner Azimuth [degree]	RSE EIRP [dBm]	Limit [dBm]	Margin [dB]
191052.00	RMS/Avg	Low	50	QPSK	H	H	-	-	-36.00	-13.00	-23.00
190293.50	RMS/Avg	Mid	50	QPSK	H	H	-	-	-35.31	-13.00	-22.31
191121.00	RMS/Avg	High	50	QPSK	H	H	-	-	-35.20	-13.00	-22.20
190357.50	RMS/Avg	Low	50	QPSK	V	H	-	-	-35.46	-13.00	-22.46
191213.00	RMS/Avg	Mid	50	QPSK	V	H	-	-	-35.11	-13.00	-22.11
190822.00	RMS/Avg	High	50	QPSK	V	H	-	-	-35.34	-13.00	-22.34

**Table 7-52. J Dipole Spurious Emissions Table (170-200GHz – n260)**

### Notes

1. The RSE EIRP level is taken directly from the spectrum analyzer which includes the appropriate antenna factors, cable losses, and harmonic mixer conversion losses. Measurements were performed at a distance of 1 meter.
2. To address compliance of MIMO RSE per KDB 662911 D01, the MIMO RSE EIRP is calculated by summing the worst case H Beam EIRP and V Beam EIRP in linear powers units then converted back to dBm:

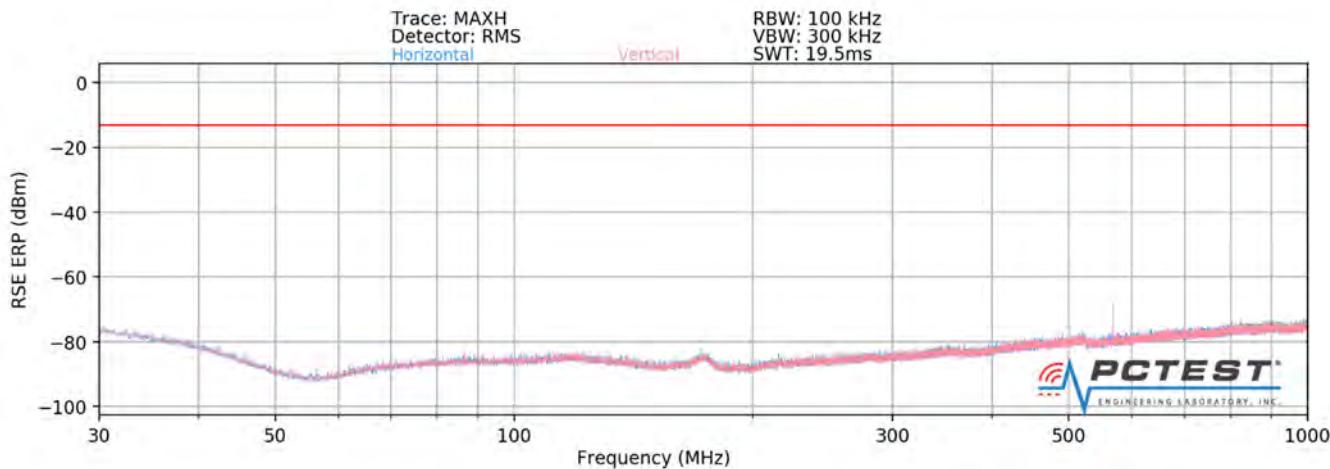
$$\text{EIRP(H Beam)} + \text{EIRP(V Beam)} = \text{EIRP(MIMO)}$$

$$(-35.31 \text{ dBm} + -35.11 \text{ dBm}) = (294.17 \text{ nW} + 308.60 \text{ nW}) = (602.77 \text{ nW}) = -32.20 \text{ dBm}$$

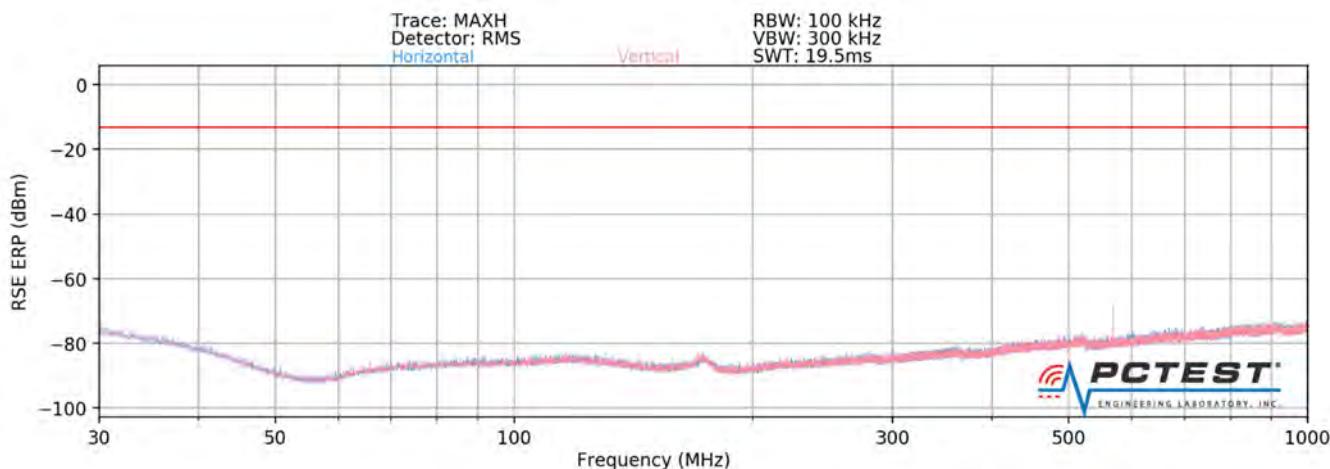
FCC ID: A3LSMN976V		MEASUREMENT REPORT (CERTIFICATION)			Approved by: Quality Manager
Test Report S/N: 1M1905130071-06-R1.A3L	Test Dates: 05/14 - 07/12/2019	EUT Type: Portable Handset			Page 171 of 371

## J Patch Radiated Spurious Emissions(n260)

### 30MHz – 1GHz(n260)



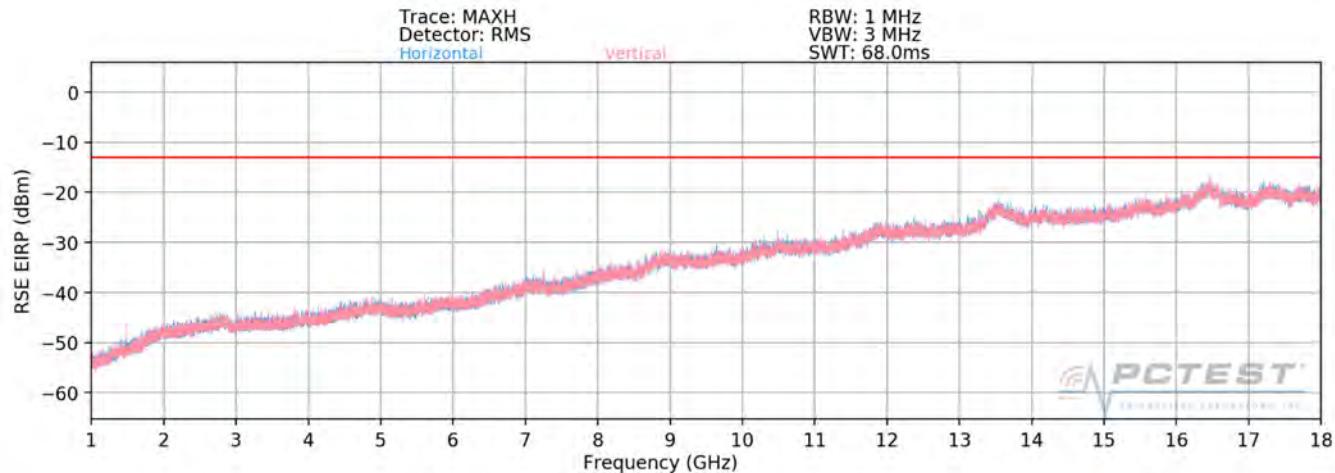
Plot 7-273. J Patch Radiated Spurious Plot 30 MHz - 1 GHz (1CC QPSK Mid Channel H Beam – n260)



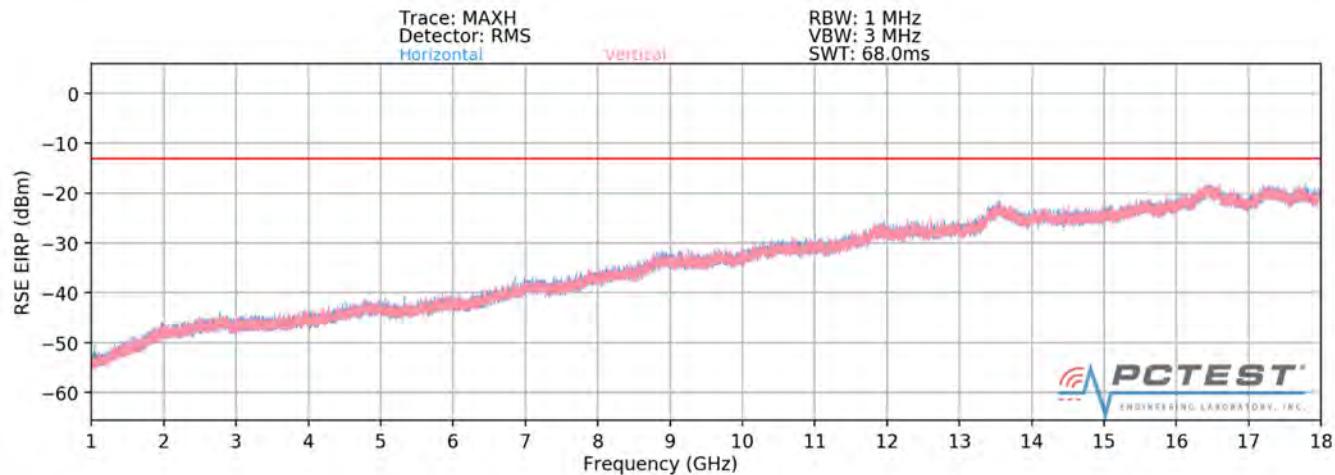
Plot 7-274. J Patch Radiated Spurious Plot 30 MHz - 1 GHz (1CC QPSK Mid Channel V Beam – n260)

FCC ID: A3LSMN976V		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1905130071-06-R1.A3L	Test Dates: 05/14 - 07/12/2019	EUT Type: Portable Handset		Page 172 of 371

## 1 – 18GHz(n260)



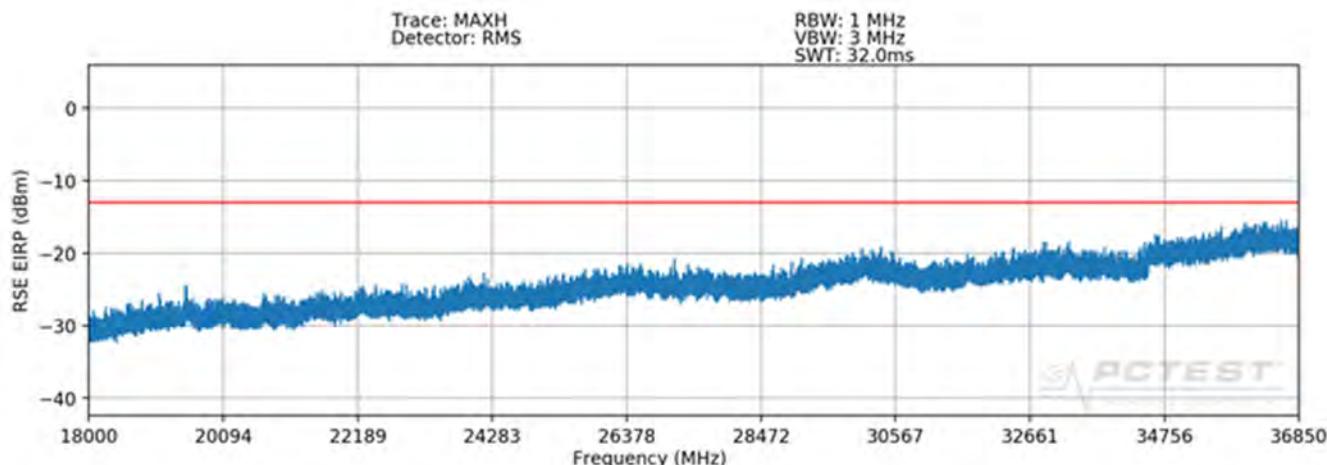
Plot 7-275. J Patch Radiated Spurious Plot 1-18 GHz (1CC QPSK Mid Channel H Beam – n260)



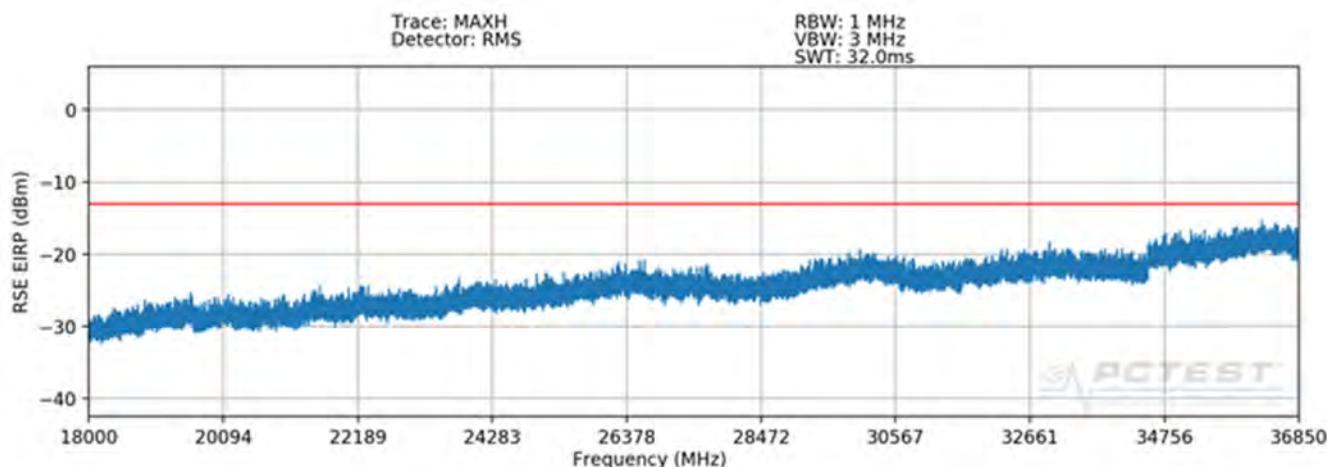
Plot 7-276. J Patch Radiated Spurious Plot 1-18 GHz (1CC QPSK Mid Channel V Beam – n260)

FCC ID: A3LSMN976V		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1905130071-06-R1.A3L	Test Dates: 05/14 - 07/12/2019	EUT Type: Portable Handset		Page 173 of 371

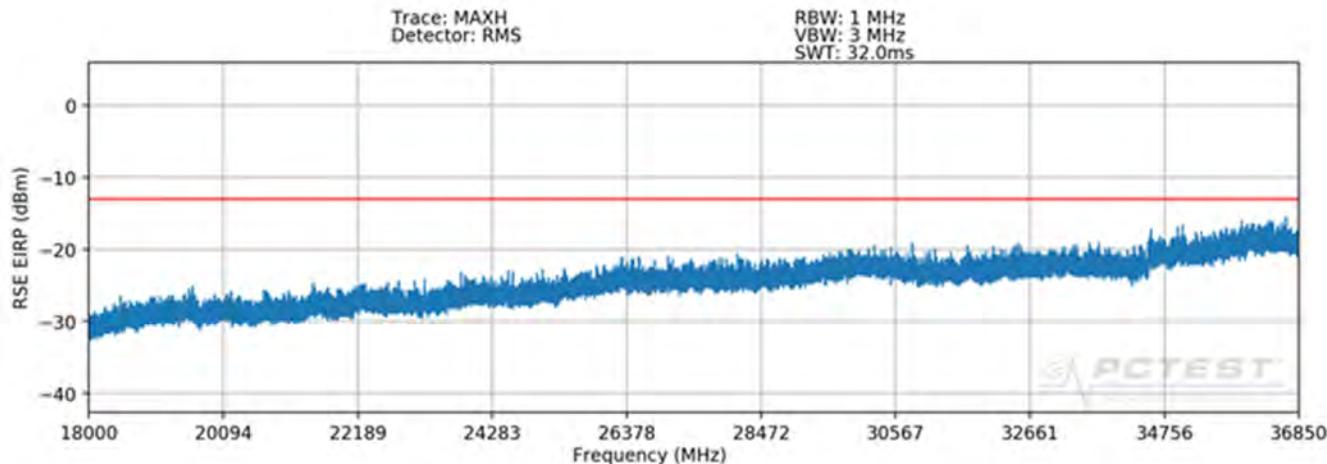
## 18 – 36.85GHz(n260)



Plot 7-277. J Patch Radiated Spurious Plot 18-36.85 GHz (1CC QPSK Low Channel H Beam – n260)

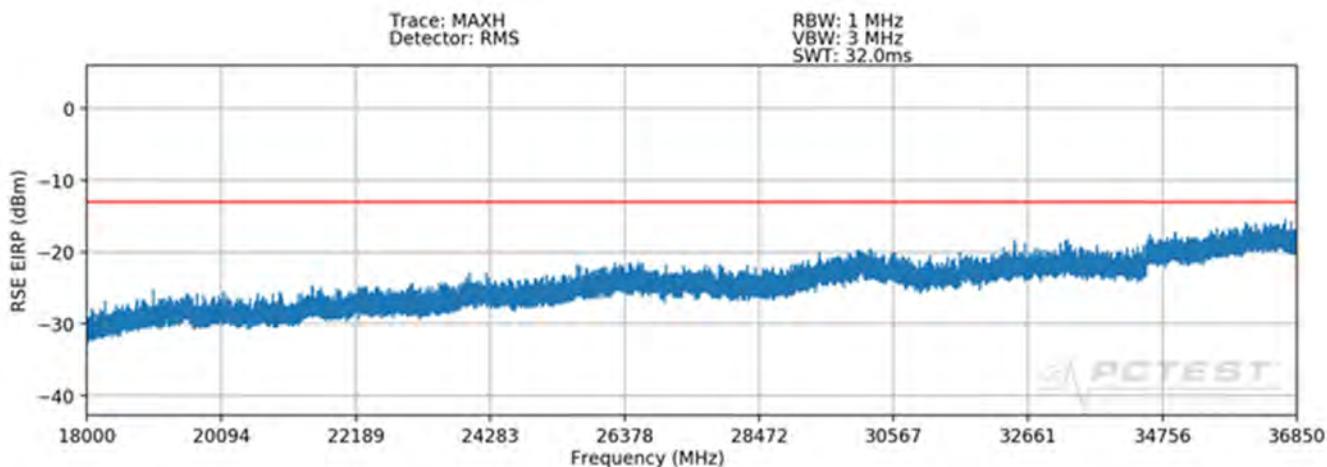


Plot 7-278. J Patch Radiated Spurious Plot 18-36.85 GHz (1CC QPSK Mid Channel H Beam – n260)

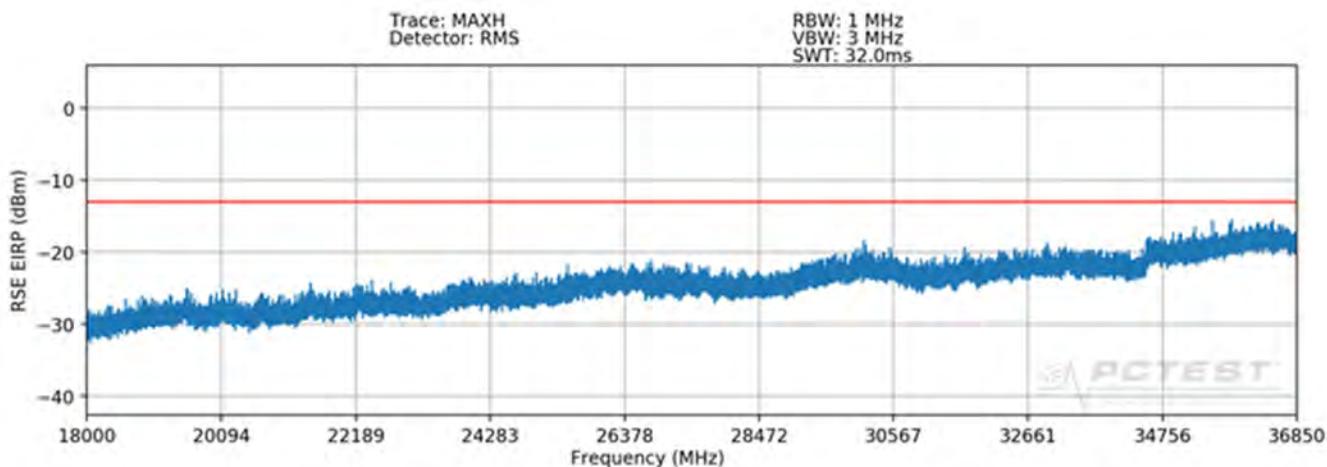


Plot 7-279. J Patch Radiated Spurious Plot 18-36.85 GHz (1CC QPSK High Channel H Beam – n260)

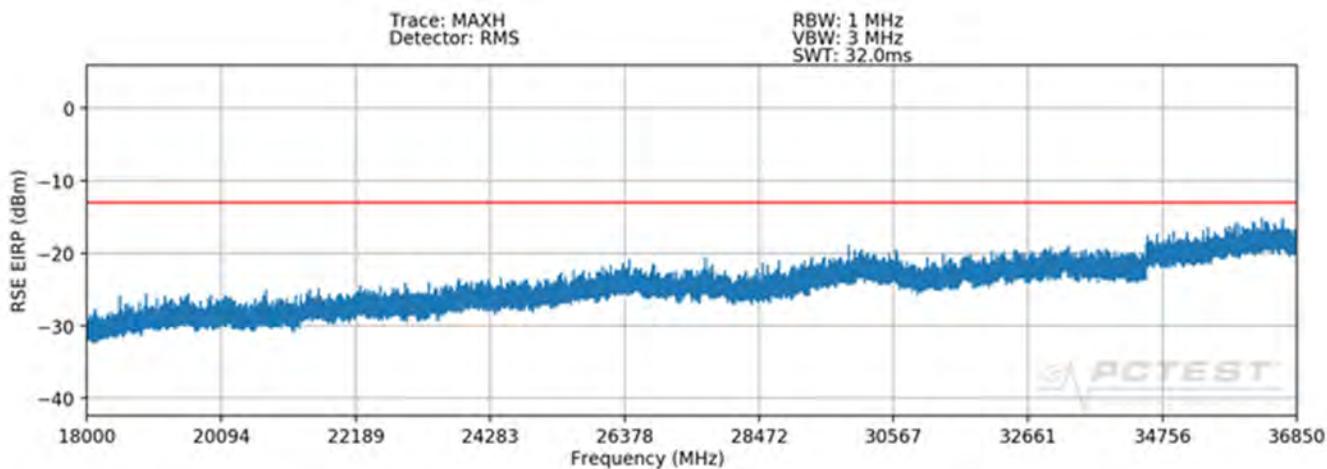
FCC ID: A3LSMN976V		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1905130071-06-R1.A3L	Test Dates: 05/14 - 07/12/2019	EUT Type: Portable Handset		Page 174 of 371



Plot 7-280. J Patch Radiated Spurious Plot 18-36.85 GHz (1CC QPSK Low Channel V Beam – n260)



Plot 7-281. J Patch Radiated Spurious Plot 18-36.85 GHz (1CC QPSK Mid Channel V Beam – n260)



Plot 7-282. J Patch Radiated Spurious Plot 18-36.85 GHz (1CC QPSK High Channel V Beam – n260)

FCC ID: A3LSMN976V	<b>PCTEST</b> ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1905130071-06-R1.A3L	Test Dates: 05/14 - 07/12/2019	EUT Type: Portable Handset		Page 175 of 371

## Spurious Emissions EIRP Sample Calculation(n260)

The raw radiated spurious level is converted to field strength in dB $\mu$ V/m. Then, the RSE EIRP level is calculated by applying the additional factors shown below for a test distance of 1 meter.

$$\text{RSE EIRP [dBm]} = \text{Analyzer Level [dBm]} + 107 + \text{AFCL [dB/m]} + 20\text{Log}(D_m) - 104.8$$

Frequency [MHz]	Detector/Trace	Chan.	Bandwidth (MHz)	Mod.	EUT Beam Polarization	Ant. Pos [H/V]	Turn Table Azimuth [degree]	Positioner Azimuth [degree]	RSE EIRP [dBm]	Limit [dBm]	Margin [dB]
28454.00	RMS/Avg	Low	50	QPSK	H	H	133	96	-33.92	-13.00	-20.92
29577.50	RMS/Avg	Mid	50	QPSK	H	H	94	94	-30.56	-13.00	-17.56
31180.50	RMS/Avg	High	50	QPSK	H	H	87	94	-22.68	-13.00	-9.68
28454.00	RMS/Avg	Low	50	QPSK	V	V	78	251	-31.38	-13.00	-18.38
29577.50	RMS/Avg	Mid	50	QPSK	V	V	79	279	-25.46	-13.00	-12.46
31180.50	RMS/Avg	High	50	QPSK	V	V	80	277	-18.76	-13.00	-5.76

Table 7-53. J Patch Spurious Emissions Table (18-36.85GHz – n260)

### Notes

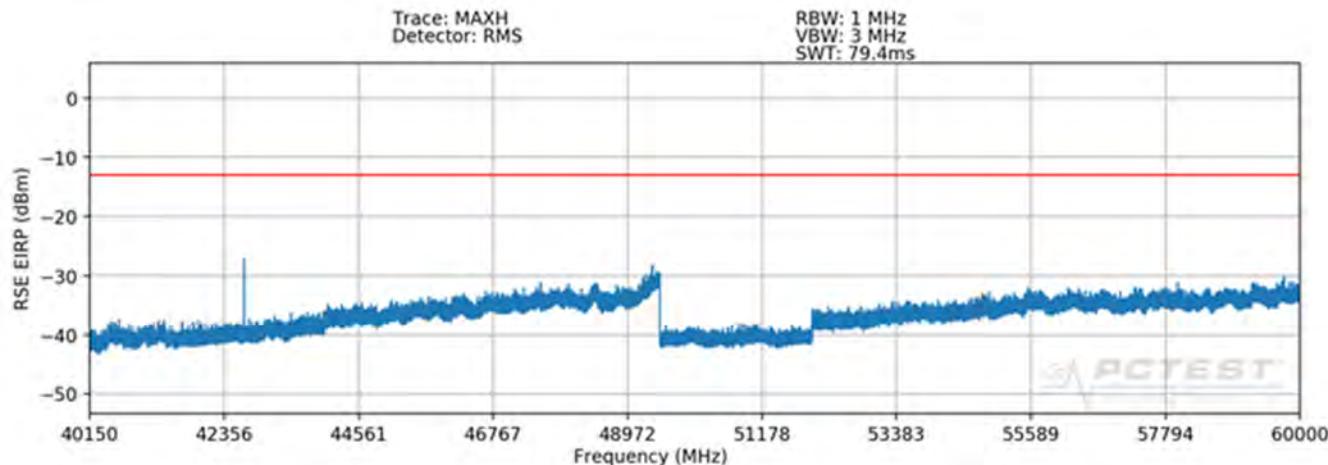
1. The RSE EIRP level is taken directly from the spectrum analyzer which includes the appropriate antenna factors, cable losses, and harmonic mixer conversion losses. Measurements were performed at a distance of 1 meter.
2. To address compliance of MIMO RSE per KDB 662911 D01, the MIMO RSE EIRP is calculated by summing the worst case H Beam EIRP and V Beam EIRP in linear powers units then converted back to dBm:

$$\text{EIRP(H Beam)} + \text{EIRP(V Beam)} = \text{EIRP(MIMO)}$$

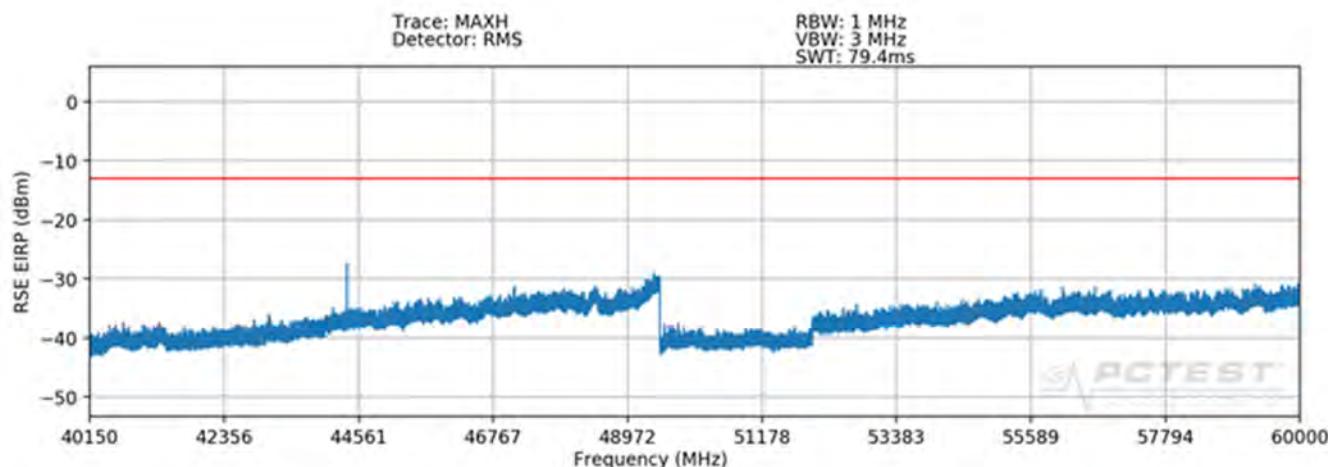
$$(-22.68 \text{ dBm} + -18.76 \text{ dBm}) = (5.40 \mu\text{W} + 13.31 \mu\text{W}) = (18.71 \mu\text{W}) = -17.28 \text{ dBm}$$

FCC ID: A3LSMN976V		MEASUREMENT REPORT (CERTIFICATION)			Approved by: Quality Manager
Test Report S/N: 1M1905130071-06-R1.A3L	Test Dates: 05/14 - 07/12/2019	EUT Type: Portable Handset			Page 176 of 371

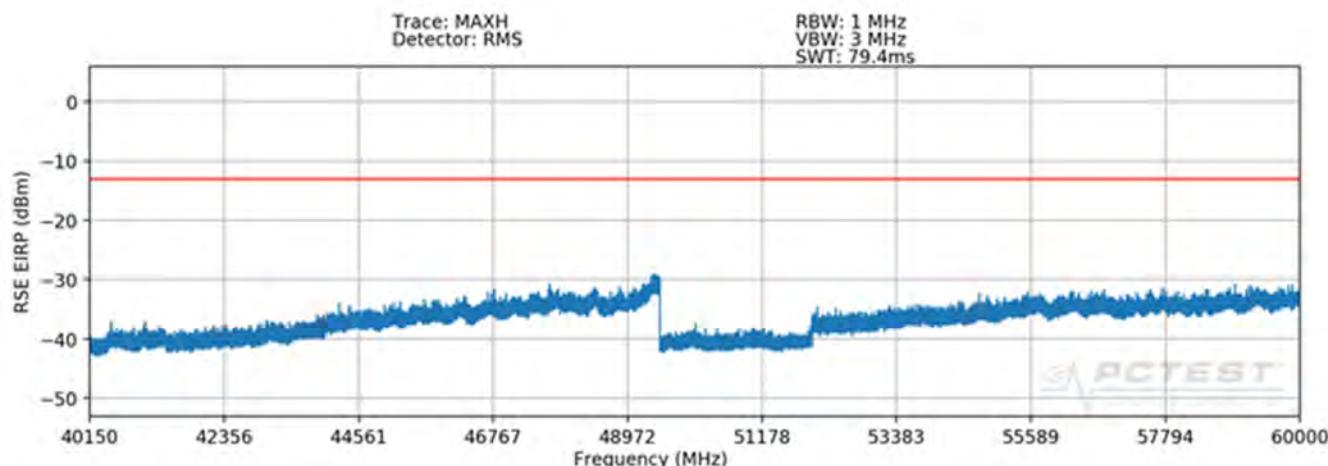
## 40.15 – 60GHz(n260)



Plot 7-283. J Patch Radiated Spurious Plot 40.15-60 GHz (1CC QPSK Low Channel H Beam – n260)

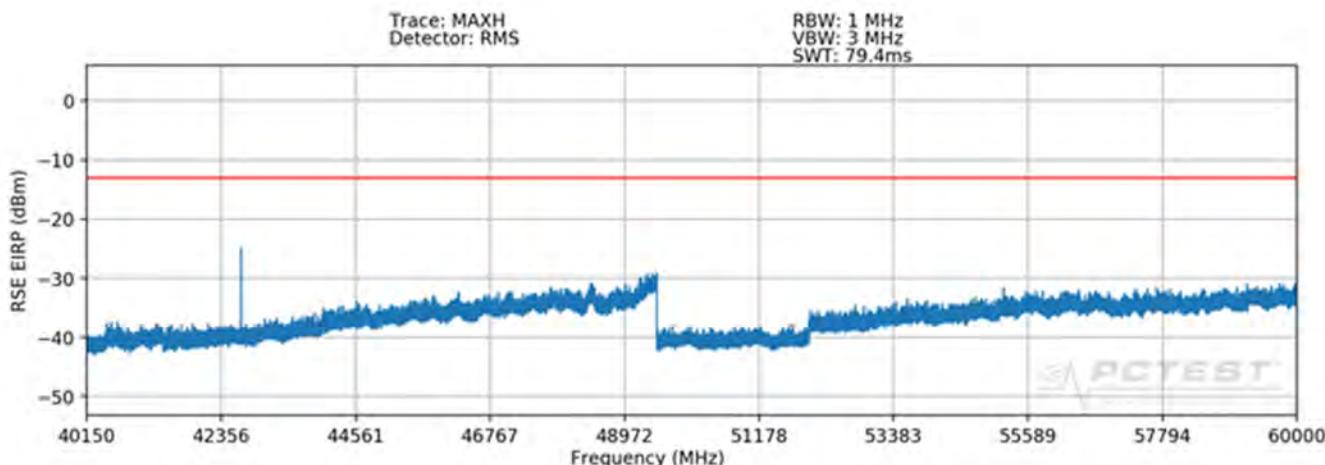


Plot 7-284. J Patch Radiated Spurious Plot 40.15-60 GHz (1CC QPSK Mid Channel H Beam – n260)

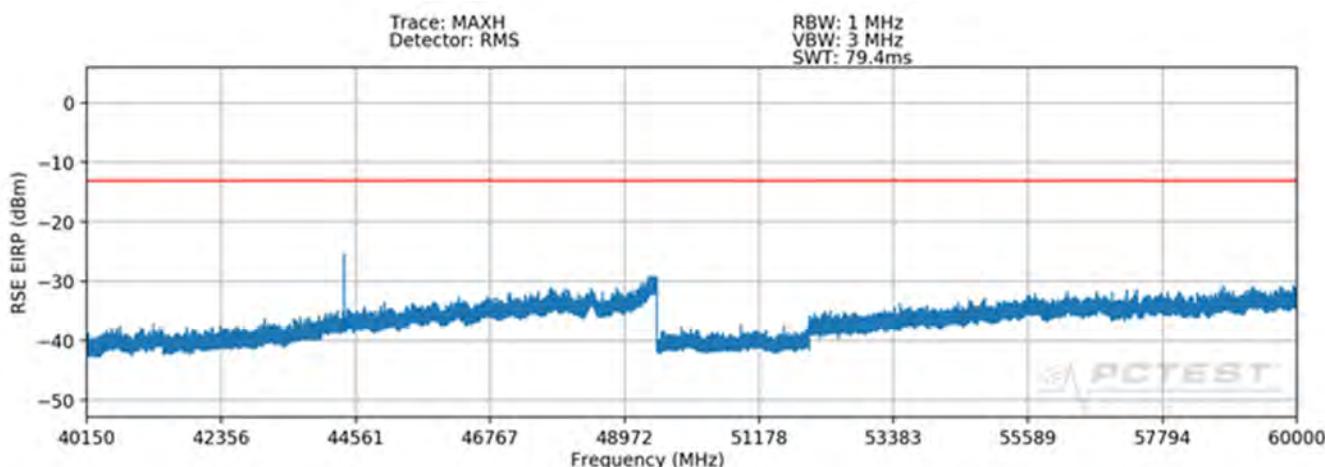


Plot 7-285. J Patch Radiated Spurious Plot 40.15-60 GHz (1CC QPSK High Channel H Beam – n260)

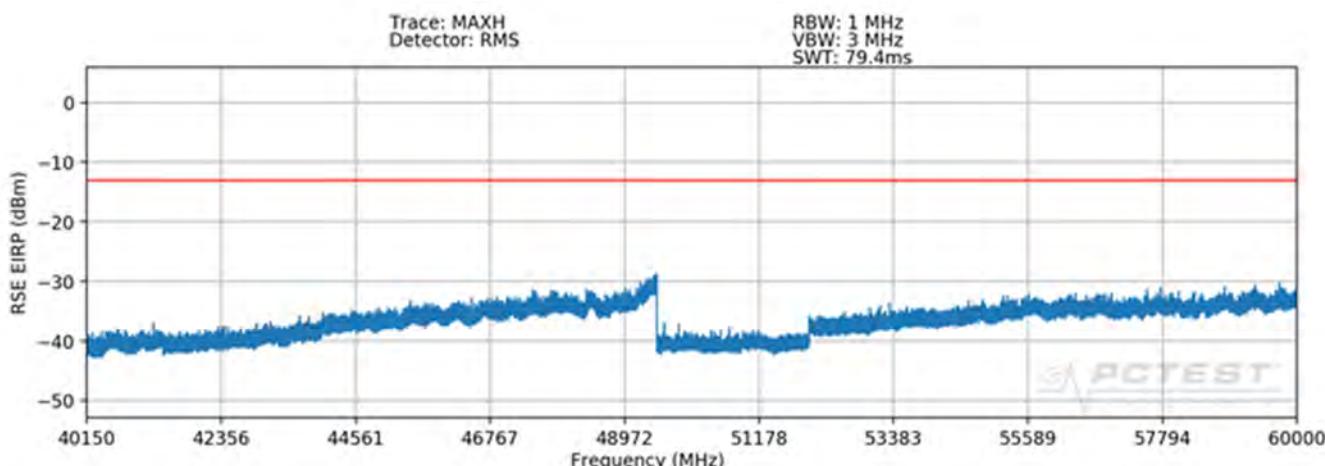
FCC ID: A3LSMN976V		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1905130071-06-R1.A3L	Test Dates: 05/14 - 07/12/2019	EUT Type: Portable Handset		Page 177 of 371



Plot 7-286. J Patch Radiated Spurious Plot 40.15-60 GHz (1CC QPSK Low Channel V Beam – n260)



Plot 7-287. J Patch Radiated Spurious Plot 40.15-60 GHz (1CC QPSK Mid Channel V Beam – n260)



Plot 7-288. J Patch Radiated Spurious Plot 40.15-60 GHz (1CC QPSK High Channel V Beam – n260)

FCC ID: A3LSMN976V	<b>PCTEST</b> ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1905130071-06-R1.A3L	Test Dates: 05/14 - 07/12/2019	EUT Type: Portable Handset		Page 178 of 371

## Spurious Emissions EIRP Sample Calculation(n260)

The raw radiated spurious level is converted to field strength in  $\text{dB}\mu\text{V/m}$ . Then, the RSE EIRP level is calculated by applying the additional factors shown below for a test distance of 1.5 meter.

$$\text{RSE EIRP [dBm]} = \text{Analyzer Level [dBm]} + 107 + \text{AFCL [dB/m]} + 20\text{Log}(\text{Dm}) - 104.8$$

Frequency [MHz]	Detector/Trace	Chan.	Bandwidth (MHz)	Mod.	EUT Beam Polarization	Ant. Pos [H/V]	Turn Table Azimuth [degree]	Positioner Azimuth [degree]	RSE EIRP [dBm]	Limit [dBm]	Margin [dB]
42681.15	RMS/Avg	Low	50	QPSK	H	H	228	290	-31.54	-13.00	-18.54
44366.28	RMS/Avg	Mid	50	QPSK	H	H	301	300	-32.35	-13.00	-19.35
46771.12	RMS/Avg	High	50	QPSK	H	H	300	274	-39.53	-13.00	-26.53
42681.47	RMS/Avg	Low	50	QPSK	V	V	82	279	-24.75	-13.00	-11.75
44366.28	RMS/Avg	Mid	50	QPSK	V	V	57	281	-30.79	-13.00	-17.79
46771.12	RMS/Avg	High	50	QPSK	V	V	54	283	-38.22	-13.00	-25.22

Table 7-54. J Patch Spurious Emissions Table (40.15-60 GHz – n260)

### Notes

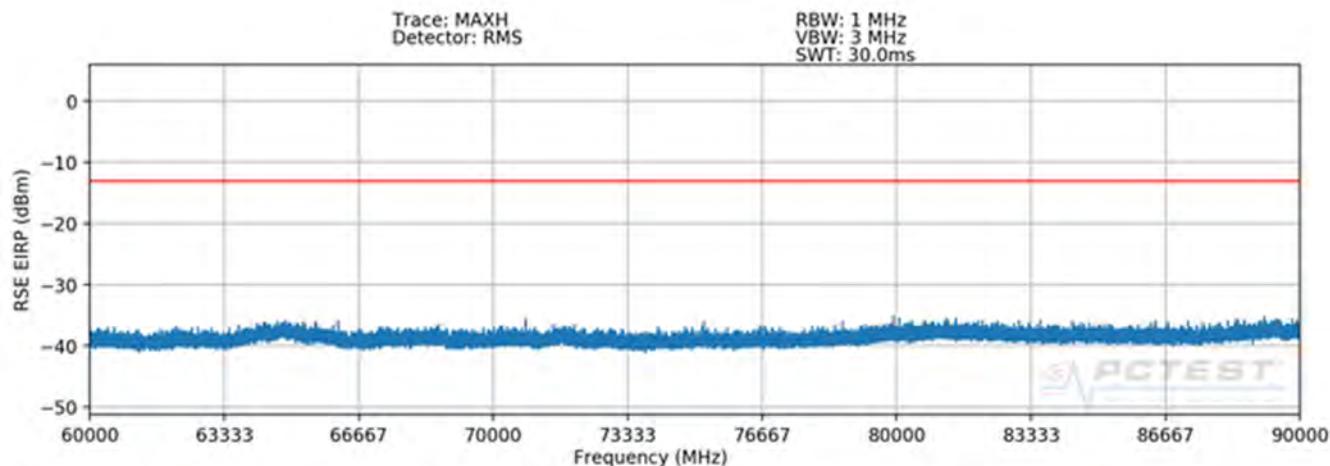
1. The RSE EIRP level is taken directly from the spectrum analyzer which includes the appropriate antenna factors, cable losses, and harmonic mixer conversion losses. Measurements were performed at a distance of 1.5 meter.
2. To address compliance of MIMO RSE per KDB 662911 D01, the MIMO RSE EIRP is calculated by summing the worst case H Beam EIRP and V Beam EIRP in linear powers units then converted back to dBm:

$$\text{EIRP(H Beam)} + \text{EIRP(V Beam)} = \text{EIRP(MIMO)}$$

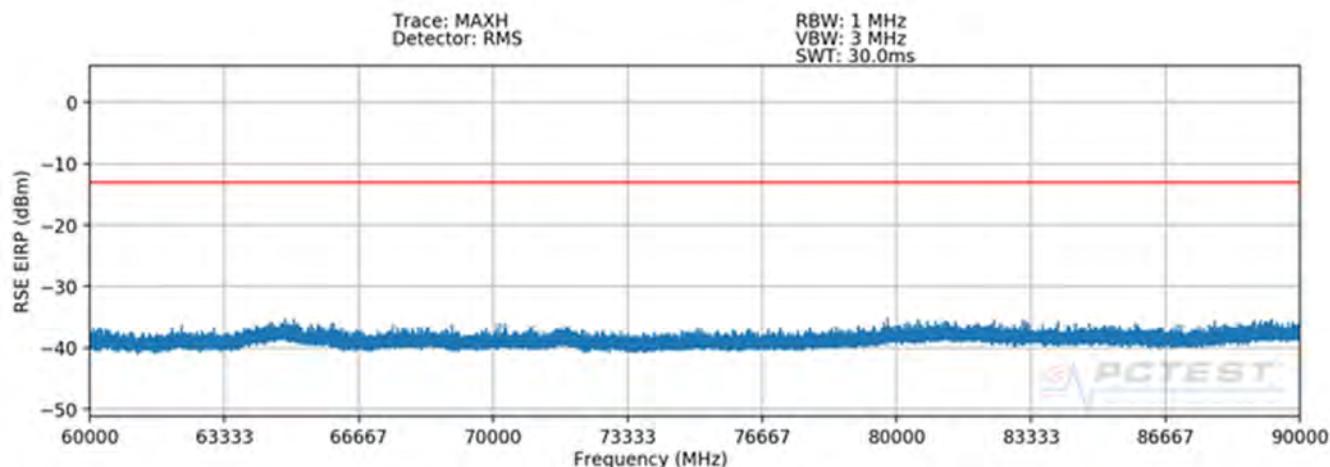
$$(-31.54 \text{ dBm} + -24.75 \text{ dBm}) = (701.46 \text{ nW} + 3349.65 \text{ nW}) = (4051.11 \text{ nW}) = -23.92 \text{ dBm}$$

FCC ID: A3LSMN976V		MEASUREMENT REPORT (CERTIFICATION)				Approved by: Quality Manager
Test Report S/N: 1M1905130071-06-R1.A3L	Test Dates: 05/14 - 07/12/2019	EUT Type: Portable Handset			Page 179 of 371	

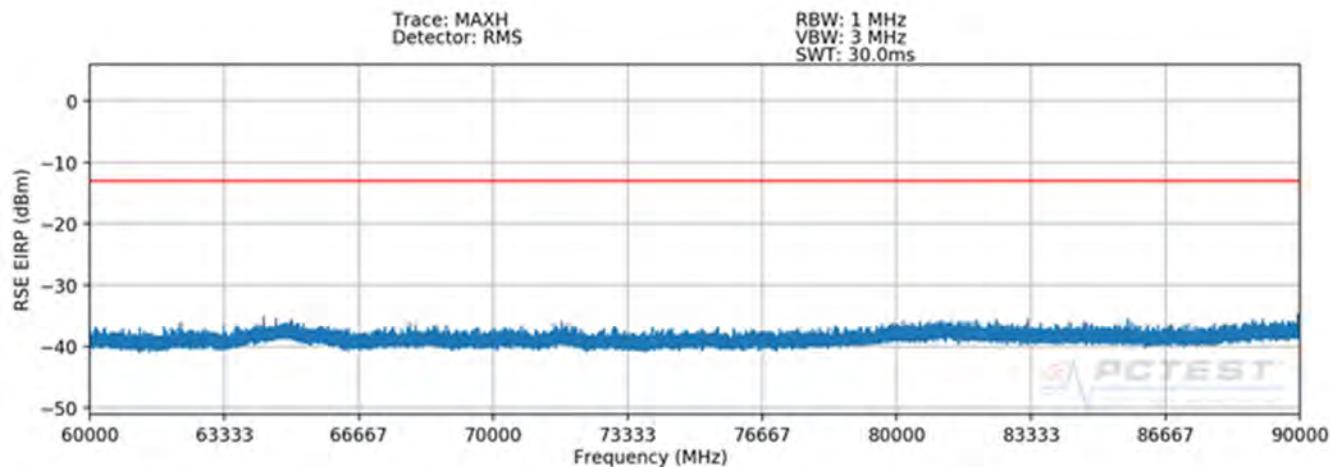
## 60 – 90GHz(n260)



Plot 7-289. J Patch Radiated Spurious Plot 60-90 GHz (1CC QPSK Low Channel H Beam – n260)

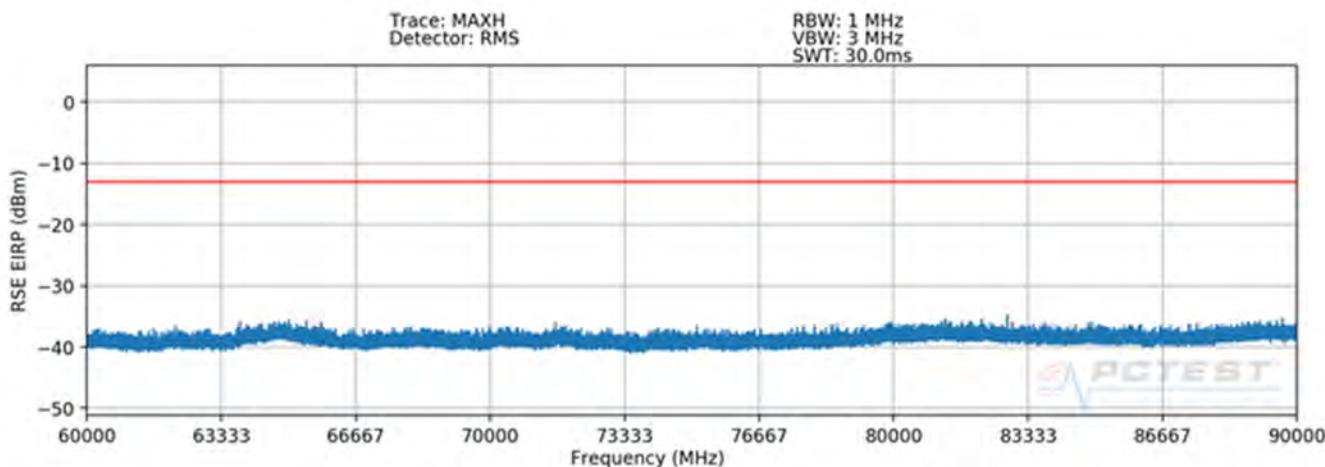


Plot 7-290. J Patch Radiated Spurious Plot 60-90 GHz (1CC QPSK Mid Channel H Beam – n260)

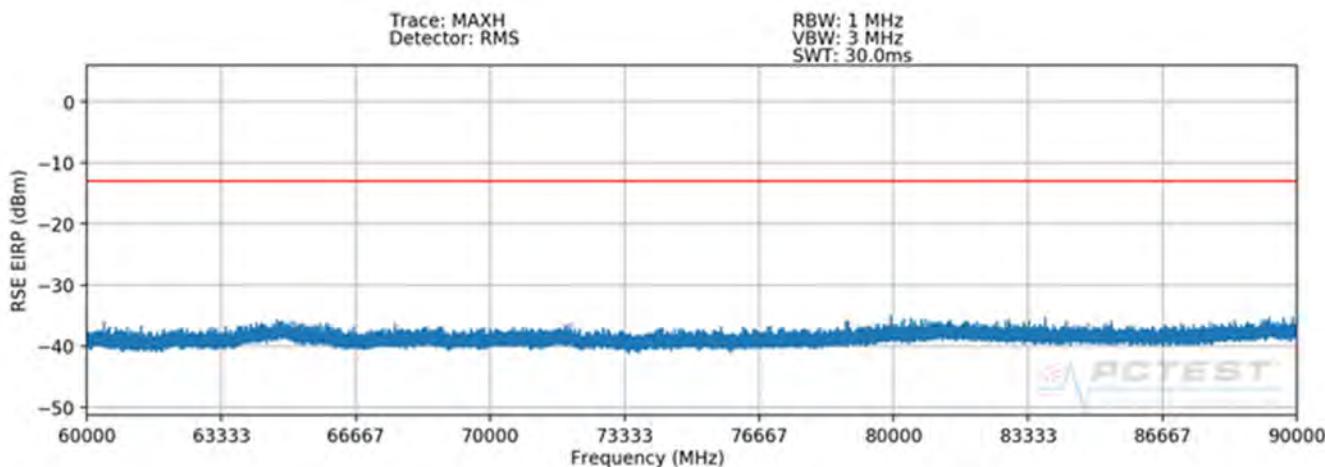


Plot 7-291. J Patch Radiated Spurious Plot 60-90 GHz (1CC QPSK High Channel H Beam – n260)

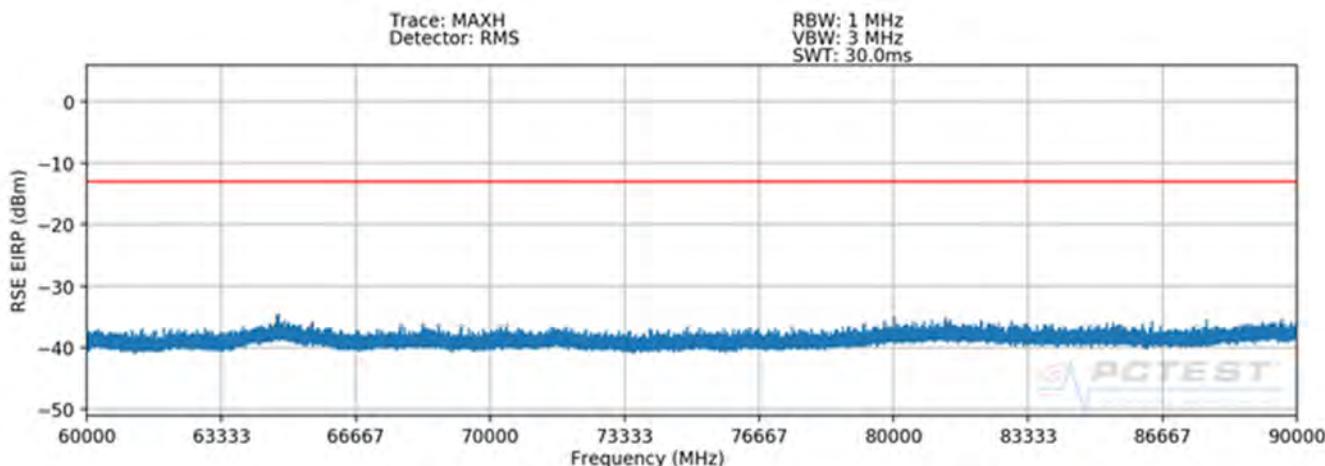
FCC ID: A3LSMN976V		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1905130071-06-R1.A3L	Test Dates: 05/14 - 07/12/2019	EUT Type: Portable Handset		Page 180 of 371



**Plot 7-292. J Patch Radiated Spurious Plot 60-90 GHz (1CC QPSK Low Channel V Beam – n260)**



**Plot 7-293. J Patch Radiated Spurious Plot 60-90 GHz (1CC QPSK Mid Channel V Beam – n260)**



**Plot 7-294. J Patch Radiated Spurious Plot 60-90 GHz (1CC QPSK High Channel V Beam – n260)**

FCC ID: A3LSMN976V	 <b>PCTEST</b> ENGINEERING LABORATORY, INC.	<b>MEASUREMENT REPORT    (CERTIFICATION)</b>			Approved by: Quality Manager
Test Report S/N: 1M1905130071-06-R1.A3L	Test Dates: 05/14 - 07/12/2019	EUT Type: Portable Handset			Page 181 of 371

## Spurious Emissions EIRP Sample Calculation(n260)

The raw radiated spurious level is converted to field strength in  $\text{dB}\mu\text{V}/\text{m}$ . Then, the RSE EIRP level is calculated by applying the additional factors shown below for a test distance of 1 meter.

