



Plot 7-147. Peak Power Spectral Density Plot (1CC– 3560 MHz- 20.0MHz 256QAM- Low Channel) Port 13



Plot 7-148. Peak Power Spectral Density Plot (1CC– 3560 MHz- 20.0MHz 256QAM- Low Channel) Port 12

FCC ID: A3LMT3204-48A	 MEASUREMENT REPORT (CERTIFICATION) 		Approved by: Quality Manager
Test Report S/N: 1M1901240015-01-R2.A3L	Test Dates: 01/23/2019 - 02/28/2019	EUT Type: Massive MIMO CBSD	Page 132 of 313

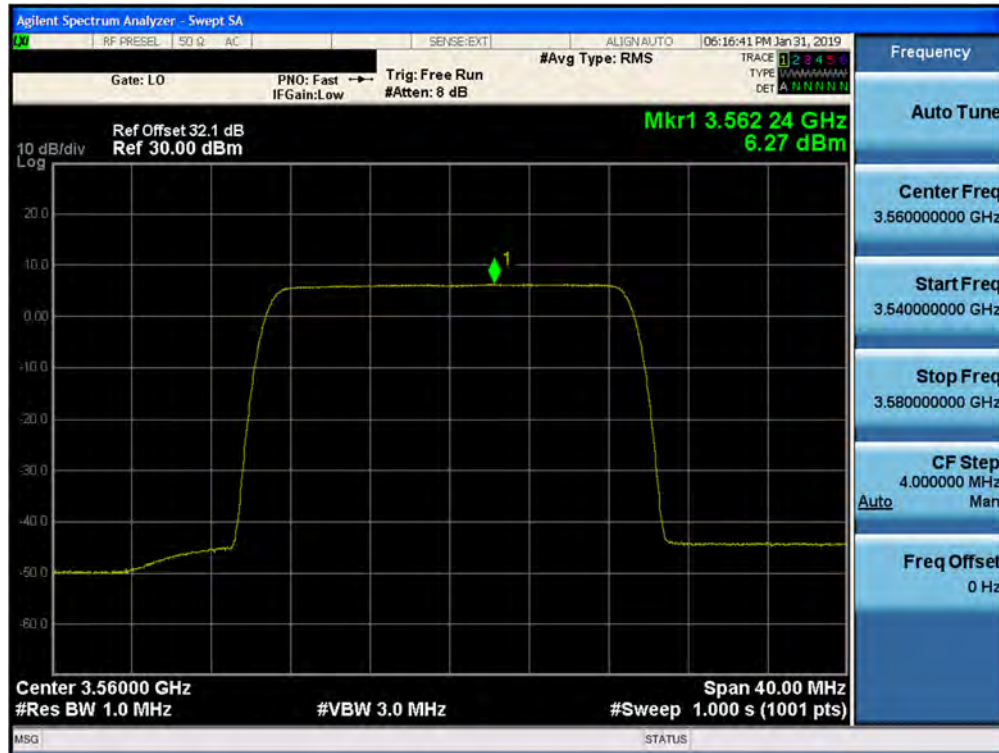


Plot 7-149. Peak Power Spectral Density Plot (1CC- 3560 MHz- 20.0MHz 256QAM- Low Channel) Port 28

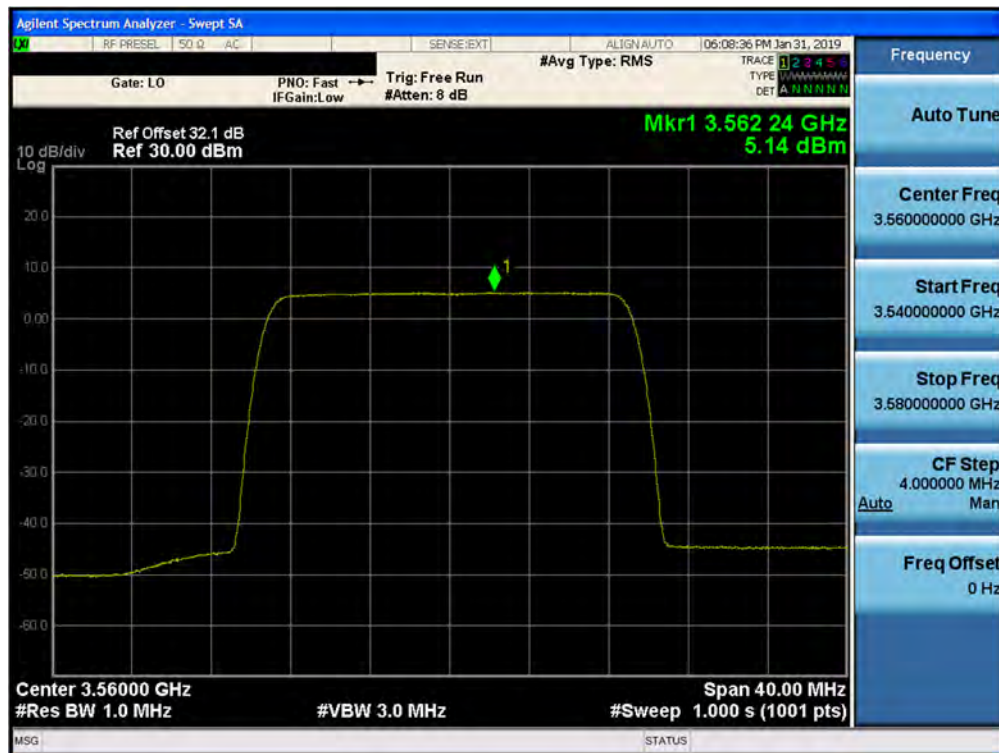


Plot 7-150. Peak Power Spectral Density Plot (1CC- 3560 MHz- 20.0MHz 256QAM- Low Channel) Port 29

FCC ID: A3LMT3204-48A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1901240015-01-R2.A3L	Test Dates: 01/23/2019 - 02/28/2019	EUT Type: Massive MIMO CBSD		Page 133 of 313



Plot 7-151. Peak Power Spectral Density Plot (1CC- 3560 MHz- 20.0MHz 256QAM- Low Channel) Port 30



Plot 7-152. Peak Power Spectral Density Plot (1CC- 3560 MHz- 20.0MHz 256QAM- Low Channel) Port 31

FCC ID: A3LMT3204-48A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1901240015-01-R2.A3L	Test Dates: 01/23/2019 - 02/28/2019	EUT Type: Massive MIMO CBSD		Page 134 of 313

8- User Beam 1CC Mid Channel

Port #	QPSK (dBm/MHz)	16-QAM (dBm/MHz)	64-QAM (dBm/MHz)	256-QAM (dBm/MHz)
3	4.71	5.49	4.88	4.86
2	5.35	5.95	5.45	5.53
1	5.48	6.00	5.46	5.35
0	5.48	6.12	5.65	5.57
16	5.20	5.82	5.34	5.43
17	5.38	5.94	5.51	5.35
18	5.59	6.06	5.69	5.63
19	4.90	5.53	4.92	4.98
7	4.50	5.10	4.48	4.43
6	5.39	5.88	5.56	5.50
5	5.53	6.03	5.55	5.49
4	5.71	6.20	5.72	5.69
20	5.46	5.99	5.63	5.67
21	5.57	6.09	5.71	5.66
22	5.43	5.83	5.39	5.31
23	5.00	5.73	5.14	5.13
11	5.09	5.72	5.11	5.11
10	5.30	5.85	5.46	5.45
9	5.41	5.86	5.54	5.58
8	5.52	5.89	5.58	5.53
24	5.45	6.01	5.77	5.74
25	5.63	5.90	5.71	5.63
26	5.24	5.94	5.31	5.26
27	5.17	5.60	5.34	5.29
15	5.24	5.63	5.18	5.11
14	5.35	6.09	5.46	5.43
13	5.48	6.01	5.63	5.76
12	5.84	6.07	5.84	5.78
28	5.53	6.01	5.66	5.75
29	5.70	6.04	5.72	5.69
30	5.72	6.29	5.71	5.69
31	5.35	5.84	5.39	5.37

Table 7-40. 8-User Beam 1CC Mid Channel Peak Power Spectral Density (LTE Band 48 – 20.0MHz)

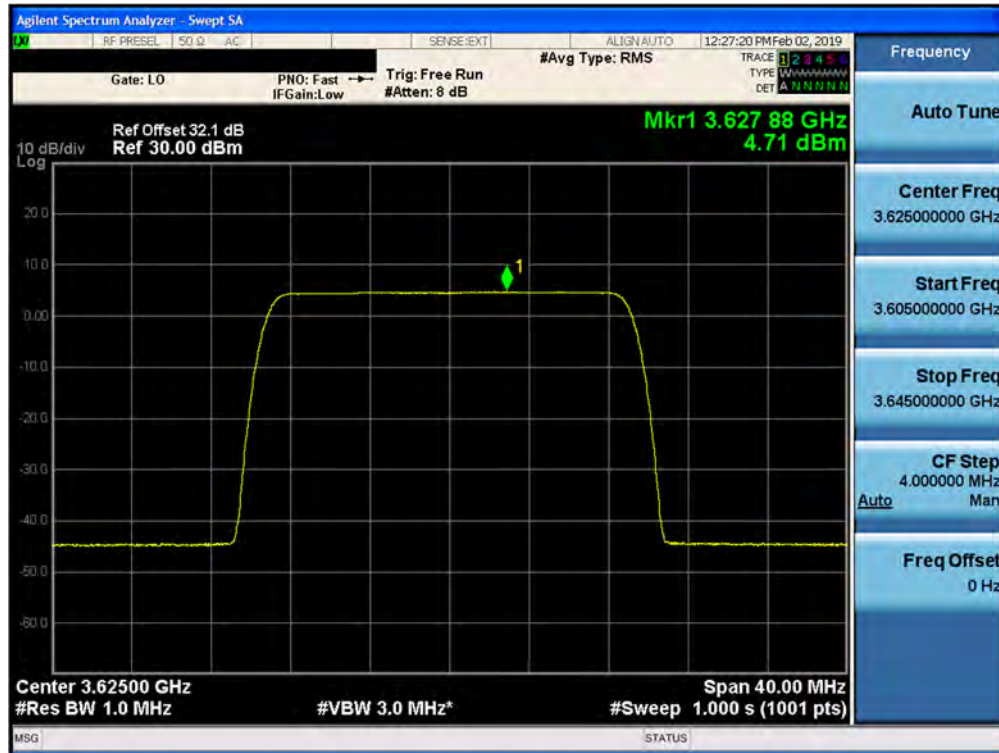
FCC ID: A3LMT3204-48A	 MEASUREMENT REPORT (CERTIFICATION) 		Approved by: Quality Manager
Test Report S/N: 1M1901240015-01-R2.A3L	Test Dates: 01/23/2019 - 02/28/2019	EUT Type: Massive MIMO CBSD	
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Mid Channel 1CC	QPSK	16-QAM	64-QAM	256-QAM
Total MIMO PSD (dBm/MHz)	20.43	20.95	20.51	20.49
Ant. Gain (dBi)	21.50	21.50	21.50	21.50
8-beam Multiplexing Reduction(dB)	-9.03	-9.03	-9.03	-9.03
Beamforming Gain (dB)	3.00	3.00	3.00	3.00
Total MIMO Radiated PSD (dBm/MHz)	35.90	36.42	35.98	35.96
FCC Maximum PSD Limit (dBm/MHz)	37.00	37.00	37.00	37.00
Margin (dB)	-1.10	-0.58	-1.02	-1.04

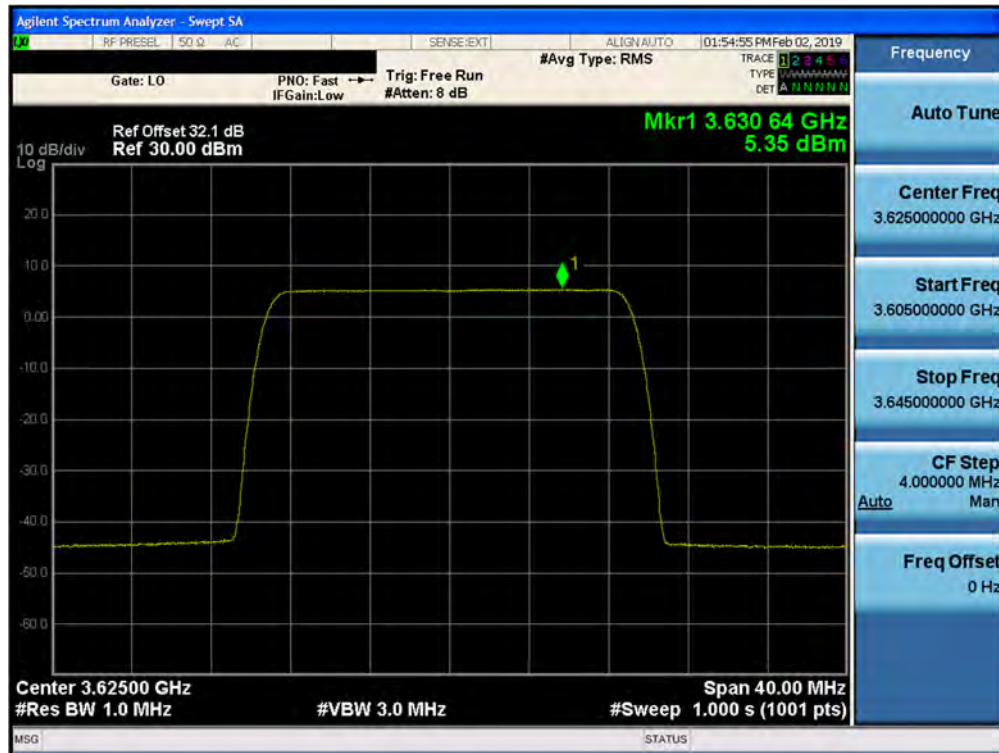
Table 7-41. 8-User Beam 1CC Mid Channel MIMO Peak Power Spectral Density (LTE Band 48 – 20.0MHz)

FCC ID: A3LMT3204-48A	 MEASUREMENT REPORT (CERTIFICATION) 		Approved by: Quality Manager
Test Report S/N: 1M1901240015-01-R2.A3L	Test Dates: 01/23/2019 - 02/28/2019	EUT Type: Massive MIMO CBSD	
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8-User Beam 1CC Mid Channel QPSK

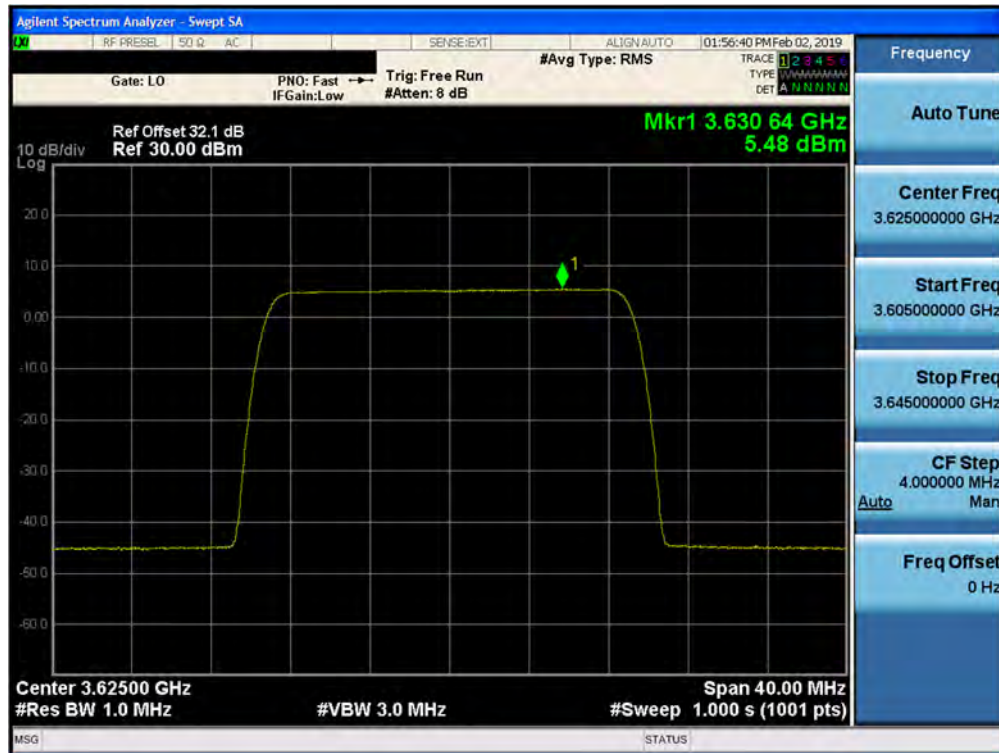


Plot 7-153. Peak Power Spectral Density Plot (1CC– 3625 MHz- 20.0MHz QPSK- Mid Channel) Port 03

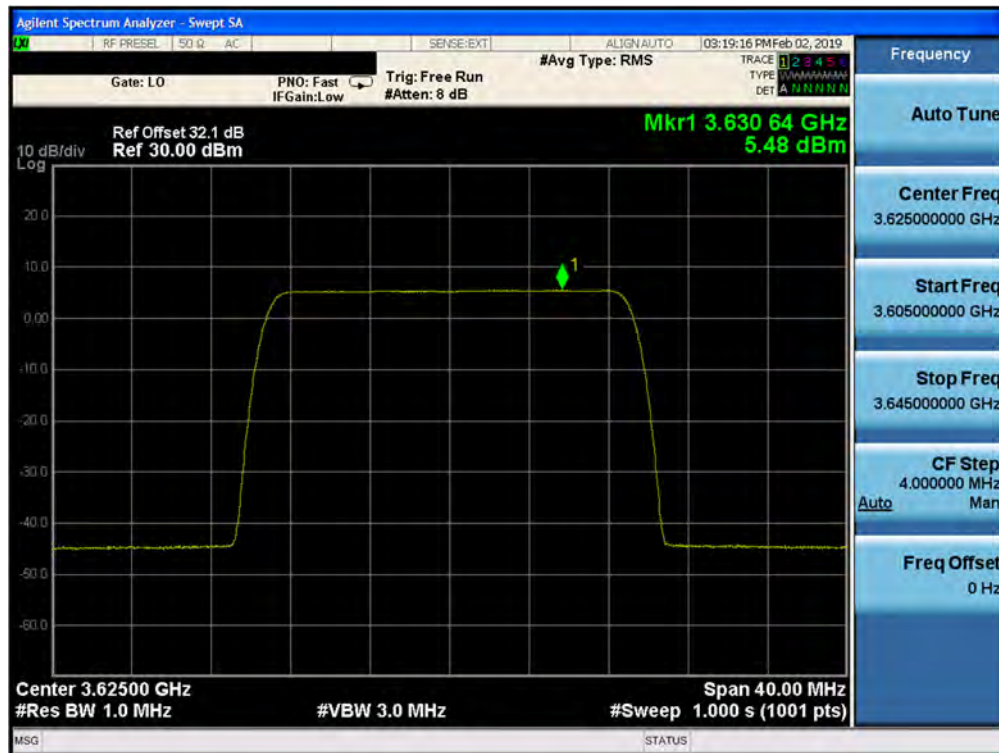


Plot 7-154. Peak Power Spectral Density Plot (1CC– 3625 MHz- 20.0MHz QPSK- Mid Channel) Port 02

FCC ID: A3LMT3204-48A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1901240015-01-R2.A3L	Test Dates: 01/23/2019 - 02/28/2019	EUT Type: Massive MIMO CBSD		Page 137 of 313



Plot 7-155. Peak Power Spectral Density Plot (1CC- 3625 MHz- 20.0MHz QPSK- Mid Channel) Port 01



Plot 7-156. Peak Power Spectral Density Plot (1CC- 3625 MHz- 20.0MHz QPSK- Mid Channel) Port 00

FCC ID: A3LMT3204-48A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1901240015-01-R2.A3L	Test Dates: 01/23/2019 - 02/28/2019	EUT Type: Massive MIMO CBSD		Page 138 of 313

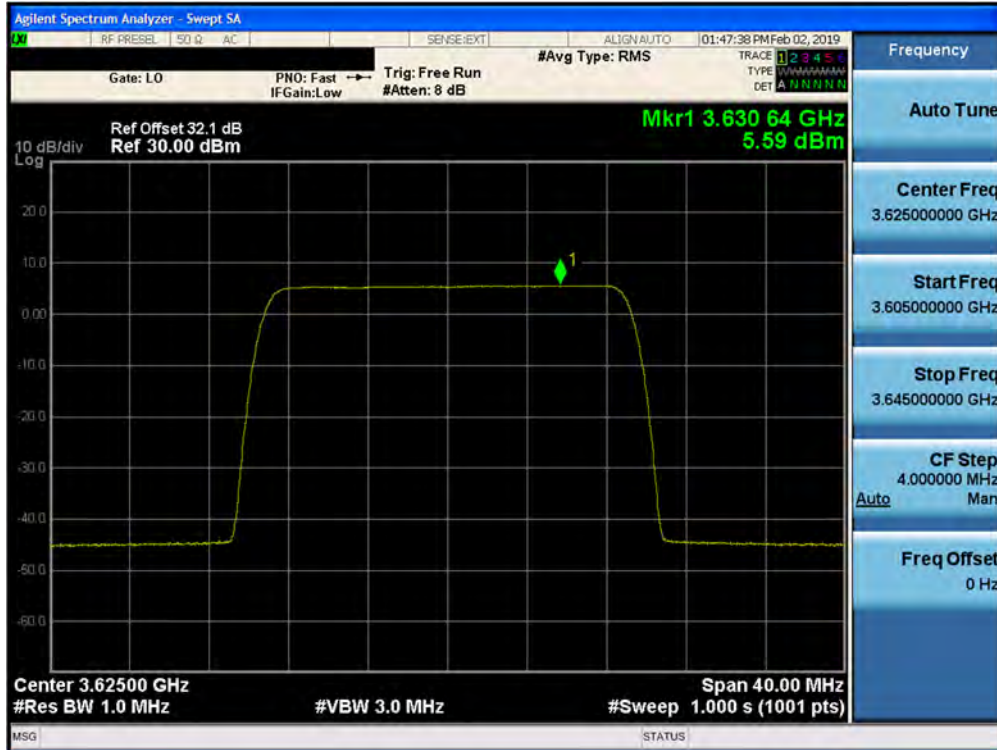


Plot 7-157. Peak Power Spectral Density Plot (1CC- 3625 MHz- 20.0MHz QPSK- Mid Channel) Port 16



Plot 7-158. Peak Power Spectral Density Plot (1CC- 3625 MHz- 20.0MHz QPSK- Mid Channel) Port 17

FCC ID: A3LMT3204-48A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1901240015-01-R2.A3L	Test Dates: 01/23/2019 - 02/28/2019	EUT Type: Massive MIMO CBSD		Page 139 of 313

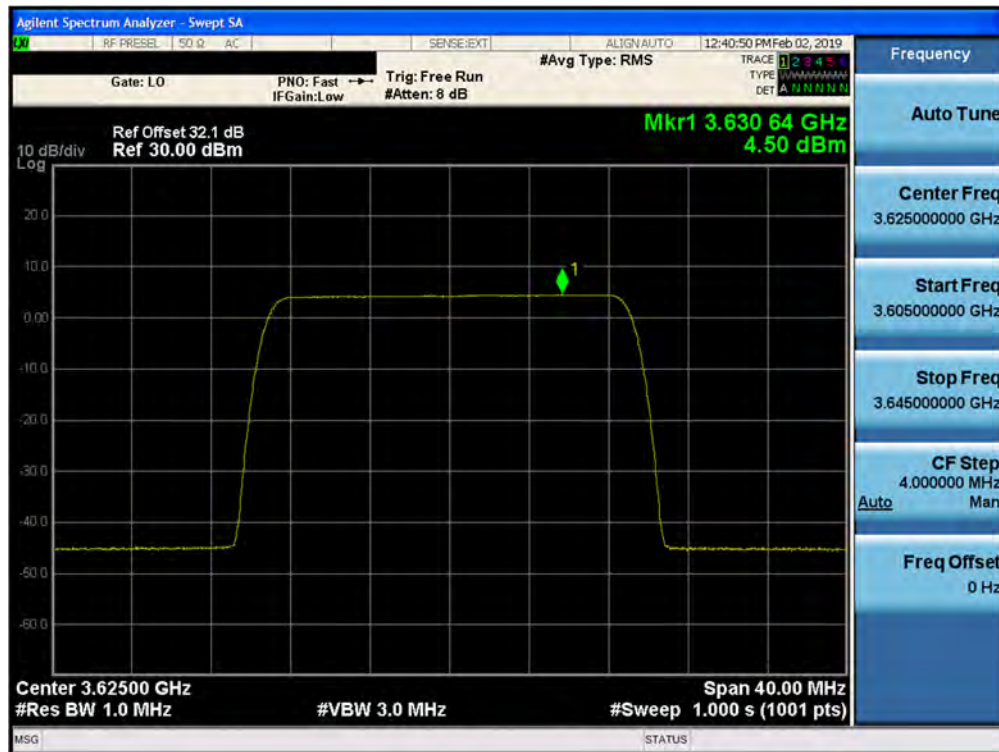


Plot 7-159. Peak Power Spectral Density Plot (1CC– 3625 MHz- 20.0MHz QPSK- Mid Channel) Port 18



Plot 7-160. Peak Power Spectral Density Plot (1CC– 3625 MHz- 20.0MHz QPSK- Mid Channel) Port 19

FCC ID: A3LMT3204-48A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1901240015-01-R2.A3L	Test Dates: 01/23/2019 - 02/28/2019	EUT Type: Massive MIMO CBSD		Page 140 of 313

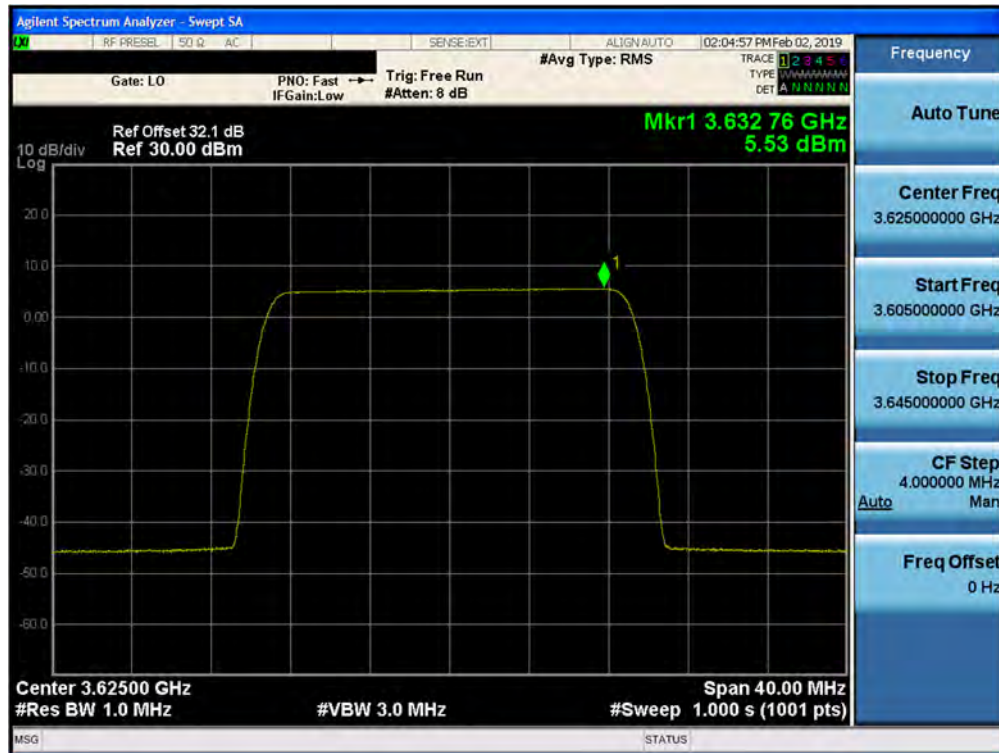


Plot 7-161. Peak Power Spectral Density Plot (1CC- 3625 MHz- 20.0MHz QPSK- Mid Channel) Port 07

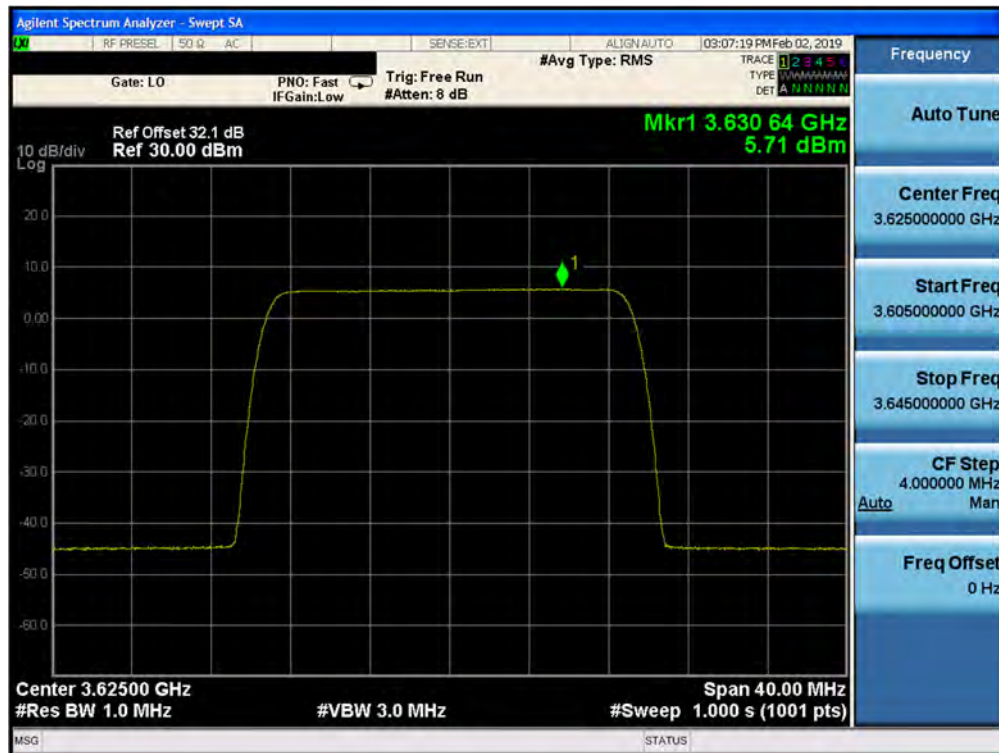


Plot 7-162. Peak Power Spectral Density Plot (1CC- 3625 MHz- 20.0MHz QPSK- Mid Channel) Port 06

FCC ID: A3LMT3204-48A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1901240015-01-R2-A3L	Test Dates: 01/23/2019 - 02/28/2019	EUT Type: Massive MIMO CBSD		Page 141 of 313

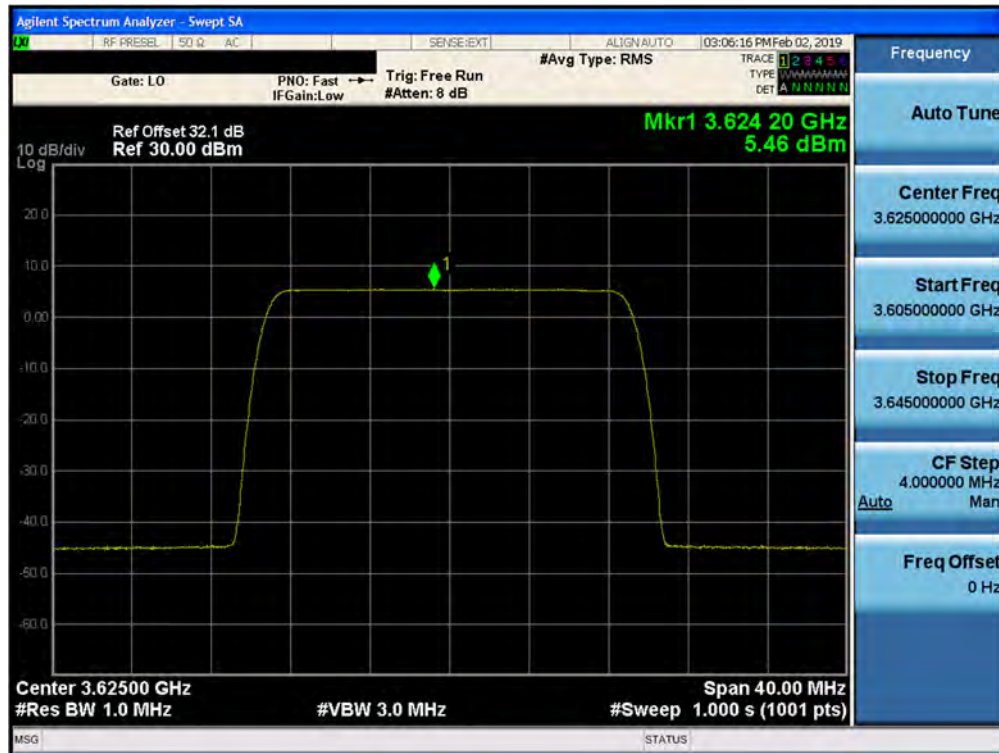


Plot 7-163. Peak Power Spectral Density Plot (1CC– 3625 MHz- 20.0MHz QPSK- Mid Channel) Port 05

