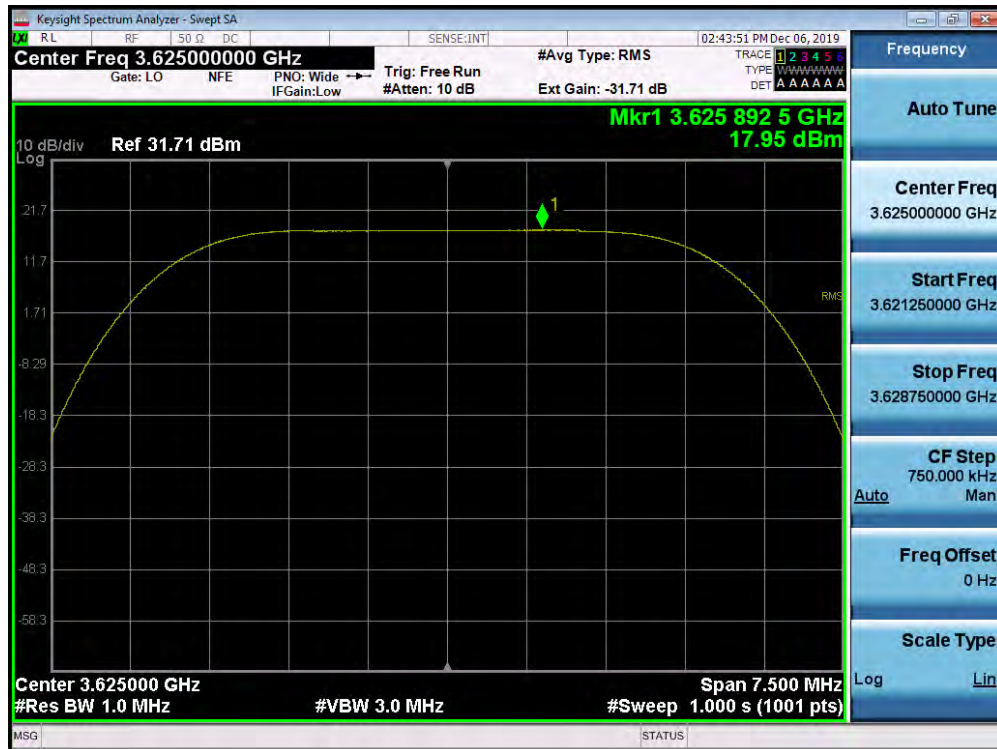


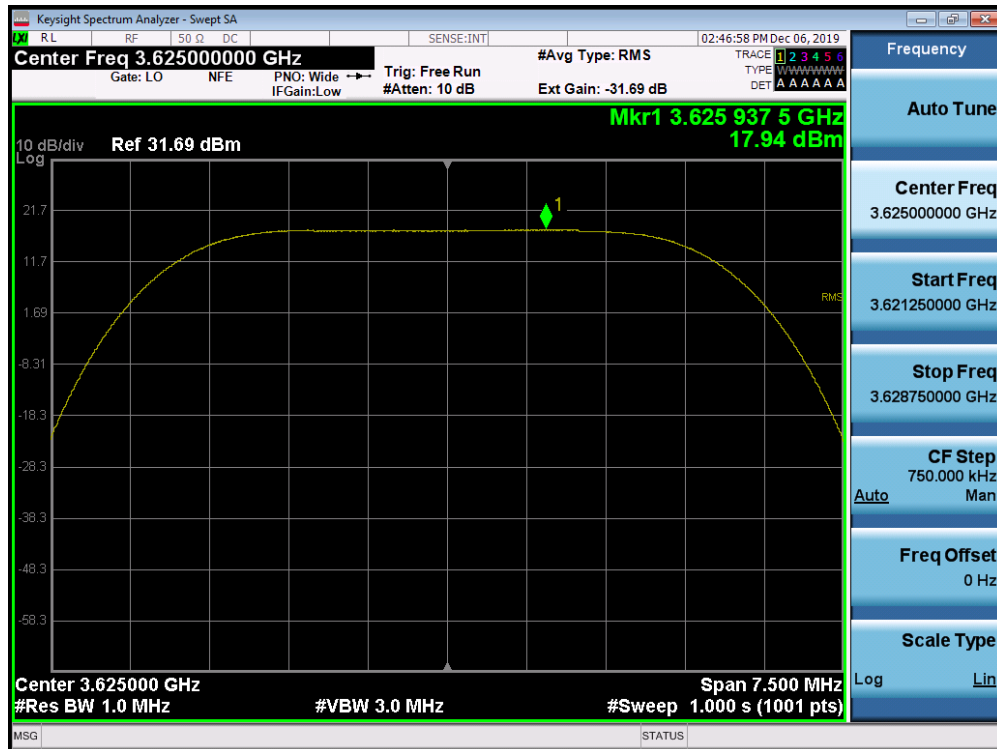


Plot 7-77. Peak Power Spectral Density Plot (1CC Configuration 5MHz QPSK - Mid Channel) Port 00



Plot 7-78. Peak Power Spectral Density Plot (1CC Configuration 5MHz QPSK - Mid Channel) Port 01

FCC ID: A3LRT4401-48A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (Class II Permissive Change)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 8K19110701.01R01.A3L	Test Dates: 12/2/2019-12/13/2019	EUT Type: RRU(RT4401)		Page 66 of 161



Plot 7-79. Peak Power Spectral Density Plot (1CC Configuration 5MHz QPSK - Mid Channel) Port 02



Plot 7-80. Peak Power Spectral Density Plot (1CC Configuration 5MHz QPSK - Mid Channel) Port 03

FCC ID: A3LRT4401-48A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (Class II Permissive Change)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 8K19110701.01R01.A3L	Test Dates: 12/2/2019-12/13/2019	EUT Type: RRU(RT4401)		Page 67 of 161



Plot 7-81. Peak Power Spectral Density Plot (1CC Configuration 5MHz 16QAM - Mid Channel) Port 00



Plot 7-82. Peak Power Spectral Density Plot (1CC Configuration 5MHz 16QAM - Mid Channel) Port 01

FCC ID: A3LRT4401-48A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (Class II Permissive Change)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 8K19110701.01R01.A3L	Test Dates: 12/2/2019-12/13/2019	EUT Type: RRU(RT4401)		Page 68 of 161

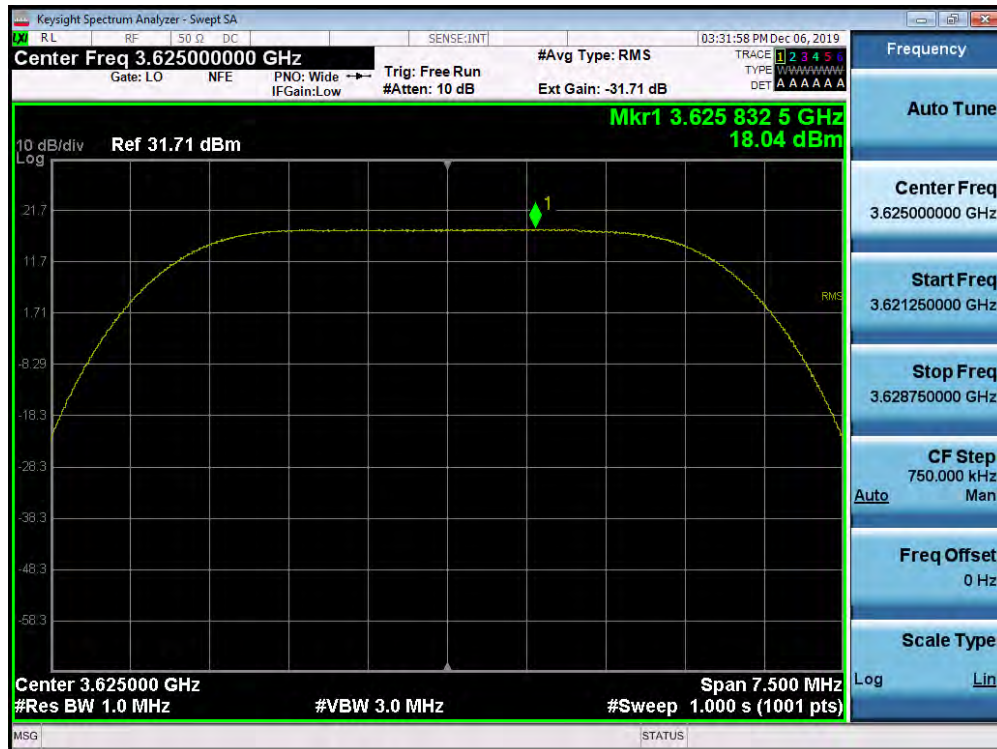


Plot 7-83. Peak Power Spectral Density Plot (1CC Configuration 5MHz 16QAM - Mid Channel) Port 02

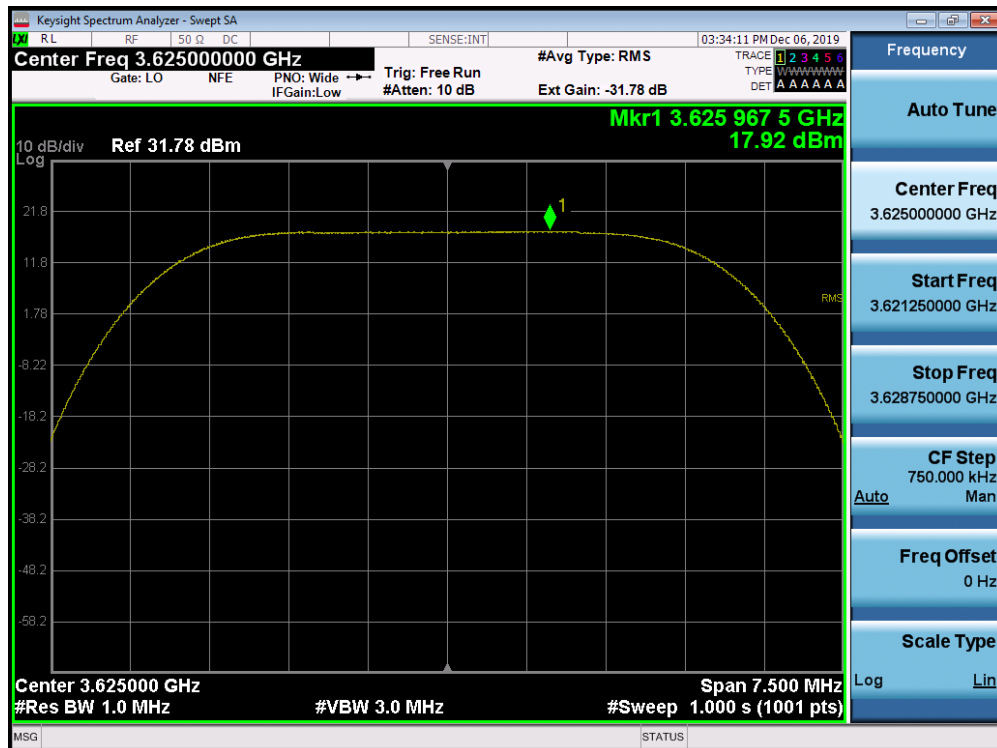


Plot 7-84. Peak Power Spectral Density Plot (1CC Configuration 5MHz 16QAM - Mid Channel) Port 03

FCC ID: A3LRT4401-48A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (Class II Permissive Change)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 8K19110701.01R01.A3L	Test Dates: 12/2/2019-12/13/2019	EUT Type: RRU(RT4401)		Page 69 of 161



Plot 7-85. Peak Power Spectral Density Plot (1CC Configuration 5MHz 64QAM - Mid Channel) Port 00



Plot 7-86. Peak Power Spectral Density Plot (1CC Configuration 5MHz 64QAM - Mid Channel) Port 01

FCC ID: A3LRT4401-48A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (Class II Permissive Change)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 8K19110701.01R01.A3L	Test Dates: 12/2/2019-12/13/2019	EUT Type: RRU(RT4401)		Page 70 of 161



Plot 7-87. Peak Power Spectral Density Plot (1CC Configuration 5MHz 64QAM - Mid Channel) Port 02

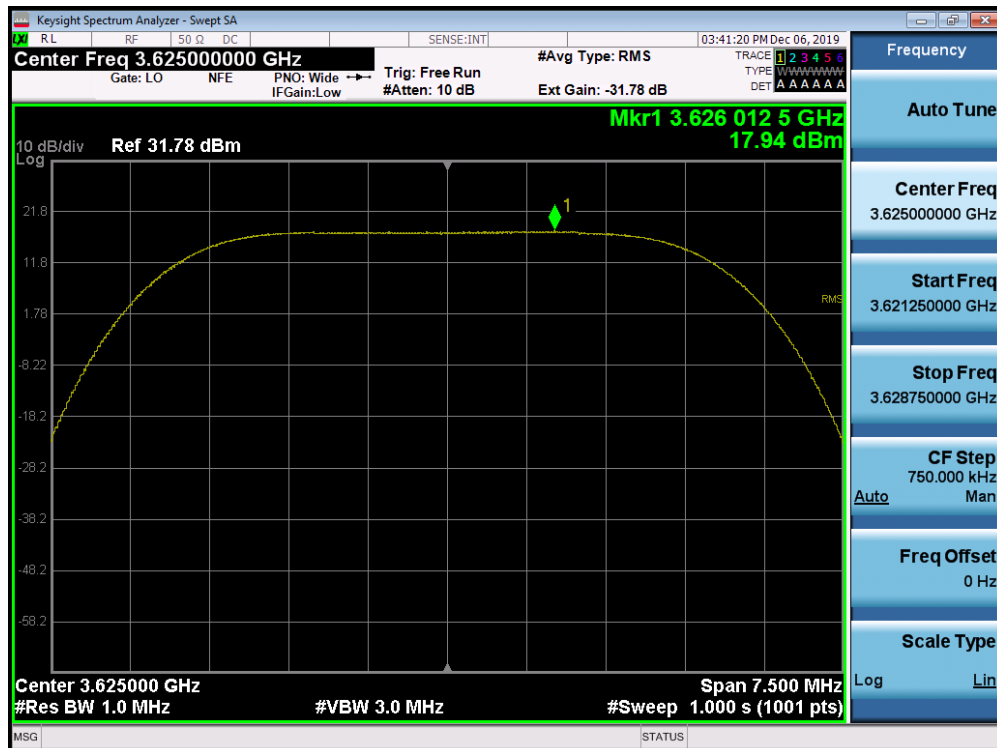


Plot 7-88. Peak Power Spectral Density Plot (1CC Configuration 5MHz 64QAM - Mid Channel) Port 03

FCC ID: A3LRT4401-48A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (Class II Permissive Change)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 8K19110701.01R01.A3L	Test Dates: 12/2/2019-12/13/2019	EUT Type: RRU(RT4401)		Page 71 of 161

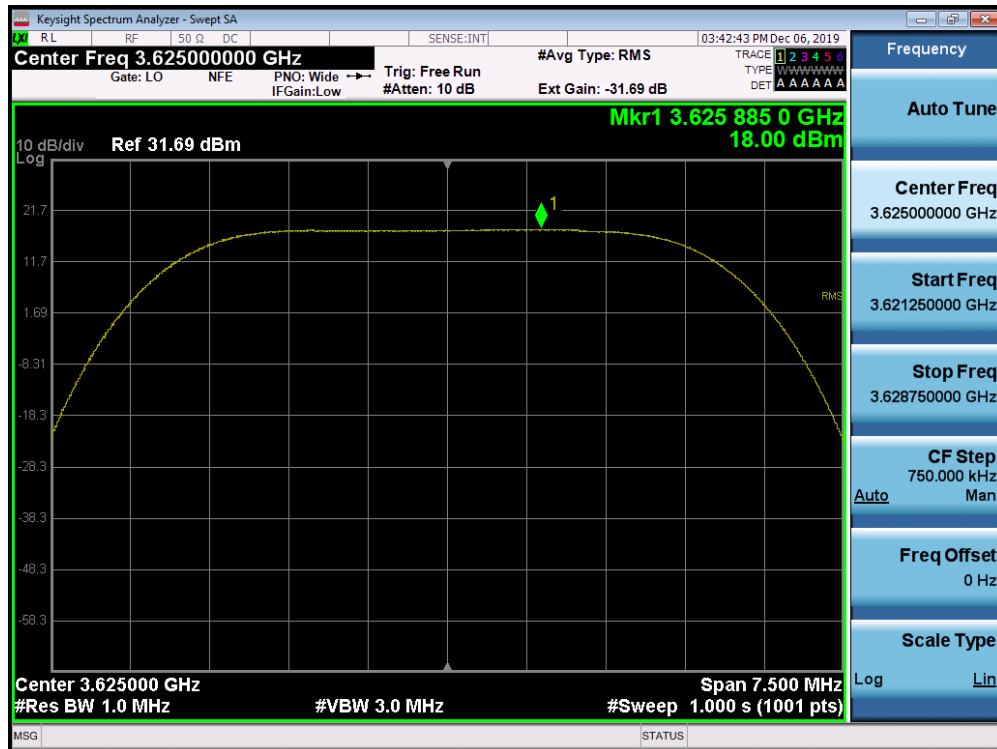


Plot 7-89. Peak Power Spectral Density Plot (1CC Configuration 5MHz 256QAM - Mid Channel) Port 00



Plot 7-90. Peak Power Spectral Density Plot (1CC Configuration 5MHz 256QAM - Mid Channel) Port 01