**RSE EIRP [dBm]** = Analyzer Level [dBm] + 107 + AFCL [dB/m] + 20Log(Dm) + Harmonic Mixer Loss (dB) – 104.8

Frequency [MHz]	Detector/Trace	Chan.	Bandwidth (MHz)	Mod.	EUT Beam Polarization	Ant. Pos [H/V]	Turn Table Azimuth [degree]	Positioner Azimuth [degree]	RSE EIRP [dBm]	Limit [dBm]	Margin [dB]
89170.50	RMS/Avg	Low	50	QPSK	H	H	-	-	-44.82	-13.00	-31.82
81378.50	RMS/Avg	Mid	50	QPSK	H	H	-	-	-44.62	-13.00	-31.62
89419.00	RMS/Avg	High	50	QPSK	H	H	-	-	-44.52	-13.00	-31.52
89465.50	RMS/Avg	Low	50	QPSK	V	V	-	-	-44.80	-13.00	-31.80
64743.00	RMS/Avg	Mid	50	QPSK	V	V	-	-	-44.74	-13.00	-31.74
81158.50	RMS/Avg	High	50	QPSK	V	V	-	-	-44.98	-13.00	-31.98

**Table 7-55. J Patch Spurious Emissions Table (60-90GHz – n260)**

### Notes

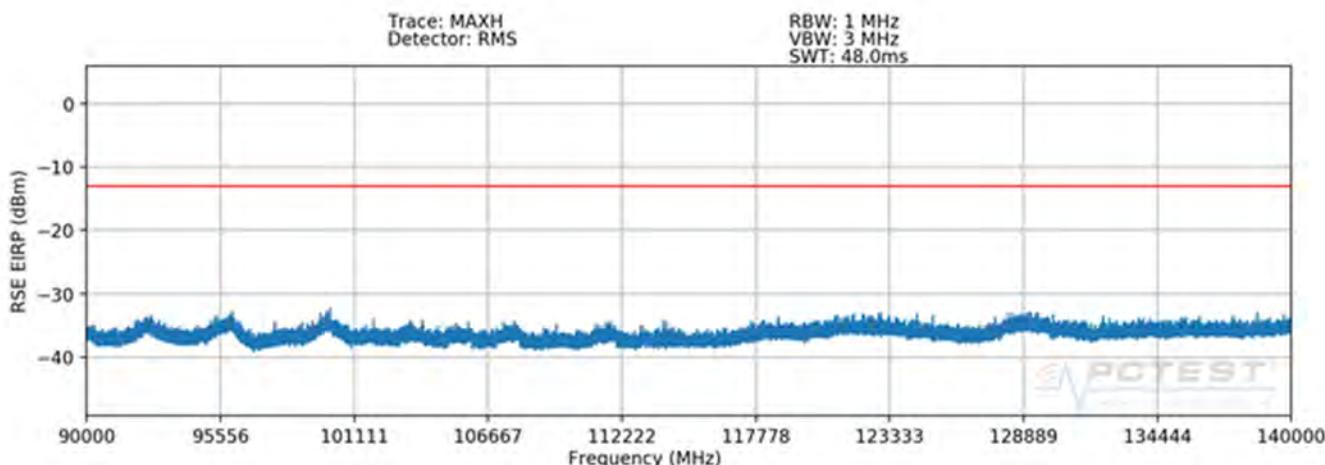
1. The RSE EIRP level is taken directly from the spectrum analyzer which includes the appropriate antenna factors, cable losses, and harmonic mixer conversion losses. Measurements were performed at a distance of 1 meter.
2. To address compliance of MIMO RSE per KDB 662911 D01, the MIMO RSE EIRP is calculated by summing the worst case H Beam EIRP and V Beam EIRP in linear powers units then converted back to dBm:

$$\text{EIRP(H Beam)} + \text{EIRP(V Beam)} = \text{EIRP(MIMO)}$$

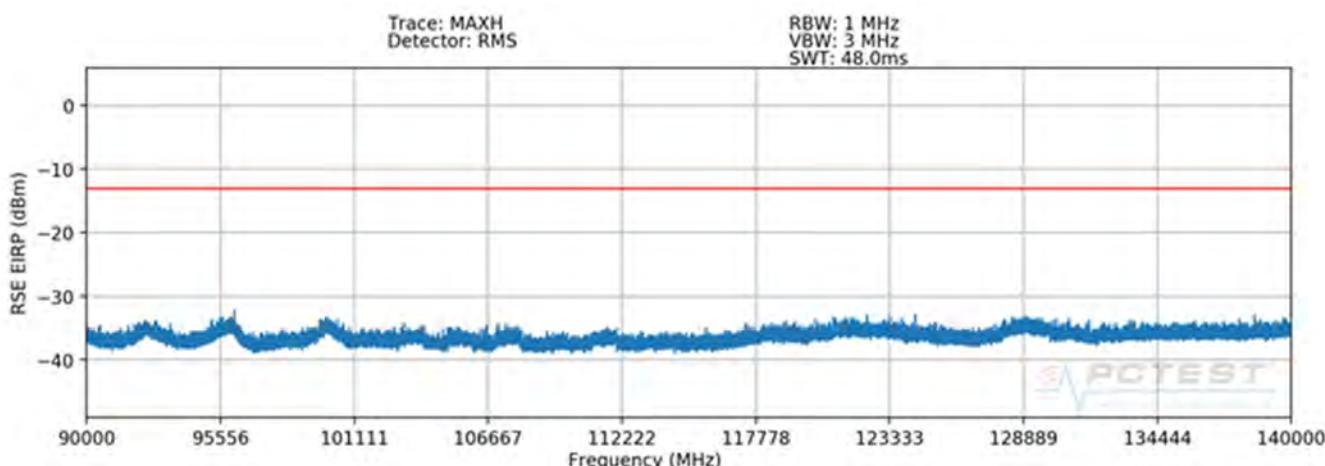
$$(-44.62 \text{ dBm} + -44.74 \text{ dBm}) = (34.53 \text{ nW} + 33.60 \text{ nW}) = (68.13 \text{ nW}) = -41.67 \text{ dBm}$$

FCC ID: A3LSMN976V		MEASUREMENT REPORT (CERTIFICATION)			Approved by: Quality Manager
Test Report S/N: 1M1905130071-06-R1.A3L	Test Dates: 05/14 - 07/12/2019	EUT Type: Portable Handset			Page 182 of 371

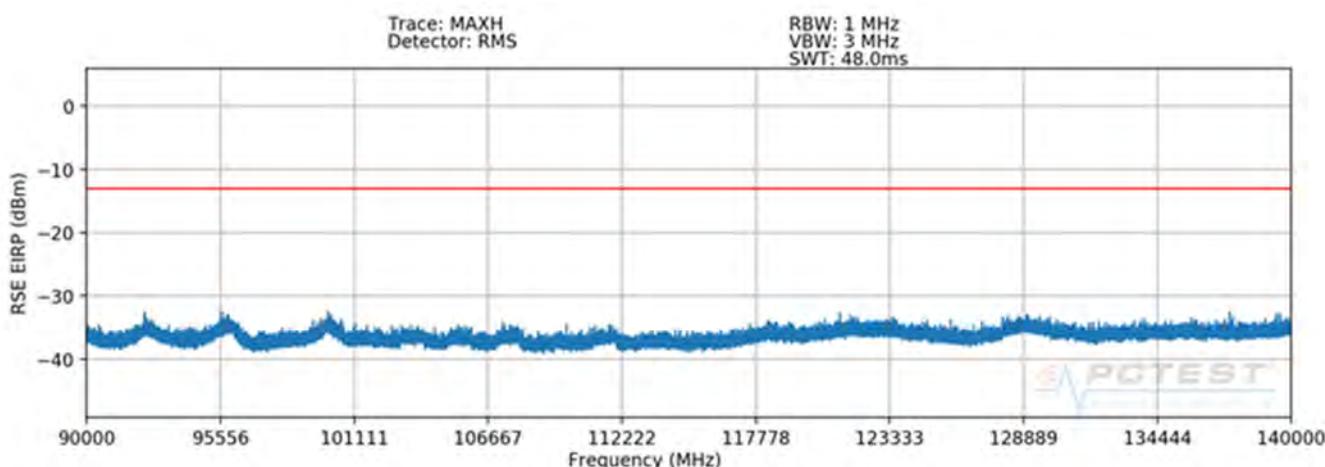
## 90 – 140GHz(n260)



Plot 7-295. J Patch Radiated Spurious Plot 90-140 GHz (1CC QPSK Low Channel H Beam – n260)

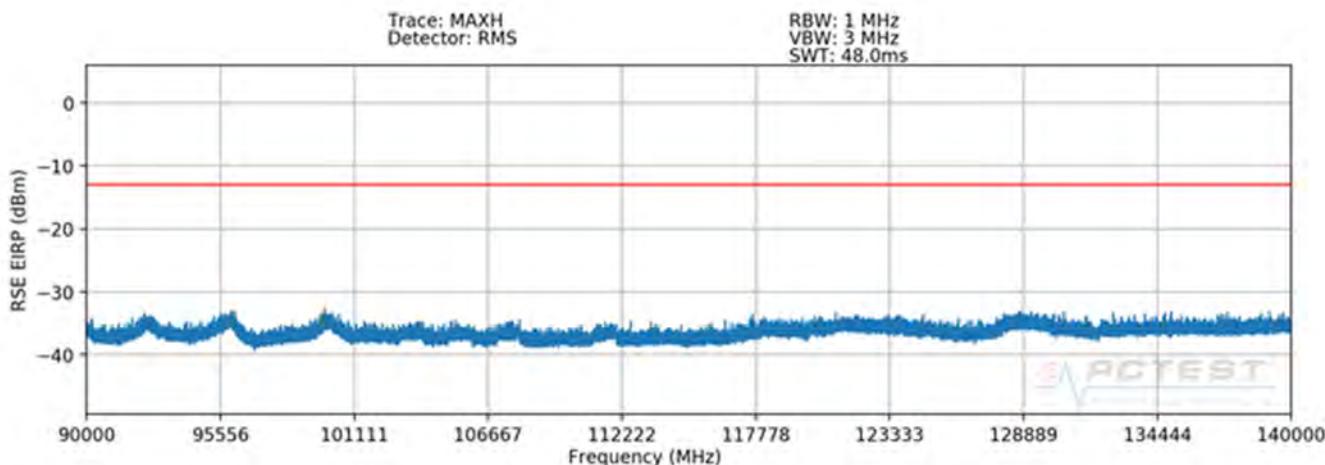


Plot 7-296. J Patch Radiated Spurious Plot 90-140 GHz (1CC QPSK Mid Channel H Beam – n260)

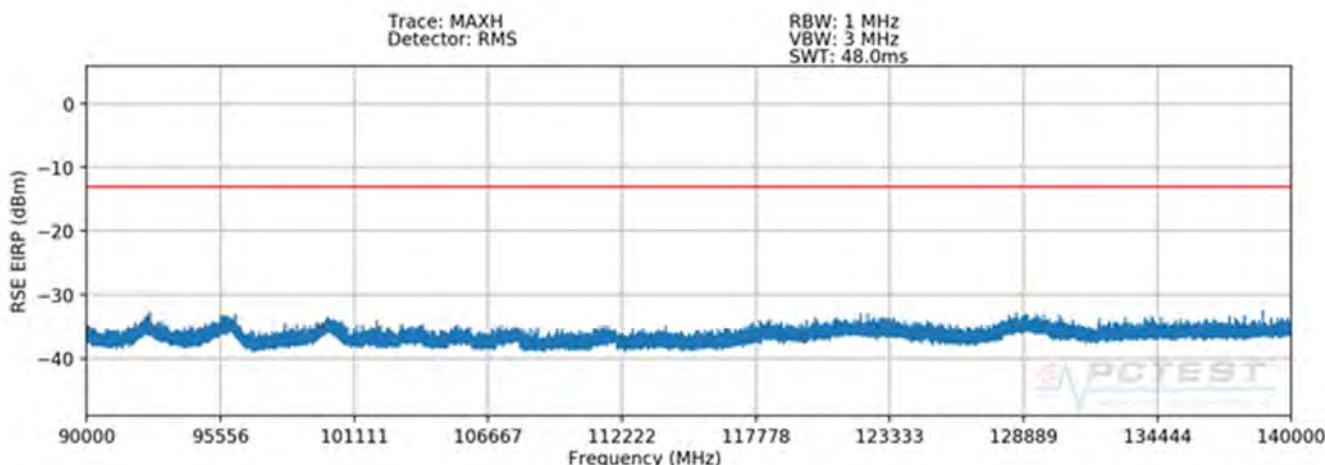


Plot 7-297. J Patch Radiated Spurious Plot 90-140 GHz (1CC QPSK High Channel H Beam – n260)

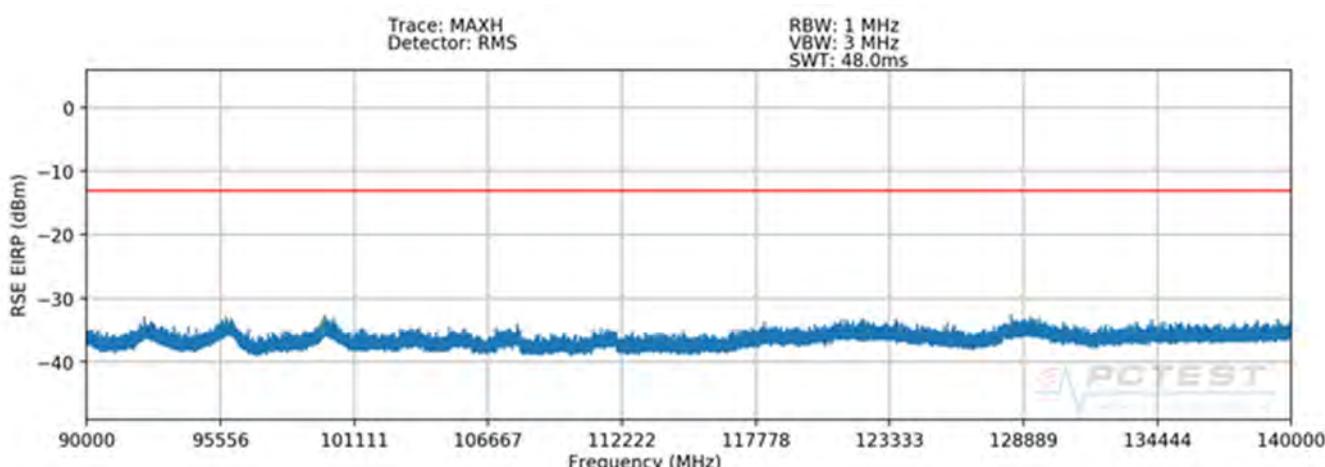
FCC ID: A3LSMN976V		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1905130071-06-R1.A3L	Test Dates: 05/14 - 07/12/2019	EUT Type: Portable Handset		Page 183 of 371



Plot 7-298. J Patch Radiated Spurious Plot 90-140 GHz (1CC QPSK Low Channel V Beam – n260)



Plot 7-299. J Patch Radiated Spurious Plot 90-140 GHz (1CC QPSK Mid Channel V Beam – n260)



Plot 7-300. J Patch Radiated Spurious Plot 90-140 GHz (1CC QPSK High Channel V Beam – n260)

FCC ID: A3LSMN976V		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1905130071-06-R1.A3L	Test Dates: 05/14 - 07/12/2019	EUT Type: Portable Handset		Page 184 of 371

## Spurious Emissions EIRP Sample Calculation(n260)

The raw radiated spurious level is converted to field strength in  $\text{dB}\mu\text{V}/\text{m}$ . Then, the RSE EIRP level is calculated by applying the additional factors shown below for a test distance of 1 meter.

**RSE EIRP [dBm]** = Analyzer Level [dBm] + 107 + AFCL[dB/m] + 20Log(Dm) + Harmonic Mixer Loss (dB) – 104.8

Frequency [MHz]	Detector/Trace	Chan.	Bandwidth (MHz)	Mod.	EUT Beam Polarization	Ant. Pos [H/V]	Turn Table Azimuth [degree]	Positioner Azimuth [degree]	RSE EIRP [dBm]	Limit [dBm]	Margin [dB]
95868.50	RMS/Avg	Low	50	QPSK	H	H	-	-	-40.02	-13.00	-27.02
128495.50	RMS/Avg	Mid	50	QPSK	H	H	-	-	-39.64	-13.00	-26.64
128823.50	RMS/Avg	High	50	QPSK	H	H	-	-	-39.72	-13.00	-26.72
95981.50	RMS/Avg	Low	50	QPSK	V	V	-	-	-39.92	-13.00	-26.92
128655.50	RMS/Avg	Mid	50	QPSK	V	V	-	-	-39.69	-13.00	-26.69
95897.00	RMS/Avg	High	50	QPSK	V	V	-	-	-39.68	-13.00	-26.68

**Table 7-56. J Patch Spurious Emissions Table (90-140GHz – n260)**

### Notes

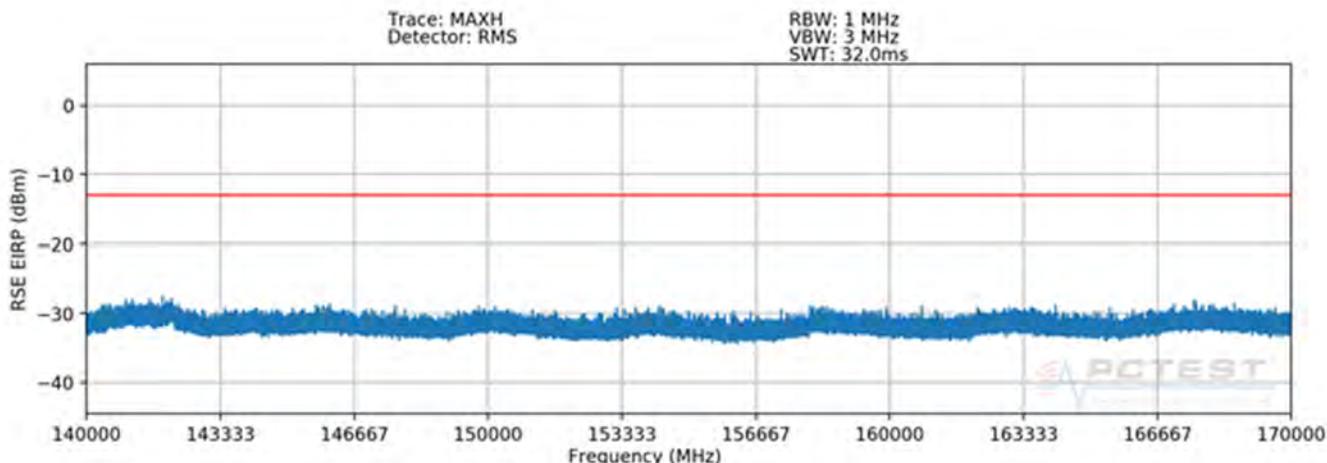
1. The RSE EIRP level is taken directly from the spectrum analyzer which includes the appropriate antenna factors, cable losses, and harmonic mixer conversion losses. Measurements were performed at a distance of 1 meter.
2. To address compliance of MIMO RSE per KDB 662911 D01, the MIMO RSE EIRP is calculated by summing the worst case H Beam EIRP and V Beam EIRP in linear powers units then converted back to dBm:

$$\text{EIRP(H Beam)} + \text{EIRP(V Beam)} = \text{EIRP(MIMO)}$$

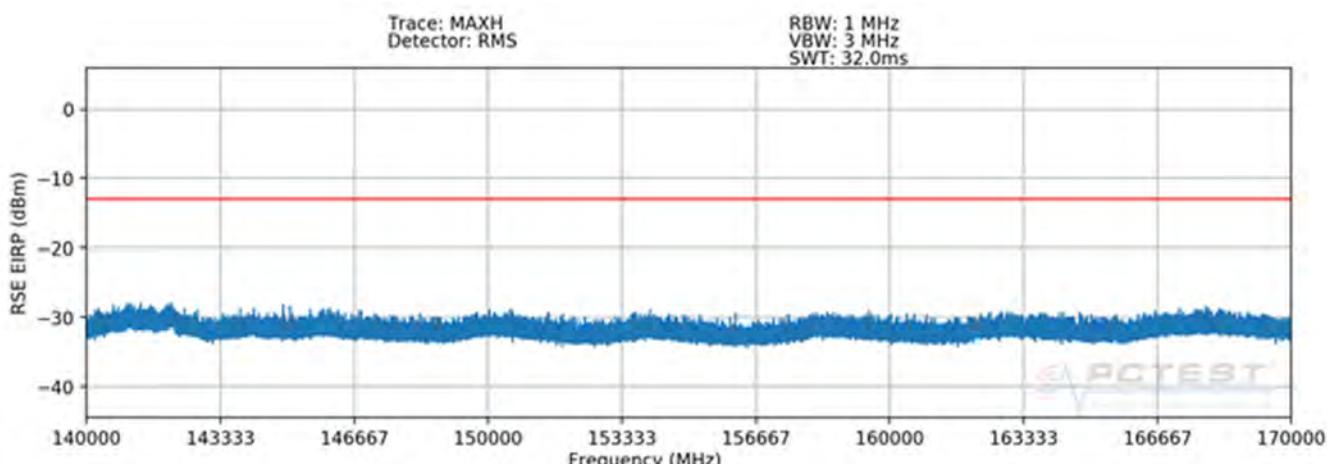
$$(-39.64 \text{ dBm} + -39.69 \text{ dBm}) = (108.64 \text{ nW} + 107.37 \text{ nW}) = (216.02 \text{ nW}) = -36.66 \text{ dBm}$$

FCC ID: A3LSMN976V		MEASUREMENT REPORT (CERTIFICATION)			Approved by: Quality Manager
Test Report S/N: 1M1905130071-06-R1.A3L	Test Dates: 05/14 - 07/12/2019	EUT Type: Portable Handset			Page 185 of 371

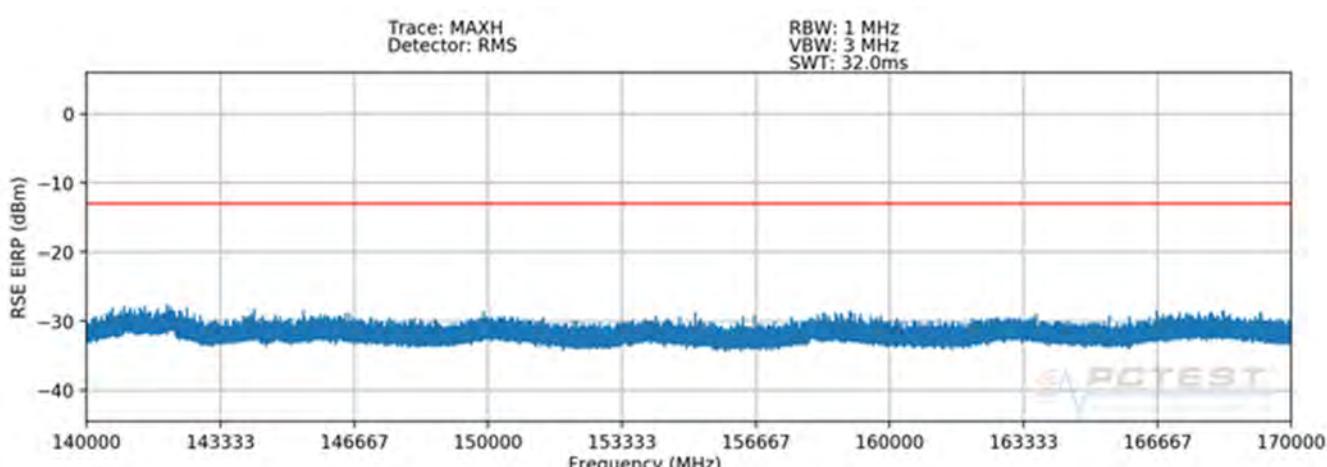
## 140 – 170GHz(n260)



Plot 7-301. J Patch Radiated Spurious Plot 140-170 GHz (1CC QPSK Low Channel H Beam – n260)

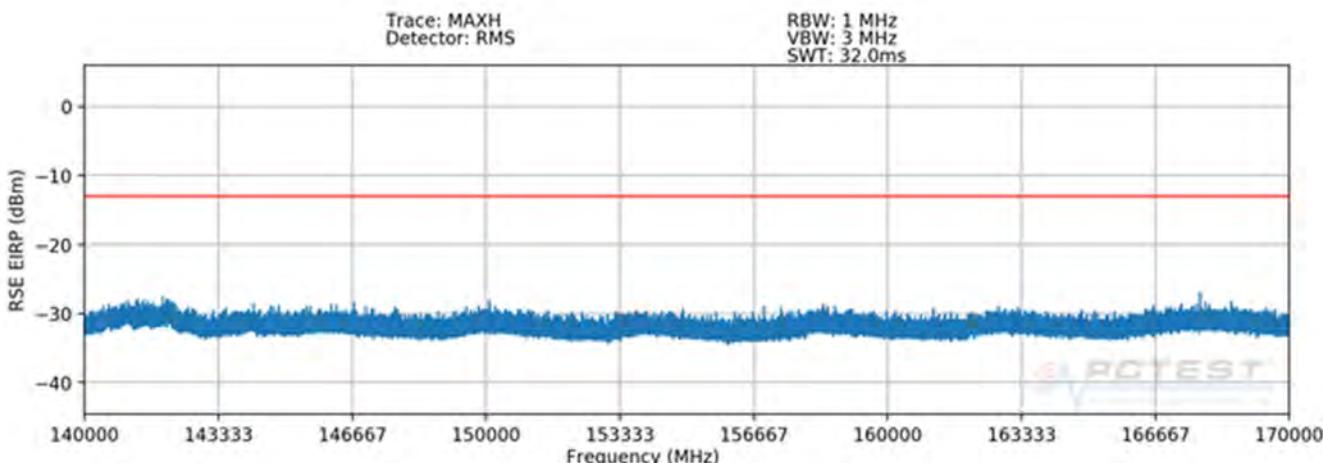


Plot 7-302. J Patch Radiated Spurious Plot 140-170 GHz (1CC QPSK Mid Channel H Beam – n260)

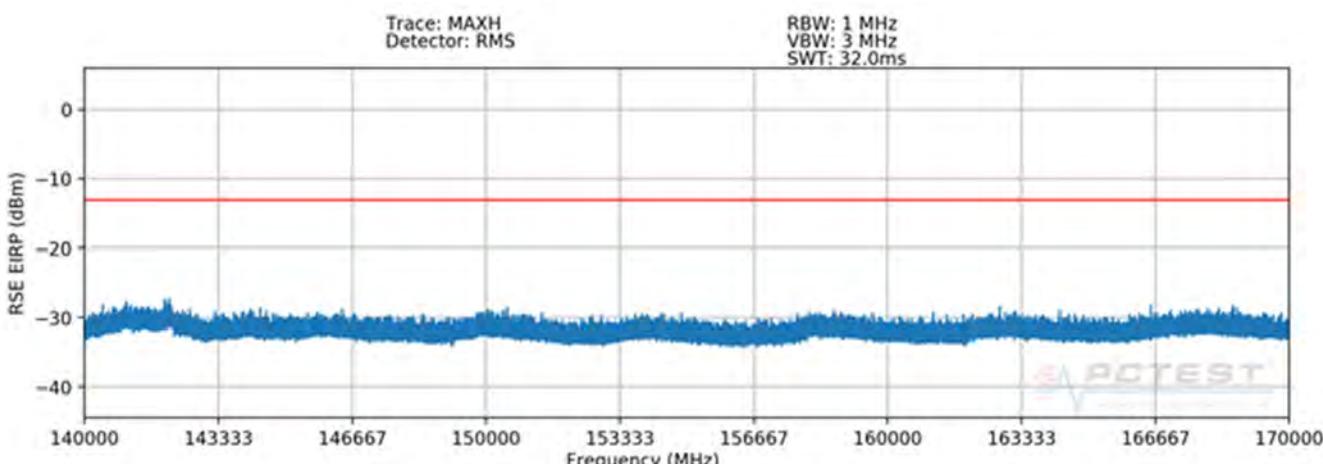


Plot 7-303. J Patch Radiated Spurious Plot 140-170 GHz (1CC QPSK High Channel H Beam – n260)

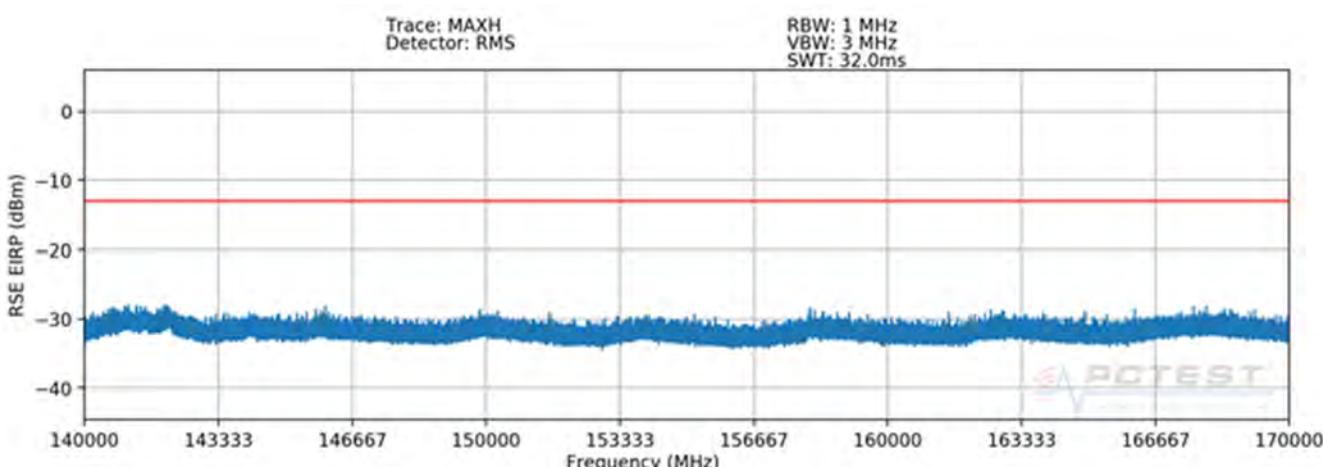
FCC ID: A3LSMN976V		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1905130071-06-R1.A3L	Test Dates: 05/14 - 07/12/2019	EUT Type: Portable Handset		Page 186 of 371



Plot 7-304. J Patch Radiated Spurious Plot 140-170 GHz (1CC QPSK Low Channel V Beam – n260)



Plot 7-305. J Patch Radiated Spurious Plot 140-170 GHz (1CC QPSK Mid Channel V Beam – n260)



Plot 7-306. J Patch Radiated Spurious Plot 140-170 GHz (1CC QPSK High Channel V Beam – n260)

FCC ID: A3LSMN976V	<b>PCTEST</b> ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1905130071-06-R1.A3L	Test Dates: 05/14 - 07/12/2019	EUT Type: Portable Handset		Page 187 of 371

## Spurious Emissions EIRP Sample Calculation(n260)

The raw radiated spurious level is converted to field strength in  $\text{dB}\mu\text{V}/\text{m}$ . Then, the RSE EIRP level is calculated by applying the additional factors shown below for a test distance of 1 meter.

**RSE EIRP [dBm]** = Analyzer Level [dBm] + 107 + AFCL[dB/m] + 20Log(Dm) + Harmonic Mixer Loss (dB) – 104.8

Frequency [MHz]	Detector/Trace	Chan.	Bandwidth (MHz)	Mod.	EUT Beam Polarization	Ant. Pos [H/V]	Turn Table Azimuth [degree]	Positioner Azimuth [degree]	RSE EIRP [dBm]	Limit [dBm]	Margin [dB]
142093.50	RMS/Avg	Low	50	QPSK	H	H	-	-	-34.83	-13.00	-21.83
142146.00	RMS/Avg	Mid	50	QPSK	H	H	-	-	-35.00	-13.00	-22.00
142107.00	RMS/Avg	High	50	QPSK	H	H	-	-	-34.81	-13.00	-21.81
142152.50	RMS/Avg	Low	50	QPSK	V	V	-	-	-34.62	-13.00	-21.62
142098.50	RMS/Avg	Mid	50	QPSK	V	V	-	-	-34.87	-13.00	-21.87
142130.50	RMS/Avg	High	50	QPSK	V	V	-	-	-34.84	-13.00	-21.84

**Table 7-57. J Patch Spurious Emissions Table (140-170GHz – n260)**

### Notes

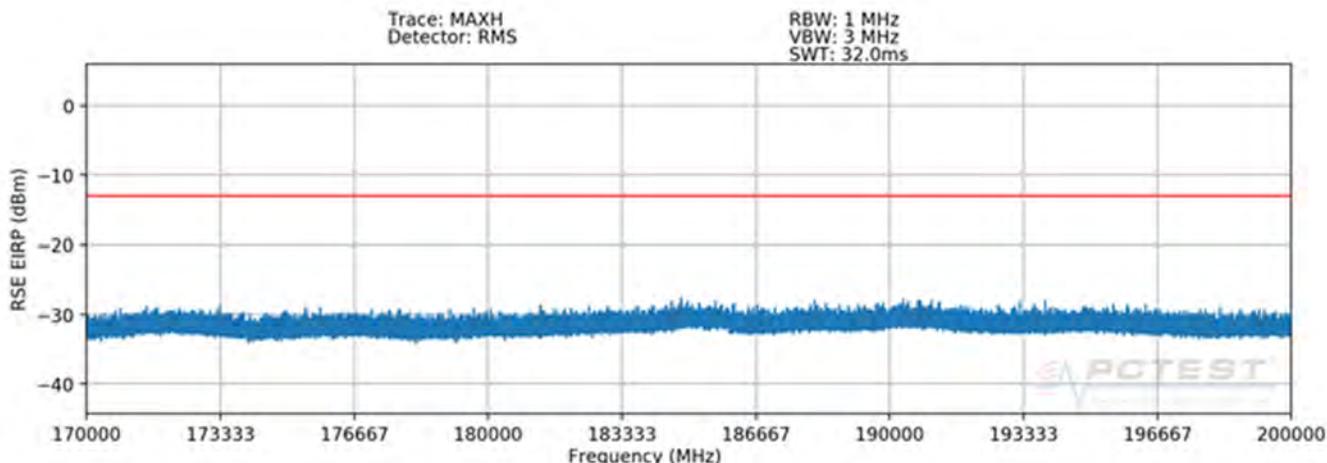
1. The RSE EIRP level is taken directly from the spectrum analyzer which includes the appropriate antenna factors, cable losses, and harmonic mixer conversion losses. Measurements were performed at a distance of 1 meter.
2. To address compliance of MIMO RSE per KDB 662911 D01, the MIMO RSE EIRP is calculated by summing the worst case H Beam EIRP and V Beam EIRP in linear powers units then converted back to dBm:

$$\text{EIRP(H Beam)} + \text{EIRP(V Beam)} = \text{EIRP(MIMO)}$$

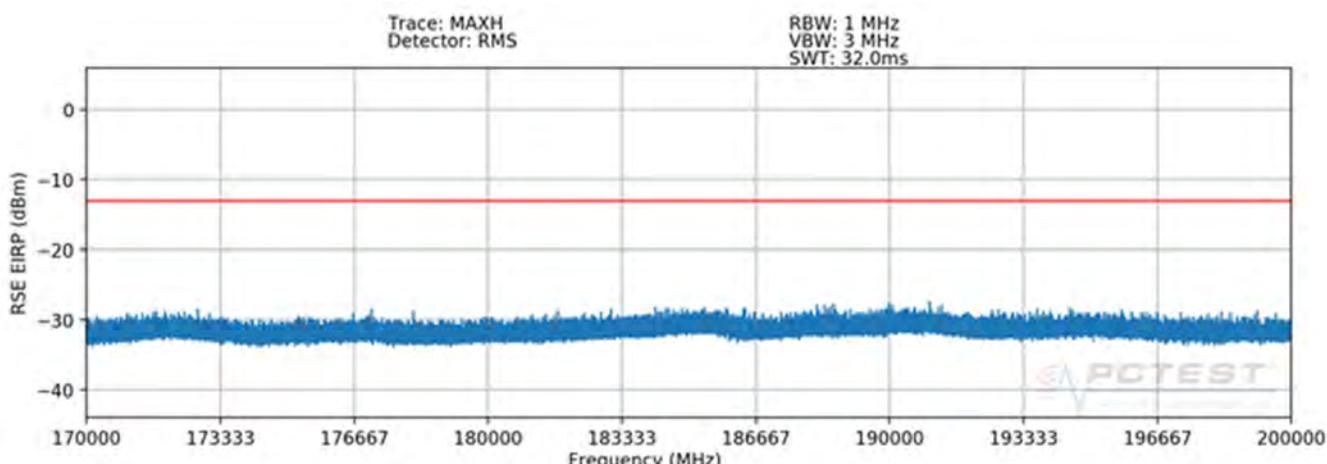
$$(-34.83 \text{ dBm} + -34.62 \text{ dBm}) = (328.93 \text{ nW} + 345.38 \text{ nW}) = (674.31 \text{ nW}) = -31.71 \text{ dBm}$$

FCC ID: A3LSMN976V		MEASUREMENT REPORT (CERTIFICATION)			Approved by: Quality Manager
Test Report S/N: 1M1905130071-06-R1.A3L	Test Dates: 05/14 - 07/12/2019	EUT Type: Portable Handset			Page 188 of 371

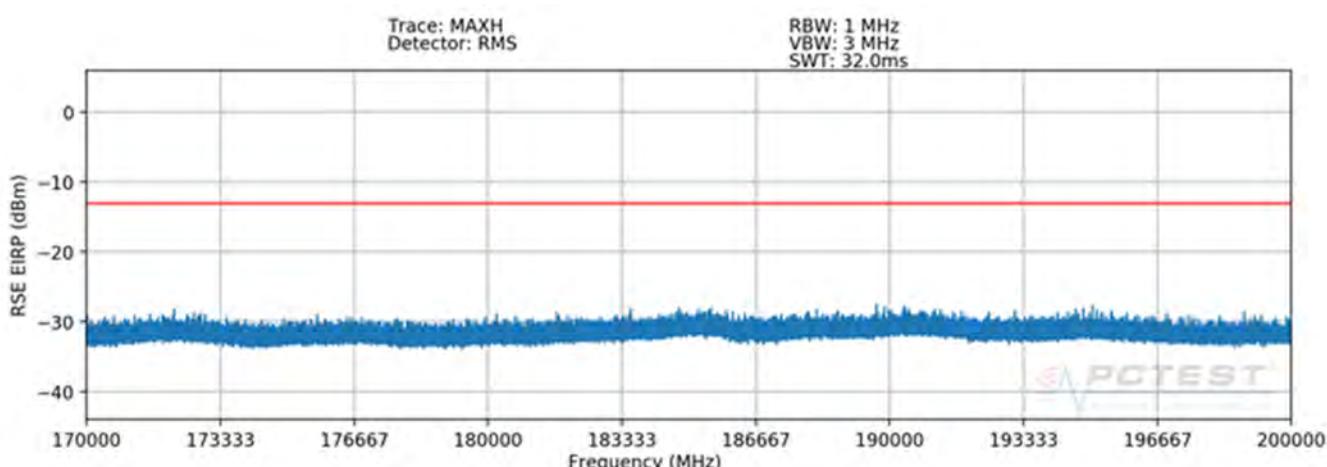
## 170 – 200GHz(n260)



Plot 7-307. J Patch Radiated Spurious Plot 170-200 GHz (1CC QPSK Low Channel H Beam – n260)

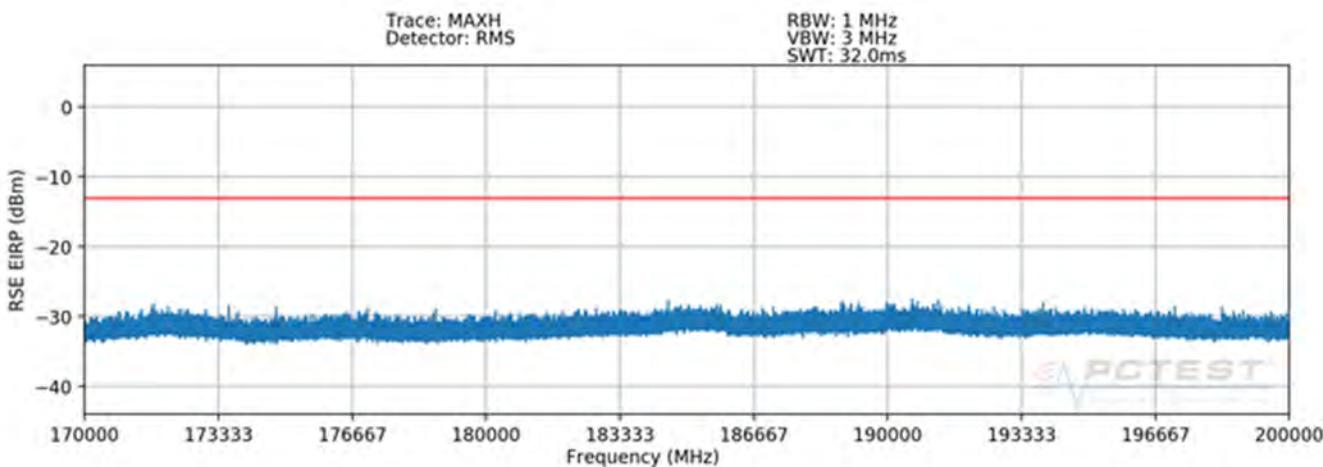


Plot 7-308. J Patch Radiated Spurious Plot 170-200 GHz (1CC QPSK Mid Channel H Beam – n260)

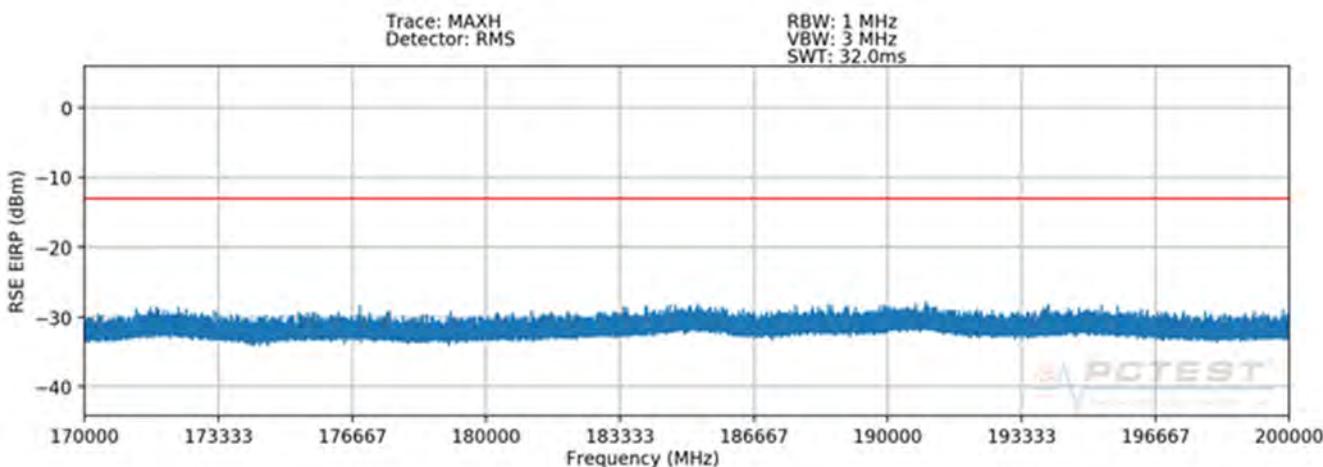


Plot 7-309. J Patch Radiated Spurious Plot 170-200 GHz (1CC QPSK High Channel H Beam – n260)

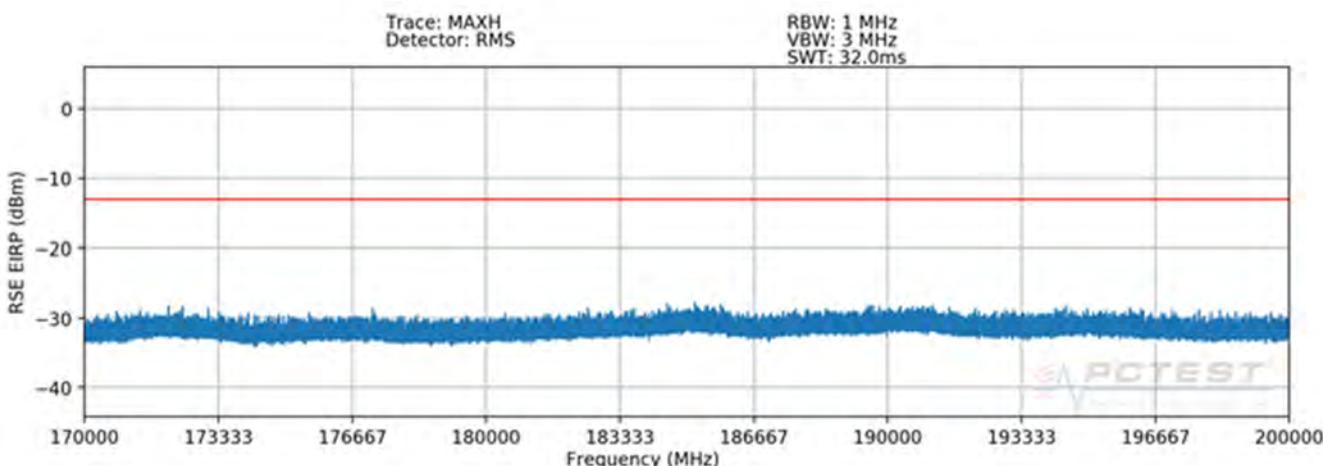
FCC ID: A3LSMN976V		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1905130071-06-R1.A3L	Test Dates: 05/14 - 07/12/2019	EUT Type: Portable Handset		Page 189 of 371



Plot 7-310. J Patch Radiated Spurious Plot 170-200 GHz (1CC QPSK Low Channel V Beam – n260)



Plot 7-311. J Patch Radiated Spurious Plot 170-200 GHz (1CC QPSK Mid Channel V Beam – n260)



Plot 7-312. J Patch Radiated Spurious Plot 170-200 GHz (1CC QPSK High Channel V Beam – n260)

FCC ID: A3LSMN976V	<b>PCTEST</b> ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1905130071-06-R1.A3L	Test Dates: 05/14 - 07/12/2019	EUT Type: Portable Handset		Page 190 of 371

## Spurious Emissions EIRP Sample Calculation(n260)

The raw radiated spurious level is converted to field strength in  $\text{dB}\mu\text{V}/\text{m}$ . Then, the RSE EIRP level is calculated by applying the additional factors shown below for a test distance of 1 meter.

**RSE EIRP [dBm]** = Analyzer Level [dBm] + 107 + AFCL[dB/m] + 20Log(Dm) + Harmonic Mixer Loss (dB) – 104.8

Frequency [MHz]	Detector/Trace	Chan.	Bandwidth (MHz)	Mod.	EUT Beam Polarization	Ant. Pos [H/V]	Turn Table Azimuth [degree]	Positioner Azimuth [degree]	RSE EIRP [dBm]	Limit [dBm]	Margin [dB]
190813.00	RMS/Avg	Low	50	QPSK	H	H	-	-	-35.18	-13.00	-22.18
190922.50	RMS/Avg	Mid	50	QPSK	H	H	-	-	-35.05	-13.00	-22.05
190464.50	RMS/Avg	High	50	QPSK	H	H	-	-	-35.27	-13.00	-22.27
184950.50	RMS/Avg	Low	50	QPSK	V	V	-	-	-35.16	-13.00	-22.16
191083.50	RMS/Avg	Mid	50	QPSK	V	V	-	-	-35.24	-13.00	-22.24
190901.00	RMS/Avg	High	50	QPSK	V	V	-	-	-35.55	-13.00	-22.55

**Table 7-58. J Patch Spurious Emissions Table (170-200GHz – n260)**

### Notes

1. The RSE EIRP level is taken directly from the spectrum analyzer which includes the appropriate antenna factors, cable losses, and harmonic mixer conversion losses. Measurements were performed at a distance of 1 meter.
2. To address compliance of MIMO RSE per KDB 662911 D01, the MIMO RSE EIRP is calculated by summing the worst case H Beam EIRP and V Beam EIRP in linear powers units then converted back to dBm:

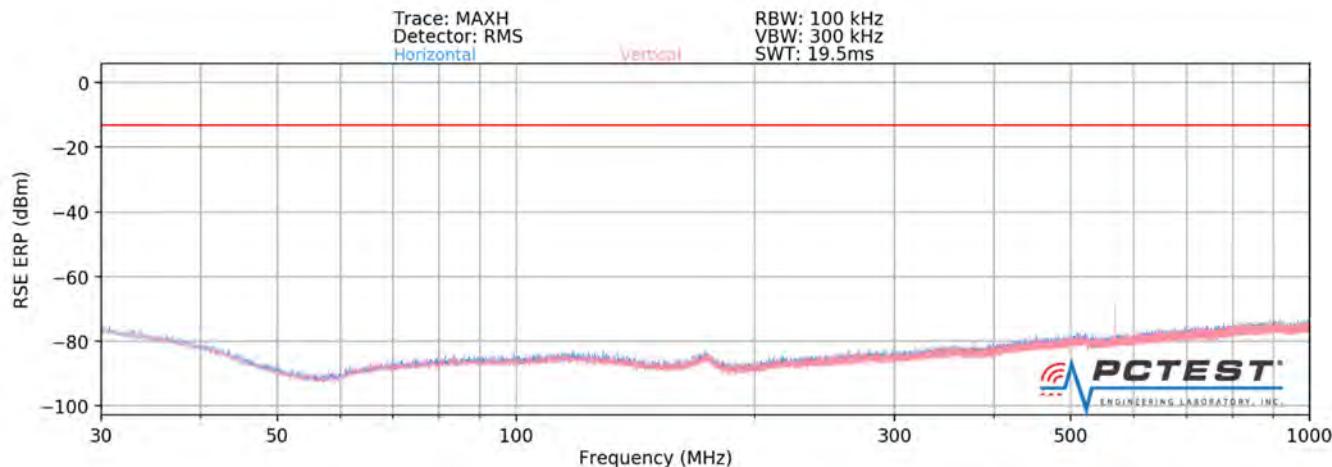
$$\text{EIRP(H Beam)} + \text{EIRP(V Beam)} = \text{EIRP(MIMO)}$$

$$(-35.05 \text{ dBm} + -35.24 \text{ dBm}) = (312.68 \text{ nW} + 299.43 \text{ nW}) = (612.11 \text{ nW}) = -32.13 \text{ dBm}$$

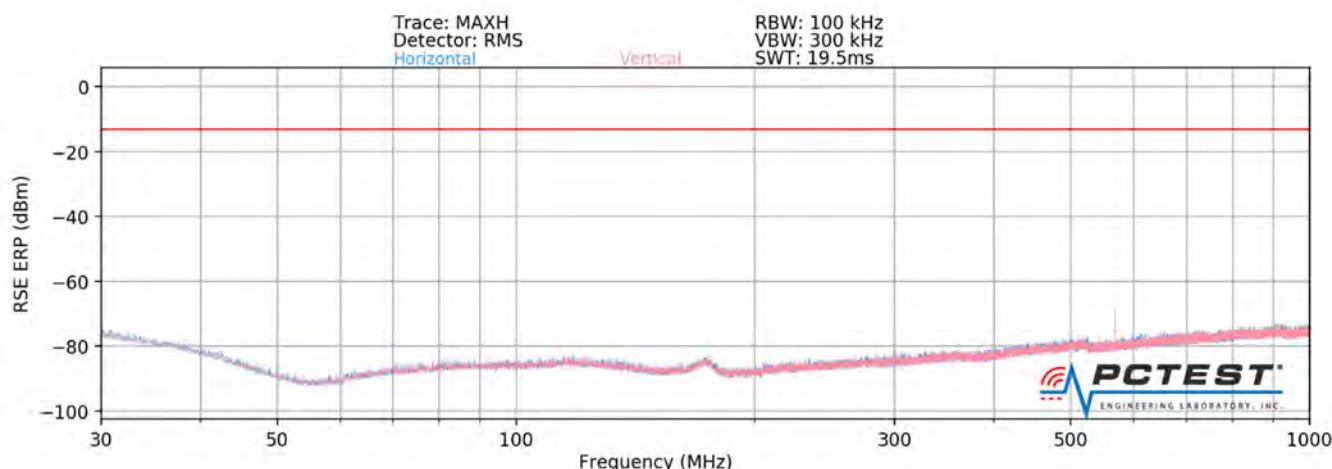
FCC ID: A3LSMN976V		MEASUREMENT REPORT (CERTIFICATION)				Approved by: Quality Manager
Test Report S/N: 1M1905130071-06-R1.A3L	Test Dates: 05/14 - 07/12/2019	EUT Type: Portable Handset			Page 191 of 371	

## K Patch Radiated Spurious Emissions(n260)

### 30MHz – 1GHz(n260)



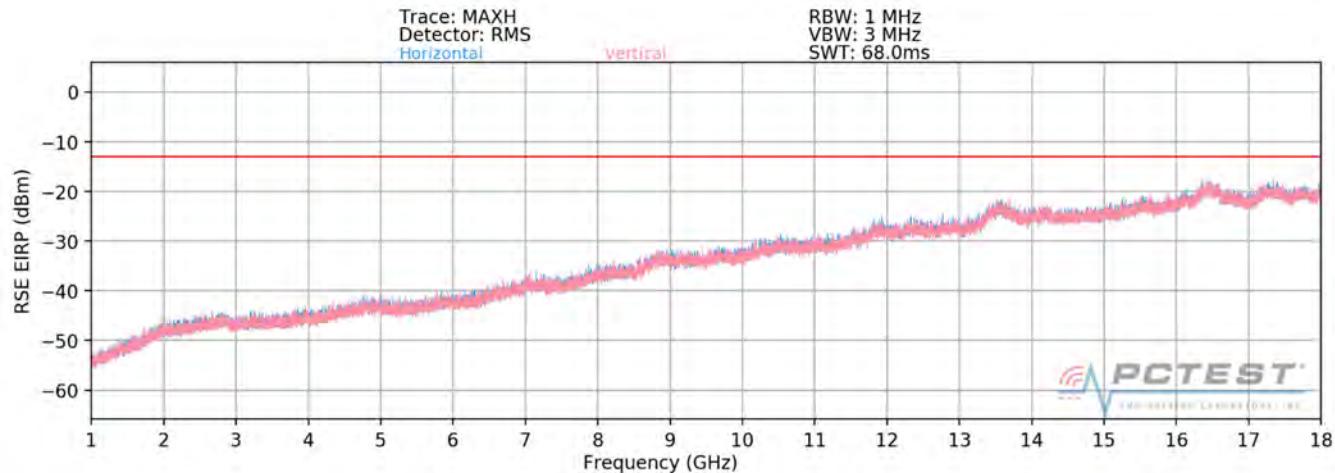
Plot 7-313. K Patch Radiated Spurious Plot 30 MHz - 1 GHz (1CC QPSK Mid Channel H Beam – n260)



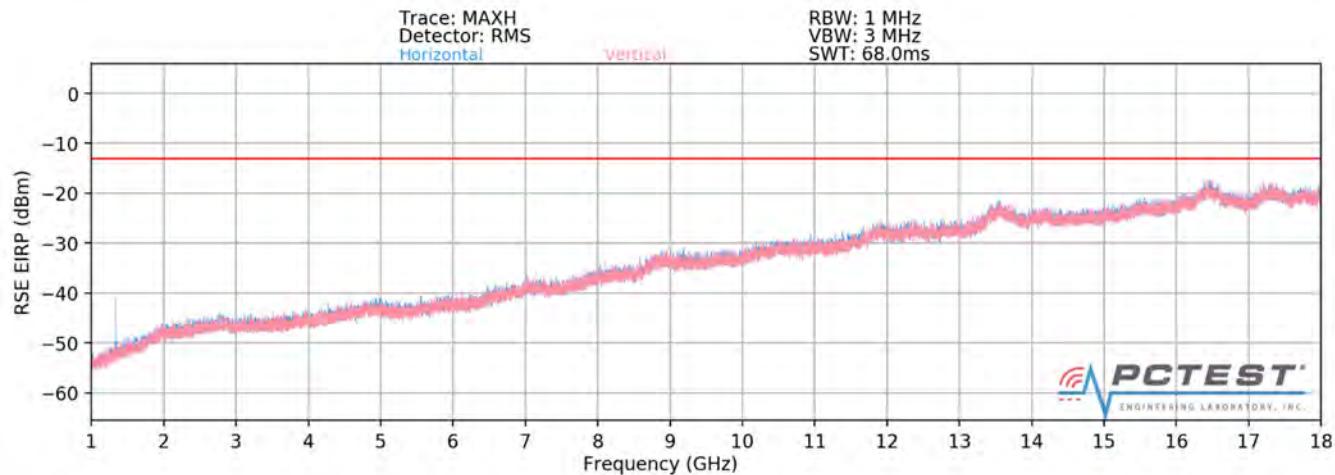
Plot 7-314. K Patch Radiated Spurious Plot 30 MHz - 1 GHz (1CC QPSK Mid Channel V Beam – n260)

FCC ID: A3LSMN976V		MEASUREMENT REPORT (CERTIFICATION)			Approved by: Quality Manager
Test Report S/N: 1M1905130071-06-R1.A3L	Test Dates: 05/14 - 07/12/2019	EUT Type: Portable Handset			Page 192 of 371

## 1 – 18GHz(n260)



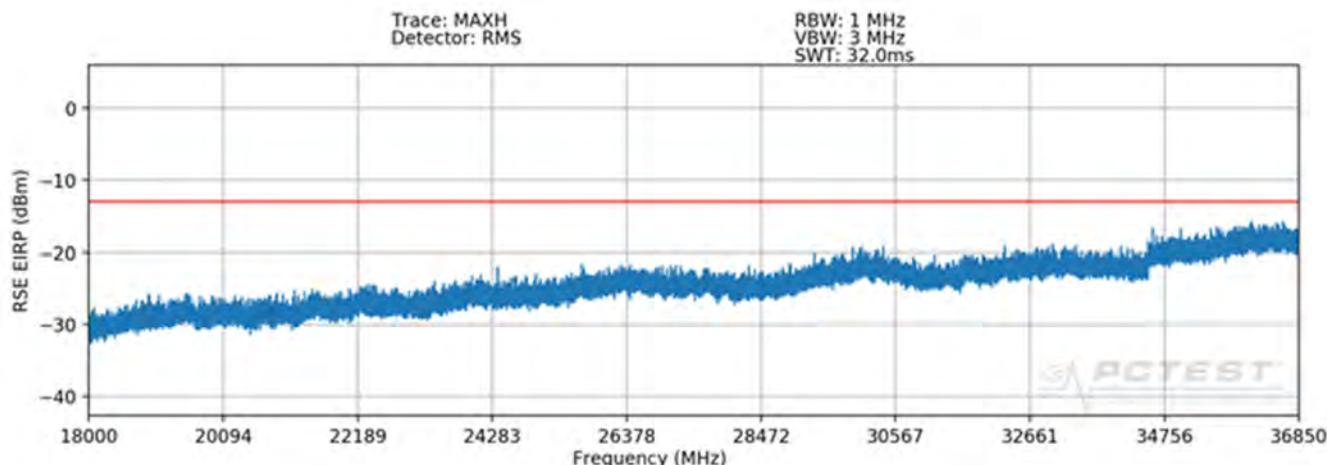
Plot 7-315. K Patch Radiated Spurious Plot 1-18 GHz (1CC QPSK Mid Channel H Beam – n260)



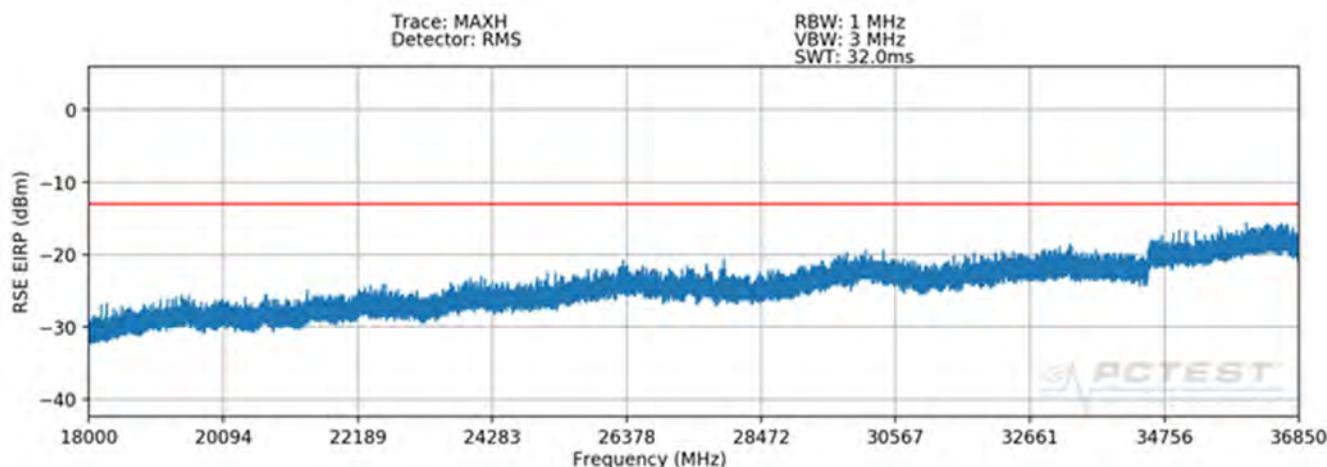
Plot 7-316. K Patch Radiated Spurious Plot 1-18 GHz (1CC QPSK Mid Channel V Beam – n260)

FCC ID: A3LSMN976V		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1905130071-06-R1.A3L	Test Dates: 05/14 - 07/12/2019	EUT Type: Portable Handset		Page 193 of 371