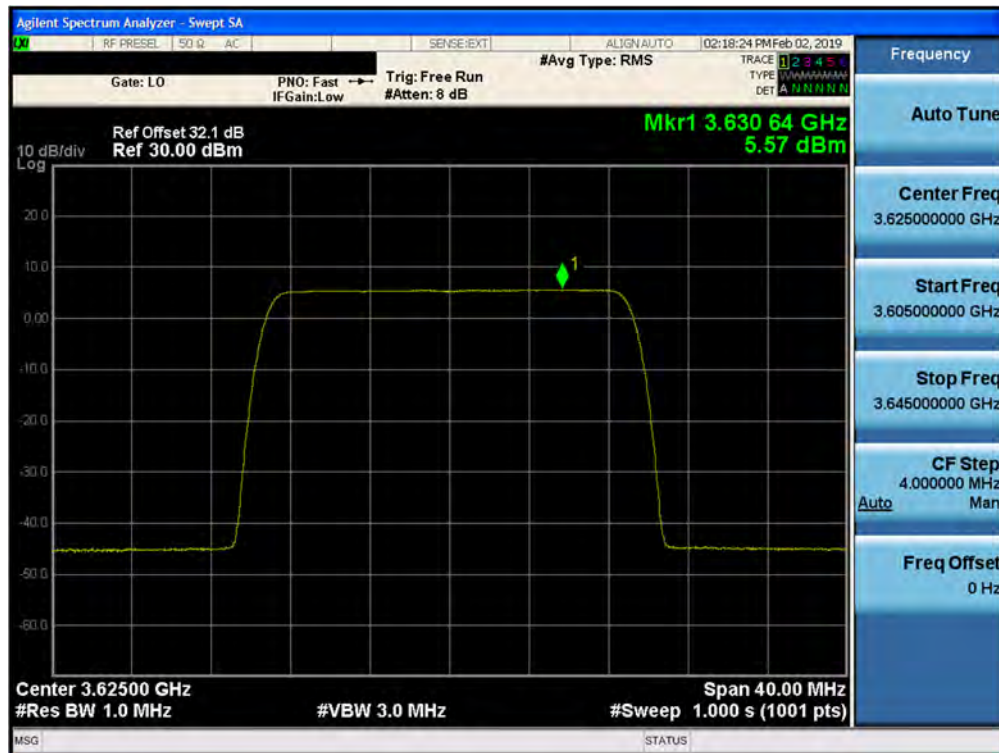


Plot 7-164. Peak Power Spectral Density Plot (1CC– 3625 MHz- 20.0MHz QPSK- Mid Channel) Port 04

FCC ID: A3LMT3204-48A	MEASUREMENT REPORT (CERTIFICATION)			Approved by: Quality Manager
Test Report S/N: 1M1901240015-01-R2.A3L	Test Dates: 01/23/2019 - 02/28/2019	EUT Type: Massive MIMO CBSD		Page 142 of 313

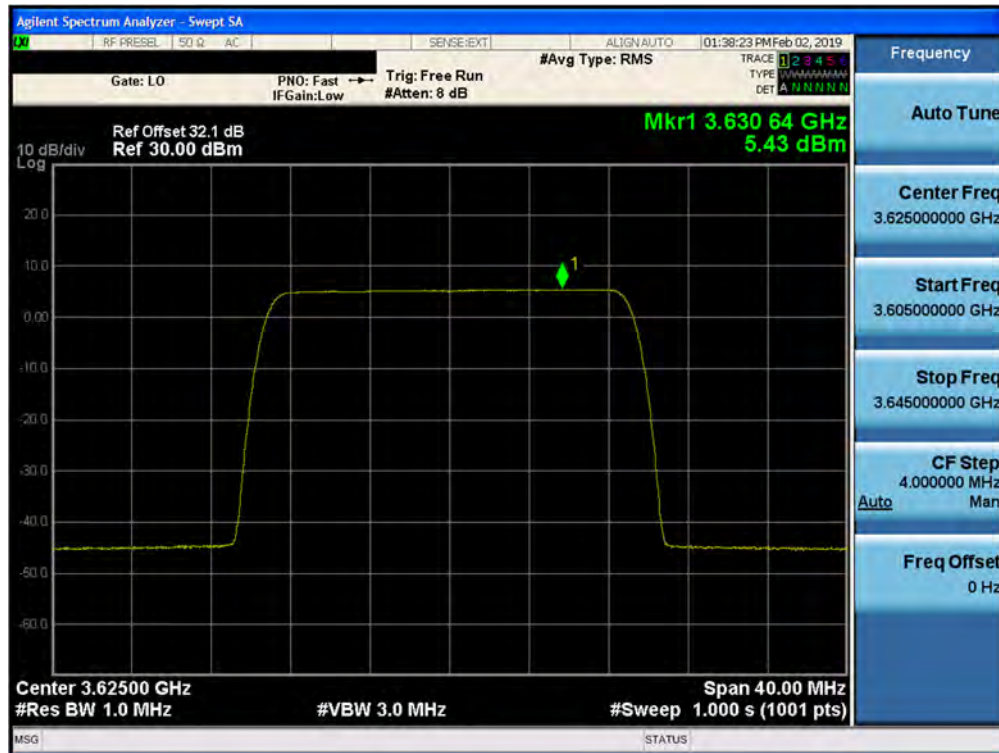


Plot 7-165. Peak Power Spectral Density Plot (1CC- 3625 MHz- 20.0MHz QPSK- Mid Channel) Port 20

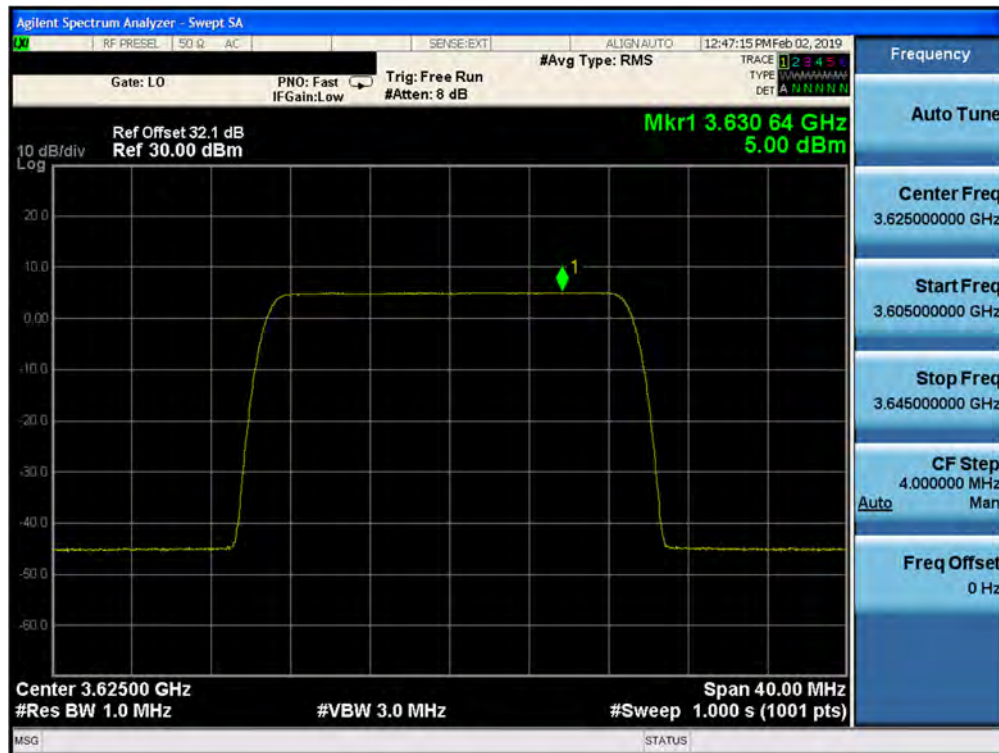


Plot 7-166. Peak Power Spectral Density Plot (1CC- 3625 MHz- 20.0MHz QPSK- Mid Channel) Port 21

FCC ID: A3LMT3204-48A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1901240015-01-R2.A3L	Test Dates: 01/23/2019 - 02/28/2019	EUT Type: Massive MIMO CBSD		Page 143 of 313

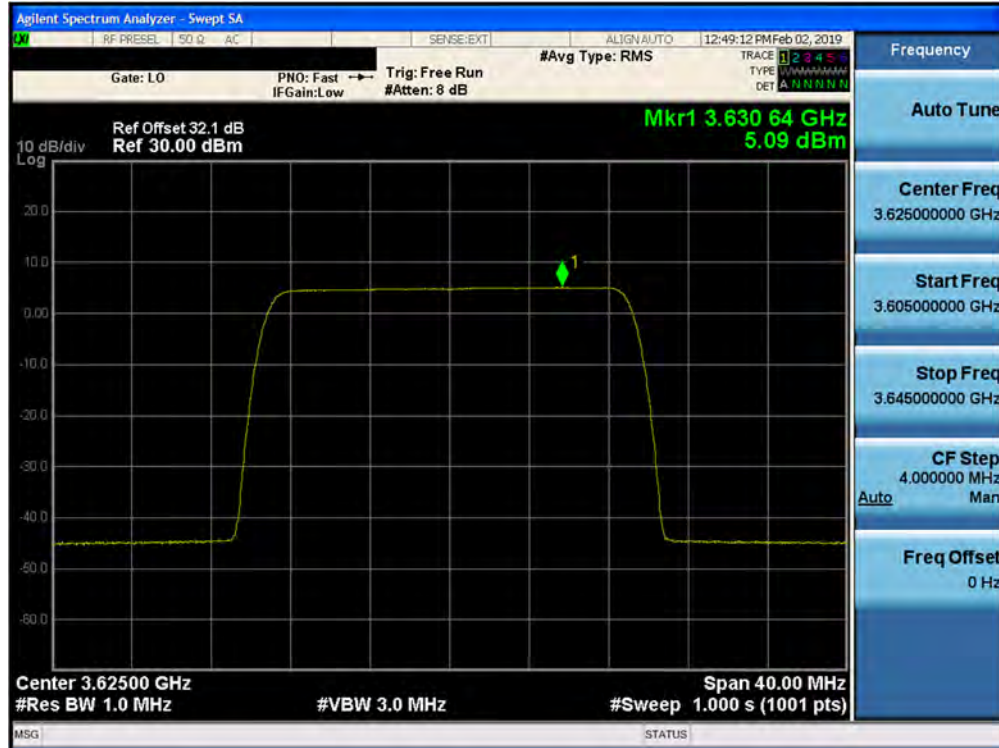


Plot 7-167. Peak Power Spectral Density Plot (1CC- 3625 MHz- 20.0MHz QPSK- Mid Channel) Port 22

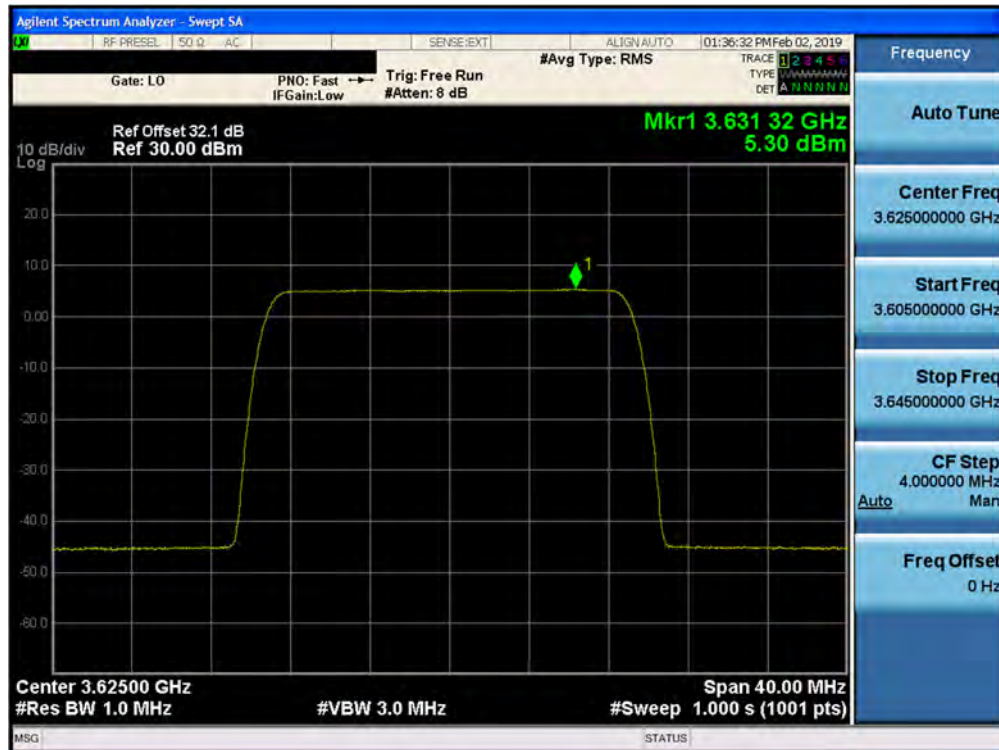


Plot 7-168. Peak Power Spectral Density Plot (1CC- 3625 MHz- 20.0MHz QPSK- Mid Channel) Port 23

FCC ID: A3LMT3204-48A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1901240015-01-R2.A3L	Test Dates: 01/23/2019 - 02/28/2019	EUT Type: Massive MIMO CBSD		Page 144 of 313

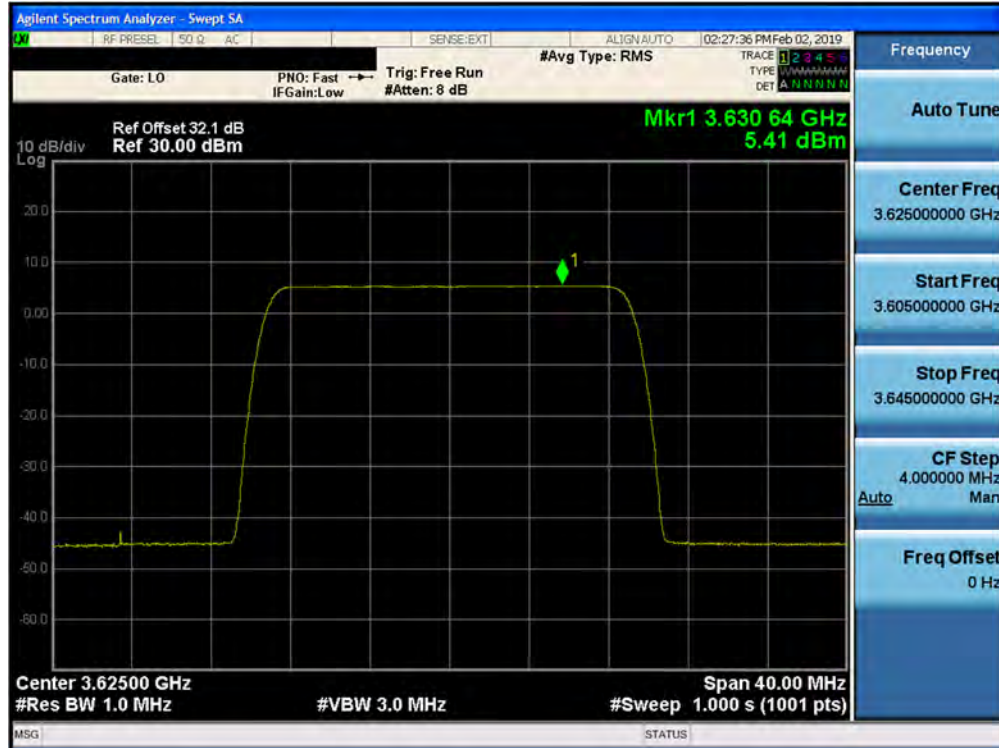


Plot 7-169. Peak Power Spectral Density Plot (1CC– 3625 MHz- 20.0MHz QPSK- Mid Channel) Port 11

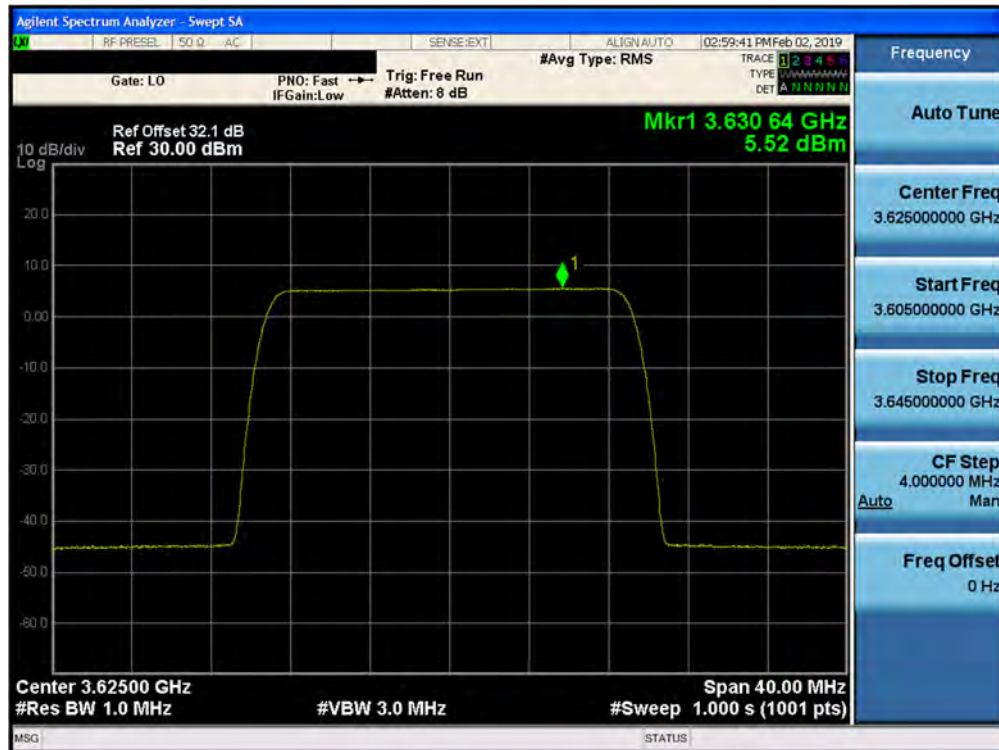


Plot 7-170. Peak Power Spectral Density Plot (1CC– 3625 MHz- 20.0MHz QPSK- Mid Channel) Port 10

FCC ID: A3LMT3204-48A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1901240015-01-R2-A3L	Test Dates: 01/23/2019 - 02/28/2019	EUT Type: Massive MIMO CBSD		Page 145 of 313

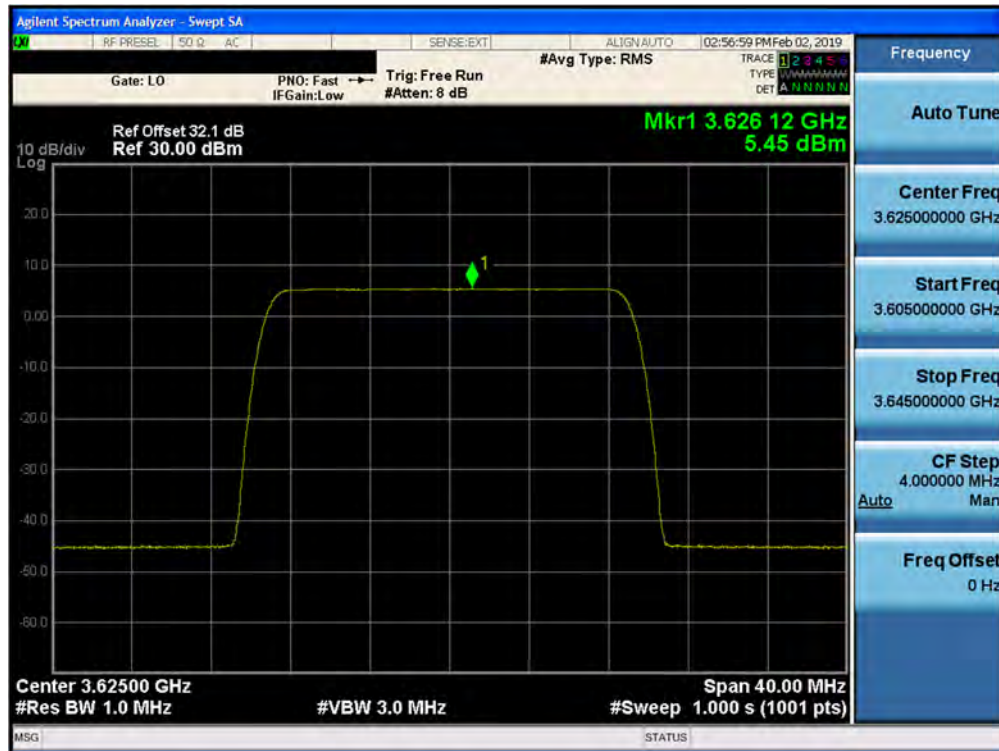


Plot 7-171. Peak Power Spectral Density Plot (1CC- 3625 MHz- 20.0MHz QPSK- Mid Channel) Port 09

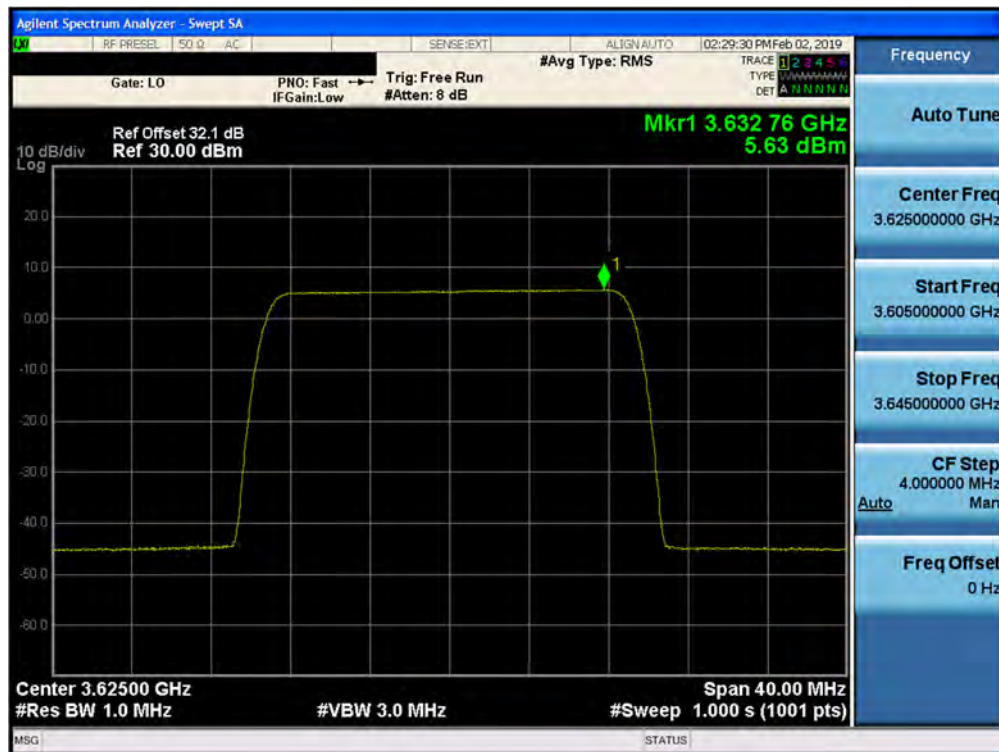


Plot 7-172. Peak Power Spectral Density Plot (1CC- 3625 MHz- 20.0MHz QPSK- Mid Channel) Port 08

FCC ID: A3LMT3204-48A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1901240015-01-R2.A3L	Test Dates: 01/23/2019 - 02/28/2019	EUT Type: Massive MIMO CBSD		Page 146 of 313

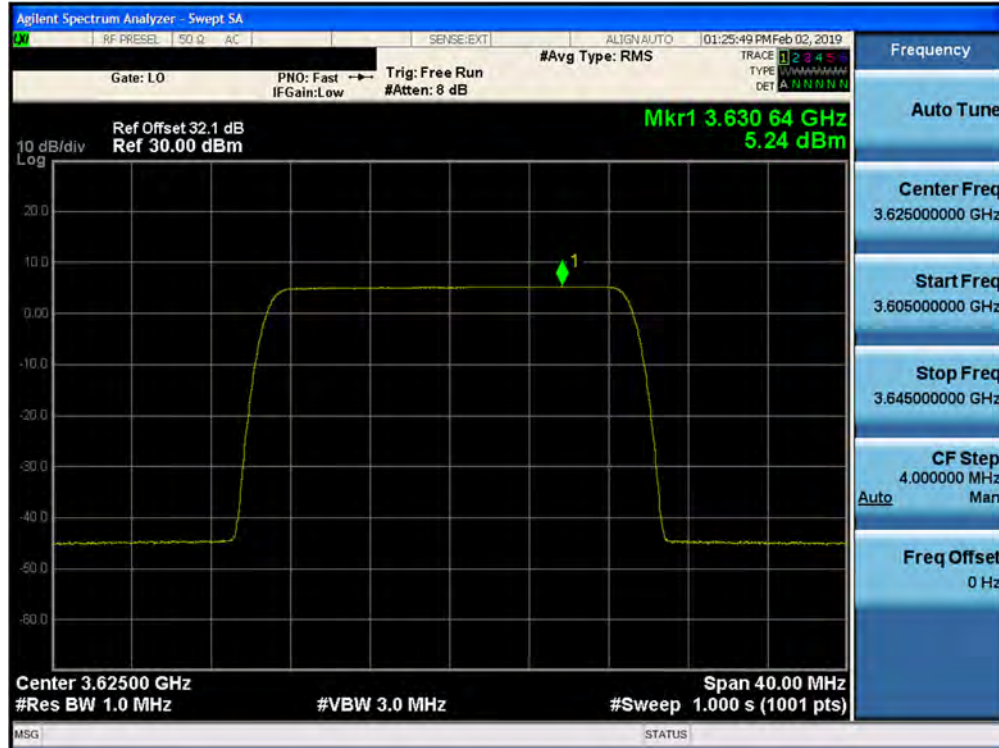


Plot 7-173. Peak Power Spectral Density Plot (1CC- 3625 MHz- 20.0MHz QPSK- Mid Channel) Port 24

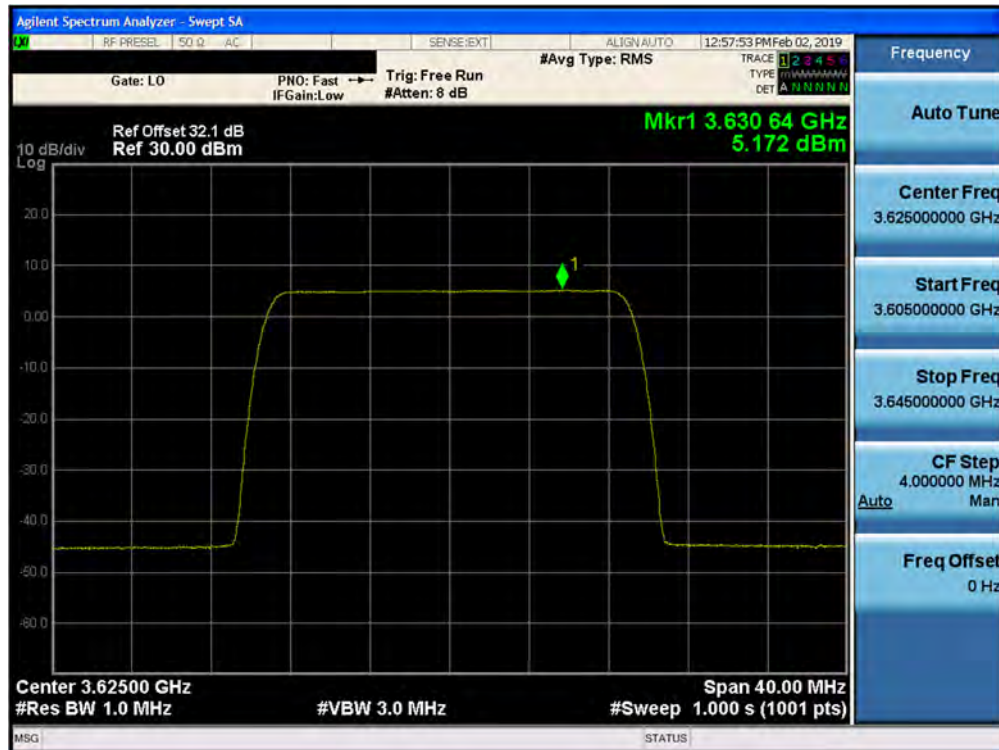


Plot 7-174. Peak Power Spectral Density Plot (1CC- 3625 MHz- 20.0MHz QPSK- Mid Channel) Port 25

FCC ID: A3LMT3204-48A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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Plot 7-175. Peak Power Spectral Density Plot (1CC– 3625 MHz- 20.0MHz QPSK- Mid Channel) Port 26

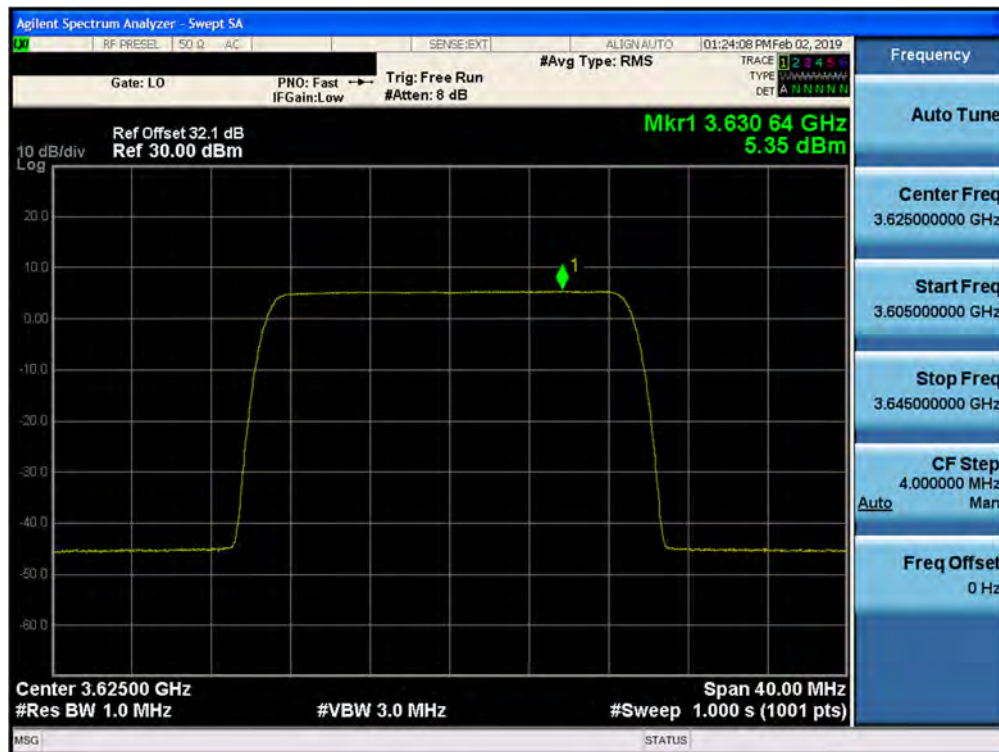


Plot 7-176. Peak Power Spectral Density Plot (1CC– 3625 MHz- 20.0MHz QPSK- Mid Channel) Port 27

FCC ID: A3LMT3204-48A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1901240015-01-R2.A3L	Test Dates: 01/23/2019 - 02/28/2019	EUT Type: Massive MIMO CBSD		Page 148 of 313

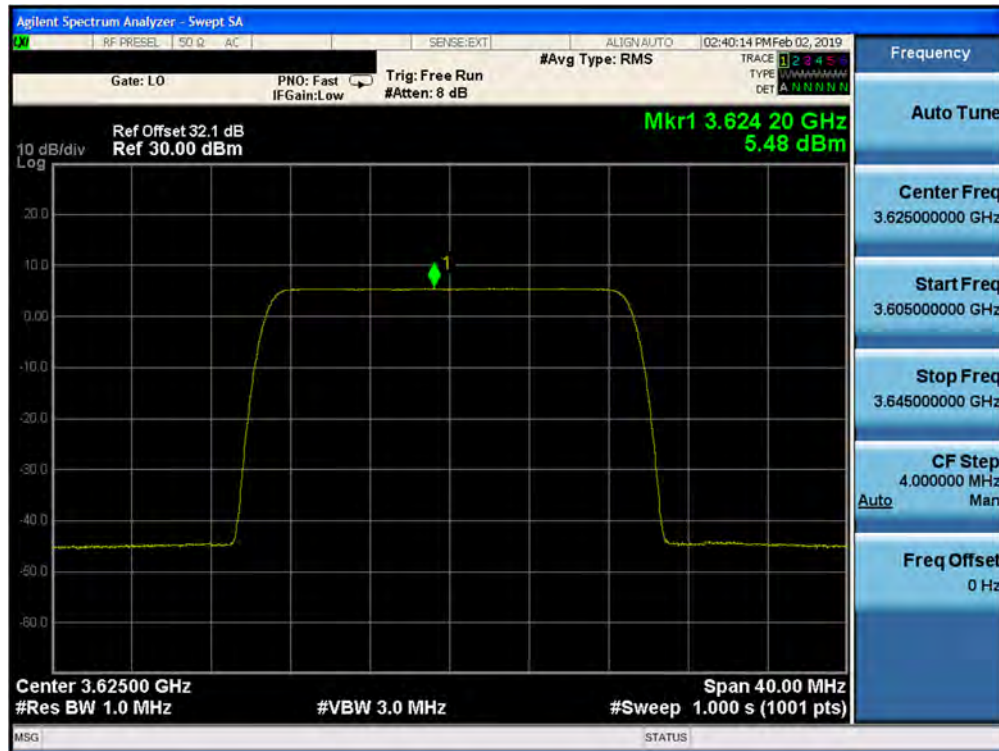


Plot 7-177. Peak Power Spectral Density Plot (1CC– 3625 MHz- 20.0MHz QPSK- Mid Channel) Port 15