FCC ID: A3LRT4401-48A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (Class II Permissive Change)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 8K19110701.01R01.A3L	Test Dates: 12/2/2019-12/13/2019	EUT Type: RRU(RT4401)		Page 72 of 161

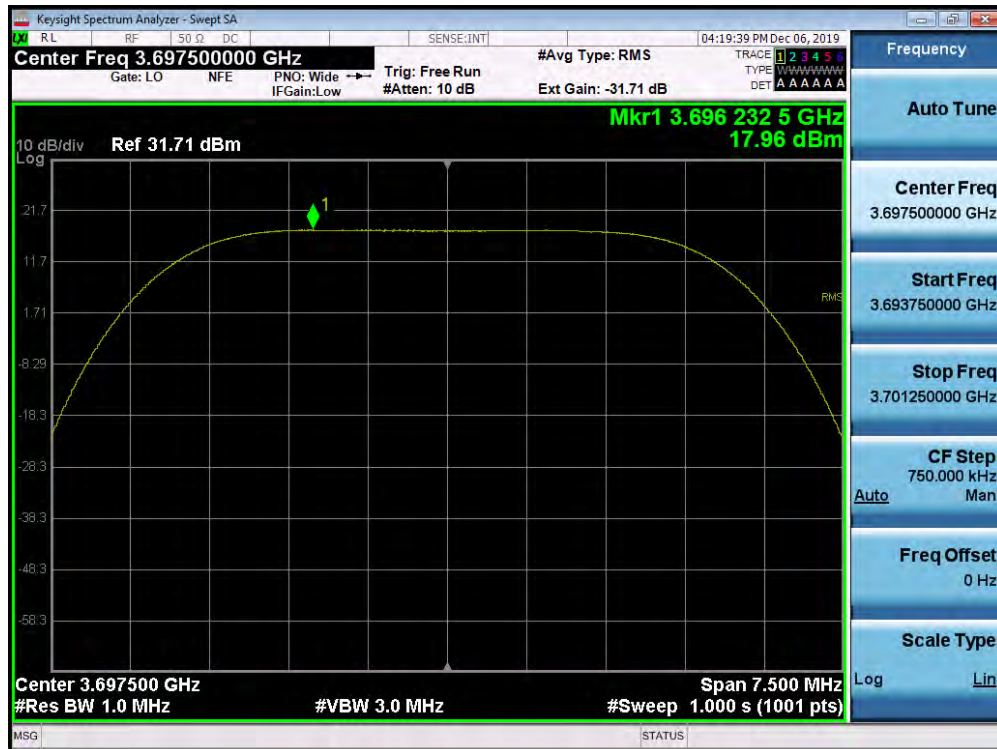


Plot 7-91. Peak Power Spectral Density Plot (1CC Configuration 5MHz 256QAM - Mid Channel) Port 02

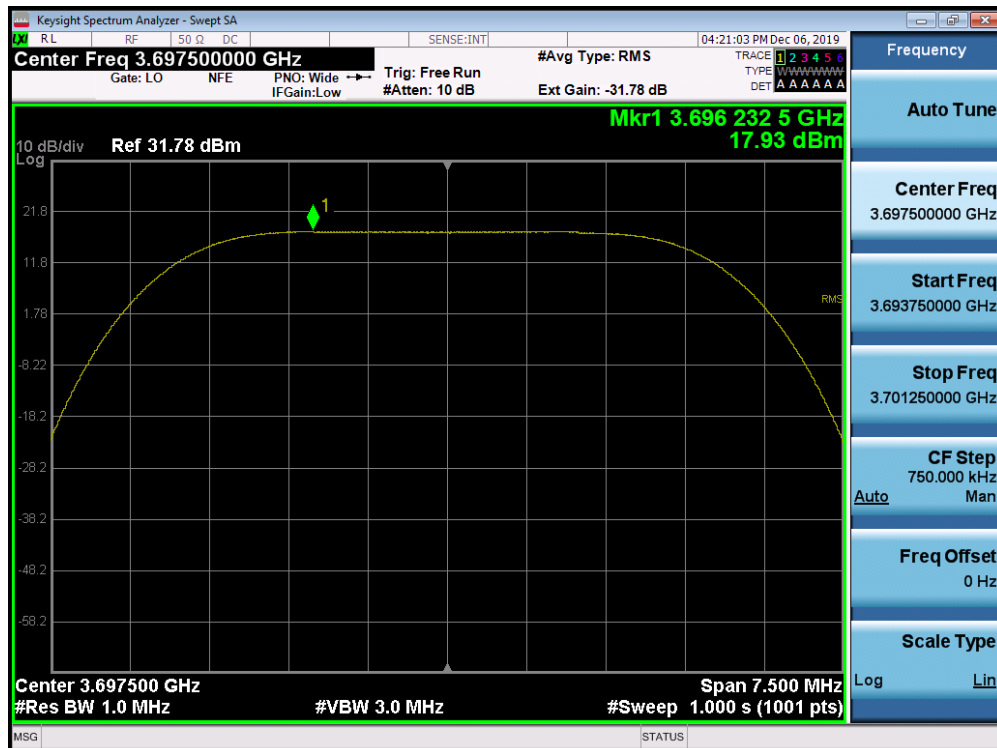


Plot 7-92. Peak Power Spectral Density Plot (1CC Configuration 5MHz 256QAM - Mid Channel) Port 03

FCC ID: A3LRT4401-48A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (Class II Permissive Change)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 8K19110701.01R01.A3L	Test Dates: 12/2/2019-12/13/2019	EUT Type: RRU(RT4401)		Page 73 of 161

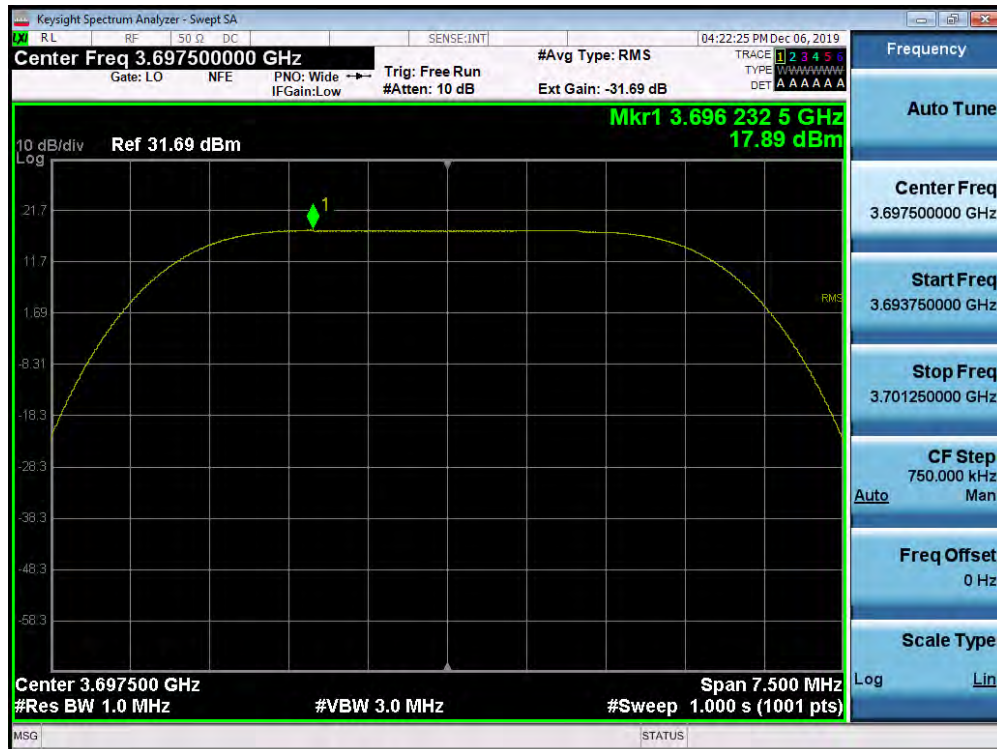


Plot 7-93. Peak Power Spectral Density Plot (1CC Configuration 5MHz QPSK - High Channel) Port 00



Plot 7-94. Peak Power Spectral Density Plot (1CC Configuration 5MHz QPSK - High Channel) Port 01

FCC ID: A3LRT4401-48A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (Class II Permissive Change)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 8K19110701.01R01.A3L	Test Dates: 12/2/2019-12/13/2019	EUT Type: RRU(RT4401)		Page 74 of 161



Plot 7-95. Peak Power Spectral Density Plot (1CC Configuration 5MHz QPSK - High Channel) Port 02



Plot 7-96. Peak Power Spectral Density Plot (1CC Configuration 5MHz QPSK - High Channel) Port 03

FCC ID: A3LRT4401-48A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (Class II Permissive Change)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 8K19110701.01R01.A3L	Test Dates: 12/2/2019-12/13/2019	EUT Type: RRU(RT4401)		Page 75 of 161

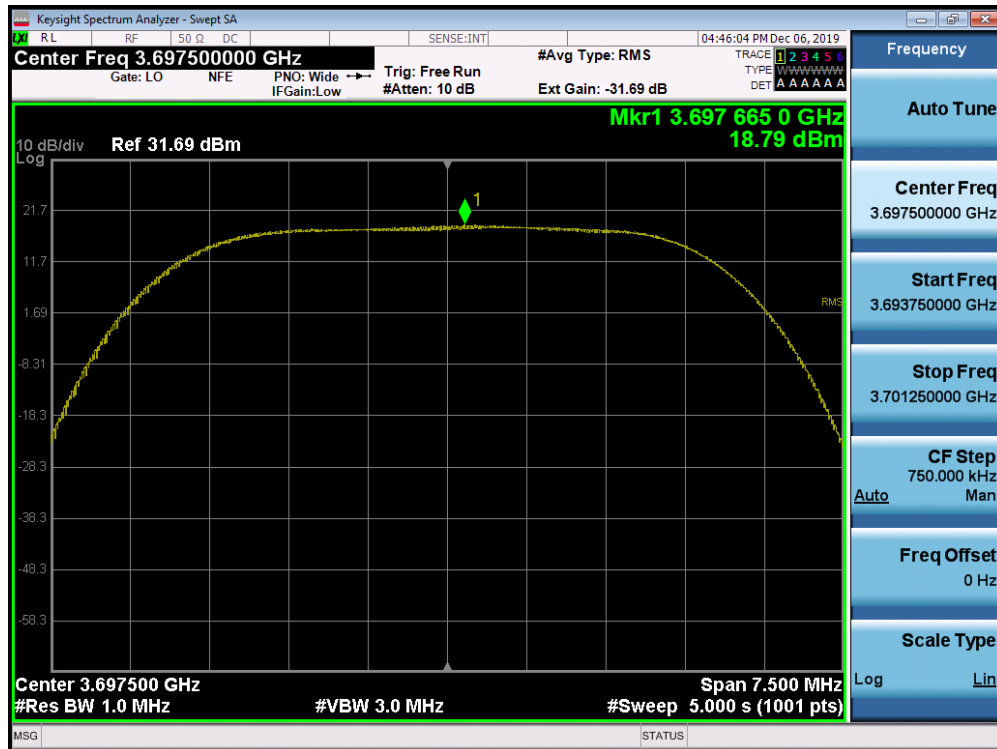


Plot 7-97. Peak Power Spectral Density Plot (1CC Configuration 5MHz 16QAM - High Channel) Port 00



Plot 7-98. Peak Power Spectral Density Plot (1CC Configuration 5MHz 16QAM - High Channel) Port 01

FCC ID: A3LRT4401-48A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (Class II Permissive Change)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 8K19110701.01R01.A3L	Test Dates: 12/2/2019-12/13/2019	EUT Type: RRU(RT4401)		Page 76 of 161

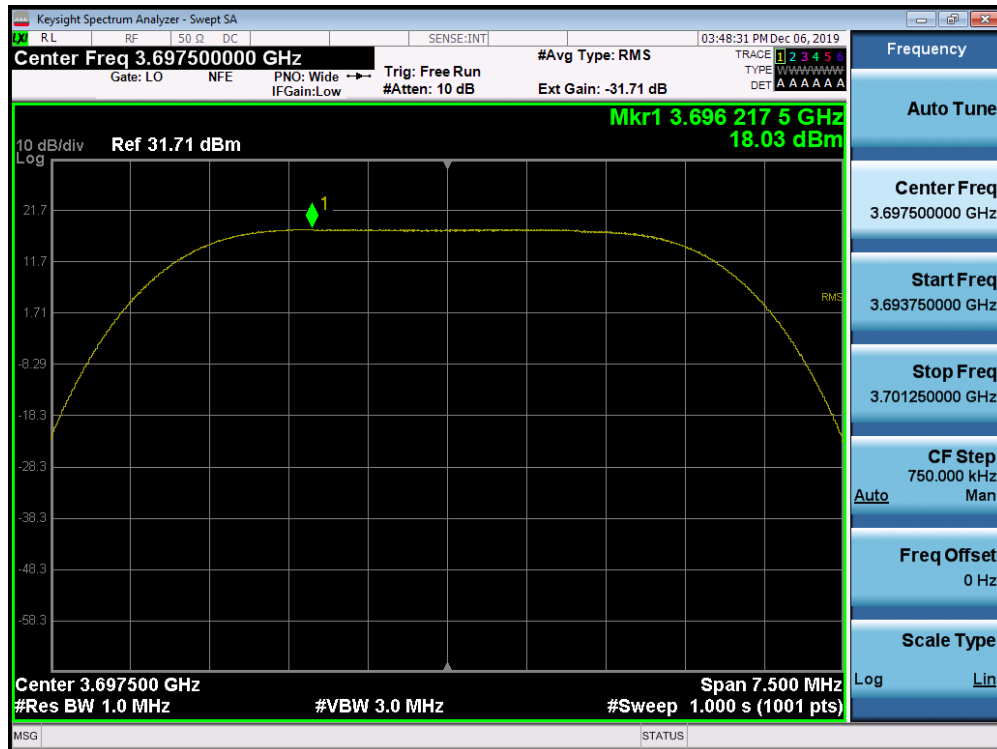


Plot 7-99. Peak Power Spectral Density Plot (1CC Configuration 5MHz 16QAM - High Channel) Port 02



Plot 7-100. Peak Power Spectral Density Plot (1CC Configuration 5MHz 16QAM - High Channel) Port 03

FCC ID: A3LRT4401-48A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (Class II Permissive Change)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 8K19110701.01R01.A3L	Test Dates: 12/2/2019-12/13/2019	EUT Type: RRU(RT4401)		Page 77 of 161

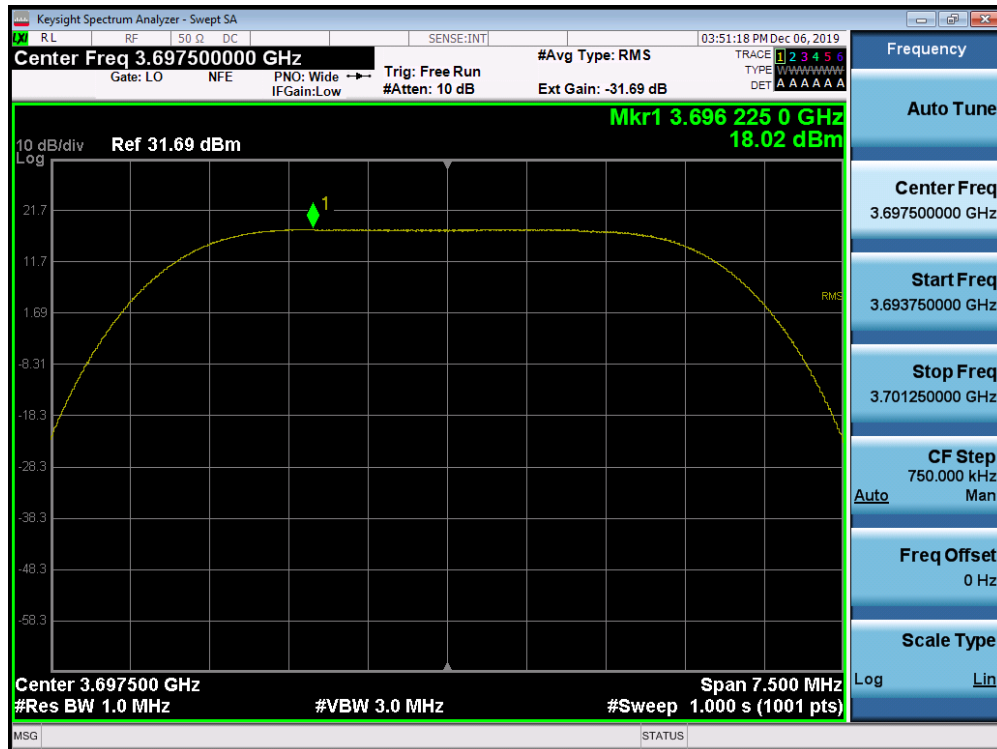


Plot 7-101. Peak Power Spectral Density Plot (1CC Configuration 5MHz 64QAM - High Channel) Port 00