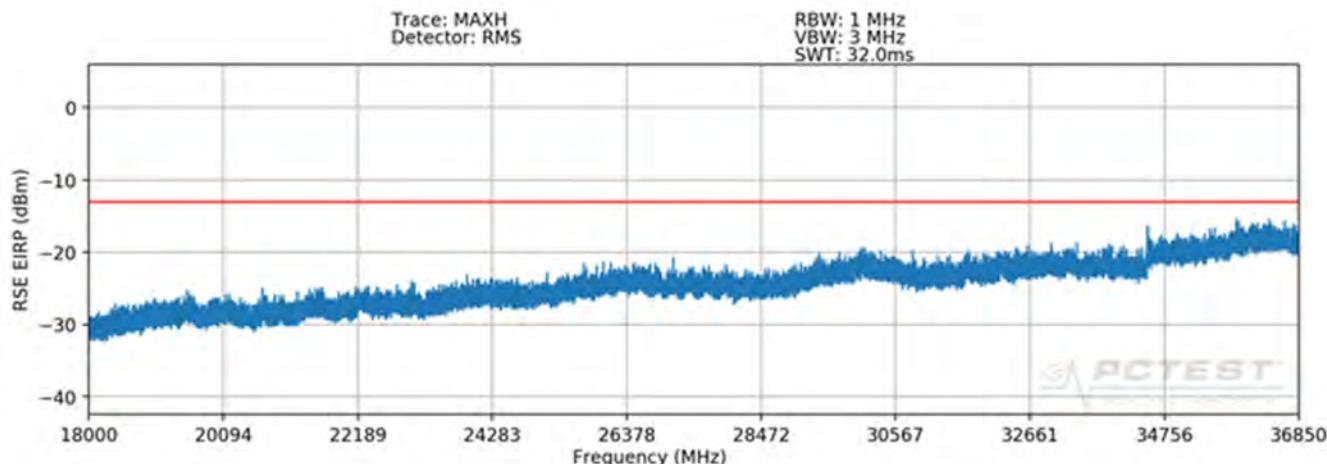
## 18 – 36.85GHz(n260)



Plot 7-317. K Patch Radiated Spurious Plot 18-36.85 GHz (1CC QPSK Low Channel H Beam – n260)

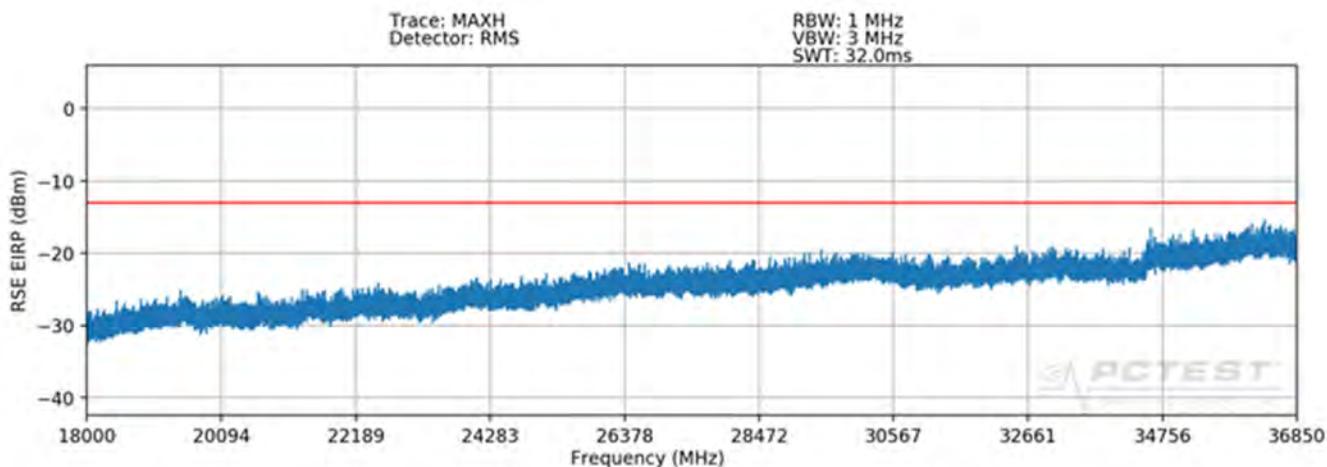


Plot 7-318. K Patch Radiated Spurious Plot 18-36.85 GHz (1CC QPSK Mid Channel H Beam – n260)

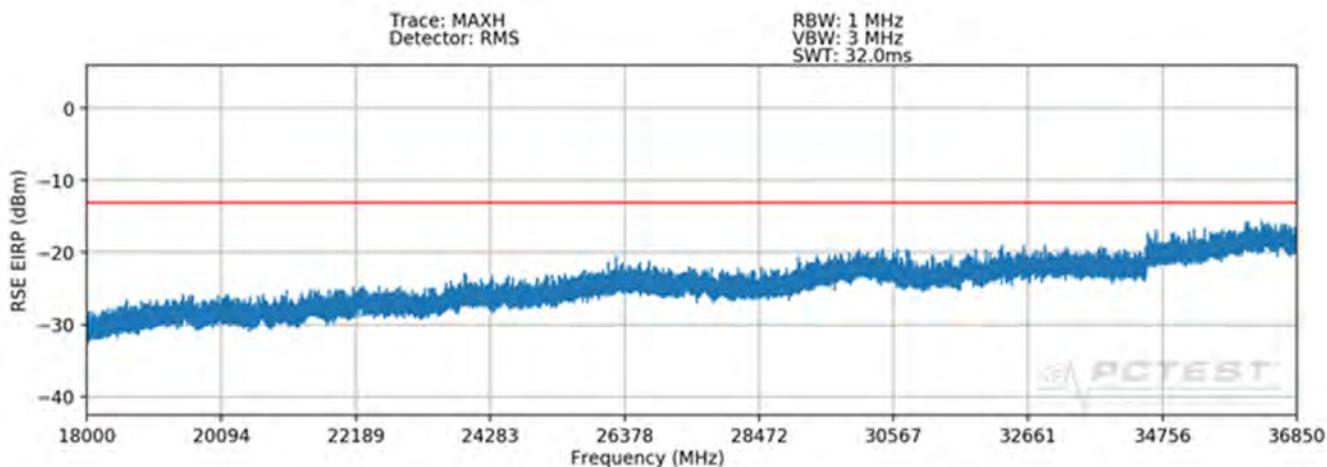


Plot 7-319. K Patch Radiated Spurious Plot 18-36.85 GHz (1CC QPSK High Channel H Beam – n260)

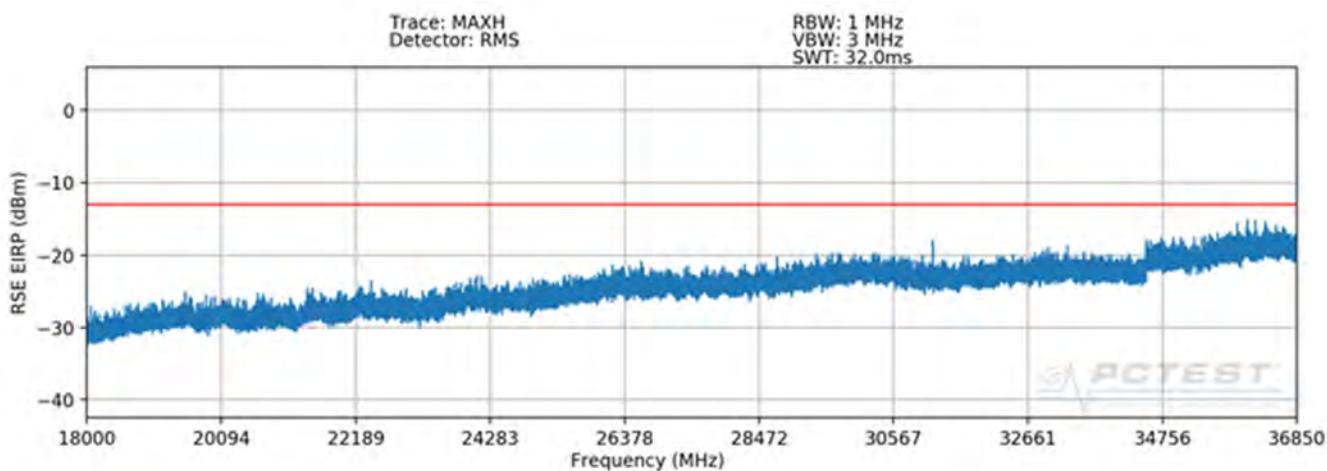
FCC ID: A3LSMN976V		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1905130071-06-R1.A3L	Test Dates: 05/14 - 07/12/2019	EUT Type: Portable Handset		Page 194 of 371



Plot 7-320. K Patch Radiated Spurious Plot 18-36.85 GHz (1CC QPSK Low Channel V Beam – n260)



Plot 7-321. K Patch Radiated Spurious Plot 18-36.85 GHz (1CC QPSK Mid Channel V Beam – n260)



Plot 7-322. K Patch Radiated Spurious Plot 18-36.85 GHz (1CC QPSK High Channel V Beam – n260)

FCC ID: A3LSMN976V	<b>PCTEST</b> ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1905130071-06-R1.A3L	Test Dates: 05/14 - 07/12/2019	EUT Type: Portable Handset		Page 195 of 371

## Spurious Emissions EIRP Sample Calculation(n260)

The raw radiated spurious level is converted to field strength in  $\text{dB}\mu\text{V}/\text{m}$ . Then, the RSE EIRP level is calculated by applying the additional factors shown below for a test distance of 1 meter.

$$\text{RSE EIRP [dBm]} = \text{Analyzer Level [dBm]} + 107 + \text{AFCL [dB/m]} + 20\text{Log}(\text{Dm}) - 104.8$$

Frequency [MHz]	Detector/Trace	Chan.	Bandwidth (MHz)	Mod.	EUT Beam Polarization	Ant. Pos [H/V]	Turn Table Azimuth [degree]	Positioner Azimuth [degree]	RSE EIRP [dBm]	Limit [dBm]	Margin [dB]
34517.50	RMS/Avg	Low	50	QPSK	H	H	138	326	-32.53	-13.00	-19.53
34762.00	RMS/Avg	Mid	50	QPSK	H	H	129	338	-32.28	-13.00	-19.28
31180.50	RMS/Avg	High	50	QPSK	H	H	89	350	-30.56	-13.00	-17.56
36763.00	RMS/Avg	Low	50	QPSK	V	V	349	3	-32.85	-13.00	-19.85
29577.50	RMS/Avg	Mid	50	QPSK	V	V	351	355	-30.60	-13.00	-17.60
31180.50	RMS/Avg	High	50	QPSK	V	V	350	1	-20.04	-13.00	-7.04

Table 7-59. K Patch Spurious Emissions Table (18-36.85GHz – n260)

### Notes

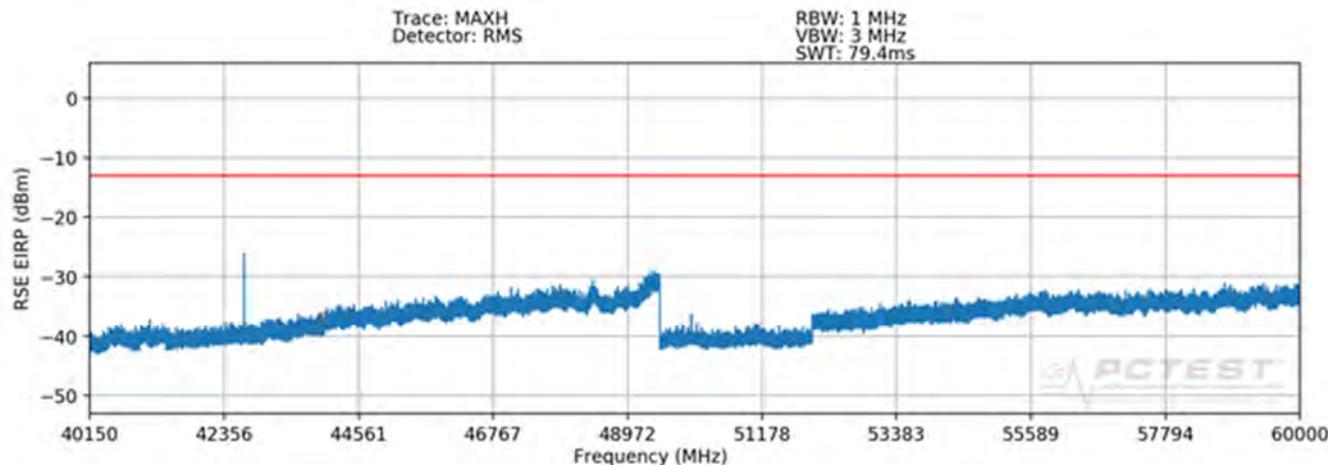
1. The RSE EIRP level is taken directly from the spectrum analyzer which includes the appropriate antenna factors, cable losses, and harmonic mixer conversion losses. Measurements were performed at a distance of 1 meter.
2. To address compliance of MIMO RSE per KDB 662911 D01, the MIMO RSE EIRP is calculated by summing the worst case H Beam EIRP and V Beam EIRP in linear powers units then converted back to dBm:

$$\text{EIRP(H Beam)} + \text{EIRP(V Beam)} = \text{EIRP(MIMO)}$$

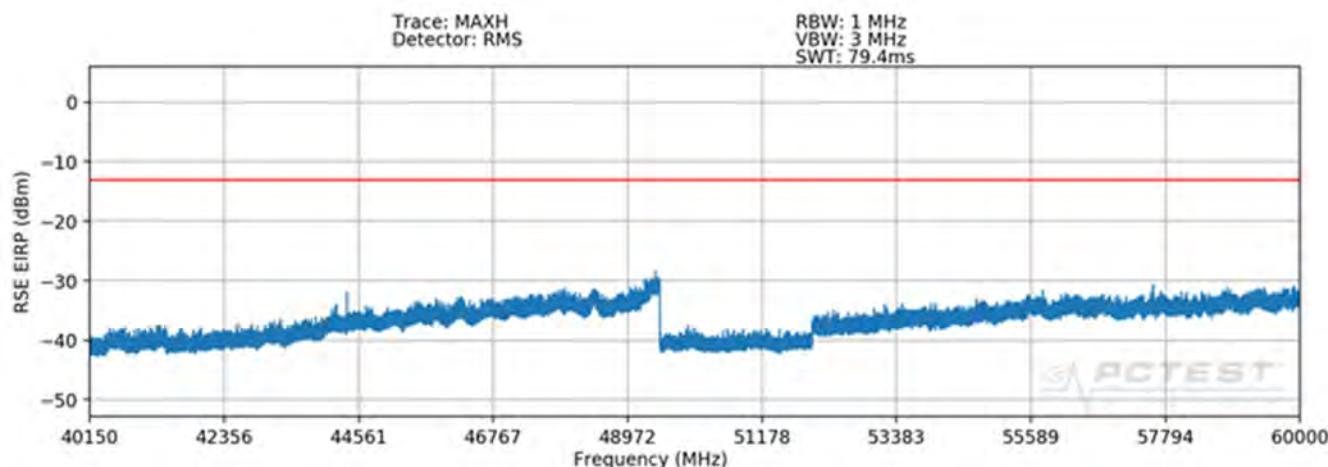
$$(-30.56 \text{ dBm} + -20.04 \text{ dBm}) = (0.88 \mu\text{W} + 9.92 \mu\text{W}) = (10.80 \mu\text{W}) = -19.67 \text{ dBm}$$

FCC ID: A3LSMN976V		MEASUREMENT REPORT (CERTIFICATION)				Approved by: Quality Manager
Test Report S/N: 1M1905130071-06-R1.A3L	Test Dates: 05/14 - 07/12/2019	EUT Type: Portable Handset				Page 196 of 371

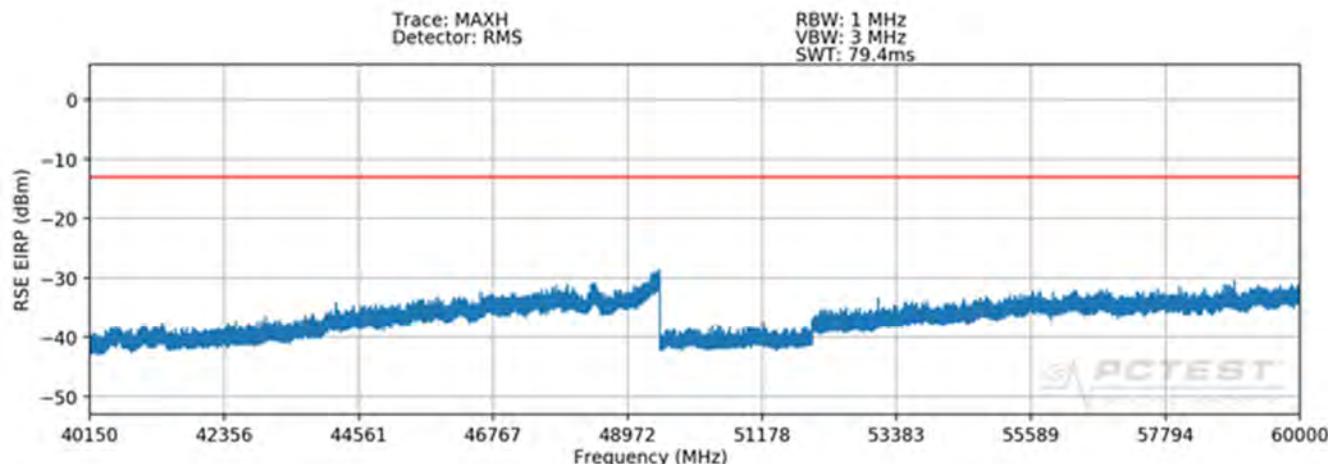
## 40.15 – 60GHz(n260)



Plot 7-323. K Patch Radiated Spurious Plot 40.15-60 GHz (1CC QPSK Low Channel H Beam – n260)

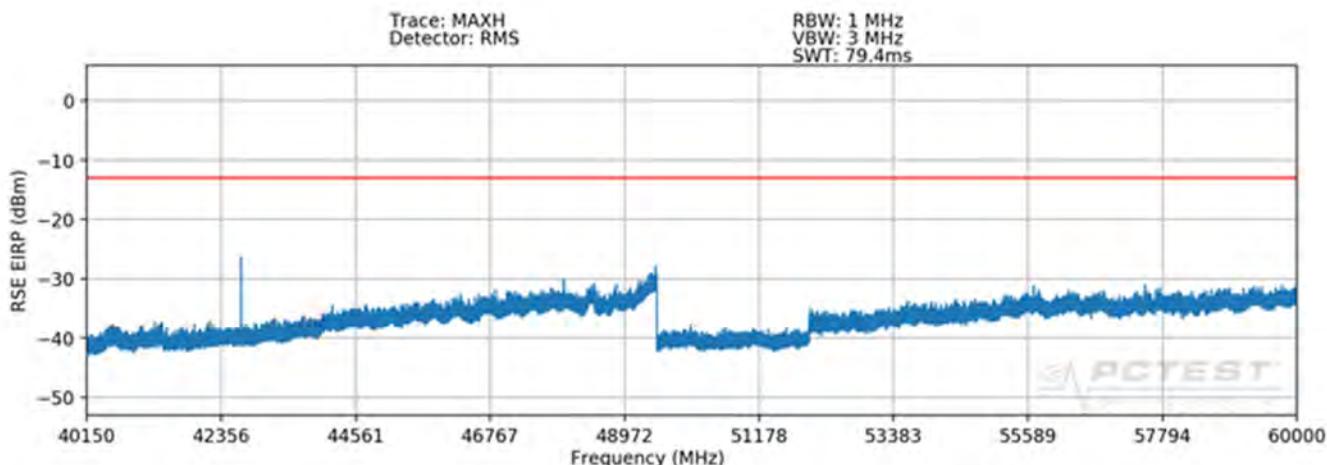


Plot 7-324. K Patch Radiated Spurious Plot 40.15-60 GHz (1CC QPSK Mid Channel H Beam – n260)

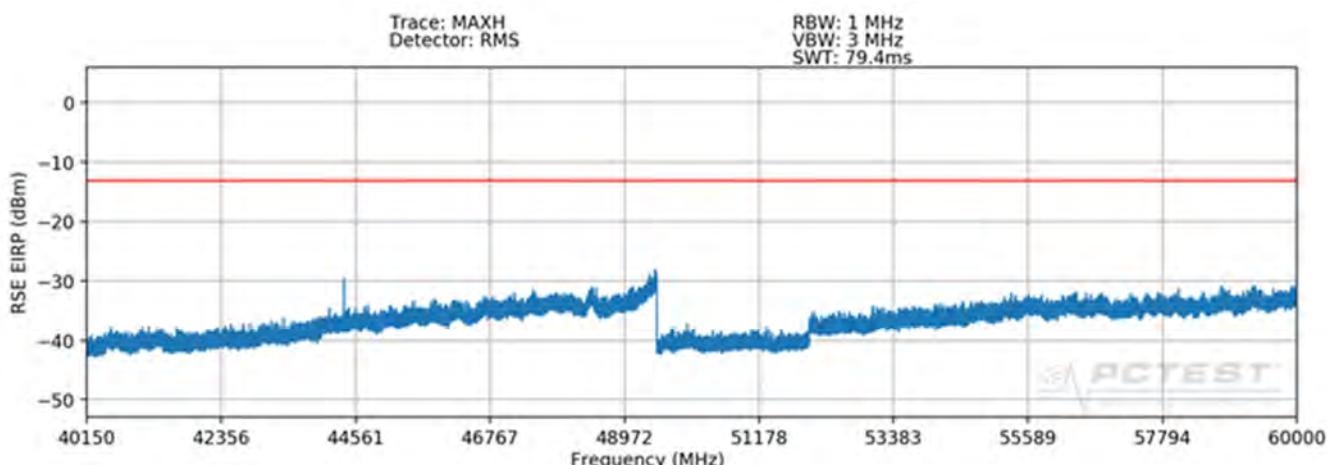


Plot 7-325. K Patch Radiated Spurious Plot 40.15-60 GHz (1CC QPSK High Channel H Beam – n260)

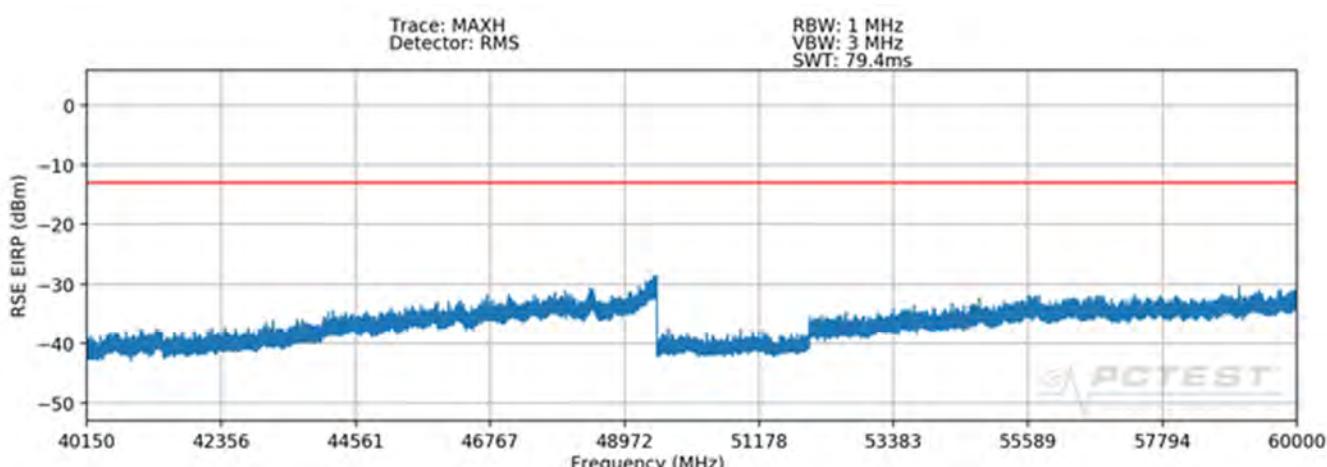
FCC ID: A3LSMN976V	 MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1905130071-06-R1.A3L	Test Dates: 05/14 - 07/12/2019	EUT Type: Portable Handset	Page 197 of 371



Plot 7-326. K Patch Radiated Spurious Plot 40.15-60 GHz (1CC QPSK Low Channel V Beam – n260)



Plot 7-327. K Patch Radiated Spurious Plot 40.15-60 GHz (1CC QPSK Mid Channel V Beam – n260)



Plot 7-328. K Patch Radiated Spurious Plot 40.15-60 GHz (1CC QPSK High Channel V Beam – n260)

FCC ID: A3LSMN976V	<b>PCTEST</b> ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1905130071-06-R1.A3L	Test Dates: 05/14 - 07/12/2019	EUT Type: Portable Handset		Page 198 of 371

## Spurious Emissions EIRP Sample Calculation(n260)

The raw radiated spurious level is converted to field strength in  $\text{dB}\mu\text{V/m}$ . Then, the RSE EIRP level is calculated by applying the additional factors shown below for a test distance of 1.5 meter.

$$\text{RSE EIRP [dBm]} = \text{Analyzer Level [dBm]} + 107 + \text{AFCL [dB/m]} + 20\text{Log}(\text{Dm}) - 104.8$$

Frequency [MHz]	Detector/Trace	Chan.	Bandwidth (MHz)	Mod.	EUT Beam Polarization	Ant. Pos [H/V]	Turn Table Azimuth [degree]	Positioner Azimuth [degree]	RSE EIRP [dBm]	Limit [dBm]	Margin [dB]
42681.45	RMS/Avg	Low	50	QPSK	H	H	86	346	-26.73	-13.00	-13.73
44366.32	RMS/Avg	Mid	50	QPSK	H	H	80	327	-33.01	-13.00	-20.01
46771.12	RMS/Avg	High	50	QPSK	H	H	134	312	-40.05	-13.00	-27.05
42681.47	RMS/Avg	Low	50	QPSK	V	V	20	15	-26.96	-13.00	-13.96
44366.46	RMS/Avg	Mid	50	QPSK	V	V	14	338	-33.83	-13.00	-20.83
46771.08	RMS/Avg	High	50	QPSK	V	V	24	355	-37.40	-13.00	-24.40

Table 7-60. K Patch Spurious Emissions Table (40.15-60 GHz – n260)

### Notes

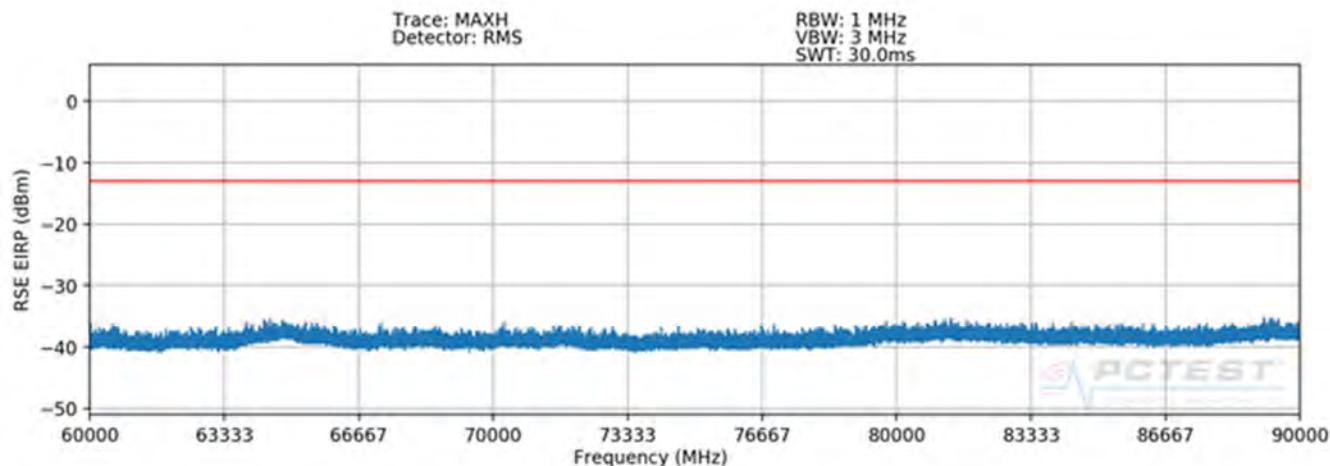
1. The RSE EIRP level is taken directly from the spectrum analyzer which includes the appropriate antenna factors, cable losses, and harmonic mixer conversion losses. Measurements were performed at a distance of 1.5 meter.
2. To address compliance of MIMO RSE per KDB 662911 D01, the MIMO RSE EIRP is calculated by summing the worst case H Beam EIRP and V Beam EIRP in linear powers units then converted back to dBm:

$$\text{EIRP(H Beam)} + \text{EIRP(V Beam)} = \text{EIRP(MIMO)}$$

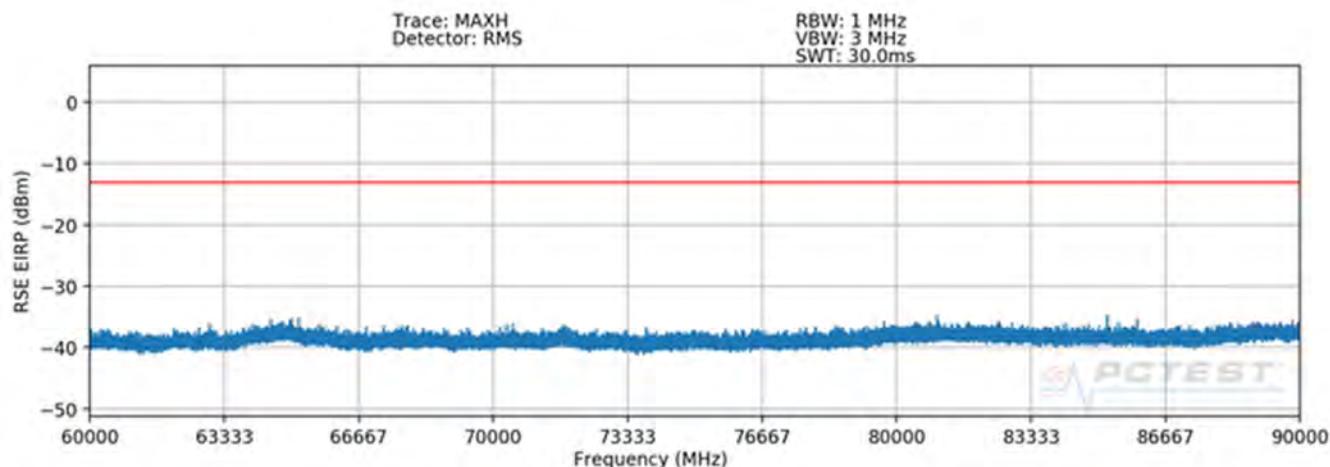
$$(-26.73 \text{ dBm} + -26.96 \text{ dBm}) = (2.12 \mu\text{W} + 2.01 \mu\text{W}) = (4.13 \mu\text{W}) = -23.83 \text{ dBm}$$

FCC ID: A3LSMN976V		MEASUREMENT REPORT (CERTIFICATION)				Approved by: Quality Manager
Test Report S/N: 1M1905130071-06-R1.A3L	Test Dates: 05/14 - 07/12/2019	EUT Type: Portable Handset				Page 199 of 371

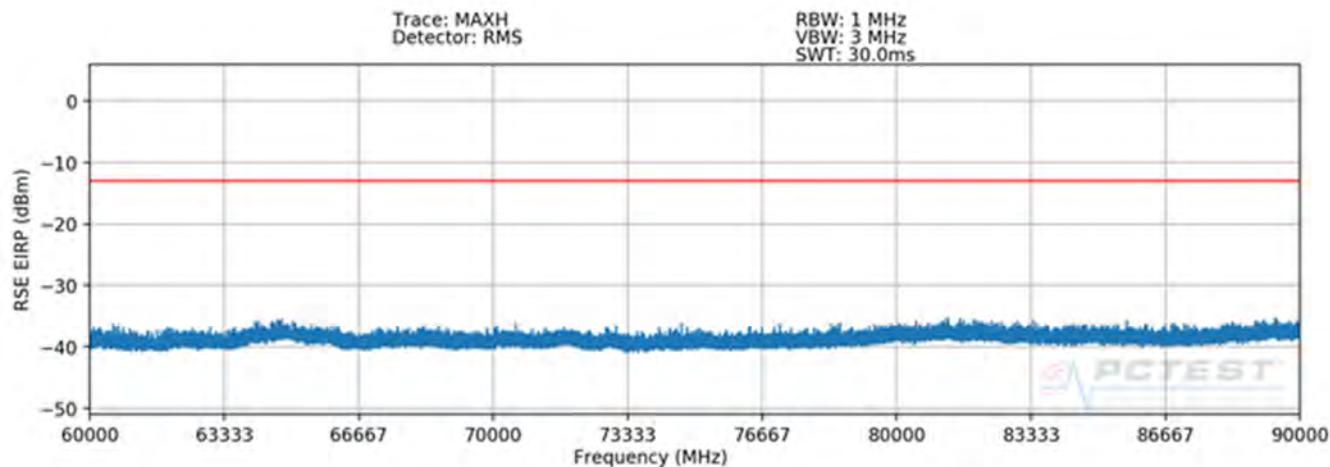
## 60 – 90GHz(n260)



Plot 7-329. K Patch Radiated Spurious Plot 60-90 GHz (1CC QPSK Low Channel H Beam – n260)

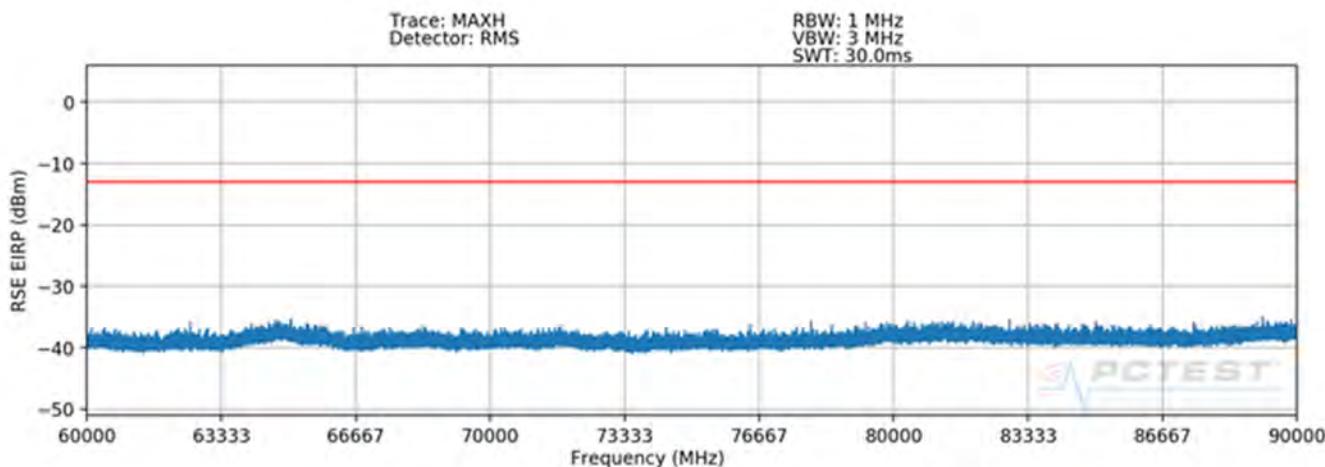


Plot 7-330. K Patch Radiated Spurious Plot 60-90 GHz (1CC QPSK Mid Channel H Beam – n260)

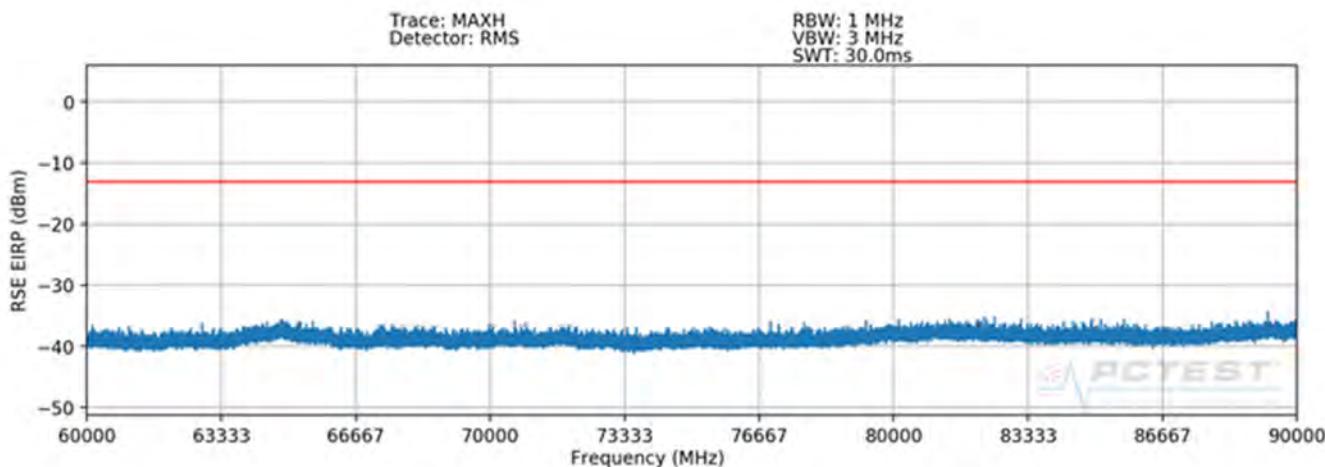


Plot 7-331. K Patch Radiated Spurious Plot 60-90 GHz (1CC QPSK High Channel H Beam – n260)

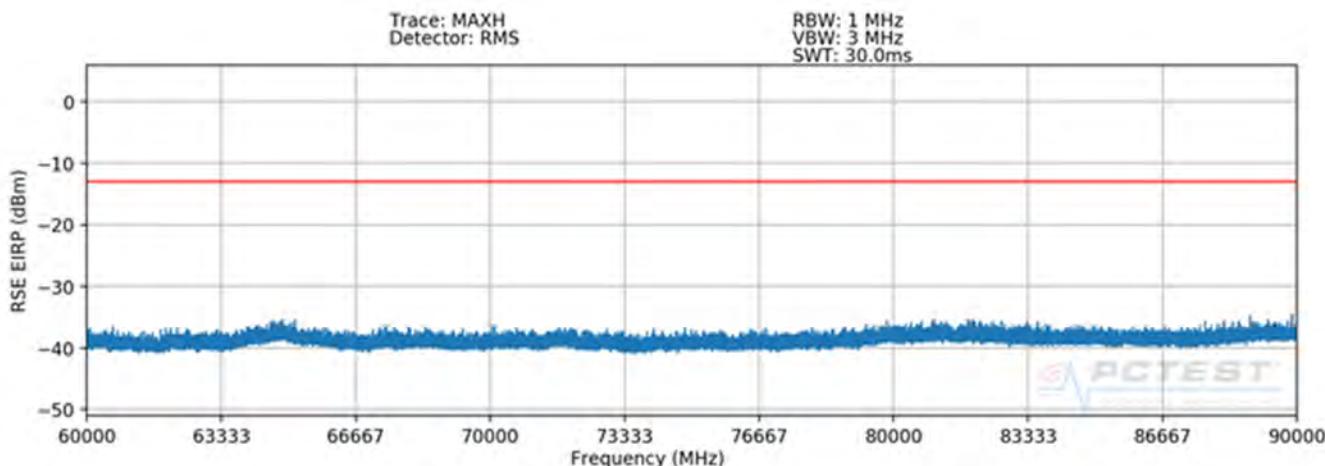
FCC ID: A3LSMN976V		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1905130071-06-R1.A3L	Test Dates: 05/14 - 07/12/2019	EUT Type: Portable Handset		Page 200 of 371



Plot 7-332. K Patch Radiated Spurious Plot 60-90 GHz (1CC QPSK Low Channel V Beam – n260)



Plot 7-333. K Patch Radiated Spurious Plot 60-90 GHz (1CC QPSK Mid Channel V Beam – n260)



Plot 7-334. K Patch Radiated Spurious Plot 60-90 GHz (1CC QPSK High Channel V Beam – n260)

FCC ID: A3LSMN976V		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1905130071-06-R1.A3L	Test Dates: 05/14 - 07/12/2019	EUT Type: Portable Handset		Page 201 of 371

## Spurious Emissions EIRP Sample Calculation(n260)

The raw radiated spurious level is converted to field strength in  $\text{dB}\mu\text{V}/\text{m}$ . Then, the RSE EIRP level is calculated by applying the additional factors shown below for a test distance of 1 meter.

**RSE EIRP [dBm]** = Analyzer Level [dBm] + 107 + AFCL [dB/m] + 20Log(Dm) + Harmonic Mixer Loss (dB) – 104.8

Frequency [MHz]	Detector/Trace	Chan.	Bandwidth (MHz)	Mod.	EUT Beam Polarization	Ant. Pos [H/V]	Turn Table Azimuth [degree]	Positioner Azimuth [degree]	RSE EIRP [dBm]	Limit [dBm]	Margin [dB]
74006.50	RMS/Avg	Low	50	QPSK	H	H	118	318	-43.54	-13.00	-30.54
77591.50	RMS/Avg	Mid	50	QPSK	H	H	110	311	-42.09	-13.00	-29.09
79884.00	RMS/Avg	High	50	QPSK	H	H	128	326	-43.22	-13.00	-30.22
74006.00	RMS/Avg	Low	50	QPSK	V	V	32	350	-41.22	-13.00	-28.22
77591.50	RMS/Avg	Mid	50	QPSK	V	V	33	342	-40.93	-13.00	-27.93
79884.00	RMS/Avg	High	50	QPSK	V	V	37	355	-41.50	-13.00	-28.50

**Table 7-61. K Patch Spurious Emissions Table (60-90GHz – n260)**

### Notes

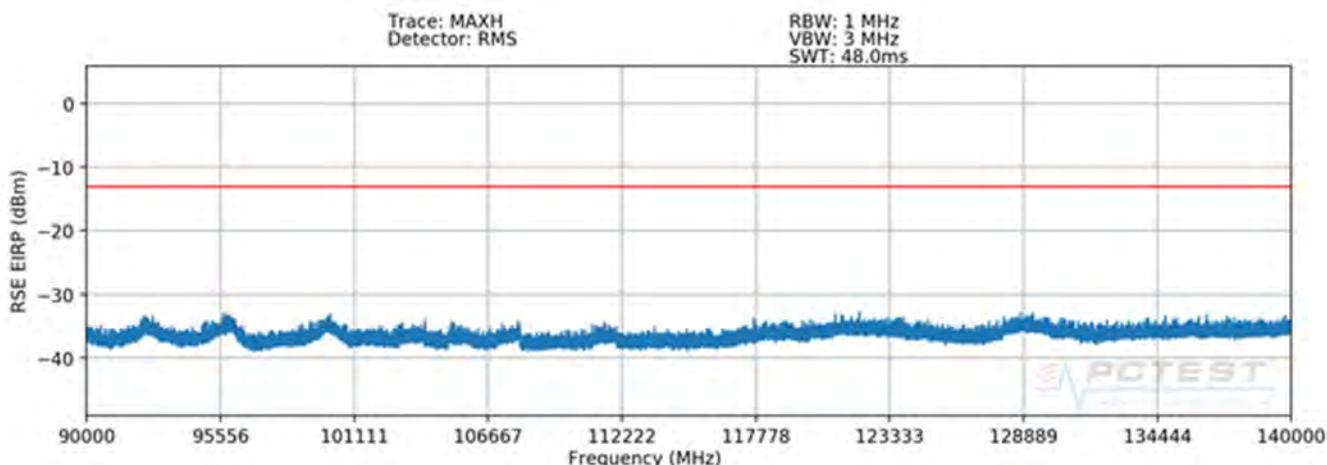
1. The RSE EIRP level is taken directly from the spectrum analyzer which includes the appropriate antenna factors, cable losses, and harmonic mixer conversion losses. Measurements were performed at a distance of 1 meter.
2. To address compliance of MIMO RSE per KDB 662911 D01, the MIMO RSE EIRP is calculated by summing the worst case H Beam EIRP and V Beam EIRP in linear powers units then converted back to dBm:

$$\text{EIRP(H Beam)} + \text{EIRP(V Beam)} = \text{EIRP(MIMO)}$$

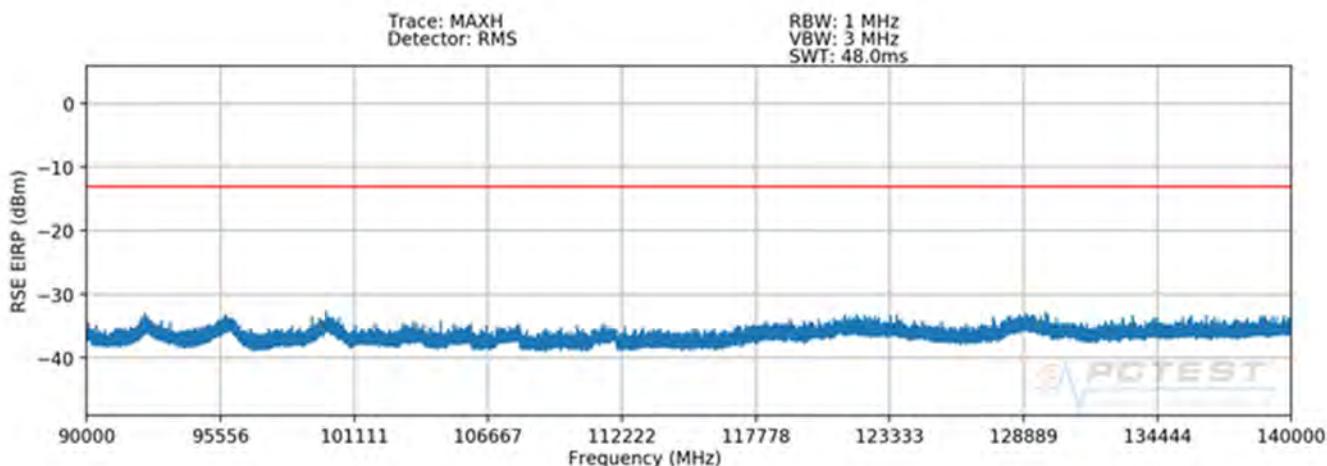
$$(-42.09 \text{ dBm} + -40.93 \text{ dBm}) = (61.83 \text{ nW} + 80.74 \text{ nW}) = (142.57 \text{ nW}) = -38.46 \text{ dBm}$$

FCC ID: A3LSMN976V		MEASUREMENT REPORT (CERTIFICATION)				Approved by: Quality Manager
Test Report S/N: 1M1905130071-06-R1.A3L	Test Dates: 05/14 - 07/12/2019	EUT Type: Portable Handset				Page 202 of 371

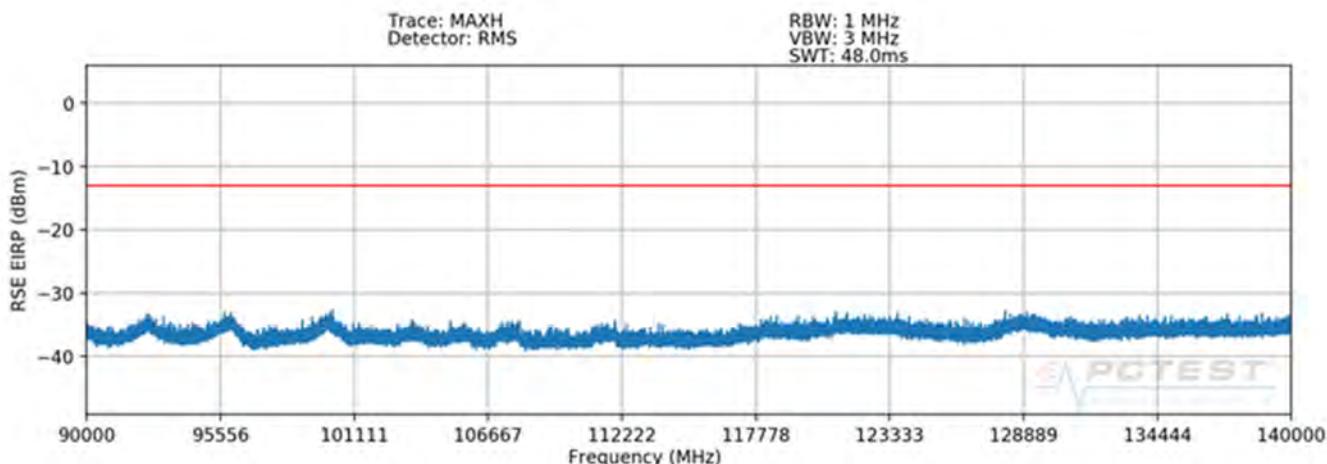
## 90 – 140GHz(n260)



Plot 7-335. K Patch Radiated Spurious Plot 90-140 GHz (1CC QPSK Low Channel H Beam – n260)

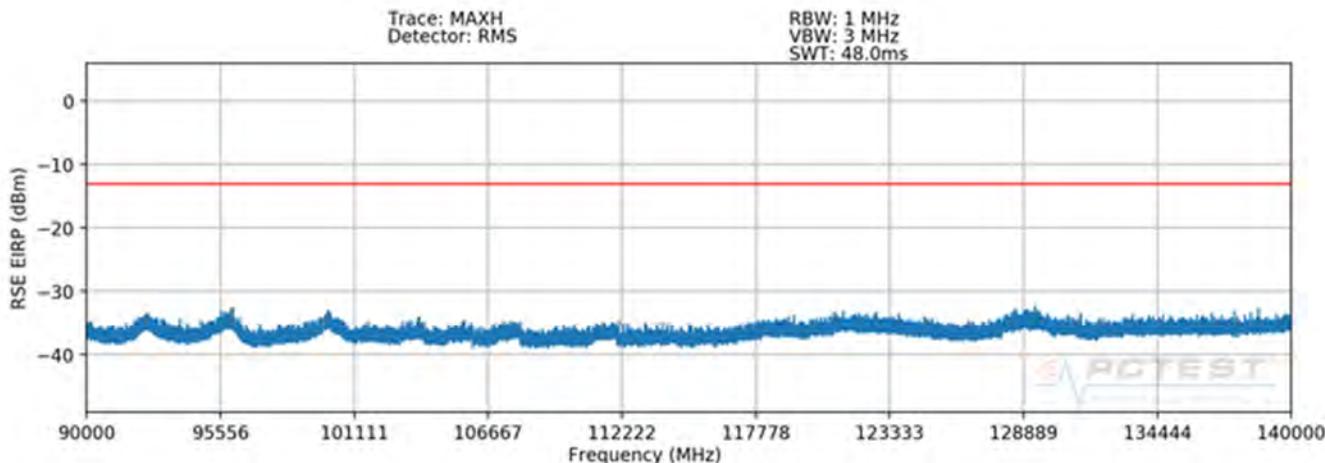


Plot 7-336. K Patch Radiated Spurious Plot 90-140 GHz (1CC QPSK Mid Channel H Beam – n260)

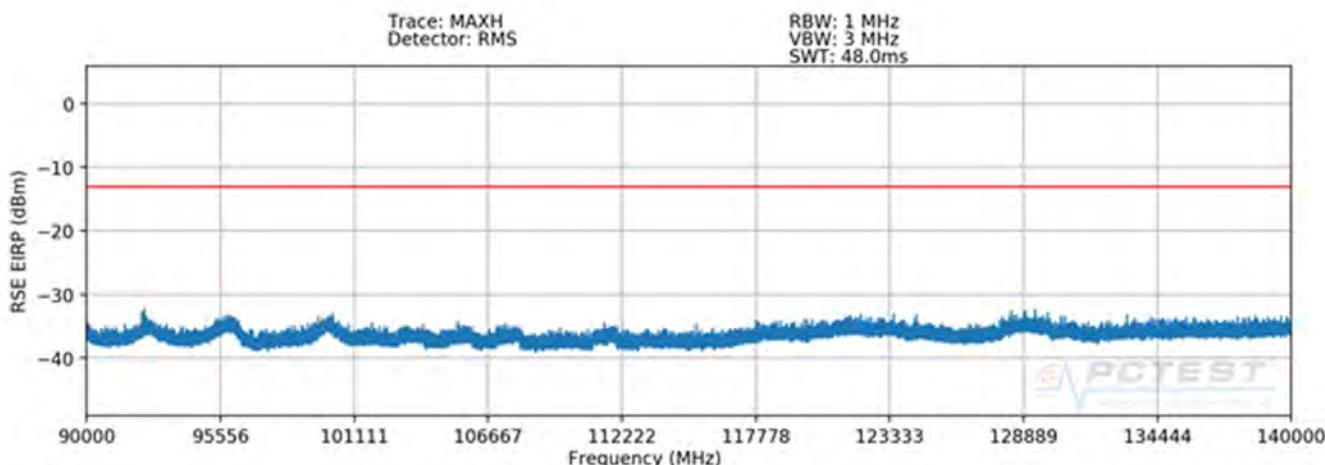


Plot 7-337. K Patch Radiated Spurious Plot 90-140 GHz (1CC QPSK High Channel H Beam – n260)

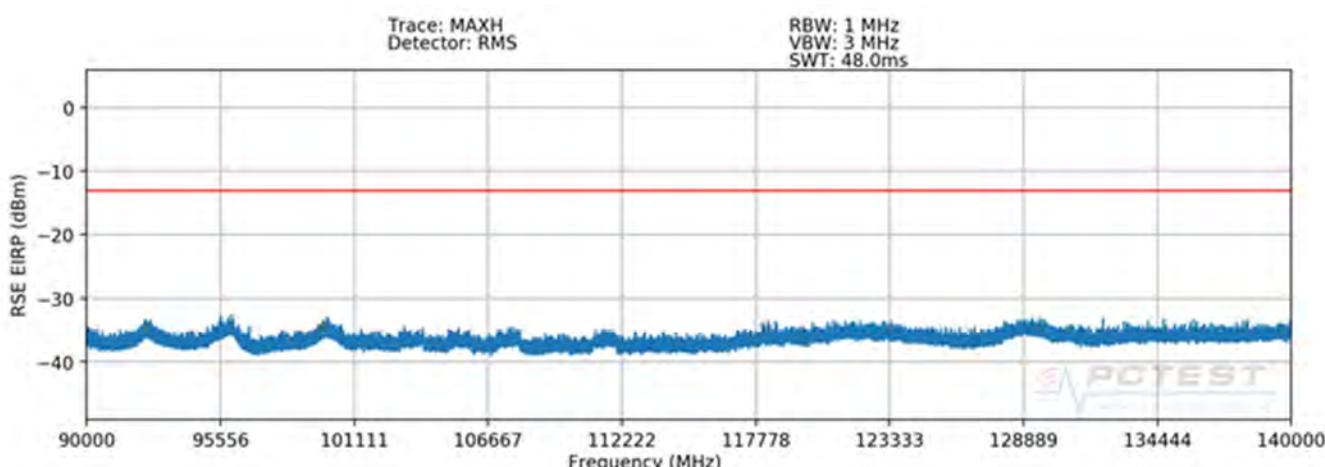
FCC ID: A3LSMN976V		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1905130071-06-R1.A3L	Test Dates: 05/14 - 07/12/2019	EUT Type: Portable Handset		Page 203 of 371



Plot 7-338. K Patch Radiated Spurious Plot 90-140 GHz (1CC QPSK Low Channel V Beam – n260)



Plot 7-339. K Patch Radiated Spurious Plot 90-140 GHz (1CC QPSK Mid Channel V Beam – n260)



Plot 7-340. K Patch Radiated Spurious Plot 90-140 GHz (1CC QPSK High Channel V Beam – n260)

FCC ID: A3LSMN976V		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1905130071-06-R1.A3L	Test Dates: 05/14 - 07/12/2019	EUT Type: Portable Handset		Page 204 of 371

## Spurious Emissions EIRP Sample Calculation(n260)

The raw radiated spurious level is converted to field strength in  $\text{dB}\mu\text{V}/\text{m}$ . Then, the RSE EIRP level is calculated by applying the additional factors shown below for a test distance of 1 meter.