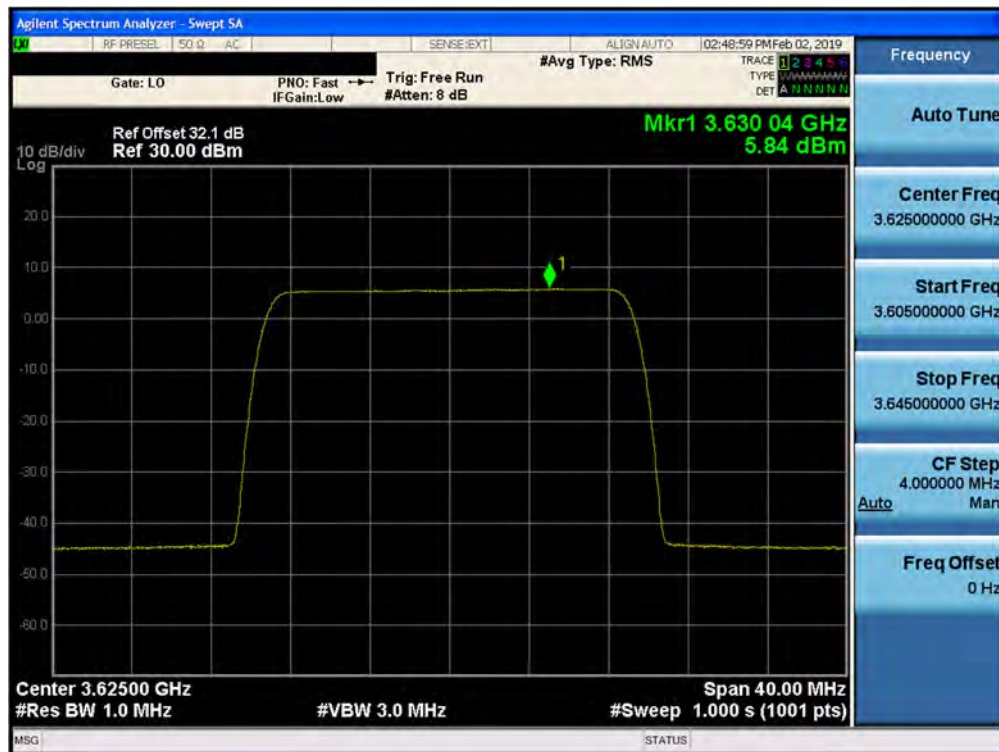


Plot 7-178. Peak Power Spectral Density Plot (1CC– 3625 MHz- 20.0MHz QPSK- Mid Channel) Port 14

FCC ID: A3LMT3204-48A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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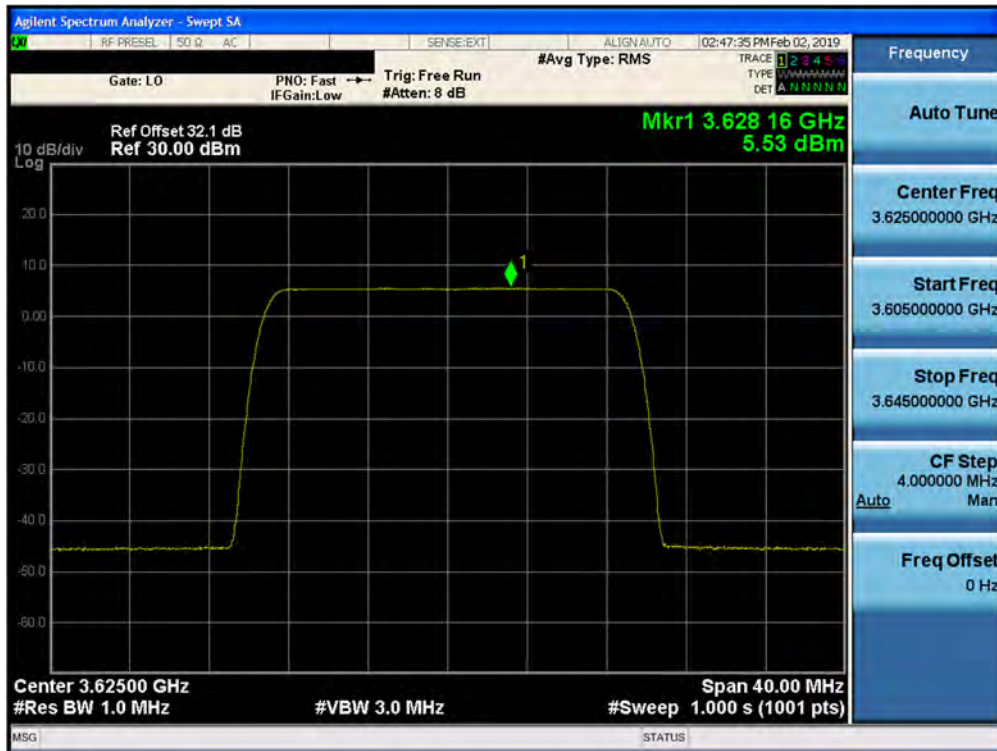


Plot 7-179. Peak Power Spectral Density Plot (1CC– 3625 MHz- 20.0MHz QPSK- Mid Channel) Port 13

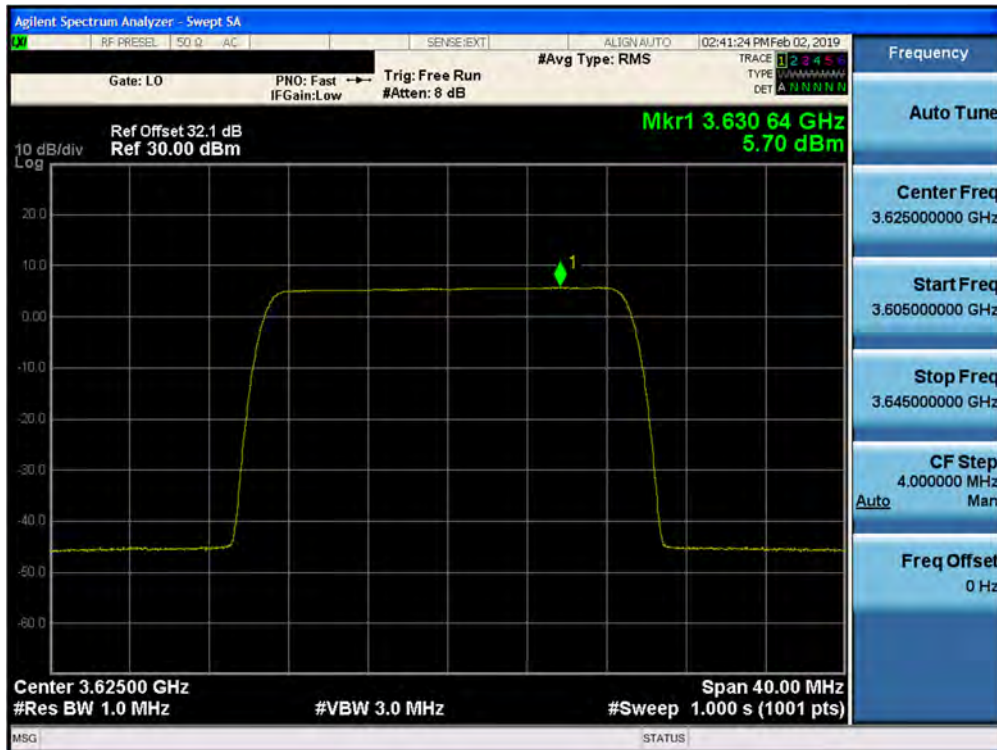


Plot 7-180. Peak Power Spectral Density Plot (1CC– 3625 MHz- 20.0MHz QPSK- Mid Channel) Port 12

FCC ID: A3LMT3204-48A	MEASUREMENT REPORT (CERTIFICATION) 		Approved by: Quality Manager
Test Report S/N: 1M1901240015-01-R2.A3L	Test Dates: 01/23/2019 - 02/28/2019	EUT Type: Massive MIMO CBSD	Page 150 of 313

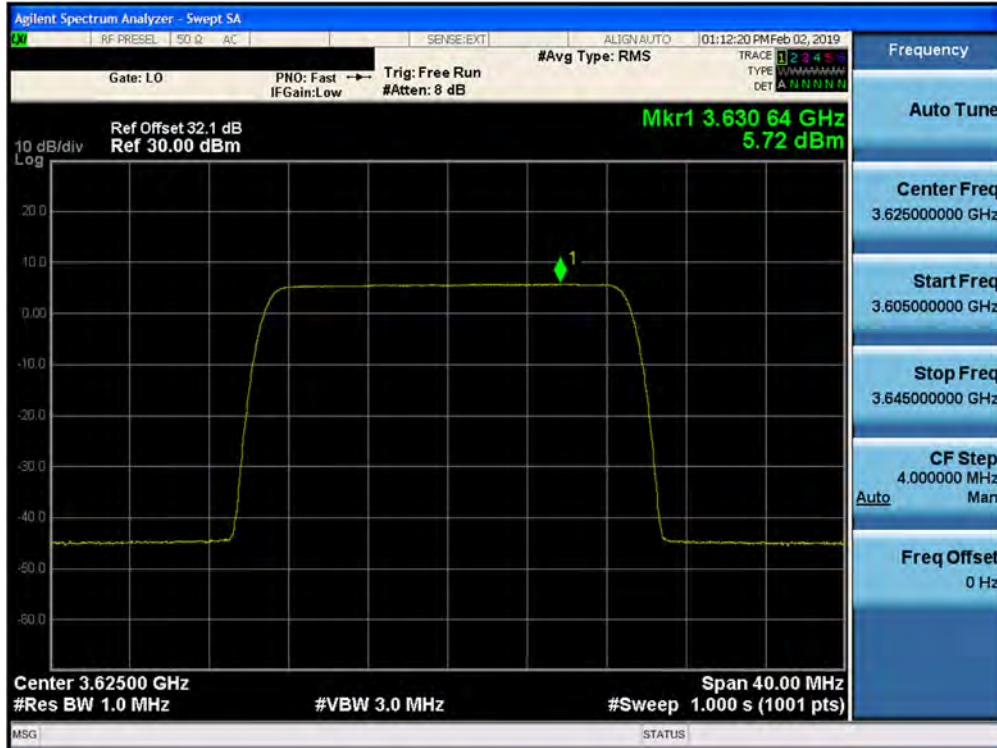


Plot 7-181. Peak Power Spectral Density Plot (1CC– 3625 MHz- 20.0MHz QPSK- Mid Channel) Port 28



Plot 7-182. Peak Power Spectral Density Plot (1CC– 3625 MHz- 20.0MHz QPSK- Mid Channel) Port 29

FCC ID: A3LMT3204-48A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1901240015-01-R2-A3L	Test Dates: 01/23/2019 - 02/28/2019	EUT Type: Massive MIMO CBSD		Page 151 of 313



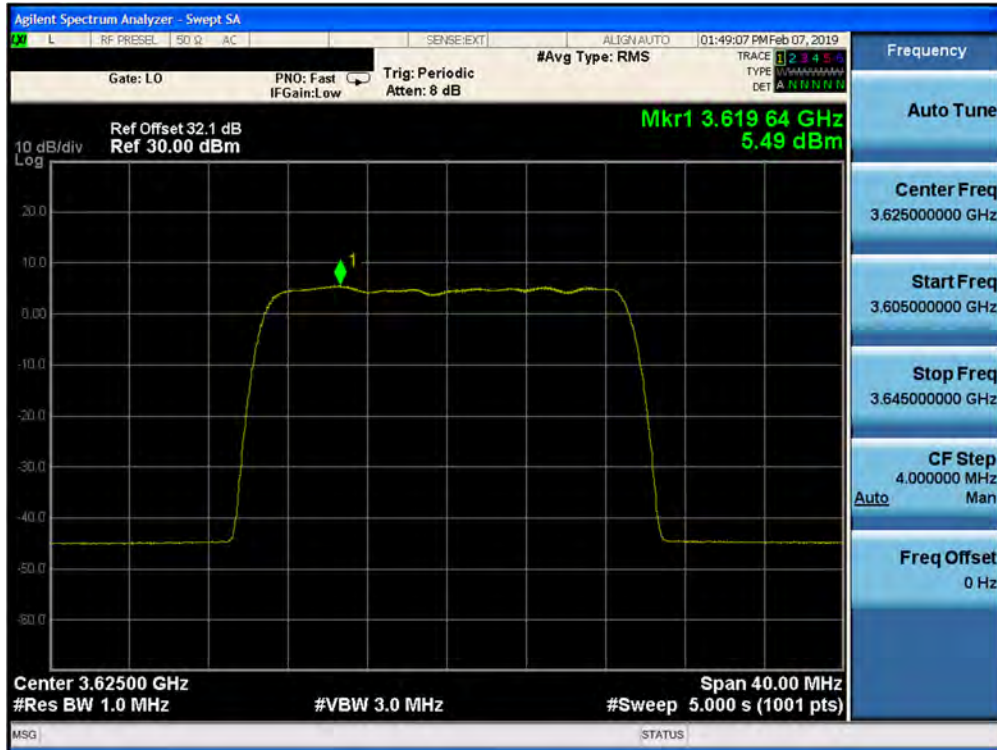
Plot 7-183. Peak Power Spectral Density Plot (1CC- 3625 MHz- 20.0MHz QPSK- Mid Channel) Port 30



Plot 7-184. Peak Power Spectral Density Plot (1CC- 3625 MHz- 20.0MHz QPSK- Mid Channel) Port 31

FCC ID: A3LMT3204-48A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1901240015-01-R2.A3L	Test Dates: 01/23/2019 - 02/28/2019	EUT Type: Massive MIMO CBSD		Page 152 of 313

8- User Beam 1CC Mid Channel 16QAM



Plot 7-185. Peak Power Spectral Density Plot (1CC– 3625 MHz- 20.0MHz 16QAM- Mid Channel) Port 03



Plot 7-186. Peak Power Spectral Density Plot (1CC– 3625 MHz- 20.0MHz 16QAM- Mid Channel) Port 02

FCC ID: A3LMT3204-48A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1901240015-01-R2.A3L	Test Dates: 01/23/2019 - 02/28/2019	EUT Type: Massive MIMO CBSD		Page 153 of 313



Plot 7-187. Peak Power Spectral Density Plot (1CC– 3625 MHz- 20.0MHz 16QAM- Mid Channel) Port 01



Plot 7-188. Peak Power Spectral Density Plot (1CC– 3625 MHz- 20.0MHz 16QAM- Mid Channel) Port 00

FCC ID: A3LMT3204-48A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1901240015-01-R2-A3L	Test Dates: 01/23/2019 - 02/28/2019	EUT Type: Massive MIMO CBSD		Page 154 of 313



Plot 7-189. Peak Power Spectral Density Plot (1CC– 3625 MHz- 20.0MHz 16QAM- Mid Channel) Port 16



Plot 7-190. Peak Power Spectral Density Plot (1CC– 3625 MHz- 20.0MHz 16QAM- Mid Channel) Port 17

FCC ID: A3LMT3204-48A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1901240015-01-R2-A3L	Test Dates: 01/23/2019 - 02/28/2019	EUT Type: Massive MIMO CBSD		Page 155 of 313



Plot 7-191. Peak Power Spectral Density Plot (1CC- 3625 MHz- 20.0MHz 16QAM- Mid Channel) Port 18

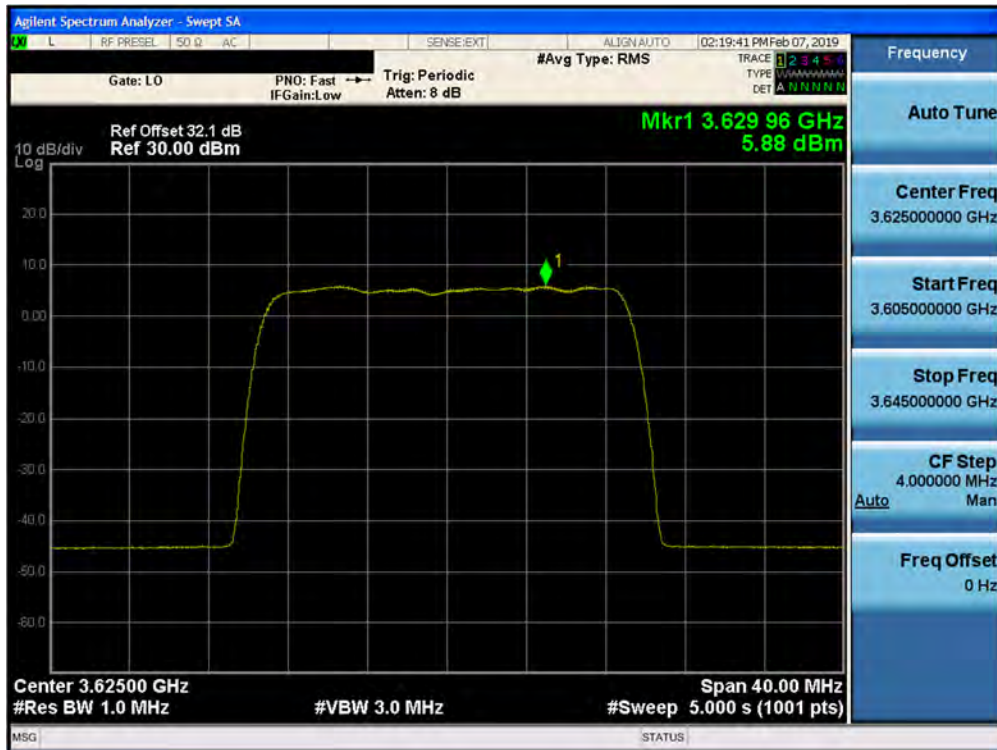


Plot 7-192. Peak Power Spectral Density Plot (1CC- 3625 MHz- 20.0MHz 16QAM- Mid Channel) Port 19

FCC ID: A3LMT3204-48A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1901240015-01-R2.A3L	Test Dates: 01/23/2019 - 02/28/2019	EUT Type: Massive MIMO CBSD		Page 156 of 313



Plot 7-193. Peak Power Spectral Density Plot (1CC- 3625 MHz- 20.0MHz 16QAM- Mid Channel) Port 07



Plot 7-194. Peak Power Spectral Density Plot (1CC- 3625 MHz- 20.0MHz 16QAM- Mid Channel) Port 06

FCC ID: A3LMT3204-48A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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Plot 7-195. Peak Power Spectral Density Plot (1CC– 3625 MHz- 20.0MHz 16QAM- Mid Channel) Port 05



Plot 7-196. Peak Power Spectral Density Plot (1CC– 3625 MHz- 20.0MHz 16QAM- Mid Channel) Port 04

FCC ID: A3LMT3204-48A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1901240015-01-R2.A3L	Test Dates: 01/23/2019 - 02/28/2019	EUT Type: Massive MIMO CBSD		Page 158 of 313

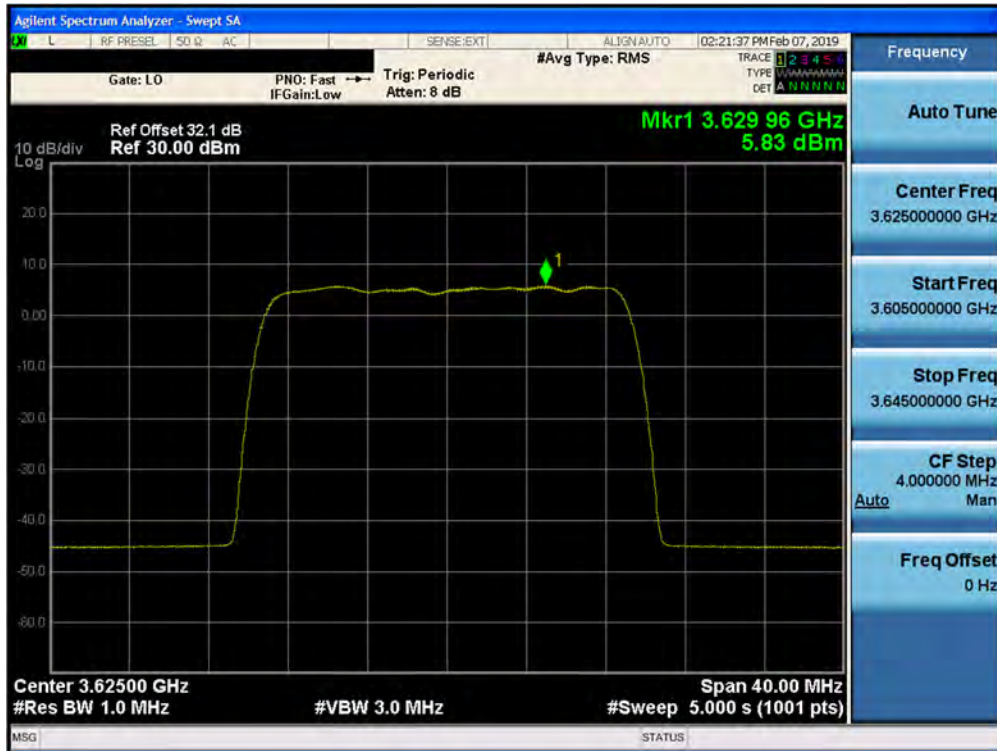


Plot 7-197. Peak Power Spectral Density Plot (1CC- 3625 MHz- 20.0MHz 16QAM- Mid Channel) Port 20

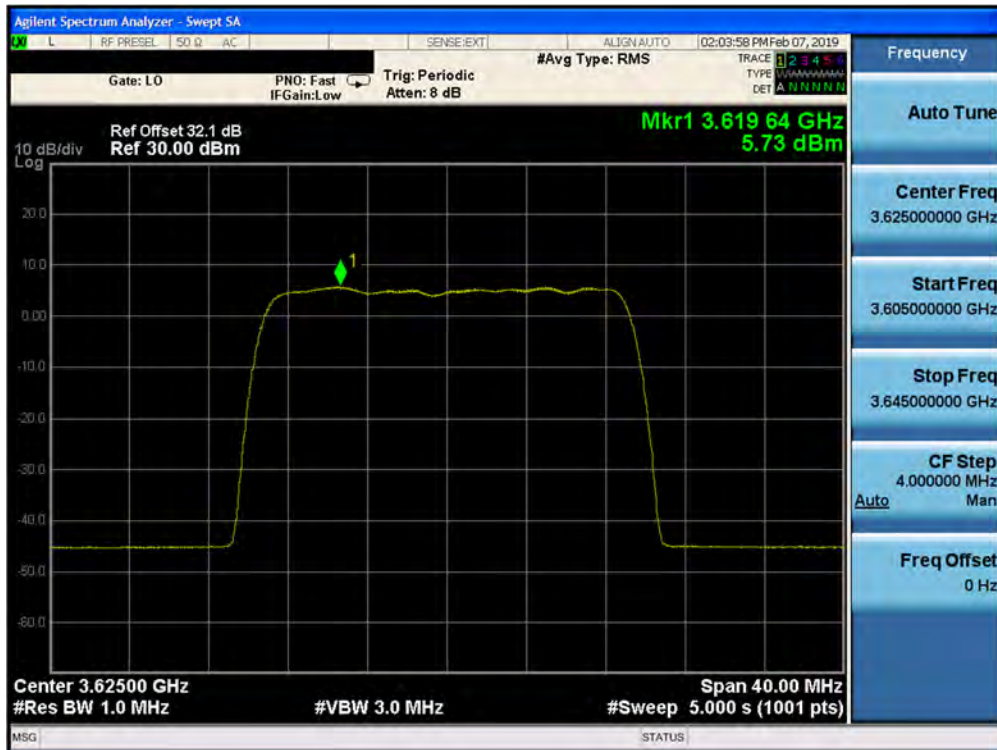


Plot 7-198. Peak Power Spectral Density Plot (1CC- 3625 MHz- 20.0MHz 16QAM- Mid Channel) Port 21

FCC ID: A3LMT3204-48A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1901240015-01-R2.A3L	Test Dates: 01/23/2019 - 02/28/2019	EUT Type: Massive MIMO CBSD		Page 159 of 313

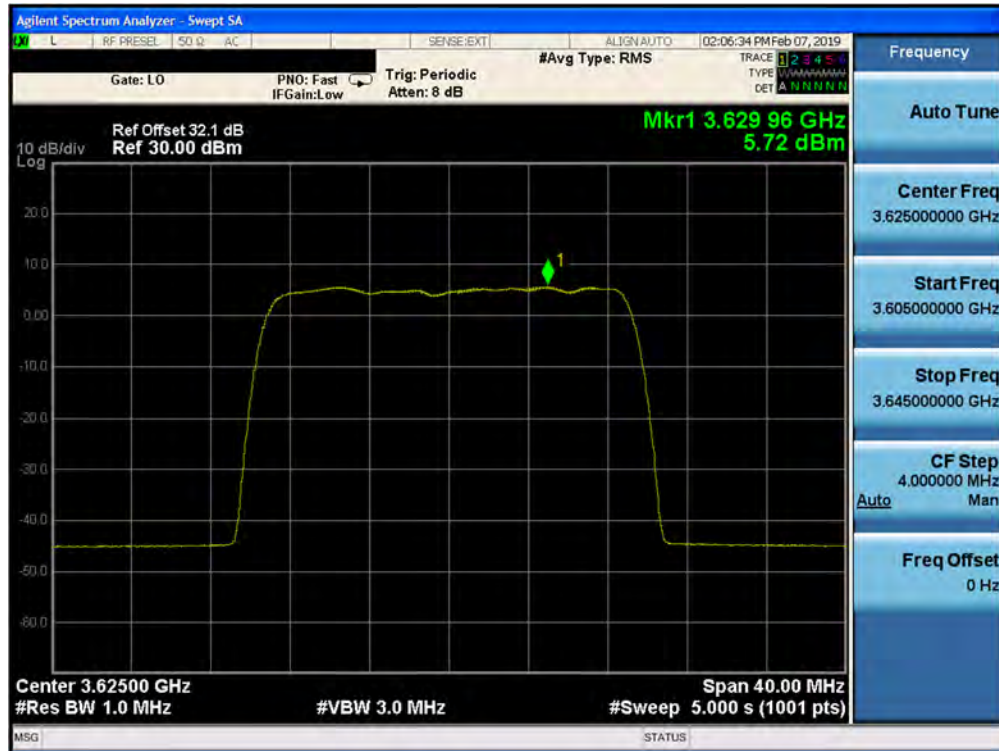


Plot 7-199. Peak Power Spectral Density Plot (1CC– 3625 MHz- 20.0MHz 16QAM- Mid Channel) Port 22



Plot 7-200. Peak Power Spectral Density Plot (1CC– 3625 MHz- 20.0MHz 16QAM- Mid Channel) Port 23

FCC ID: A3LMT3204-48A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1901240015-01-R2.A3L	Test Dates: 01/23/2019 - 02/28/2019	EUT Type: Massive MIMO CBSD		Page 160 of 313



Plot 7-201. Peak Power Spectral Density Plot (1CC- 3625 MHz- 20.0MHz 16QAM- Mid Channel) Port 11



Plot 7-202. Peak Power Spectral Density Plot (1CC- 3625 MHz- 20.0MHz 16QAM- Mid Channel) Port 10

FCC ID: A3LMT3204-48A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1901240015-01-R2-A3L	Test Dates: 01/23/2019 - 02/28/2019	EUT Type: Massive MIMO CBSD		Page 161 of 313



Plot 7-203. Peak Power Spectral Density Plot (1CC– 3625 MHz- 20.0MHz 16QAM- Mid Channel) Port 09



Plot 7-204. Peak Power Spectral Density Plot (1CC– 3625 MHz- 20.0MHz 16QAM- Mid Channel) Port 08

FCC ID: A3LMT3204-48A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1901240015-01-R2-A3L	Test Dates: 01/23/2019 - 02/28/2019	EUT Type: Massive MIMO CBSD		Page 162 of 313



Plot 7-205. Peak Power Spectral Density Plot (1CC– 3625 MHz- 20.0MHz 16QAM- Mid Channel) Port 24



Plot 7-206. Peak Power Spectral Density Plot (1CC– 3625 MHz- 20.0MHz 16QAM- Mid Channel) Port 25

FCC ID: A3LMT3204-48A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1901240015-01-R2-A3L	Test Dates: 01/23/2019 - 02/28/2019	EUT Type: Massive MIMO CBSD		Page 163 of 313



Plot 7-207. Peak Power Spectral Density Plot (1CC– 3625 MHz- 20.0MHz 16QAM- Mid Channel) Port 26



Plot 7-208. Peak Power Spectral Density Plot (1CC– 3625 MHz- 20.0MHz 16QAM- Mid Channel) Port 27

FCC ID: A3LMT3204-48A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1901240015-01-R2-A3L	Test Dates: 01/23/2019 - 02/28/2019	EUT Type: Massive MIMO CBSD		Page 164 of 313



Plot 7-209. Peak Power Spectral Density Plot (1CC– 3625 MHz- 20.0MHz 16QAM- Mid Channel) Port 15



Plot 7-210. Peak Power Spectral Density Plot (1CC– 3625 MHz- 20.0MHz 16QAM- Mid Channel) Port 14

FCC ID: A3LMT3204-48A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1901240015-01-R2-A3L	Test Dates: 01/23/2019 - 02/28/2019	EUT Type: Massive MIMO CBSD		Page 165 of 313



Plot 7-211. Peak Power Spectral Density Plot (1CC– 3625 MHz- 20.0MHz 16QAM- Mid Channel) Port 13



Plot 7-212. Peak Power Spectral Density Plot (1CC– 3625 MHz- 20.0MHz 16QAM- Mid Channel) Port 12

FCC ID: A3LMT3204-48A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1901240015-01-R2-A3L	Test Dates: 01/23/2019 - 02/28/2019	EUT Type: Massive MIMO CBSD		Page 166 of 313



Plot 7-213. Peak Power Spectral Density Plot (1CC– 3625 MHz- 20.0MHz 16QAM- Mid Channel) Port 28

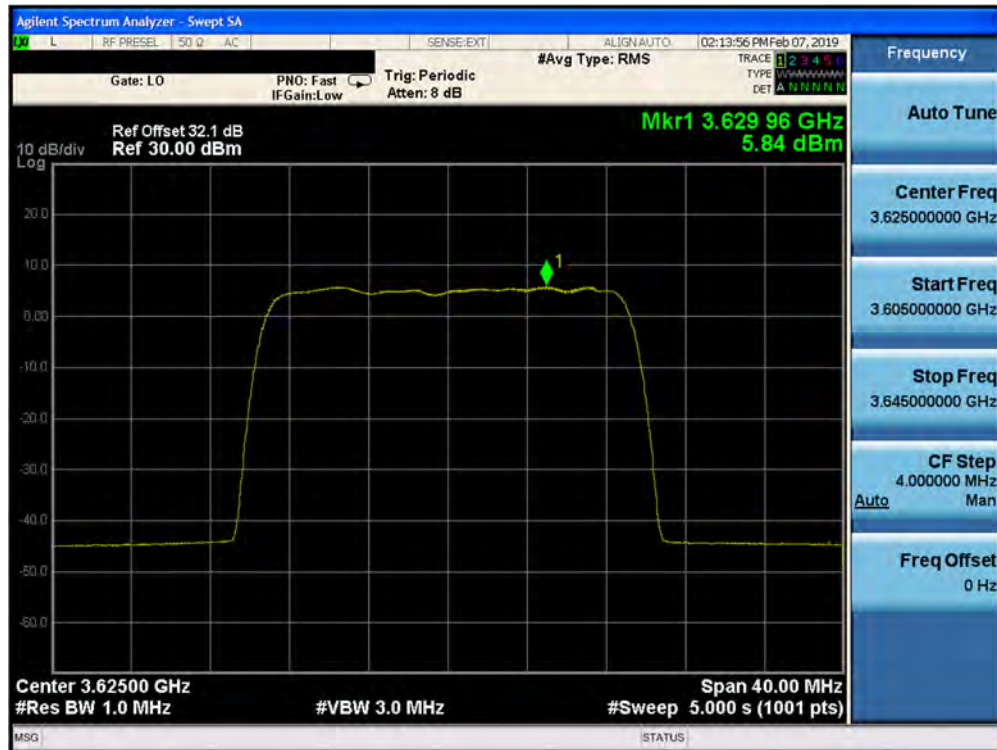


Plot 7-214. Peak Power Spectral Density Plot (1CC– 3625 MHz- 20.0MHz 16QAM- Mid Channel) Port 29

FCC ID: A3LMT3204-48A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1901240015-01-R2-A3L	Test Dates: 01/23/2019 - 02/28/2019	EUT Type: Massive MIMO CBSD		Page 167 of 313



Plot 7-215. Peak Power Spectral Density Plot (1CC– 3625 MHz- 20.0MHz 16QAM- Mid Channel) Port 30



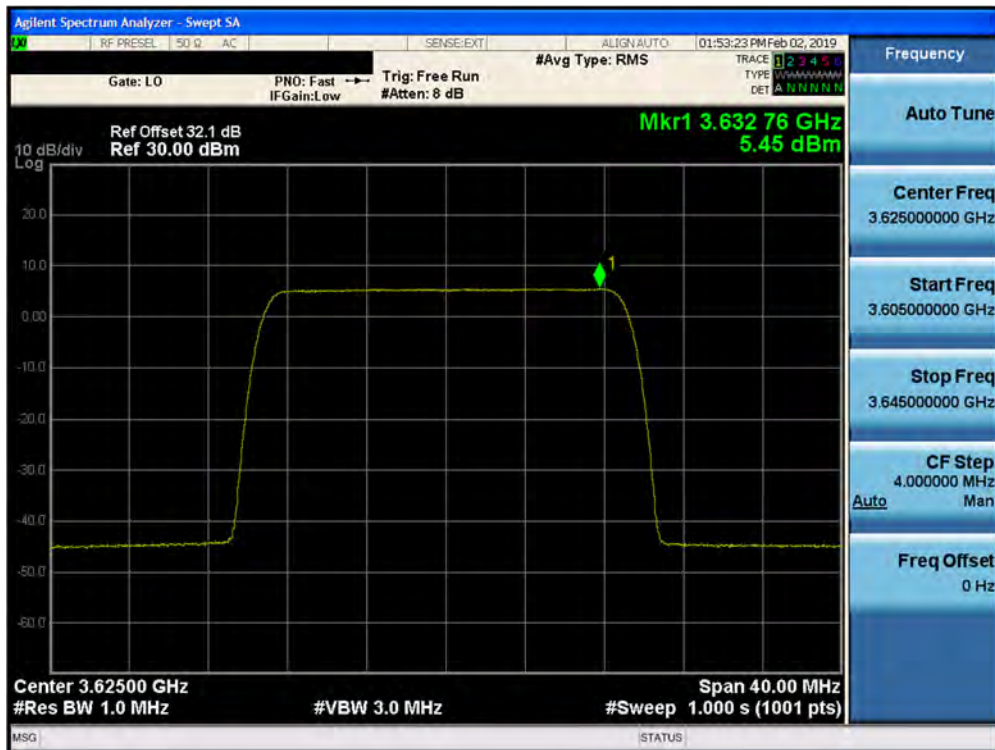
Plot 7-216. Peak Power Spectral Density Plot (1CC– 3625 MHz- 20.0MHz 16QAM- Mid Channel) Port 31