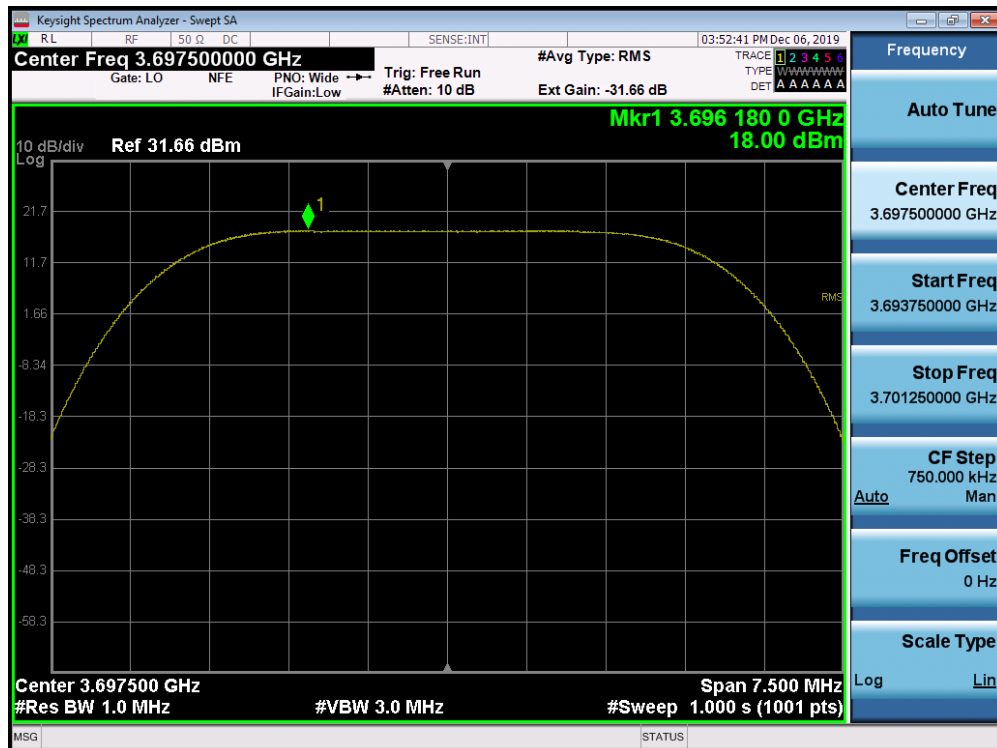


Plot 7-102. Peak Power Spectral Density Plot (1CC Configuration 5MHz 64QAM - High Channel) Port 01

FCC ID: A3LRT4401-48A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (Class II Permissive Change)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 8K19110701.01R01.A3L	Test Dates: 12/2/2019-12/13/2019	EUT Type: RRU(RT4401)		Page 78 of 161

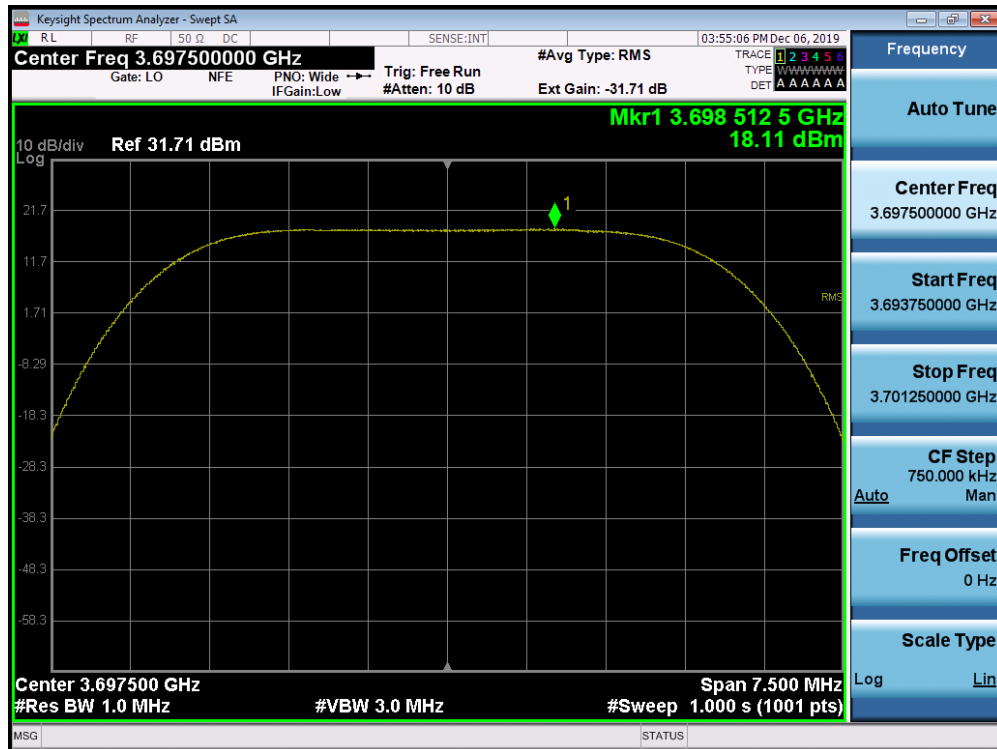


Plot 7-103. Peak Power Spectral Density Plot (1CC Configuration 5MHz 64QAM - High Channel) Port 02

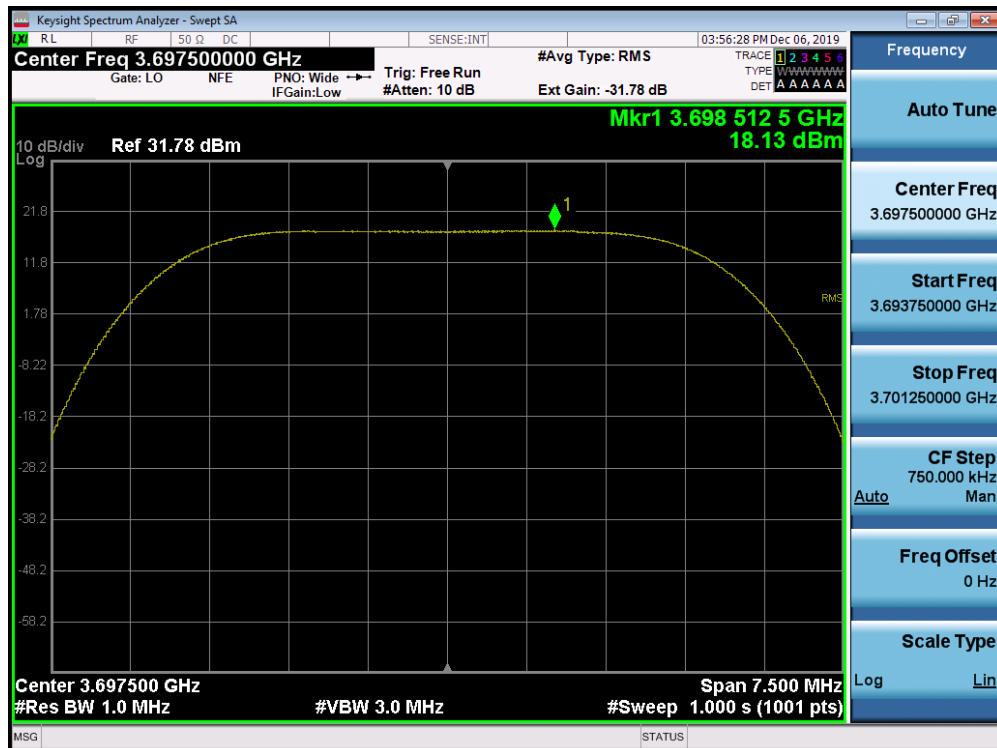


Plot 7-104. Peak Power Spectral Density Plot (1CC Configuration 5MHz 64QAM - High Channel) Port 03

FCC ID: A3LRT4401-48A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (Class II Permissive Change)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 8K19110701.01R01.A3L	Test Dates: 12/2/2019-12/13/2019	EUT Type: RRU(RT4401)		Page 79 of 161

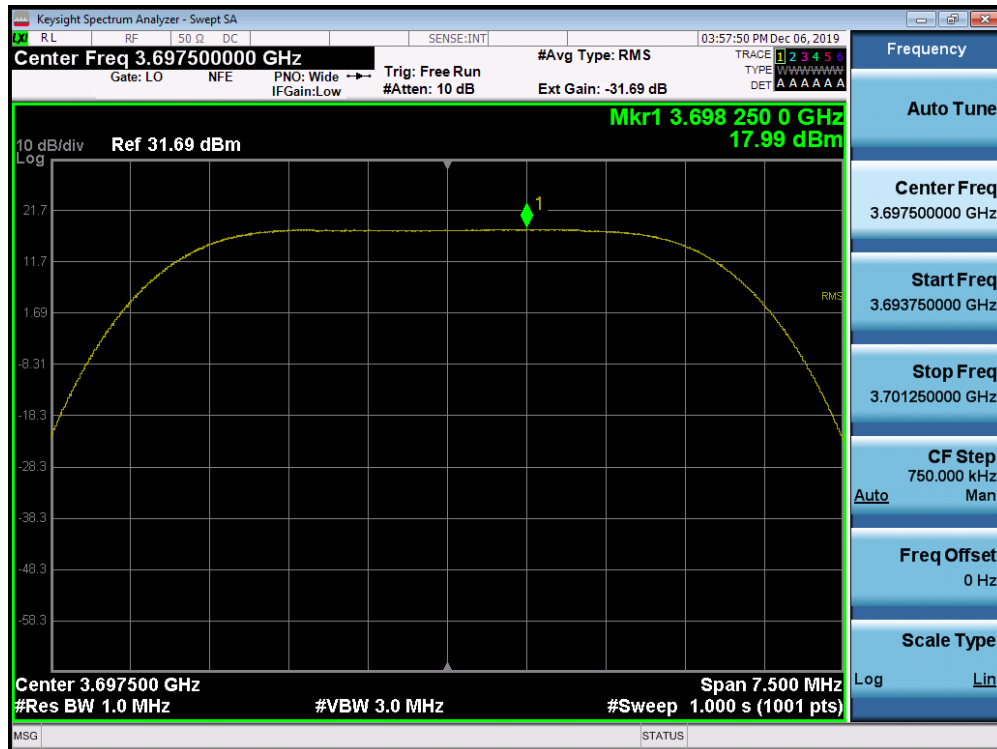


Plot 7-105. Peak Power Spectral Density Plot (1CC Configuration 5MHz 256QAM - High Channel) Port 00



Plot 7-106. Peak Power Spectral Density Plot (1CC Configuration 5MHz 256QAM - High Channel) Port 01

FCC ID: A3LRT4401-48A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (Class II Permissive Change)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 8K19110701.01R01.A3L	Test Dates: 12/2/2019-12/13/2019	EUT Type: RRU(RT4401)		Page 80 of 161



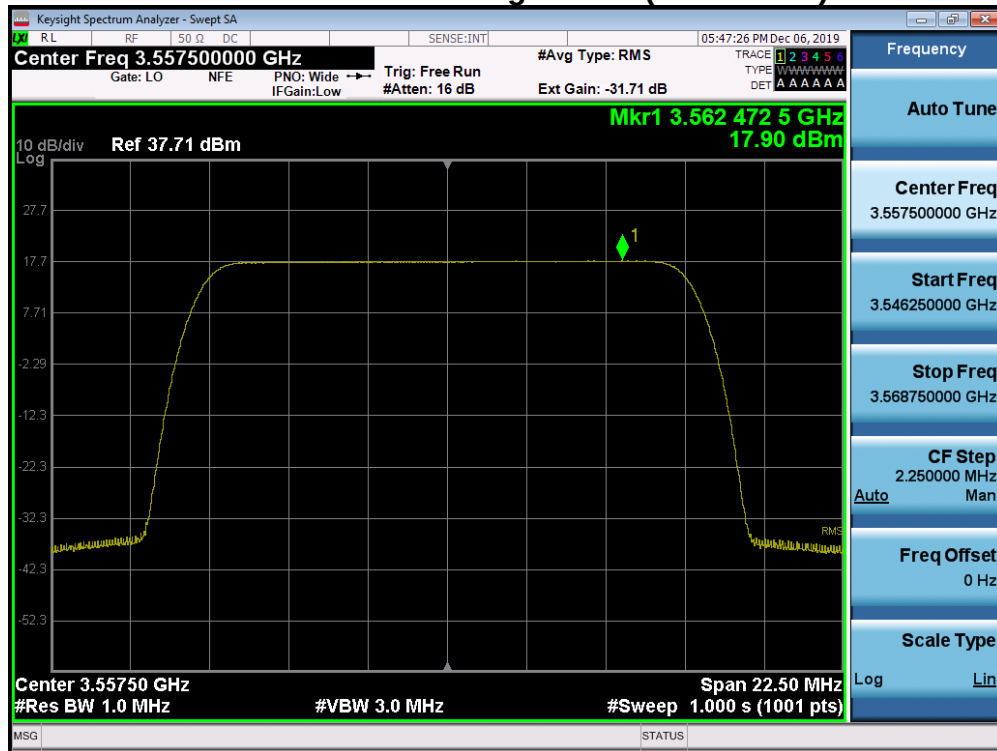
Plot 7-107. Peak Power Spectral Density Plot (1CC Configuration 5MHz 256QAM - High Channel) Port 02



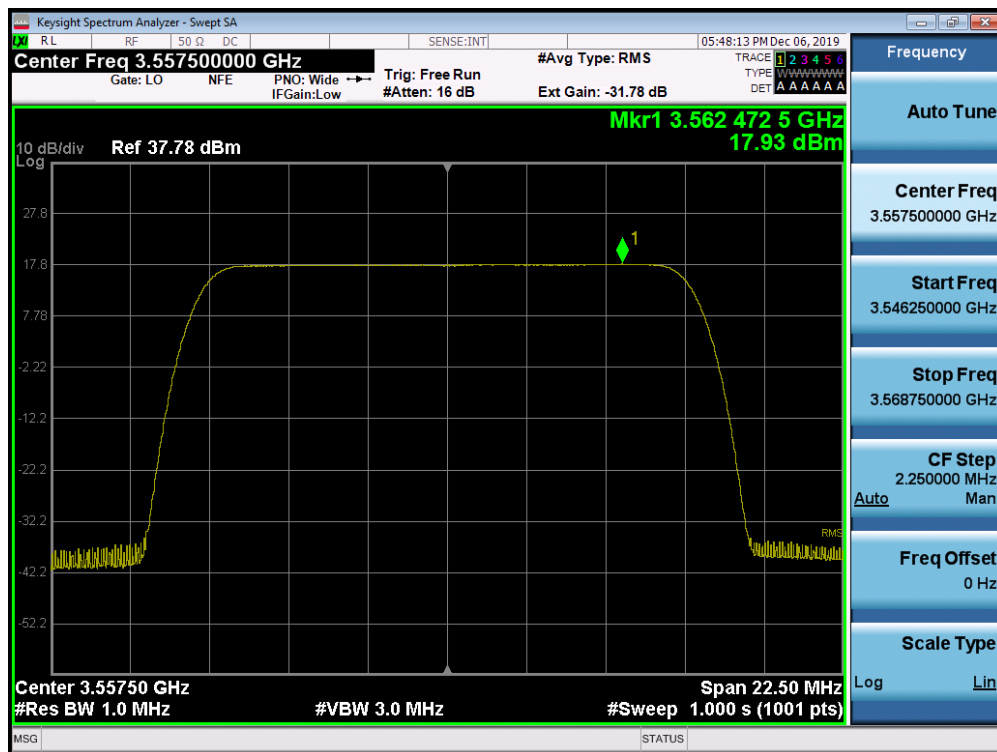
Plot 7-108. Peak Power Spectral Density Plot (1CC Configuration 5MHz 256QAM - High Channel) Port 03

FCC ID: A3LRT4401-48A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (Class II Permissive Change)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 8K19110701.01R01.A3L	Test Dates: 12/2/2019-12/13/2019	EUT Type: RRU(RT4401)		Page 81 of 161

Case02. 1CC - 15MHz Total Bandwidth Configuration (15MHz BW)

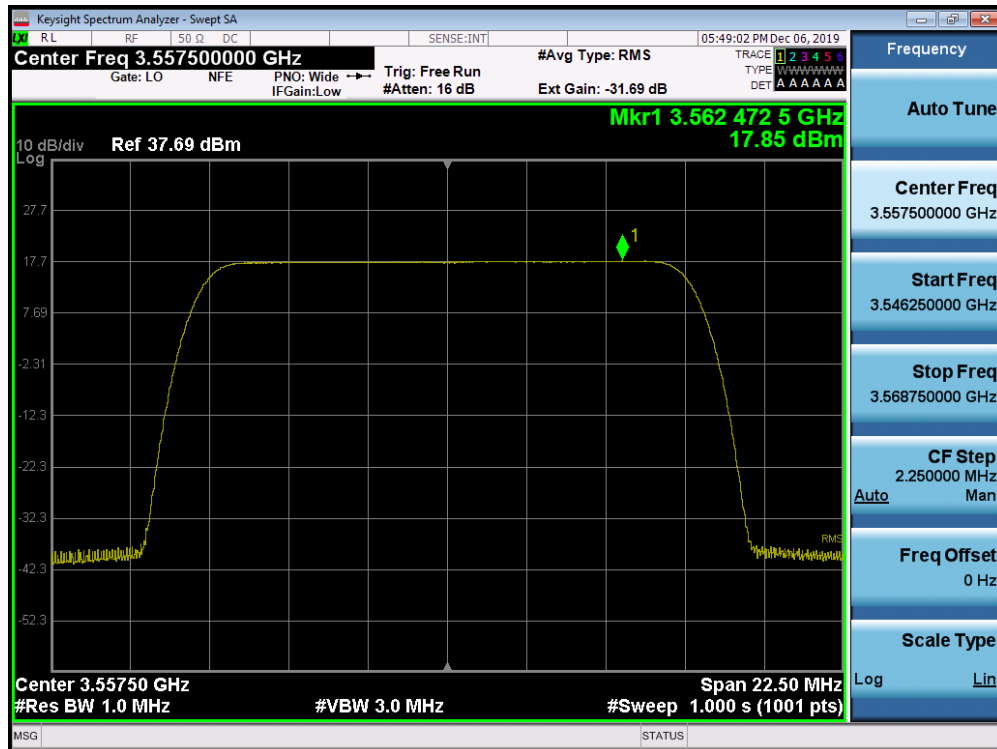


Plot 7-109. Peak Power Spectral Density Plot (1CC Configuration 15MHz QPSK - Low Channel) Port 00