**RSE EIRP [dBm]** = Analyzer Level [dBm] + 107 + AFCL[dB/m] + 20Log(Dm) + Harmonic Mixer Loss (dB) – 104.8

Frequency [MHz]	Detector/Trace	Chan.	Bandwidth (MHz)	Mod.	EUT Beam Polarization	Ant. Pos [H/V]	Turn Table Azimuth [degree]	Positioner Azimuth [degree]	RSE EIRP [dBm]	Limit [dBm]	Margin [dB]
128618.50	RMS/Avg	Low	50	QPSK	H	H	-	-	-39.61	-13.00	-26.61
95994.50	RMS/Avg	Mid	50	QPSK	H	H	-	-	-39.67	-13.00	-26.67
128583.00	RMS/Avg	High	50	QPSK	H	H	-	-	-39.93	-13.00	-26.93
96004.00	RMS/Avg	Low	50	QPSK	V	V	-	-	-39.83	-13.00	-26.83
128743.00	RMS/Avg	Mid	50	QPSK	V	V	-	-	-39.83	-13.00	-26.83
95995.50	RMS/Avg	High	50	QPSK	V	V	-	-	-39.67	-13.00	-26.67

**Table 7-62. K Patch Spurious Emissions Table (90-140GHz – n260)**

### Notes

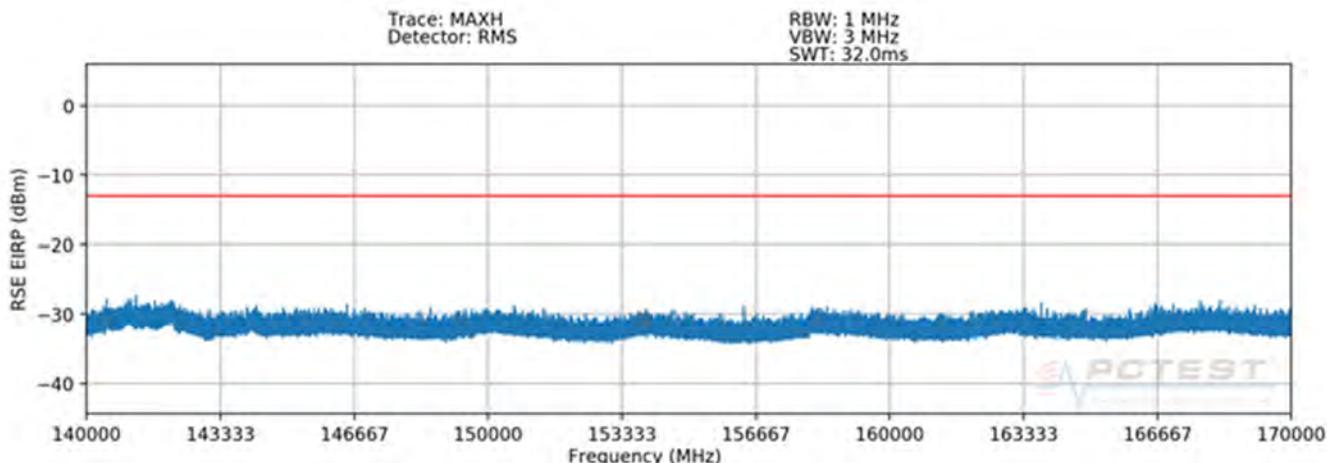
1. The RSE EIRP level is taken directly from the spectrum analyzer which includes the appropriate antenna factors, cable losses, and harmonic mixer conversion losses. Measurements were performed at a distance of 1 meter.
2. To address compliance of MIMO RSE per KDB 662911 D01, the MIMO RSE EIRP is calculated by summing the worst case H Beam EIRP and V Beam EIRP in linear powers units then converted back to dBm:

$$\text{EIRP(H Beam)} + \text{EIRP(V Beam)} = \text{EIRP(MIMO)}$$

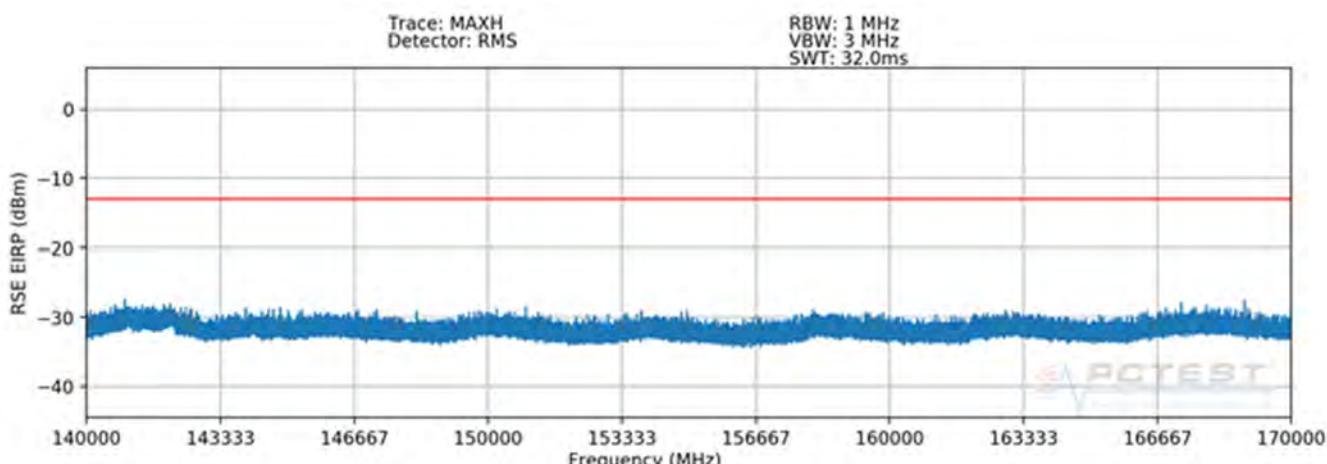
$$(-39.61 \text{ dBm} + -39.83 \text{ dBm}) = (109.40 \text{ nW} + 104.06 \text{ nW}) = (213.46 \text{ nW}) = -36.71 \text{ dBm}$$

FCC ID: A3LSMN976V		MEASUREMENT REPORT (CERTIFICATION)				Approved by: Quality Manager
Test Report S/N: 1M1905130071-06-R1.A3L	Test Dates: 05/14 - 07/12/2019	EUT Type: Portable Handset				Page 205 of 371

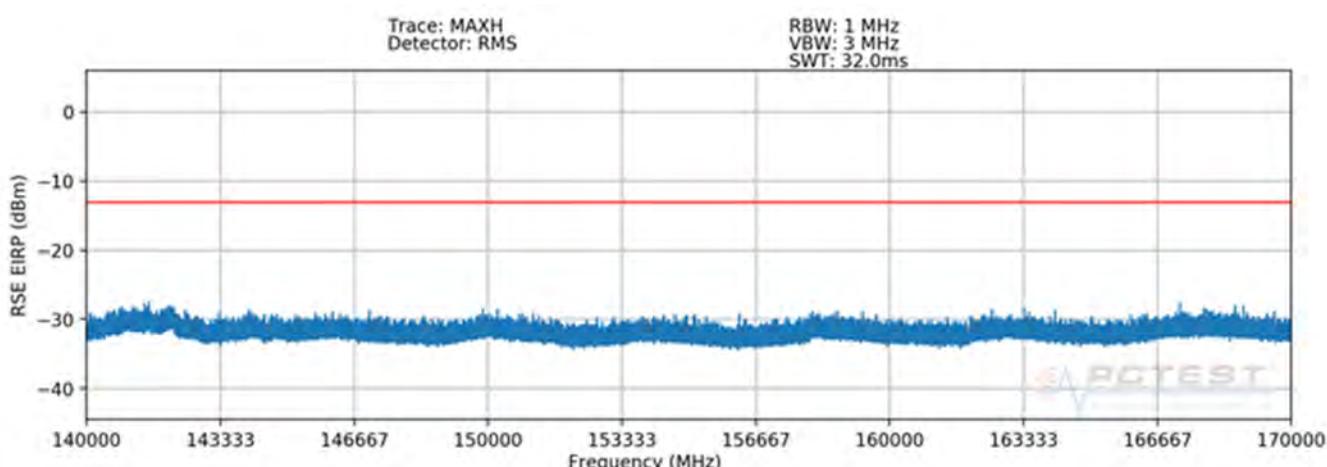
## 140 – 170GHz(n260)



Plot 7-341. K Patch Radiated Spurious Plot 140-170 GHz (1CC QPSK Low Channel H Beam – n260)

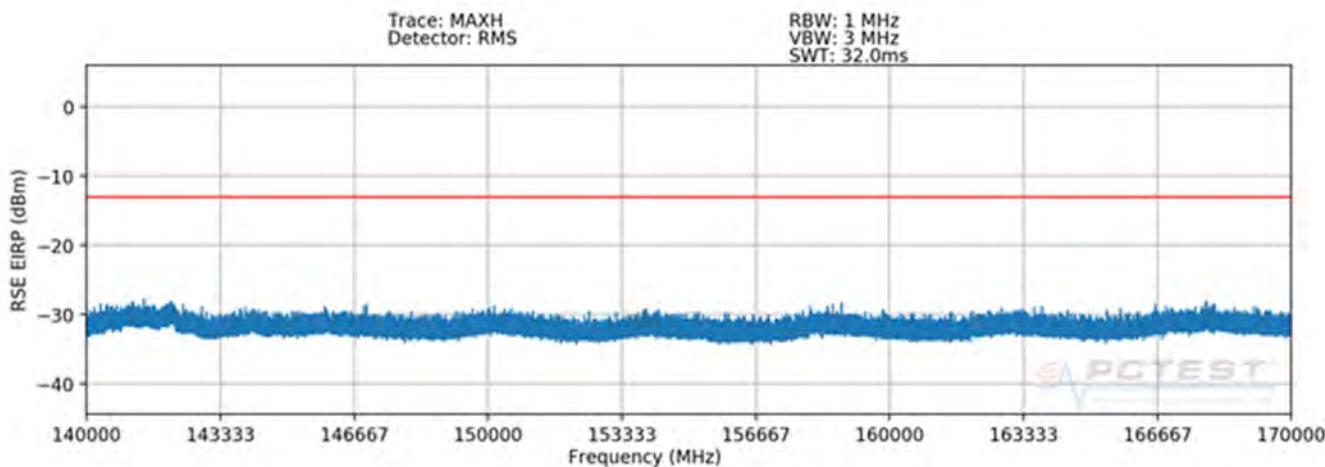


Plot 7-342. K Patch Radiated Spurious Plot 140-170 GHz (1CC QPSK Mid Channel H Beam – n260)

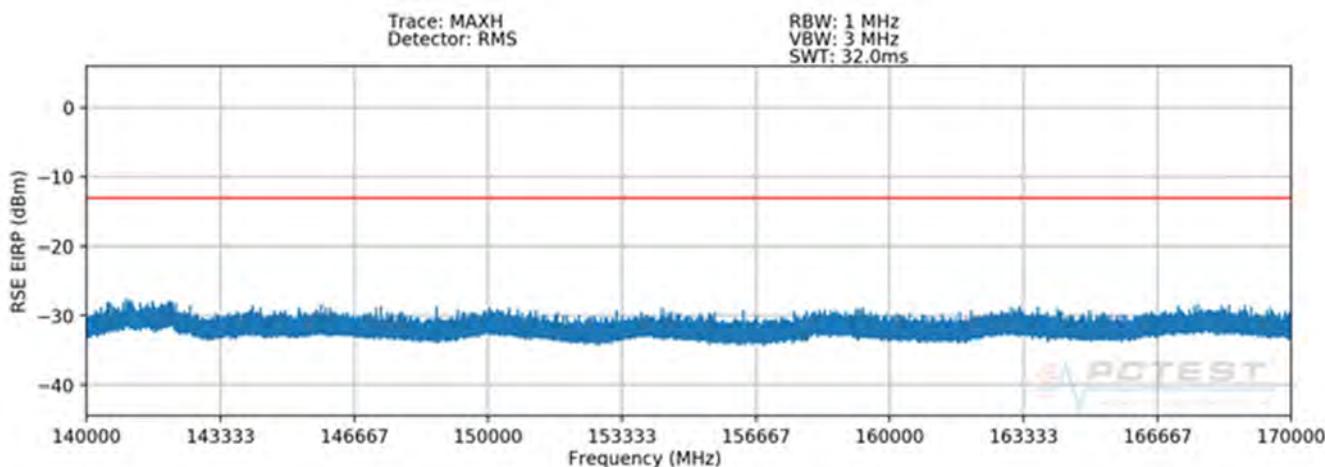


Plot 7-343. K Patch Radiated Spurious Plot 140-170 GHz (1CC QPSK High Channel H Beam – n260)

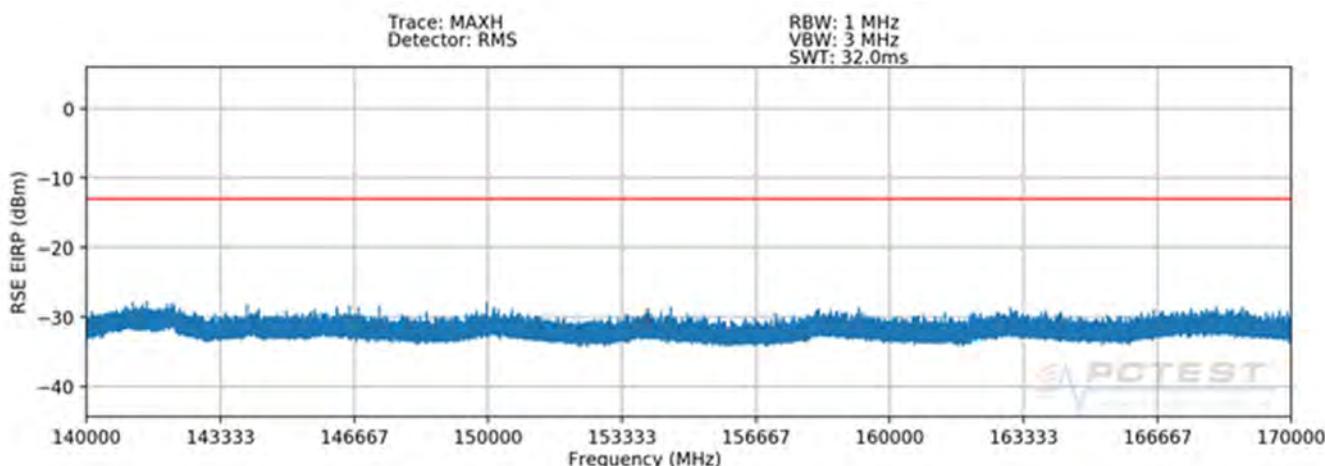
FCC ID: A3LSMN976V		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: 1M1905130071-06-R1.A3L	Test Dates: 05/14 - 07/12/2019	EUT Type: Portable Handset	Page 206 of 371



Plot 7-344. K Patch Radiated Spurious Plot 140-170 GHz (1CC QPSK Low Channel V Beam – n260)



Plot 7-345. K Patch Radiated Spurious Plot 140-170 GHz (1CC QPSK Mid Channel V Beam – n260)



Plot 7-346. K Patch Radiated Spurious Plot 140-170 GHz (1CC QPSK High Channel V Beam – n260)

FCC ID: A3LSMN976V	<b>PCTEST</b> ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1905130071-06-R1.A3L	Test Dates: 05/14 - 07/12/2019	EUT Type: Portable Handset		Page 207 of 371

## Spurious Emissions EIRP Sample Calculation(n260)

The raw radiated spurious level is converted to field strength in dB $\mu$ V/m. Then, the RSE EIRP level is calculated by applying the additional factors shown below for a test distance of 1 meter.

**RSE EIRP [dBm]** = Analyzer Level [dBm] + 107 + AFCL[dB/m] + 20Log(Dm) + Harmonic Mixer Loss (dB) – 104.8

Frequency [MHz]	Detector/Trace	Chan.	Bandwidth (MHz)	Mod.	EUT Beam Polarization	Ant. Pos [H/V]	Turn Table Azimuth [degree]	Positioner Azimuth [degree]	RSE EIRP [dBm]	Limit [dBm]	Margin [dB]
142095.50	RMS/Avg	Low	50	QPSK	H	H	-	-	-34.73	-13.00	-21.73
142113.50	RMS/Avg	Mid	50	QPSK	H	H	-	-	-34.86	-13.00	-21.86
142091.00	RMS/Avg	High	50	QPSK	H	H	-	-	-34.95	-13.00	-21.95
142104.50	RMS/Avg	Low	50	QPSK	V	V	-	-	-34.33	-13.00	-21.33
142114.00	RMS/Avg	Mid	50	QPSK	V	V	-	-	-34.81	-13.00	-21.81
142142.50	RMS/Avg	High	50	QPSK	V	V	-	-	-34.68	-13.00	-21.68

**Table 7-63. K Patch Spurious Emissions Table (140-170GHz – n260)**

### Notes

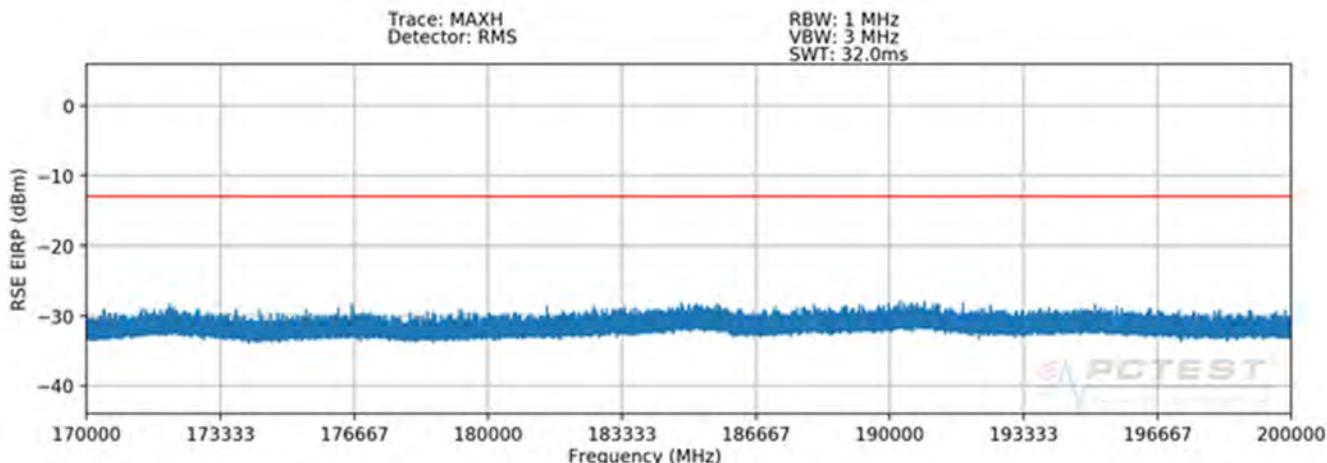
1. The RSE EIRP level is taken directly from the spectrum analyzer which includes the appropriate antenna factors, cable losses, and harmonic mixer conversion losses. Measurements were performed at a distance of 1 meter.
2. To address compliance of MIMO RSE per KDB 662911 D01, the MIMO RSE EIRP is calculated by summing the worst case H Beam EIRP and V Beam EIRP in linear powers units then converted back to dBm:

$$\text{EIRP(H Beam)} + \text{EIRP(V Beam)} = \text{EIRP(MIMO)}$$

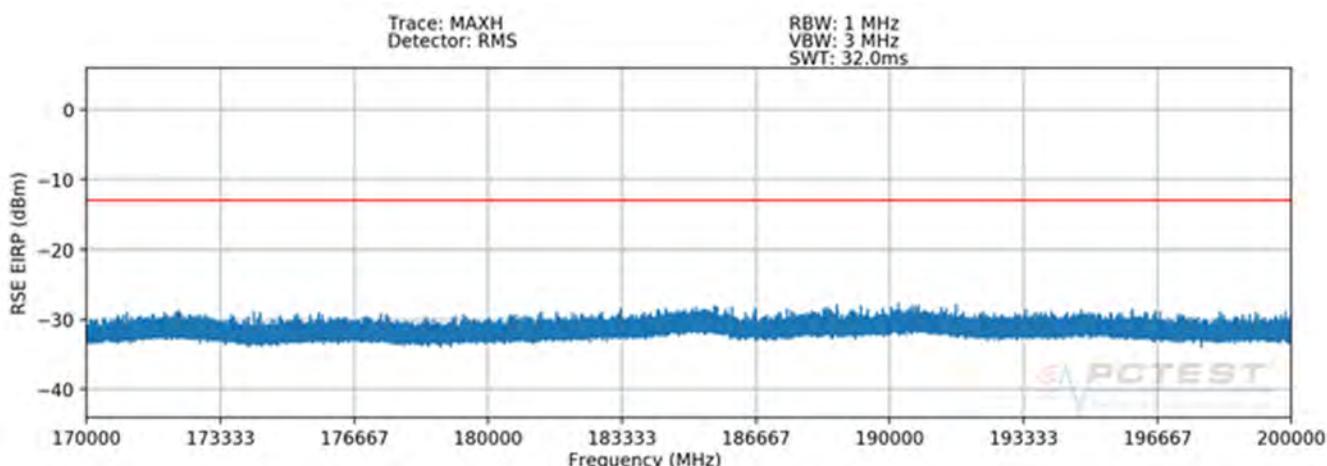
$$(-34.73 \text{ dBm} + -34.33 \text{ dBm}) = (336.90 \text{ nW} + 369.06 \text{ nW}) = (705.96 \text{ nW}) = -31.51 \text{ dBm}$$

FCC ID: A3LSMN976V		MEASUREMENT REPORT (CERTIFICATION)				Approved by: Quality Manager
Test Report S/N: 1M1905130071-06-R1.A3L	Test Dates: 05/14 - 07/12/2019	EUT Type: Portable Handset				Page 208 of 371

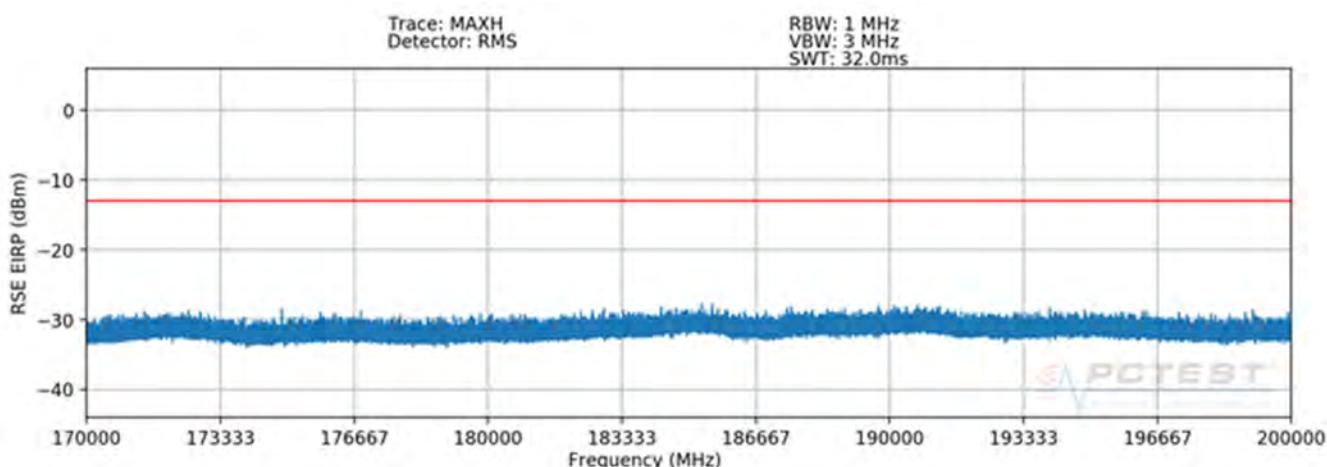
## 170 – 200GHz(n260)



Plot 7-347. K Patch Radiated Spurious Plot 170-200 GHz (1CC QPSK Low Channel H Beam – n260)

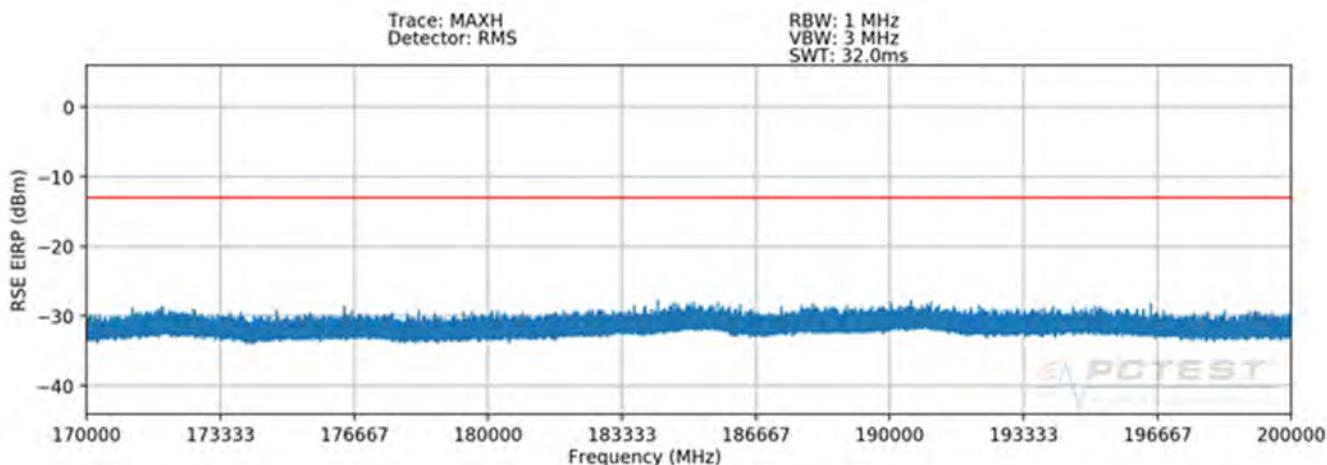


Plot 7-348. K Patch Radiated Spurious Plot 170-200 GHz (1CC QPSK Mid Channel H Beam – n260)

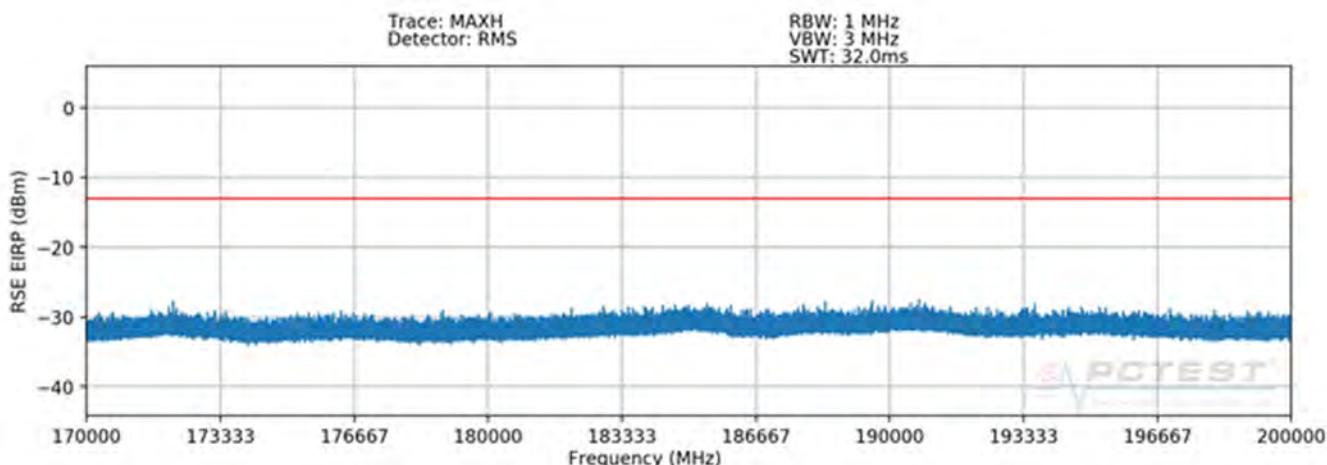


Plot 7-349. K Patch Radiated Spurious Plot 170-200 GHz (1CC QPSK High Channel H Beam – n260)

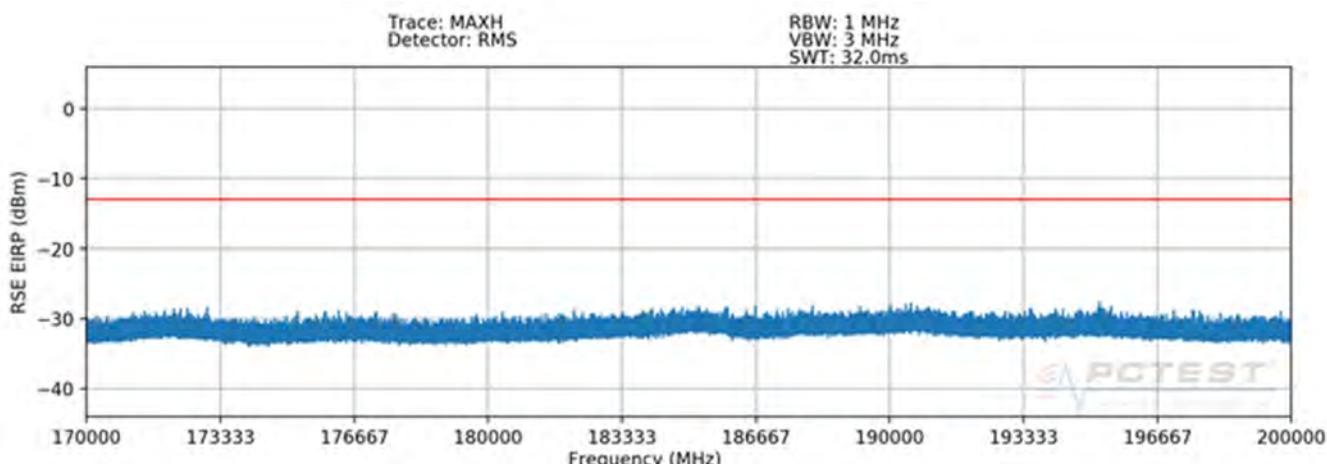
FCC ID: A3LSMN976V		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1905130071-06-R1.A3L	Test Dates: 05/14 - 07/12/2019	EUT Type: Portable Handset		Page 209 of 371



Plot 7-350. K Patch Radiated Spurious Plot 170-200 GHz (1CC QPSK Low Channel V Beam – n260)



Plot 7-351. K Patch Radiated Spurious Plot 170-200 GHz (1CC QPSK Mid Channel V Beam – n260)



Plot 7-352. K Patch Radiated Spurious Plot 170-200 GHz (1CC QPSK High Channel V Beam – n260)

FCC ID: A3LSMN976V	<b>PCTEST</b> ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1905130071-06-R1.A3L	Test Dates: 05/14 - 07/12/2019	EUT Type: Portable Handset		Page 210 of 371

## Spurious Emissions EIRP Sample Calculation(n260)

The raw radiated spurious level is converted to field strength in  $\text{dB}\mu\text{V}/\text{m}$ . Then, the RSE EIRP level is calculated by applying the additional factors shown below for a test distance of 1 meter.

**RSE EIRP [dBm]** = Analyzer Level [dBm] + 107 + AFCL[dB/m] + 20Log(Dm) + Harmonic Mixer Loss (dB) – 104.8

Frequency [MHz]	Detector/Trace	Chan.	Bandwidth (MHz)	Mod.	EUT Beam Polarization	Ant. Pos [H/V]	Turn Table Azimuth [degree]	Positioner Azimuth [degree]	RSE EIRP [dBm]	Limit [dBm]	Margin [dB]
190400.50	RMS/Avg	Low	50	QPSK	H	H	-	-	-35.35	-13.00	-22.35
190090.00	RMS/Avg	Mid	50	QPSK	H	H	-	-	-35.47	-13.00	-22.47
190572.50	RMS/Avg	High	50	QPSK	H	H	-	-	-35.20	-13.00	-22.20
190431.00	RMS/Avg	Low	50	QPSK	V	V	-	-	-35.09	-13.00	-22.09
190363.50	RMS/Avg	Mid	50	QPSK	V	V	-	-	-35.27	-13.00	-22.27
185025.50	RMS/Avg	High	50	QPSK	V	V	-	-	-35.17	-13.00	-22.17

**Table 7-64. K Patch Spurious Emissions Table (170-200GHz – n260)**

### Notes

1. The RSE EIRP level is taken directly from the spectrum analyzer which includes the appropriate antenna factors, cable losses, and harmonic mixer conversion losses. Measurements were performed at a distance of 1 meter.
2. To address compliance of MIMO RSE per KDB 662911 D01, the MIMO RSE EIRP is calculated by summing the worst case H Beam EIRP and V Beam EIRP in linear powers units then converted back to dBm:

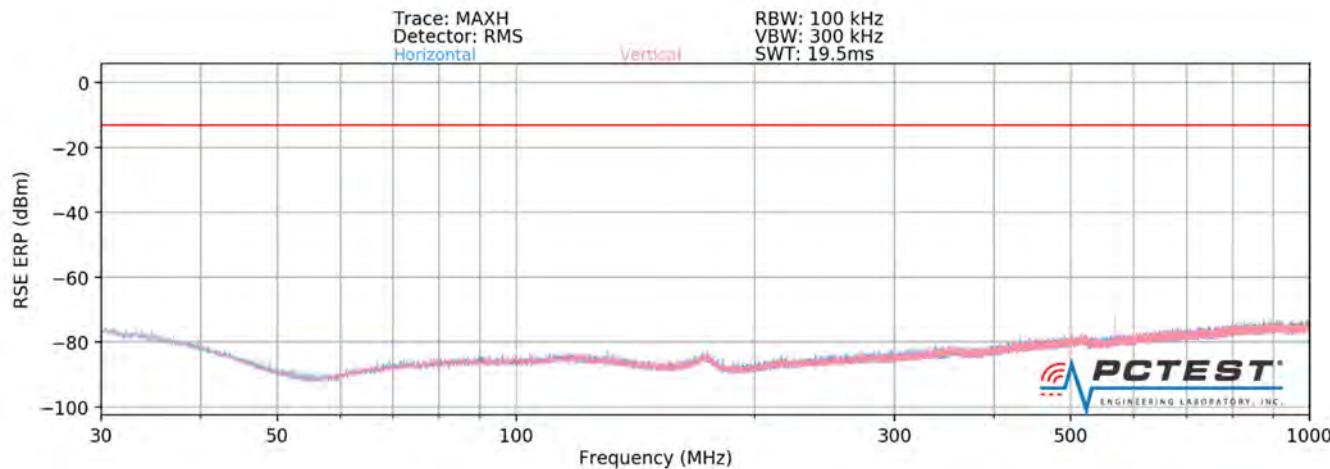
$$\text{EIRP(H Beam)} + \text{EIRP(V Beam)} = \text{EIRP(MIMO)}$$

$$(-35.20 \text{ dBm} + -35.17 \text{ dBm}) = (302.13 \text{ nW} + 303.81 \text{ nW}) = (605.94 \text{ nW}) = -32.18 \text{ dBm}$$

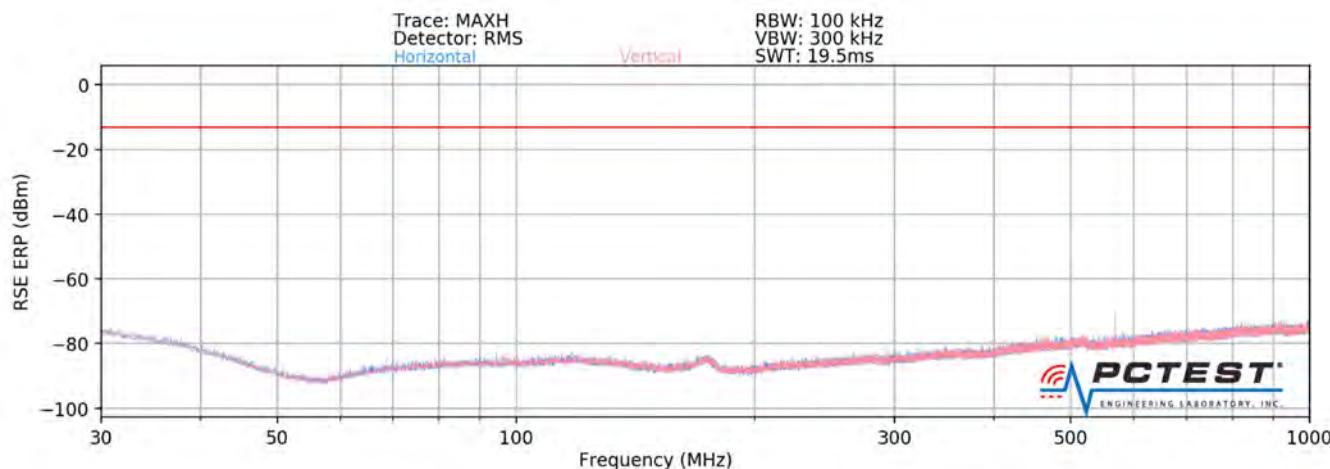
FCC ID: A3LSMN976V		MEASUREMENT REPORT (CERTIFICATION)				Approved by: Quality Manager
Test Report S/N: 1M1905130071-06-R1.A3L	Test Dates: 05/14 - 07/12/2019	EUT Type: Portable Handset				Page 211 of 371

## L Patch Radiated Spurious Emissions(n260)

### 30MHz – 1GHz(n260)



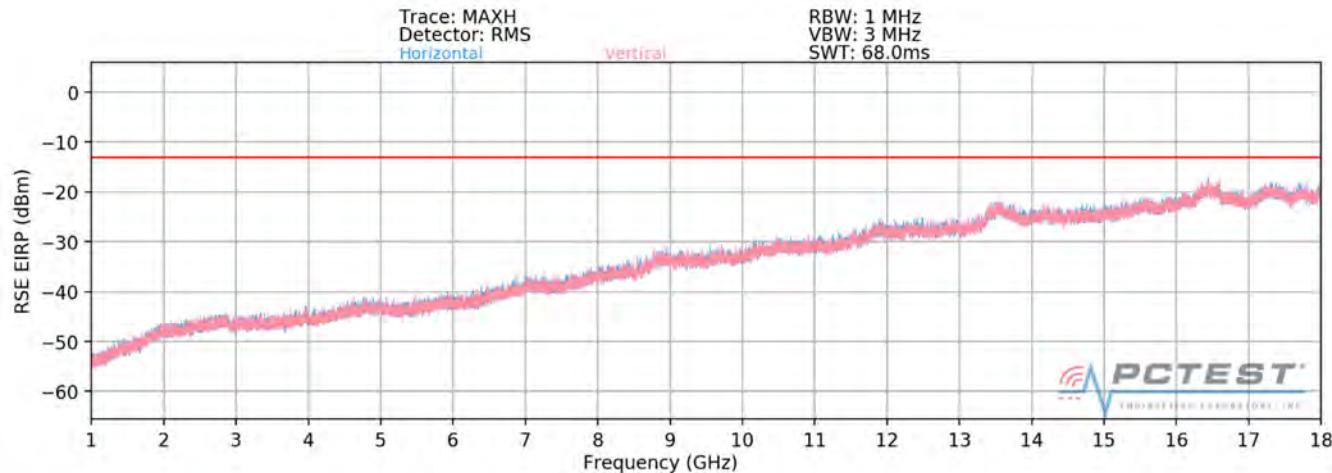
Plot 7-353. L Patch Radiated Spurious Plot 30 MHz - 1 GHz (1CC QPSK Mid Channel H Beam – n260)



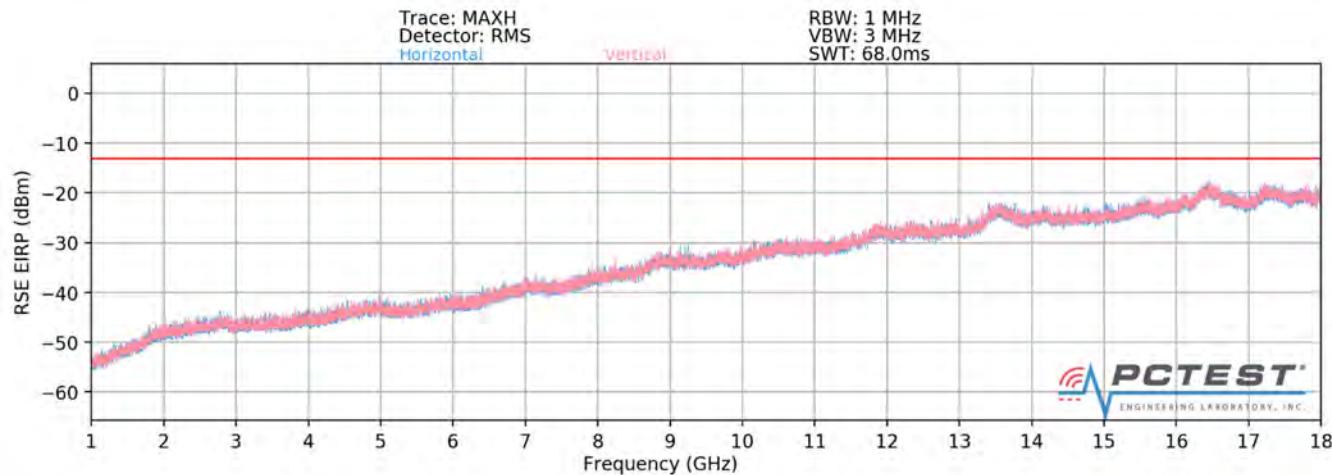
Plot 7-354. L Patch Radiated Spurious Plot 30 MHz - 1 GHz (1CC QPSK Mid Channel V Beam – n260)

FCC ID: A3LSMN976V		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1905130071-06-R1.A3L	Test Dates: 05/14 - 07/12/2019	EUT Type: Portable Handset		Page 212 of 371

## 1 – 18GHz(n260)



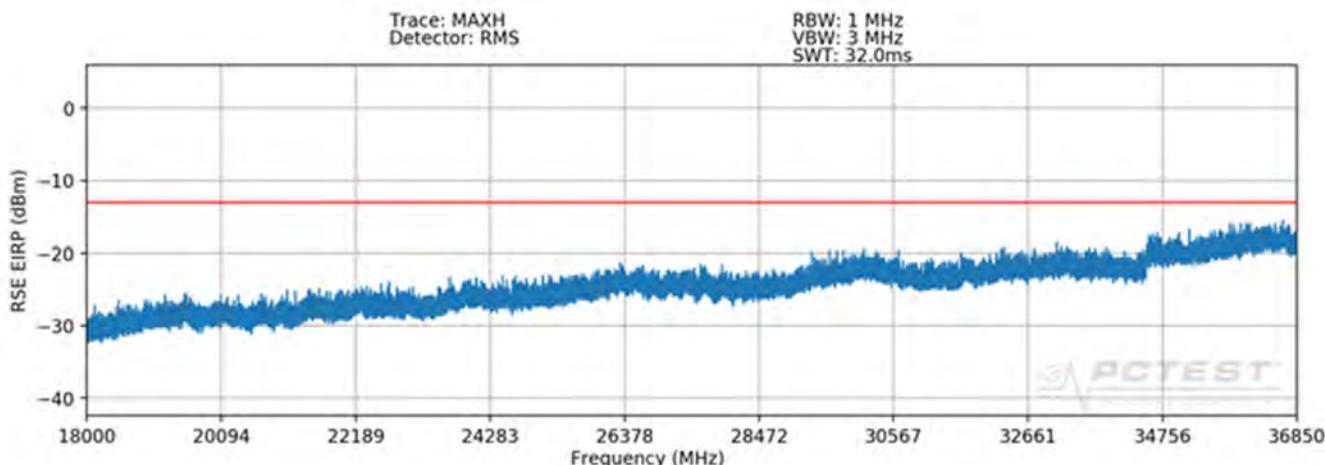
Plot 7-355. L Patch Radiated Spurious Plot 1-18 GHz (1CC QPSK Mid Channel H Beam – n260)



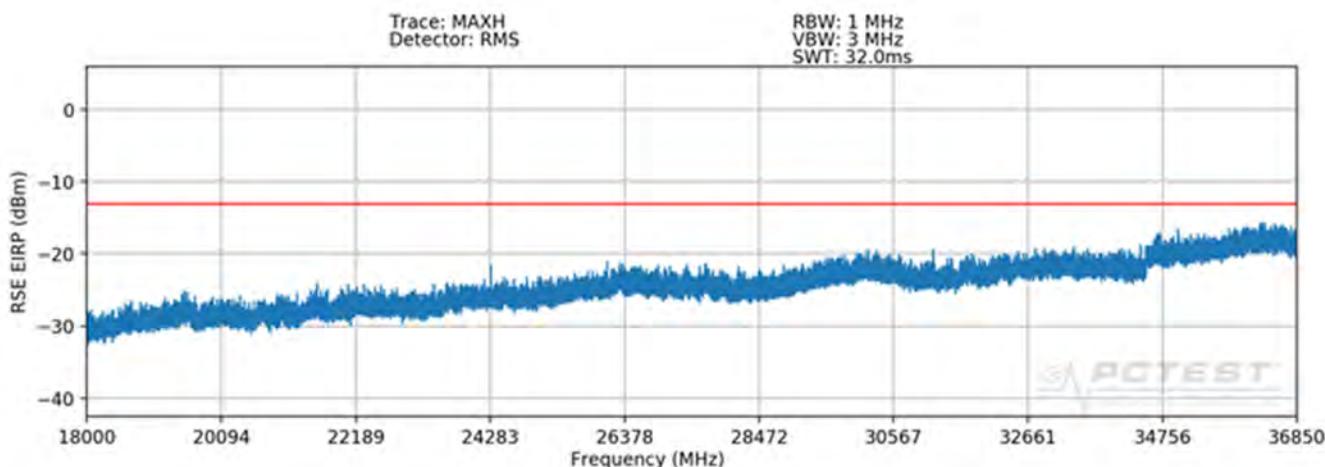
Plot 7-356. L Patch Radiated Spurious Plot 1-18 GHz (1CC QPSK Mid Channel V Beam – n260)

FCC ID: A3LSMN976V		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1905130071-06-R1.A3L	Test Dates: 05/14 - 07/12/2019	EUT Type: Portable Handset		Page 213 of 371

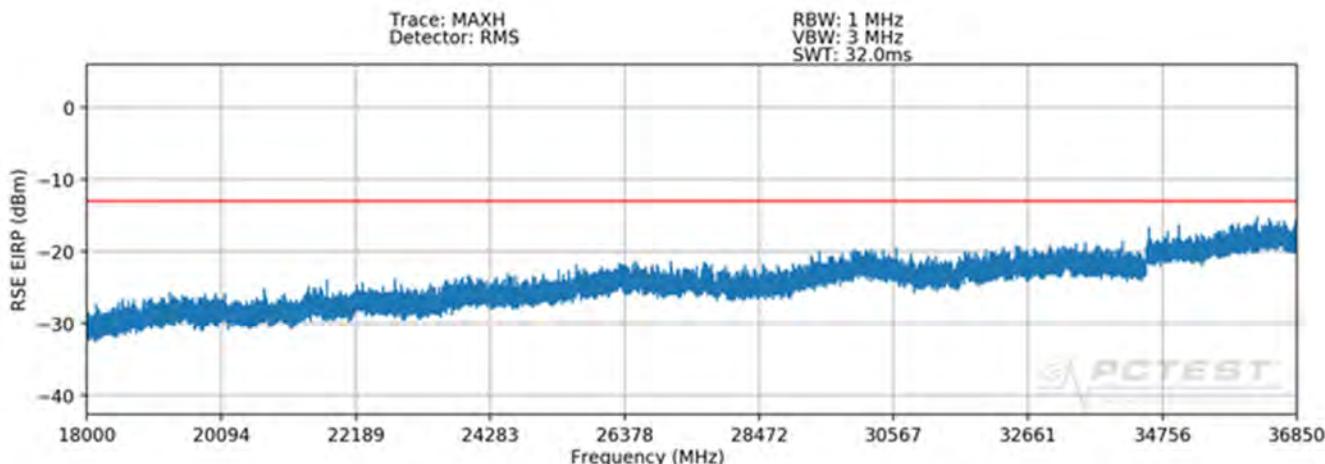
## 18 – 36.85GHz(n260)



Plot 7-357. L Patch Radiated Spurious Plot 18-36.85 GHz (1CC QPSK Low Channel H Beam – n260)

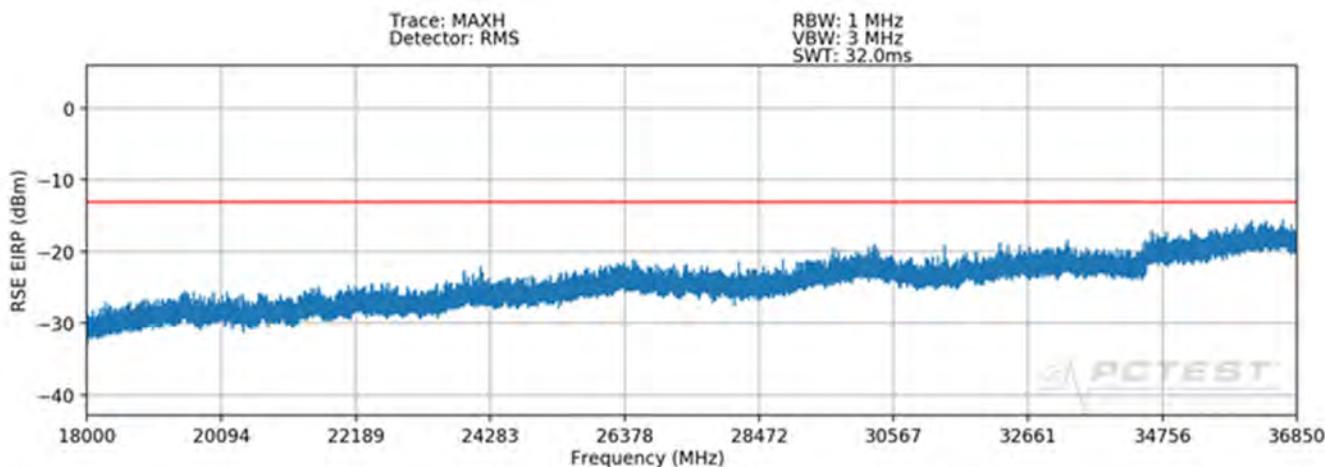


Plot 7-358. L Patch Radiated Spurious Plot 18-36.85 GHz (1CC QPSK Mid Channel H Beam – n260)

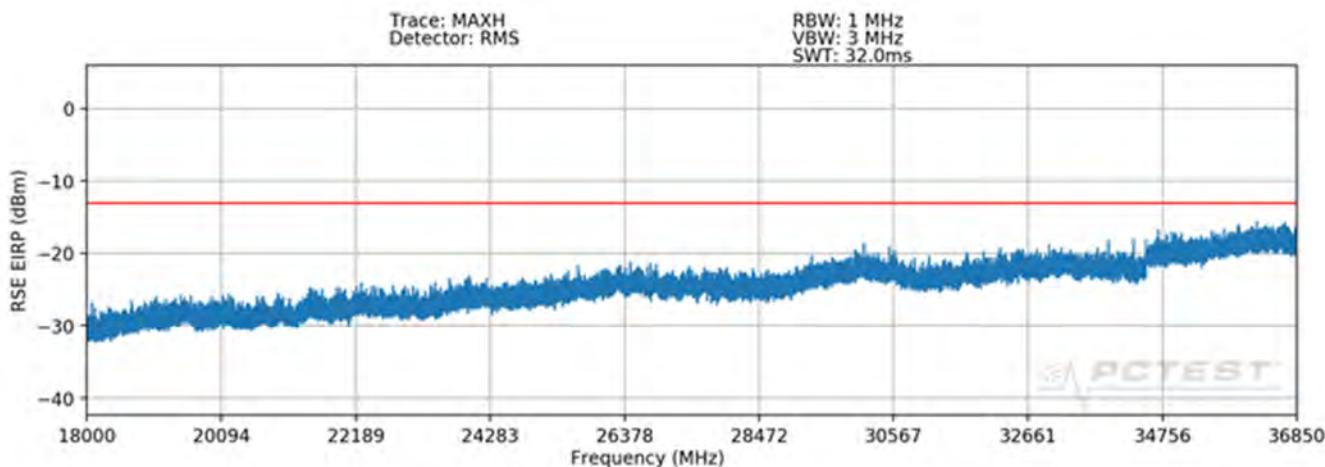


Plot 7-359. L Patch Radiated Spurious Plot 18-36.85 GHz (1CC QPSK High Channel H Beam – n260)

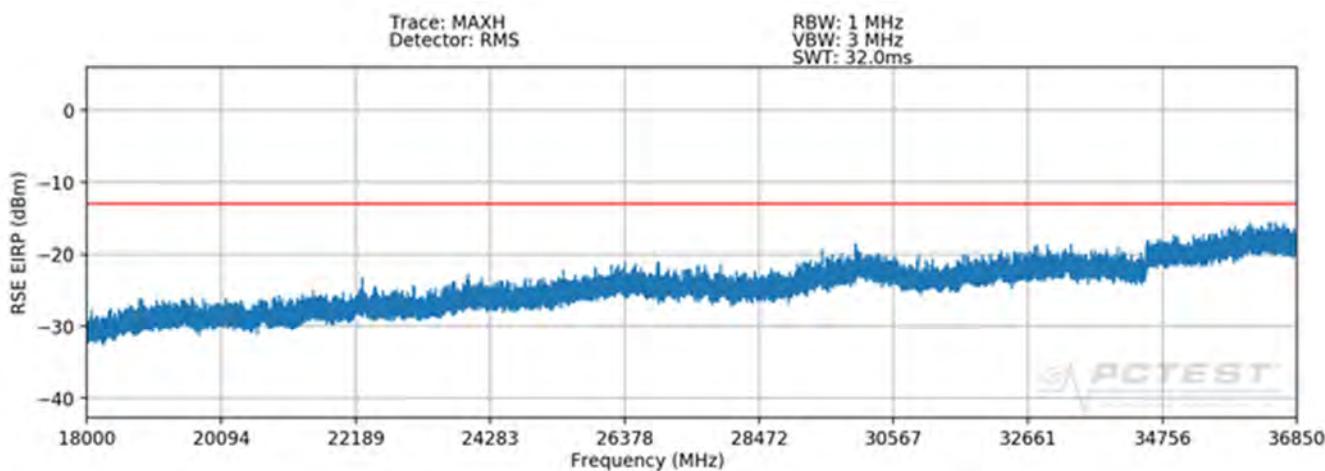
FCC ID: A3LSMN976V		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1905130071-06-R1.A3L	Test Dates: 05/14 - 07/12/2019	EUT Type: Portable Handset		Page 214 of 371



Plot 7-360. L Patch Radiated Spurious Plot 18-36.85 GHz (1CC QPSK Low Channel V Beam – n260)



Plot 7-361. L Patch Radiated Spurious Plot 18-36.85 GHz (1CC QPSK Mid Channel V Beam – n260)



Plot 7-362. L Patch Radiated Spurious Plot 18-36.85 GHz (1CC QPSK High Channel V Beam – n260)

FCC ID: A3LSMN976V	<b>PCTEST</b> ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1905130071-06-R1.A3L	Test Dates: 05/14 - 07/12/2019	EUT Type: Portable Handset		Page 215 of 371

## Spurious Emissions EIRP Sample Calculation(n260)

The raw radiated spurious level is converted to field strength in  $\text{dB}\mu\text{V/m}$ . Then, the RSE EIRP level is calculated by applying the additional factors shown below for a test distance of 1 meter.

$$\text{RSE EIRP [dBm]} = \text{Analyzer Level [dBm]} + 107 + \text{AFCL [dB/m]} + 20\text{Log}(\text{Dm}) - 104.8$$

Frequency [MHz]	Detector/Trace	Chan.	Bandwidth (MHz)	Mod.	EUT Beam Polarization	Ant. Pos [H/V]	Turn Table Azimuth [degree]	Positioner Azimuth [degree]	RSE EIRP [dBm]	Limit [dBm]	Margin [dB]
34618.00	RMS/Avg	Low	50	QPSK	H	H	263	22	-32.02	-13.00	-19.02
34671.50	RMS/Avg	Mid	50	QPSK	H	H	221	24	-32.16	-13.00	-19.16
31181.00	RMS/Avg	High	50	QPSK	H	H	258	44	-27.67	-13.00	-14.67
36623.00	RMS/Avg	Low	50	QPSK	V	V	297	7	-32.07	-13.00	-19.07
34926.00	RMS/Avg	Mid	50	QPSK	V	V	253	10	-32.68	-13.00	-19.68
31180.50	RMS/Avg	High	50	QPSK	V	V	258	353	-25.60	-13.00	-12.60

**Table 7-65. L Patch Spurious Emissions Table (18-36.85GHz – n260)**

### Notes

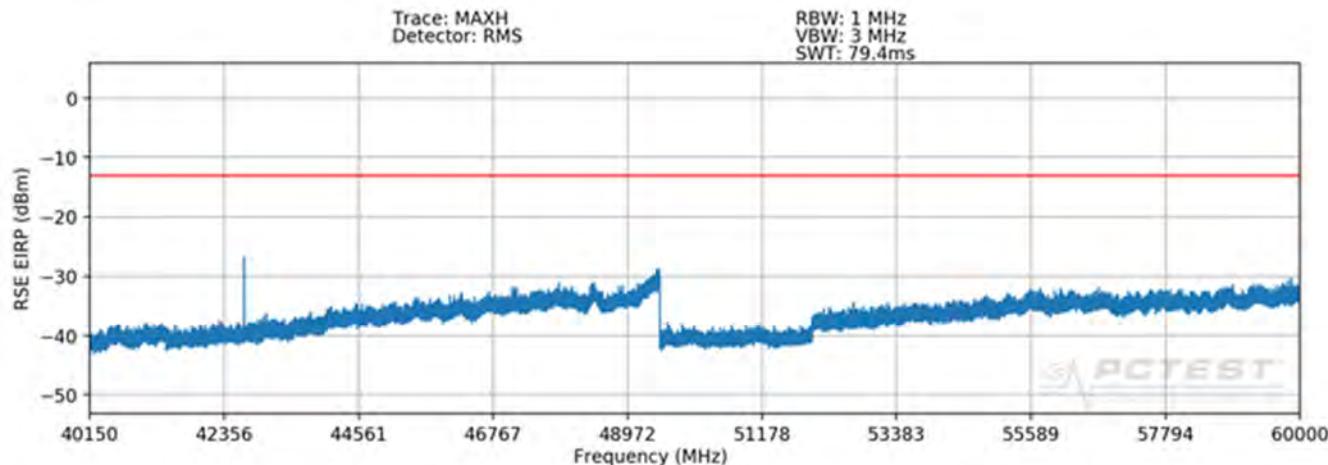
1. The RSE EIRP level is taken directly from the spectrum analyzer which includes the appropriate antenna factors, cable losses, and harmonic mixer conversion losses. Measurements were performed at a distance of 1 meter.
2. To address compliance of MIMO RSE per KDB 662911 D01, the MIMO RSE EIRP is calculated by summing the worst case H Beam EIRP and V Beam EIRP in linear powers units then converted back to dBm:

$$\text{EIRP(H Beam)} + \text{EIRP(V Beam)} = \text{EIRP(MIMO)}$$

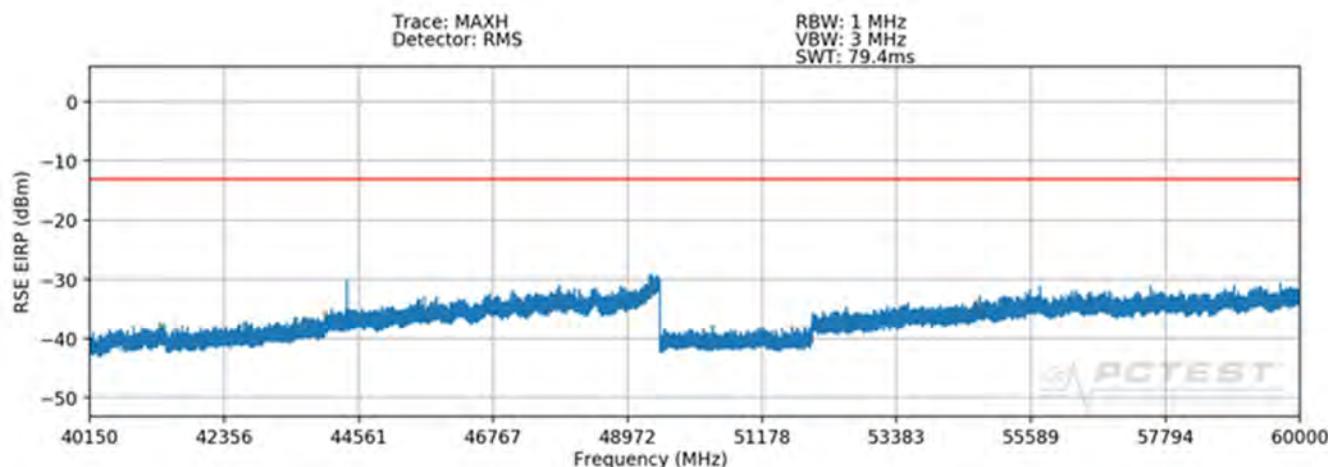
$$(-27.67 \text{ dBm} + -25.60 \text{ dBm}) = (1.71 \mu\text{W} + 2.75 \mu\text{W}) = (4.46 \mu\text{W}) = -23.50 \text{ dBm}$$

FCC ID: A3LSMN976V		MEASUREMENT REPORT (CERTIFICATION)				Approved by: Quality Manager
Test Report S/N: 1M1905130071-06-R1.A3L	Test Dates: 05/14 - 07/12/2019	EUT Type: Portable Handset				Page 216 of 371