FCC ID: A3LMT3204-48A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1901240015-01-R2-A3L	Test Dates: 01/23/2019 - 02/28/2019	EUT Type: Massive MIMO CBSD		Page 168 of 313

8-User Beam 1CC Mid Channel 64-QAM

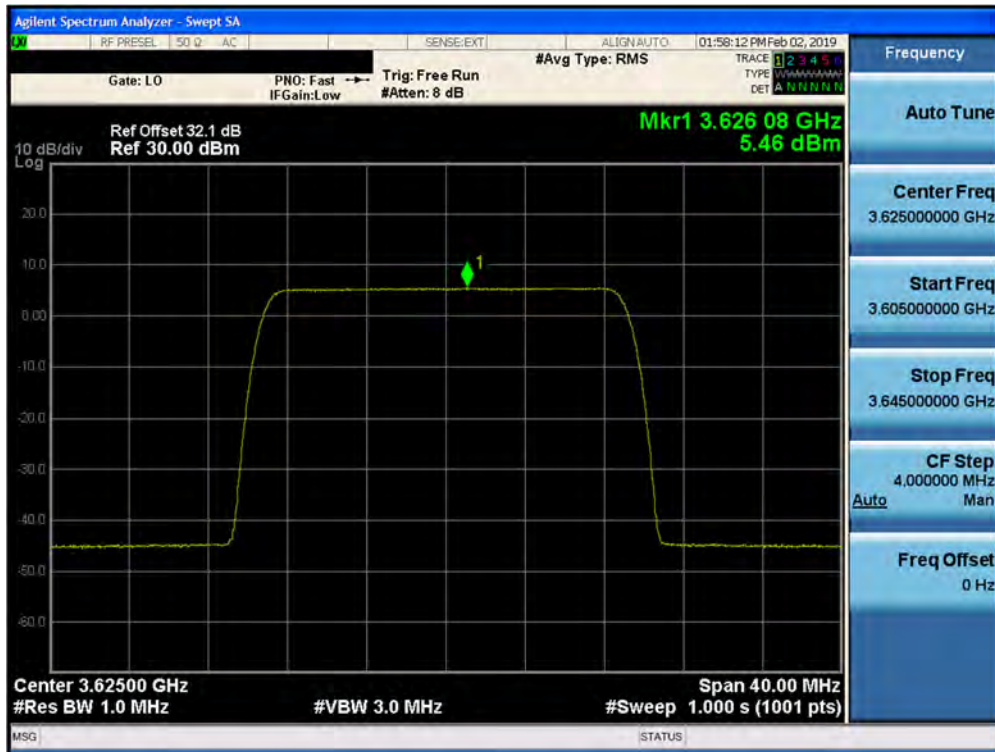


Plot 7-217. Peak Power Spectral Density Plot (1CC– 3625 MHz- 20.0MHz 64QAM- Mid Channel) Port 03

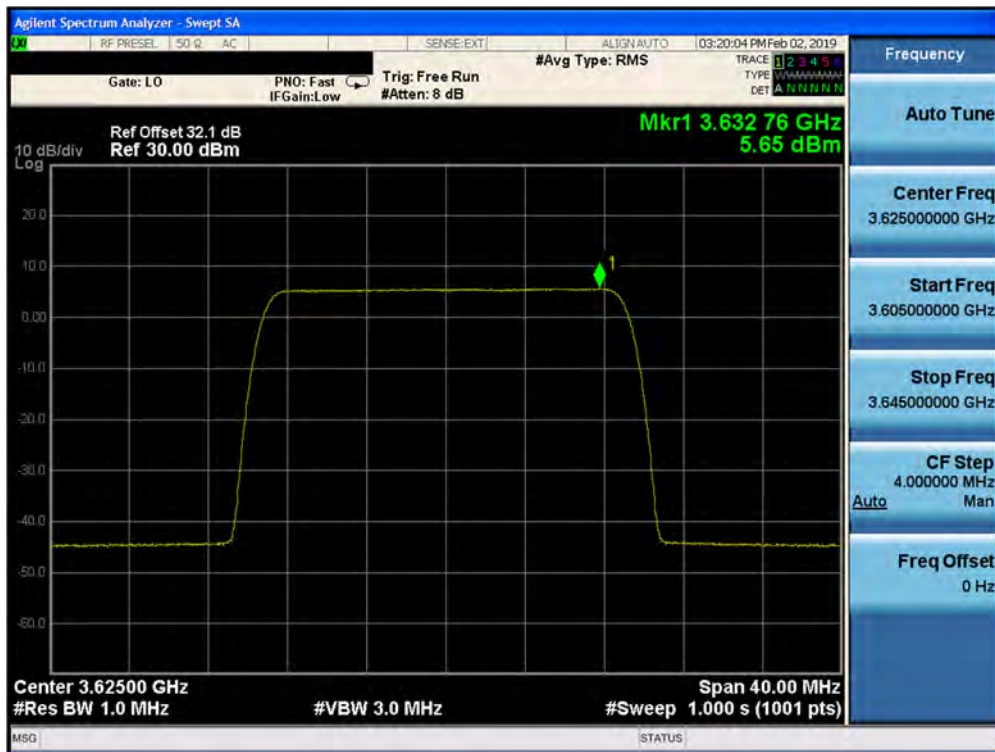


Plot 7-218. Peak Power Spectral Density Plot (1CC– 3625 MHz- 20.0MHz 64QAM- Mid Channel) Port 02

FCC ID: A3LMT3204-48A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1901240015-01-R2-A3L	Test Dates: 01/23/2019 - 02/28/2019	EUT Type: Massive MIMO CBSD		Page 169 of 313

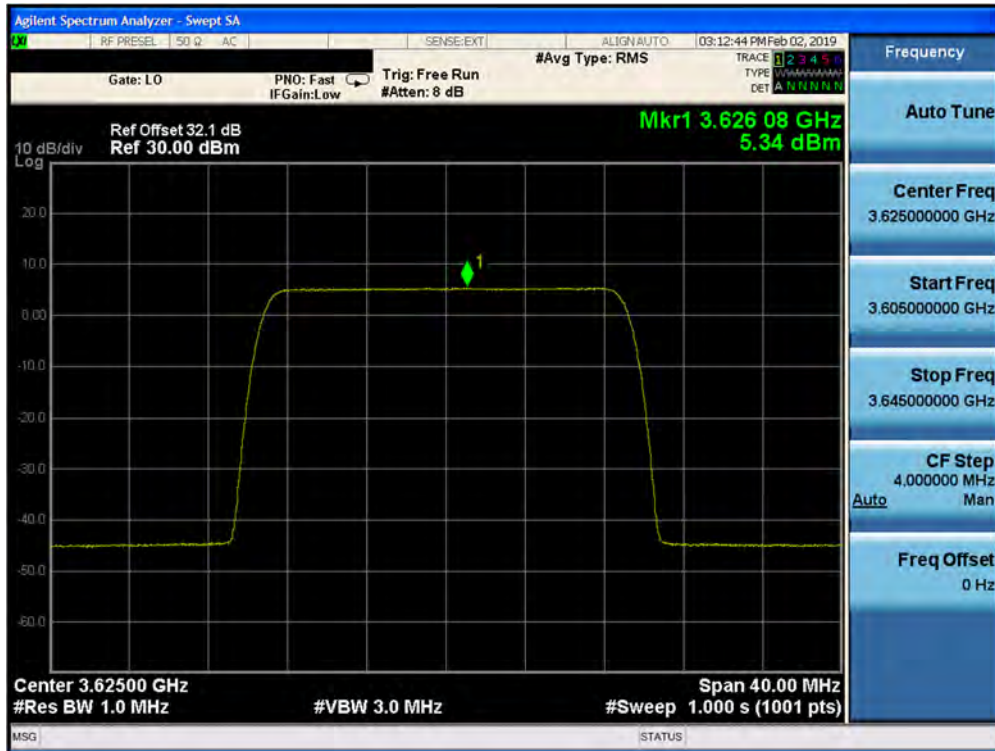


Plot 7-219. Peak Power Spectral Density Plot (1CC- 3625 MHz- 20.0MHz 64QAM- Mid Channel) Port 01

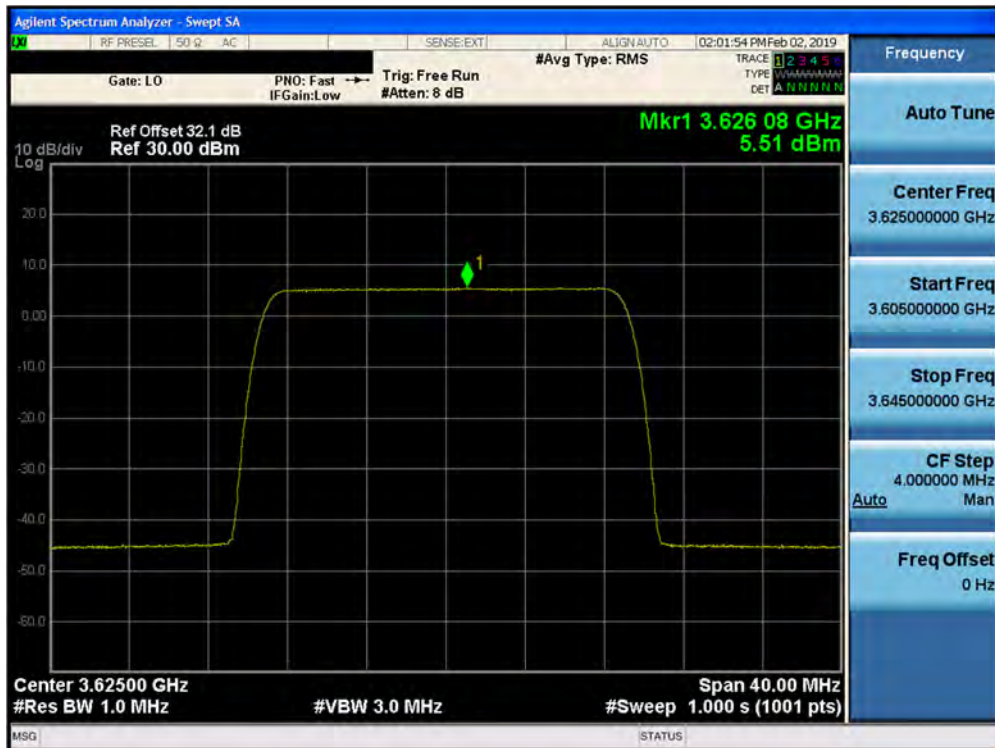


Plot 7-220. Peak Power Spectral Density Plot (1CC- 3625 MHz- 20.0MHz 64QAM- Mid Channel) Port 00

FCC ID: A3LMT3204-48A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1901240015-01-R2.A3L	Test Dates: 01/23/2019 - 02/28/2019	EUT Type: Massive MIMO CBSD		Page 170 of 313

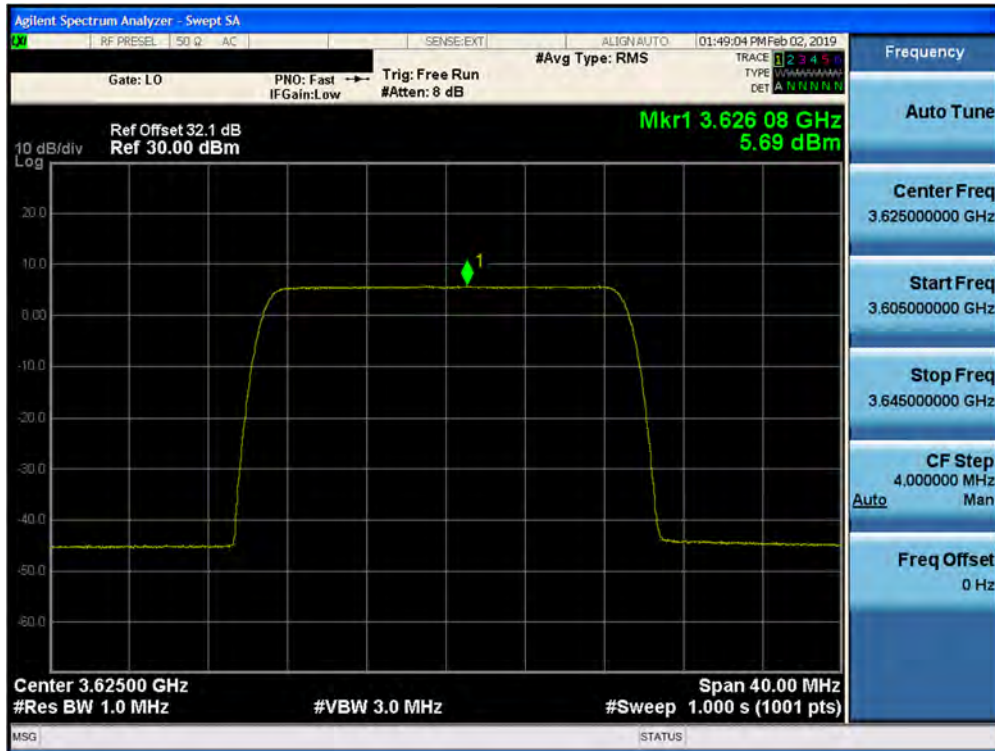


Plot 7-221. Peak Power Spectral Density Plot (1CC– 3625 MHz- 20.0MHz 64QAM- Mid Channel) Port 16

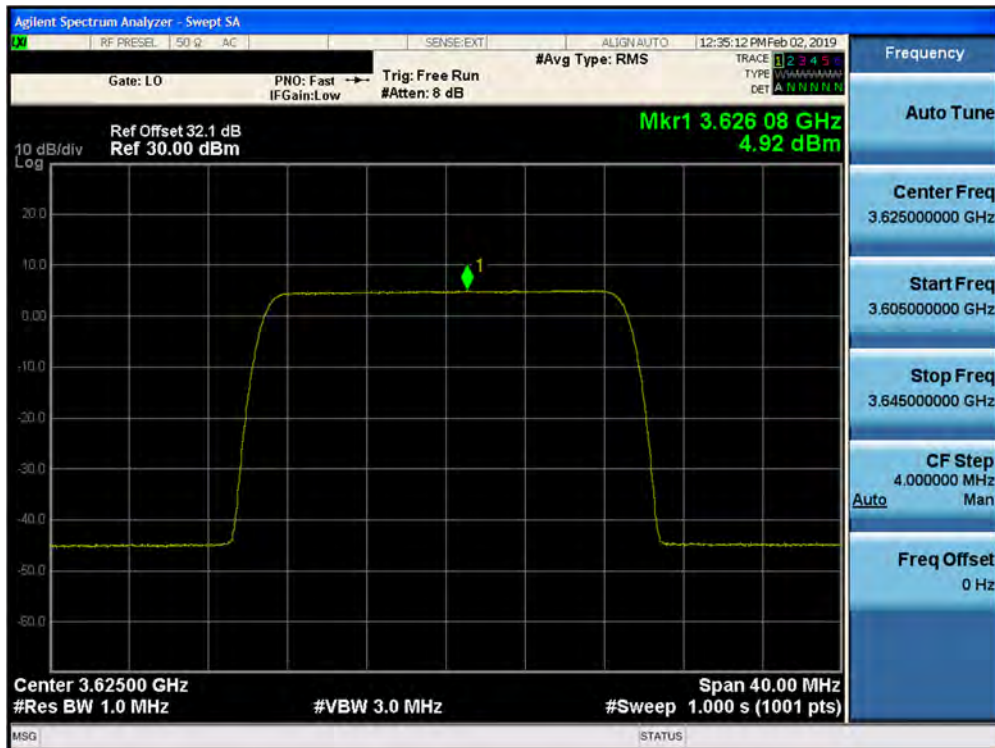


Plot 7-222. Peak Power Spectral Density Plot (1CC– 3625 MHz- 20.0MHz 64QAM- Mid Channel) Port 17

FCC ID: A3LMT3204-48A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1901240015-01-R2-A3L	Test Dates: 01/23/2019 - 02/28/2019	EUT Type: Massive MIMO CBS		Page 171 of 313

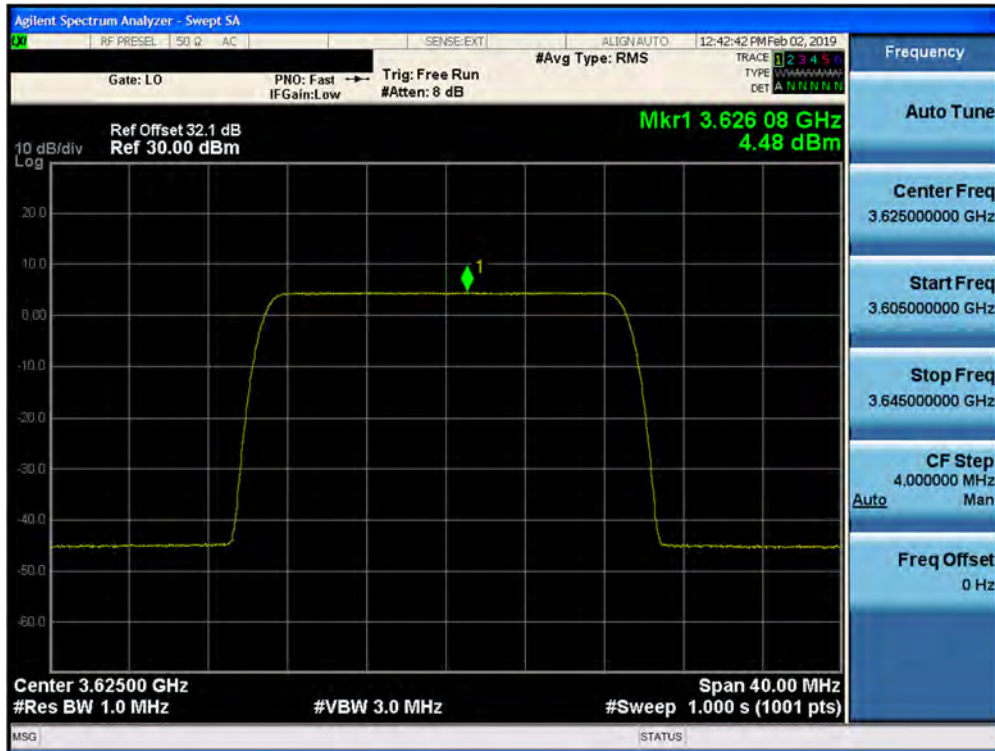


Plot 7-223. Peak Power Spectral Density Plot (1CC– 3625 MHz- 20.0MHz 64QAM- Mid Channel) Port 18

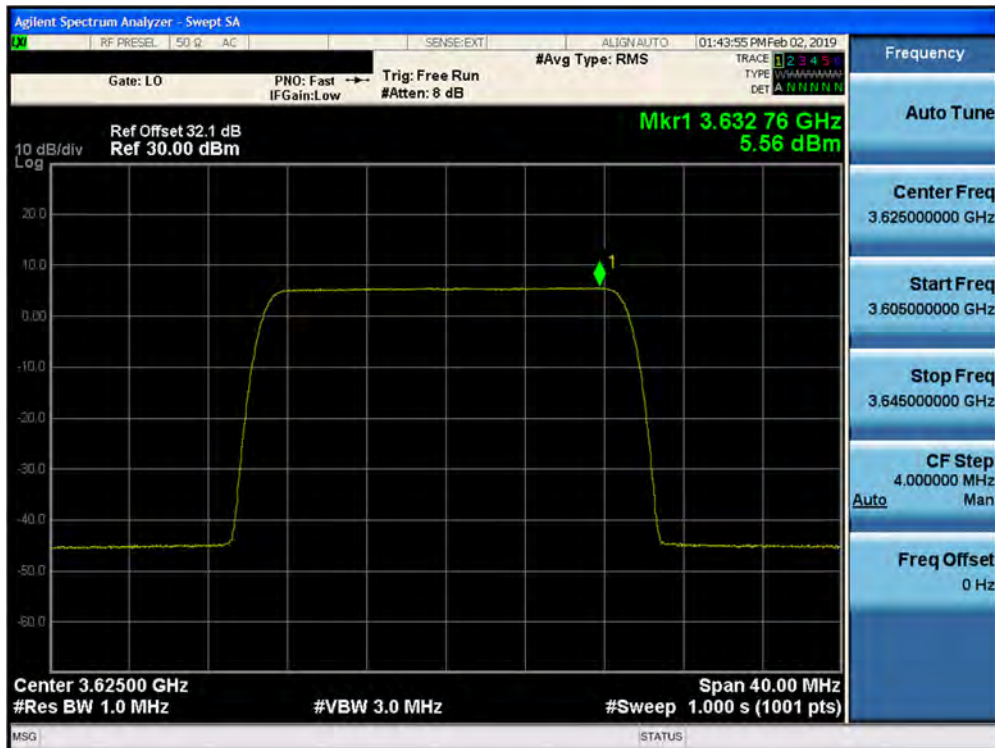


Plot 7-224. Peak Power Spectral Density Plot (1CC– 3625 MHz- 20.0MHz 64QAM- Mid Channel) Port 19

FCC ID: A3LMT3204-48A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1901240015-01-R2-A3L	Test Dates: 01/23/2019 - 02/28/2019	EUT Type: Massive MIMO CBSD		Page 172 of 313

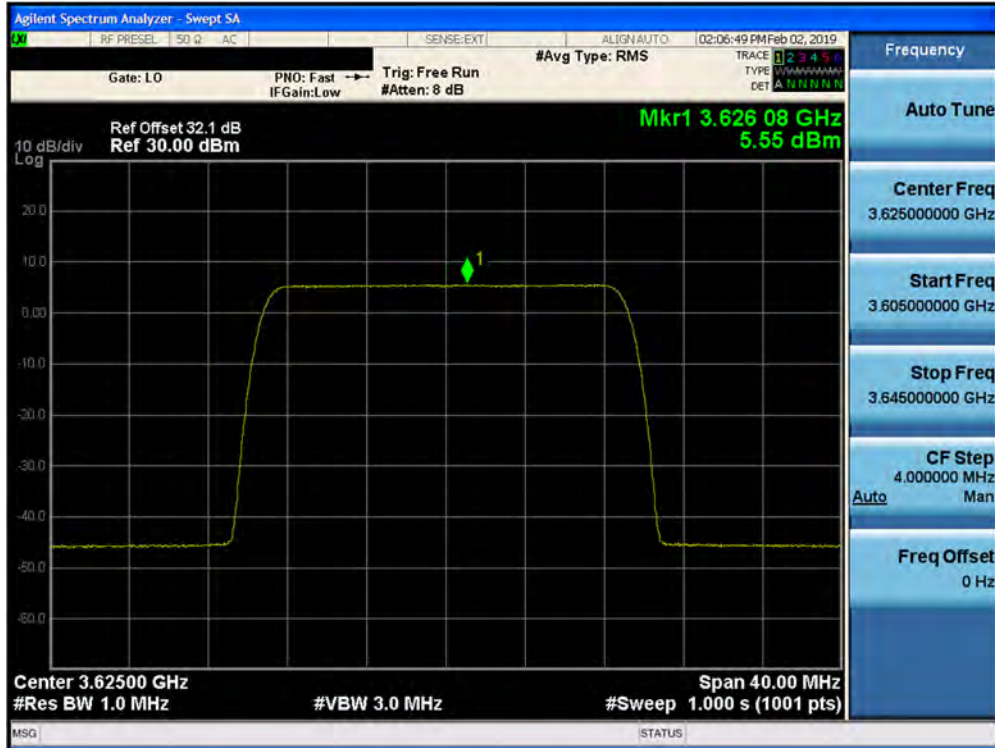


Plot 7-225. Peak Power Spectral Density Plot (1CC– 3625 MHz- 20.0MHz 64QAM- Mid Channel) Port 07

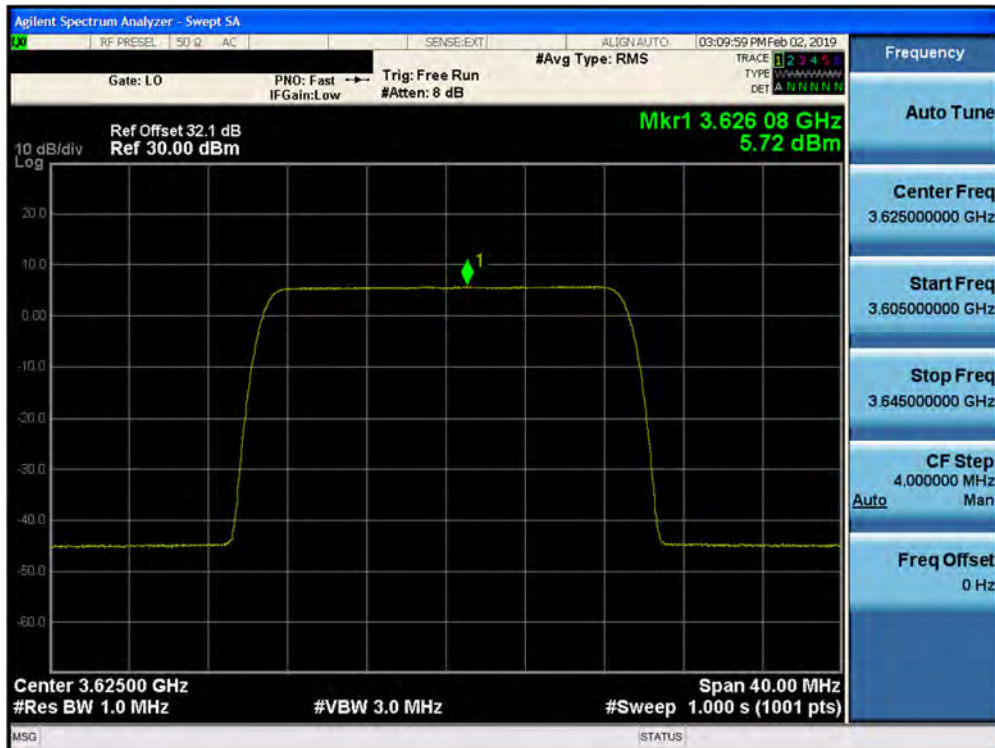


Plot 7-226. Peak Power Spectral Density Plot (1CC– 3625 MHz- 20.0MHz 64QAM- Mid Channel) Port 06

FCC ID: A3LMT3204-48A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1901240015-01-R2-A3L	Test Dates: 01/23/2019 - 02/28/2019	EUT Type: Massive MIMO CBS		Page 173 of 313

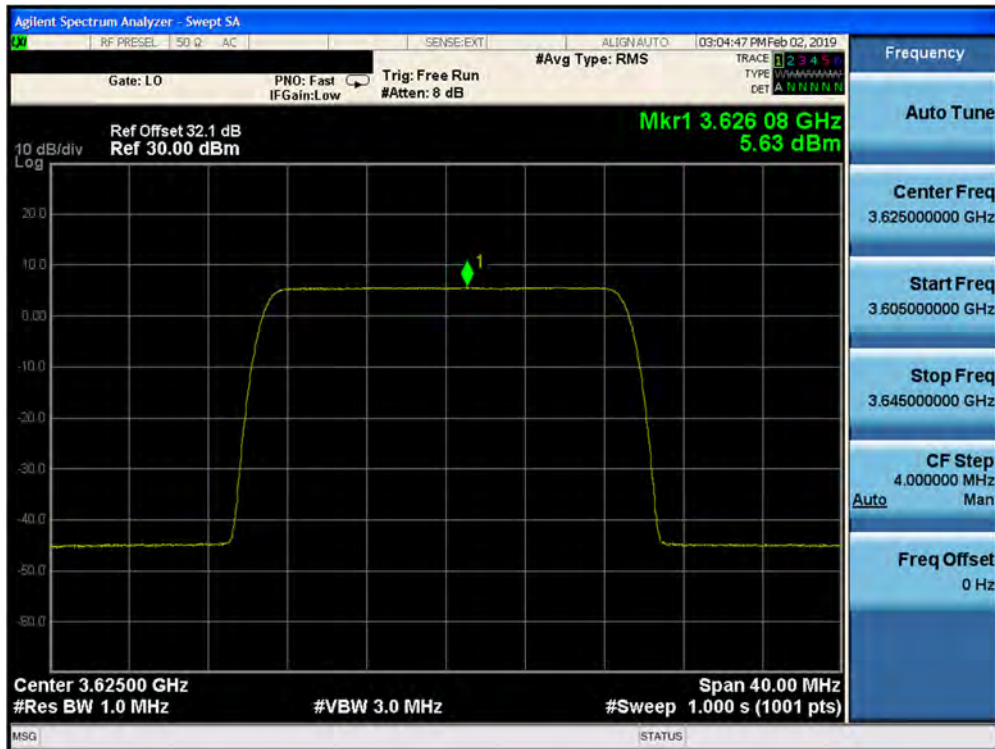


Plot 7-227. Peak Power Spectral Density Plot (1CC- 3625 MHz- 20.0MHz 64QAM- Mid Channel) Port 05

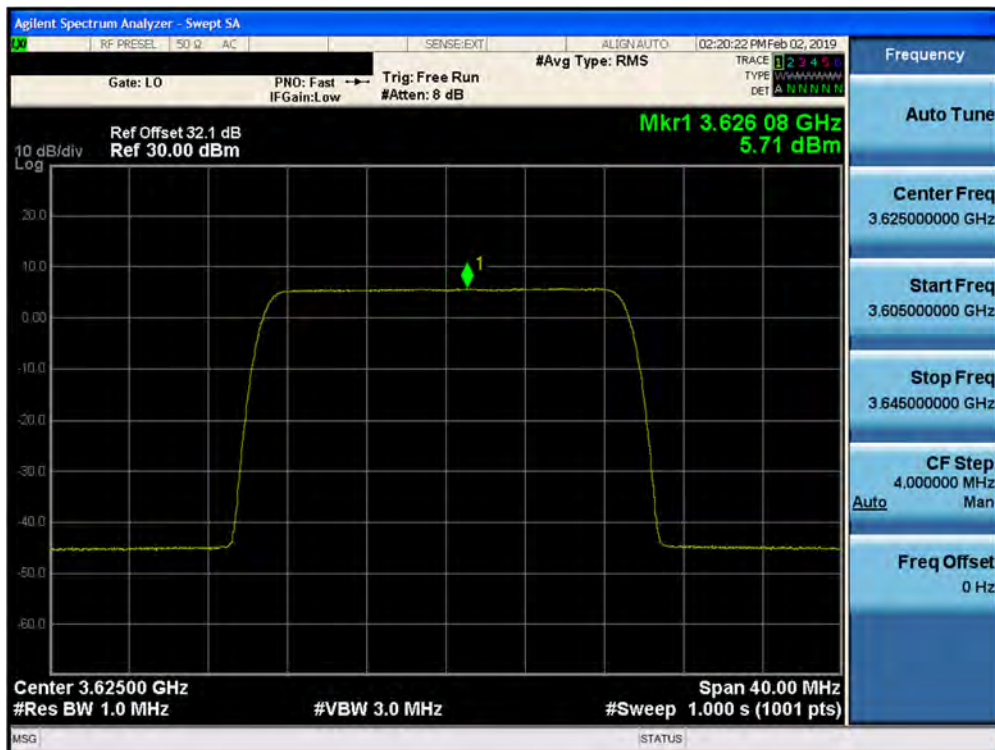


Plot 7-228. Peak Power Spectral Density Plot (1CC- 3625 MHz- 20.0MHz 64QAM- Mid Channel) Port 04

FCC ID: A3LMT3204-48A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1901240015-01-R2-A3L	Test Dates: 01/23/2019 - 02/28/2019	EUT Type: Massive MIMO CBSD		Page 174 of 313

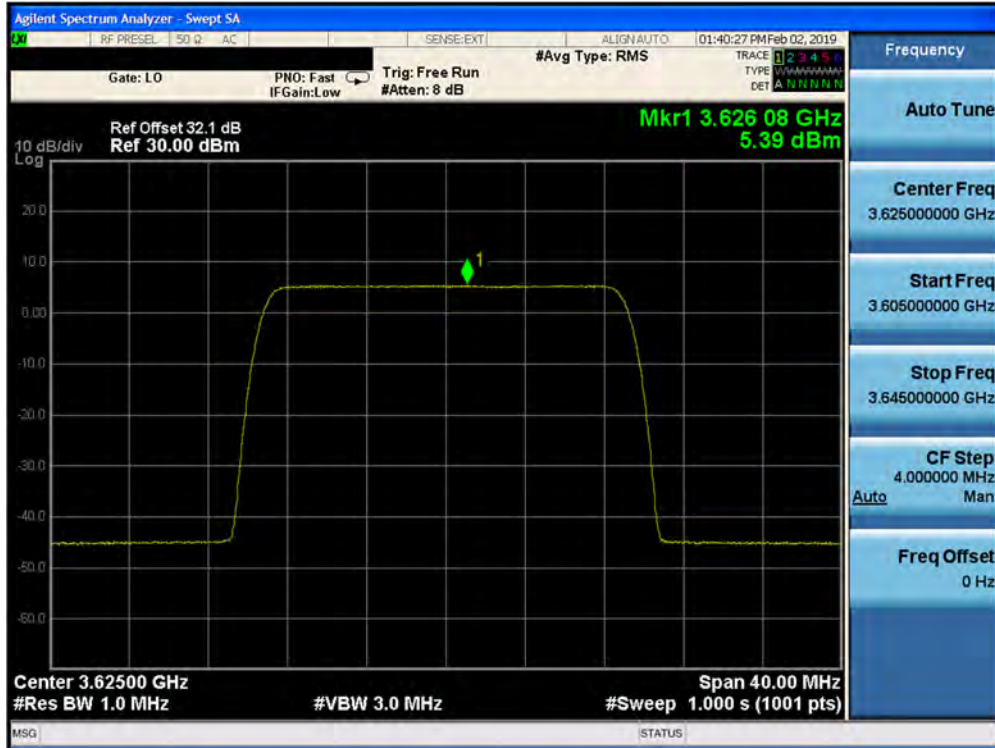


Plot 7-229. Peak Power Spectral Density Plot (1CC– 3625 MHz- 20.0MHz 64QAM- Mid Channel) Port 20



Plot 7-230. Peak Power Spectral Density Plot (1CC– 3625 MHz- 20.0MHz 64QAM- Mid Channel) Port 21