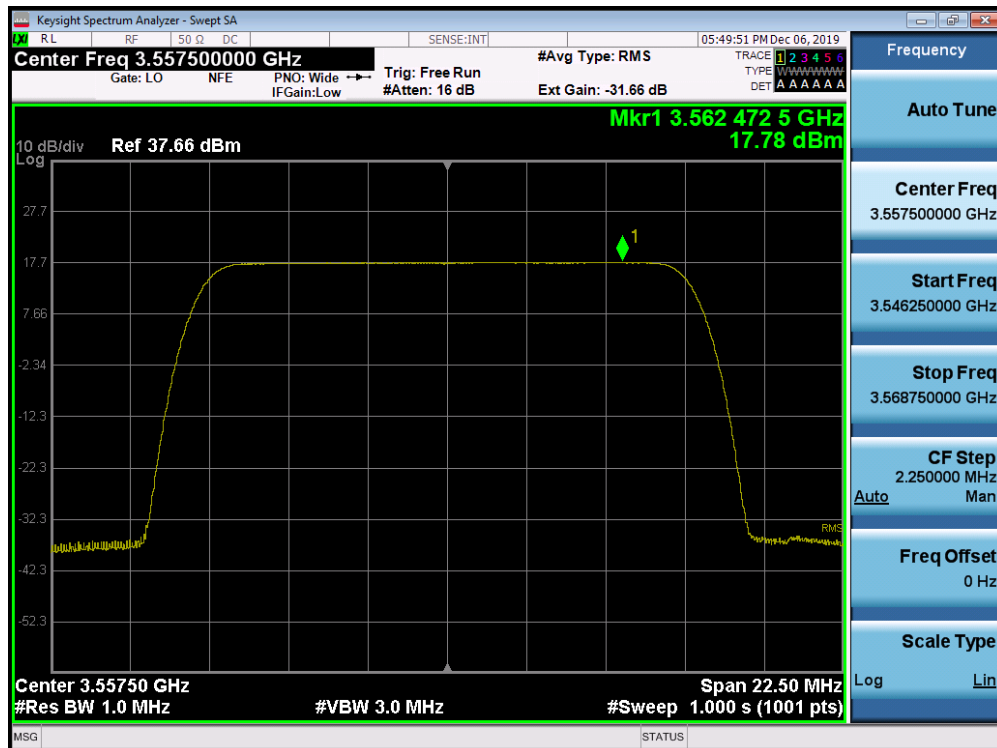


Plot 7-110. Peak Power Spectral Density Plot (1CC Configuration 15MHz QPSK - Low Channel) Port 01

FCC ID: A3LRT4401-48A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (Class II Permissive Change)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 8K19110701.01R01.A3L	Test Dates: 12/2/2019-12/13/2019	EUT Type: RRU(RT4401)		Page 82 of 161

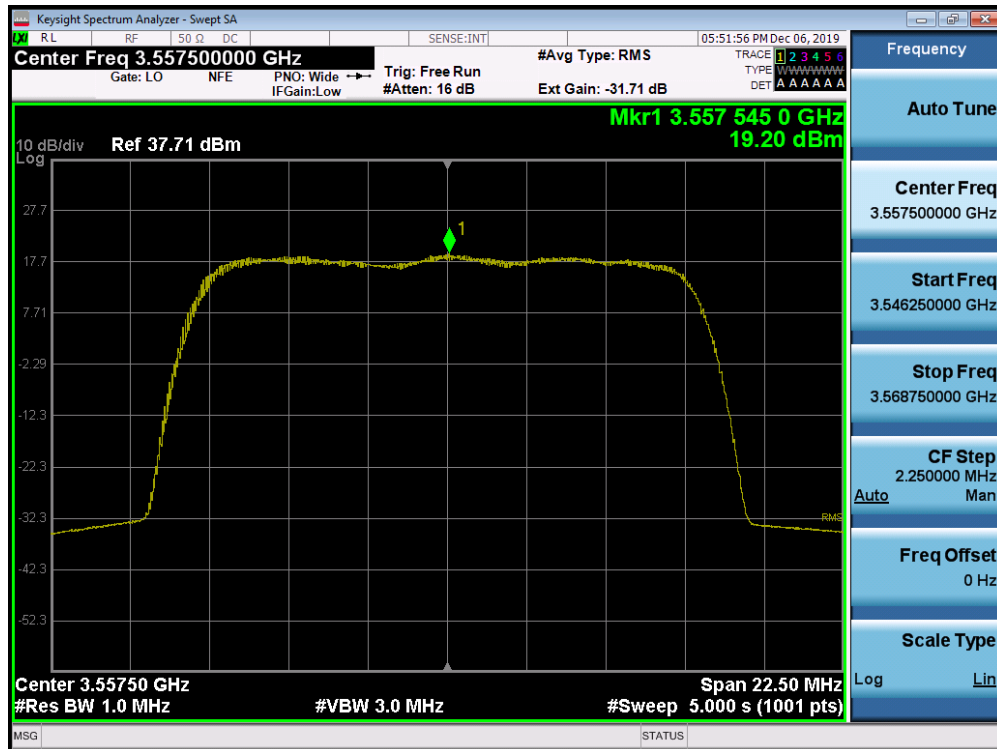


Plot 7-111. Peak Power Spectral Density Plot (1CC Configuration 15MHz QPSK - Low Channel) Port 02

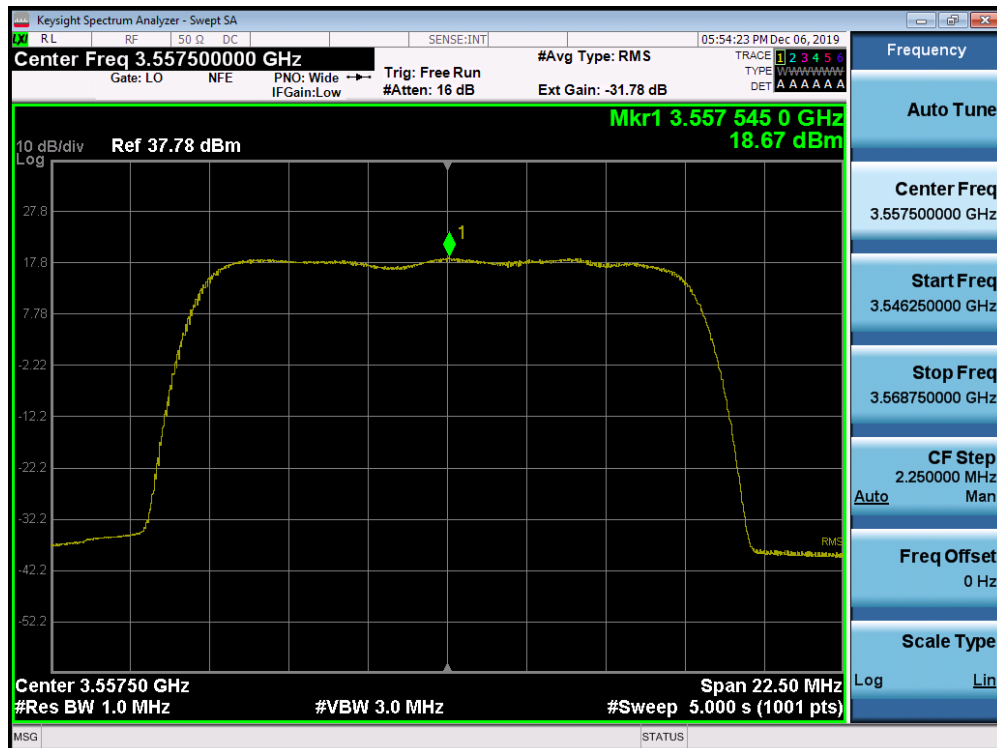


Plot 7-112. Peak Power Spectral Density Plot (1CC Configuration 15MHz QPSK - Low Channel) Port 03

FCC ID: A3LRT4401-48A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (Class II Permissive Change)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 8K19110701.01R01.A3L	Test Dates: 12/2/2019-12/13/2019	EUT Type: RRU(RT4401)		Page 83 of 161

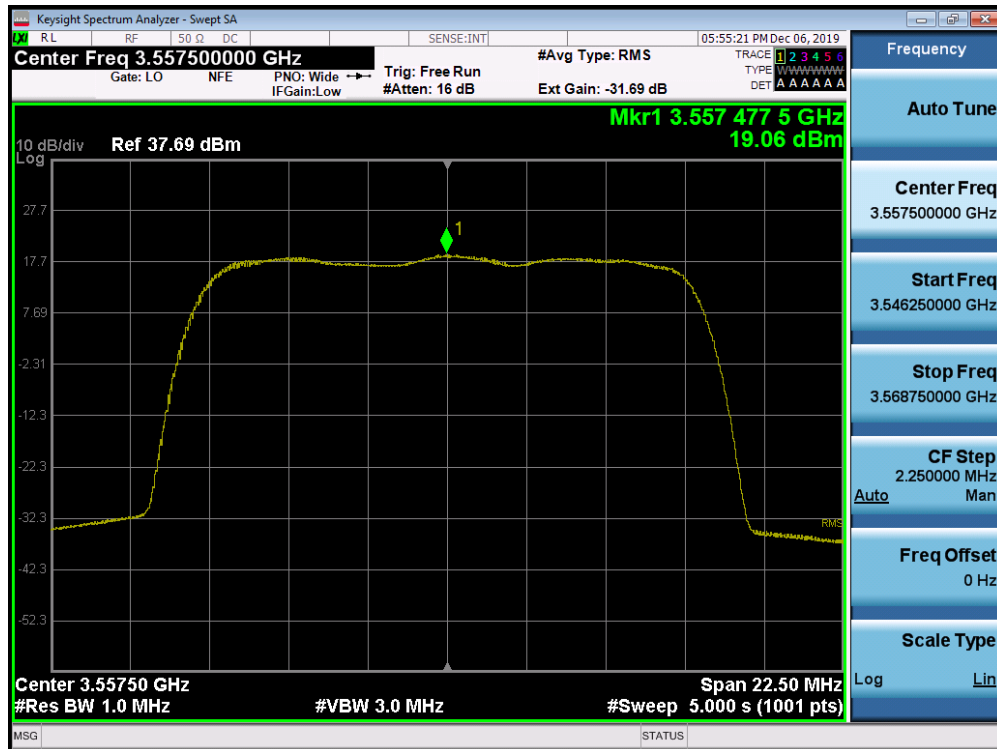


Plot 7-113. Peak Power Spectral Density Plot (1CC Configuration 15MHz 16QAM - Low Channel) Port 00

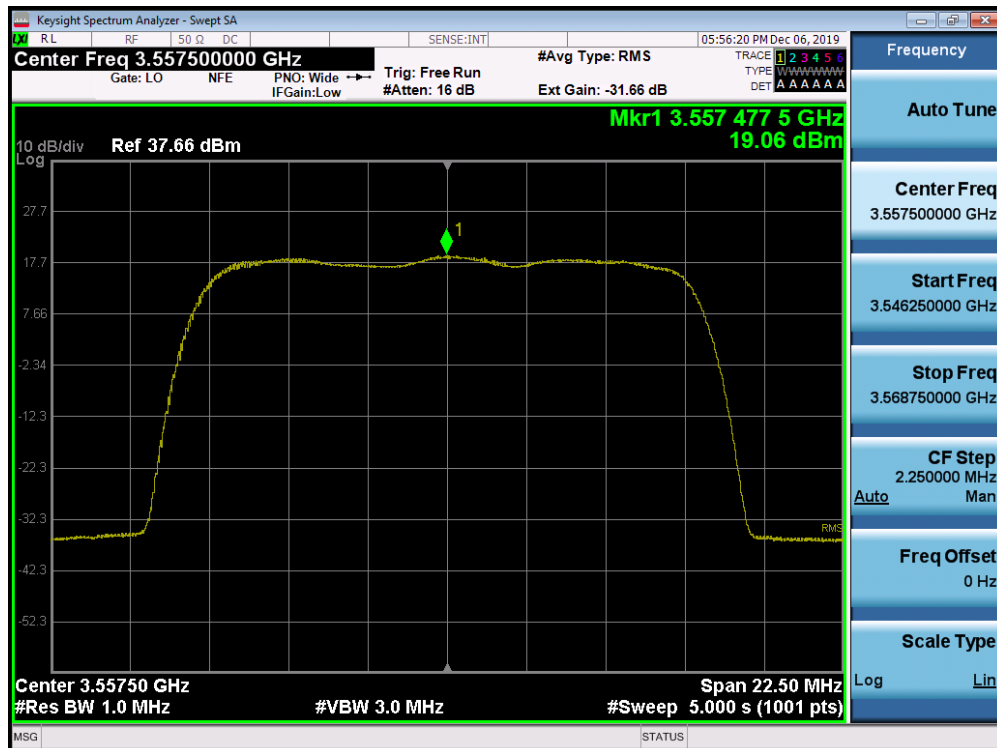


Plot 7-114. Peak Power Spectral Density Plot (1CC Configuration 15MHz 16QAM - Low Channel) Port 01

FCC ID: A3LRT4401-48A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (Class II Permissive Change)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 8K19110701.01R01.A3L	Test Dates: 12/2/2019-12/13/2019	EUT Type: RRU(RT4401)		Page 84 of 161

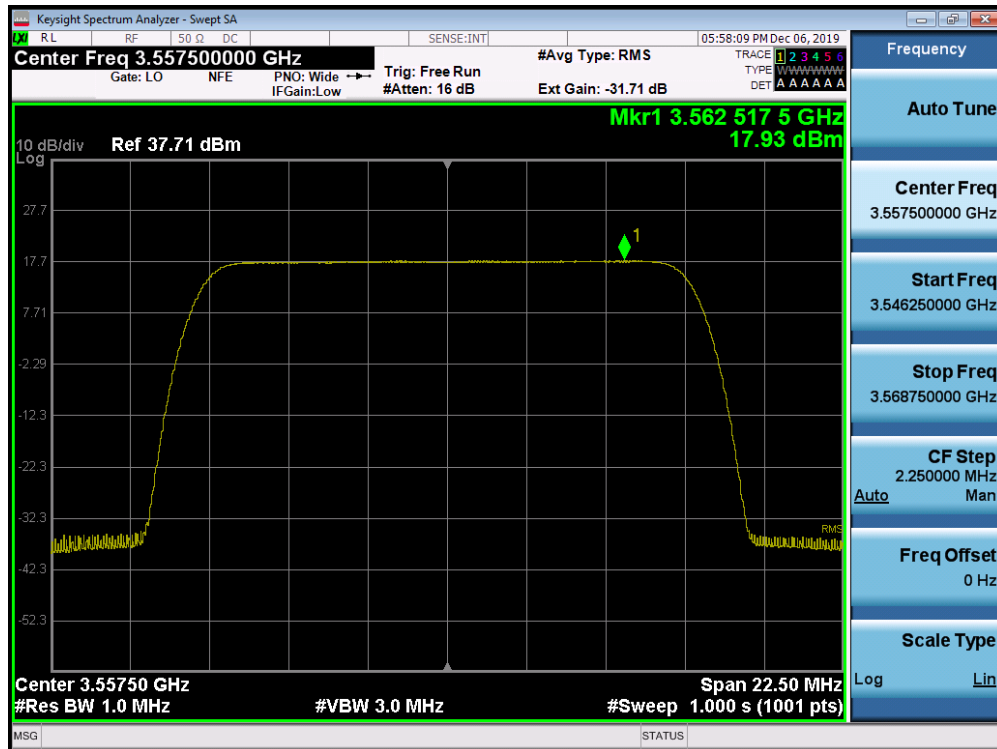


Plot 7-115. Peak Power Spectral Density Plot (1CC Configuration 15MHz 16QAM - Low Channel) Port 02



Plot 7-116. Peak Power Spectral Density Plot (1CC Configuration 15MHz 16QAM - Low Channel) Port 03

FCC ID: A3LRT4401-48A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (Class II Permissive Change)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 8K19110701.01R01.A3L	Test Dates: 12/2/2019-12/13/2019	EUT Type: RRU(RT4401)		Page 85 of 161