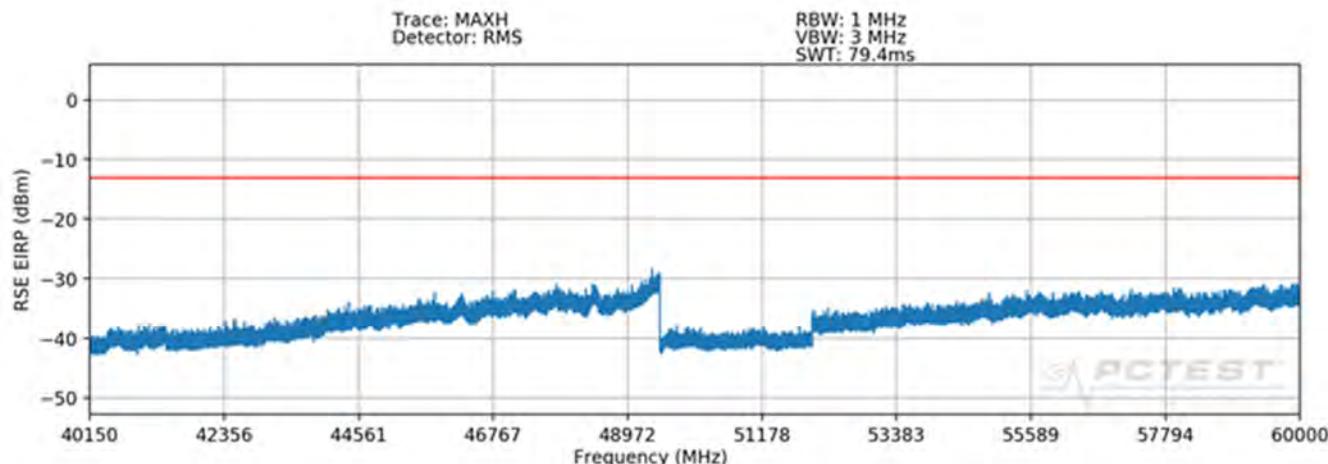
## 40.15 – 60GHz(n260)



Plot 7-363. L Patch Radiated Spurious Plot 40.15-60 GHz (1CC QPSK Low Channel H Beam – n260)

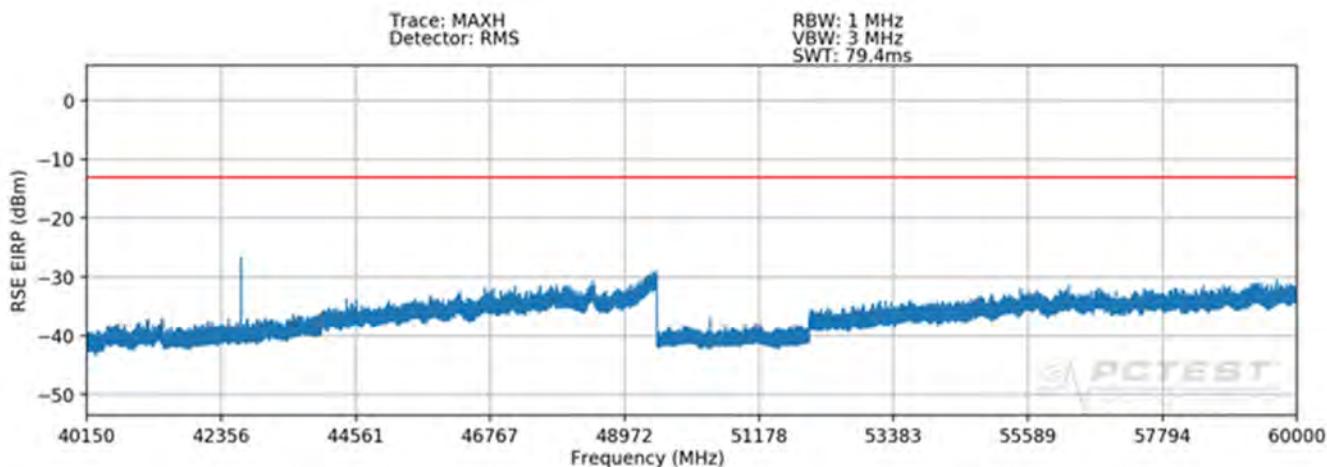


Plot 7-364. L Patch Radiated Spurious Plot 40.15-60 GHz (1CC QPSK Mid Channel H Beam – n260)

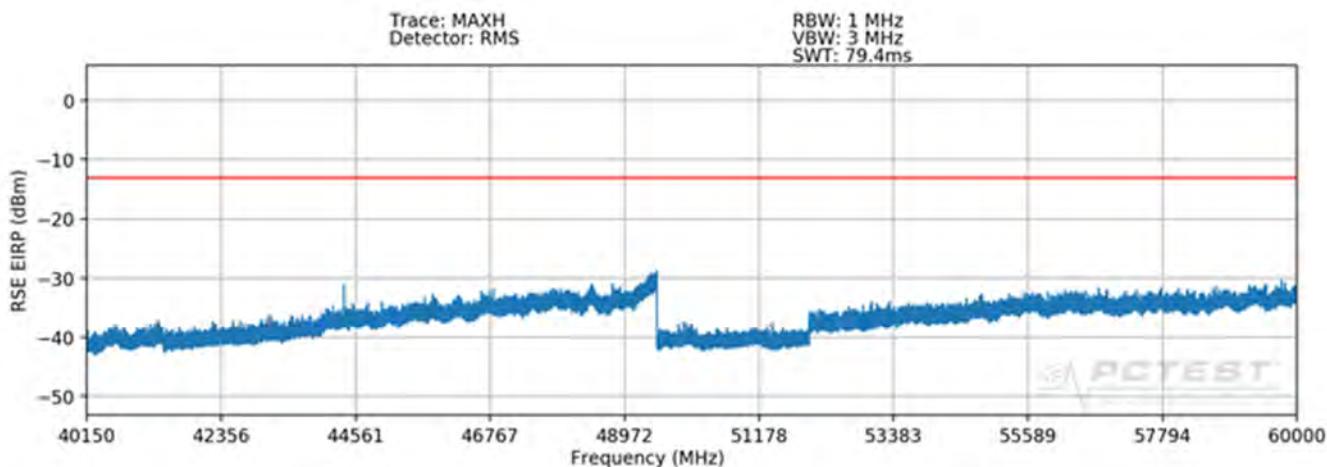


Plot 7-365. L Patch Radiated Spurious Plot 40.15-60 GHz (1CC QPSK High Channel H Beam – n260)

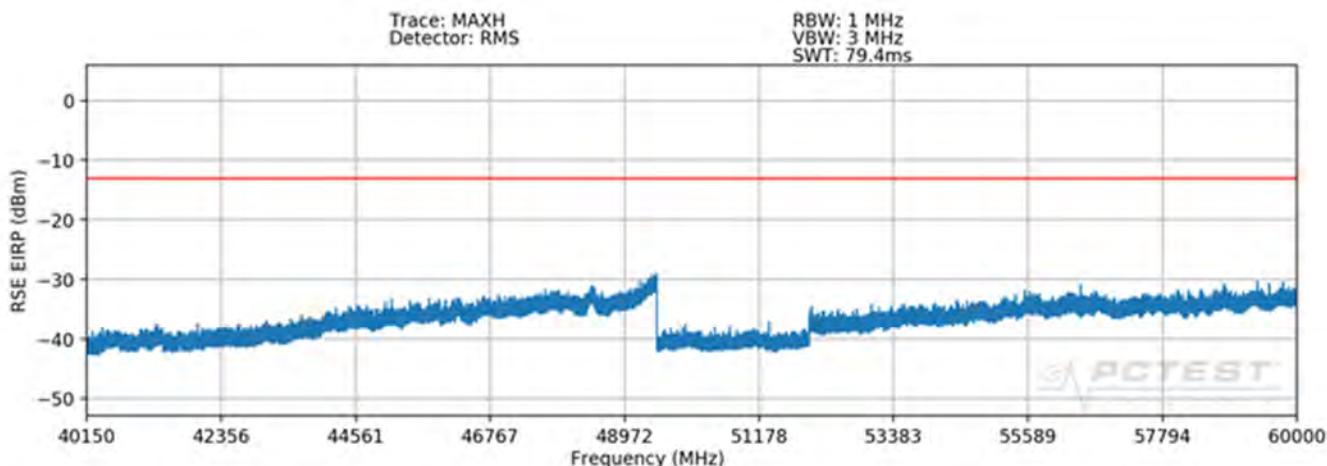
FCC ID: A3LSMN976V		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1905130071-06-R1.A3L	Test Dates: 05/14 - 07/12/2019	EUT Type: Portable Handset		Page 217 of 371



Plot 7-366. L Patch Radiated Spurious Plot 40.15-60 GHz (1CC QPSK Low Channel V Beam – n260)



Plot 7-367. L Patch Radiated Spurious Plot 40.15-60 GHz (1CC QPSK Mid Channel V Beam – n260)



Plot 7-368. L Patch Radiated Spurious Plot 40.15-60 GHz (1CC QPSK High Channel V Beam – n260)

FCC ID: A3LSMN976V	<b>PCTEST</b> ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1905130071-06-R1.A3L	Test Dates: 05/14 - 07/12/2019	EUT Type: Portable Handset		Page 218 of 371

## Spurious Emissions EIRP Sample Calculation(n260)

The raw radiated spurious level is converted to field strength in  $\text{dB}\mu\text{V/m}$ . Then, the RSE EIRP level is calculated by applying the additional factors shown below for a test distance of 1.5 meter.

$$\text{RSE EIRP [dBm]} = \text{Analyzer Level [dBm]} + 107 + \text{AFCL [dB/m]} + 20\text{Log}(\text{Dm}) - 104.8$$

Frequency [MHz]	Detector/Trace	Chan.	Bandwidth (MHz)	Mod.	EUT Beam Polarization	Ant. Pos [H/V]	Turn Table Azimuth [degree]	Positioner Azimuth [degree]	RSE EIRP [dBm]	Limit [dBm]	Margin [dB]
42681.47	RMS/Avg	Low	50	QPSK	H	H	274	14	-27.40	-13.00	-14.40
44366.40	RMS/Avg	Mid	50	QPSK	H	H	338	66	-30.57	-13.00	-17.57
46771.00	RMS/Avg	High	50	QPSK	H	H	329	35	-38.45	-13.00	-25.45
42681.45	RMS/Avg	Low	50	QPSK	V	V	286	255	-28.48	-13.00	-15.48
44366.32	RMS/Avg	Mid	50	QPSK	V	V	319	246	-31.02	-13.00	-18.02
46771.06	RMS/Avg	High	50	QPSK	V	V	283	346	-37.06	-13.00	-24.06

Table 7-66. L Patch Spurious Emissions Table (40.15-60 GHz – n260)

### Notes

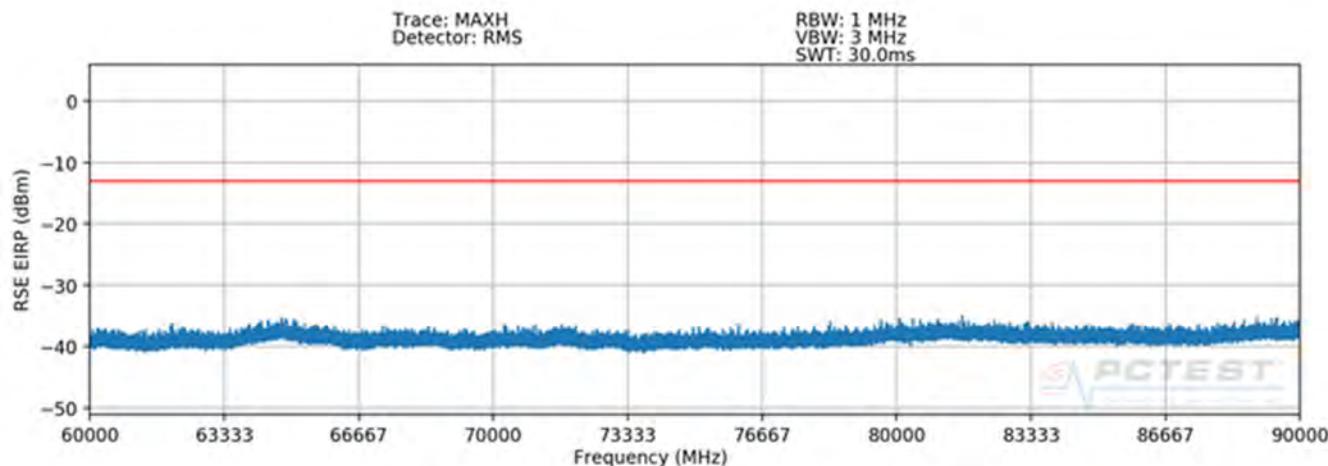
1. The RSE EIRP level is taken directly from the spectrum analyzer which includes the appropriate antenna factors, cable losses, and harmonic mixer conversion losses. Measurements were performed at a distance of 1.5 meter.
2. To address compliance of MIMO RSE per KDB 662911 D01, the MIMO RSE EIRP is calculated by summing the worst case H Beam EIRP and V Beam EIRP in linear powers units then converted back to dBm:

$$\text{EIRP(H Beam)} + \text{EIRP(V Beam)} = \text{EIRP(MIMO)}$$

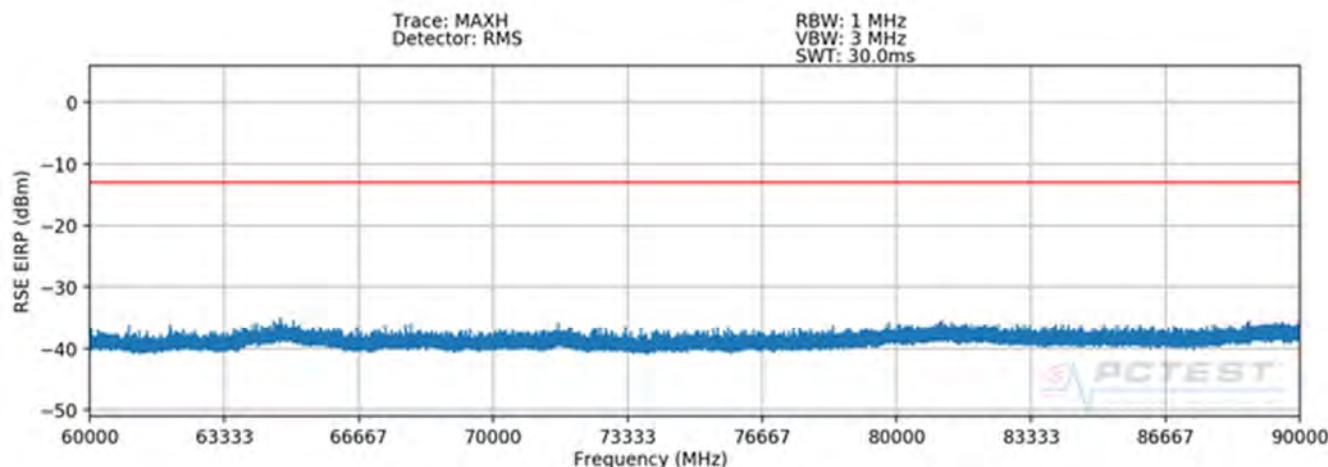
$$(-27.40 \text{ dBm} + -28.48 \text{ dBm}) = (1.82 \mu\text{W} + 1.42 \mu\text{W}) = (3.24 \mu\text{W}) = -24.90 \text{ dBm}$$

FCC ID: A3LSMN976V		MEASUREMENT REPORT (CERTIFICATION)				Approved by: Quality Manager
Test Report S/N: 1M1905130071-06-R1.A3L	Test Dates: 05/14 - 07/12/2019	EUT Type: Portable Handset				Page 219 of 371

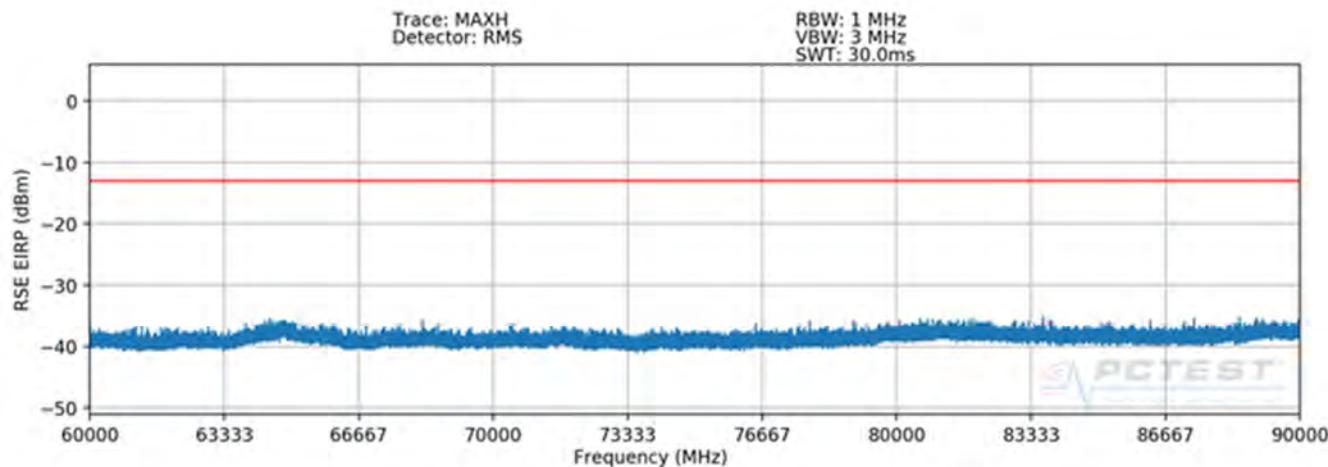
## 60 – 90GHz(n260)



Plot 7-369. L Patch Radiated Spurious Plot 60-90 GHz (1CC QPSK Low Channel H Beam – n260)

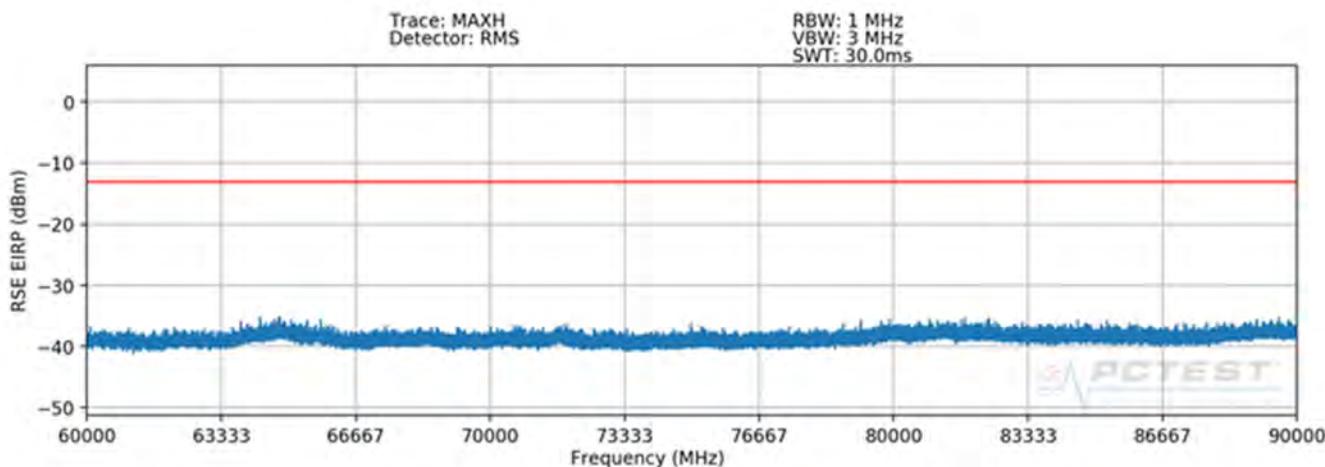


Plot 7-370. L Patch Radiated Spurious Plot 60-90 GHz (1CC QPSK Mid Channel H Beam – n260)

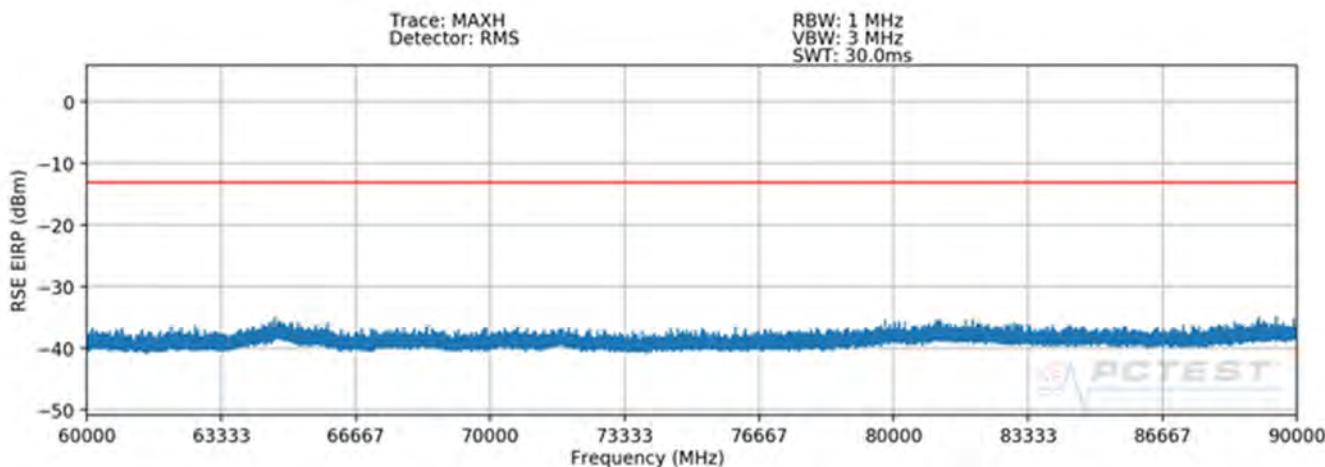


Plot 7-371. L Patch Radiated Spurious Plot 60-90 GHz (1CC QPSK High Channel H Beam – n260)

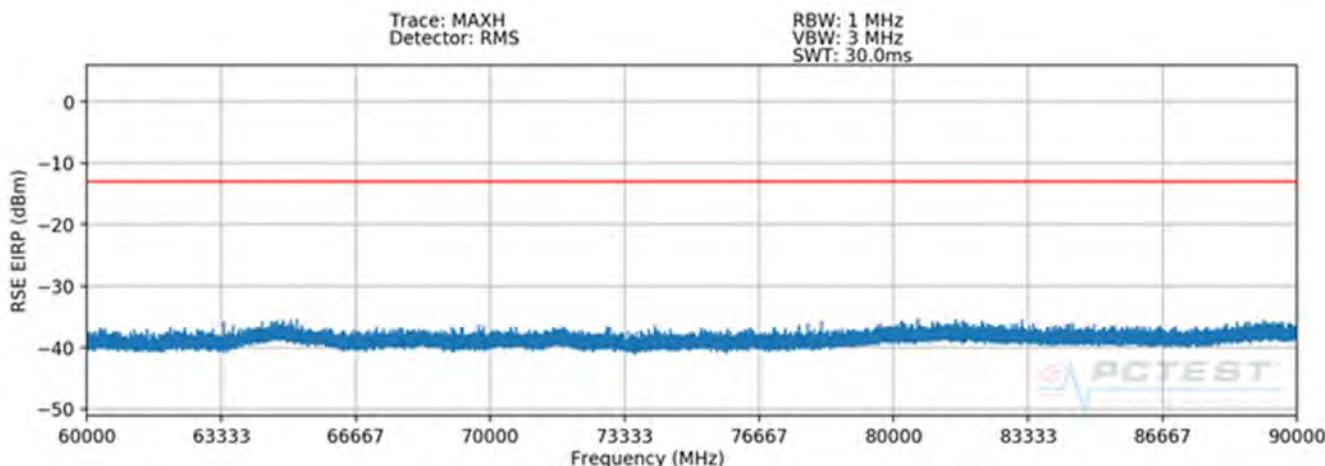
FCC ID: A3LSMN976V		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1905130071-06-R1.A3L	Test Dates: 05/14 - 07/12/2019	EUT Type: Portable Handset		Page 220 of 371



**Plot 7-372. L Patch Radiated Spurious Plot 60-90 GHz (1CC QPSK Low Channel V Beam – n260)**



**Plot 7-373. L Patch Radiated Spurious Plot 60-90 GHz (1CC QPSK Mid Channel V Beam – n260)**



**Plot 7-374. L Patch Radiated Spurious Plot 60-90 GHz (1CC QPSK High Channel V Beam – n260)**

FCC ID: A3LSMN976V	<b>PCTEST</b> ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)		SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1905130071-06-R1.A3L	Test Dates: 05/14 - 07/12/2019	EUT Type: Portable Handset			Page 221 of 371

## Spurious Emissions EIRP Sample Calculation(n260)

The raw radiated spurious level is converted to field strength in  $\text{dB}\mu\text{V}/\text{m}$ . Then, the RSE EIRP level is calculated by applying the additional factors shown below for a test distance of 1 meter.

**RSE EIRP [dBm]** = Analyzer Level [dBm] + 107 + AFCL [dB/m] + 20Log(Dm) + Harmonic Mixer Loss (dB) – 104.8

Frequency [MHz]	Detector/Trace	Chan.	Bandwidth (MHz)	Mod.	EUT Beam Polarization	Ant. Pos [H/V]	Turn Table Azimuth [degree]	Positioner Azimuth [degree]	RSE EIRP [dBm]	Limit [dBm]	Margin [dB]
74006.00	RMS/Avg	Low	50	QPSK	H	H	288	23	-43.52	-13.00	-30.52
77591.50	RMS/Avg	Mid	50	QPSK	H	H	320	53	-42.65	-13.00	-29.65
79884.00	RMS/Avg	High	50	QPSK	H	H	269	22	-43.21	-13.00	-30.21
74006.00	RMS/Avg	Low	50	QPSK	V	V	242	31	-43.11	-13.00	-30.11
77591.50	RMS/Avg	Mid	50	QPSK	V	V	244	33	-39.82	-13.00	-26.82
79884.00	RMS/Avg	High	50	QPSK	V	V	278	7	-43.48	-13.00	-30.48

**Table 7-67. L Patch Spurious Emissions Table (60-90GHz – n260)**

### Notes

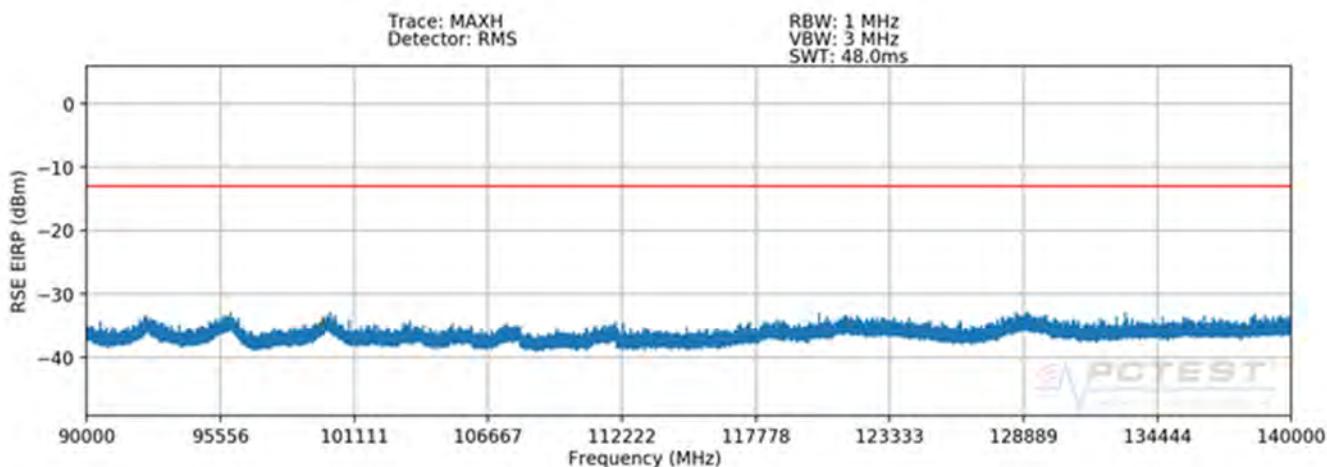
1. The RSE EIRP level is taken directly from the spectrum analyzer which includes the appropriate antenna factors, cable losses, and harmonic mixer conversion losses. Measurements were performed at a distance of 1 meter.
2. To address compliance of MIMO RSE per KDB 662911 D01, the MIMO RSE EIRP is calculated by summing the worst case H Beam EIRP and V Beam EIRP in linear powers units then converted back to dBm:

$$\text{EIRP(H Beam)} + \text{EIRP(V Beam)} = \text{EIRP(MIMO)}$$

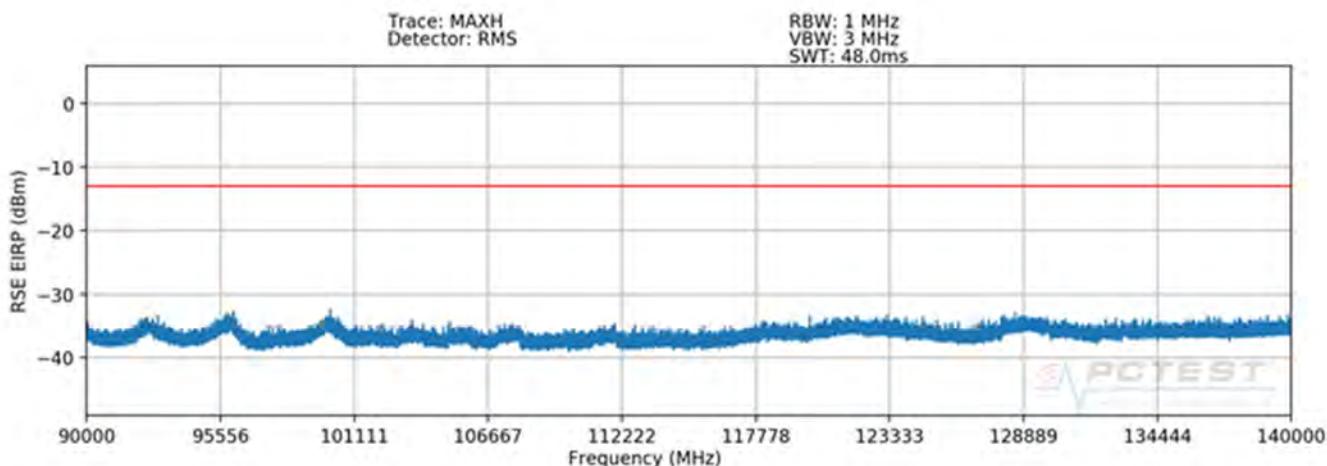
$$(-42.65 \text{ dBm} + -39.82 \text{ dBm}) = (54.33 \text{ nW} + 104.30 \text{ nW}) = (158.63 \text{ nW}) = -38.00 \text{ dBm}$$

FCC ID: A3LSMN976V		MEASUREMENT REPORT (CERTIFICATION)				Approved by: Quality Manager
Test Report S/N: 1M1905130071-06-R1.A3L	Test Dates: 05/14 - 07/12/2019	EUT Type: Portable Handset				Page 222 of 371

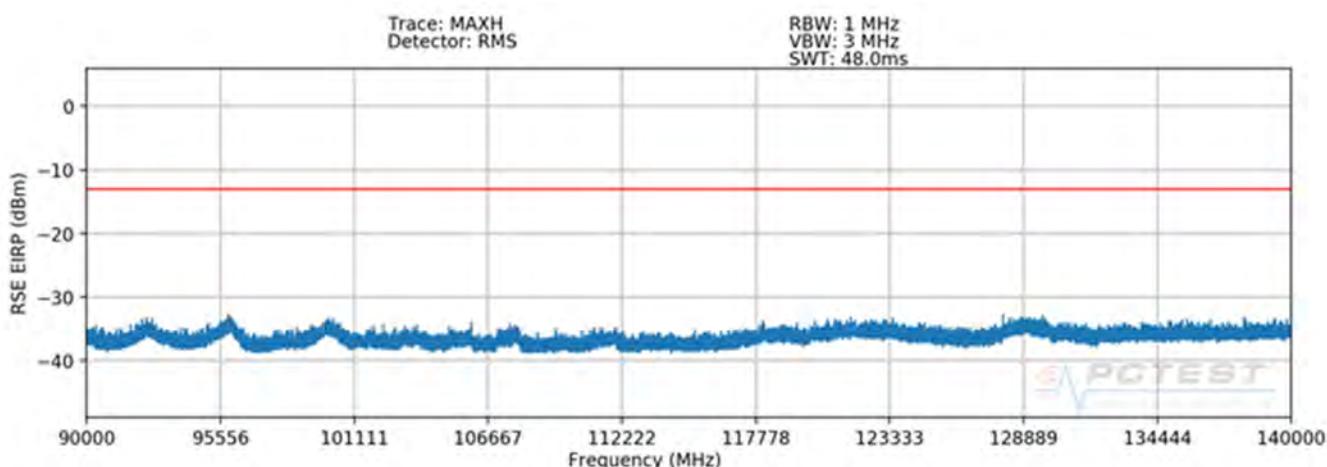
## 90 – 140GHz(n260)



Plot 7-375. L Patch Radiated Spurious Plot 90-140 GHz (1CC QPSK Low Channel H Beam – n260)

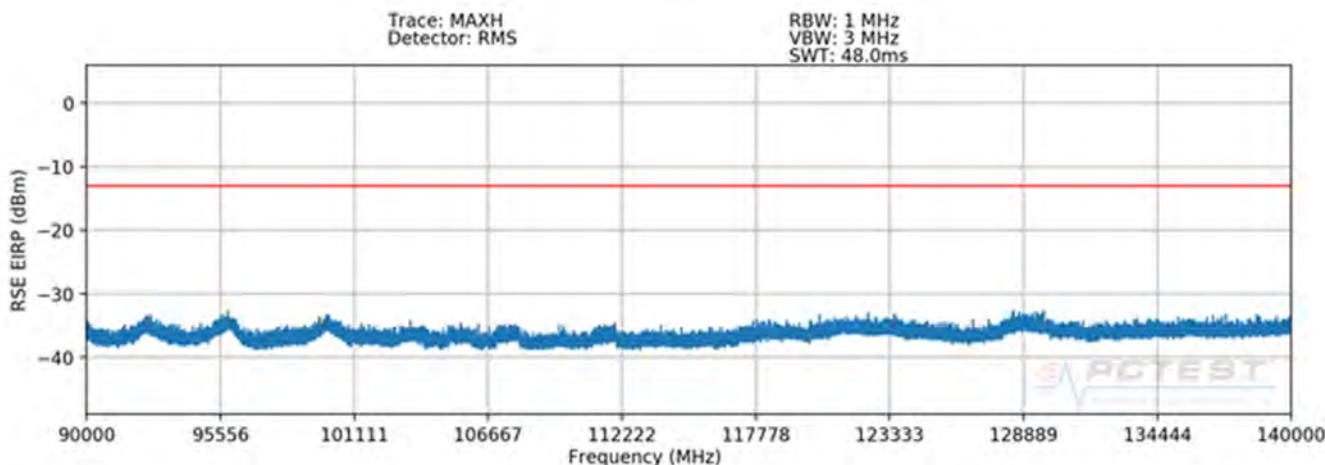


Plot 7-376. L Patch Radiated Spurious Plot 90-140 GHz (1CC QPSK Mid Channel H Beam – n260)

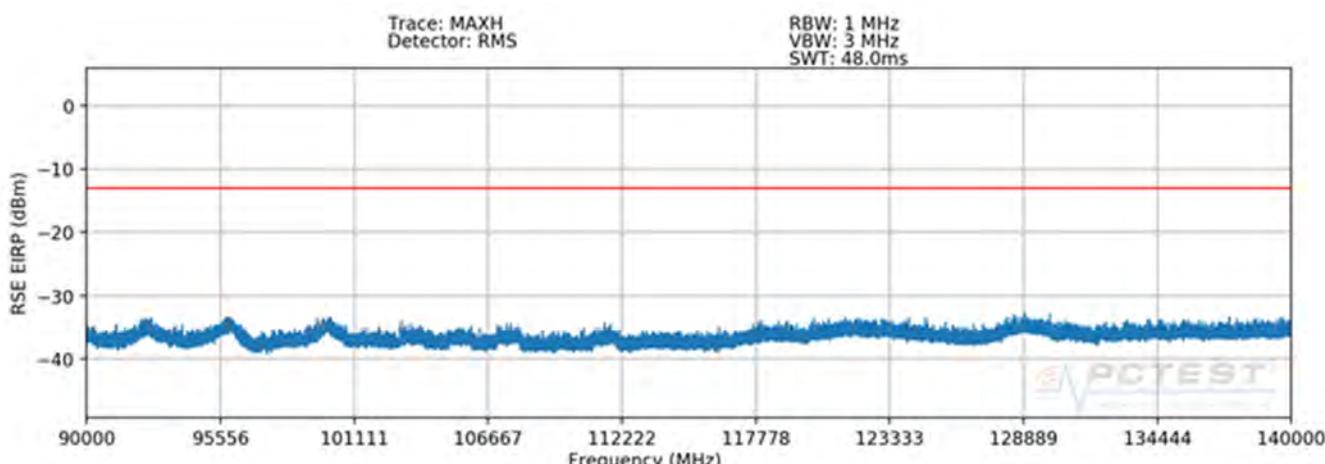


Plot 7-377. L Patch Radiated Spurious Plot 90-140 GHz (1CC QPSK High Channel H Beam – n260)

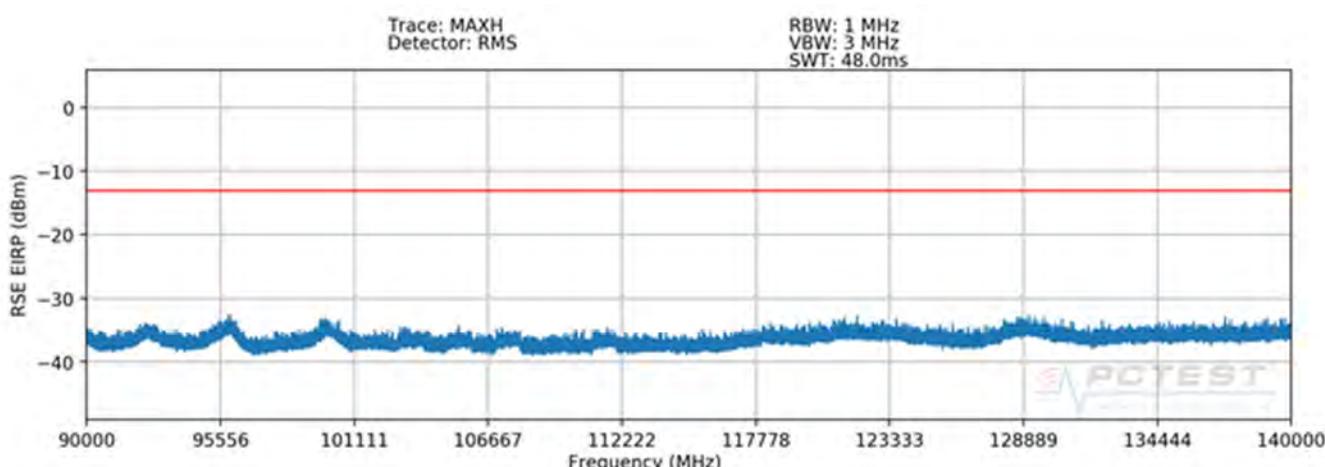
FCC ID: A3LSMN976V		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1905130071-06-R1.A3L	Test Dates: 05/14 - 07/12/2019	EUT Type: Portable Handset		Page 223 of 371



**Plot 7-378. L Patch Radiated Spurious Plot 90-140 GHz (1CC QPSK Low Channel V Beam – n260)**



**Plot 7-379. L Patch Radiated Spurious Plot 90-140 GHz (1CC QPSK Mid Channel V Beam – n260)**



**Plot 7-380. L Patch Radiated Spurious Plot 90-140 GHz (1CC QPSK High Channel V Beam – n260)**

FCC ID: A3LSMN976V	<b>PCTEST</b> ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1905130071-06-R1.A3L	Test Dates: 05/14 - 07/12/2019	EUT Type: Portable Handset		Page 224 of 371

## Spurious Emissions EIRP Sample Calculation(n260)

The raw radiated spurious level is converted to field strength in  $\text{dB}\mu\text{V/m}$ . Then, the RSE EIRP level is calculated by applying the additional factors shown below for a test distance of 1 meter.

**RSE EIRP [dBm]** = Analyzer Level [dBm] + 107 + AFCL[dB/m] + 20Log(Dm) + Harmonic Mixer Loss (dB) – 104.8

Frequency [MHz]	Detector/Trace	Chan.	Bandwidth (MHz)	Mod.	EUT Beam Polarization	Ant. Pos [H/V]	Turn Table Azimuth [degree]	Positioner Azimuth [degree]	RSE EIRP [dBm]	Limit [dBm]	Margin [dB]
99919.50	RMS/Avg	Low	50	QPSK	H	H	-	-	-39.63	-13.00	-26.63
99992.00	RMS/Avg	Mid	50	QPSK	H	H	-	-	-39.59	-13.00	-26.59
128890.50	RMS/Avg	High	50	QPSK	H	H	-	-	-39.63	-13.00	-26.63
99965.00	RMS/Avg	Low	50	QPSK	V	V	-	-	-39.64	-13.00	-26.64
99871.00	RMS/Avg	Mid	50	QPSK	V	V	-	-	-39.82	-13.00	-26.82
95947.00	RMS/Avg	High	50	QPSK	V	V	-	-	-39.69	-13.00	-26.69

**Table 7-68. L Patch Spurious Emissions Table (90-140GHz – n260)**

### Notes

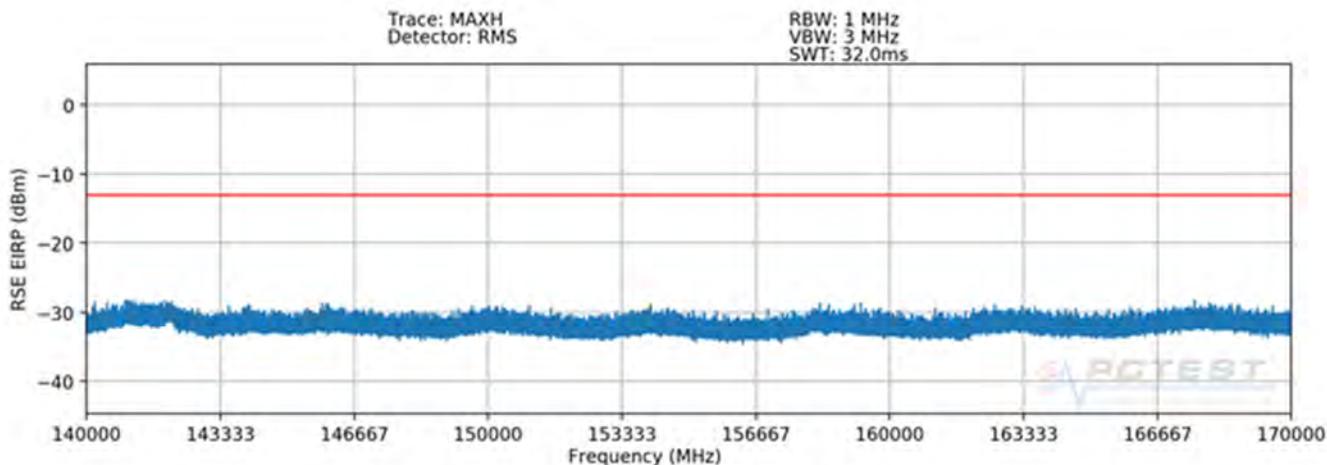
1. The RSE EIRP level is taken directly from the spectrum analyzer which includes the appropriate antenna factors, cable losses, and harmonic mixer conversion losses. Measurements were performed at a distance of 1 meter.
2. To address compliance of MIMO RSE per KDB 662911 D01, the MIMO RSE EIRP is calculated by summing the worst case H Beam EIRP and V Beam EIRP in linear powers units then converted back to dBm:

$$\text{EIRP(H Beam)} + \text{EIRP(V Beam)} = \text{EIRP(MIMO)}$$

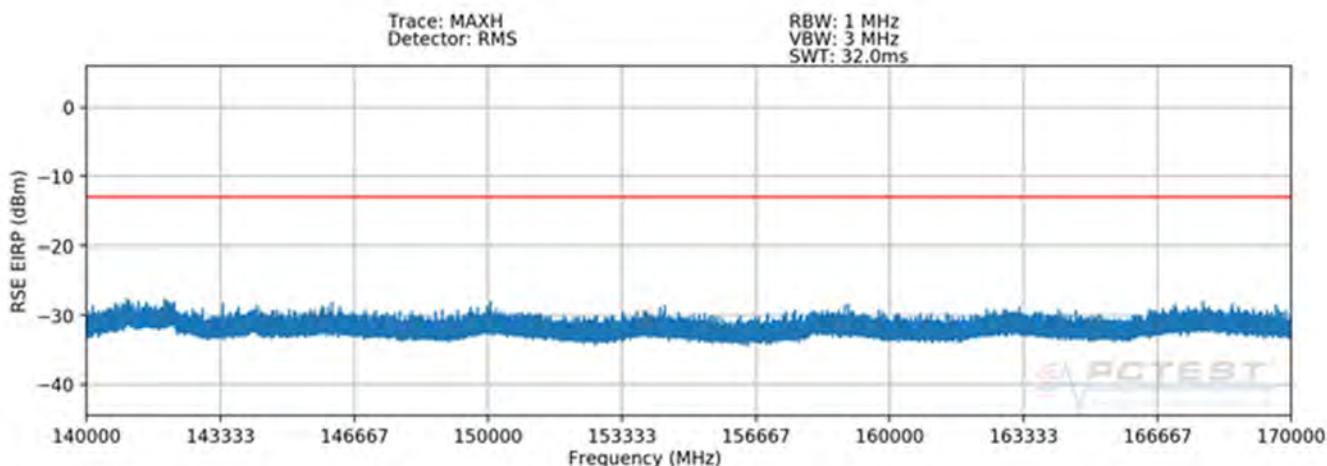
$$(-39.63 \text{ dBm} + -39.64 \text{ dBm}) = (108.94 \text{ nW} + 108.64 \text{ nW}) = (215.59 \text{ nW}) = -36.62 \text{ dBm}$$

FCC ID: A3LSMN976V		MEASUREMENT REPORT (CERTIFICATION)				Approved by: Quality Manager
Test Report S/N: 1M1905130071-06-R1.A3L	Test Dates: 05/14 - 07/12/2019	EUT Type: Portable Handset				Page 225 of 371

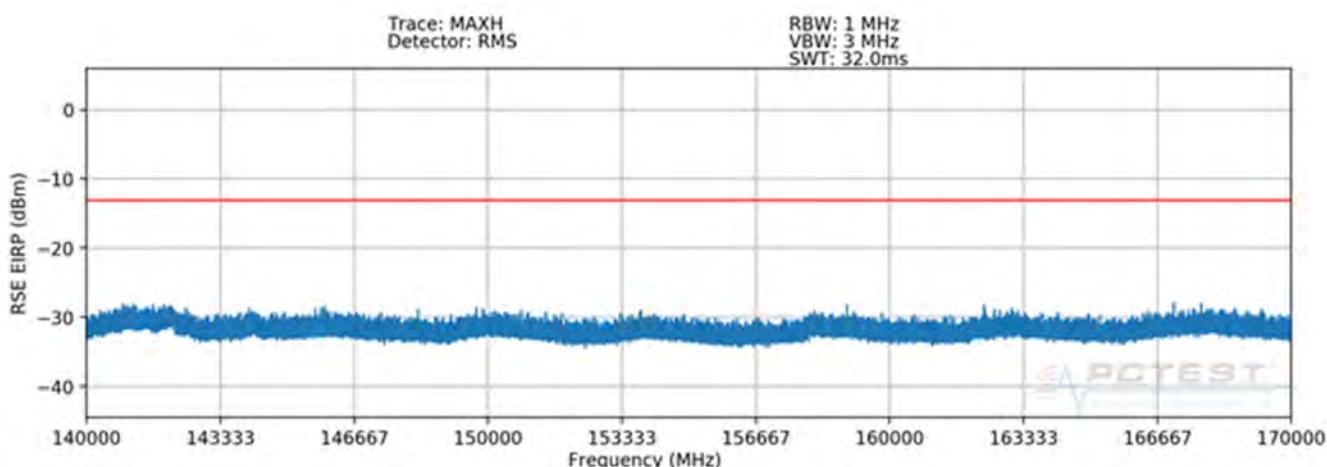
## 140 – 170GHz(n260)



Plot 7-381. L Patch Radiated Spurious Plot 140-170 GHz (1CC QPSK Low Channel H Beam – n260)

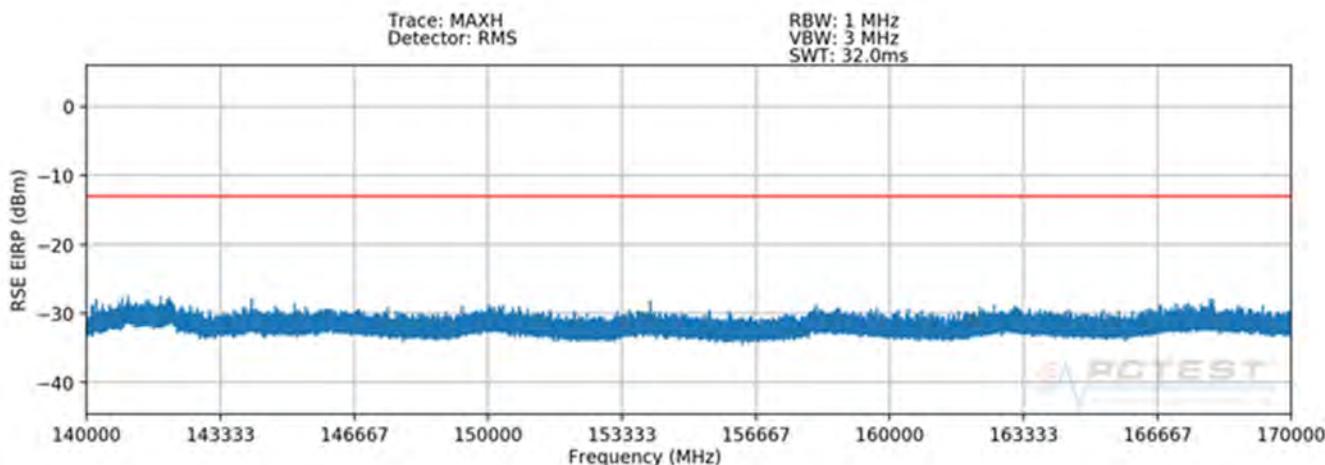


Plot 7-382. L Patch Radiated Spurious Plot 140-170 GHz (1CC QPSK Mid Channel H Beam – n260)

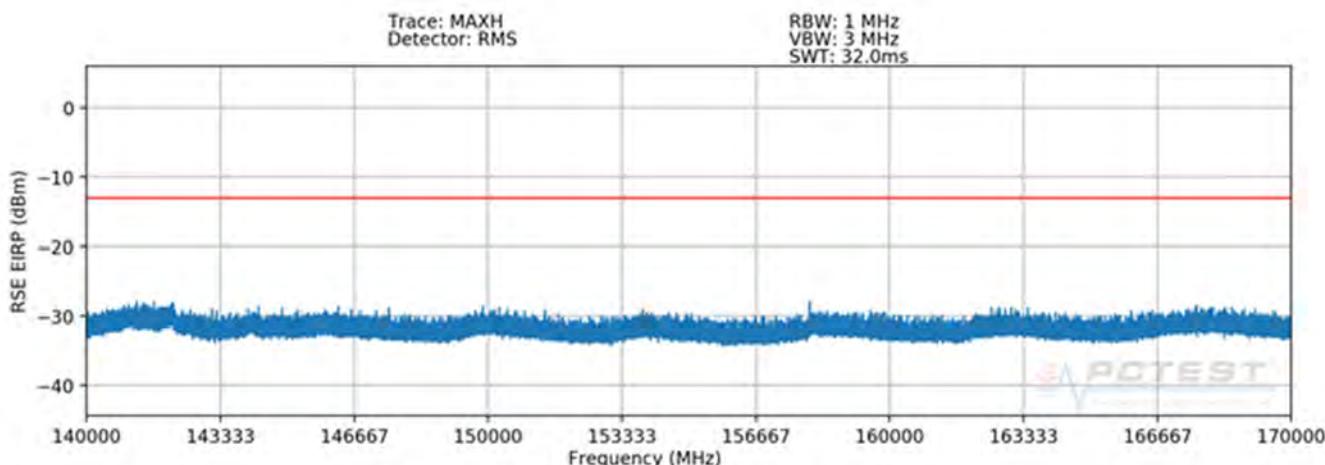


Plot 7-383. L Patch Radiated Spurious Plot 140-170 GHz (1CC QPSK High Channel H Beam – n260)

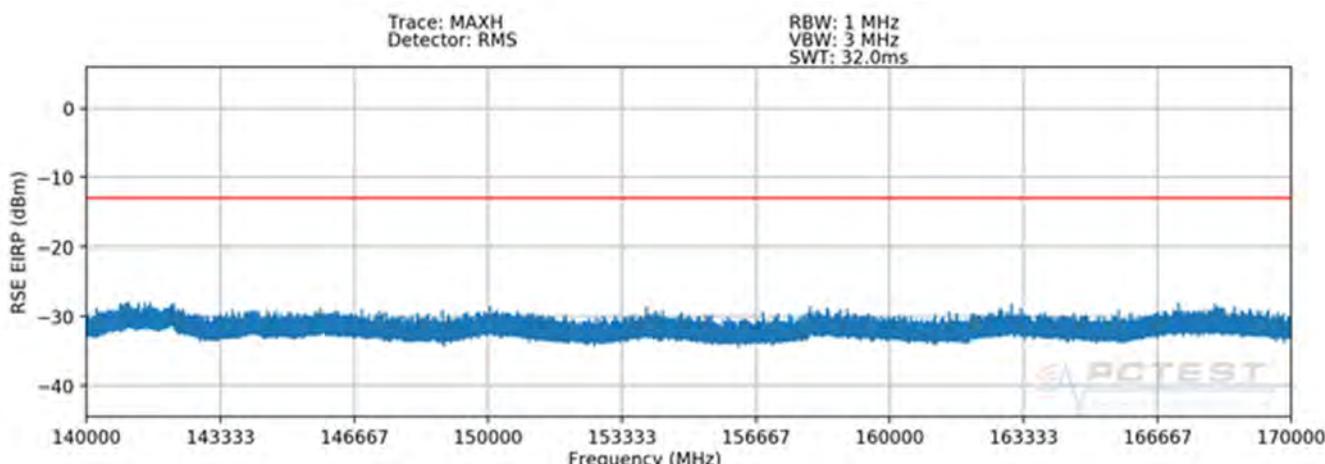
FCC ID: A3LSMN976V		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1905130071-06-R1.A3L	Test Dates: 05/14 - 07/12/2019	EUT Type: Portable Handset		Page 226 of 371



Plot 7-384. L Patch Radiated Spurious Plot 140-170 GHz (1CC QPSK Low Channel V Beam – n260)



Plot 7-385. L Patch Radiated Spurious Plot 140-170 GHz (1CC QPSK Mid Channel V Beam – n260)



Plot 7-386. L Patch Radiated Spurious Plot 140-170 GHz (1CC QPSK High Channel V Beam – n260)

FCC ID: A3LSMN976V	<b>PCTEST</b> ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1905130071-06-R1.A3L	Test Dates: 05/14 - 07/12/2019	EUT Type: Portable Handset		Page 227 of 371

## Spurious Emissions EIRP Sample Calculation(n260)

The raw radiated spurious level is converted to field strength in dB $\mu$ V/m. Then, the RSE EIRP level is calculated by applying the additional factors shown below for a test distance of 1 meter.