FCC ID: A3LMT3204-48A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1901240015-01-R2-A3L	Test Dates: 01/23/2019 - 02/28/2019	EUT Type: Massive MIMO CBS		Page 175 of 313

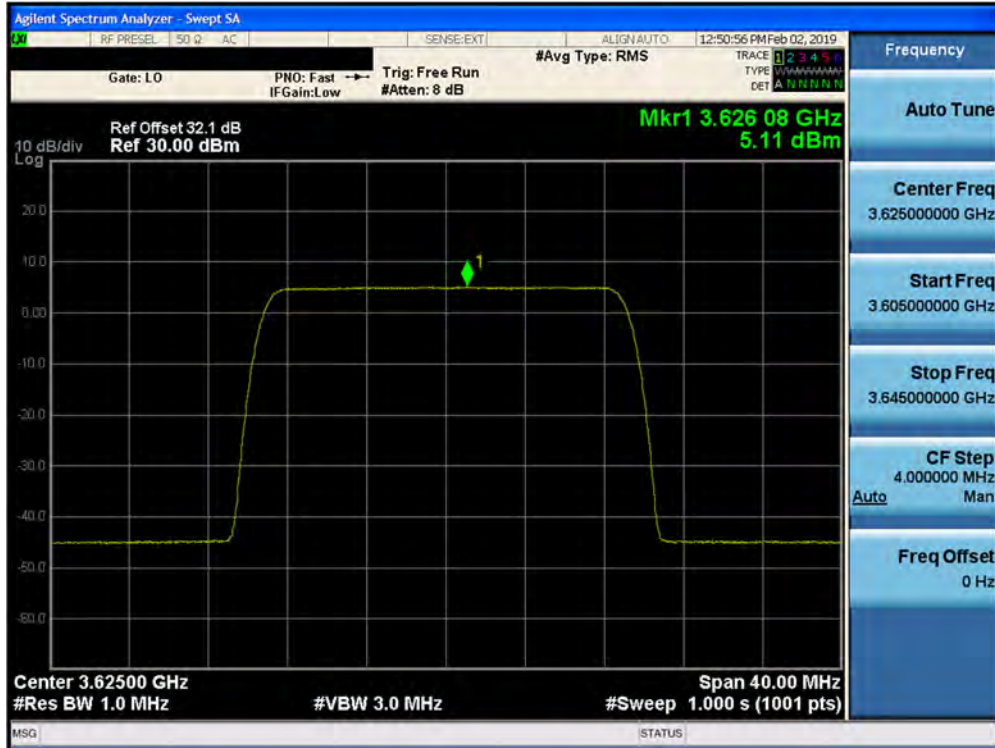


Plot 7-231. Peak Power Spectral Density Plot (1CC– 3625 MHz- 20.0MHz 64QAM- Mid Channel) Port 22

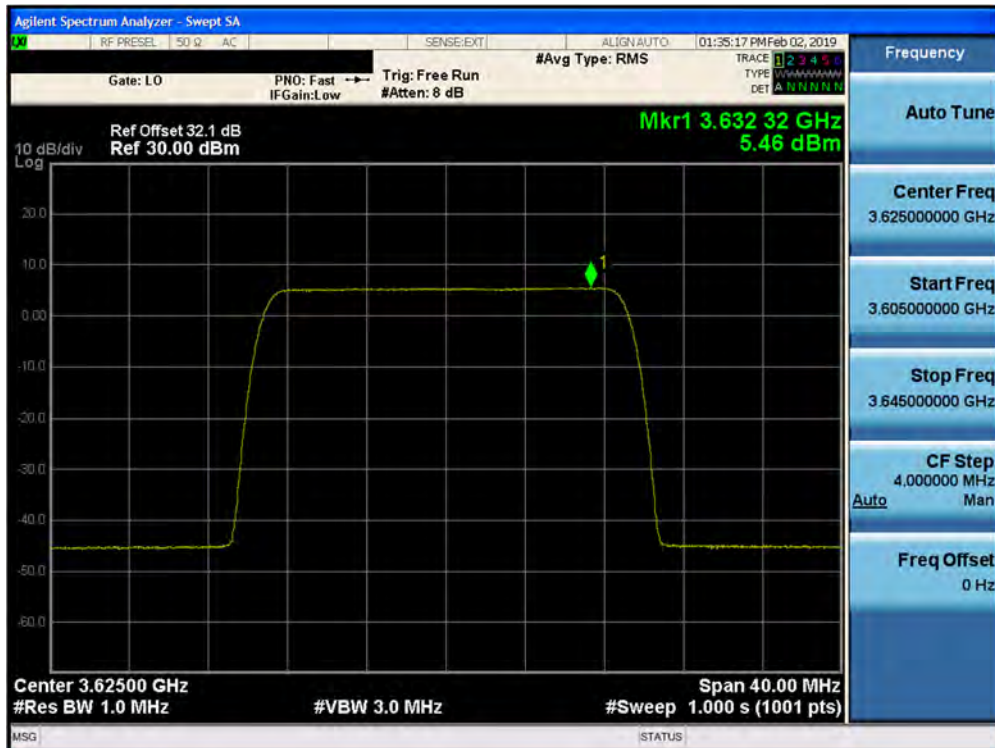


Plot 7-232. Peak Power Spectral Density Plot (1CC– 3625 MHz- 20.0MHz 64QAM- Mid Channel) Port 23

FCC ID: A3LMT3204-48A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1901240015-01-R2-A3L	Test Dates: 01/23/2019 - 02/28/2019	EUT Type: Massive MIMO CBSD		Page 176 of 313

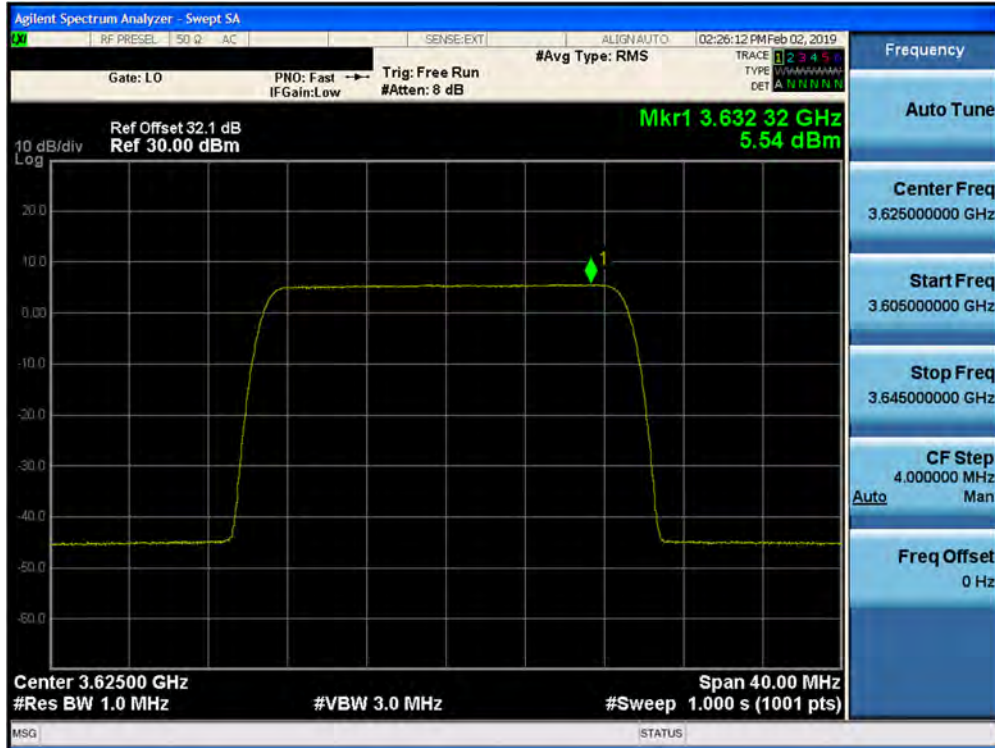


Plot 7-233. Peak Power Spectral Density Plot (1CC– 3625 MHz- 20.0MHz 64QAM- Mid Channel) Port 11

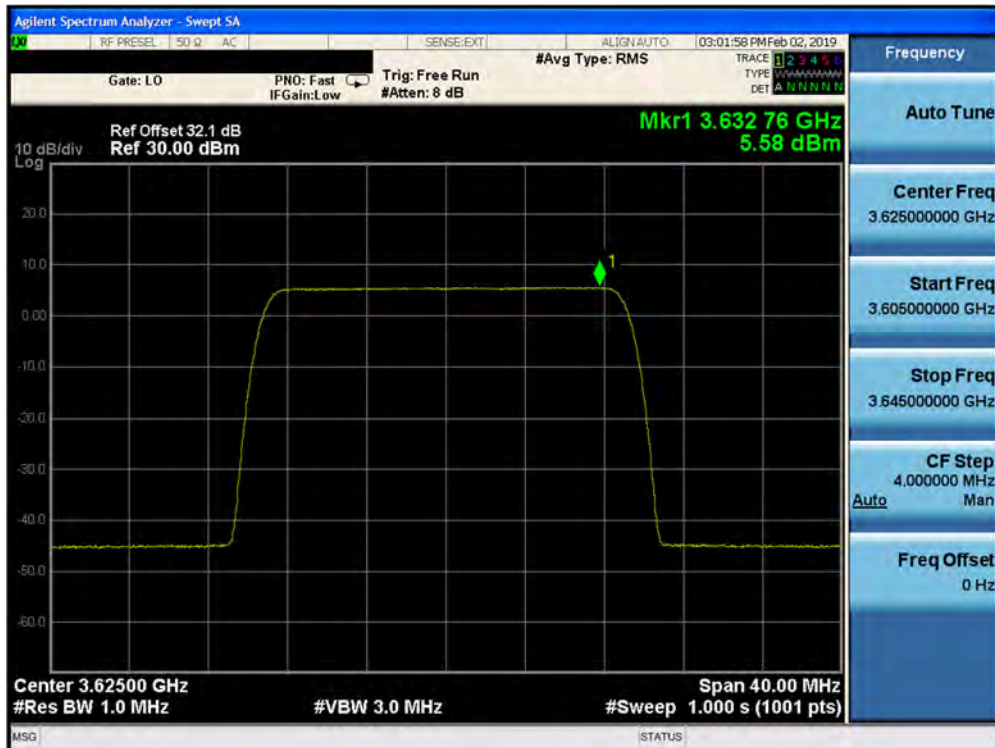


Plot 7-234. Peak Power Spectral Density Plot (1CC– 3625 MHz- 20.0MHz 64QAM- Mid Channel) Port 10

FCC ID: A3LMT3204-48A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1901240015-01-R2-A3L	Test Dates: 01/23/2019 - 02/28/2019	EUT Type: Massive MIMO CBS		Page 177 of 313

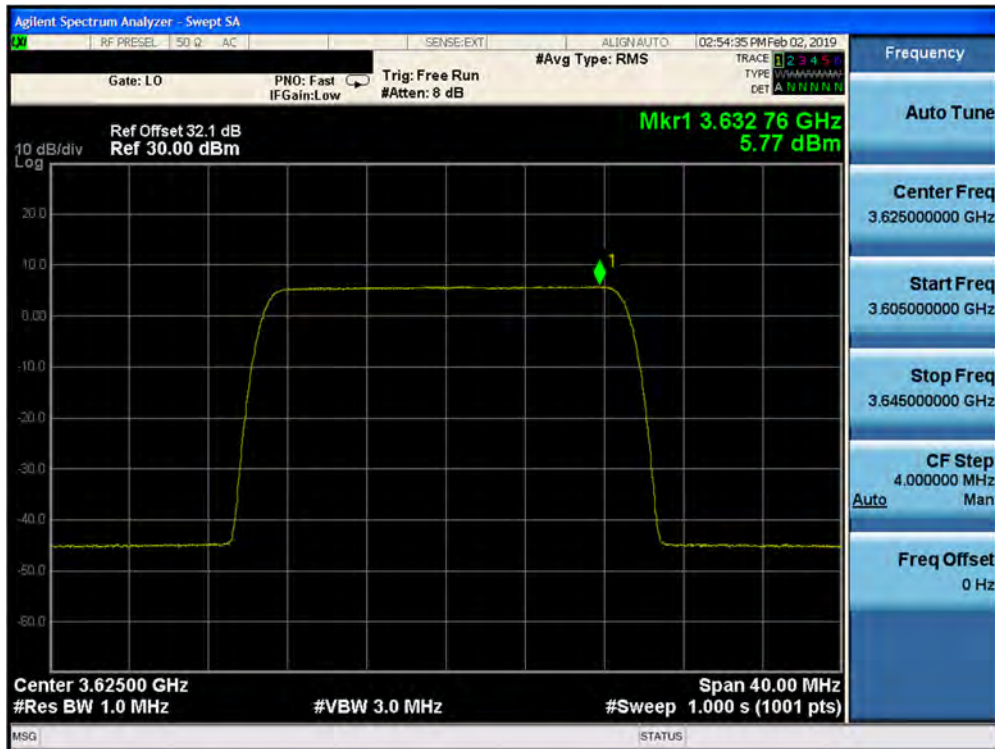


Plot 7-235. Peak Power Spectral Density Plot (1CC– 3625 MHz- 20.0MHz 64QAM- Mid Channel) Port 09

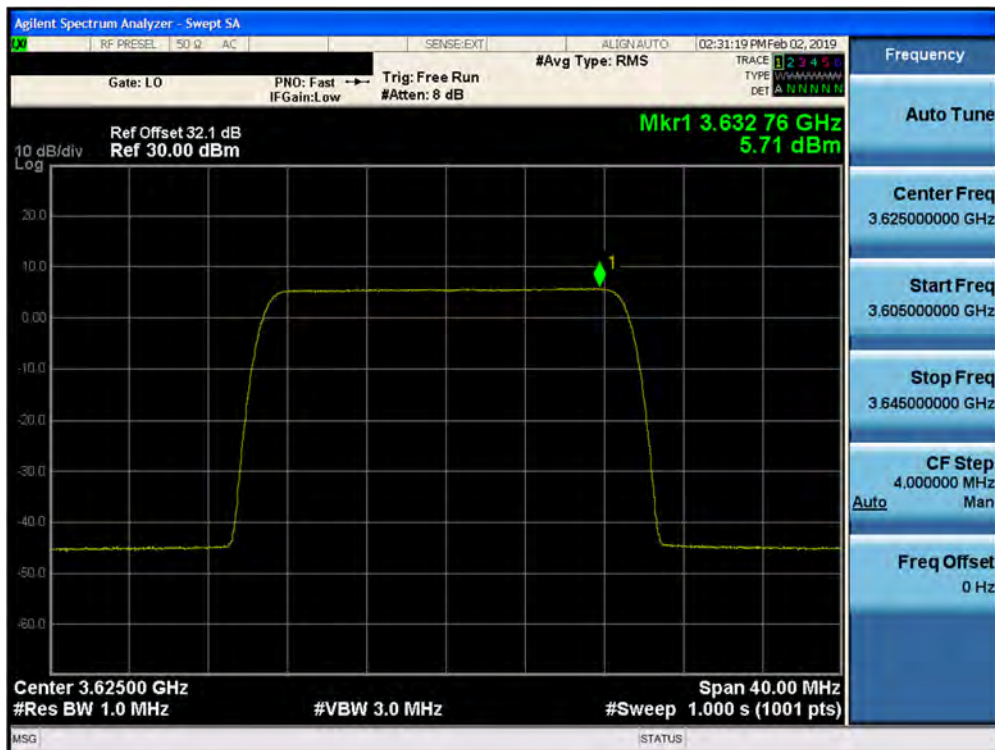


Plot 7-236. Peak Power Spectral Density Plot (1CC– 3625 MHz- 20.0MHz 64QAM- Mid Channel) Port 08

FCC ID: A3LMT3204-48A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1901240015-01-R2-A3L	Test Dates: 01/23/2019 - 02/28/2019	EUT Type: Massive MIMO CBSD		Page 178 of 313



Plot 7-237. Peak Power Spectral Density Plot (1CC– 3625 MHz- 20.0MHz 64QAM- Mid Channel) Port 24



Plot 7-238. Peak Power Spectral Density Plot (1CC– 3625 MHz- 20.0MHz 64QAM- Mid Channel) Port 25

FCC ID: A3LMT3204-48A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1901240015-01-R2-A3L	Test Dates: 01/23/2019 - 02/28/2019	EUT Type: Massive MIMO CBSD		Page 179 of 313



Plot 7-239. Peak Power Spectral Density Plot (1CC- 3625 MHz- 20.0MHz 64QAM- Mid Channel) Port 26



Plot 7-240. Peak Power Spectral Density Plot (1CC- 3625 MHz- 20.0MHz 64QAM- Mid Channel) Port 27

FCC ID: A3LMT3204-48A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1901240015-01-R2-A3L	Test Dates: 01/23/2019 - 02/28/2019	EUT Type: Massive MIMO CBSD		Page 180 of 313

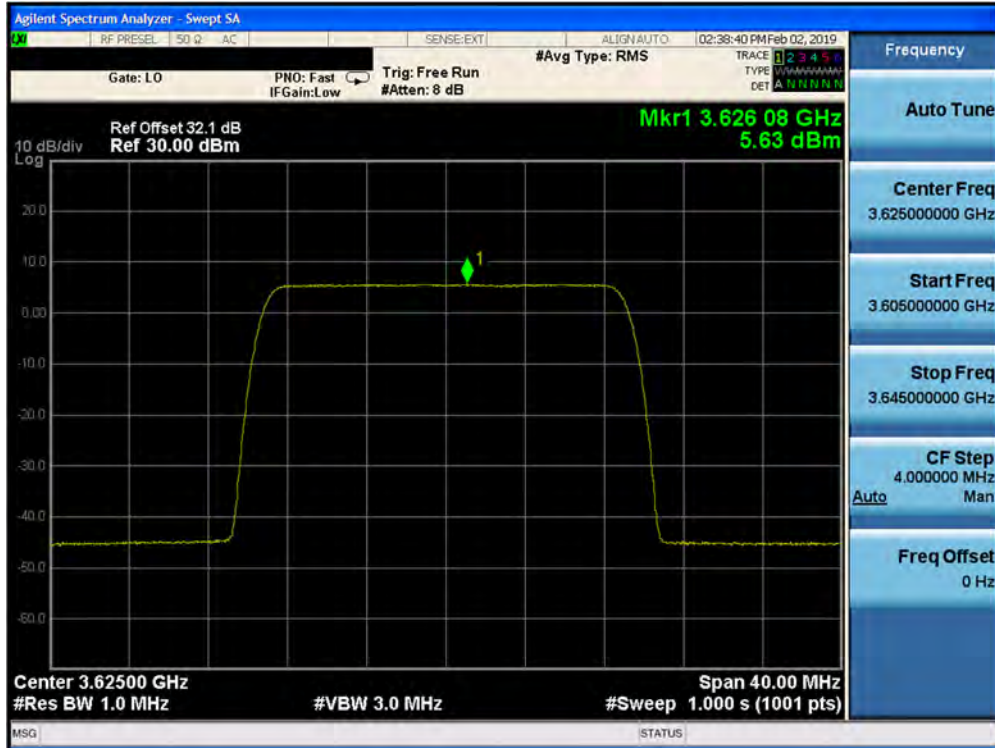


Plot 7-241. Peak Power Spectral Density Plot (1CC– 3625 MHz- 20.0MHz 64QAM- Mid Channel) Port 15

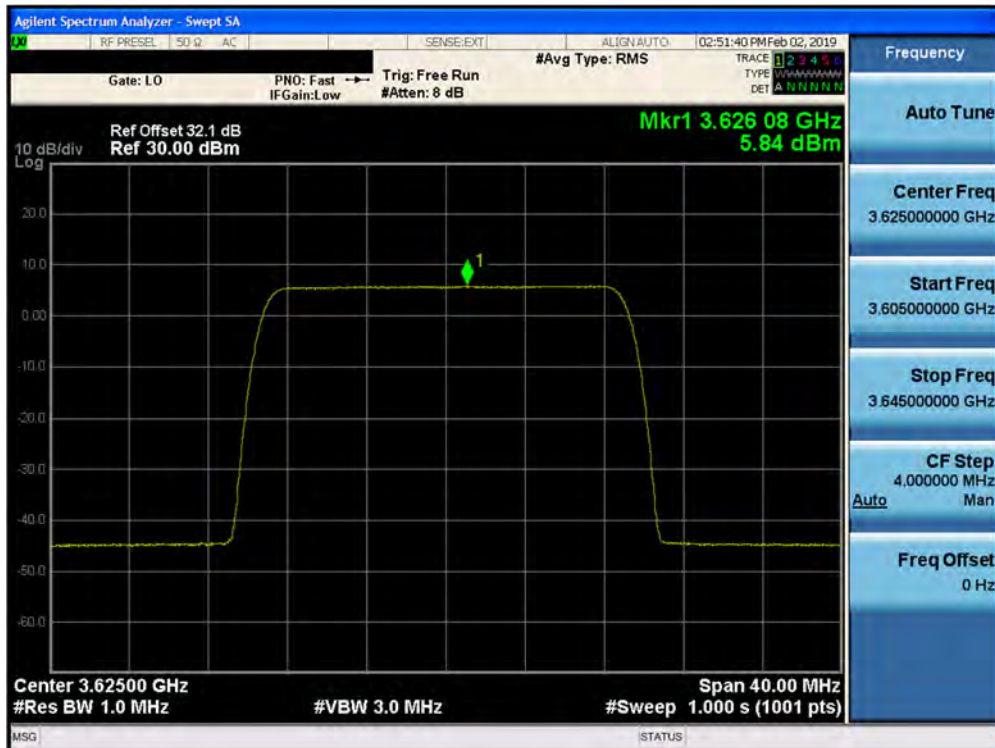


Plot 7-242. Peak Power Spectral Density Plot (1CC– 3625 MHz- 20.0MHz 64QAM- Mid Channel) Port 14

FCC ID: A3LMT3204-48A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1901240015-01-R2-A3L	Test Dates: 01/23/2019 - 02/28/2019	EUT Type: Massive MIMO CBSD		Page 181 of 313

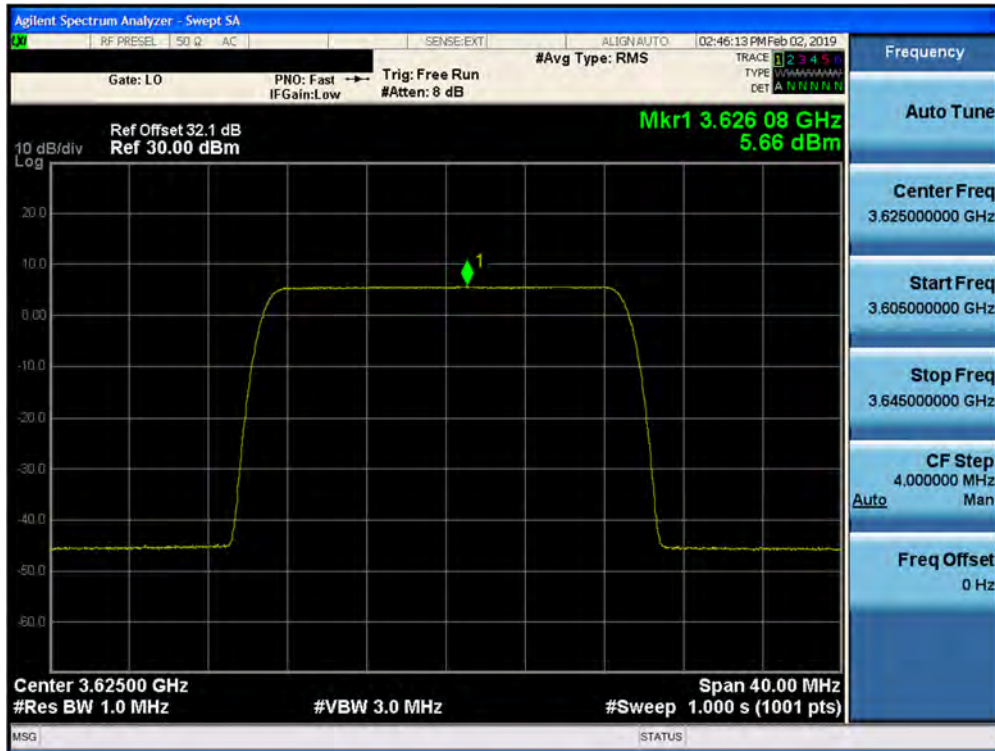


Plot 7-243. Peak Power Spectral Density Plot (1CC- 3625 MHz- 20.0MHz 64QAM- Mid Channel) Port 13

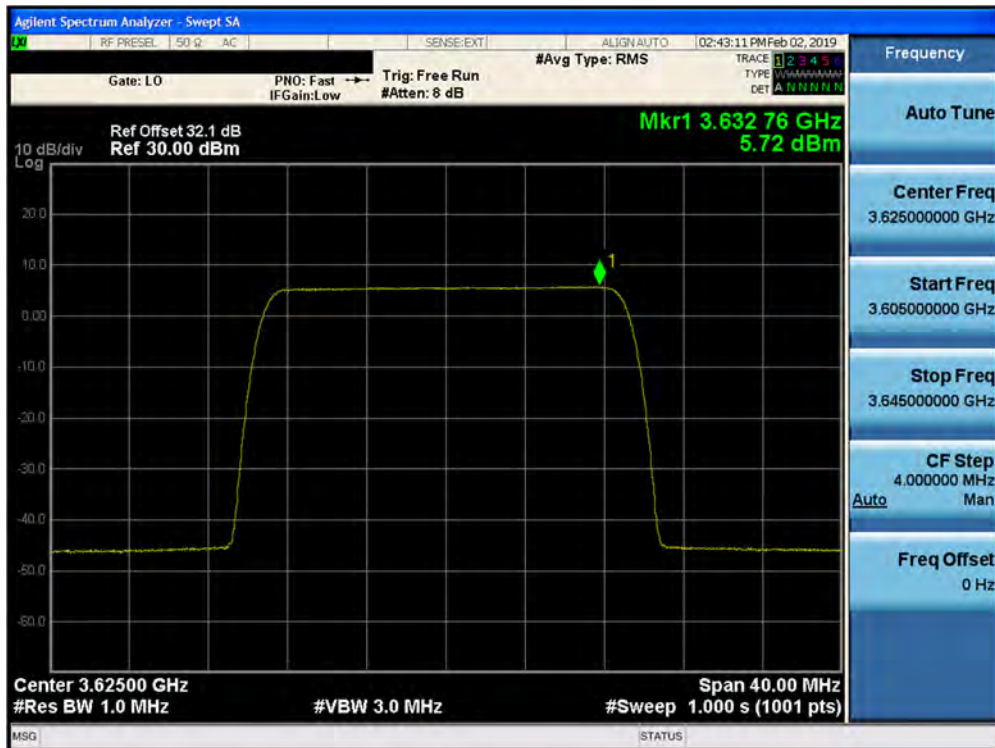


Plot 7-244. Peak Power Spectral Density Plot (1CC- 3625 MHz- 20.0MHz 64QAM- Mid Channel) Port 12

FCC ID: A3LMT3204-48A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1901240015-01-R2-A3L	Test Dates: 01/23/2019 - 02/28/2019	EUT Type: Massive MIMO CBSD		Page 182 of 313

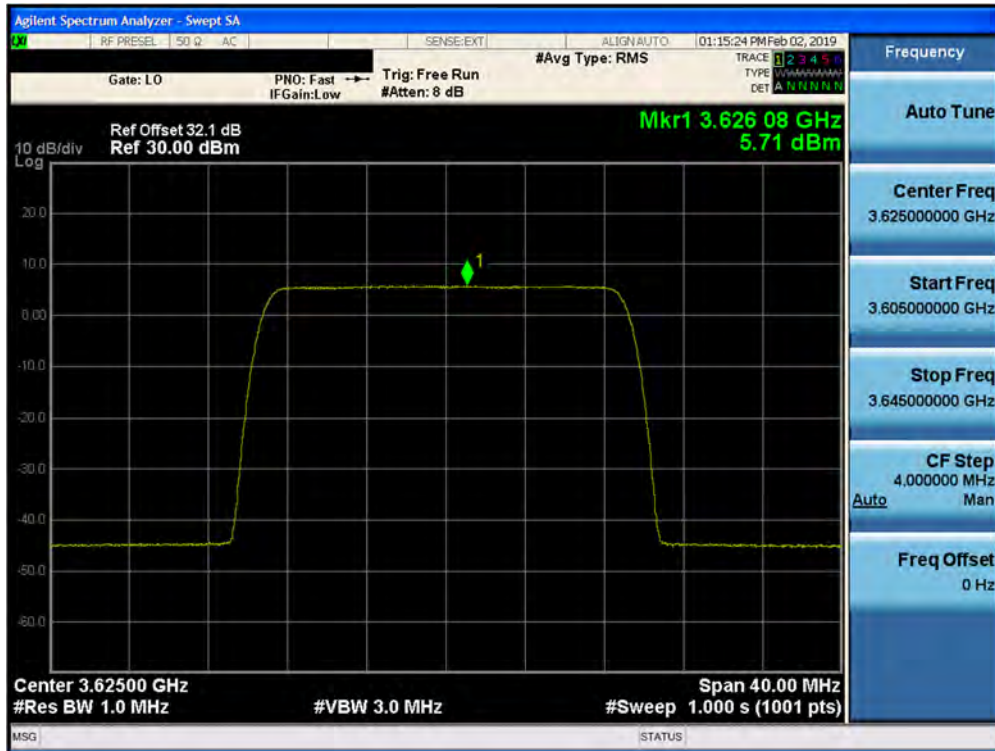


Plot 7-245. Peak Power Spectral Density Plot (1CC– 3625 MHz- 20.0MHz 64QAM- Mid Channel) Port 28

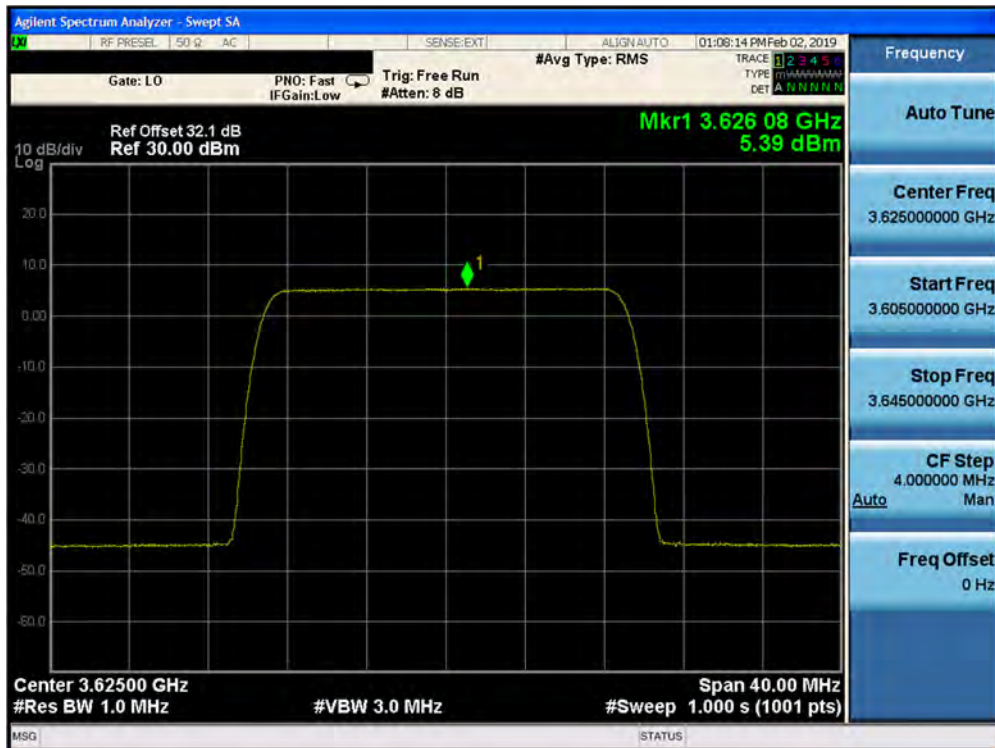


Plot 7-246. Peak Power Spectral Density Plot (1CC– 3625 MHz- 20.0MHz 64QAM- Mid Channel) Port 29

FCC ID: A3LMT3204-48A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1901240015-01-R2-A3L	Test Dates: 01/23/2019 - 02/28/2019	EUT Type: Massive MIMO CBSD		Page 183 of 313



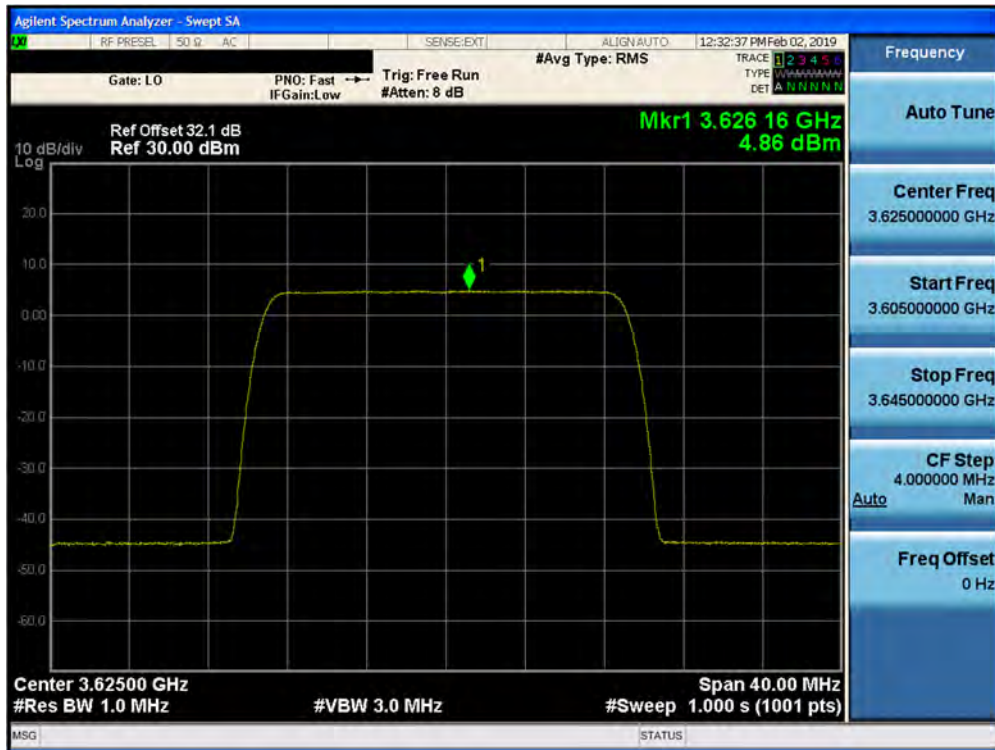
Plot 7-247. Peak Power Spectral Density Plot (1CC– 3625 MHz- 20.0MHz 64QAM- Mid Channel) Port 30