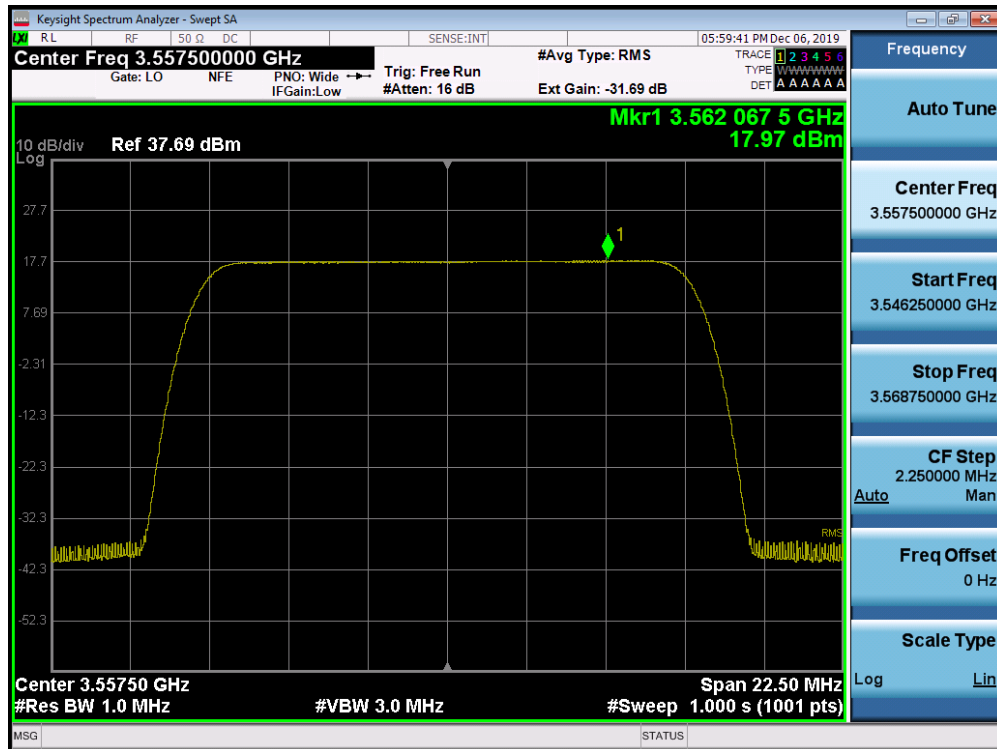


Plot 7-117. Peak Power Spectral Density Plot (1CC Configuration 15MHz 64QAM - Low Channel) Port 00

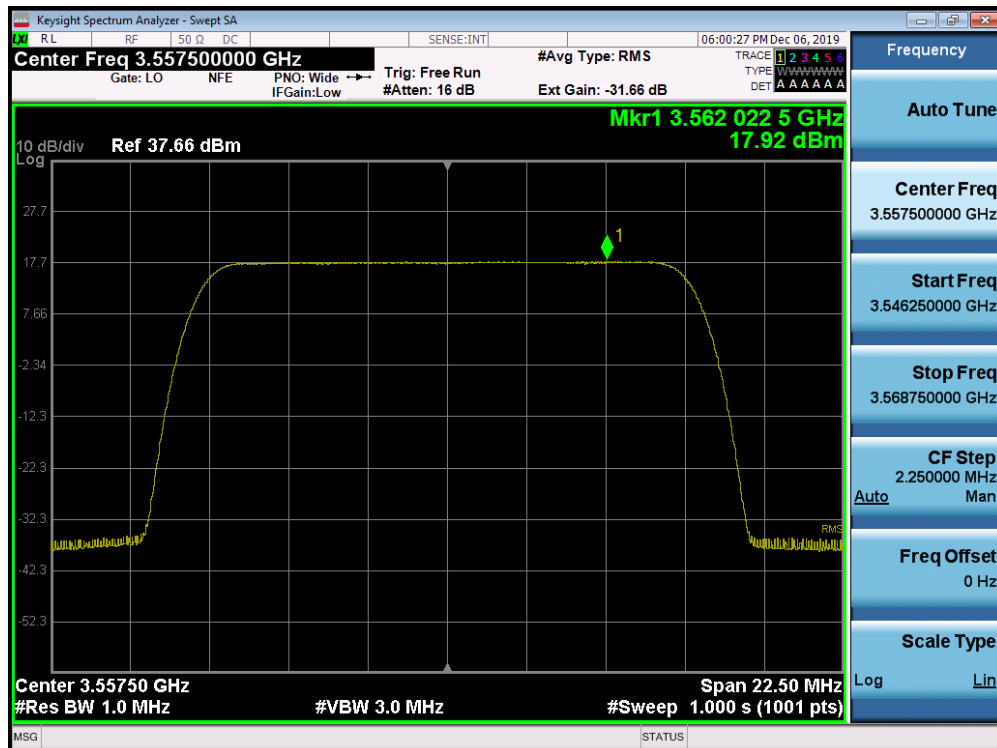


Plot 7-118. Peak Power Spectral Density Plot (1CC Configuration 15MHz 64QAM - Low Channel) Port 01

FCC ID: A3LRT4401-48A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (Class II Permissive Change)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 8K19110701.01R01.A3L	Test Dates: 12/2/2019-12/13/2019	EUT Type: RRU(RT4401)		Page 86 of 161

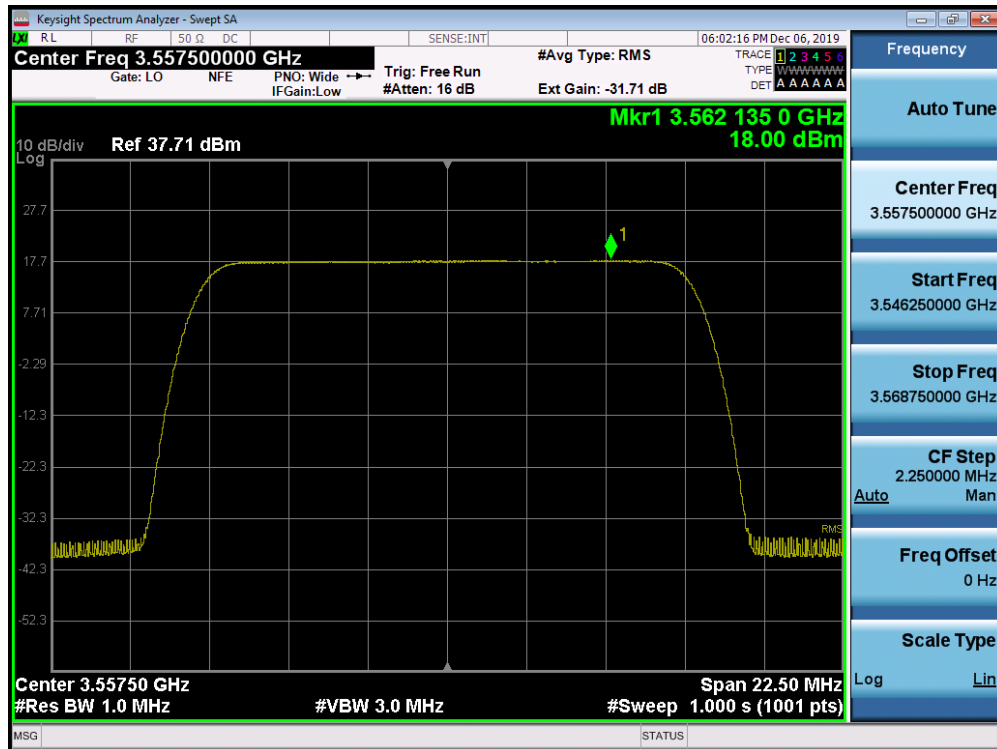


Plot 7-119. Peak Power Spectral Density Plot (1CC Configuration 15MHz 64QAM - Low Channel) Port 02

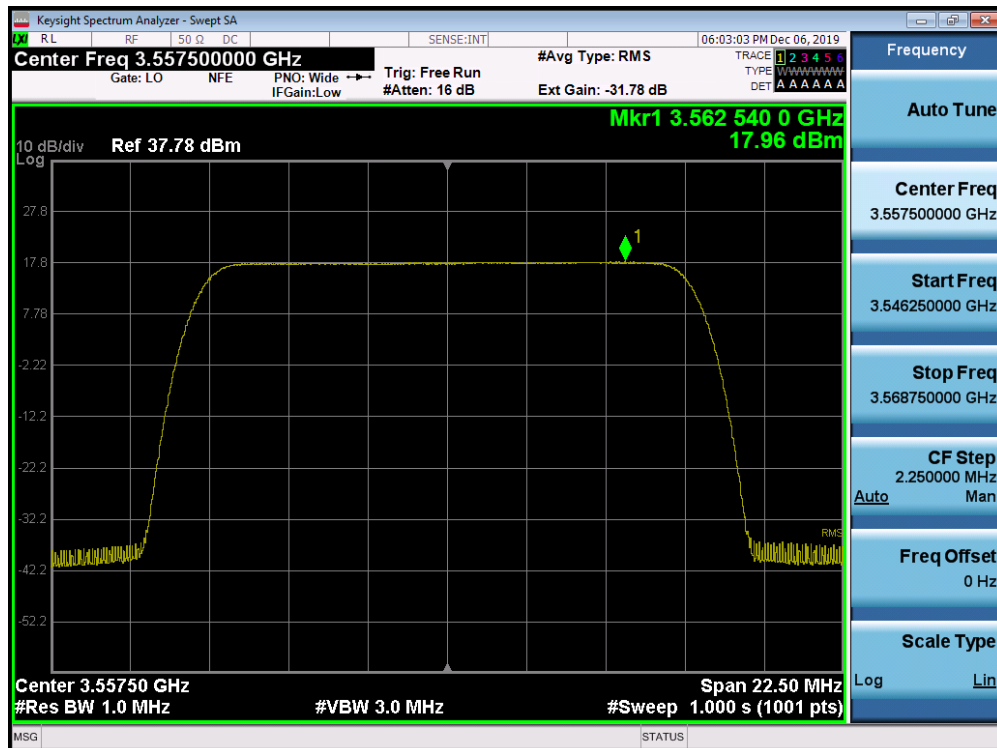


Plot 7-120. Peak Power Spectral Density Plot (1CC Configuration 15MHz 64QAM - Low Channel) Port 03

FCC ID: A3LRT4401-48A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (Class II Permissive Change)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 8K19110701.01R01.A3L	Test Dates: 12/2/2019-12/13/2019	EUT Type: RRU(RT4401)		Page 87 of 161

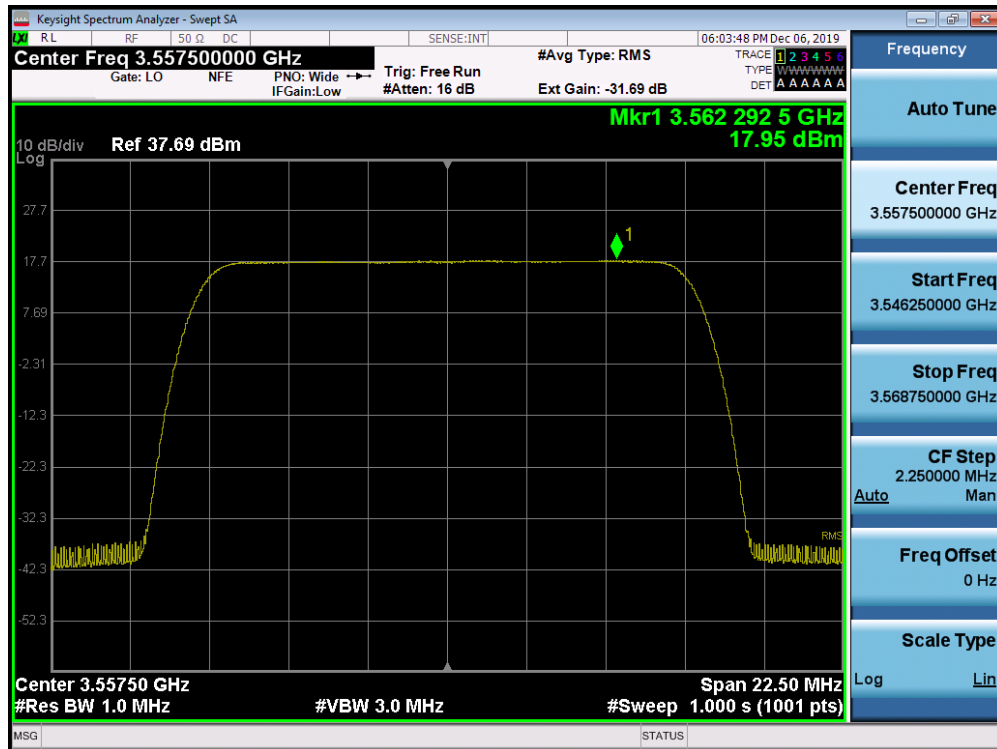


Plot 7-121. Peak Power Spectral Density Plot (1CC Configuration 15MHz 256QAM - Low Channel) Port 00

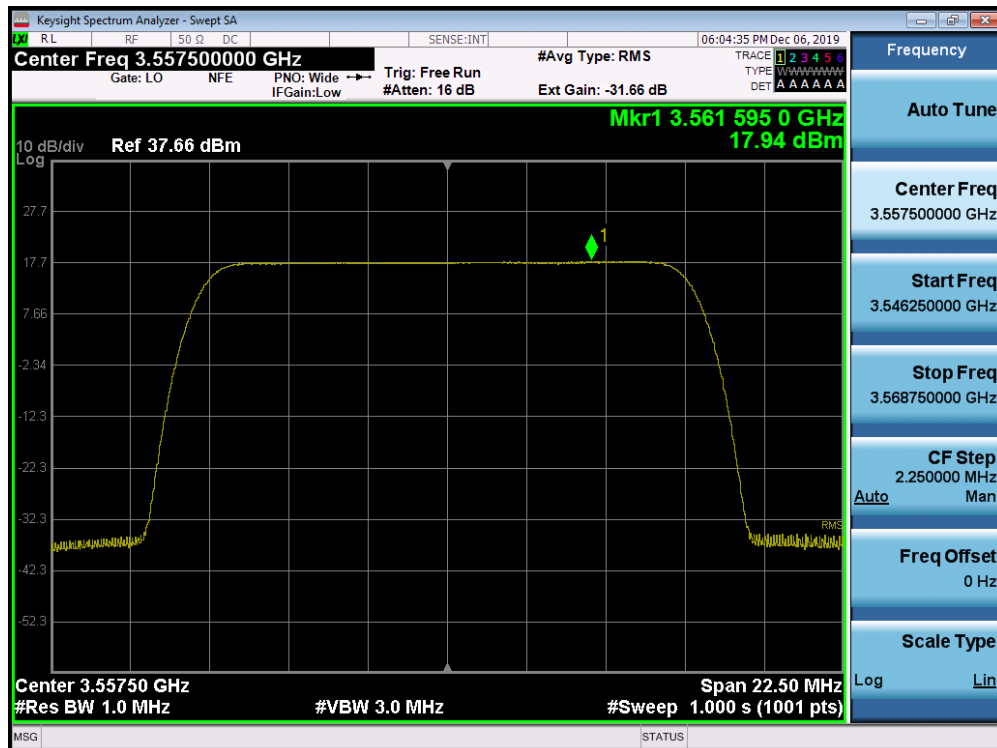


Plot 7-122. Peak Power Spectral Density Plot (1CC Configuration 15MHz 256QAM - Low Channel) Port 01

FCC ID: A3LRT4401-48A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (Class II Permissive Change)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 8K19110701.01R01.A3L	Test Dates: 12/2/2019-12/13/2019	EUT Type: RRU(RT4401)		Page 88 of 161

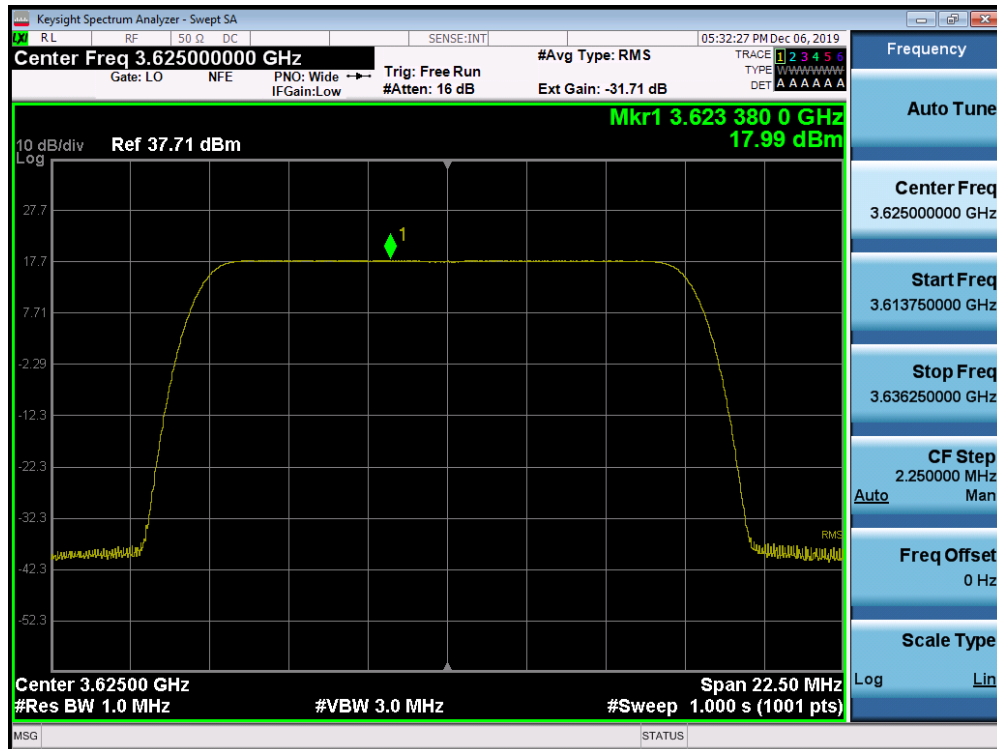


Plot 7-123. Peak Power Spectral Density Plot (1CC Configuration 15MHz 256QAM - Low Channel) Port 02



Plot 7-124. Peak Power Spectral Density Plot (1CC Configuration 15MHz 256QAM - Low Channel) Port 03

FCC ID: A3LRT4401-48A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (Class II Permissive Change)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 8K19110701.01R01.A3L	Test Dates: 12/2/2019-12/13/2019	EUT Type: RRU(RT4401)		Page 89 of 161