**RSE EIRP [dBm]** = Analyzer Level [dBm] + 107 + AFCL[dB/m] + 20Log(Dm) + Harmonic Mixer Loss (dB) – 104.8

Frequency [MHz]	Detector/Trace	Chan.	Bandwidth (MHz)	Mod.	EUT Beam Polarization	Ant. Pos [H/V]	Turn Table Azimuth [degree]	Positioner Azimuth [degree]	RSE EIRP [dBm]	Limit [dBm]	Margin [dB]
142145.00	RMS/Avg	Low	50	QPSK	H	H	-	-	-34.79	-13.00	-21.79
142108.00	RMS/Avg	Mid	50	QPSK	H	H	-	-	-34.66	-13.00	-21.66
142111.00	RMS/Avg	High	50	QPSK	H	H	-	-	-34.77	-13.00	-21.77
142079.00	RMS/Avg	Low	50	QPSK	V	V	-	-	-34.68	-13.00	-21.68
142133.50	RMS/Avg	Mid	50	QPSK	V	V	-	-	-34.79	-13.00	-21.79
142097.50	RMS/Avg	High	50	QPSK	V	V	-	-	-34.88	-13.00	-21.88

**Table 7-69. L Patch Spurious Emissions Table (140-170GHz – n260)**

### Notes

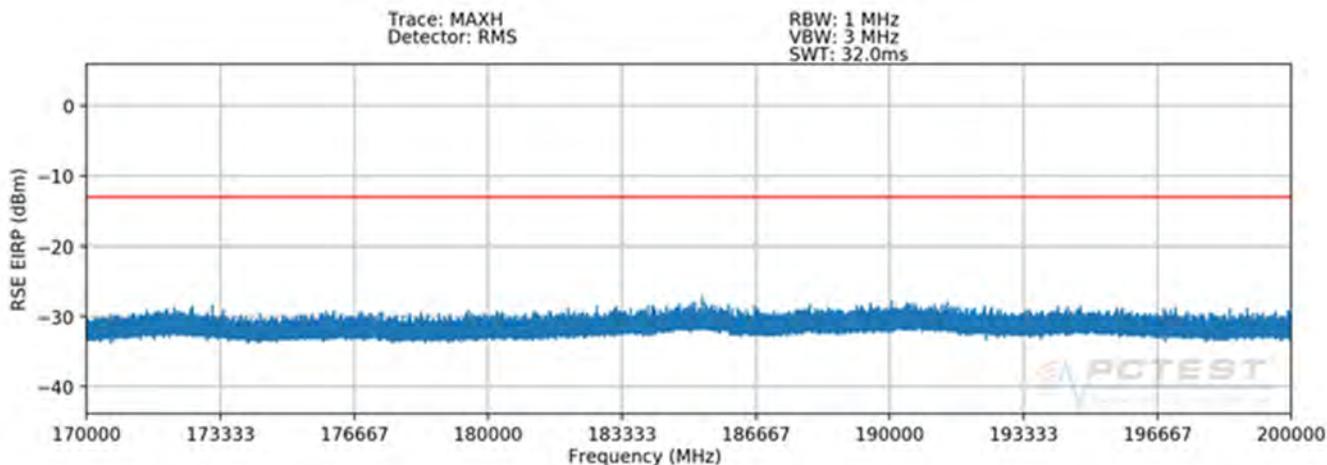
1. The RSE EIRP level is taken directly from the spectrum analyzer which includes the appropriate antenna factors, cable losses, and harmonic mixer conversion losses. Measurements were performed at a distance of 1 meter.
2. To address compliance of MIMO RSE per KDB 662911 D01, the MIMO RSE EIRP is calculated by summing the worst case H Beam EIRP and V Beam EIRP in linear powers units then converted back to dBm:

$$\text{EIRP(H Beam)} + \text{EIRP(V Beam)} = \text{EIRP(MIMO)}$$

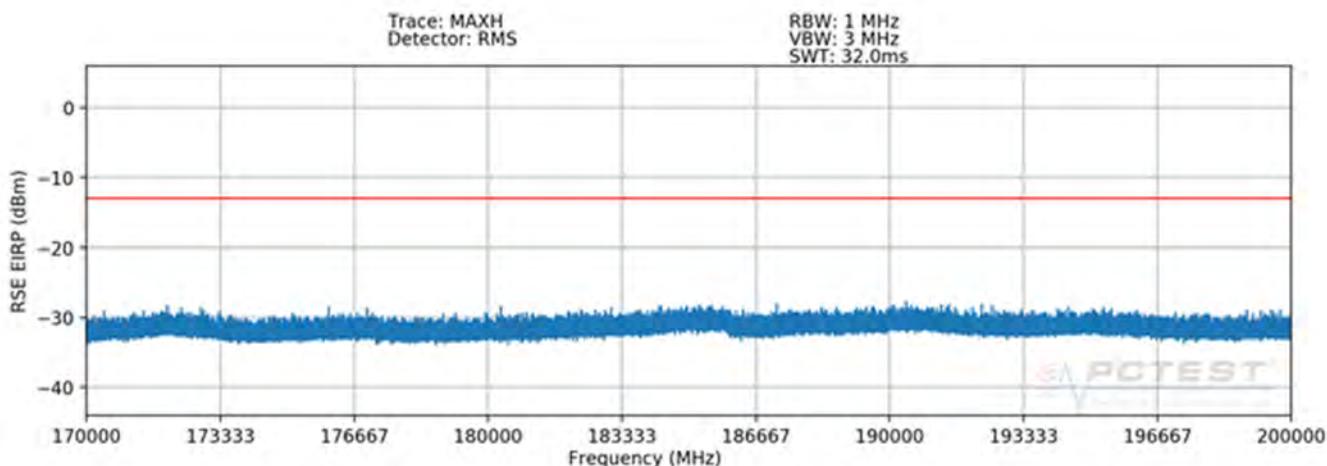
$$(-34.66 \text{ dBm} + -34.79 \text{ dBm}) = (341.98 \text{ nW} + 331.67 \text{ nW}) = (673.64 \text{ nW}) = -31.72 \text{ dBm}$$

FCC ID: A3LSMN976V		MEASUREMENT REPORT (CERTIFICATION)				Approved by: Quality Manager
Test Report S/N: 1M1905130071-06-R1.A3L	Test Dates: 05/14 - 07/12/2019	EUT Type: Portable Handset			Page 228 of 371	

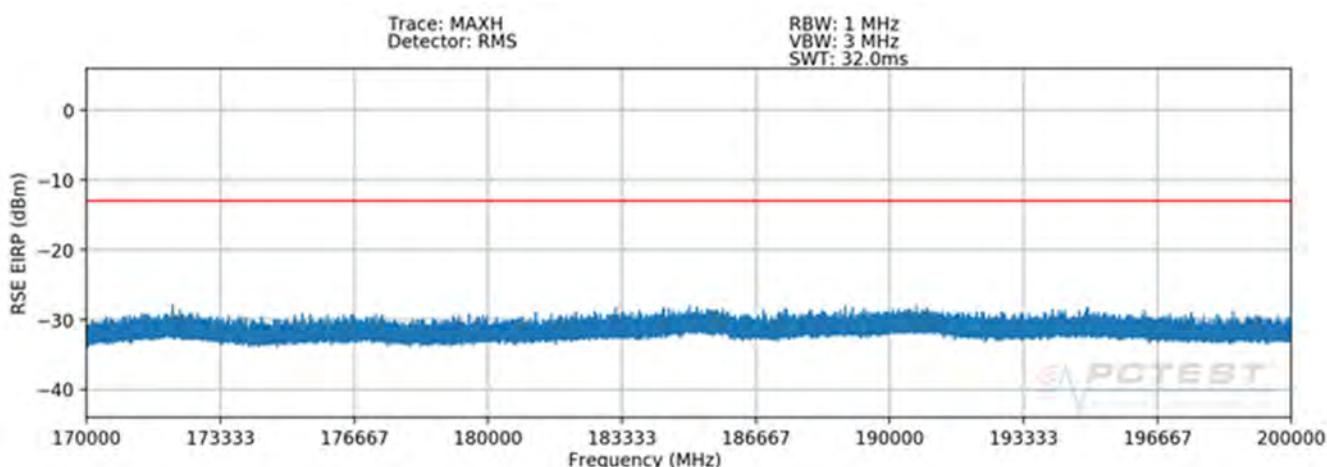
## 170 – 200GHz(n260)



Plot 7-387. L Patch Radiated Spurious Plot 170-200 GHz (1CC QPSK Low Channel H Beam – n260)

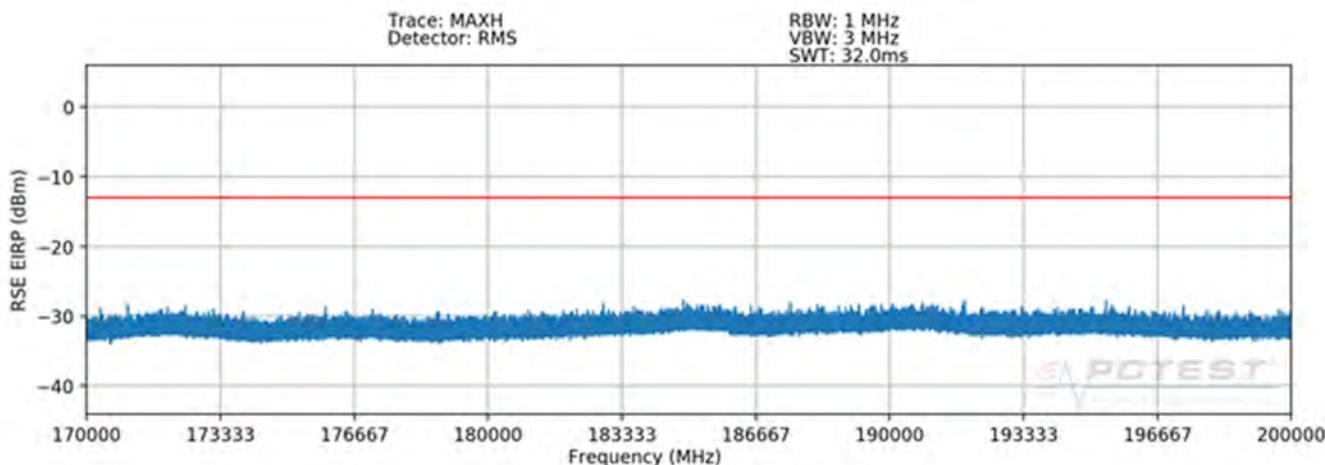


Plot 7-388. L Patch Radiated Spurious Plot 170-200 GHz (1CC QPSK Mid Channel H Beam – n260)

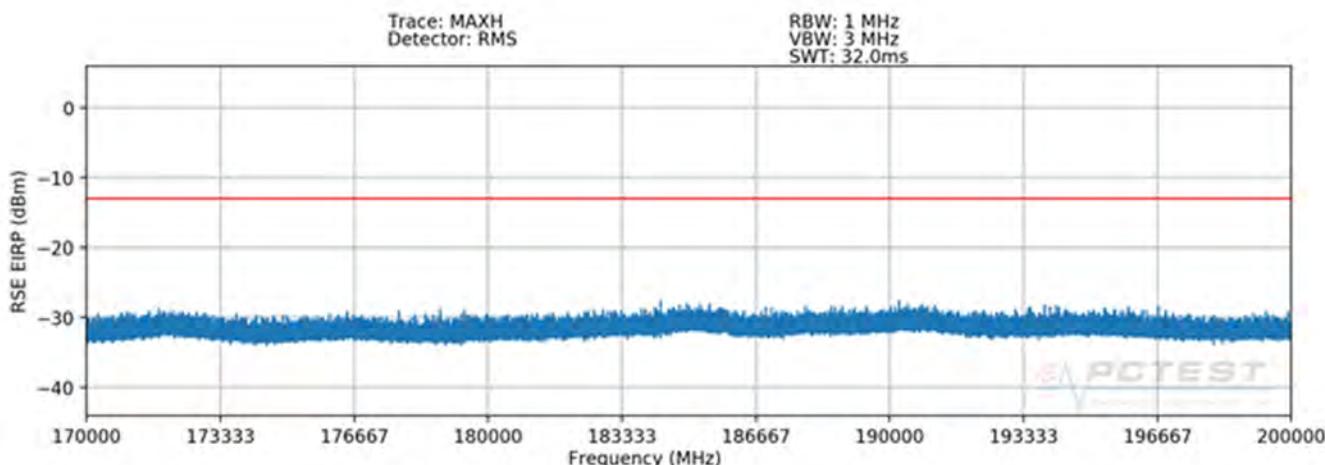


Plot 7-389. L Patch Radiated Spurious Plot 170-200 GHz (1CC QPSK High Channel H Beam – n260)

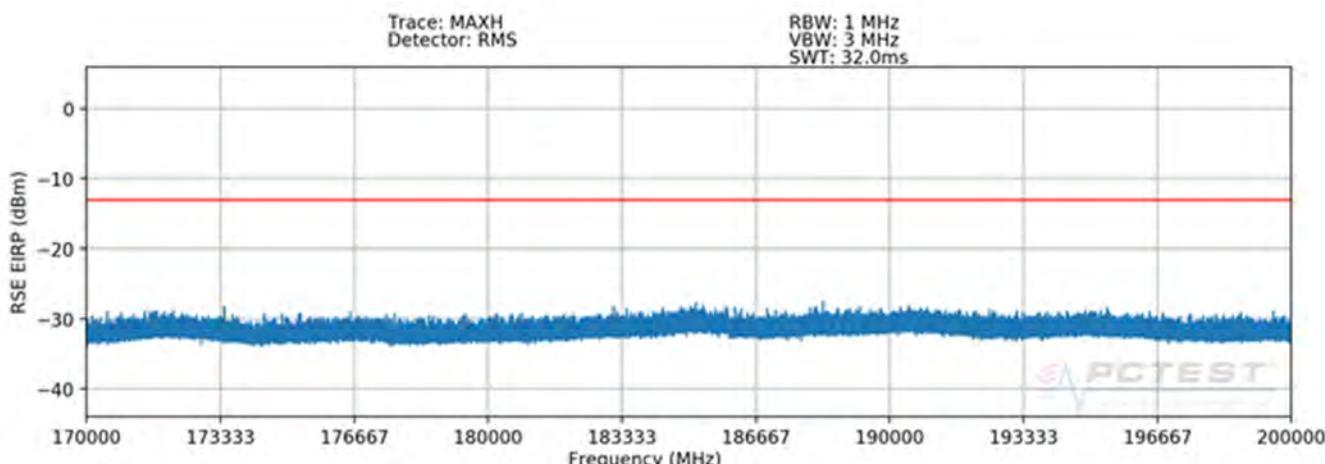
FCC ID: A3LSMN976V		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1905130071-06-R1.A3L	Test Dates: 05/14 - 07/12/2019	EUT Type: Portable Handset		Page 229 of 371



Plot 7-390. L Patch Radiated Spurious Plot 170-200 GHz (1CC QPSK Low Channel V Beam – n260)



Plot 7-391. L Patch Radiated Spurious Plot 170-200 GHz (1CC QPSK Mid Channel V Beam – n260)



Plot 7-392. L Patch Radiated Spurious Plot 170-200 GHz (1CC QPSK High Channel V Beam – n260)

FCC ID: A3LSMN976V	<b>PCTEST</b> ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1905130071-06-R1.A3L	Test Dates: 05/14 - 07/12/2019	EUT Type: Portable Handset		Page 230 of 371

## Spurious Emissions EIRP Sample Calculation(n260)

The raw radiated spurious level is converted to field strength in  $\text{dB}\mu\text{V}/\text{m}$ . Then, the RSE EIRP level is calculated by applying the additional factors shown below for a test distance of 1 meter.

**RSE EIRP [dBm]** = Analyzer Level [dBm] + 107 + AFCL[dB/m] + 20Log(Dm) + Harmonic Mixer Loss (dB) – 104.8

Frequency [MHz]	Detector/Trace	Chan.	Bandwidth (MHz)	Mod.	EUT Beam Polarization	Ant. Pos [H/V]	Turn Table Azimuth [degree]	Positioner Azimuth [degree]	RSE EIRP [dBm]	Limit [dBm]	Margin [dB]
190527.00	RMS/Avg	Low	50	QPSK	H	H	-	-	-35.20	-13.00	-22.20
191112.50	RMS/Avg	Mid	50	QPSK	H	H	-	-	-35.24	-13.00	-22.24
190984.50	RMS/Avg	High	50	QPSK	H	H	-	-	-35.28	-13.00	-22.28
190706.50	RMS/Avg	Low	50	QPSK	V	V	-	-	-34.91	-13.00	-21.91
191218.00	RMS/Avg	Mid	50	QPSK	V	V	-	-	-35.09	-13.00	-22.09
190528.50	RMS/Avg	High	50	QPSK	V	V	-	-	-35.52	-13.00	-22.52

**Table 7-70. L Patch Spurious Emissions Table (170-200GHz – n260)**

### Notes

1. The RSE EIRP level is taken directly from the spectrum analyzer which includes the appropriate antenna factors, cable losses, and harmonic mixer conversion losses. Measurements were performed at a distance of 1 meter.
2. To address compliance of MIMO RSE per KDB 662911 D01, the MIMO RSE EIRP is calculated by summing the worst case H Beam EIRP and V Beam EIRP in linear powers units then converted back to dBm:

$$\text{EIRP(H Beam)} + \text{EIRP(V Beam)} = \text{EIRP(MIMO)}$$

$$(-35.20 \text{ dBm} + -34.91 \text{ dBm}) = (301.79 \text{ nW} + 322.78 \text{ nW}) = (624.56 \text{ nW}) = -32.04 \text{ dBm}$$

FCC ID: A3LSMN976V		MEASUREMENT REPORT (CERTIFICATION)			Approved by: Quality Manager
Test Report S/N: 1M1905130071-06-R1.A3L	Test Dates: 05/14 - 07/12/2019	EUT Type: Portable Handset			Page 231 of 371

## 7.5 Band Edge Emissions

§2.1051, §30.203

### Test Overview

All out of band emissions are measured in a radiated setup while the EUT is operating at its maximum duty cycle, at maximum power, and at the appropriate frequencies. All modulations were investigated to determine the worst case configuration. All modes of operation were investigated and the worst case configuration results are reported in this section.

***The minimum permissible attenuation level of any spurious emission is -13dBm/1MHz. However, in the bands immediately outside and adjacent to the licensee's frequency block, having a bandwidth equal to 10 percent of the channel bandwidth, the conductive power or the total radiated power of any emission shall be -5 dBm/MHz or lower.***

### Test Procedure Used

ANSI C63.26-2015 Section 5 and ANSI C63.26-2015 Section 6.4  
KDB 842590 D01 v01 Section 4.4.2.5

### Test Settings

1. Start and stop frequency were set such that both upper and lower band edges are measured.
2. Span was set large enough so as to capture all out of band emissions near the band edge
3. RBW = 1MHz
4. VBW  $\geq$  3 x RBW
5. Detector = RMS
6. Number of sweep points  $\geq$  2 x Span/RBW
7. Trace mode = trace average
8. Sweep time = auto couple
9. The trace was allowed to stabilize

### Test Notes

- 1) The EUT was tested in three orthogonal planes and in all possible test configurations and positioning.
- 2) Band Edge measurements in this section are shown as equivalent conductive powers for direct comparison to the 30.203 limit. The conductive power at the band edge is calculated by subtracting the gain of the EUT's antenna from the measured EIRP level. Antenna Gain information is shown on the following page.
- 3) Band Edge emissions were measured at a 1 meter distance.
- 4) The spectrum analyzer for each measurement shows an offset value that was determined using the measurement antenna factor, cable loss, far field measurement distance, and EUT antenna gain. A sample calculation is shown on the following page.
- 5) MIMO Band Edge plots shown below are mathematically summed conductive powers between spectrum analyzer measurements on H Beam and V Beam. This MIMO bandedge plot was produced by summing the following two spectrum analyzer traces: (1) the first trace is maximized while the EUT is transmitting in H-beam and (2) the second trace is maximized while the EUT is transmitting in V-beam.
- 6) The MIMO Band Edges were calculated by using the "measure and sum the spectra across the outputs" technique specified in Section 6.4.3.2.2 of ANSI C63.26-2015. The spectra were summed linearly and converted to dBm for comparison with the limit.

FCC ID: A3LSMN976V		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1905130071-06-R1.A3L	Test Dates: 05/14 - 07/12/2019	EUT Type: Portable Handset		Page 232 of 371

## 7.5.1 Antenna Gain Information at the Band Edge

The following antenna gain information is provided to demonstrate the antenna performance of the 27.5 – 28.35GHz and 37 – 40GHz band. These antenna gains were subtracted from the measured EIRP levels at the lower and upper band edge frequencies to determine an equivalent conductive power that was compared directly with the §30.203 limits.

Antenna	Channel	Beam Polarization	Beam ID	Gain (dBi)
J Dipole	Low	H	5	6.60
		V	133	6.88
	High	H	16	6.16
		V	133	6.93
J Patch	Low	H	25	10.94
		V	154	10.31
	High	H	25	10.34
		V	168	10.72
K Patch	Low	H	44	8.64
		V	173	10.15
	High	H	30	9.40
		V	160	9.04
L Patch	Low	H	48	8.86
		V	163	10.53
	High	H	48	9.79
		V	176	9.38

Table 7-71. Antenna Gains at the Band Edges(n261)

Antenna	Channel	Beam Polarization	Beam ID	Gain (dBi)
J Dipole	Low	H	5	7.95
		V	145	8.07
	High	H	5	7.99
		V	145	8.94
J Patch	Low	H	26	10.62
		V	168	11.87
	High	H	26	10.06
		V	168	11.20
K Patch	Low	H	30	11.60
		V	172	9.57
	High	H	31	10.49
		V	172	9.40
L Patch	Low	H	35	11.26
		V	176	10.01
	High	H	35	10.89
		V	176	10.84

Table 7-72. Antenna Gains at the Band Edges(n260)

FCC ID: A3LSMN976V		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1905130071-06-R1.A3L	Test Dates: 05/14 - 07/12/2019	EUT Type: Portable Handset		Page 233 of 371

### Sample Analyzer Offset Calculation (at 27.5GHz)

Measurement Antenna Factor = 40.70dB/m

Cable Loss = 8.82dB

EUT Antenna Gain = 6.60dBi

Analyzer Offset (dB) = AF (dB/m) + CL (dB) + 107 + 20log<sub>10</sub>(D) – 104.8dB – Gain (dBi), where D = 1m

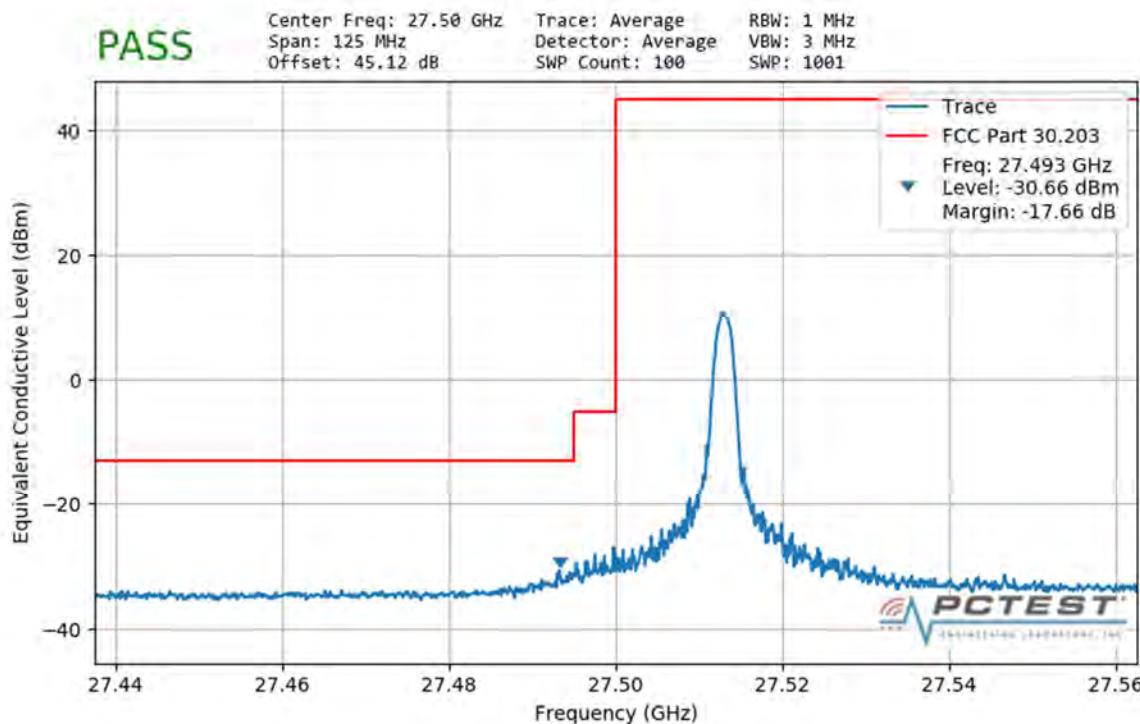
$$\begin{aligned}
 &= 40.70\text{dB/m} + 8.82\text{dB} + 107 + 20\log_{10}(1\text{m}) - 104.8\text{dB} - 6.60\text{dBi} \\
 &= 45.12\text{dB}
 \end{aligned}$$

FCC ID: A3LSMN976V	MEASUREMENT REPORT (CERTIFICATION)			Approved by: Quality Manager
Test Report S/N: 1M1905130071-06-R1.A3L	Test Dates: 05/14 - 07/12/2019	EUT Type: Portable Handset		Page 234 of 371

## 7.5.2 n261 Band Edge J Dipole MIMO(n261)

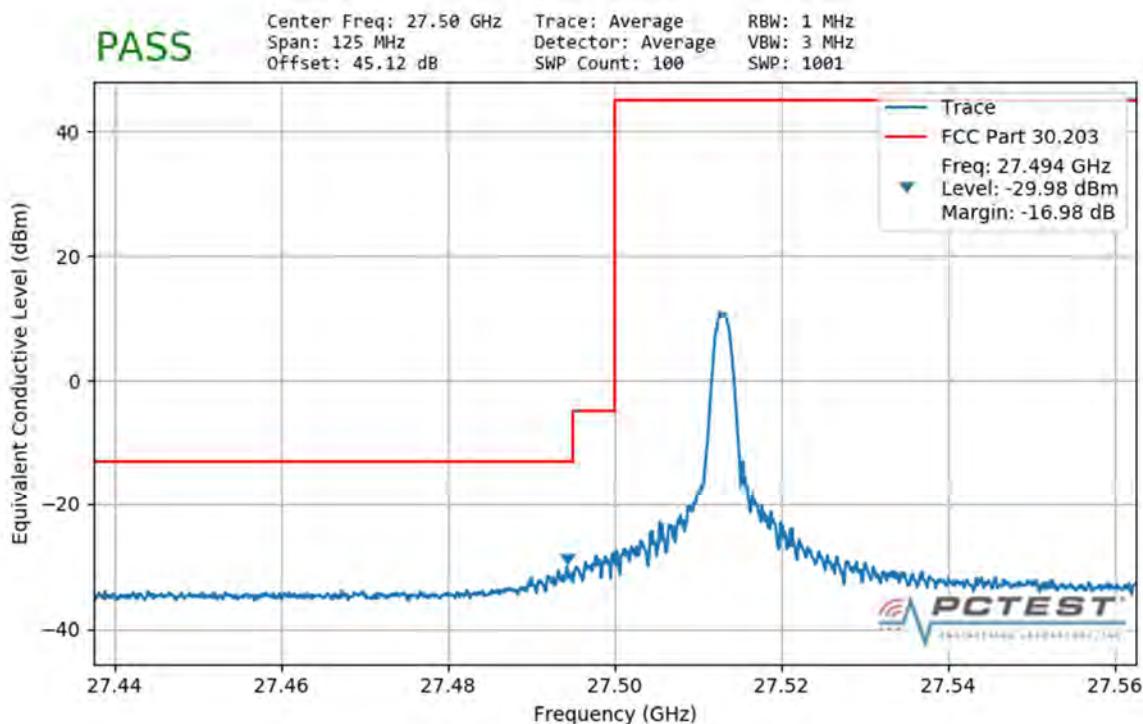


Plot 7-393. Lower Band Edge Plot (1CC 50MHz QPSK Full RB)

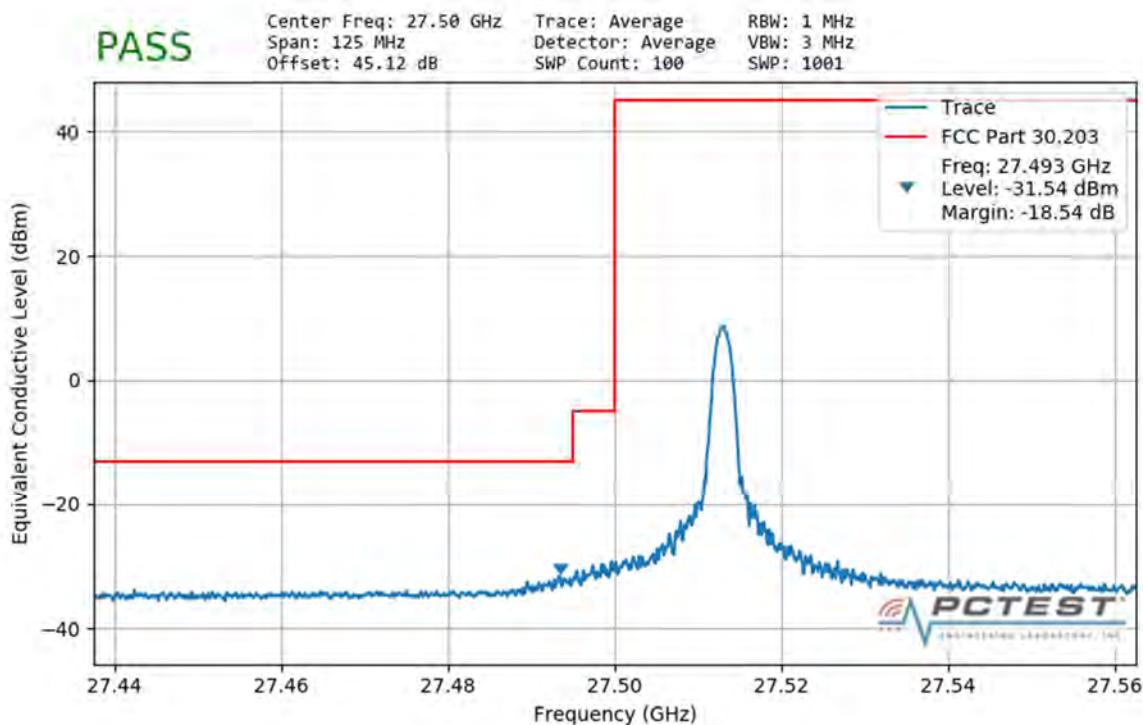


Plot 7-394. Lower Band Edge Plot (1CC 50MHz QPSK 1 RB)

FCC ID: A3LSMN976V		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1905130071-06-R1.A3L	Test Dates: 05/14 - 07/12/2019	EUT Type: Portable Handset		Page 235 of 371

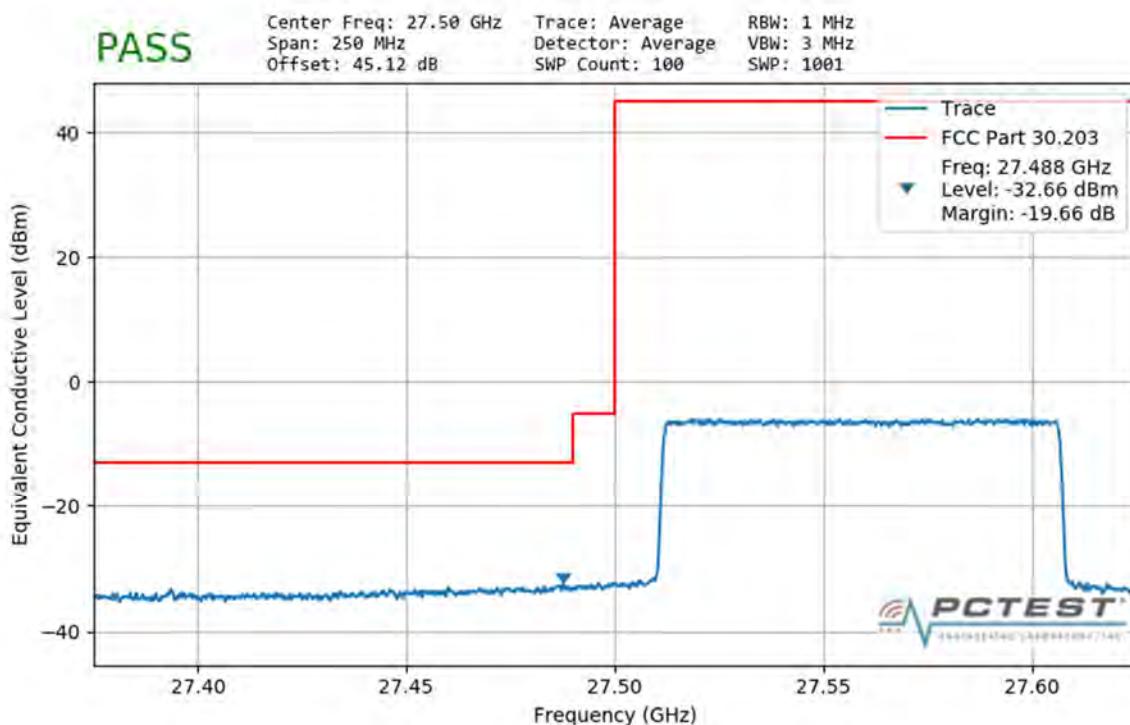


Plot 7-395. Lower Band Edge Plot (1CC 50MHz 16QAM 1 RB)

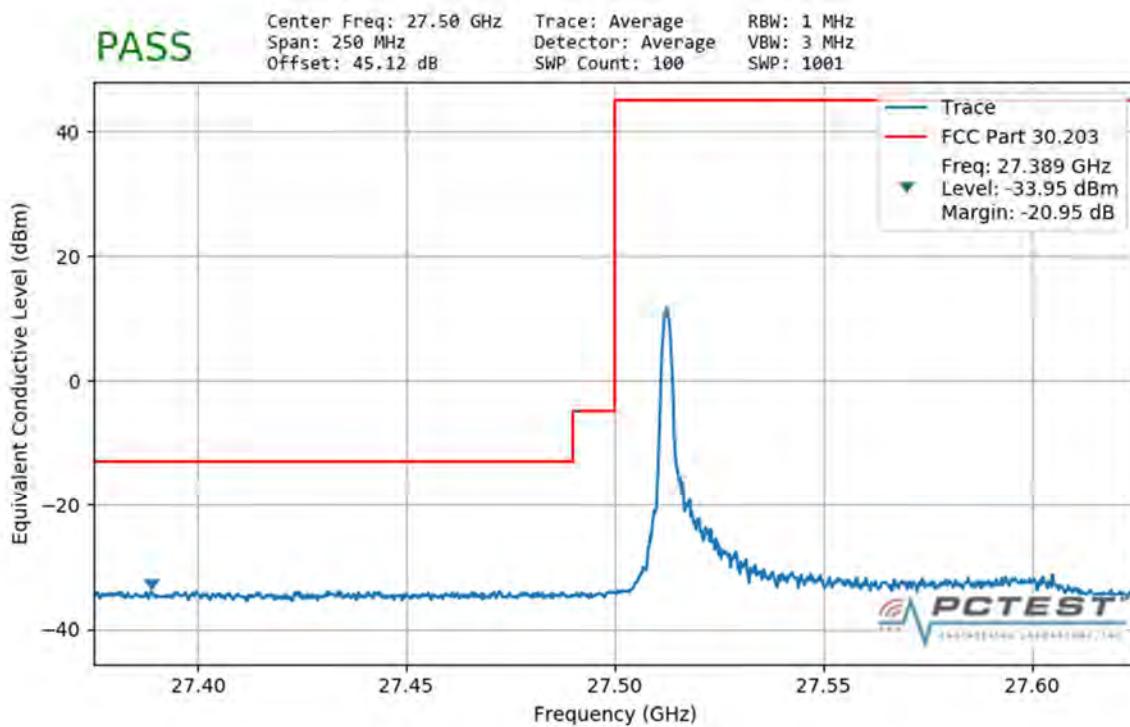


Plot 7-396. Lower Band Edge Plot (1CC 50MHz 64QAM 1 RB)

FCC ID: A3LSMN976V	<b>PCTEST</b>	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1905130071-06-R1.A3L	Test Dates: 05/14 - 07/12/2019	EUT Type: Portable Handset		Page 236 of 371



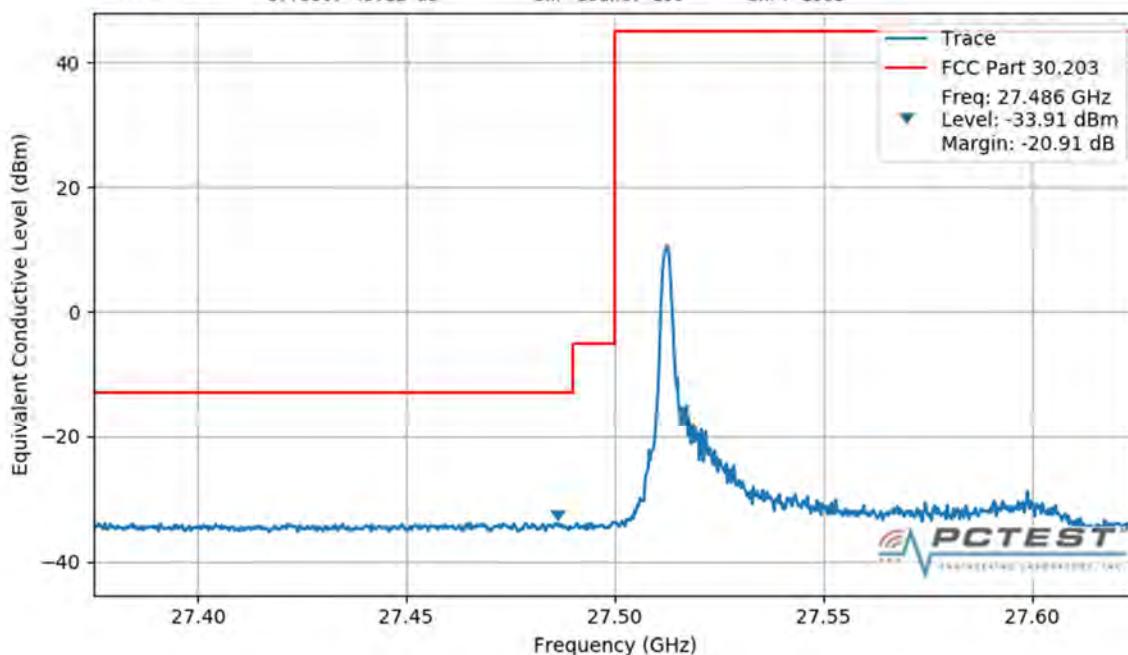
Plot 7-397. Lower Band Edge Plot (1CC 100MHz QPSK Full RB)

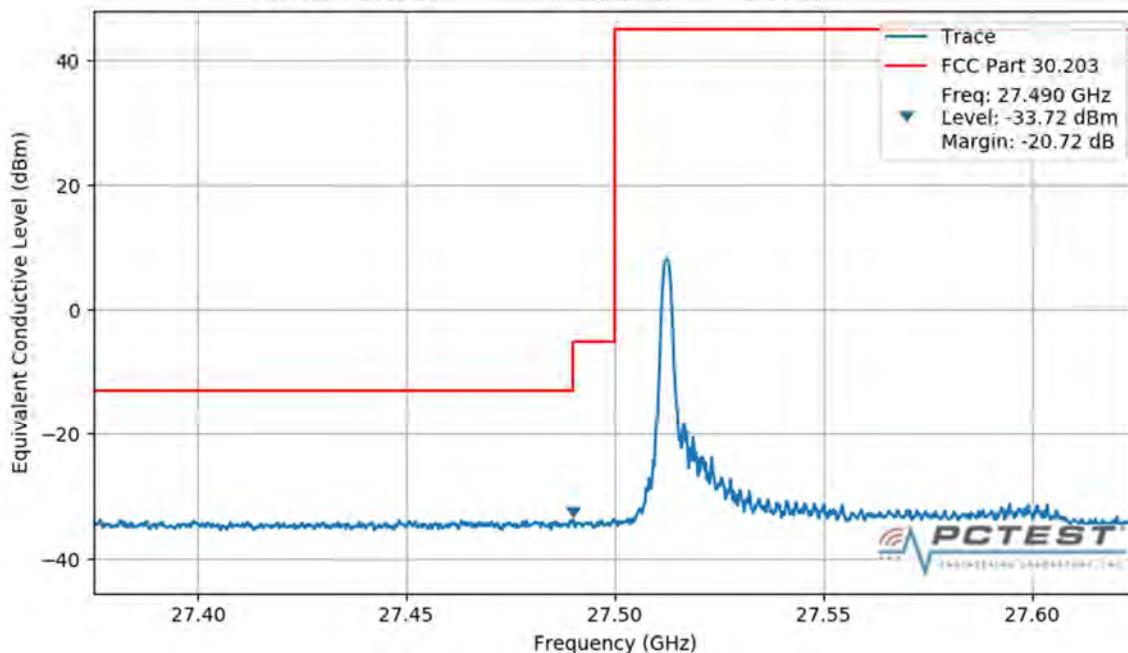


Plot 7-398. Lower Band Edge Plot (1CC 100MHz QPSK 1 RB)

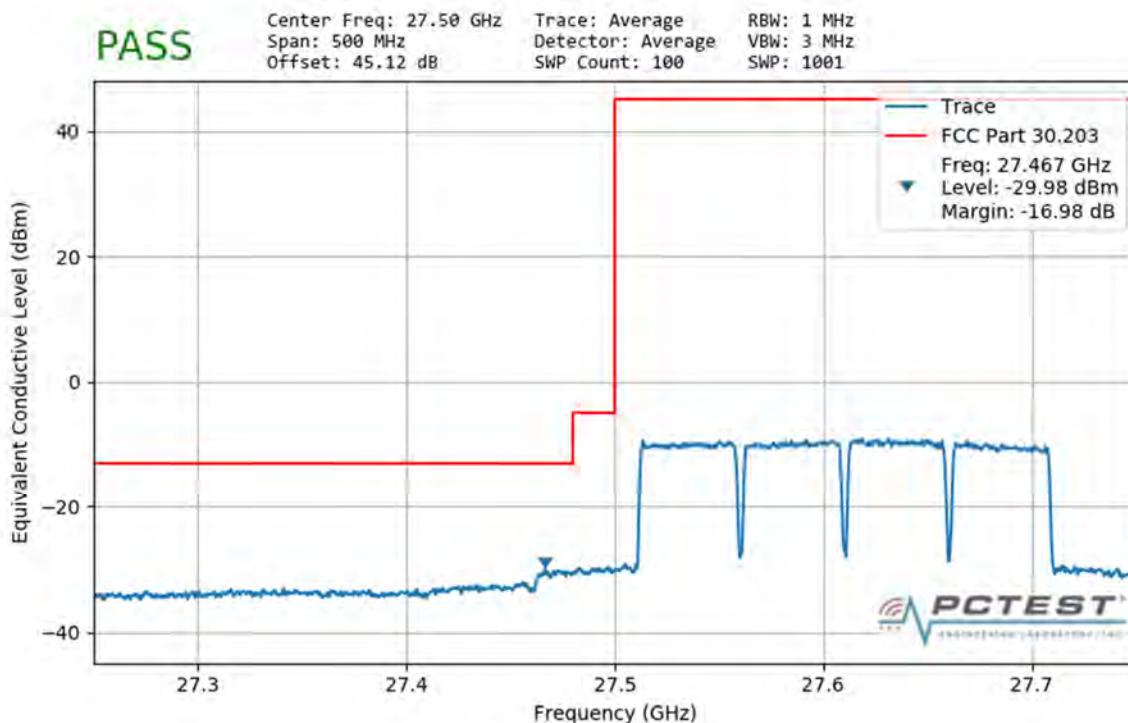
FCC ID: A3LSMN976V	<b>PCTEST</b>	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1905130071-06-R1.A3L	Test Dates: 05/14 - 07/12/2019	EUT Type: Portable Handset		Page 237 of 371

**PASS**

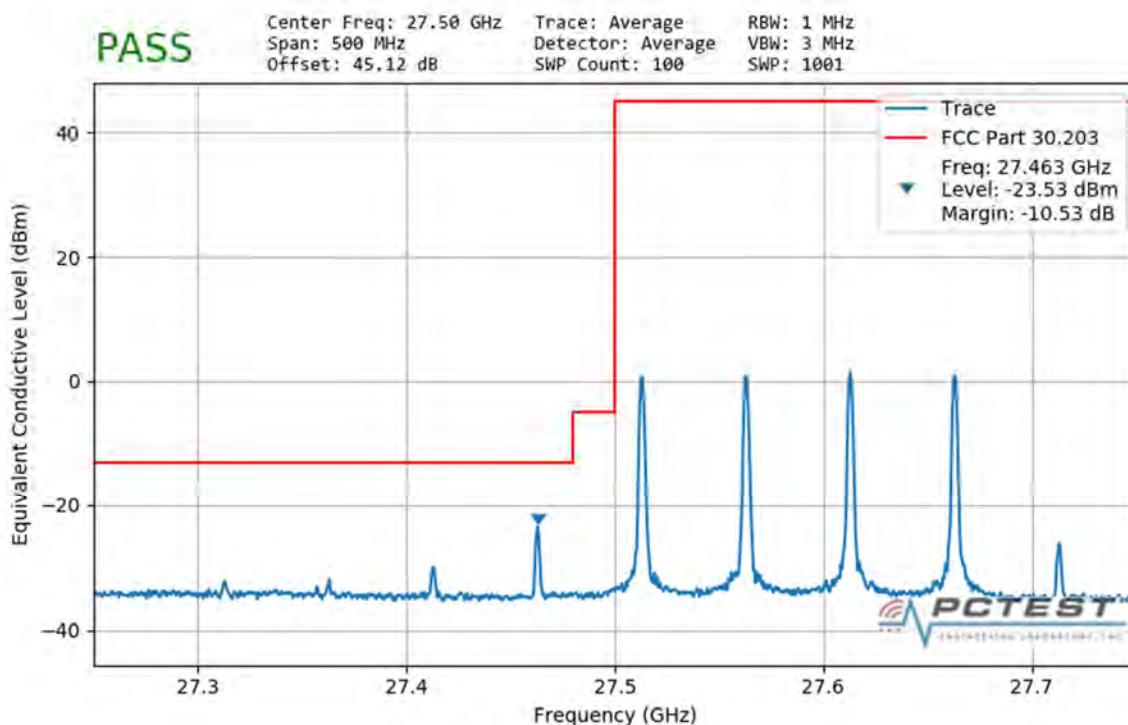
 Center Freq: 27.50 GHz Trace: Average  
 Span: 250 MHz Detector: Average  
 Offset: 45.12 dB SWP Count: 100  
 RBW: 1 MHz VBW: 3 MHz  
 SWP: 1001

**Plot 7-399. Lower Band Edge Plot (1CC 100MHz 16QAM 1 RB)**
**PASS**

 Center Freq: 27.50 GHz Trace: Average  
 Span: 250 MHz Detector: Average  
 Offset: 45.12 dB SWP Count: 100  
 RBW: 1 MHz VBW: 3 MHz  
 SWP: 1001

**Plot 7-400. Lower Band Edge Plot (1CC 100MHz 64QAM 1 RB)**

FCC ID: A3LSMN976V		MEASUREMENT REPORT (CERTIFICATION)			Approved by: Quality Manager
Test Report S/N: 1M1905130071-06-R1.A3L	Test Dates: 05/14 - 07/12/2019	EUT Type: Portable Handset			Page 238 of 371

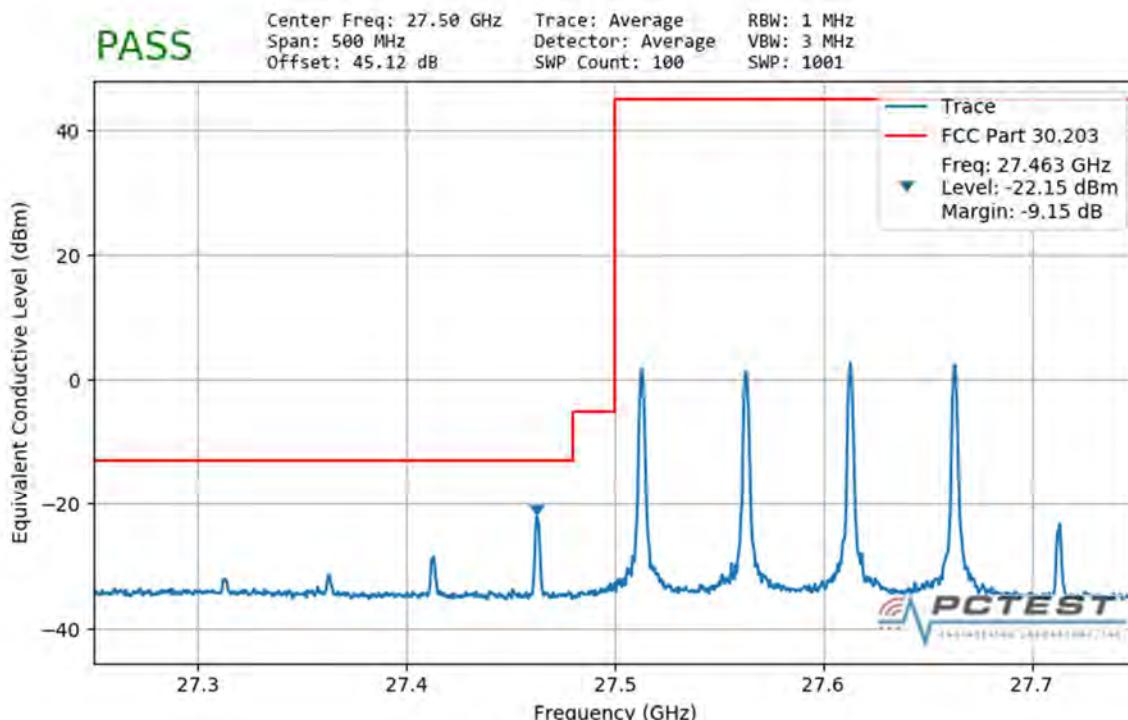


Plot 7-401. Lower Band Edge Plot (4CC 200MHz QPSK Full RB)

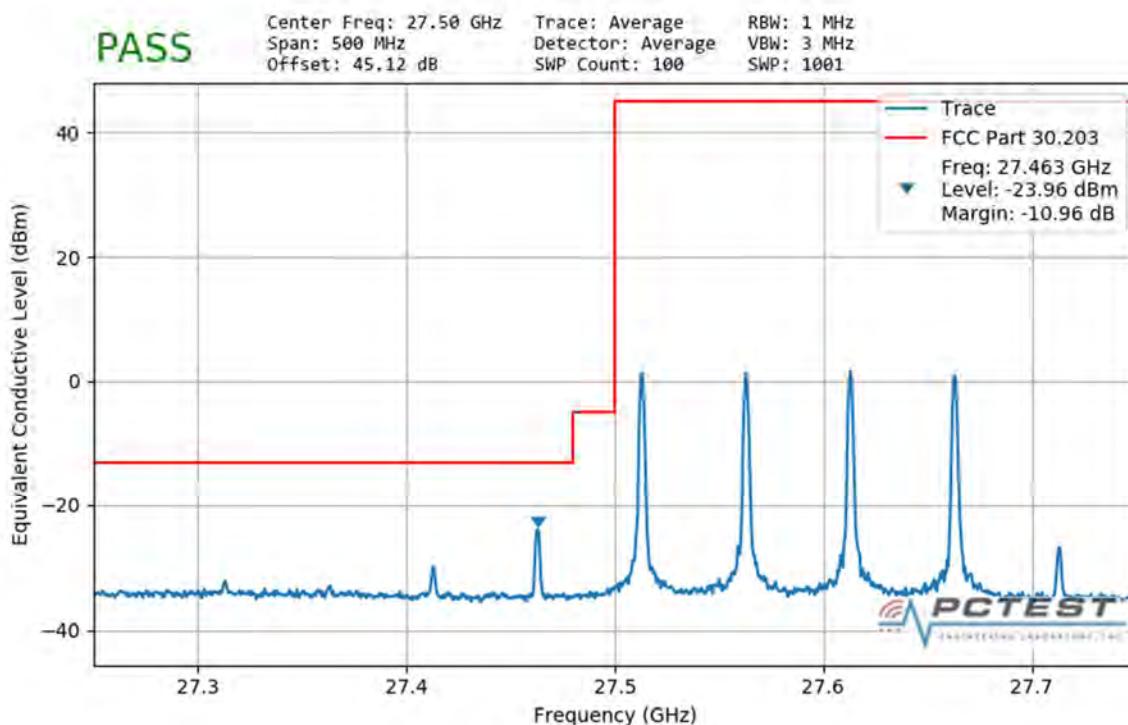


Plot 7-402. Lower Band Edge Plot (4CC 200MHz QPSK 1 RB)

FCC ID: A3LSMN976V	<b>PCTEST</b>	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1905130071-06-R1.A3L	Test Dates: 05/14 - 07/12/2019	EUT Type: Portable Handset		Page 239 of 371



**Plot 7-403. Lower Band Edge Plot (4CC 200MHz 16QAM 1 RB)**

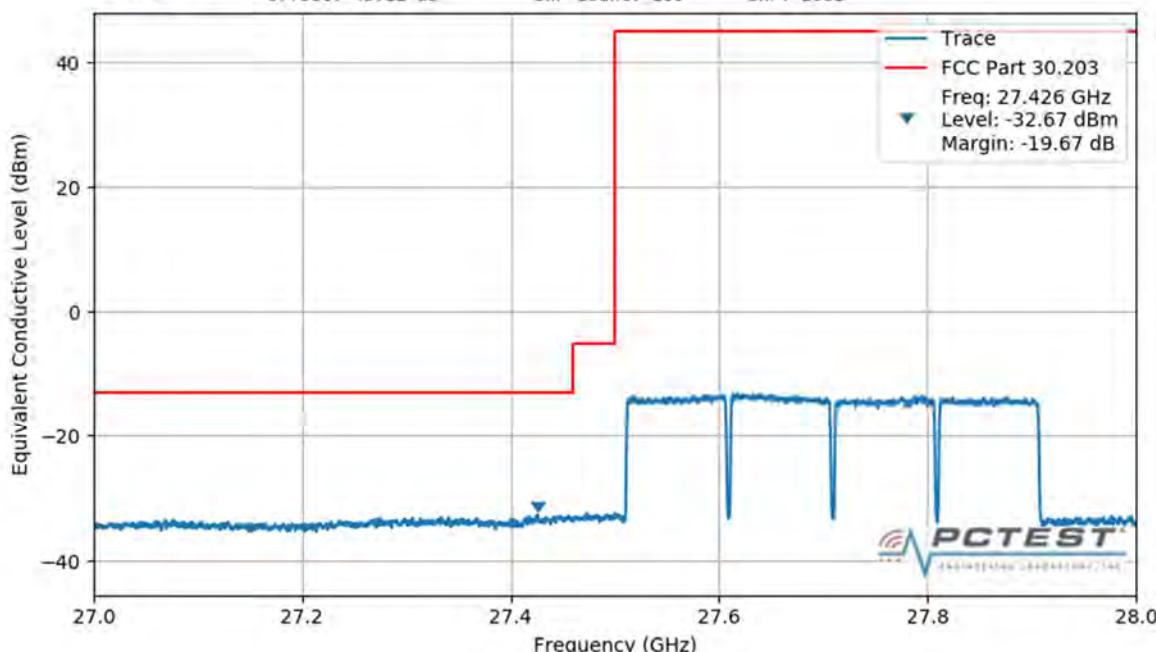


**Plot 7-404. Lower Band Edge Plot (4CC 200MHz 64QAM 1 RB)**

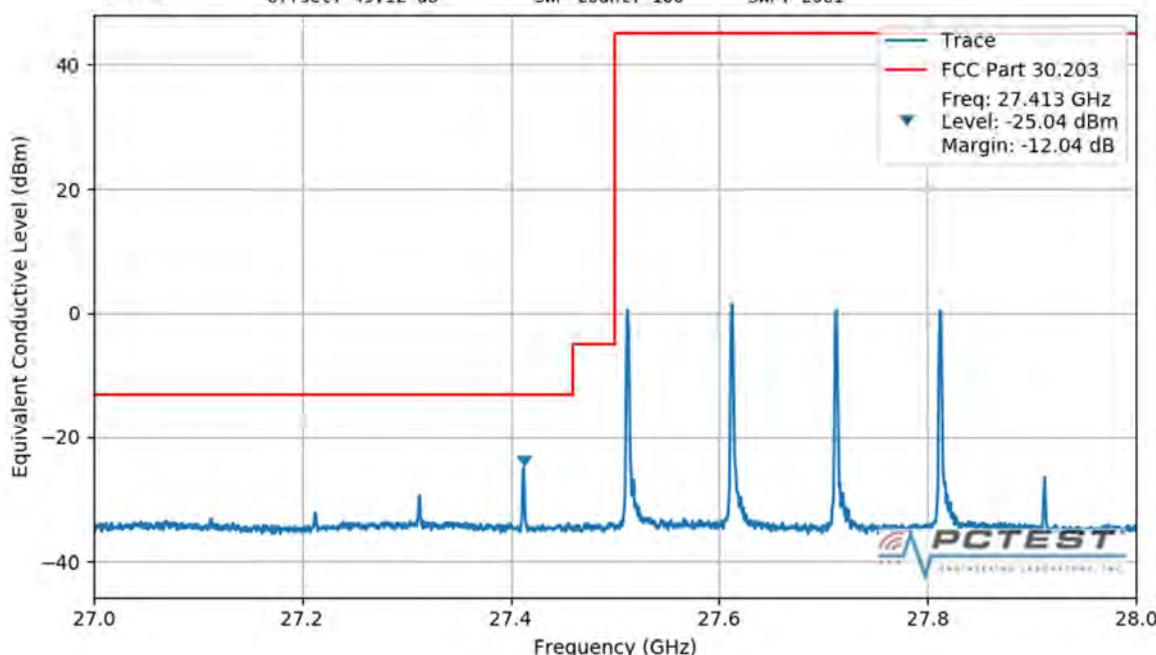
FCC ID: A3LSMN976V	<b>PCTEST</b>	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1905130071-06-R1.A3L	Test Dates: 05/14 - 07/12/2019	EUT Type: Portable Handset		Page 240 of 371

**PASS**

 Center Freq: 27.50 GHz   Trace: Average  
 Span: 1 GHz   Detector: Average  
 Offset: 45.12 dB   SWP Count: 100