Plot 7-248. Peak Power Spectral Density Plot (1CC– 3625 MHz- 20.0MHz 64QAM- Mid Channel) Port 31

FCC ID: A3LMT3204-48A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1901240015-01-R2-A3L	Test Dates: 01/23/2019 - 02/28/2019	EUT Type: Massive MIMO CBSD		Page 184 of 313

8-User Beam 1CC Mid Channel 256-QAM

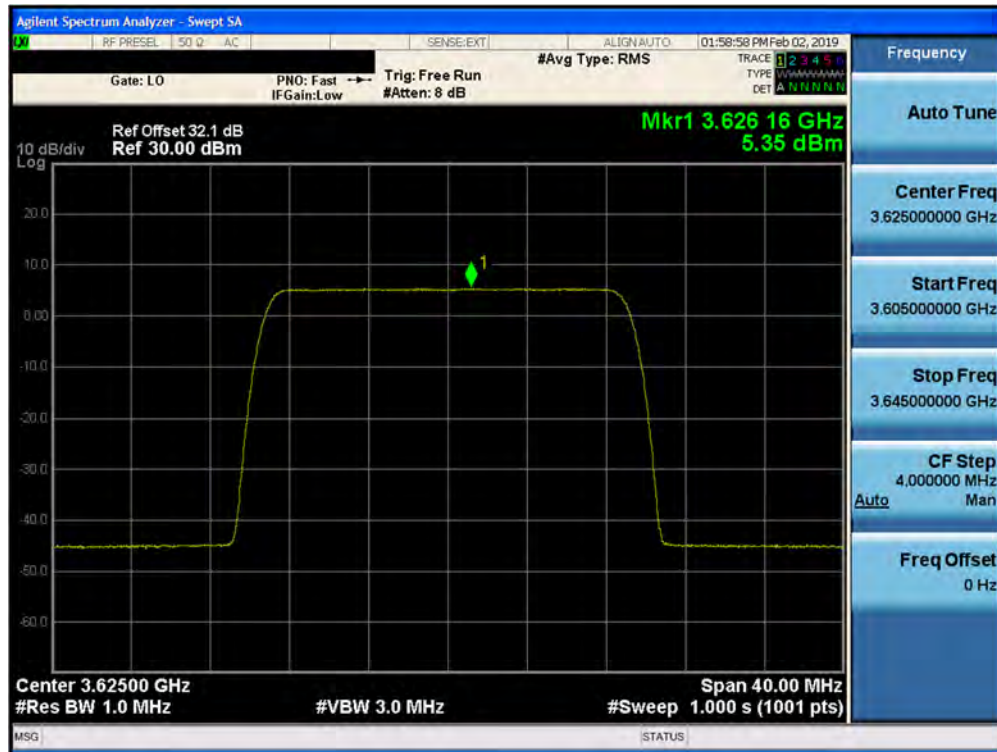


Plot 7-249. Peak Power Spectral Density Plot (1CC– 3625 MHz- 20.0MHz 256QAM- Mid Channel) Port 03

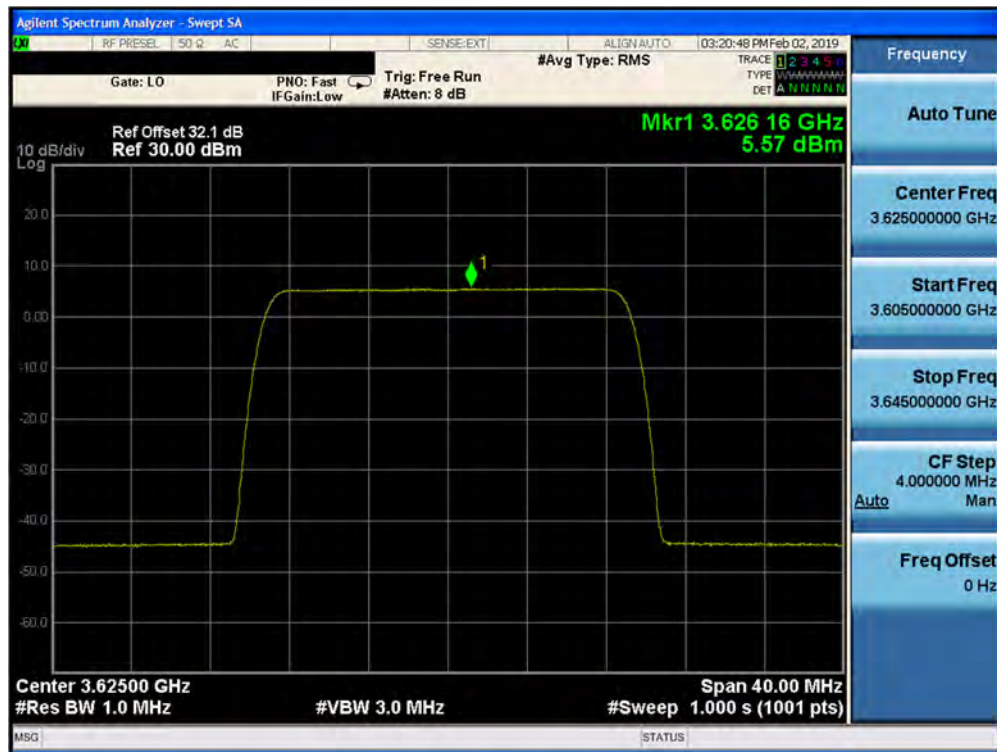


Plot 7-250. Peak Power Spectral Density Plot (1CC– 3625 MHz- 20.0MHz 256QAM- Mid Channel) Port 02

FCC ID: A3LMT3204-48A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1901240015-01-R2-A3L	Test Dates: 01/23/2019 - 02/28/2019	EUT Type: Massive MIMO CBS		Page 185 of 313

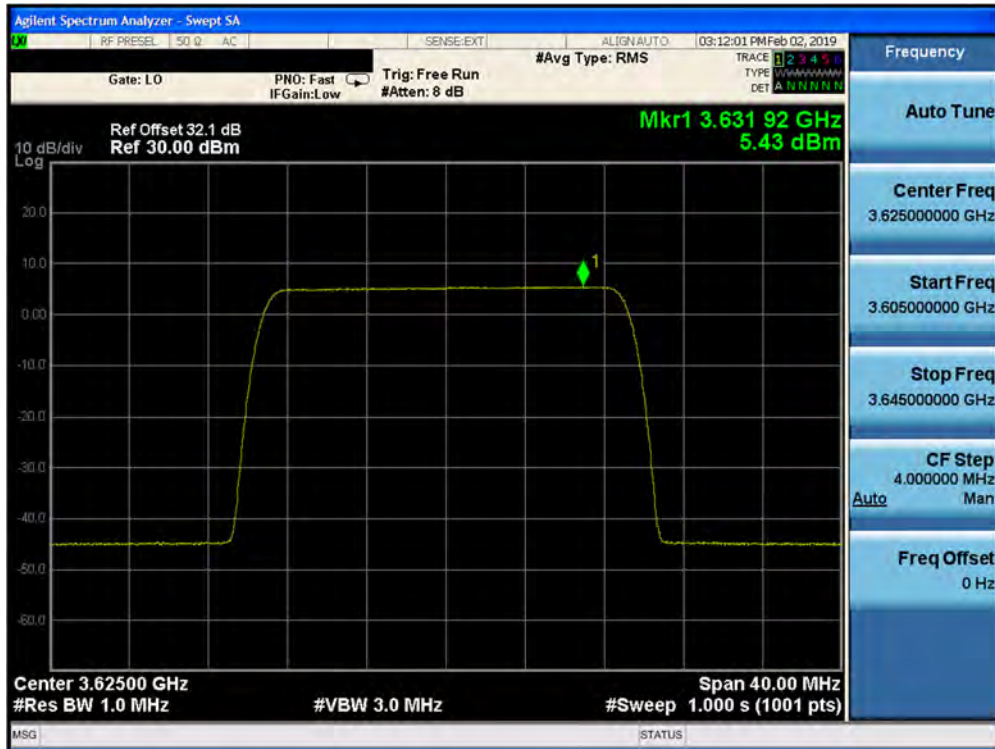


Plot 7-251. Peak Power Spectral Density Plot (1CC– 3625 MHz- 20.0MHz 256QAM- Mid Channel) Port 01

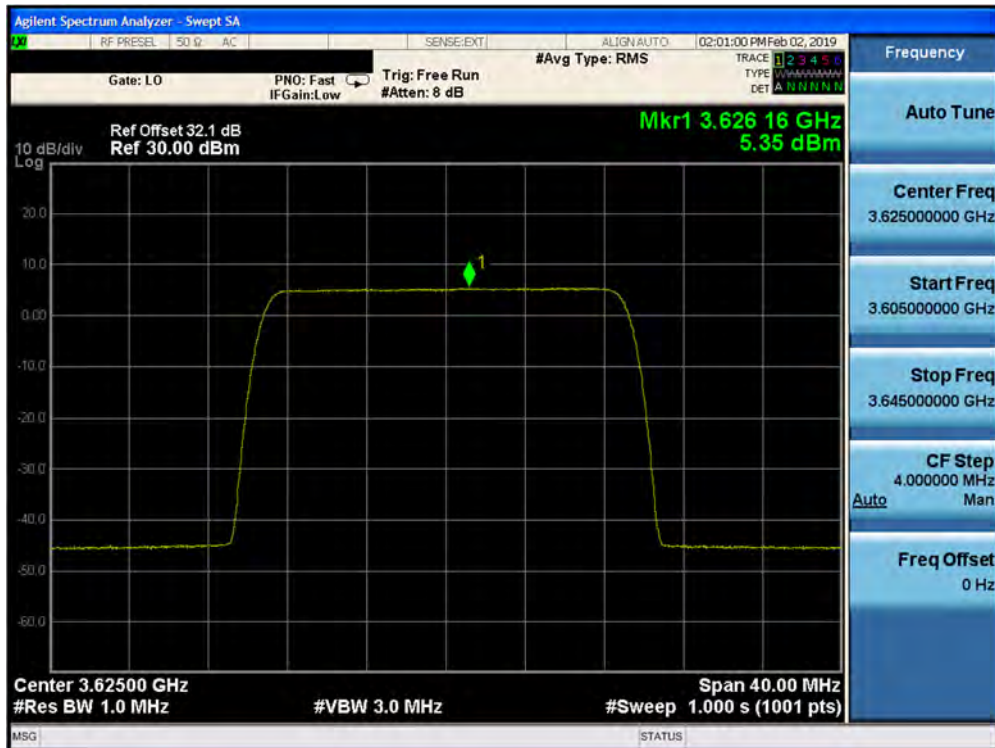


Plot 7-252. Peak Power Spectral Density Plot (1CC– 3625 MHz- 20.0MHz 256QAM- Mid Channel) Port 00

FCC ID: A3LMT3204-48A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1901240015-01-R2.A3L	Test Dates: 01/23/2019 - 02/28/2019	EUT Type: Massive MIMO CBSD		Page 186 of 313



Plot 7-253. Peak Power Spectral Density Plot (1CC– 3625 MHz- 20.0MHz 256QAM- Mid Channel) Port 16

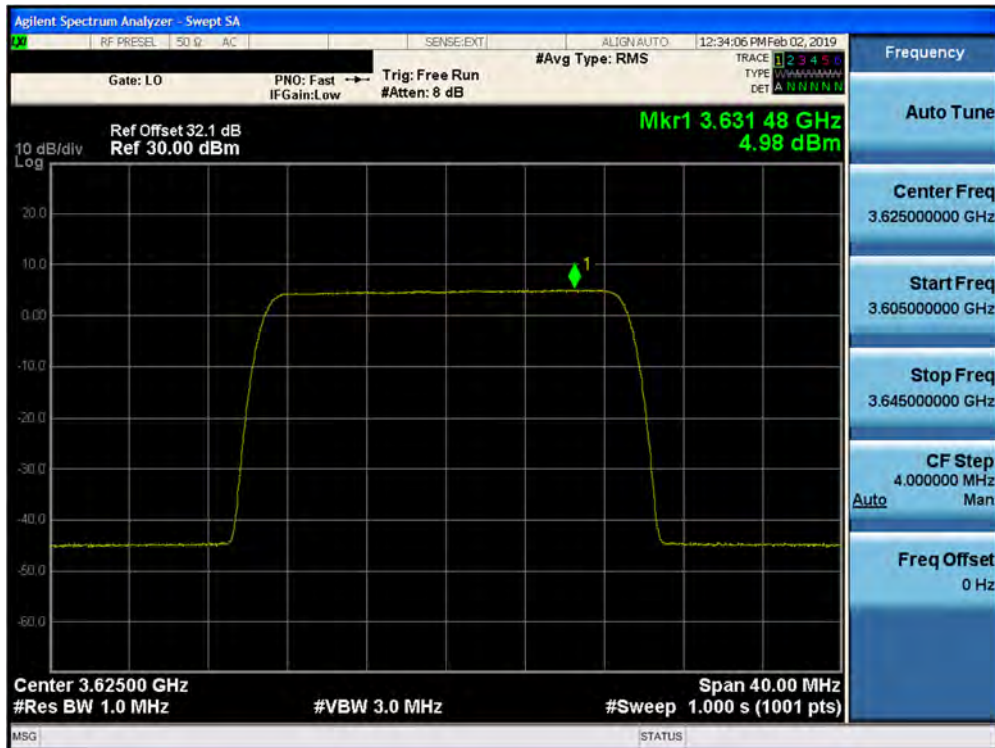


Plot 7-254. Peak Power Spectral Density Plot (1CC– 3625 MHz- 20.0MHz 256QAM- Mid Channel) Port 17

FCC ID: A3LMT3204-48A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1901240015-01-R2-A3L	Test Dates: 01/23/2019 - 02/28/2019	EUT Type: Massive MIMO CBSD		Page 187 of 313

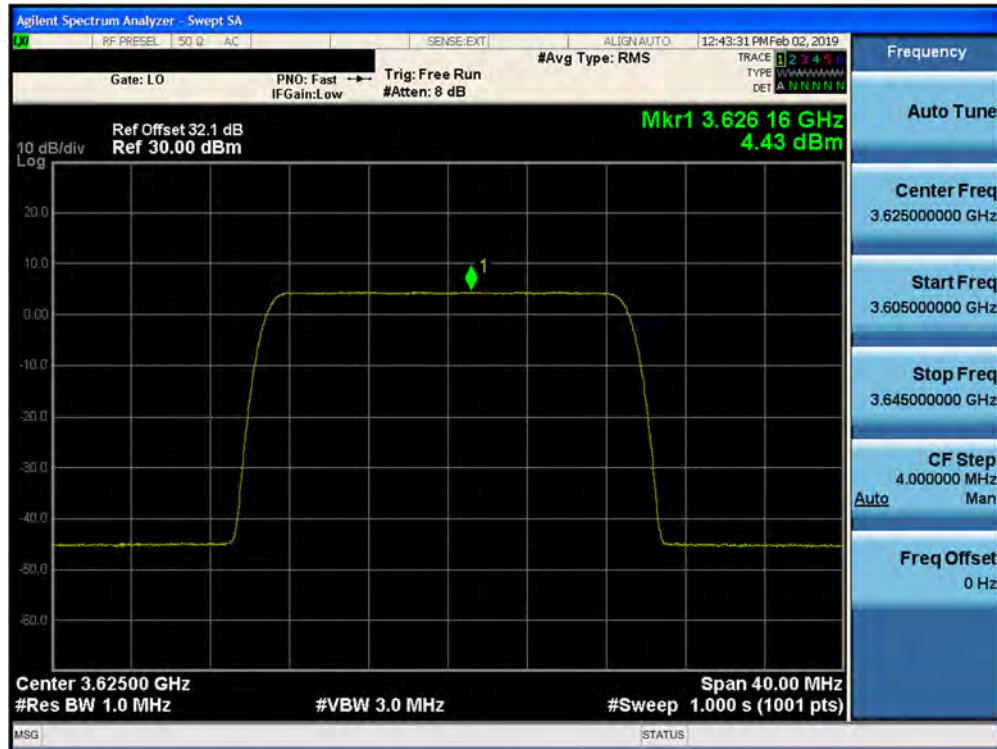


Plot 7-255. Peak Power Spectral Density Plot (1CC– 3625 MHz- 20.0MHz 256QAM- Mid Channel) Port 18

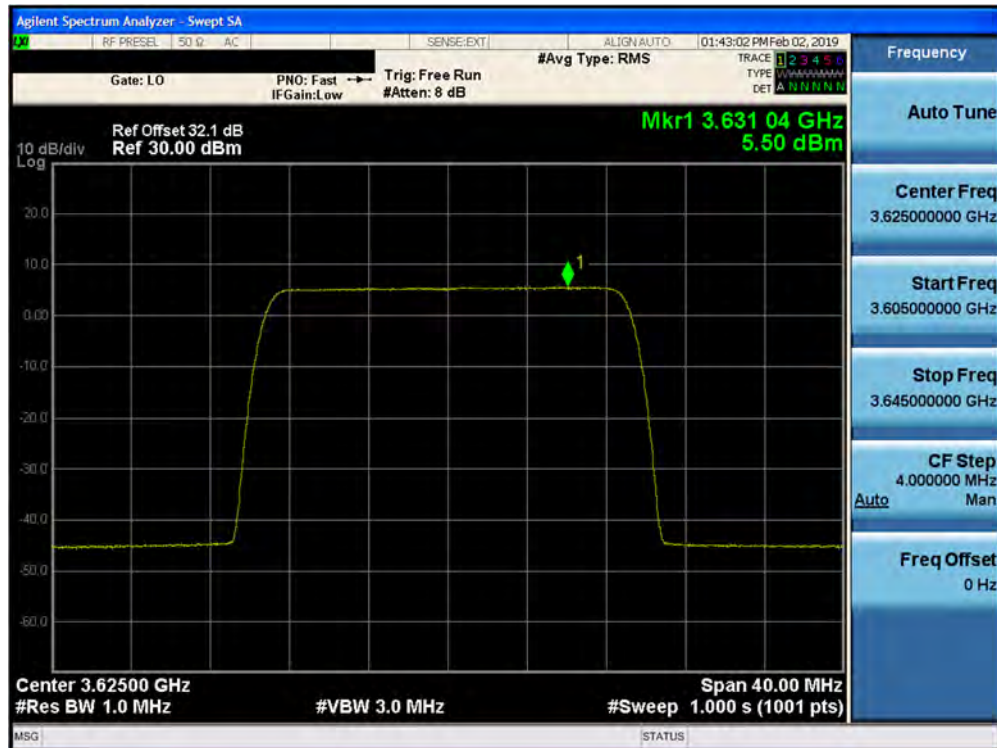


Plot 7-256. Peak Power Spectral Density Plot (1CC– 3625 MHz- 20.0MHz 256QAM- Mid Channel) Port 19

FCC ID: A3LMT3204-48A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1901240015-01-R2-A3L	Test Dates: 01/23/2019 - 02/28/2019	EUT Type: Massive MIMO CBSD		Page 188 of 313

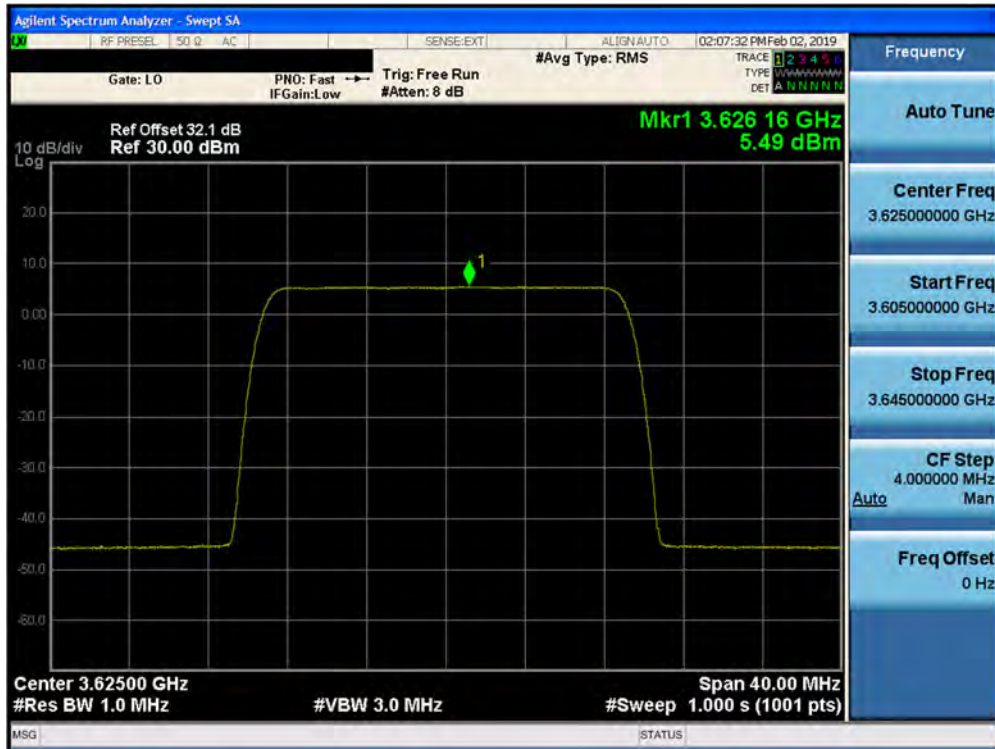


Plot 7-257. Peak Power Spectral Density Plot (1CC– 3625 MHz- 20.0MHz 256QAM- Mid Channel) Port 07

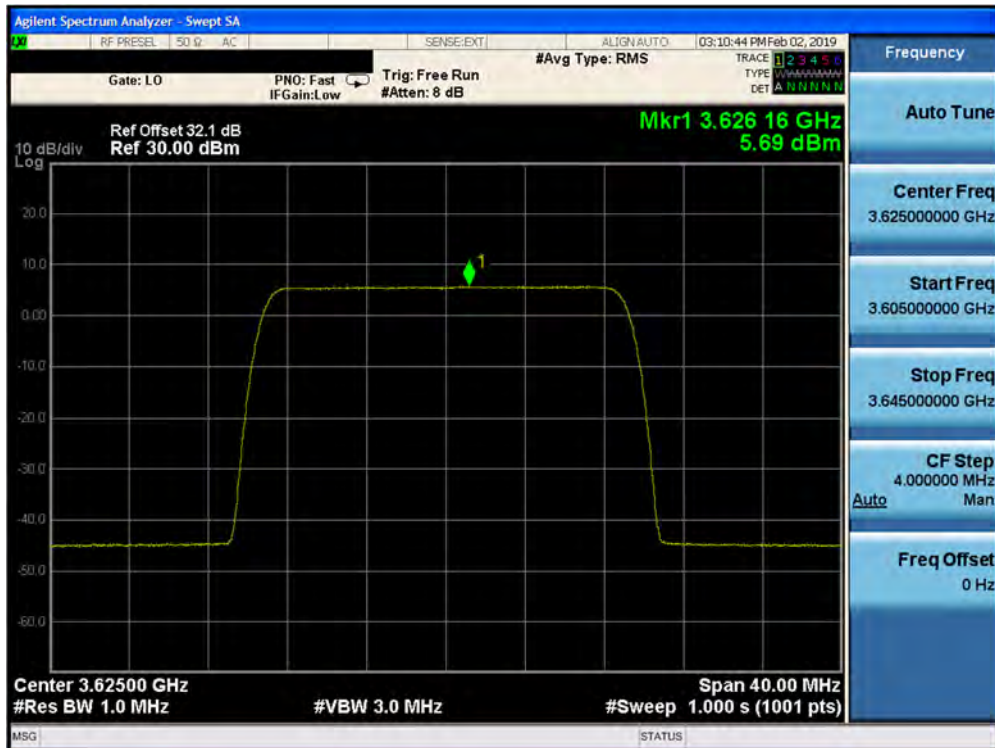


Plot 7-258. Peak Power Spectral Density Plot (1CC– 3625 MHz- 20.0MHz 256QAM- Mid Channel) Port 06

FCC ID: A3LMT3204-48A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1901240015-01-R2-A3L	Test Dates: 01/23/2019 - 02/28/2019	EUT Type: Massive MIMO CBSD		Page 189 of 313

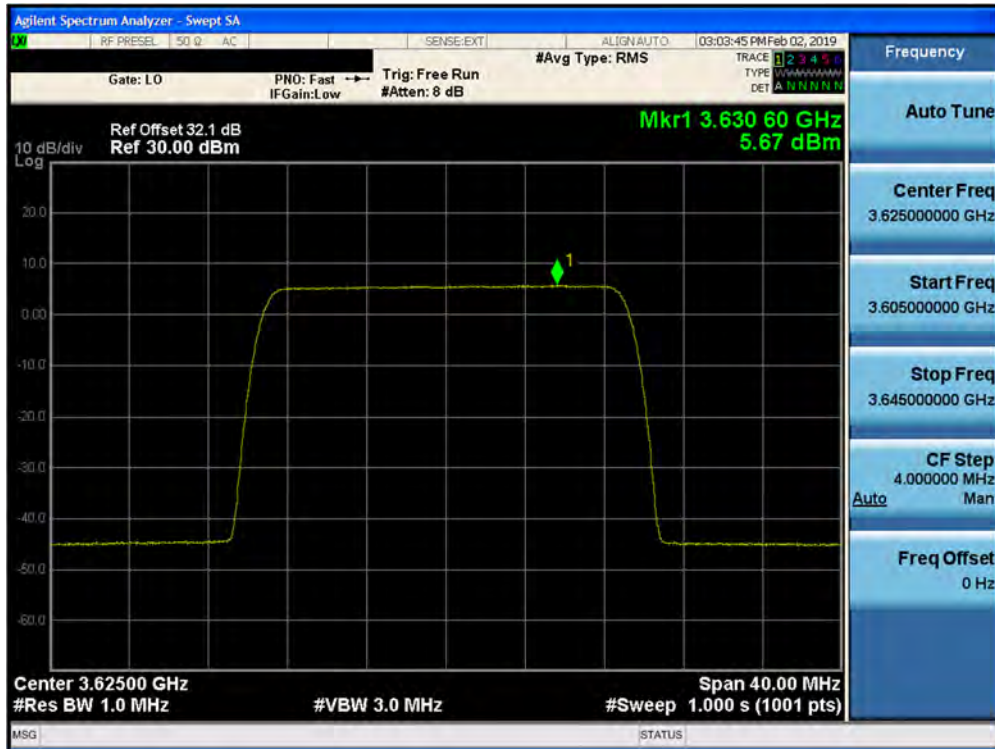


Plot 7-259. Peak Power Spectral Density Plot (1CC- 3625 MHz- 20.0MHz 256QAM- Mid Channel) Port 05

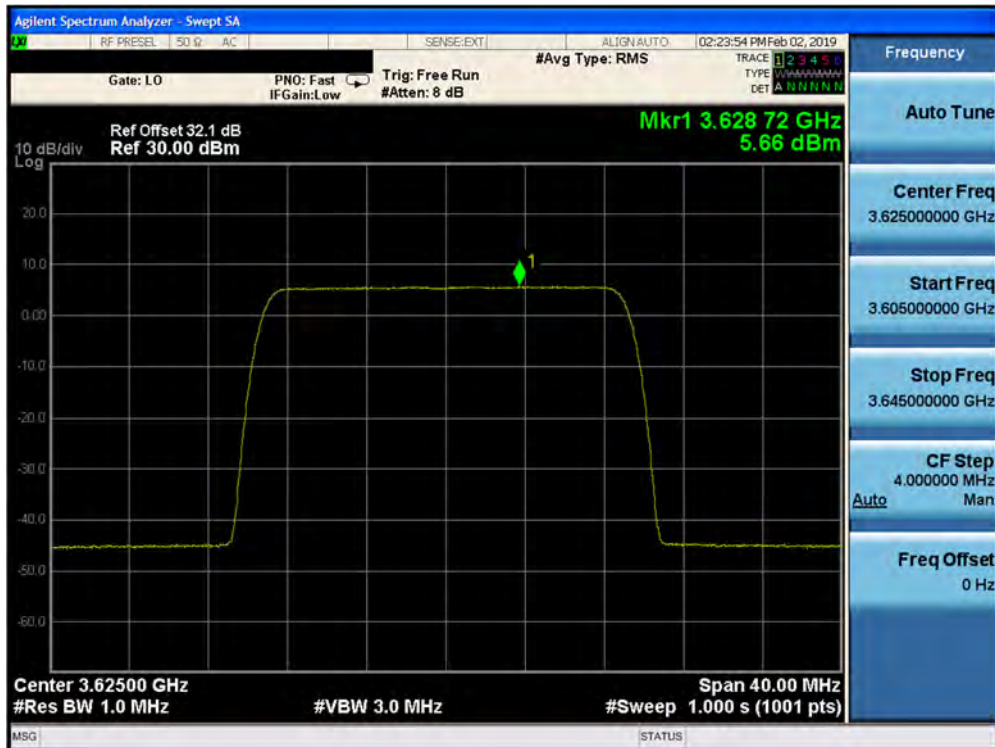


Plot 7-260. Peak Power Spectral Density Plot (1CC- 3625 MHz- 20.0MHz 256QAM- Mid Channel) Port 04

FCC ID: A3LMT3204-48A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1901240015-01-R2-A3L	Test Dates: 01/23/2019 - 02/28/2019	EUT Type: Massive MIMO CBSD		Page 190 of 313

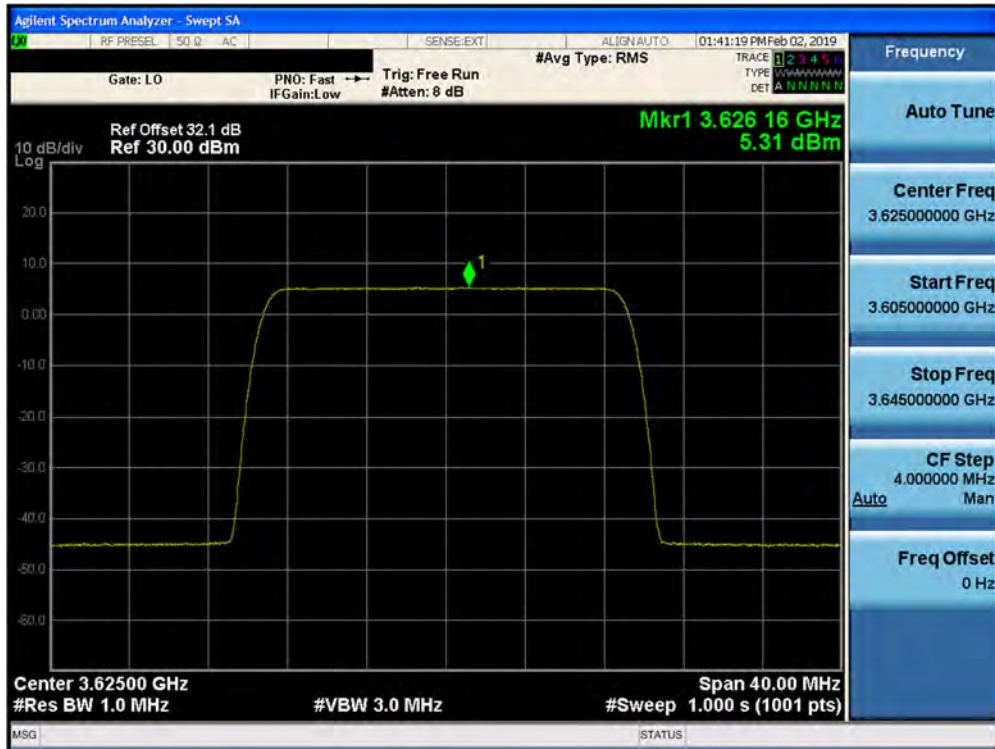


Plot 7-261. Peak Power Spectral Density Plot (1CC- 3625 MHz- 20.0MHz 256QAM- Mid Channel) Port 20



Plot 7-262. Peak Power Spectral Density Plot (1CC- 3625 MHz- 20.0MHz 256QAM- Mid Channel) Port 21

FCC ID: A3LMT3204-48A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1901240015-01-R2-A3L	Test Dates: 01/23/2019 - 02/28/2019	EUT Type: Massive MIMO CBSD		Page 191 of 313