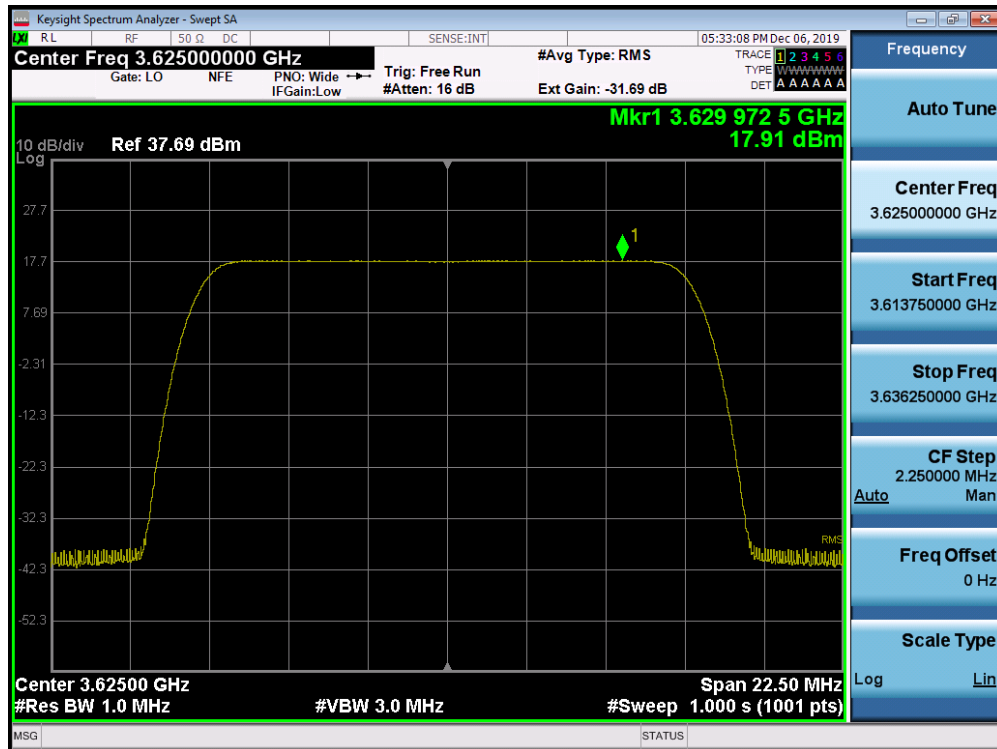


Plot 7-125. Peak Power Spectral Density Plot (1CC Configuration 15MHz QPSK - Mid Channel) Port 00

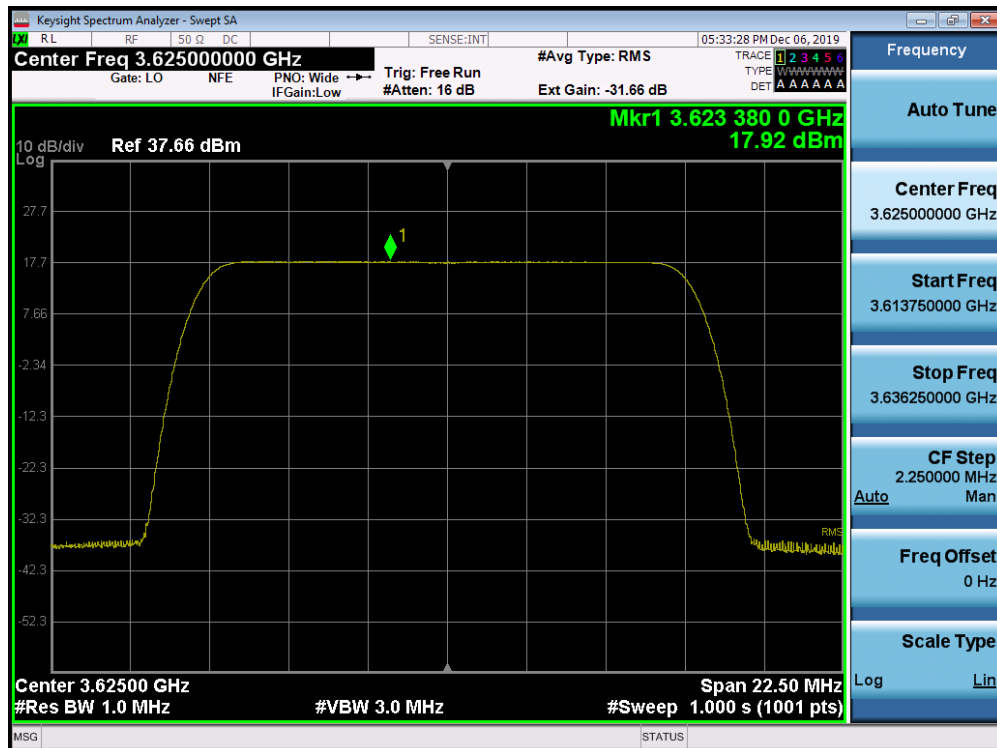


Plot 7-126. Peak Power Spectral Density Plot (1CC Configuration 15MHz QPSK - Mid Channel) Port 01

FCC ID: A3LRT4401-48A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (Class II Permissive Change)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 8K19110701.01R01.A3L	Test Dates: 12/2/2019-12/13/2019	EUT Type: RRU(RT4401)		Page 90 of 161

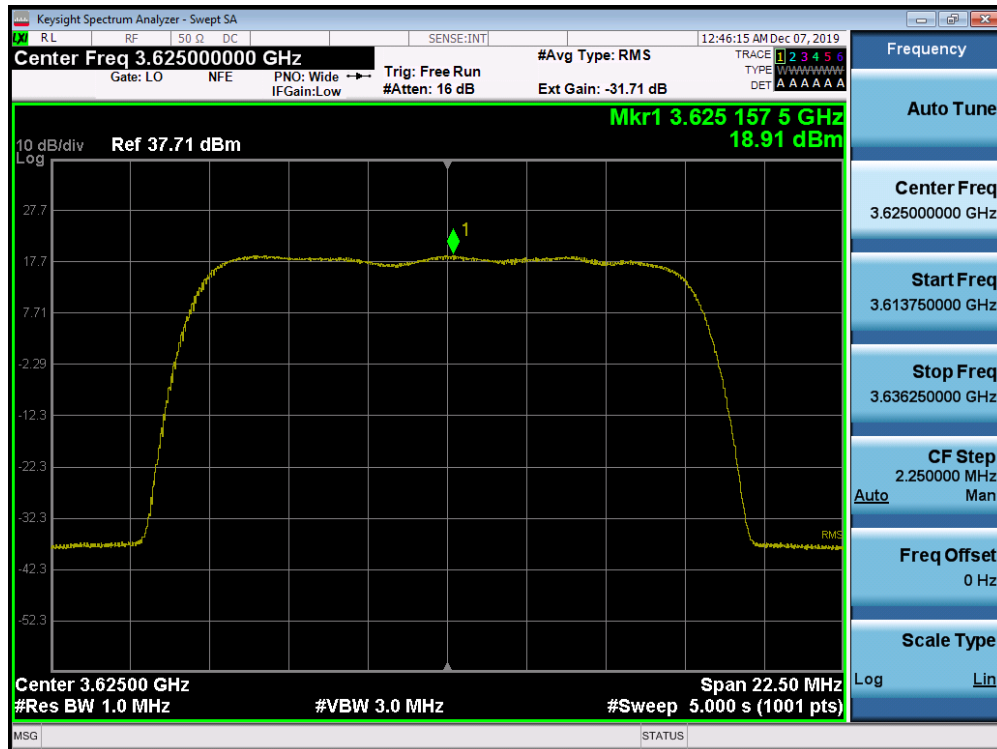


Plot 7-127. Peak Power Spectral Density Plot (1CC Configuration 15MHz QPSK - Mid Channel) Port 02

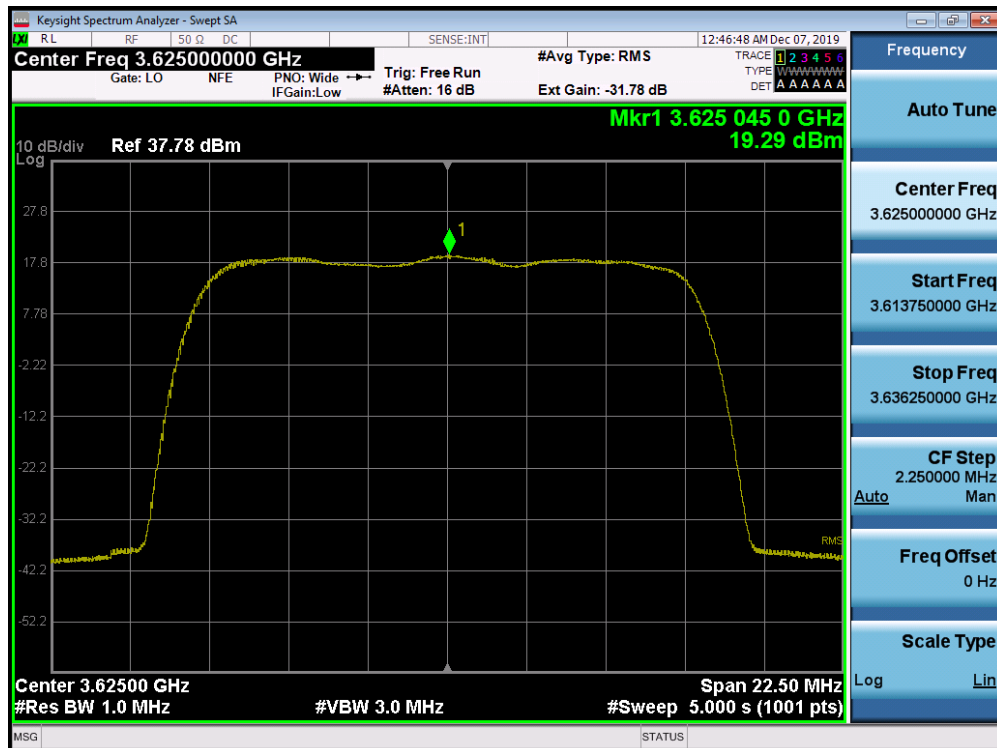


Plot 7-128. Peak Power Spectral Density Plot (1CC Configuration 15MHz QPSK - Mid Channel) Port 03

FCC ID: A3LRT4401-48A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (Class II Permissive Change)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 8K19110701.01R01.A3L	Test Dates: 12/2/2019-12/13/2019	EUT Type: RRU(RT4401)		Page 91 of 161

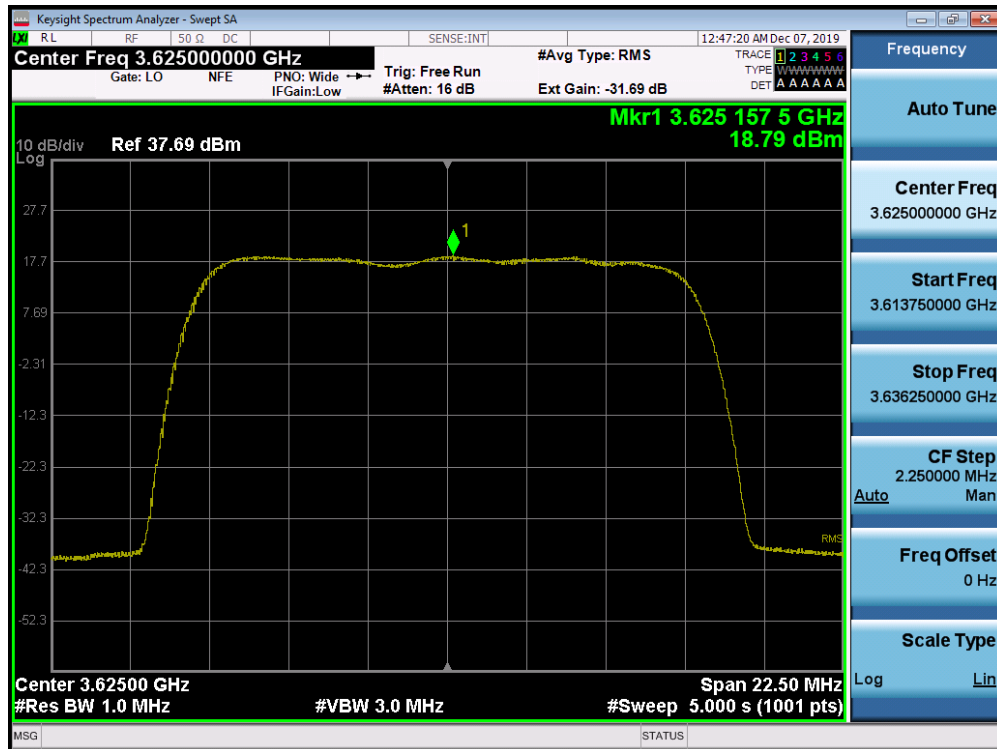


Plot 7-129. Peak Power Spectral Density Plot (1CC Configuration 15MHz 16QAM - Mid Channel) Port 00



Plot 7-130. Peak Power Spectral Density Plot (1CC Configuration 15MHz 16QAM - Mid Channel) Port 01

FCC ID: A3LRT4401-48A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (Class II Permissive Change)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 8K19110701.01R01.A3L	Test Dates: 12/2/2019-12/13/2019	EUT Type: RRU(RT4401)		Page 92 of 161

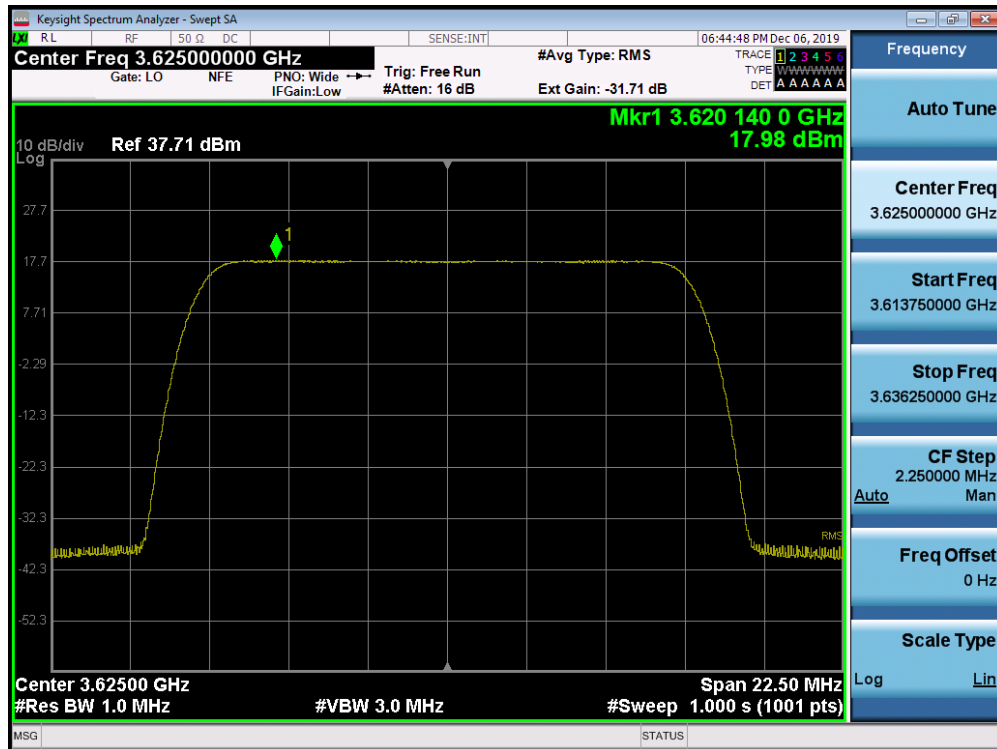


Plot 7-131. Peak Power Spectral Density Plot (1CC Configuration 15MHz 16QAM - Mid Channel) Port 02

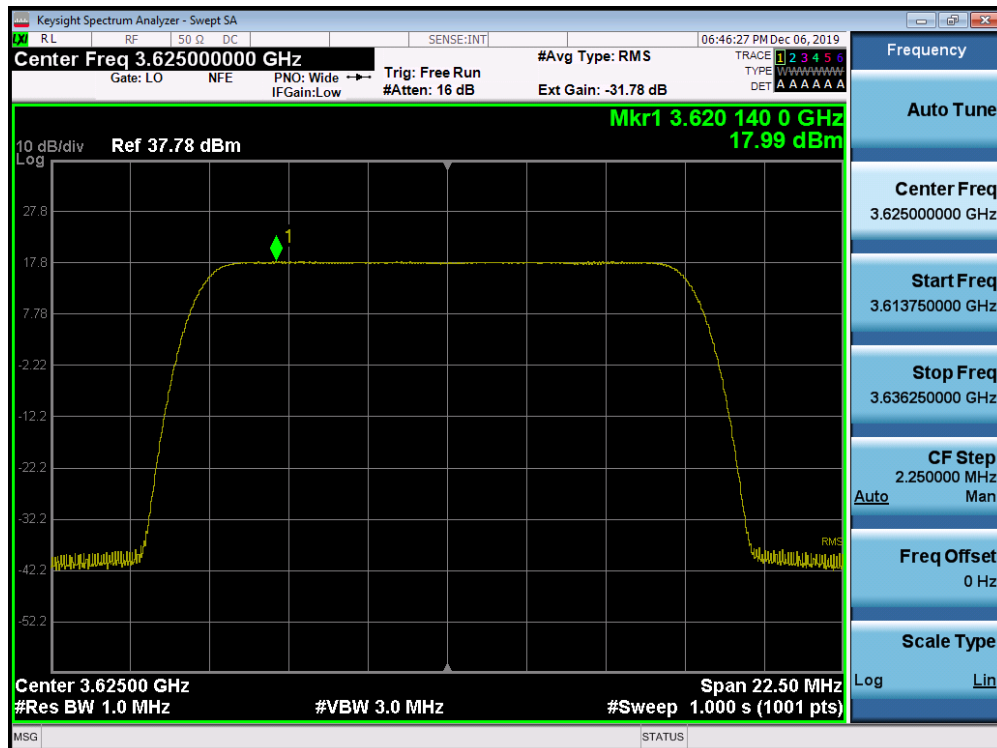


Plot 7-132. Peak Power Spectral Density Plot (1CC Configuration 15MHz 16QAM - Mid Channel) Port 03