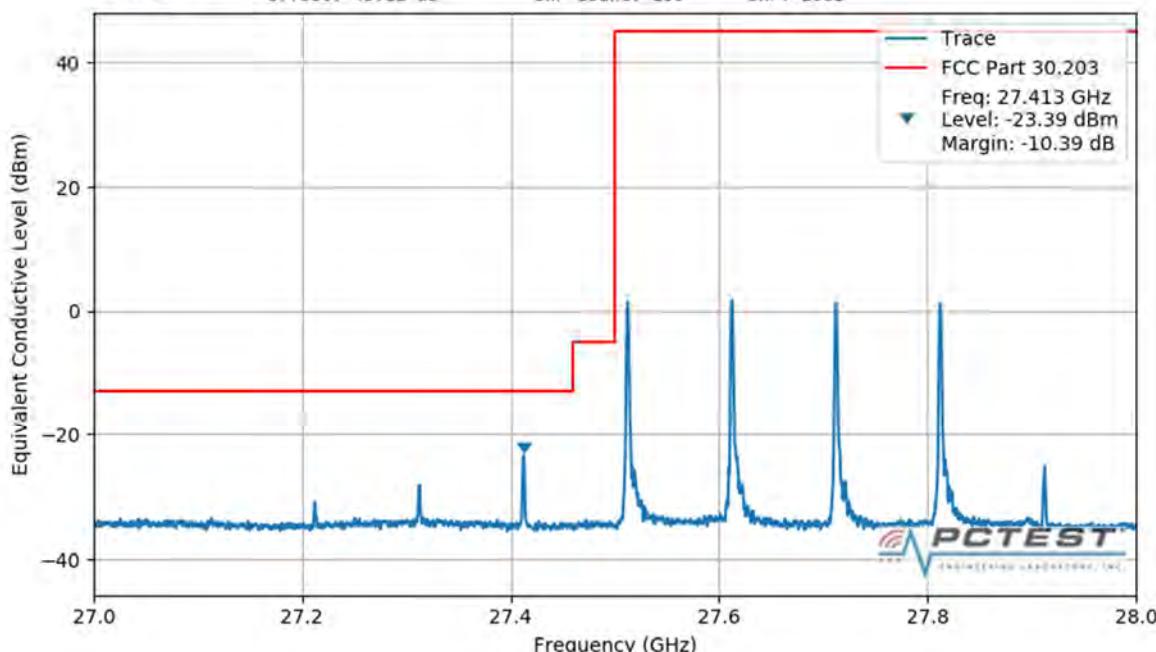
 RBW: 1 MHz   VBW: 3 MHz  
 SWP: 2001

**Plot 7-405. Lower Band Edge Plot (4CC 400MHz QPSK Full RB)**
**PASS**

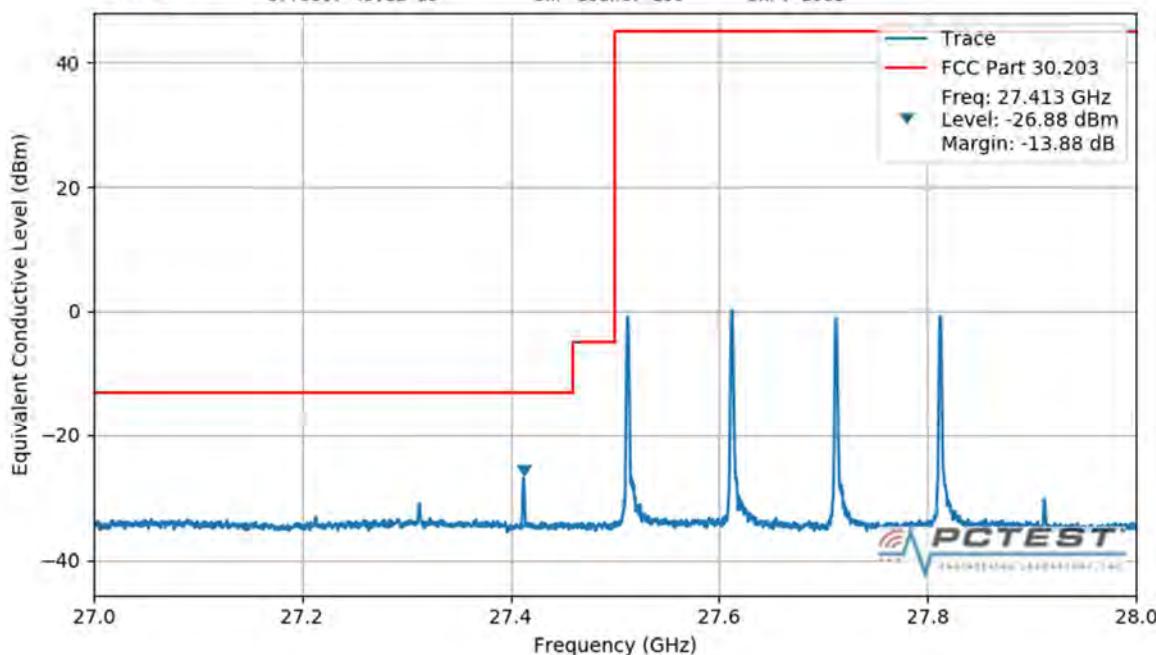
 Center Freq: 27.50 GHz   Trace: Average  
 Span: 1 GHz   Detector: Average  
 Offset: 45.12 dB   SWP Count: 100

 RBW: 1 MHz   VBW: 3 MHz  
 SWP: 2001

**Plot 7-406. Lower Band Edge Plot (4CC 400MHz QPSK 1 RB)**

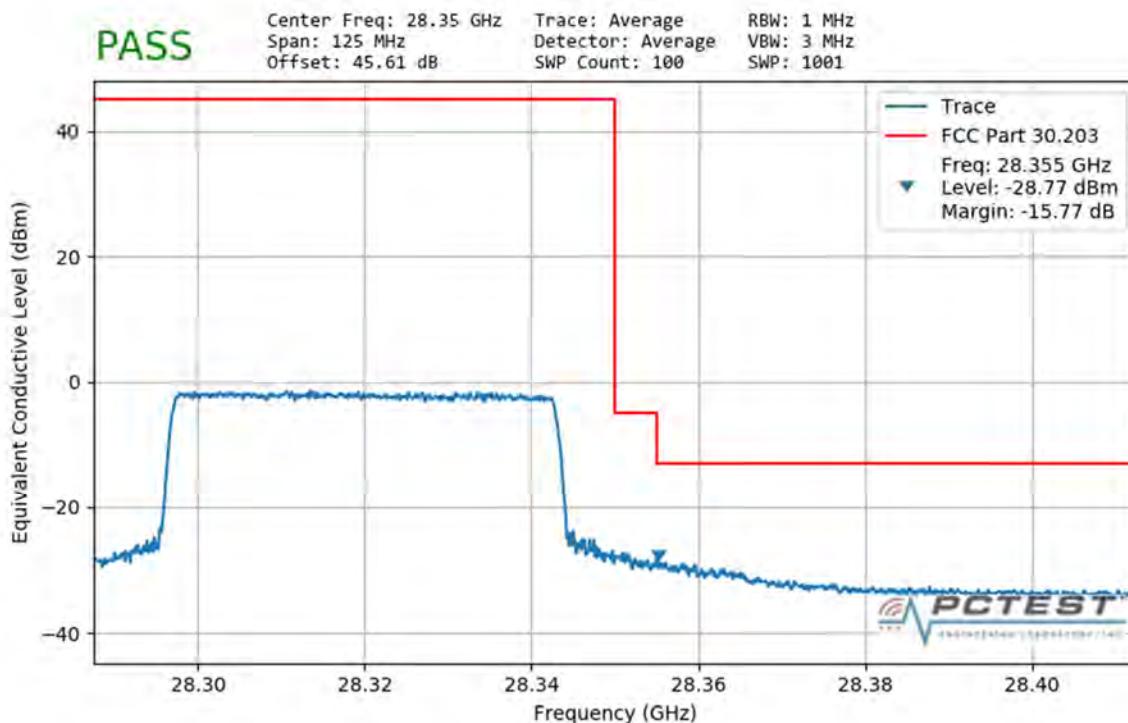
FCC ID: A3LSMN976V		MEASUREMENT REPORT (CERTIFICATION)			Approved by: Quality Manager
Test Report S/N: 1M1905130071-06-R1.A3L	Test Dates: 05/14 - 07/12/2019	EUT Type: Portable Handset			Page 241 of 371

**PASS**

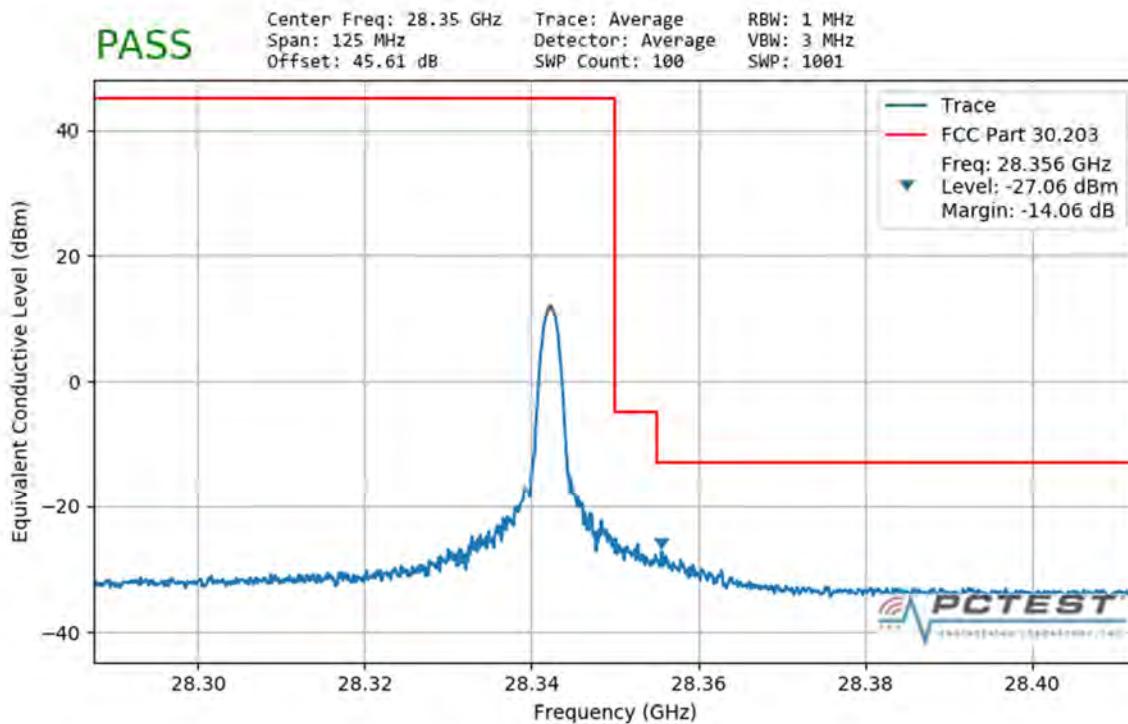
 Center Freq: 27.50 GHz    Trace: Average  
 Span: 1 GHz    Detector: Average  
 Offset: 45.12 dB    SWP Count: 100    RBW: 1 MHz  
 VBW: 3 MHz    SWP: 2001

**Plot 7-407. Lower Band Edge Plot (4CC 400MHz 16QAM 1 RB)**
**PASS**

 Center Freq: 27.50 GHz    Trace: Average  
 Span: 1 GHz    Detector: Average  
 Offset: 45.12 dB    SWP Count: 100    RBW: 1 MHz  
 VBW: 3 MHz    SWP: 2001

**Plot 7-408. Lower Band Edge Plot (4CC 400MHz 64QAM 1 RB)**

FCC ID: A3LSMN976V		MEASUREMENT REPORT (CERTIFICATION)			Approved by: Quality Manager
Test Report S/N: 1M1905130071-06-R1.A3L	Test Dates: 05/14 - 07/12/2019	EUT Type: Portable Handset			Page 242 of 371

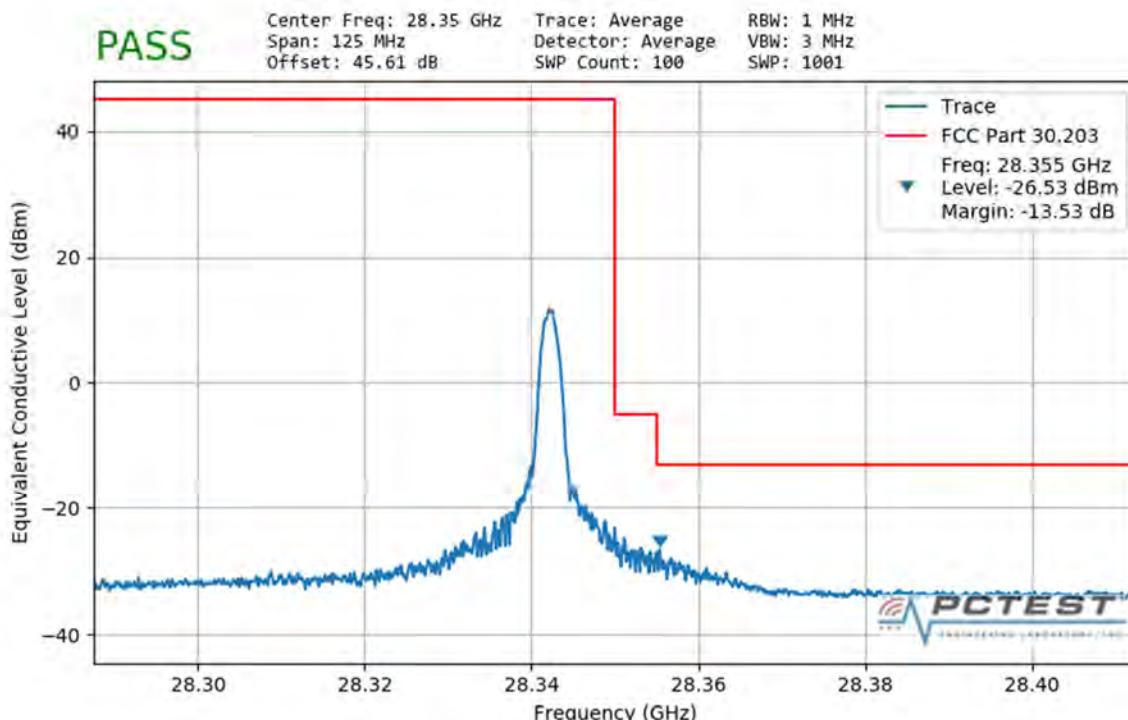


**Plot 7-409. Upper Band Edge Plot (1CC 50MHz QPSK Full RB)**

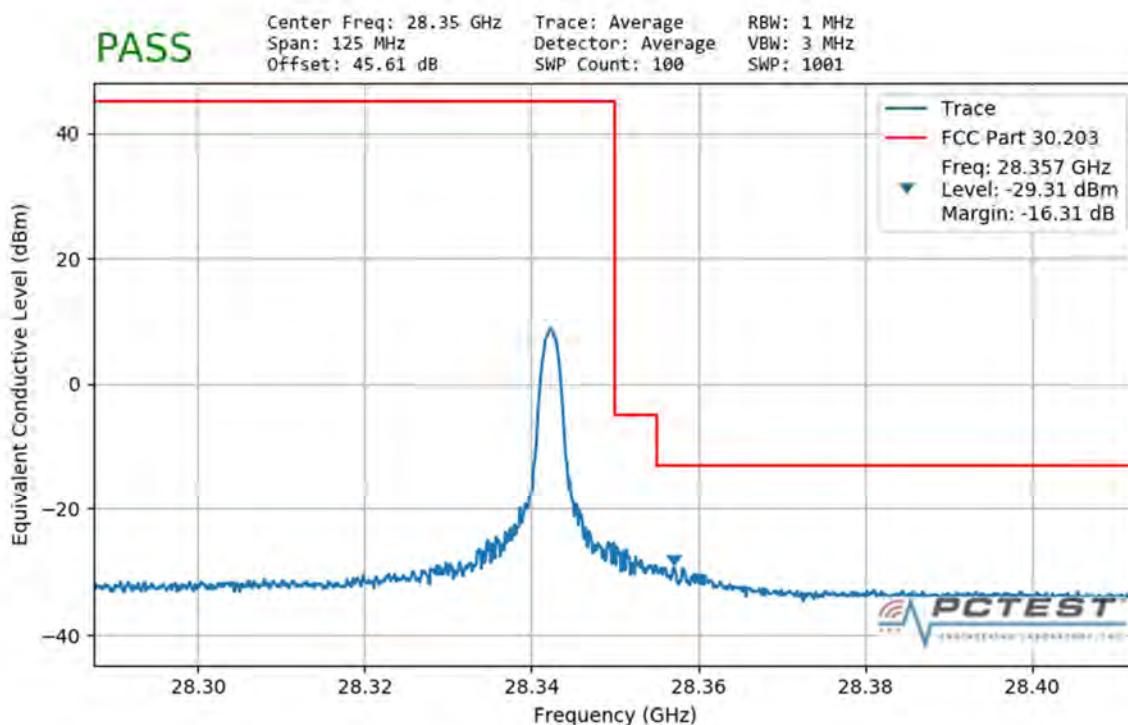


**Plot 7-410. Upper Band Edge Plot (1CC 50MHz QPSK 1 RB)**

FCC ID: A3LSMN976V		MEASUREMENT REPORT (CERTIFICATION)			Approved by: Quality Manager
Test Report S/N: 1M1905130071-06-R1.A3L	Test Dates: 05/14 - 07/12/2019	EUT Type: Portable Handset			Page 243 of 371

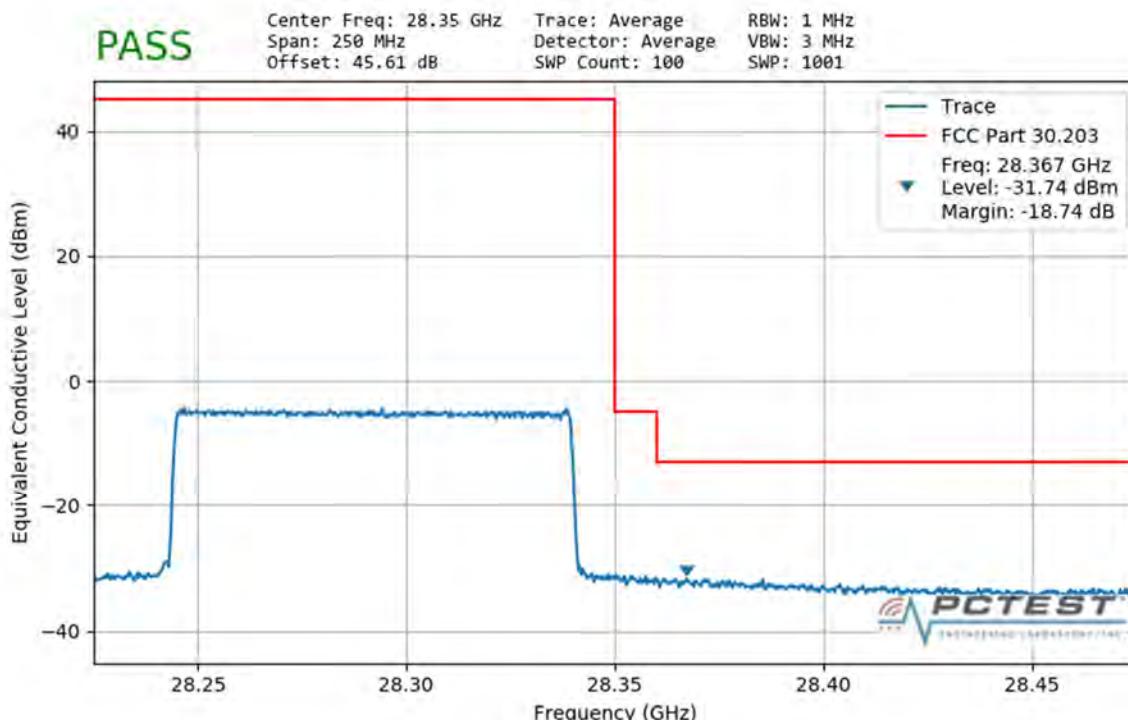


Plot 7-411. Upper Band Edge Plot (1CC 50MHz 16QAM 1 RB)

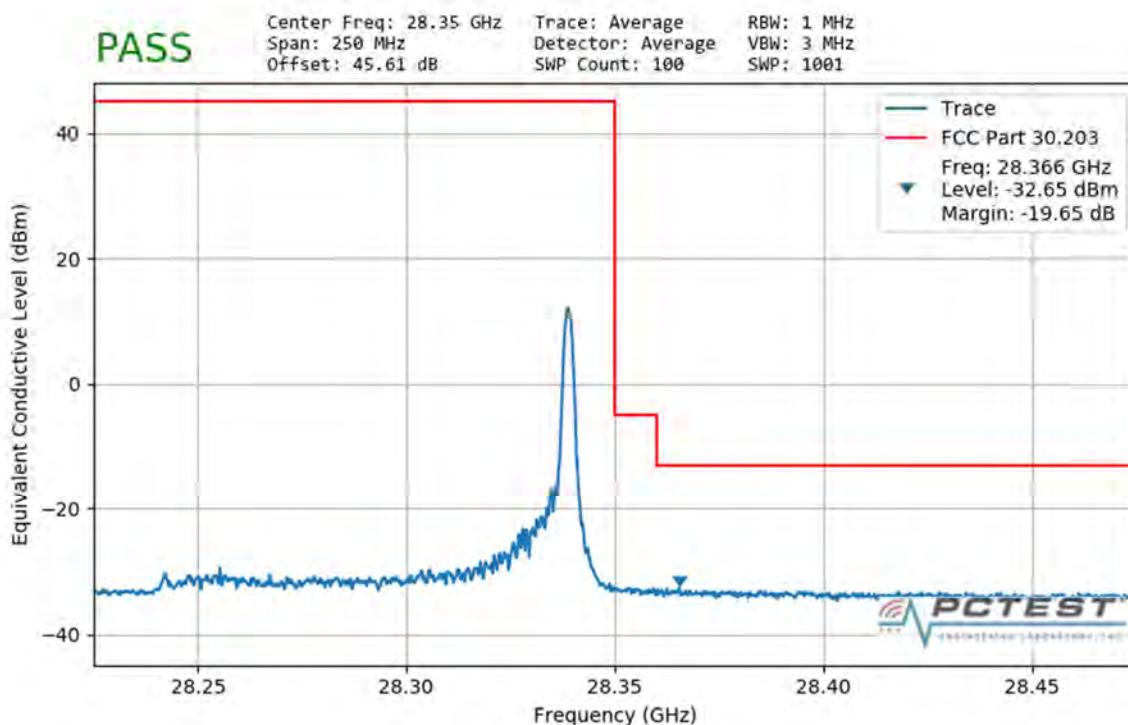


Plot 7-412. Upper Band Edge Plot (1CC 50MHz 64QAM 1 RB)

FCC ID: A3LSMN976V		MEASUREMENT REPORT (CERTIFICATION)		SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1905130071-06-R1.A3L	Test Dates: 05/14 - 07/12/2019	EUT Type: Portable Handset			Page 244 of 371

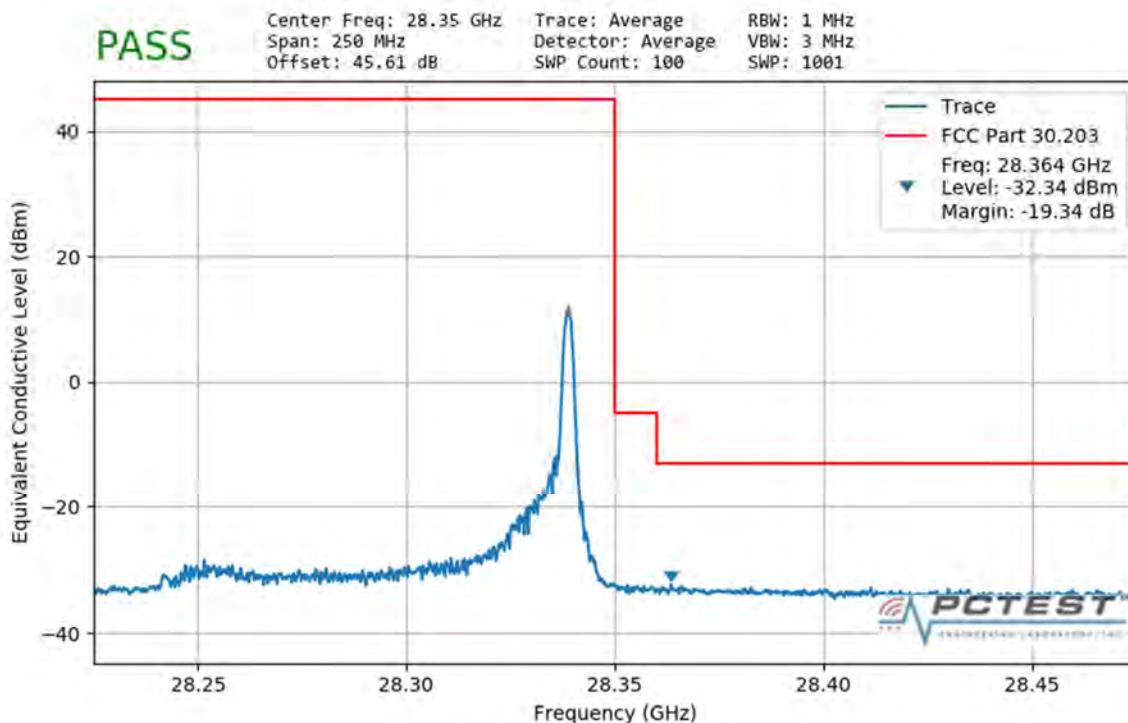


Plot 7-413. Upper Band Edge Plot (1CC 100MHz QPSK Full RB)

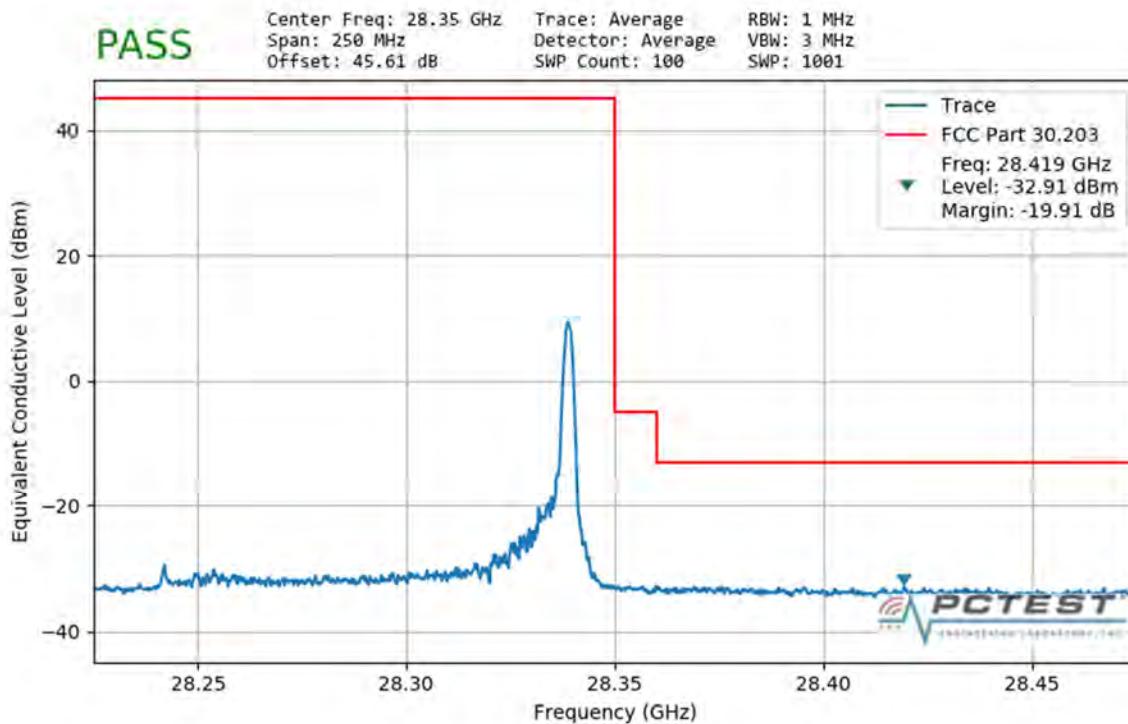


Plot 7-414. Upper Band Edge Plot (1CC 100MHz QPSK 1 RB)

FCC ID: A3LSMN976V		MEASUREMENT REPORT (CERTIFICATION)		SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1905130071-06-R1.A3L	Test Dates: 05/14 - 07/12/2019	EUT Type: Portable Handset			Page 245 of 371

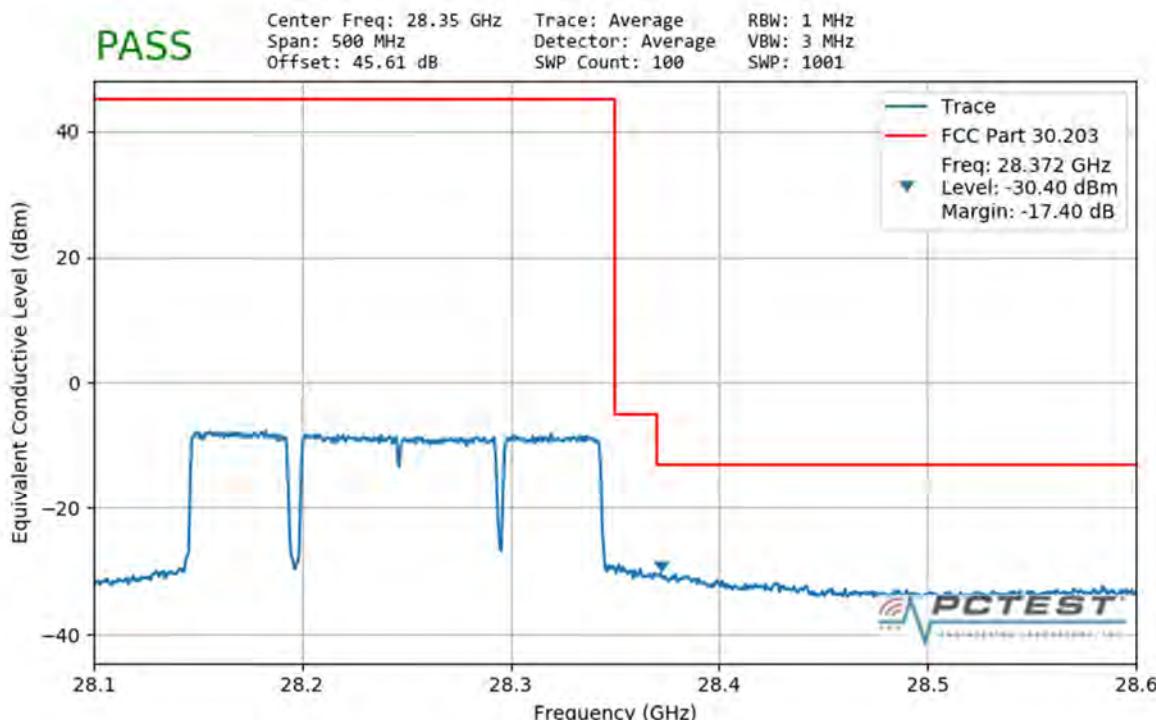


Plot 7-415. Upper Band Edge Plot (1CC 100MHz 16QAM 1 RB)

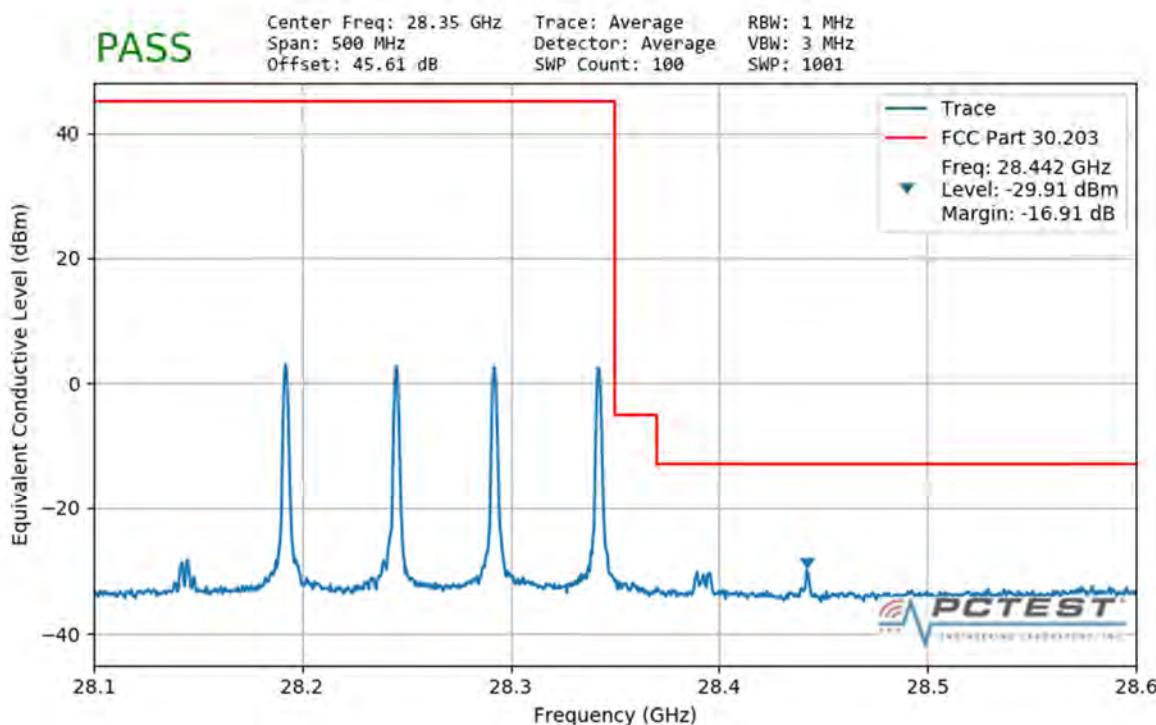


Plot 7-416. Upper Band Edge Plot (1CC 100MHz 64QAM 1 RB)

FCC ID: A3LSMN976V		MEASUREMENT REPORT (CERTIFICATION)			Approved by: Quality Manager
Test Report S/N: 1M1905130071-06-R1.A3L	Test Dates: 05/14 - 07/12/2019	EUT Type: Portable Handset			Page 246 of 371

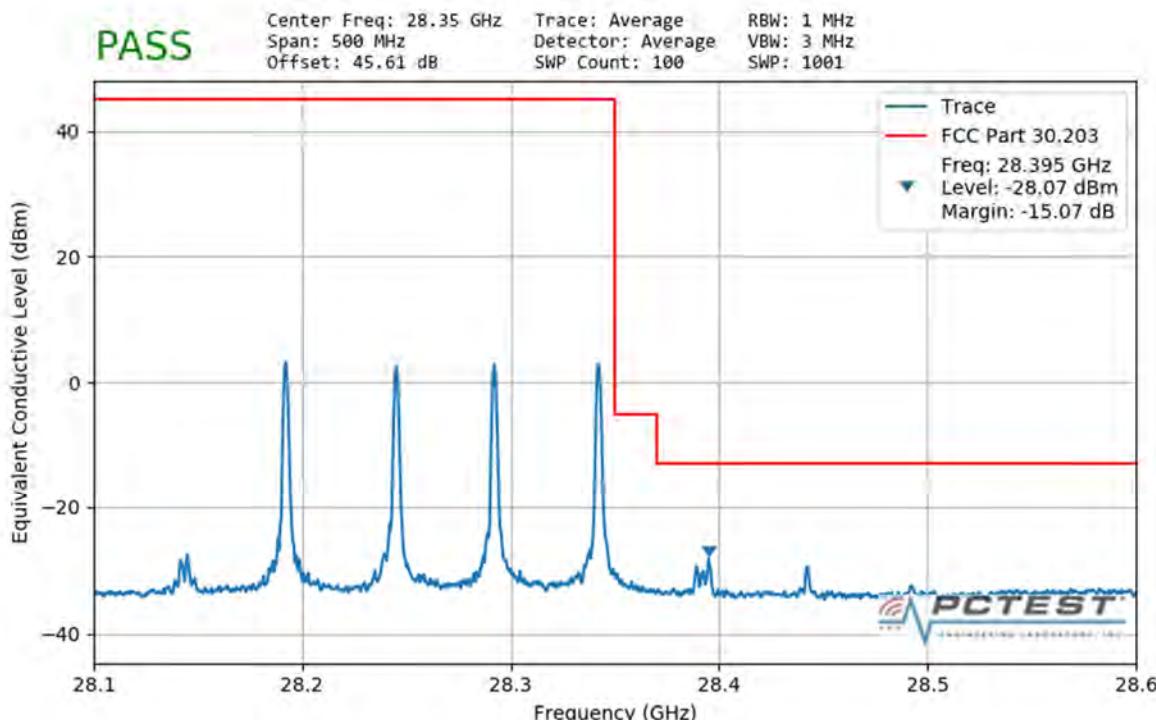


Plot 7-417. Upper Band Edge Plot (4CC 200MHz QPSK Full RB)

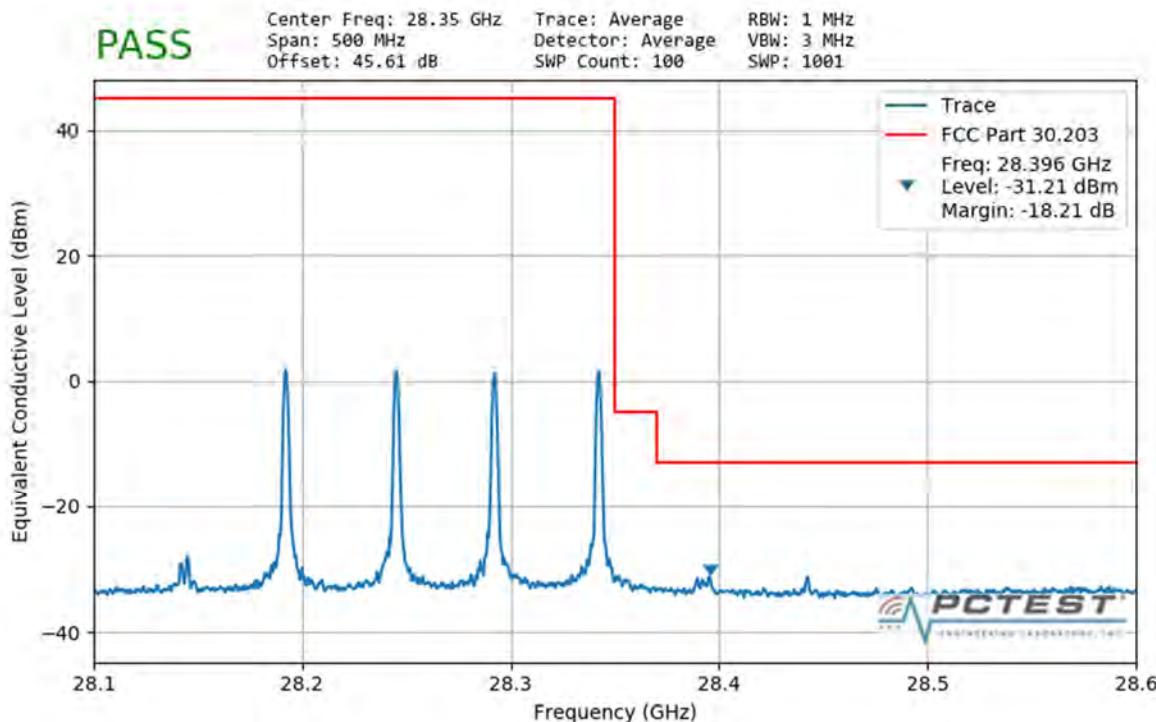


Plot 7-418. Upper Band Edge Plot (4CC 200MHz QPSK 1 RB)

FCC ID: A3LSMN976V		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1905130071-06-R1.A3L	Test Dates: 05/14 - 07/12/2019	EUT Type: Portable Handset		Page 247 of 371

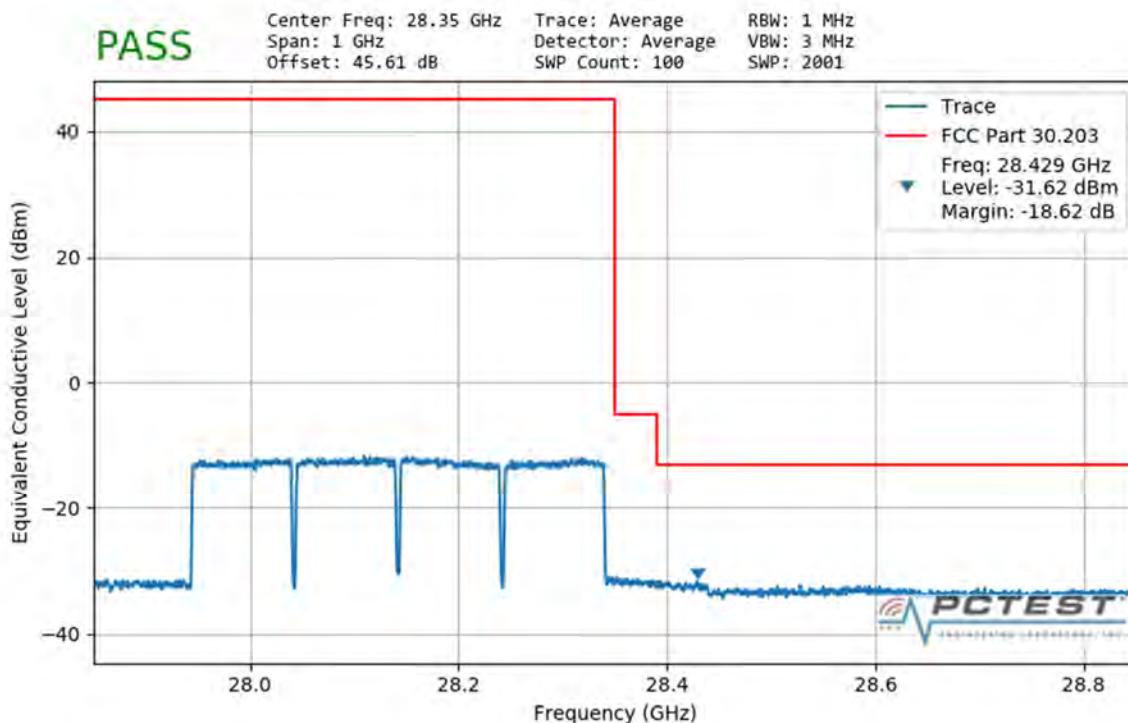


Plot 7-419. Upper Band Edge Plot (4CC 200MHz 16QAM 1 RB)

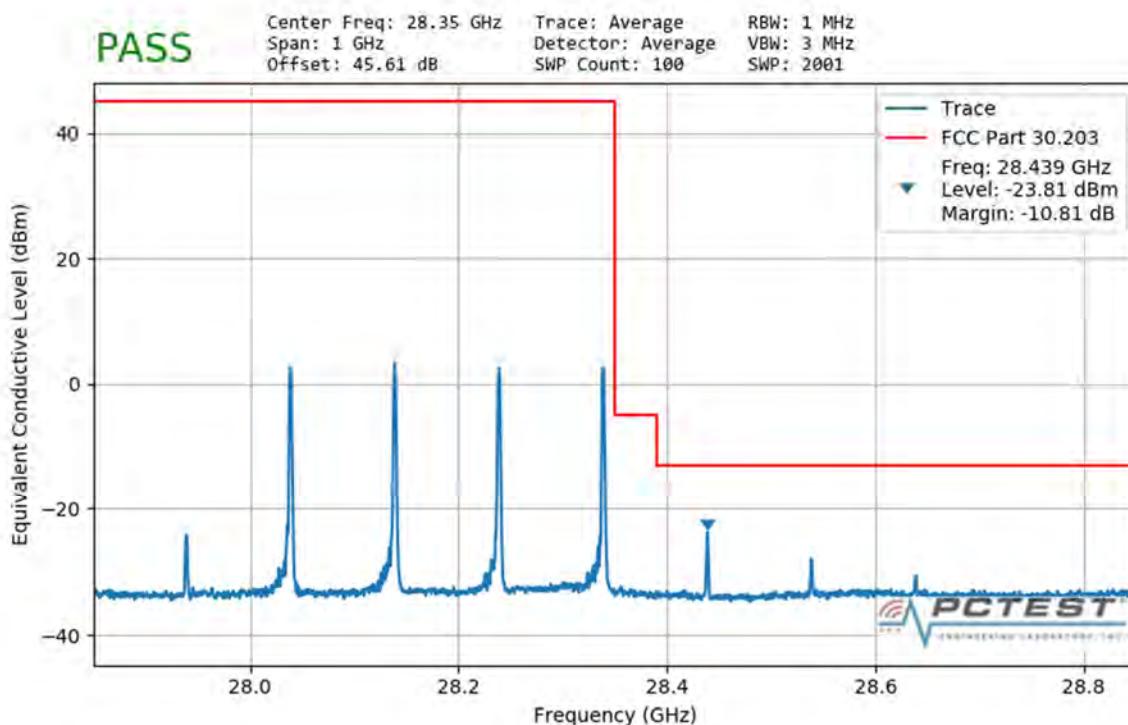


Plot 7-420. Upper Band Edge Plot (4CC 200MHz 64QAM 1 RB)

FCC ID: A3LSMN976V		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1905130071-06-R1.A3L	Test Dates: 05/14 - 07/12/2019	EUT Type: Portable Handset		Page 248 of 371



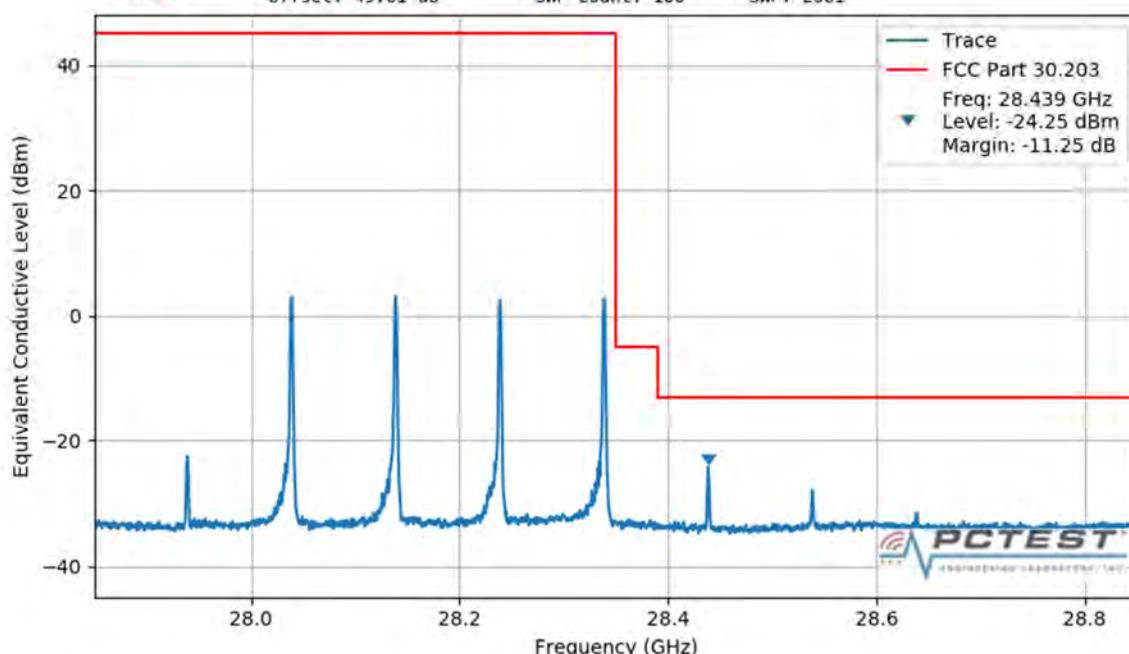
Plot 7-421. Upper Band Edge Plot (4CC 400MHz QPSK Full RB)

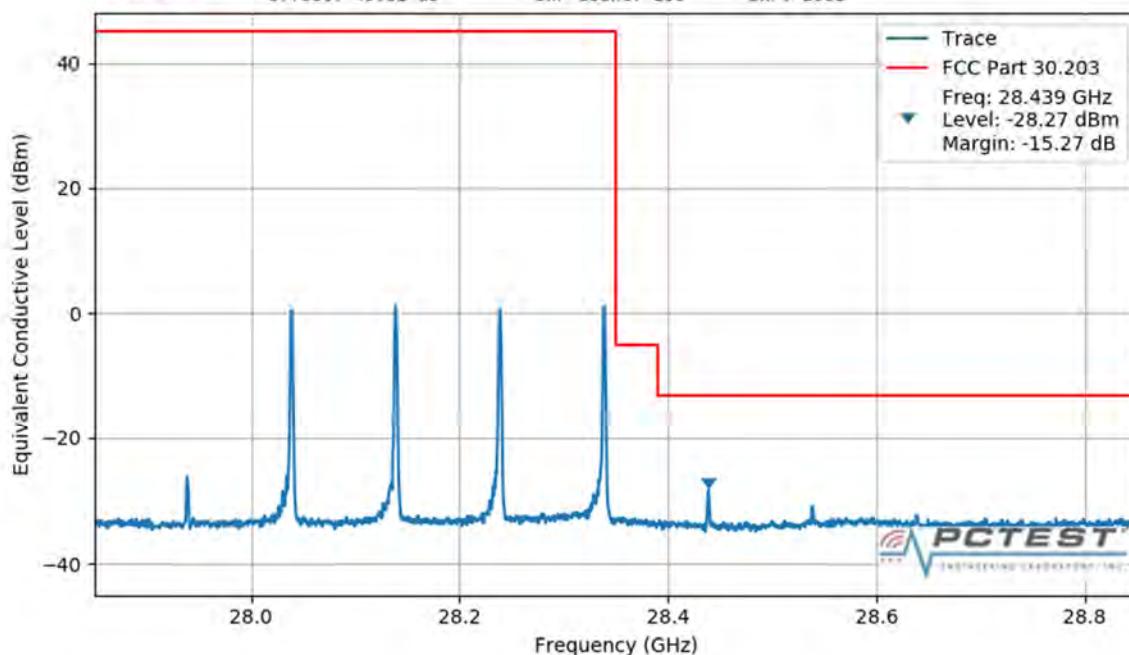


Plot 7-422. Upper Band Edge Plot (4CC 400MHz QPSK 1 RB)

FCC ID: A3LSMN976V		MEASUREMENT REPORT (CERTIFICATION)			Approved by: Quality Manager
Test Report S/N: 1M1905130071-06-R1.A3L	Test Dates: 05/14 - 07/12/2019	EUT Type: Portable Handset			Page 249 of 371

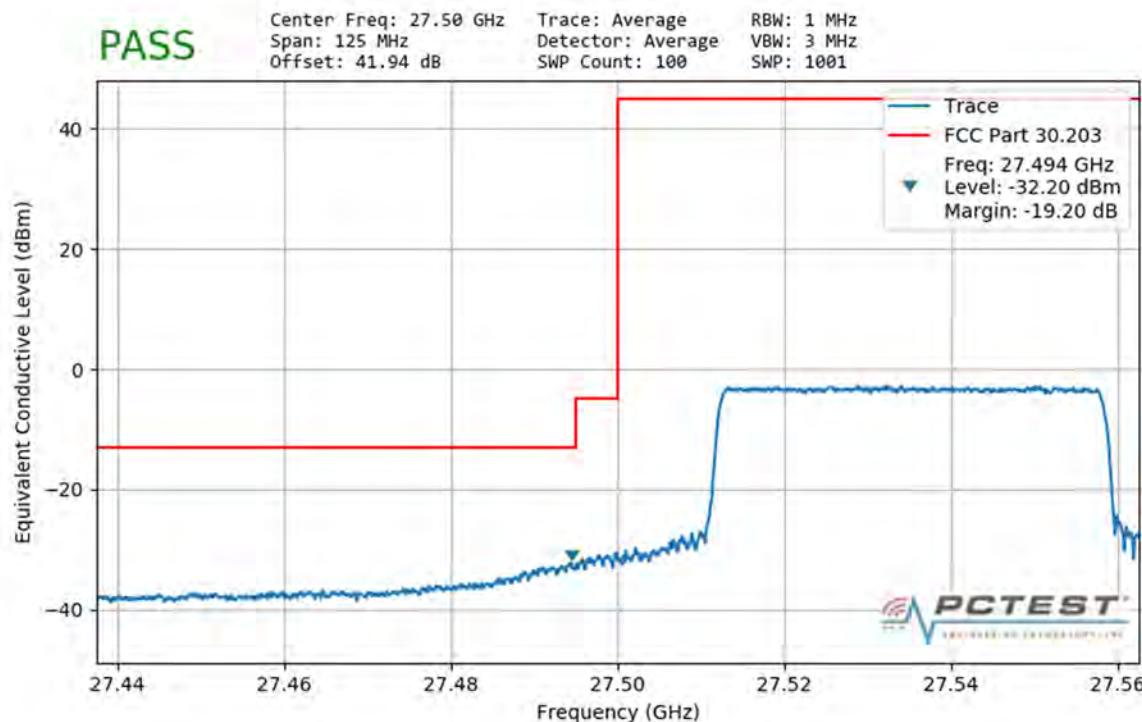
**PASS**

 Center Freq: 28.35 GHz Trace: Average  
 Span: 1 GHz Detector: Average  
 Offset: 45.61 dB SWP Count: 100  
 RBW: 1 MHz  
 VBW: 3 MHz  
 SWP: 2001

**Plot 7-423. Upper Band Edge Plot (4CC 400MHz 16QAM 1 RB)**
**PASS**

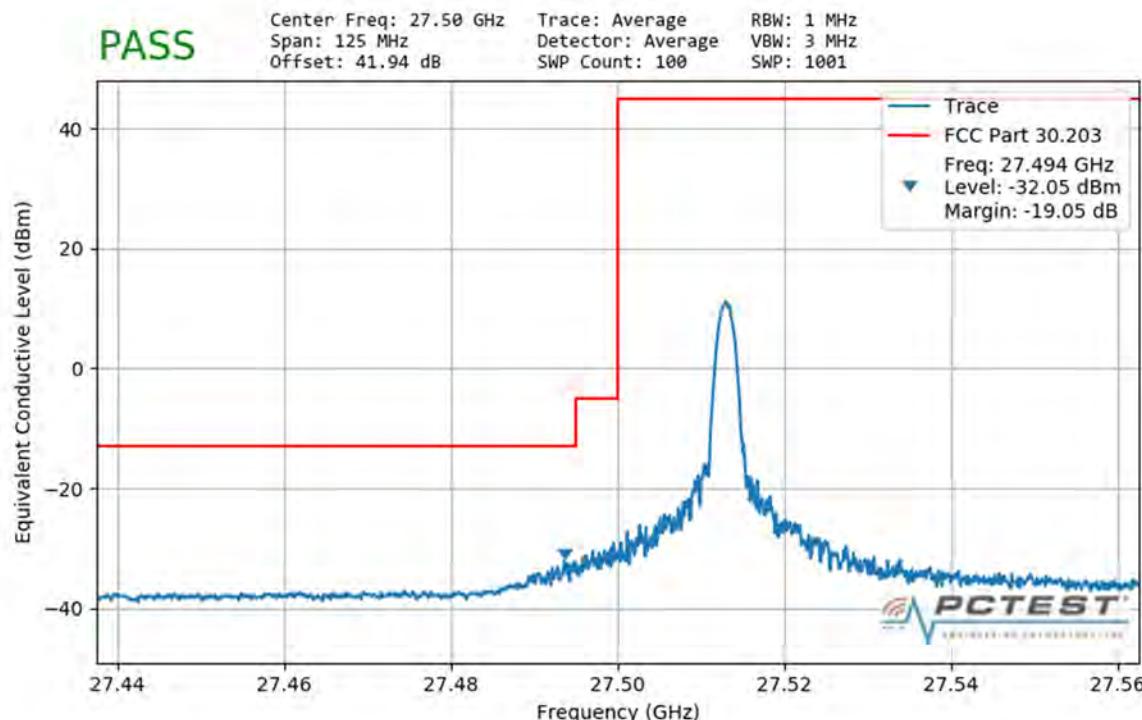
 Center Freq: 28.35 GHz Trace: Average  
 Span: 1 GHz Detector: Average  
 Offset: 45.61 dB SWP Count: 100  
 RBW: 1 MHz  
 VBW: 3 MHz  
 SWP: 2001

**Plot 7-424. Upper Band Edge Plot (4CC 400MHz 64QAM 1 RB)**

FCC ID: A3LSMN976V		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1905130071-06-R1.A3L	Test Dates: 05/14 - 07/12/2019	EUT Type: Portable Handset		Page 250 of 371

## J Patch MIMO(n261)

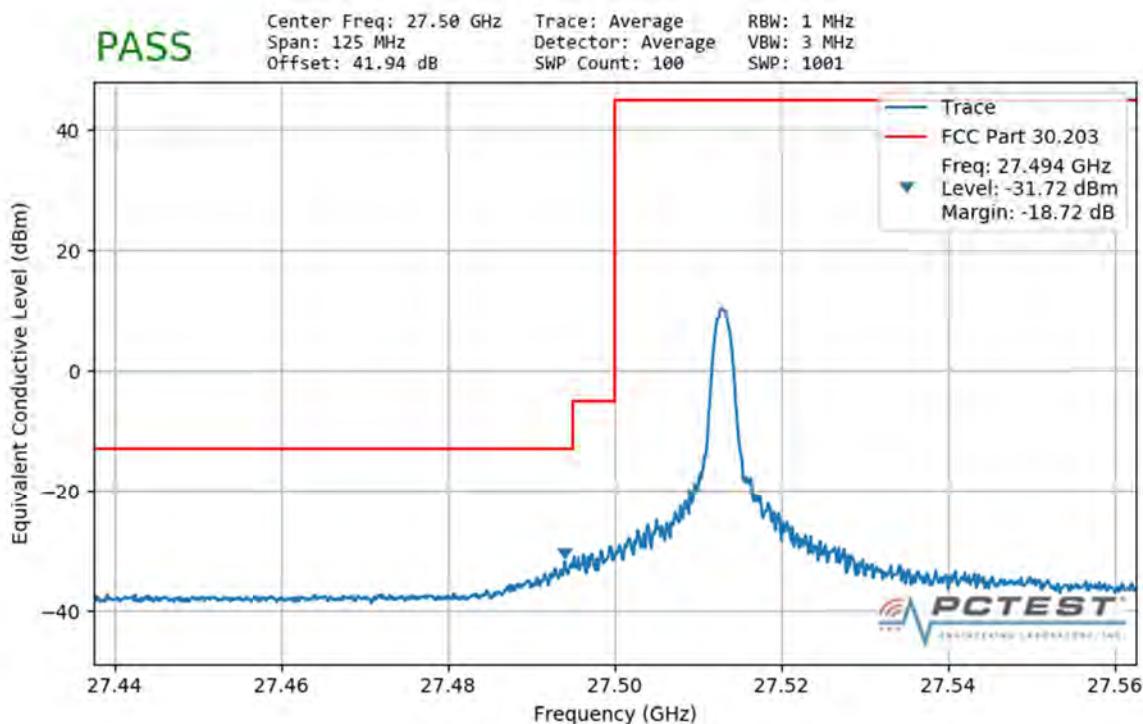


Plot 7-425. Lower Band Edge Plot (1CC 50MHz QPSK Full RB)

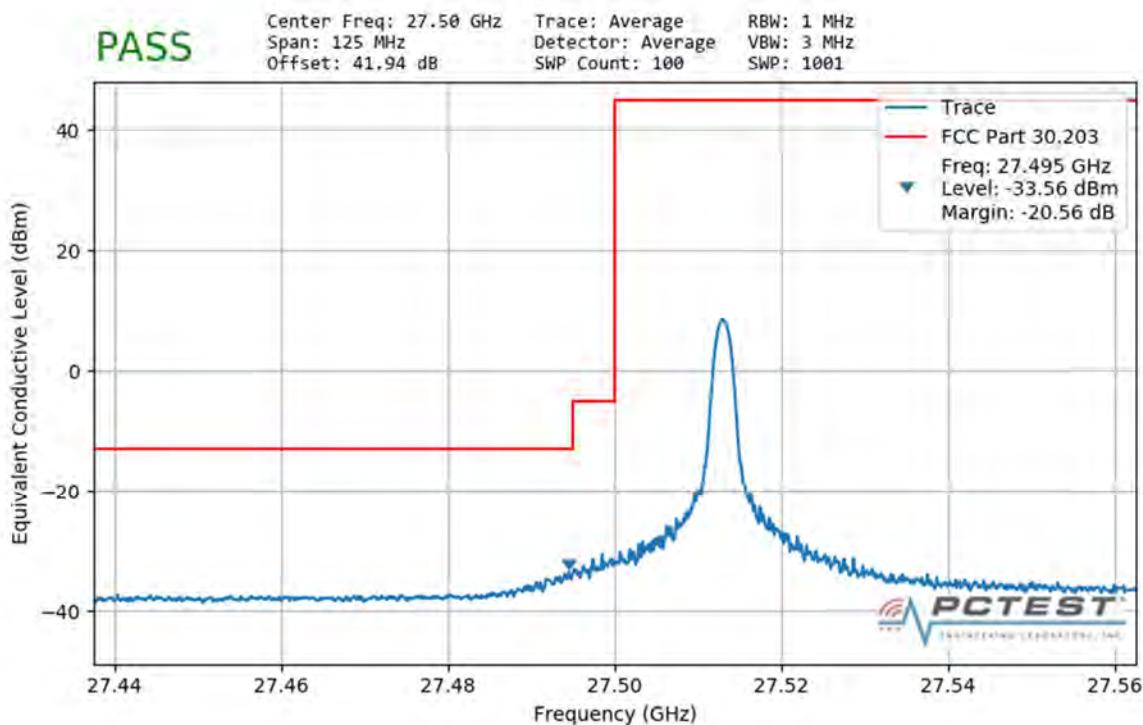


Plot 7-426. Lower Band Edge Plot (1CC 50MHz QPSK 1 RB)