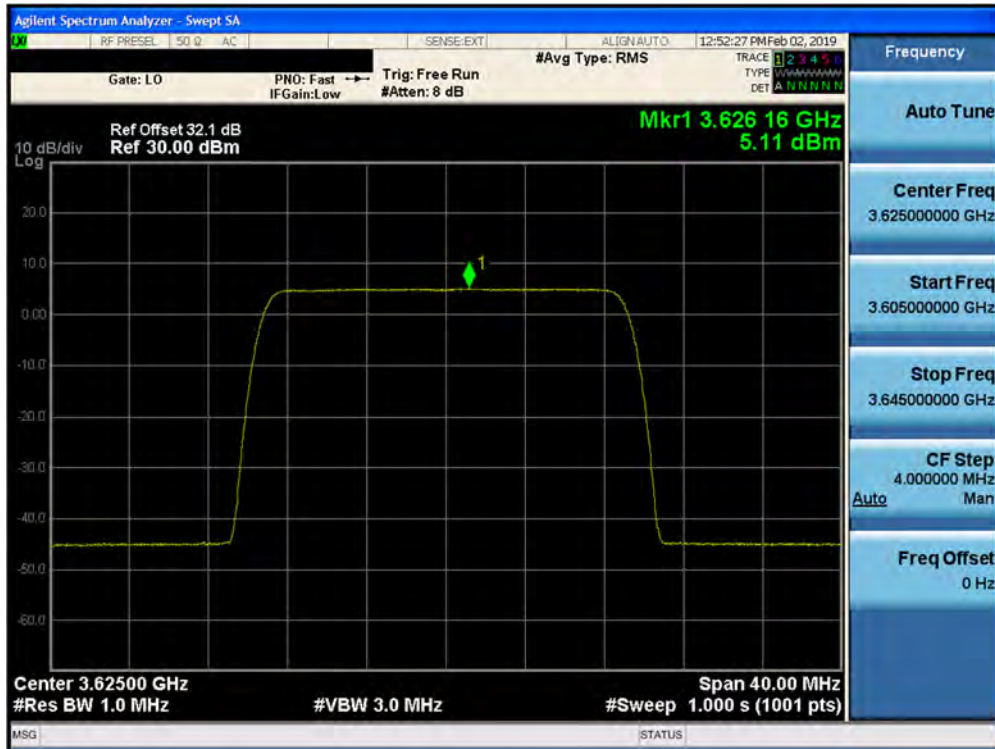


Plot 7-263. Peak Power Spectral Density Plot (1CC– 3625 MHz- 20.0MHz 256QAM- Mid Channel) Port 22

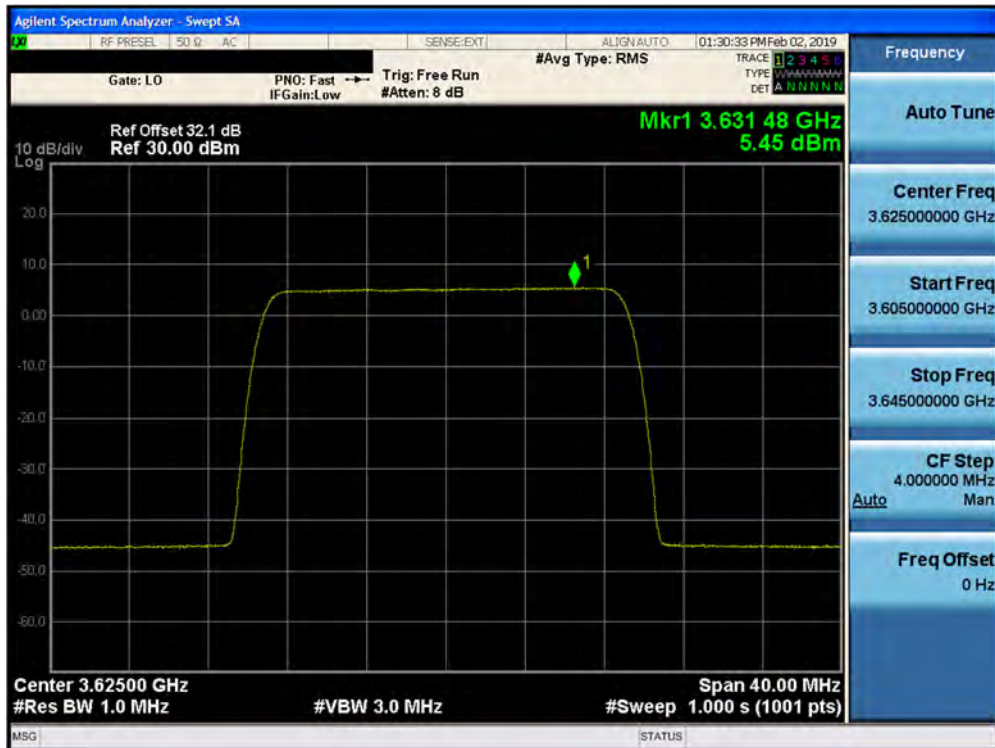


Plot 7-264. Peak Power Spectral Density Plot (1CC– 3625 MHz- 20.0MHz 256QAM- Mid Channel) Port 23

FCC ID: A3LMT3204-48A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1901240015-01-R2-A3L	Test Dates: 01/23/2019 - 02/28/2019	EUT Type: Massive MIMO CBSD		Page 192 of 313

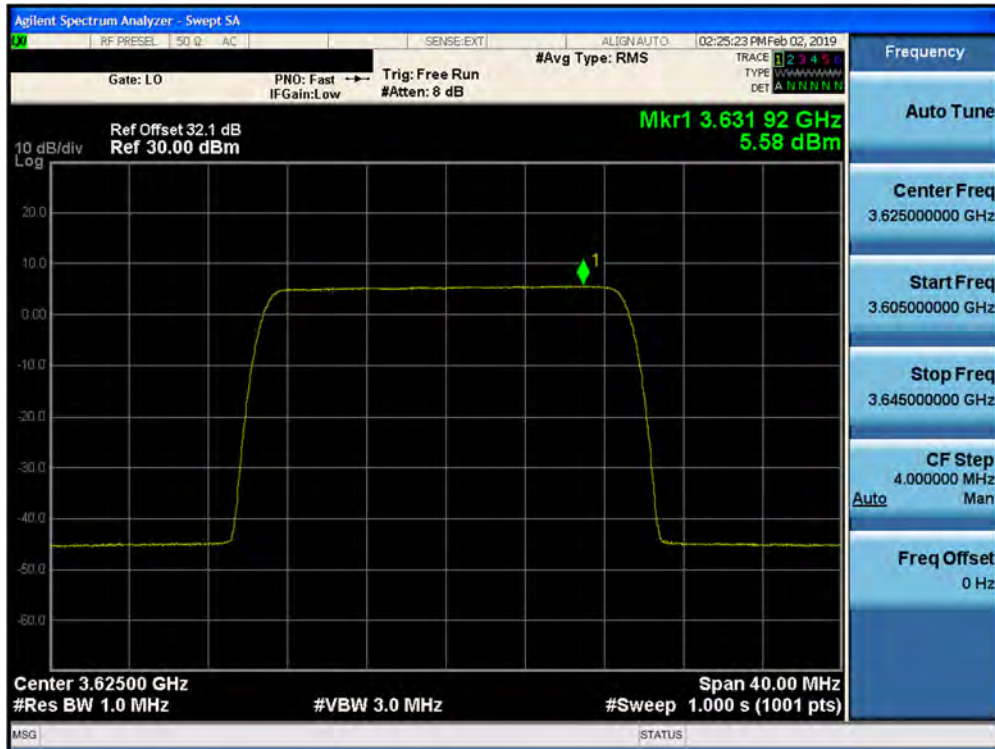


Plot 7-265. Peak Power Spectral Density Plot (1CC– 3625 MHz- 20.0MHz 256QAM- Mid Channel) Port 11

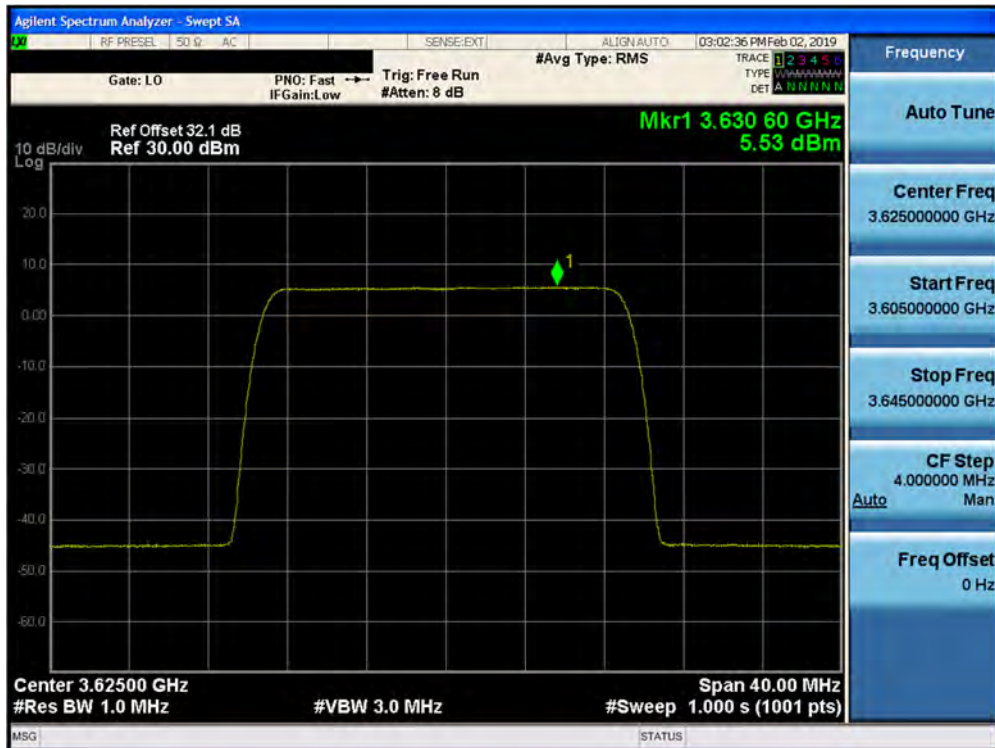


Plot 7-266. Peak Power Spectral Density Plot (1CC– 3625 MHz- 20.0MHz 256QAM- Mid Channel) Port 10

FCC ID: A3LMT3204-48A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1901240015-01-R2-A3L	Test Dates: 01/23/2019 - 02/28/2019	EUT Type: Massive MIMO CBSD		Page 193 of 313



Plot 7-267. Peak Power Spectral Density Plot (1CC– 3625 MHz- 20.0MHz 256QAM- Mid Channel) Port 09

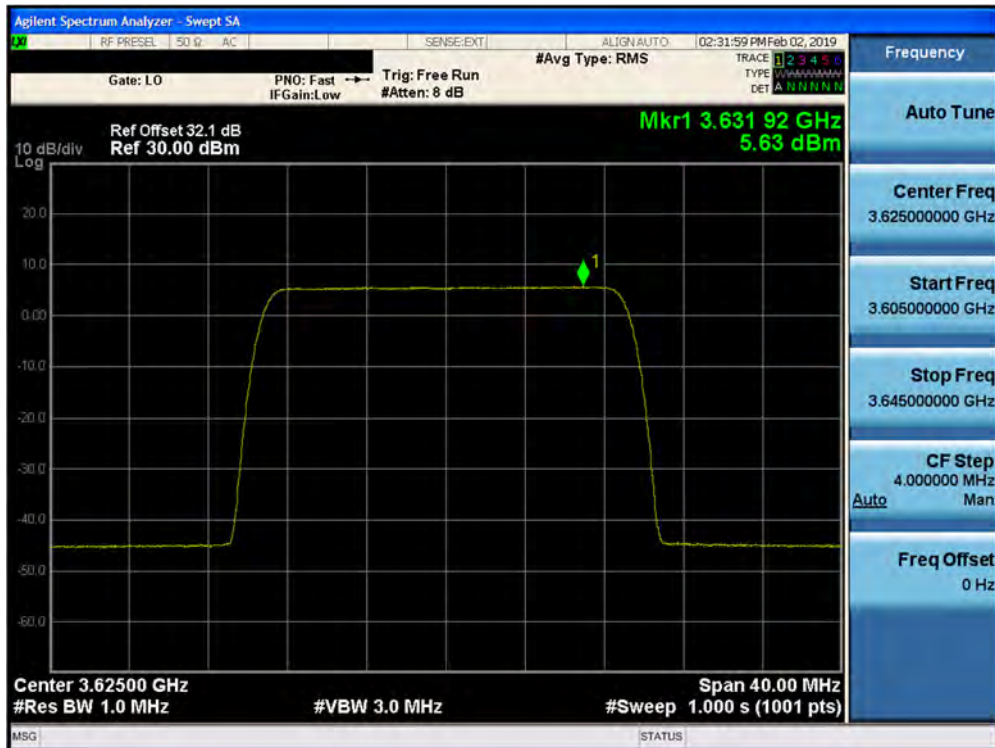


Plot 7-268. Peak Power Spectral Density Plot (1CC– 3625 MHz- 20.0MHz 256QAM- Mid Channel) Port 08

FCC ID: A3LMT3204-48A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1901240015-01-R2-A3L	Test Dates: 01/23/2019 - 02/28/2019	EUT Type: Massive MIMO CBSD		Page 194 of 313

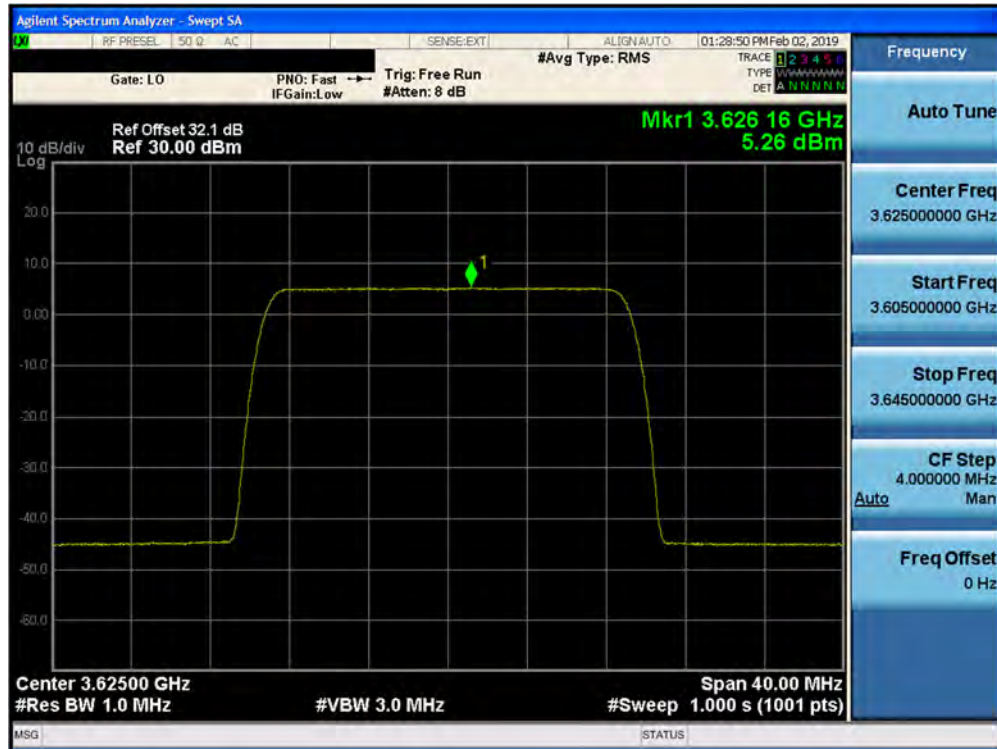


Plot 7-269. Peak Power Spectral Density Plot (1CC– 3625 MHz- 20.0MHz 256QAM- Mid Channel) Port 24

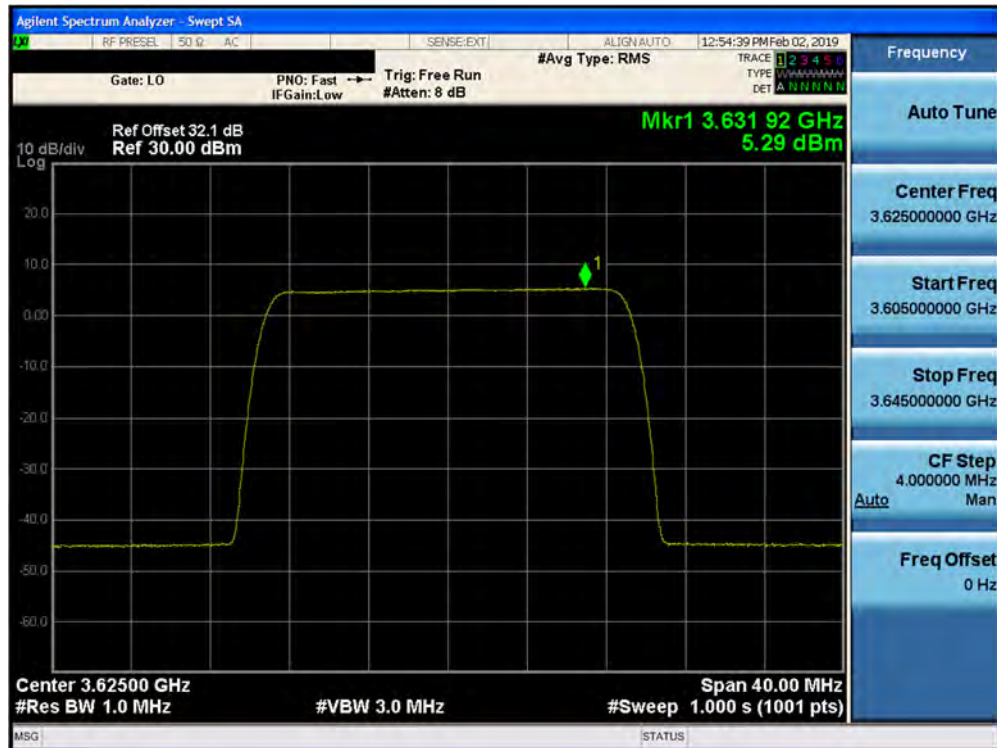


Plot 7-270. Peak Power Spectral Density Plot (1CC– 3625 MHz- 20.0MHz 256QAM- Mid Channel) Port 25

FCC ID: A3LMT3204-48A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1901240015-01-R2-A3L	Test Dates: 01/23/2019 - 02/28/2019	EUT Type: Massive MIMO CBSD		Page 195 of 313

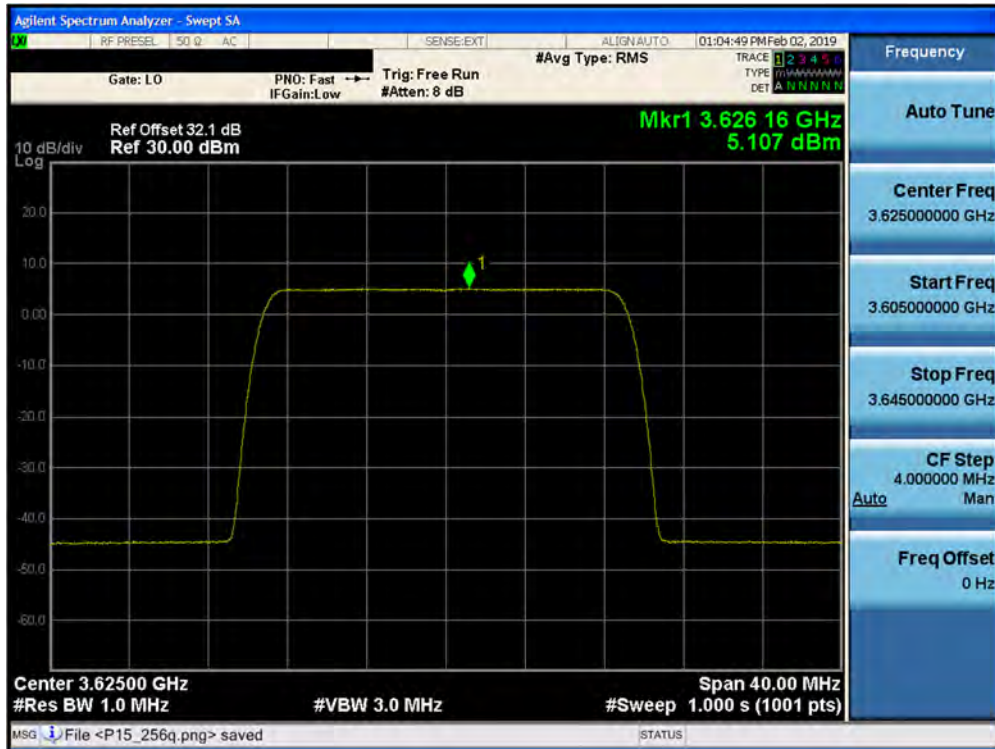


Plot 7-271. Peak Power Spectral Density Plot (1CC– 3625 MHz- 20.0MHz 256QAM- Mid Channel) Port 26

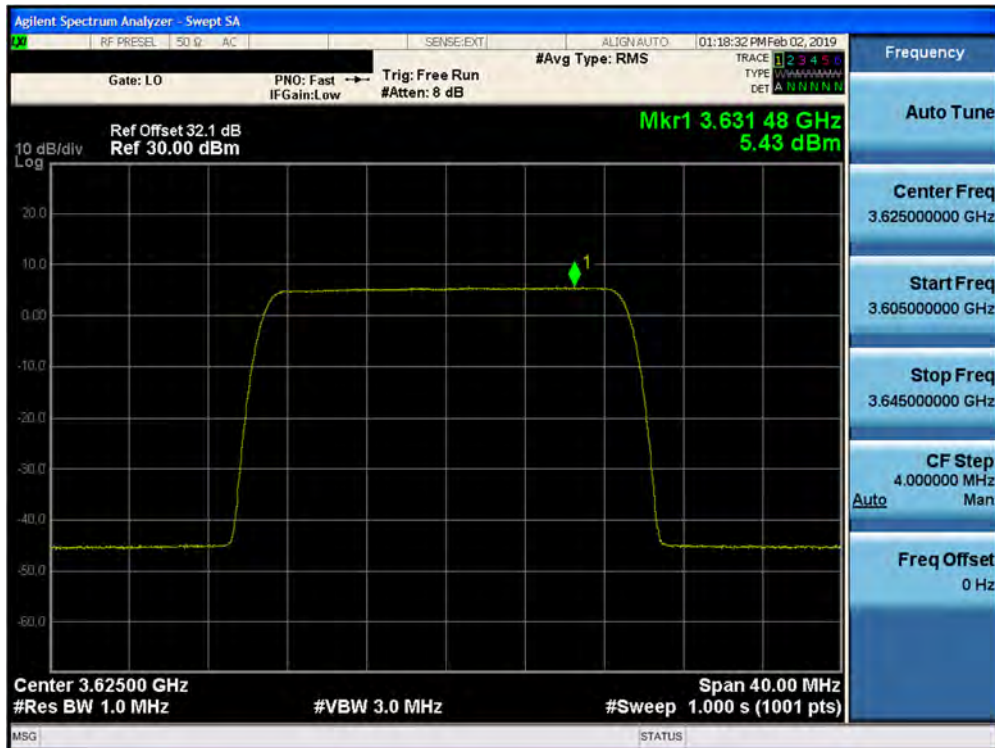


Plot 7-272. Peak Power Spectral Density Plot (1CC– 3625 MHz- 20.0MHz 256QAM- Mid Channel) Port 27

FCC ID: A3LMT3204-48A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1901240015-01-R2-A3L	Test Dates: 01/23/2019 - 02/28/2019	EUT Type: Massive MIMO CBS		Page 196 of 313

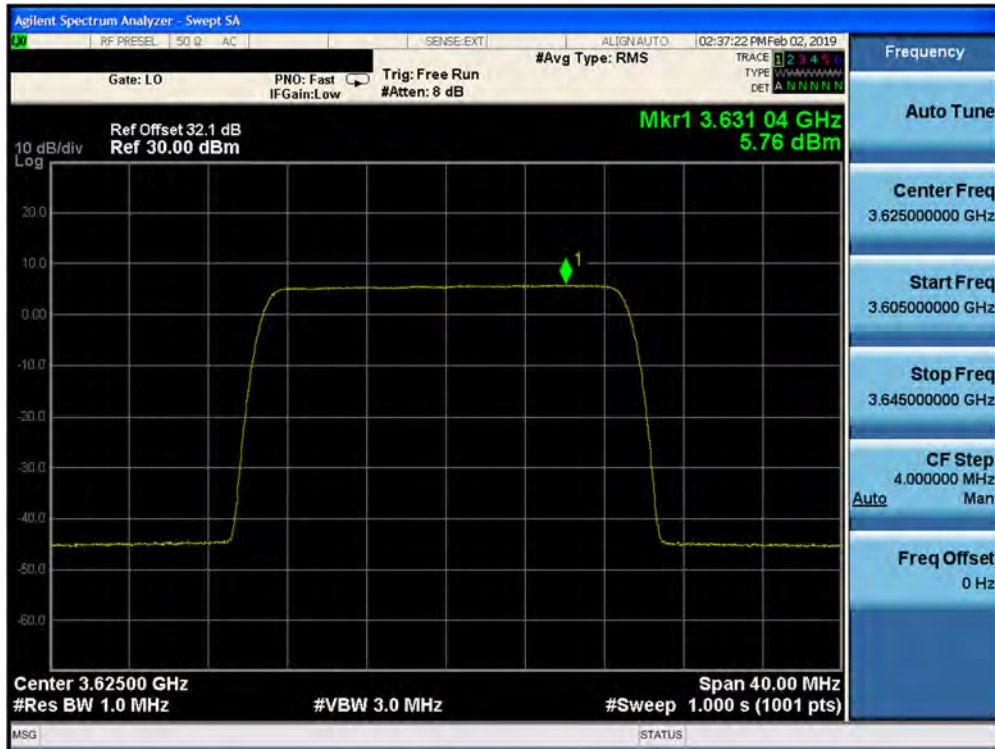


Plot 7-273. Peak Power Spectral Density Plot (1CC- 3625 MHz- 20.0MHz 256QAM- Mid Channel) Port 15



Plot 7-274. Peak Power Spectral Density Plot (1CC- 3625 MHz- 20.0MHz 256QAM- Mid Channel) Port 14

FCC ID: A3LMT3204-48A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1901240015-01-R2-A3L	Test Dates: 01/23/2019 - 02/28/2019	EUT Type: Massive MIMO CBSD		Page 197 of 313

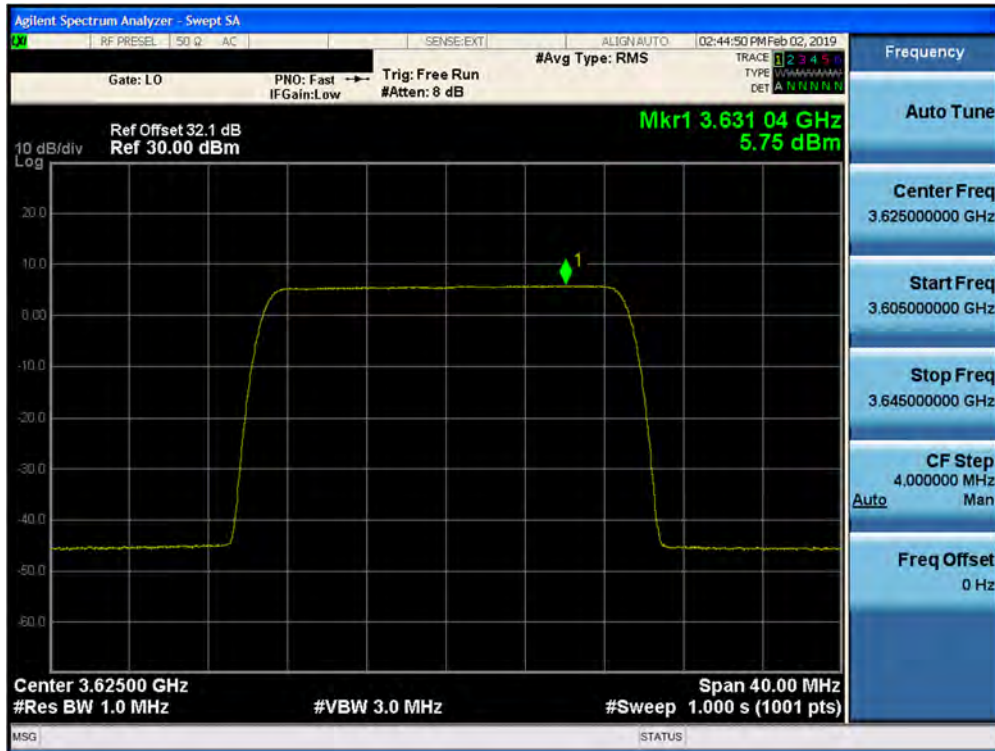


Plot 7-275. Peak Power Spectral Density Plot (1CC– 3625 MHz- 20.0MHz 256QAM- Mid Channel) Port 13

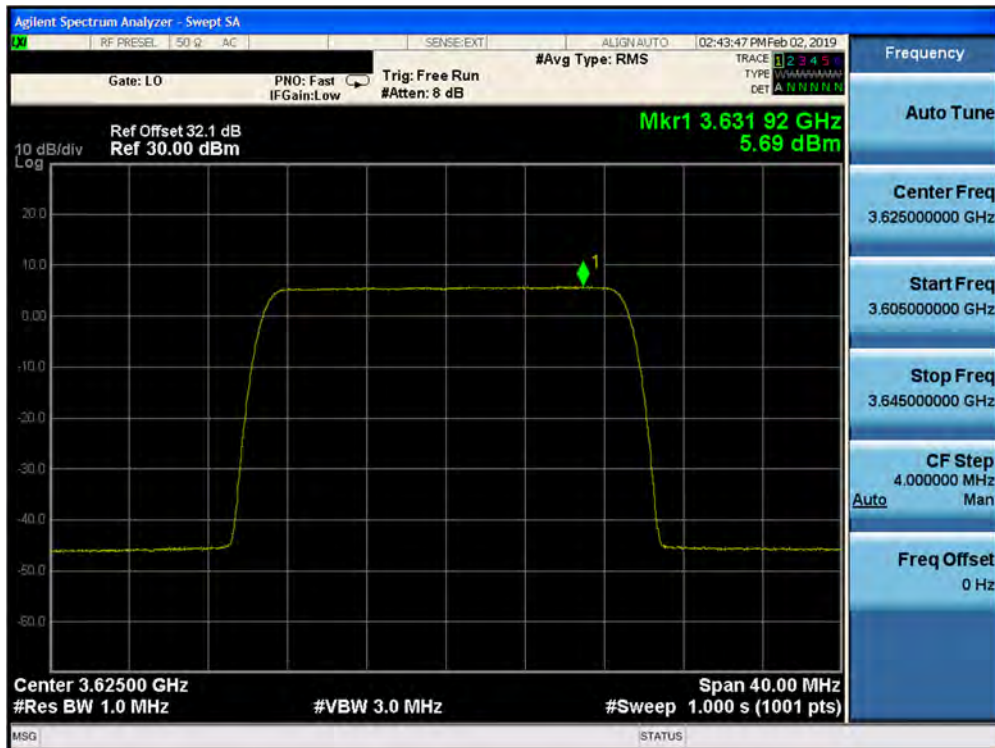


Plot 7-276. Peak Power Spectral Density Plot (1CC– 3625 MHz- 20.0MHz 256QAM- Mid Channel) Port 12

FCC ID: A3LMT3204-48A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1901240015-01-R2-A3L	Test Dates: 01/23/2019 - 02/28/2019	EUT Type: Massive MIMO CBSD		Page 198 of 313

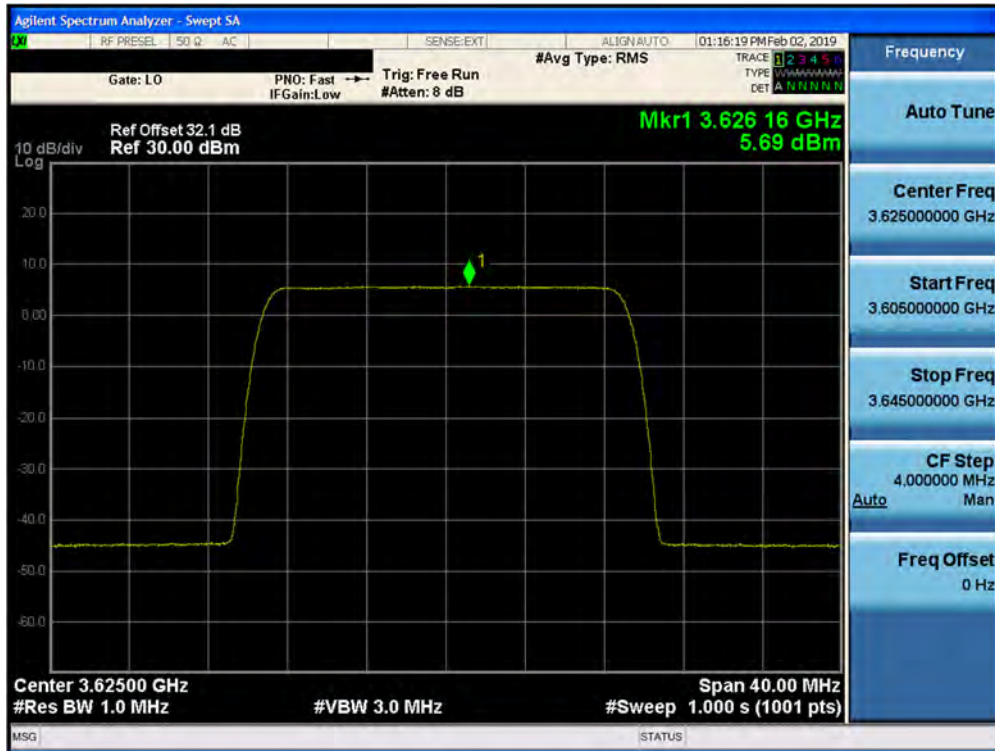


Plot 7-277. Peak Power Spectral Density Plot (1CC- 3625 MHz- 20.0MHz 256QAM- Mid Channel) Port 28