FCC ID: A3LRT4401-48A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (Class II Permissive Change)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 8K19110701.01R01.A3L	Test Dates: 12/2/2019-12/13/2019	EUT Type: RRU(RT4401)		Page 93 of 161

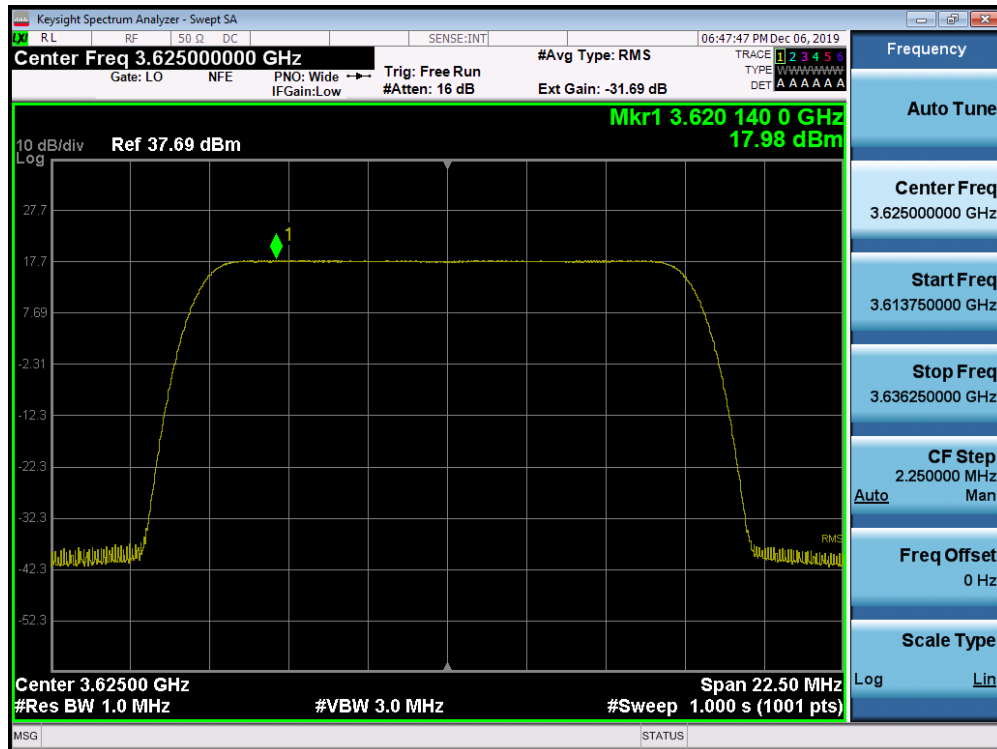


Plot 7-133. Peak Power Spectral Density Plot (1CC Configuration 15MHz 64QAM - Mid Channel) Port 00

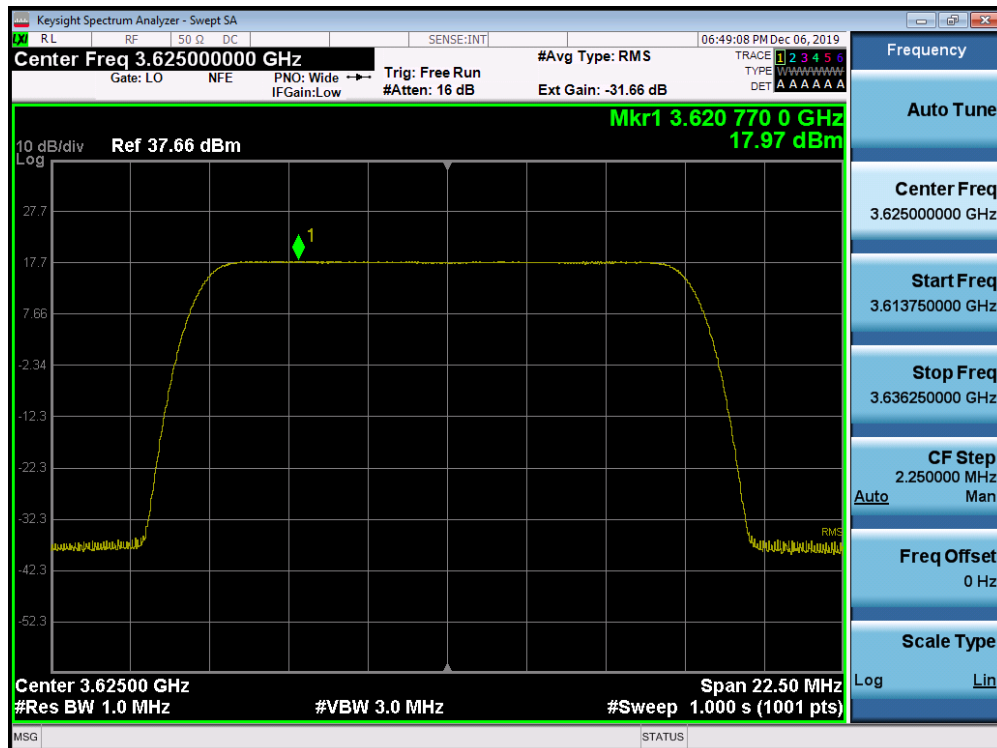


Plot 7-134. Peak Power Spectral Density Plot (1CC Configuration 15MHz 64QAM - Mid Channel) Port 01

FCC ID: A3LRT4401-48A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (Class II Permissive Change)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 8K19110701.01R01.A3L	Test Dates: 12/2/2019-12/13/2019	EUT Type: RRU(RT4401)		Page 94 of 161

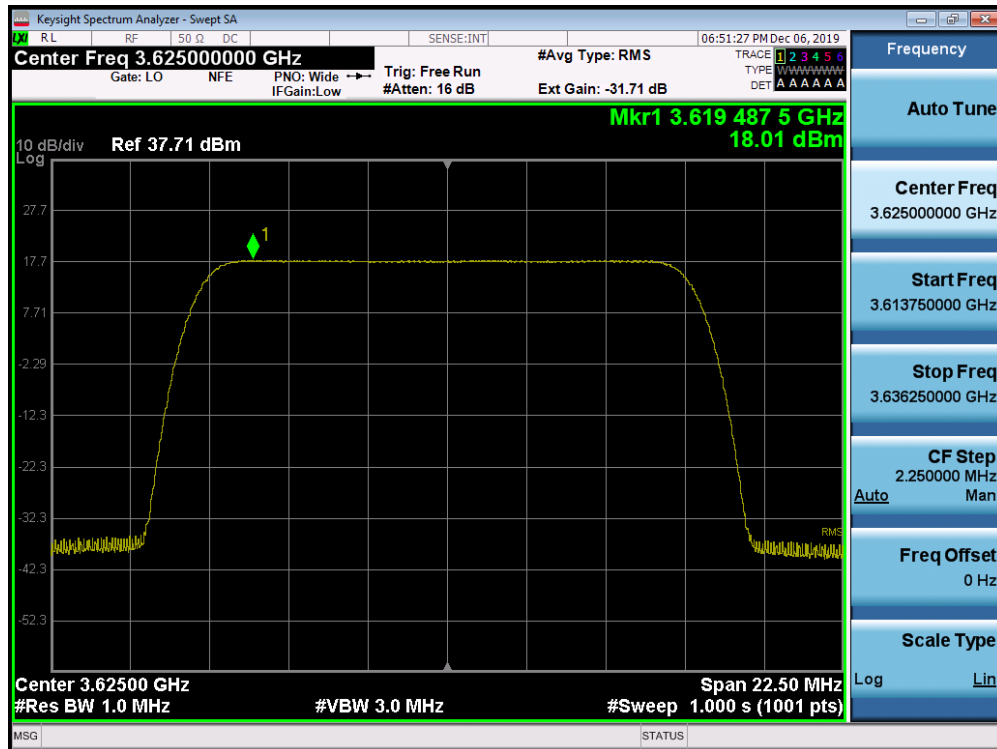


Plot 7-135. Peak Power Spectral Density Plot (1CC Configuration 15MHz 64QAM - Mid Channel) Port 02

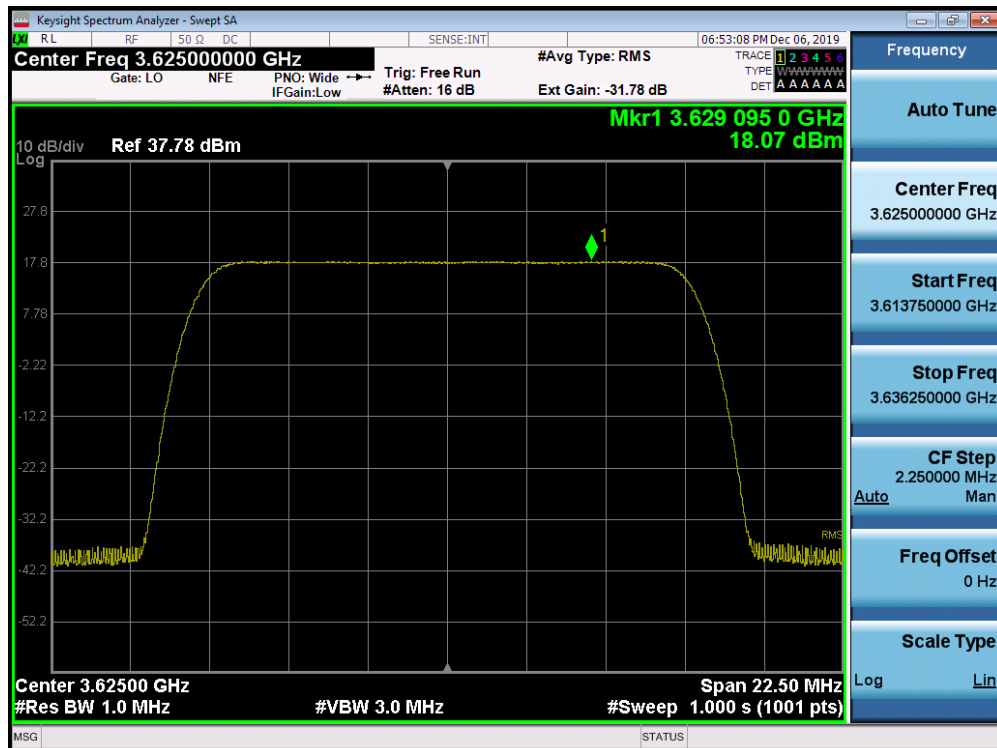


Plot 7-136. Peak Power Spectral Density Plot (1CC Configuration 15MHz 64QAM - Mid Channel) Port 03

FCC ID: A3LRT4401-48A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (Class II Permissive Change)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 8K19110701.01R01.A3L	Test Dates: 12/2/2019-12/13/2019	EUT Type: RRU(RT4401)		Page 95 of 161

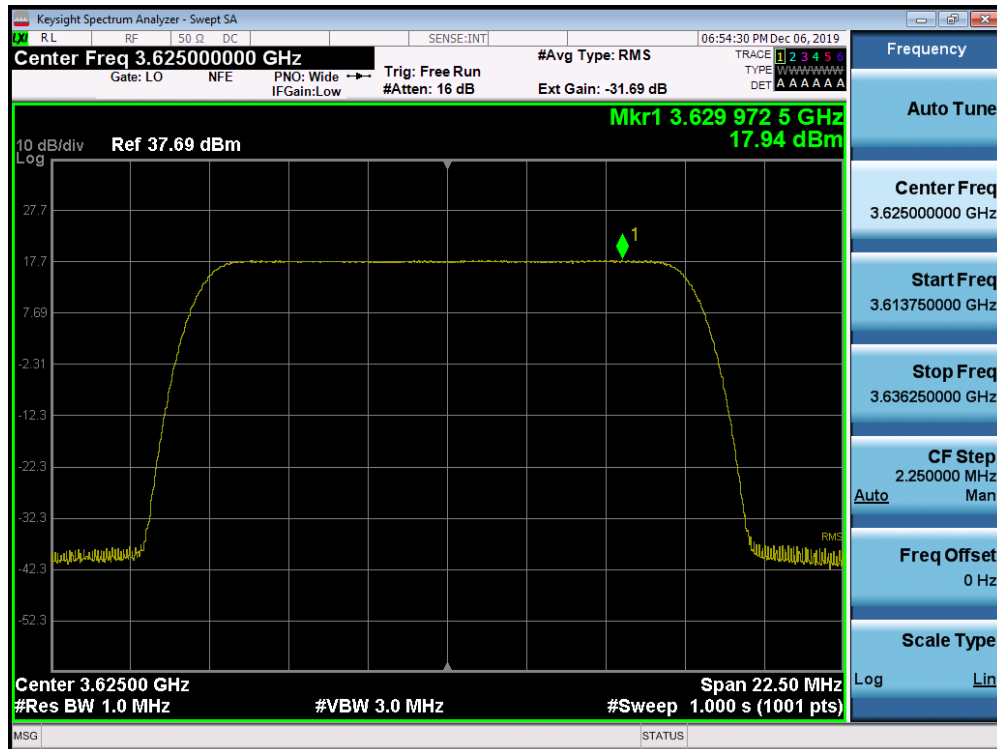


Plot 7-137. Peak Power Spectral Density Plot (1CC Configuration 15MHz 256QAM - Mid Channel) Port 00

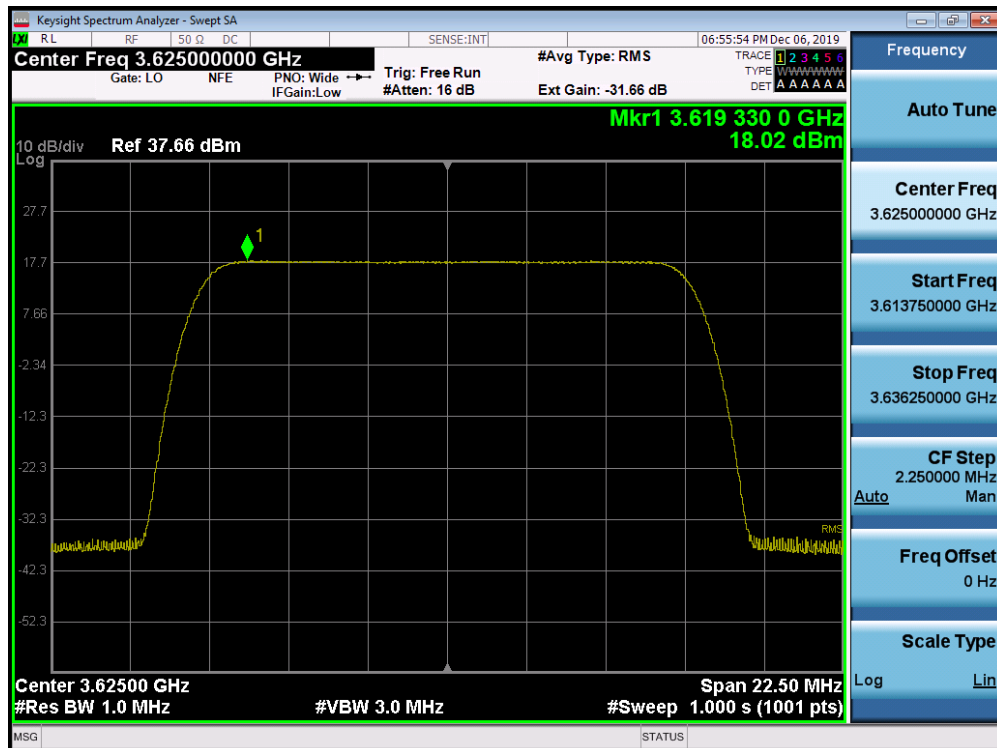


Plot 7-138. Peak Power Spectral Density Plot (1CC Configuration 15MHz 256QAM - Mid Channel) Port 01

FCC ID: A3LRT4401-48A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (Class II Permissive Change)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 8K19110701.01R01.A3L	Test Dates: 12/2/2019-12/13/2019	EUT Type: RRU(RT4401)		Page 96 of 161