FCC ID: A3LSMN976V		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: 1M1905130071-06-R1.A3L	Test Dates: 05/14 - 07/12/2019	EUT Type: Portable Handset	Page 251 of 371



Plot 7-427. Lower Band Edge Plot (1CC 50MHz 16QAM 1 RB)

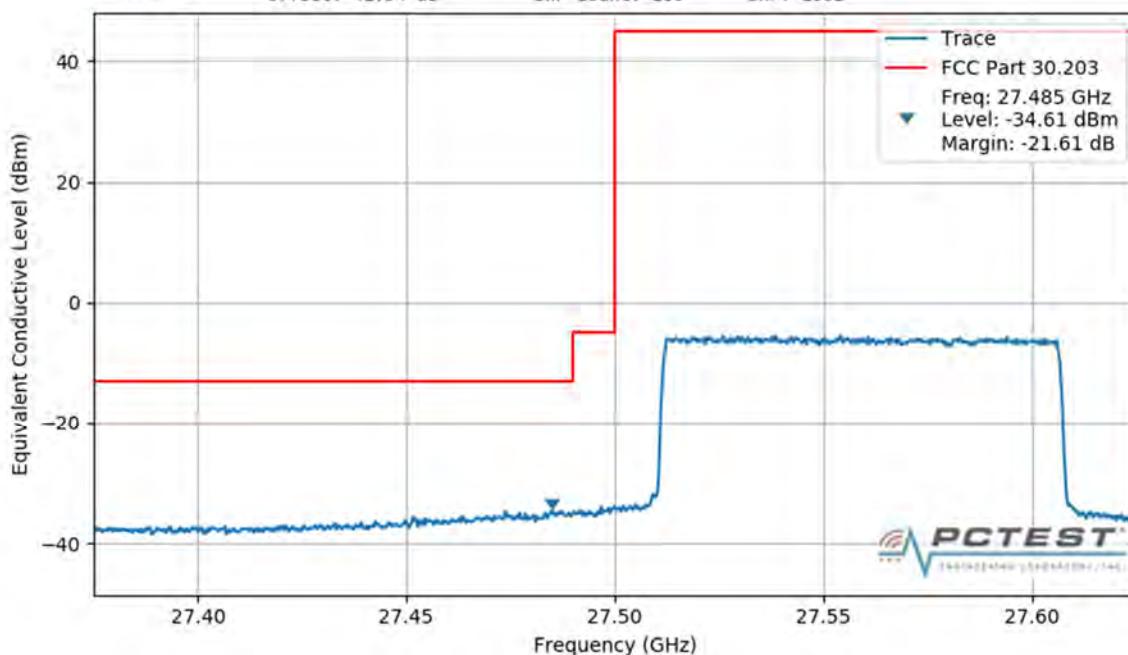


Plot 7-428. Lower Band Edge Plot (1CC 50MHz 64QAM 1 RB)

FCC ID: A3LSMN976V	<b>PCTEST</b> ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	<b>SAMSUNG</b>	Approved by: Quality Manager
Test Report S/N: 1M1905130071-06-R1.A3L	Test Dates: 05/14 - 07/12/2019	EUT Type: Portable Handset		Page 252 of 371

**PASS**

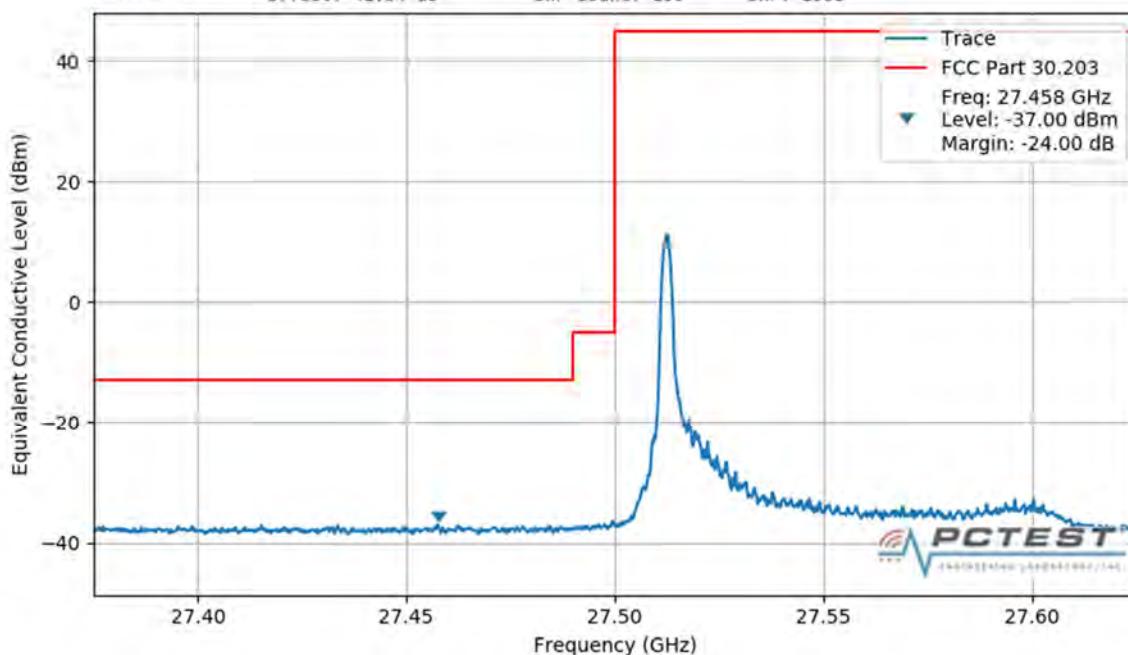
Center Freq: 27.50 GHz   Trace: Average  
Span: 250 MHz   Detector: Average  
Offset: 41.94 dB   SWP Count: 100   RBW: 1 MHz  
VBW: 3 MHz   SWP: 1001



**Plot 7-429. Lower Band Edge Plot (1CC 100MHz QPSK Full RB)**

**PASS**

Center Freq: 27.50 GHz   Trace: Average  
Span: 250 MHz   Detector: Average  
Offset: 41.94 dB   SWP Count: 100   RBW: 1 MHz  
VBW: 3 MHz   SWP: 1001

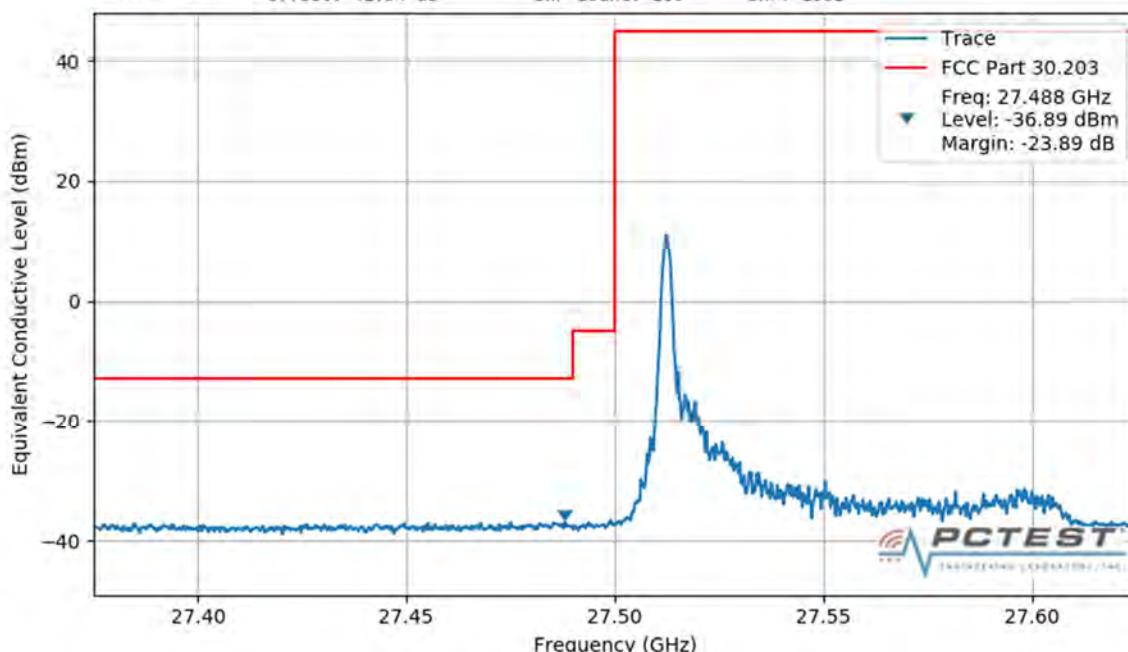


**Plot 7-430. Lower Band Edge Plot (1CC 100MHz QPSK 1 RB)**

FCC ID: A3LSMN976V	<b>PCTEST</b>	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1905130071-06-R1.A3L	Test Dates: 05/14 - 07/12/2019	EUT Type: Portable Handset		Page 253 of 371

**PASS**

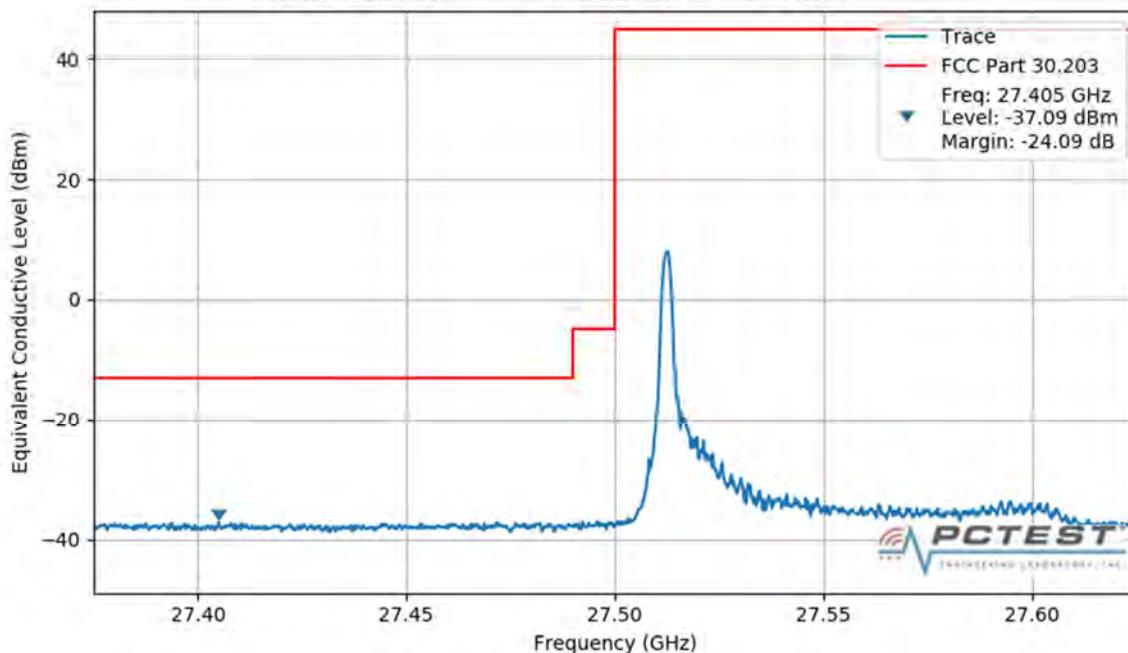
Center Freq: 27.50 GHz   Trace: Average  
Span: 250 MHz   Detector: Average  
Offset: 41.94 dB   SWP Count: 100   RBW: 1 MHz  
Vbw: 3 MHz   SWP: 1001



**Plot 7-431. Lower Band Edge Plot (1CC 100MHz 16QAM 1 RB)**

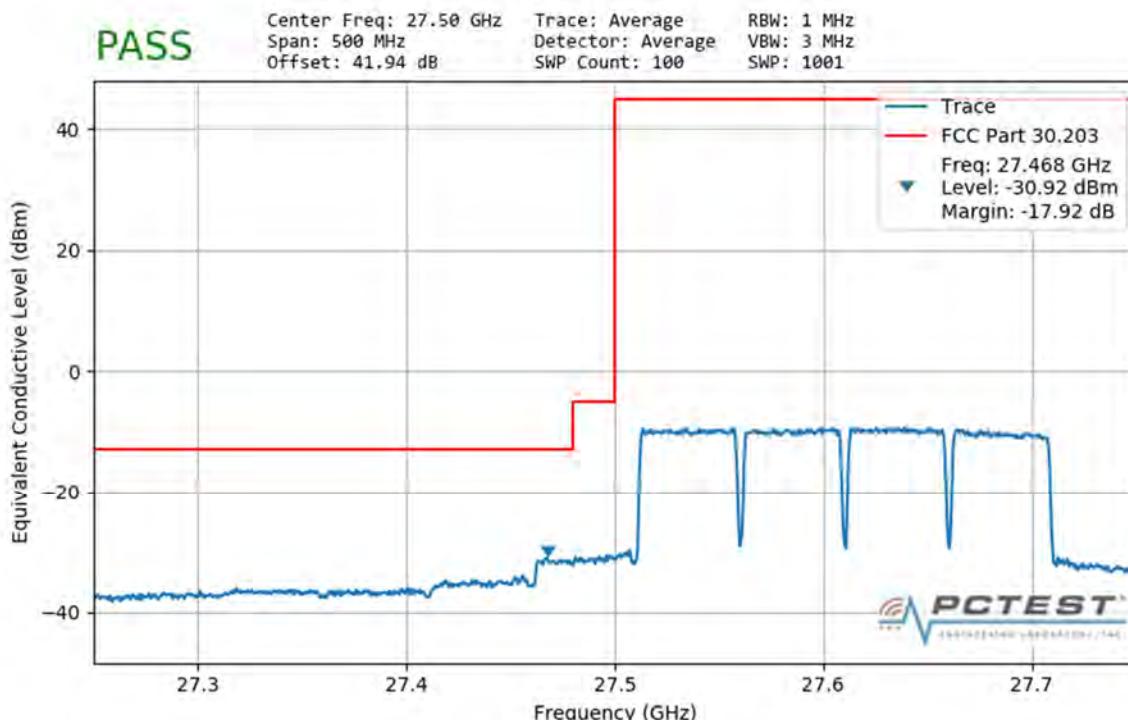
**PASS**

Center Freq: 27.50 GHz   Trace: Average   RBW: 1 MHz  
Span: 250 MHz   Detector: Average   Vbw: 3 MHz  
Offset: 41.94 dB   SWP Count: 100   SWP: 1001

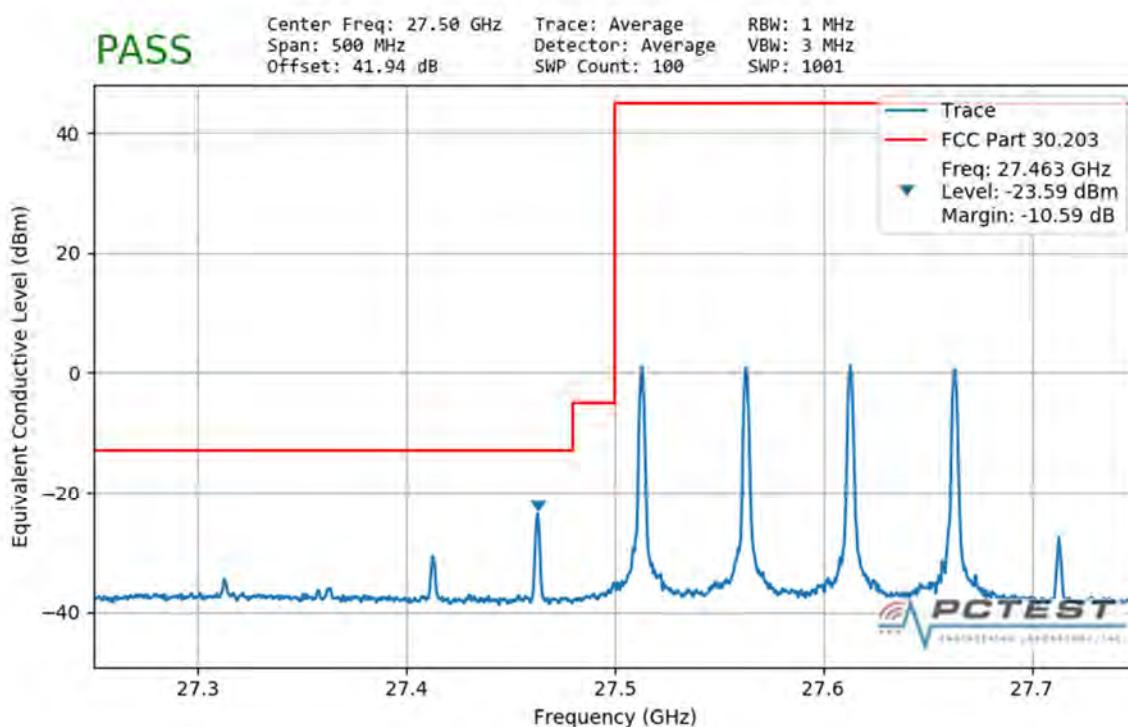


**Plot 7-432. Lower Band Edge Plot (1CC 100MHz 64QAM 1 RB)**

FCC ID: A3LSMN976V	<b>PCTEST</b>	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1905130071-06-R1.A3L	Test Dates: 05/14 - 07/12/2019	EUT Type: Portable Handset		Page 254 of 371



Plot 7-433. Lower Band Edge Plot (4CC 200MHz QPSK Full RB)

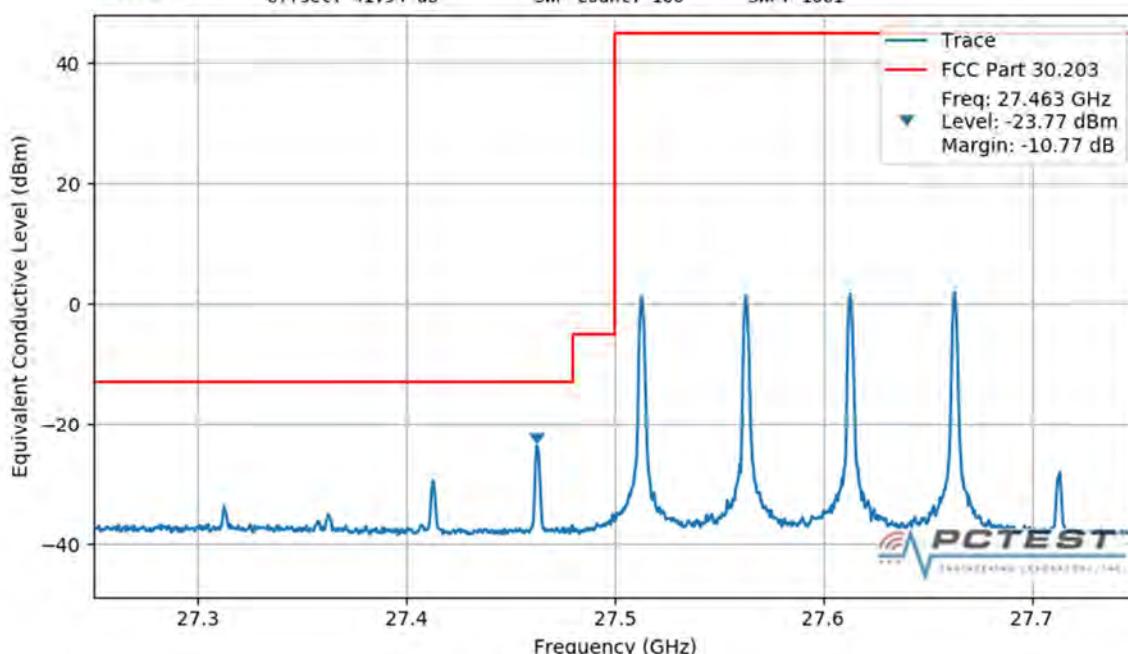


Plot 7-434. Lower Band Edge Plot (4CC 200MHz QPSK 1 RB)

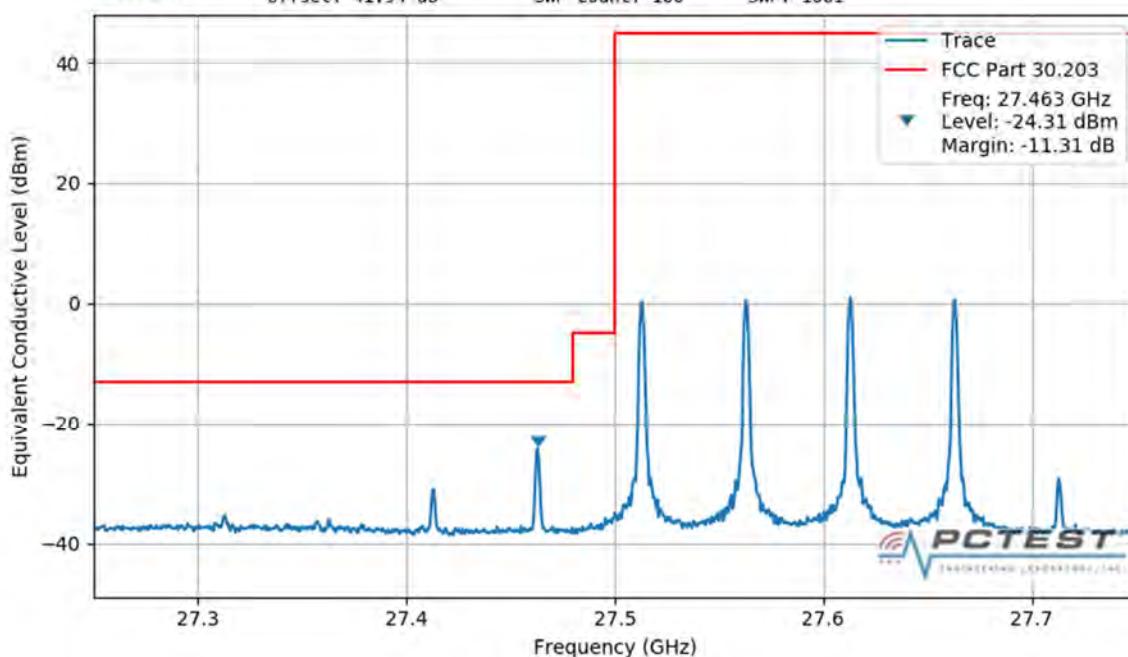
FCC ID: A3LSMN976V	<b>PCTEST</b>	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1905130071-06-R1.A3L	Test Dates: 05/14 - 07/12/2019	EUT Type: Portable Handset		Page 255 of 371

**PASS**

 Center Freq: 27.50 GHz   Trace: Average  
 Span: 500 MHz   Detector: Average  
 Offset: 41.94 dB   SWP Count: 100

 RBW: 1 MHz   VBW: 3 MHz  
 SWP: 1001

**Plot 7-435. Lower Band Edge Plot (4CC 200MHz 16QAM 1 RB)**
**PASS**

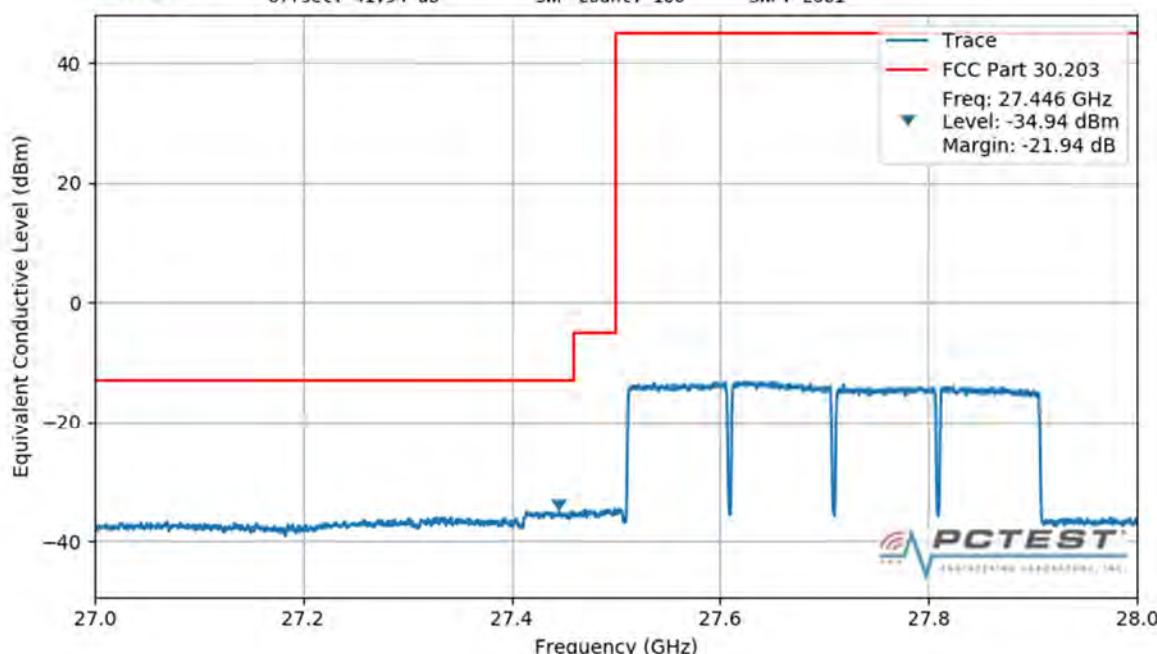
 Center Freq: 27.50 GHz   Trace: Average  
 Span: 500 MHz   Detector: Average  
 Offset: 41.94 dB   SWP Count: 100

 RBW: 1 MHz   VBW: 3 MHz  
 SWP: 1001

**Plot 7-436. Lower Band Edge Plot (4CC 200MHz 64QAM 1 RB)**

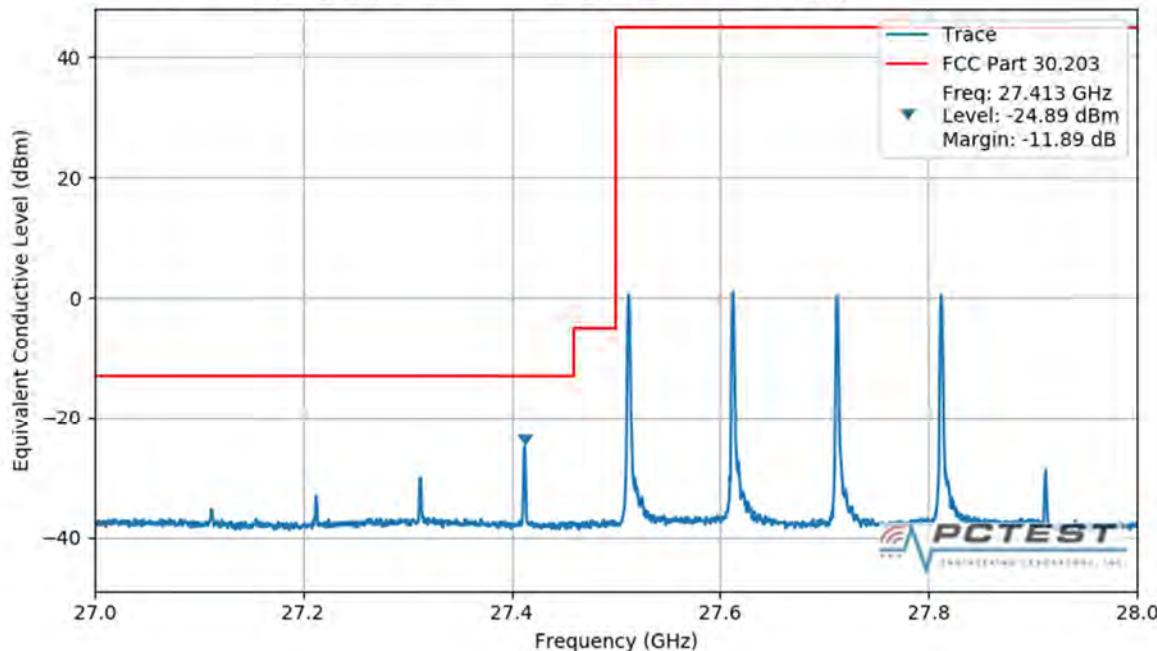
FCC ID: A3LSMN976V		MEASUREMENT REPORT (CERTIFICATION)			Approved by: Quality Manager
Test Report S/N: 1M1905130071-06-R1.A3L	Test Dates: 05/14 - 07/12/2019	EUT Type: Portable Handset			Page 256 of 371

**PASS**

 Center Freq: 27.50 GHz   Trace: Average  
 Span: 1 GHz   Detector: Average  
 Offset: 41.94 dB   SWP Count: 100

 RBW: 1 MHz   VBW: 3 MHz  
 SWP: 2001

**Plot 7-437. Lower Band Edge Plot (4CC 400MHz QPSK Full RB)**
**PASS**

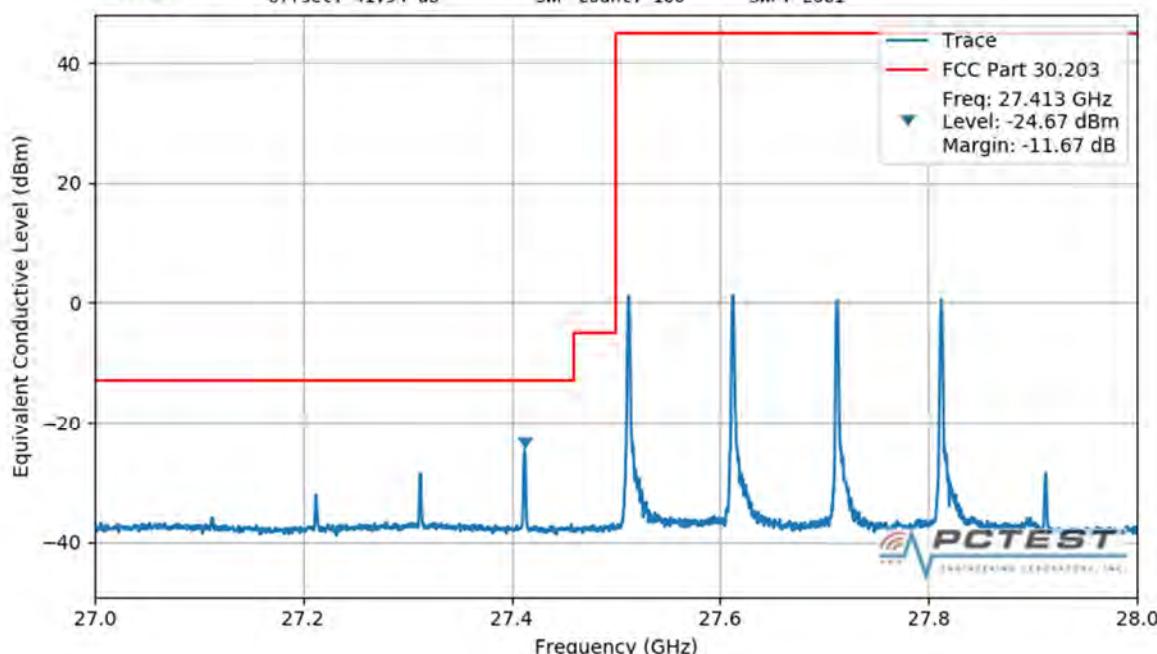
 Center Freq: 27.50 GHz   Trace: Average  
 Span: 1 GHz   Detector: Average  
 Offset: 41.94 dB   SWP Count: 100

 RBW: 1 MHz   VBW: 3 MHz  
 SWP: 2001

**Plot 7-438. Lower Band Edge Plot (4CC 400MHz QPSK 1 RB)**

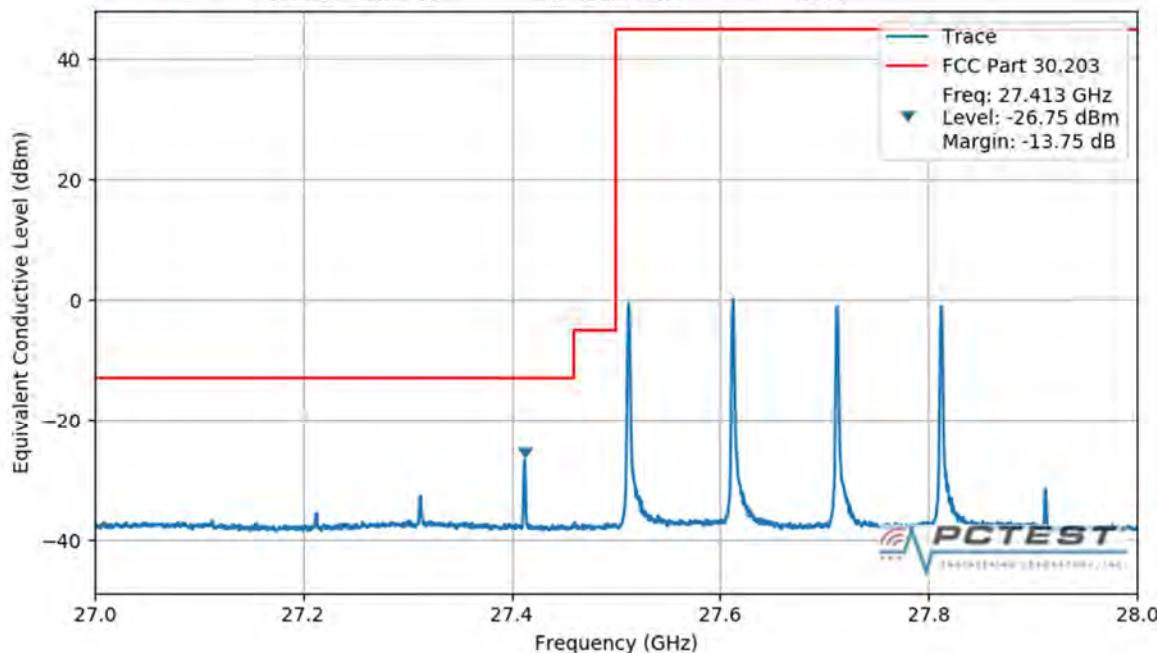
FCC ID: A3LSMN976V		MEASUREMENT REPORT (CERTIFICATION)			Approved by: Quality Manager
Test Report S/N: 1M1905130071-06-R1.A3L	Test Dates: 05/14 - 07/12/2019	EUT Type: Portable Handset			Page 257 of 371

**PASS**

 Center Freq: 27.50 GHz   Trace: Average  
 Span: 1 GHz   Detector: Average  
 Offset: 41.94 dB   SWP Count: 100

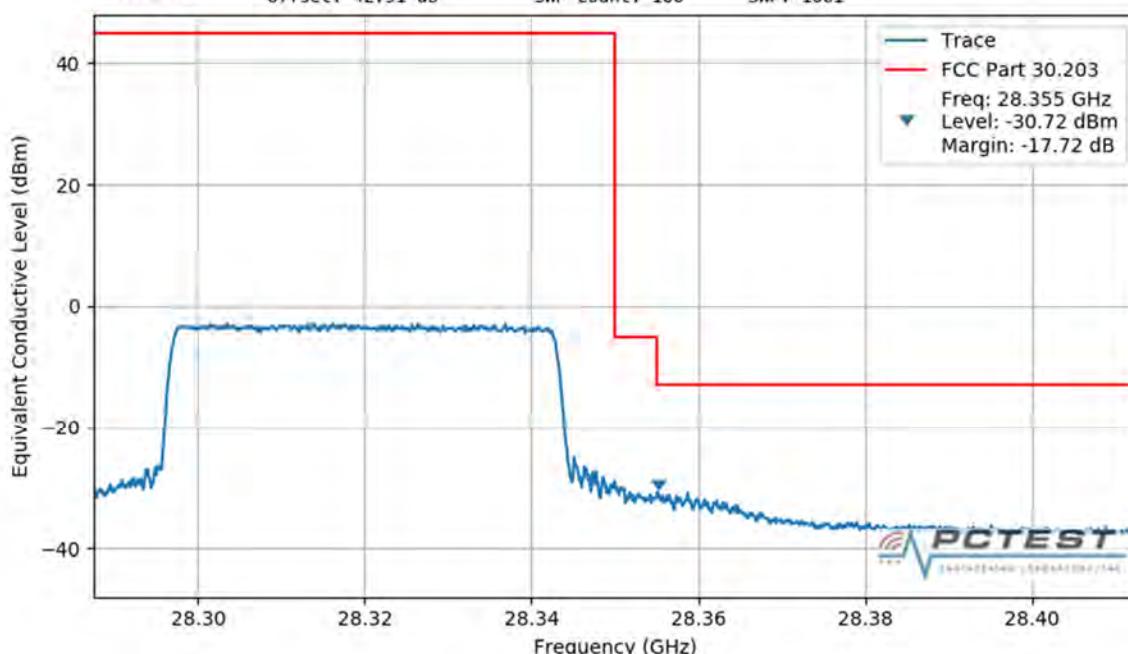
 RBW: 1 MHz   VBW: 3 MHz  
 SWP: 2001

**Plot 7-439. Lower Band Edge Plot (4CC 400MHz 16QAM 1 RB)**
**PASS**

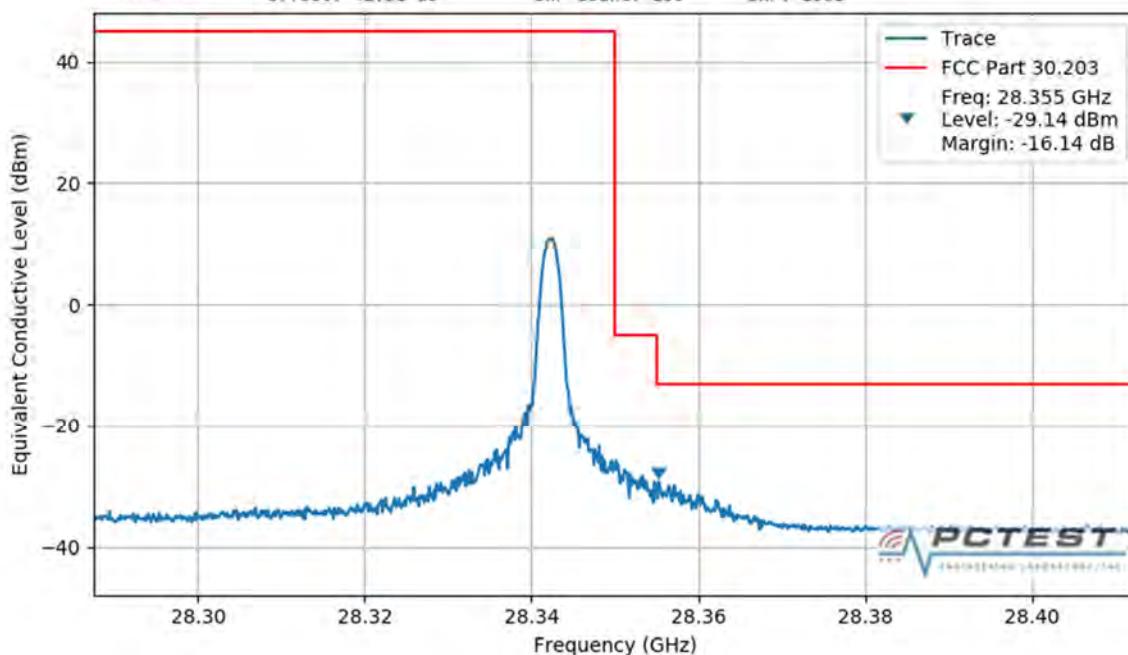
 Center Freq: 27.50 GHz   Trace: Average  
 Span: 1 GHz   Detector: Average  
 Offset: 41.94 dB   SWP Count: 100

 RBW: 1 MHz   VBW: 3 MHz  
 SWP: 2001

**Plot 7-440. Lower Band Edge Plot (4CC 400MHz 64QAM 1 RB)**

FCC ID: A3LSMN976V		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1M1905130071-06-R1.A3L	Test Dates: 05/14 - 07/12/2019	EUT Type: Portable Handset		Page 258 of 371

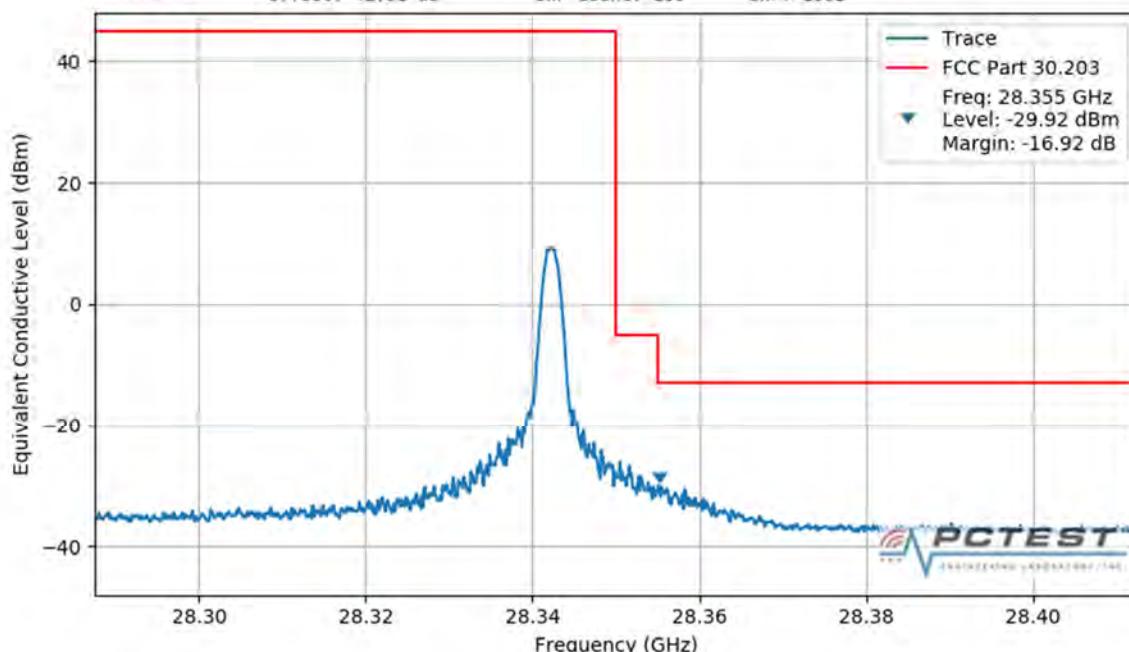
**PASS**

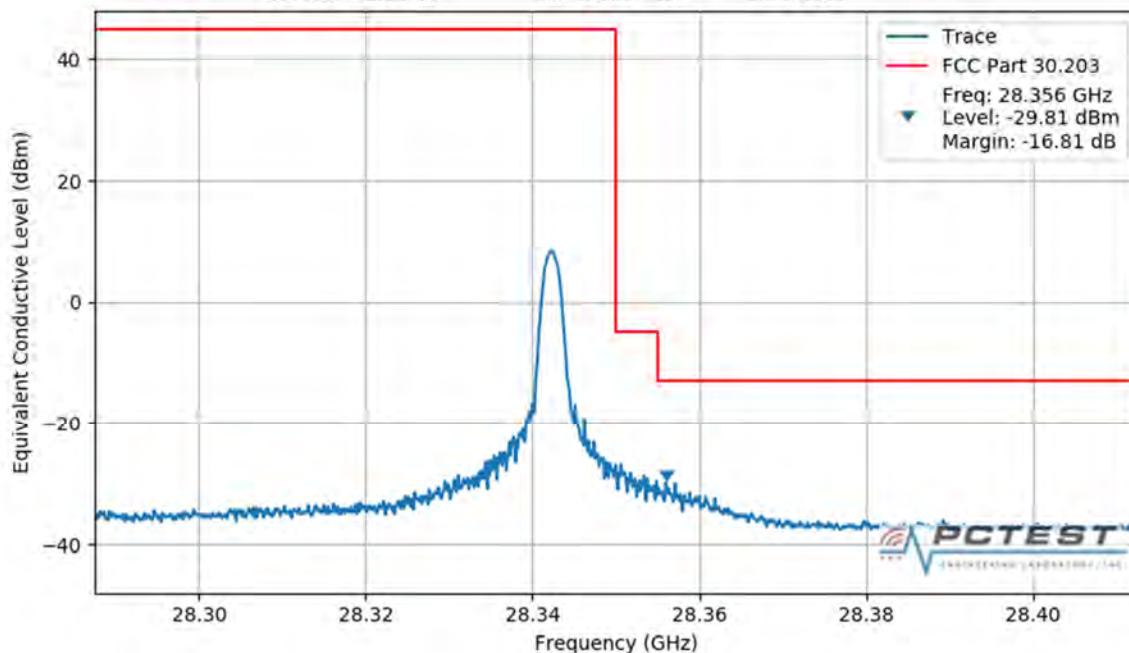
 Center Freq: 28.35 GHz    Trace: Average  
 Span: 125 MHz    Detector: Average  
 Offset: 42.31 dB    RBW: 1 MHz  
 SWP Count: 100    VBW: 3 MHz  
 SWP: 1001

**Plot 7-441. Upper Band Edge Plot (1CC 50MHz QPSK Full RB)**
**PASS**

 Center Freq: 28.35 GHz    Trace: Average  
 Span: 125 MHz    Detector: Average  
 Offset: 42.31 dB    RBW: 1 MHz  
 SWP Count: 100    VBW: 3 MHz  
 SWP: 1001

**Plot 7-442. Upper Band Edge Plot (1CC 50MHz QPSK 1 RB)**

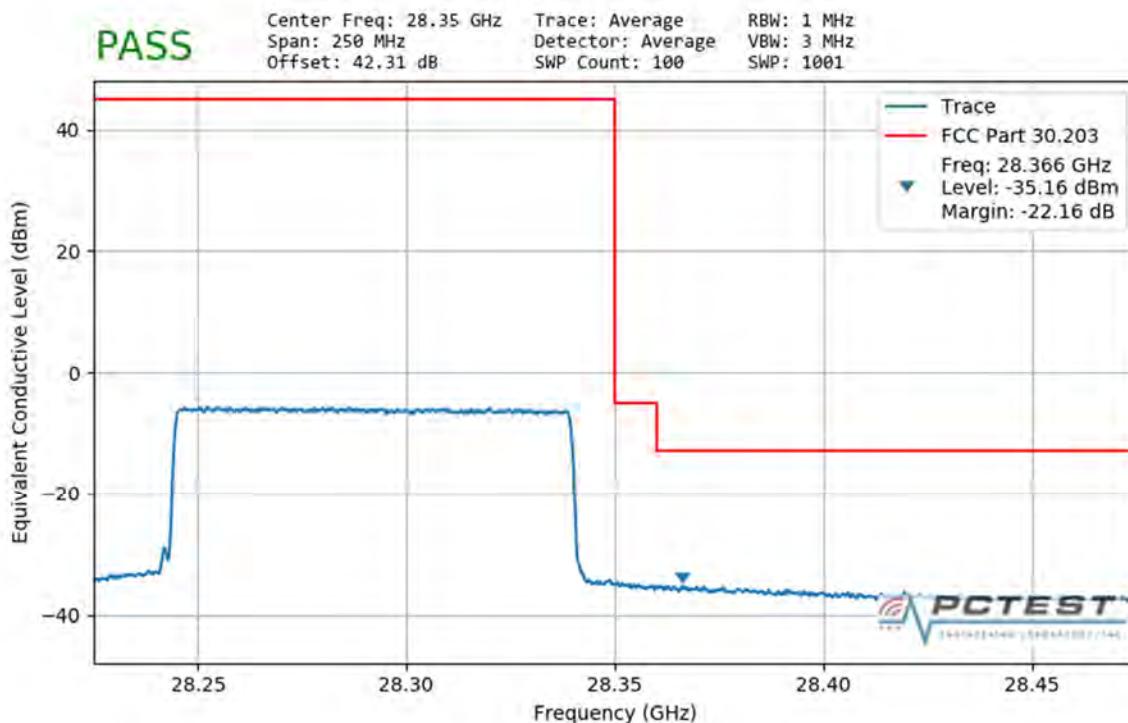
FCC ID: A3LSMN976V		MEASUREMENT REPORT (CERTIFICATION)			Approved by: Quality Manager
Test Report S/N: 1M1905130071-06-R1.A3L	Test Dates: 05/14 - 07/12/2019	EUT Type: Portable Handset			Page 259 of 371

**PASS**

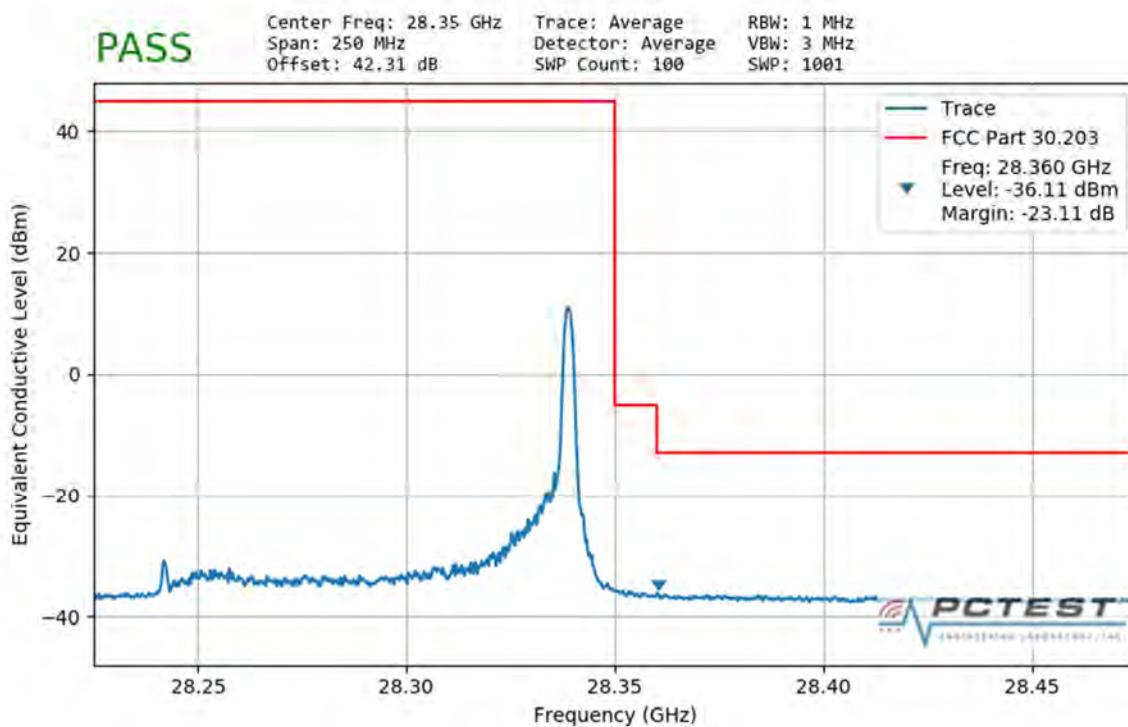
 Center Freq: 28.35 GHz  
 Span: 125 MHz  
 Offset: 42.31 dB  
 Trace: Average  
 Detector: Average  
 SWP Count: 100  
 RBW: 1 MHz  
 VBW: 3 MHz  
 SWP: 1001

**Plot 7-443. Upper Band Edge Plot (1CC 50MHz 16QAM 1 RB)**
**PASS**

 Center Freq: 28.35 GHz  
 Span: 125 MHz  
 Offset: 42.31 dB  
 Trace: Average  
 Detector: Average  
 SWP Count: 100  
 RBW: 1 MHz  
 VBW: 3 MHz  
 SWP: 1001

**Plot 7-444. Upper Band Edge Plot (1CC 50MHz 64QAM 1 RB)**

FCC ID: A3LSMN976V		MEASUREMENT REPORT (CERTIFICATION)			Approved by: Quality Manager
Test Report S/N: 1M1905130071-06-R1.A3L	Test Dates: 05/14 - 07/12/2019	EUT Type: Portable Handset			Page 260 of 371



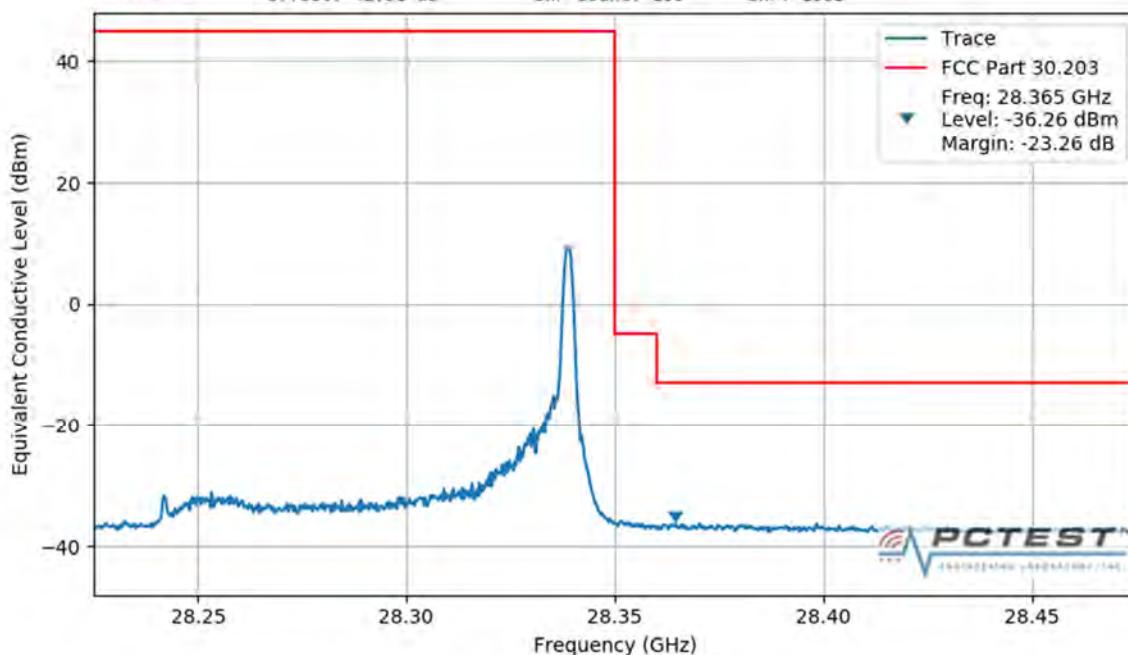
Plot 7-445. Upper Band Edge Plot (1CC 100MHz QPSK Full RB)

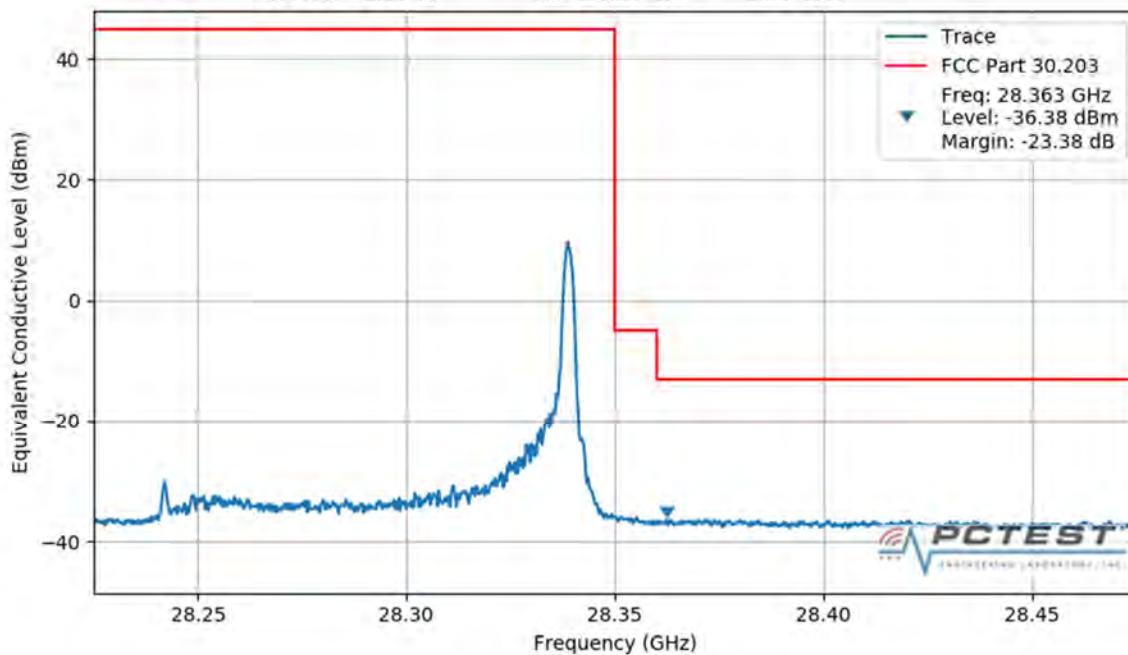


Plot 7-446. Upper Band Edge Plot (1CC 100MHz QPSK 1 RB)

FCC ID: A3LSMN976V		MEASUREMENT REPORT (CERTIFICATION)			Approved by: Quality Manager
Test Report S/N: 1M1905130071-06-R1.A3L	Test Dates: 05/14 - 07/12/2019	EUT Type: Portable Handset			Page 261 of 371

**PASS**

 Center Freq: 28.35 GHz Trace: Average  
 Span: 250 MHz Detector: Average  
 Offset: 42.31 dB SWP Count: 100  
 RBW: 1 MHz VBW: 3 MHz  
 SWP: 1001

**Plot 7-447. Upper Band Edge Plot (1CC 100MHz 16QAM 1 RB)**
**PASS**

 Center Freq: 28.35 GHz Trace: Average  
 Span: 250 MHz Detector: Average  
 Offset: 42.31 dB SWP Count: 100  
 RBW: 1 MHz VBW: 3 MHz  
 SWP: 1001

**Plot 7-448. Upper Band Edge Plot (1CC 100MHz 64QAM 1 RB)**

FCC ID: A3LSMN976V		MEASUREMENT REPORT (CERTIFICATION)			Approved by: Quality Manager
Test Report S/N: 1M1905130071-06-R1.A3L	Test Dates: 05/14 - 07/12/2019	EUT Type: Portable Handset			Page 262 of 371