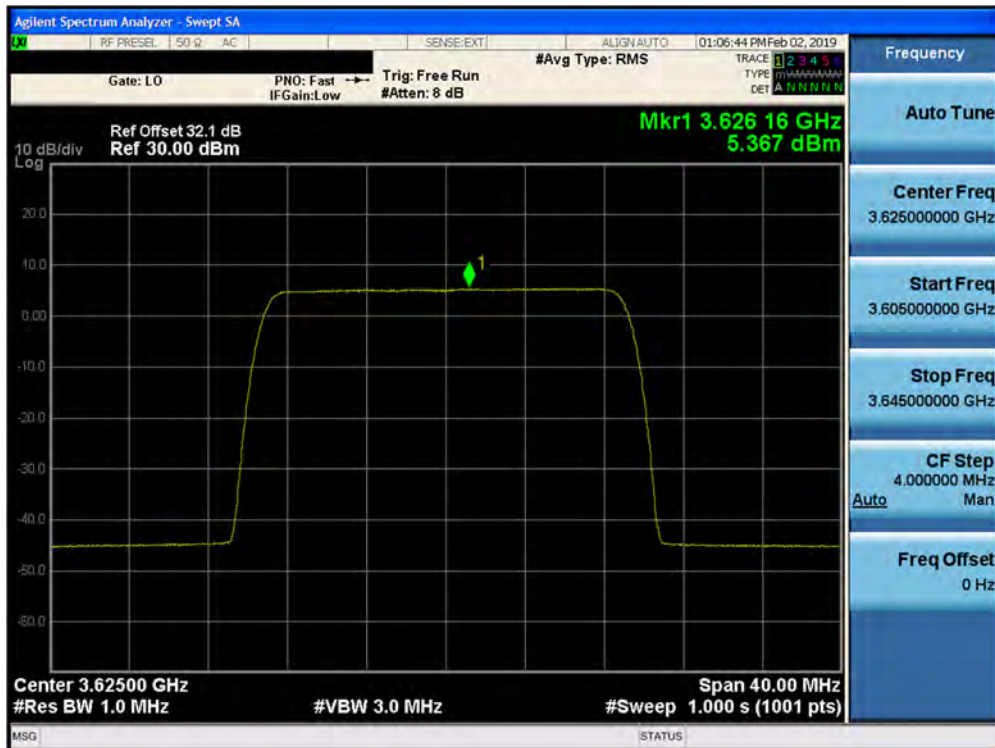


Plot 7-278. Peak Power Spectral Density Plot (1CC- 3625 MHz- 20.0MHz 256QAM- Mid Channel) Port 29

FCC ID: A3LMT3204-48A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1901240015-01-R2-A3L	Test Dates: 01/23/2019 - 02/28/2019	EUT Type: Massive MIMO CBSD		Page 199 of 313



Plot 7-279. Peak Power Spectral Density Plot (1CC- 3625 MHz- 20.0MHz 256QAM- Mid Channel) Port 30



Plot 7-280. Peak Power Spectral Density Plot (1CC- 3625 MHz- 20.0MHz 256QAM- Mid Channel) Port 31

FCC ID: A3LMT3204-48A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1901240015-01-R2-A3L	Test Dates: 01/23/2019 - 02/28/2019	EUT Type: Massive MIMO CBS		Page 200 of 313

8-User Beam 1CC High Channel

Port #	QPSK (dBm/MHz)	16-QAM (dBm/MHz)	64-QAM (dBm/MHz)	256-QAM (dBm/MHz)
3	5.36	6.27	5.53	5.36
2	5.82	6.34	5.90	5.75
1	5.74	6.64	5.93	5.71
0	5.30	6.31	5.42	5.38
16	5.33	6.26	5.42	5.41
17	5.84	6.84	5.99	6.22
18	6.18	6.70	6.35	6.30
19	5.80	6.61	5.86	5.91
7	4.43	5.99	4.62	4.39
6	5.91	6.48	5.99	5.83
5	5.91	6.74	5.82	5.68
4	5.46	6.36	5.52	5.47
20	5.60	6.52	5.68	5.61
21	5.55	6.55	5.69	5.62
22	5.64	6.21	5.78	5.67
23	6.01	6.72	6.03	5.84
11	5.50	6.30	5.71	5.64
10	4.64	6.32	4.98	4.89
9	5.98	6.91	6.14	6.07
8	5.67	6.39	5.70	5.58
24	5.58	6.52	5.69	5.62
25	5.46	5.93	5.54	5.41
26	5.75	6.13	5.85	5.74
27	5.63	6.73	5.83	5.69
15	5.75	6.50	5.97	5.88
14	5.82	6.42	5.97	5.85
13	5.52	6.27	5.65	5.63
12	5.93	6.79	5.88	5.89
28	5.67	6.70	5.96	5.90
29	5.89	6.46	5.92	5.76
30	6.30	6.59	6.89	6.70
31	6.02	6.60	6.02	5.88

Table 7-42. 8-User Beam 1CC High Channel Peak Power Spectral Density (LTE Band 48 – 20.0MHz)

FCC ID: A3LMT3204-48A	 MEASUREMENT REPORT (CERTIFICATION) 		Approved by: Quality Manager
Test Report S/N: 1M1901240015-01-R2.A3L	Test Dates: 01/23/2019 - 02/28/2019	EUT Type: Massive MIMO CBSD	Page 201 of 313

High Channel 1CC	QPSK	16-QAM	64-QAM	256-QAM
Total MIMO PSD (dBm/MHz)	20.72	21.52	20.86	20.76
Ant. Gain (dBi)	21.50	21.50	21.50	21.50
8-beam Multiplexing Reduction(dB)	-9.03	-9.03	-9.03	-9.03
Beamforming Gain (dB)	3.00	3.00	3.00	3.00
Total MIMO Radiated PSD (dBm/MHz)	36.19	36.99	36.33	36.23
FCC Maximum PSD Limit (dBm/MHz)	37.00	37.00	37.00	37.00
Margin (dB)	-0.81	-0.01	-0.67	-0.77

Table 7-43. 8-User Beam 1CC High Channel MIMO Peak Power Spectral Density (LTE Band 48 – 20.0MHz)

FCC ID: A3LMT3204-48A	 MEASUREMENT REPORT (CERTIFICATION) 		Approved by: Quality Manager
Test Report S/N: 1M1901240015-01-R2.A3L	Test Dates: 01/23/2019 - 02/28/2019	EUT Type: Massive MIMO CBS	
			Page 202 of 313

1CC High Channel QPSK

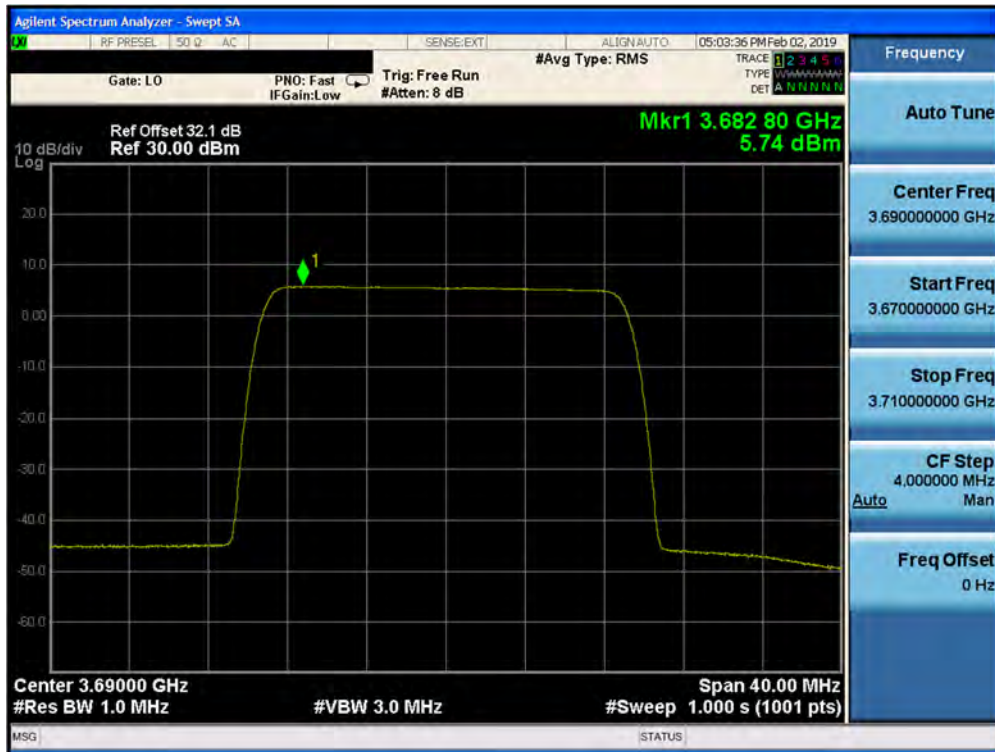


Plot 7-281. Peak Power Spectral Density Plot (1CC– 3690 MHz- 20.0MHz QPSK- High Channel) Port 03

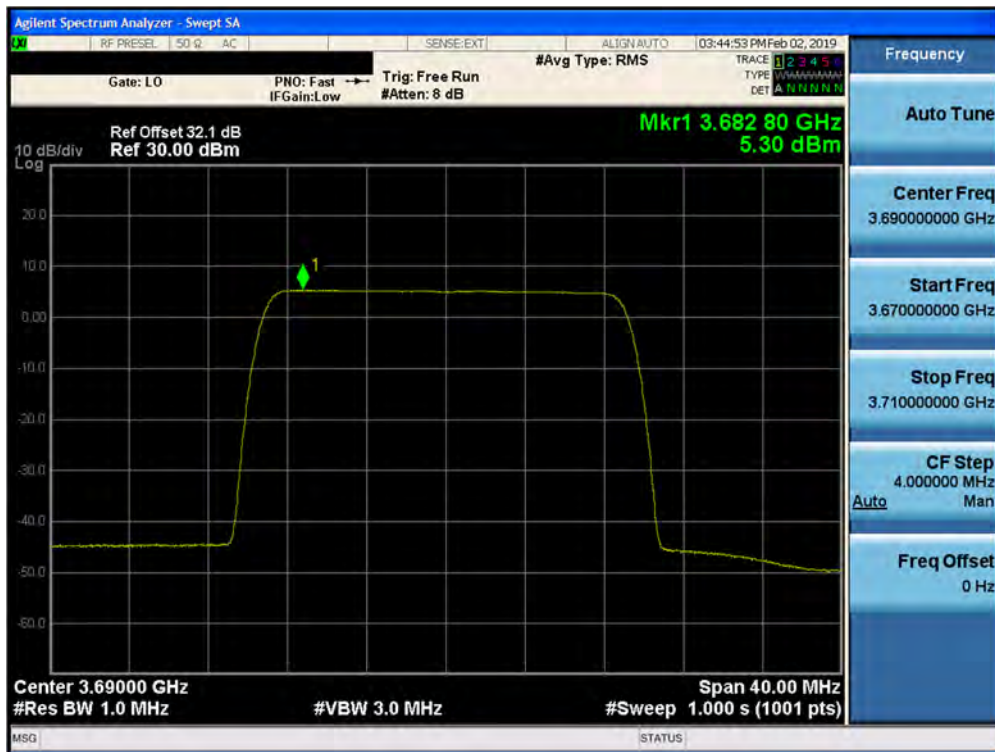


Plot 7-282. Peak Power Spectral Density Plot (1CC– 3690 MHz- 20.0MHz QPSK- High Channel) Port 02

FCC ID: A3LMT3204-48A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1901240015-01-R2-A3L	Test Dates: 01/23/2019 - 02/28/2019	EUT Type: Massive MIMO CBS		Page 203 of 313

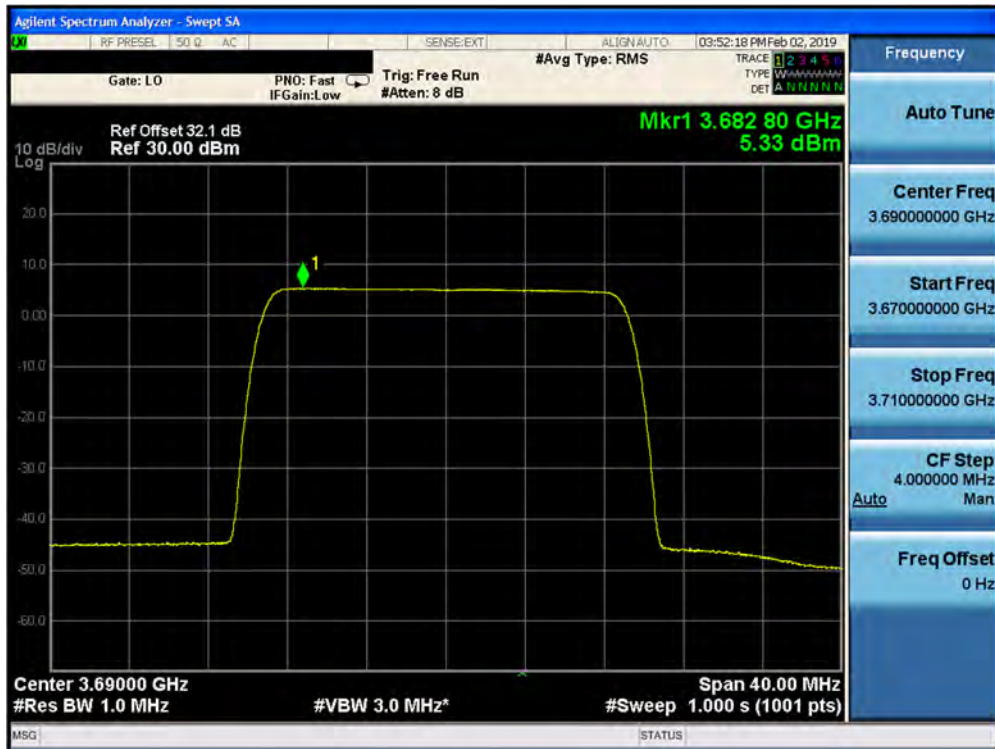


Plot 7-283. Peak Power Spectral Density Plot (1CC– 3690 MHz- 20.0MHz QPSK- High Channel) Port 01



Plot 7-284. Peak Power Spectral Density Plot (1CC– 3690 MHz- 20.0MHz QPSK- High Channel) Port 00

FCC ID: A3LMT3204-48A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1901240015-01-R2.A3L	Test Dates: 01/23/2019 - 02/28/2019	EUT Type: Massive MIMO CBSD		Page 204 of 313



Plot 7-285. Peak Power Spectral Density Plot (1CC– 3690 MHz- 20.0MHz QPSK- High Channel) Port 16



Plot 7-286. Peak Power Spectral Density Plot (1CC– 3690 MHz- 20.0MHz QPSK- High Channel) Port 17

FCC ID: A3LMT3204-48A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1901240015-01-R2.A3L	Test Dates: 01/23/2019 - 02/28/2019	EUT Type: Massive MIMO CBSD		Page 205 of 313

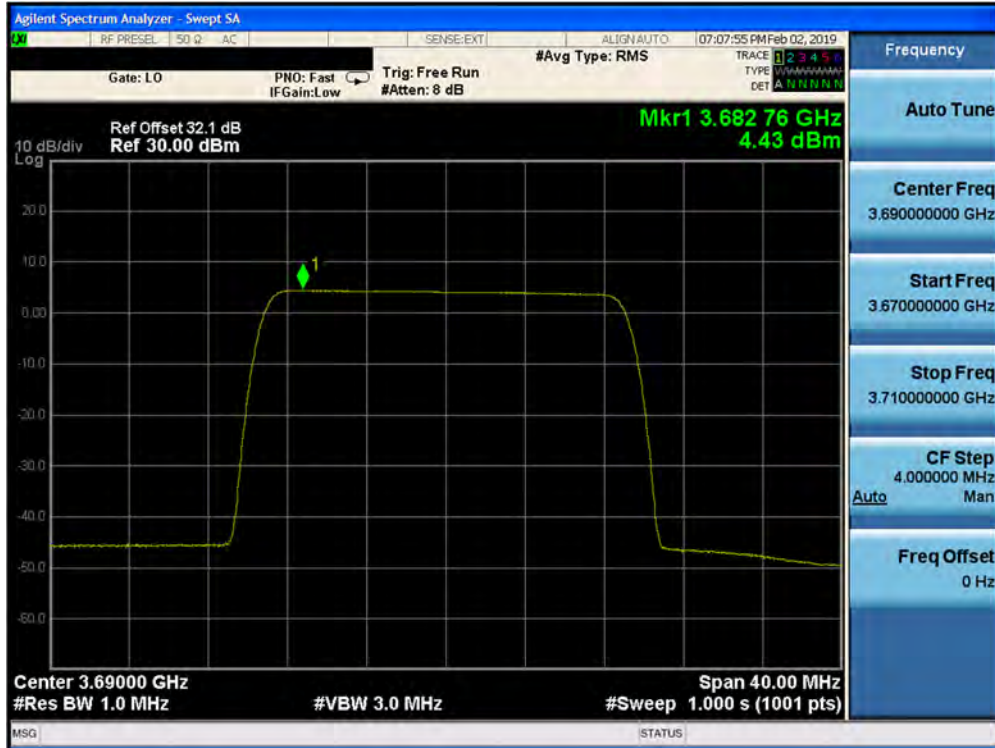


Plot 7-287. Peak Power Spectral Density Plot (1CC– 3690 MHz- 20.0MHz QPSK- High Channel) Port 18



Plot 7-288. Peak Power Spectral Density Plot (1CC– 3690 MHz- 20.0MHz QPSK- High Channel) Port 19

FCC ID: A3LMT3204-48A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1901240015-01-R2-A3L	Test Dates: 01/23/2019 - 02/28/2019	EUT Type: Massive MIMO CBS		Page 206 of 313

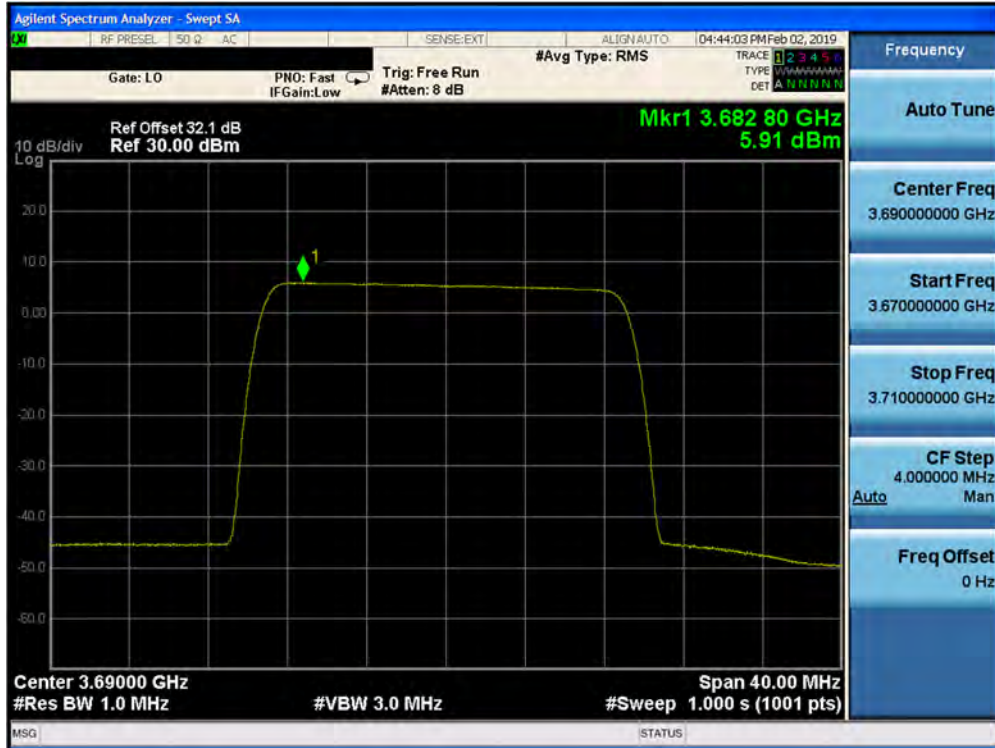


Plot 7-289. Peak Power Spectral Density Plot (1CC– 3690 MHz- 20.0MHz QPSK- High Channel) Port 07



Plot 7-290. Peak Power Spectral Density Plot (1CC– 3690 MHz- 20.0MHz QPSK- High Channel) Port 06

FCC ID: A3LMT3204-48A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1901240015-01-R2-A3L	Test Dates: 01/23/2019 - 02/28/2019	EUT Type: Massive MIMO CBS		Page 207 of 313

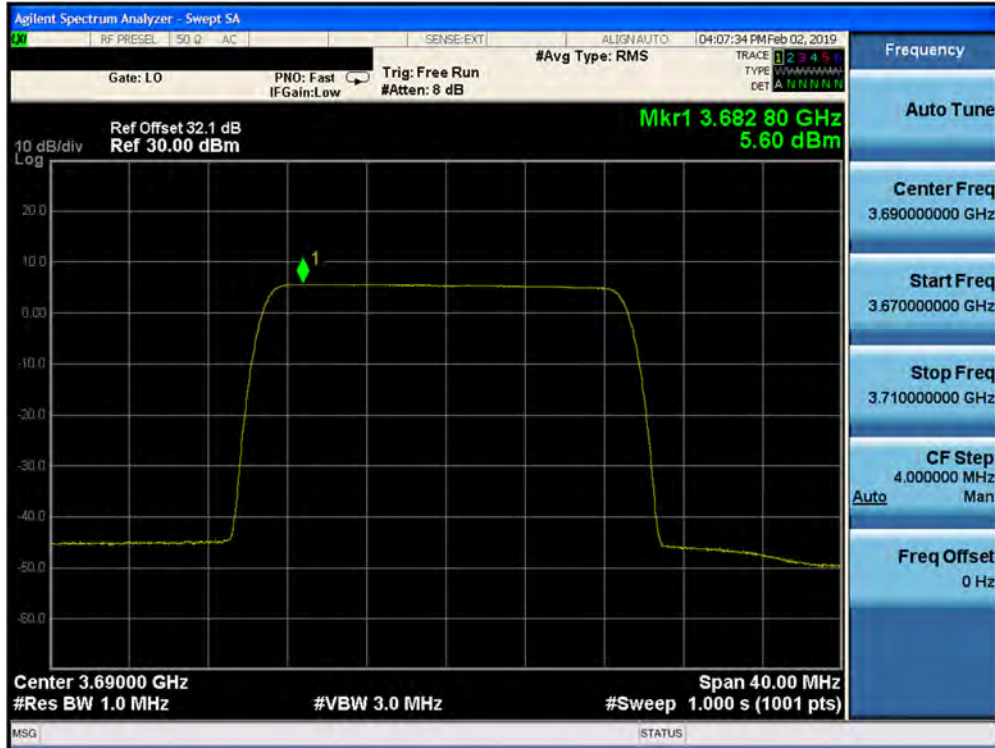


Plot 7-291. Peak Power Spectral Density Plot (1CC– 3690 MHz- 20.0MHz QPSK- High Channel) Port 05



Plot 7-292. Peak Power Spectral Density Plot (1CC– 3690 MHz- 20.0MHz QPSK- High Channel) Port 04

FCC ID: A3LMT3204-48A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1901240015-01-R2-A3L	Test Dates: 01/23/2019 - 02/28/2019	EUT Type: Massive MIMO CBSD		Page 208 of 313



Plot 7-293. Peak Power Spectral Density Plot (1CC– 3690 MHz- 20.0MHz QPSK- High Channel) Port 20

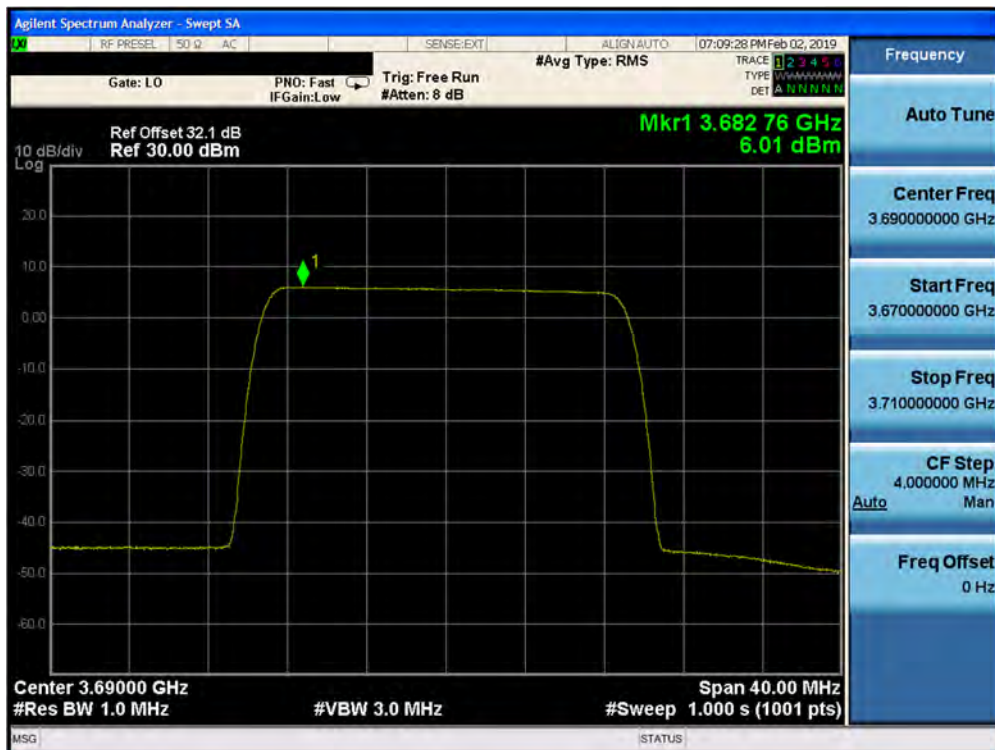


Plot 7-294. Peak Power Spectral Density Plot (1CC– 3690 MHz- 20.0MHz QPSK- High Channel) Port 21

FCC ID: A3LMT3204-48A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1901240015-01-R2-A3L	Test Dates: 01/23/2019 - 02/28/2019	EUT Type: Massive MIMO CBSD		Page 209 of 313



Plot 7-295. Peak Power Spectral Density Plot (1CC– 3690 MHz- 20.0MHz QPSK- High Channel) Port 22



Plot 7-296. Peak Power Spectral Density Plot (1CC– 3690 MHz- 20.0MHz QPSK- High Channel) Port 23

FCC ID: A3LMT3204-48A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1901240015-01-R2-A3L	Test Dates: 01/23/2019 - 02/28/2019	EUT Type: Massive MIMO CBSD		Page 210 of 313

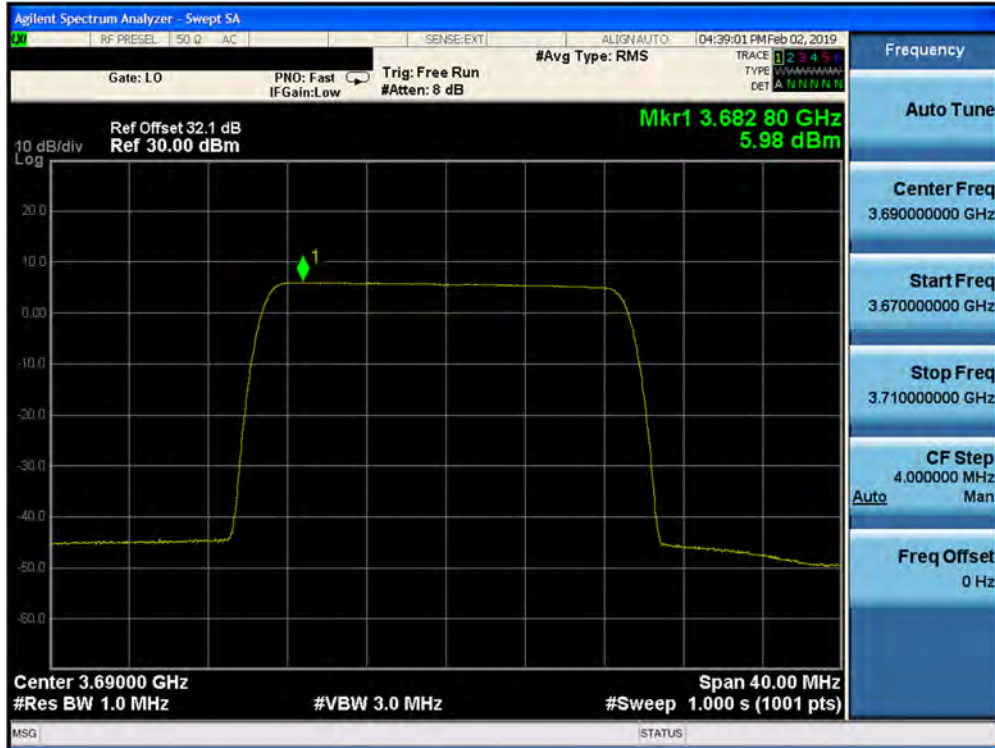


Plot 7-297. Peak Power Spectral Density Plot (1CC– 3690 MHz- 20.0MHz QPSK- High Channel) Port 11



Plot 7-298. Peak Power Spectral Density Plot (1CC– 3690 MHz- 20.0MHz QPSK- High Channel) Port 10

FCC ID: A3LMT3204-48A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1901240015-01-R2-A3L	Test Dates: 01/23/2019 - 02/28/2019	EUT Type: Massive MIMO CBSD		Page 211 of 313

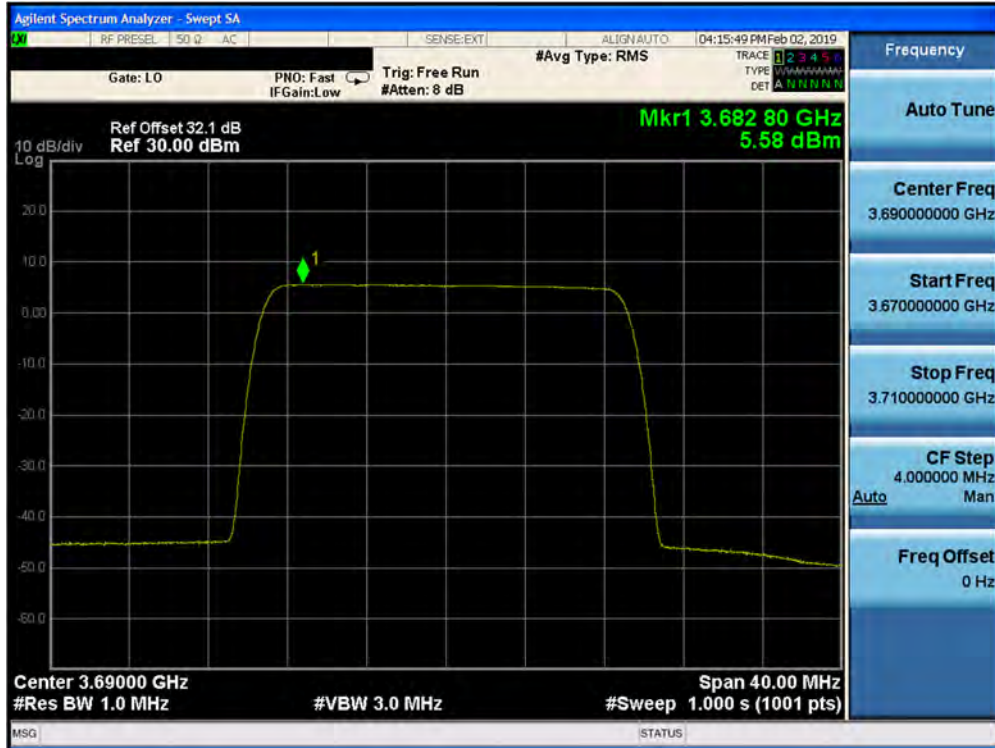


Plot 7-299. Peak Power Spectral Density Plot (1CC– 3690 MHz- 20.0MHz QPSK- High Channel) Port 09

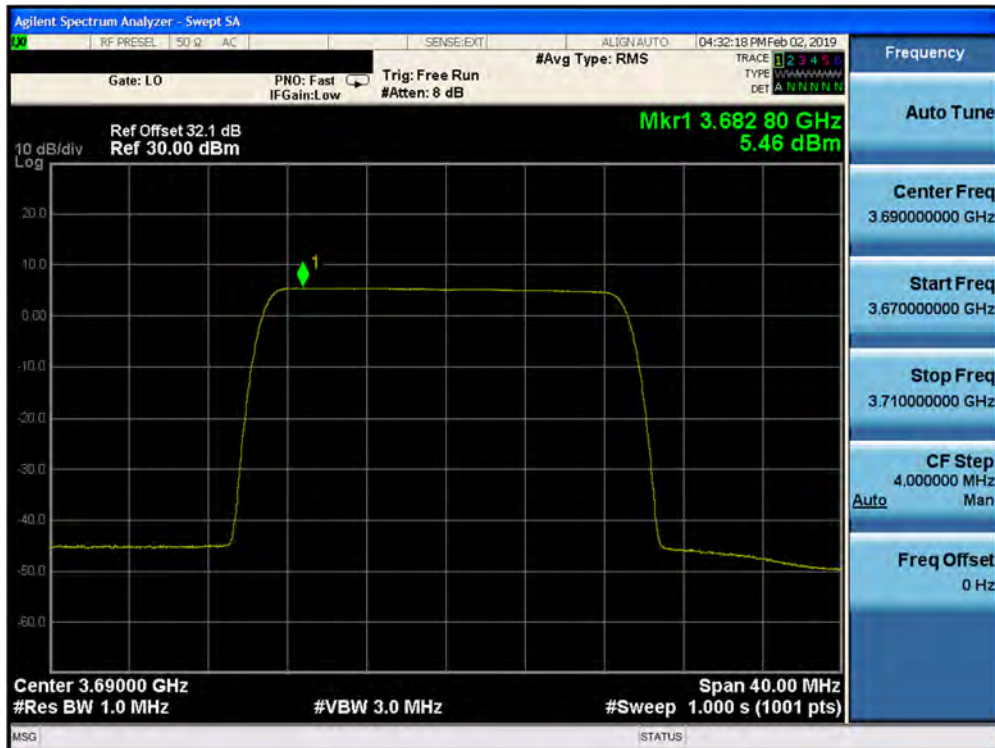


Plot 7-300. Peak Power Spectral Density Plot (1CC– 3690 MHz- 20.0MHz QPSK- High Channel) Port 08

FCC ID: A3LMT3204-48A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 1M1901240015-01-R2-A3L	Test Dates: 01/23/2019 - 02/28/2019	EUT Type: Massive MIMO CBSD		Page 212 of 313



Plot 7-301. Peak Power Spectral Density Plot (1CC– 3690 MHz- 20.0MHz QPSK- High Channel) Port 24



Plot 7-302. Peak Power Spectral Density Plot (1CC– 3690 MHz- 20.0MHz QPSK- High Channel) Port 25

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Plot 7-303. Peak Power Spectral Density Plot (1CC– 3690 MHz- 20.0MHz QPSK- High Channel) Port 26



Plot 7-304. Peak Power Spectral Density Plot (1CC– 3690 MHz- 20.0MHz QPSK- High Channel) Port 27

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