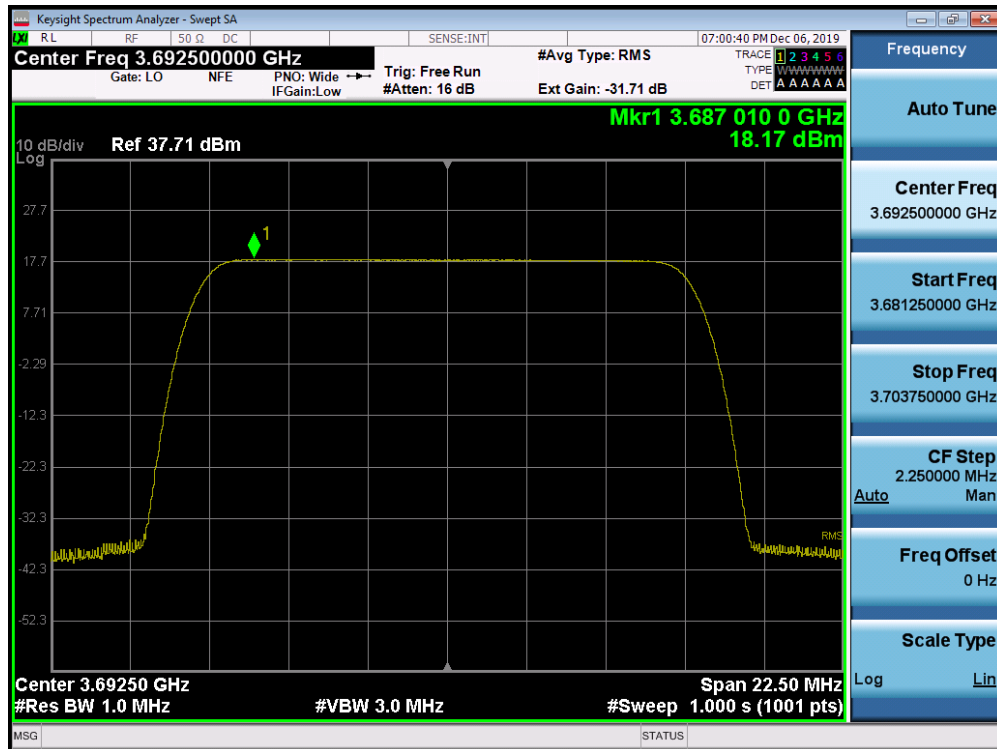


Plot 7-139. Peak Power Spectral Density Plot (1CC Configuration 15MHz 256QAM - Mid Channel) Port 02

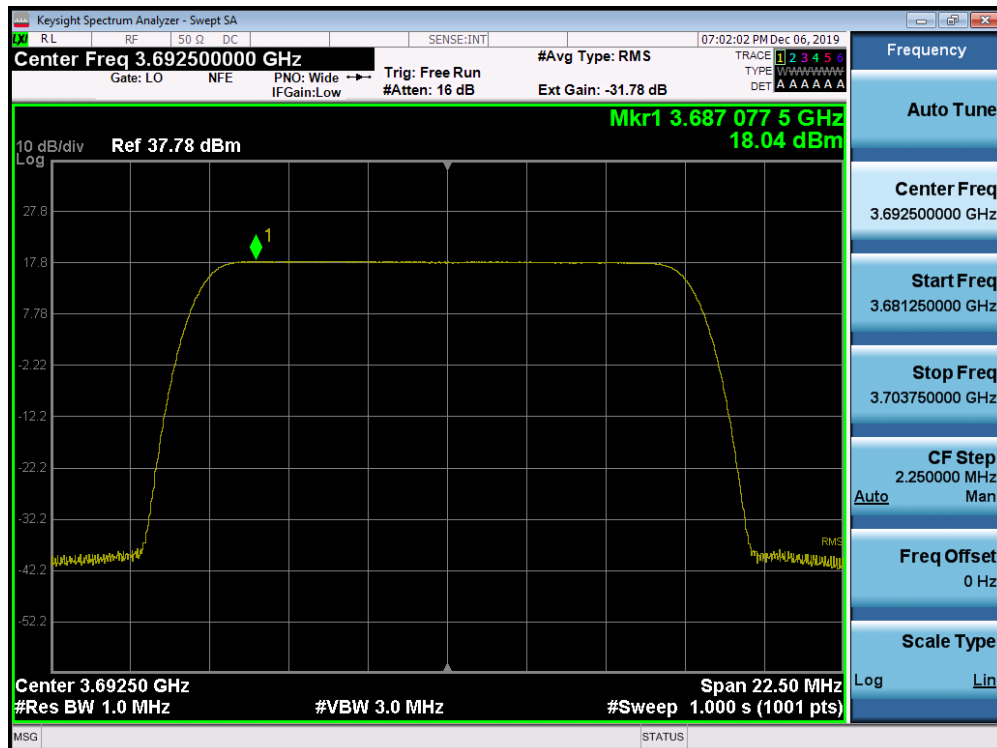


Plot 7-140. Peak Power Spectral Density Plot (1CC Configuration 15MHz 256QAM - Mid Channel) Port 03

FCC ID: A3LRT4401-48A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (Class II Permissive Change)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 8K19110701.01R01.A3L	Test Dates: 12/2/2019-12/13/2019	EUT Type: RRU(RT4401)		Page 97 of 161

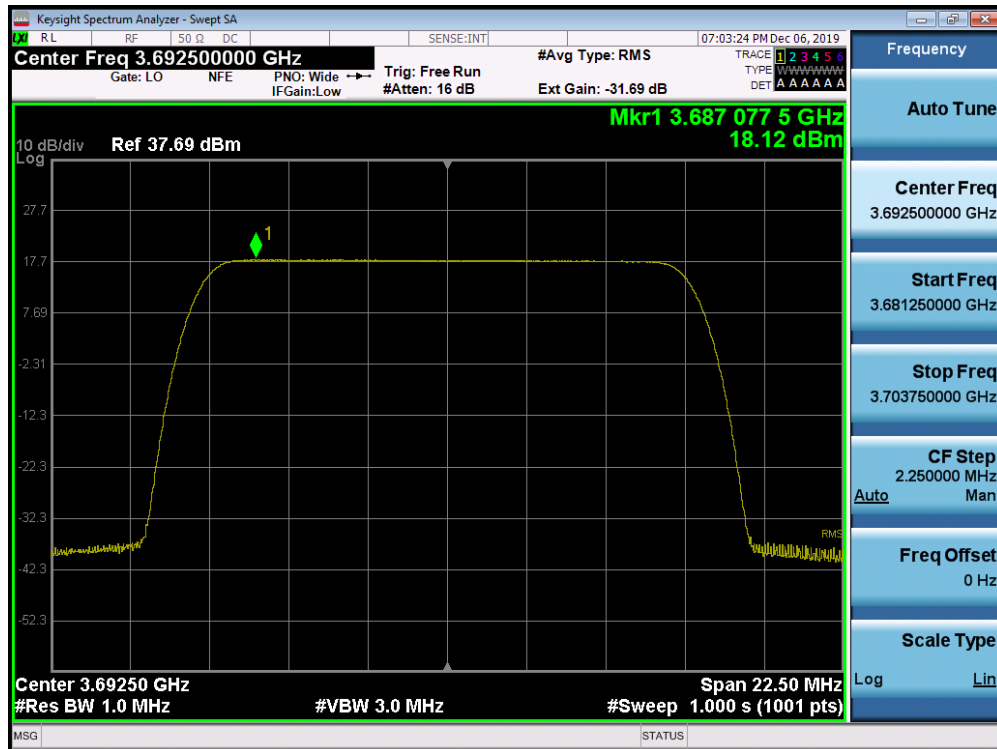


Plot 7-141. Peak Power Spectral Density Plot (1CC Configuration 15MHz QPSK - High Channel) Port 00

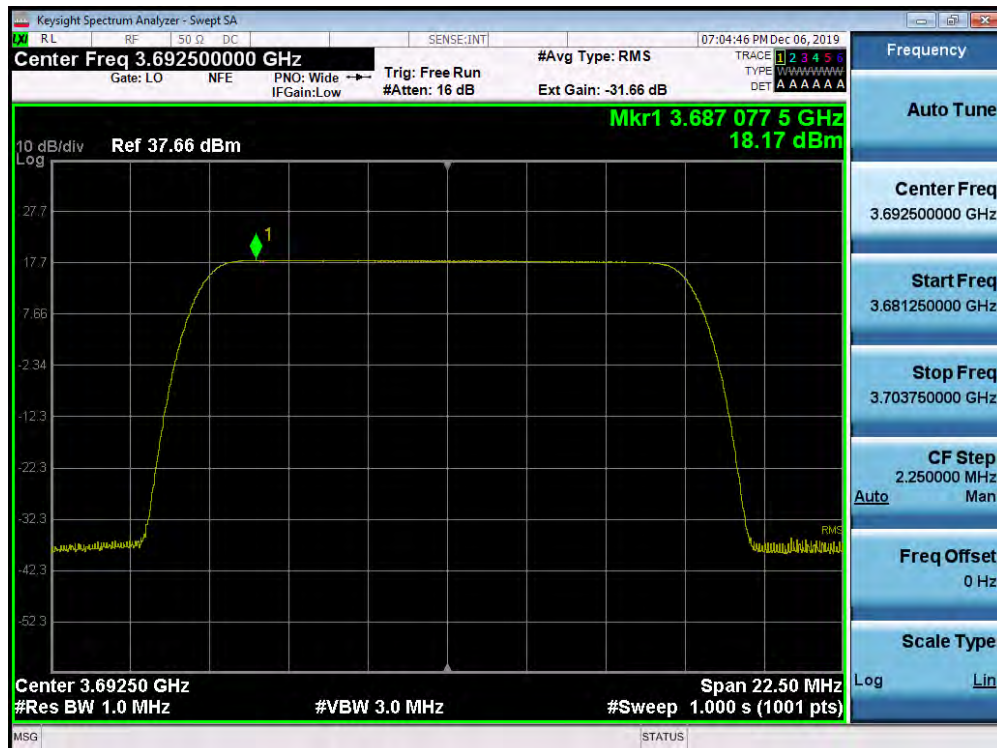


Plot 7-142. Peak Power Spectral Density Plot (1CC Configuration 15MHz QPSK - High Channel) Port 01

FCC ID: A3LRT4401-48A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (Class II Permissive Change)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 8K19110701.01R01.A3L	Test Dates: 12/2/2019-12/13/2019	EUT Type: RRU(RT4401)		Page 98 of 161

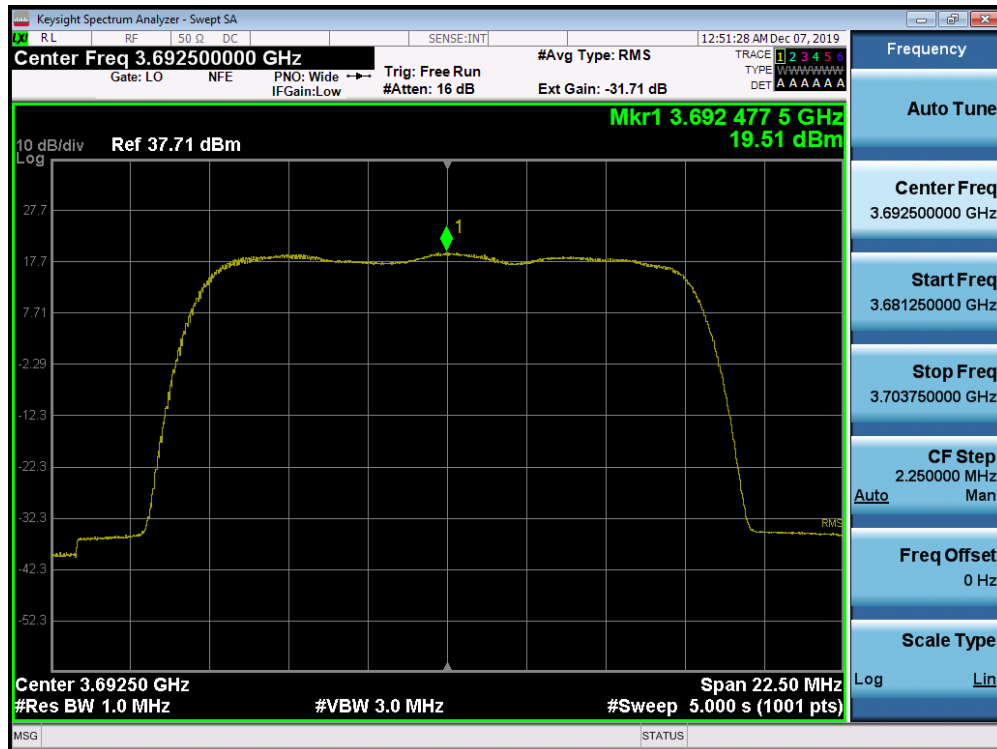


Plot 7-143. Peak Power Spectral Density Plot (1CC Configuration 15MHz QPSK - High Channel) Port 02

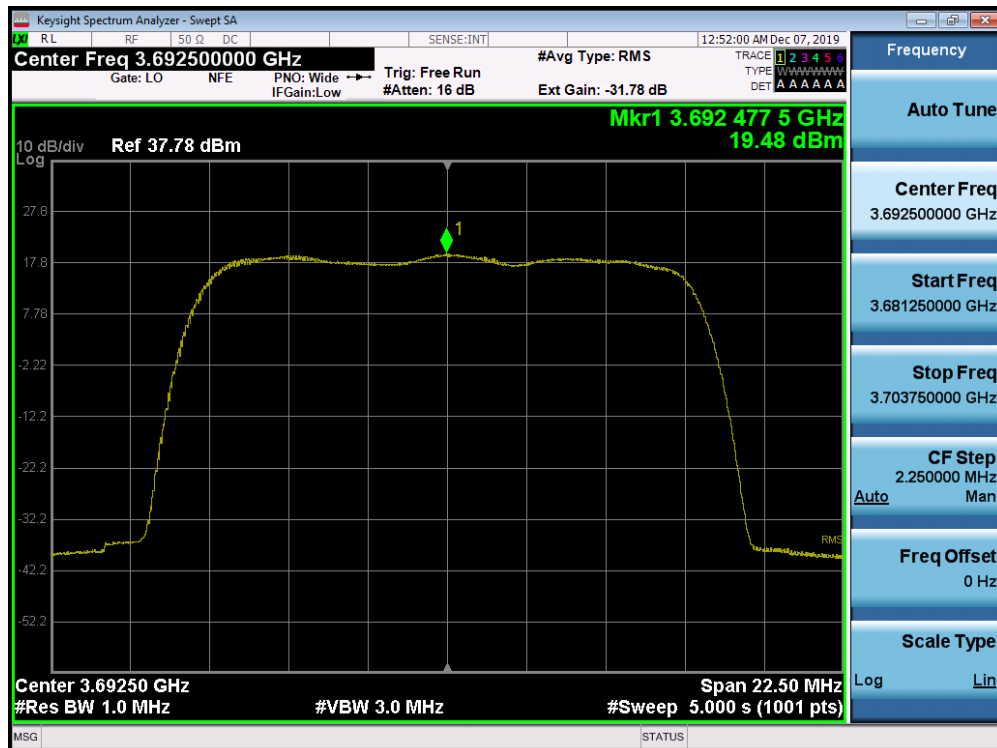


Plot 7-144. Peak Power Spectral Density Plot (1CC Configuration 15MHz QPSK - High Channel) Port 03

FCC ID: A3LRT4401-48A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (Class II Permissive Change)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 8K19110701.01R01.A3L	Test Dates: 12/2/2019-12/13/2019	EUT Type: RRU(RT4401)		Page 99 of 161

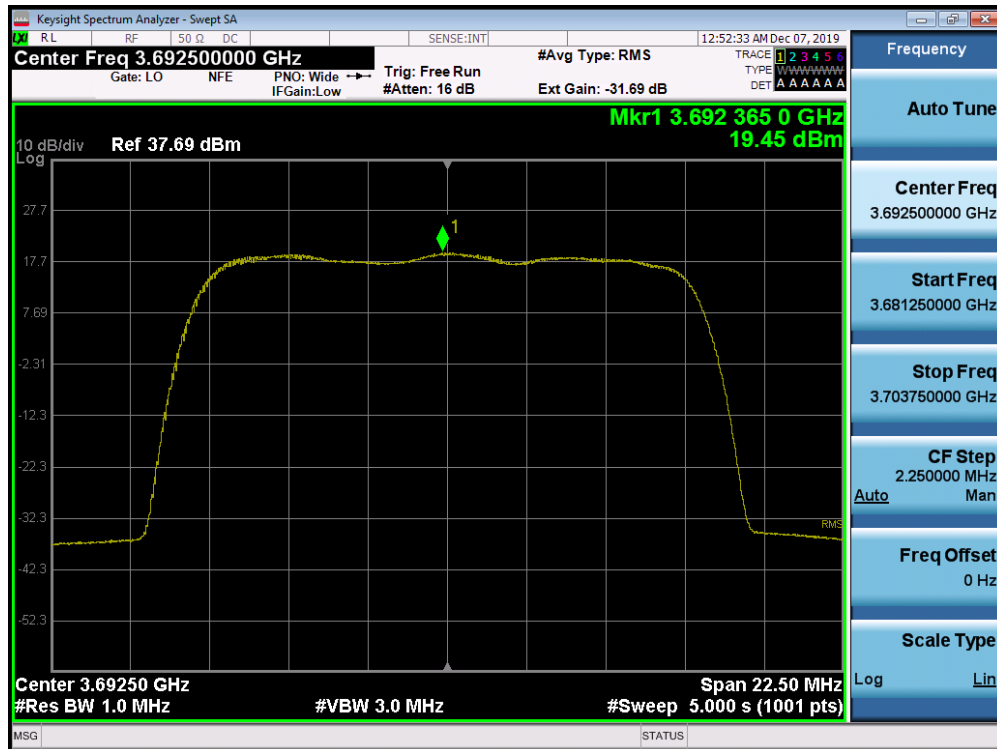


Plot 7-145. Peak Power Spectral Density Plot (1CC Configuration 15MHz 16QAM - High Channel) Port 00

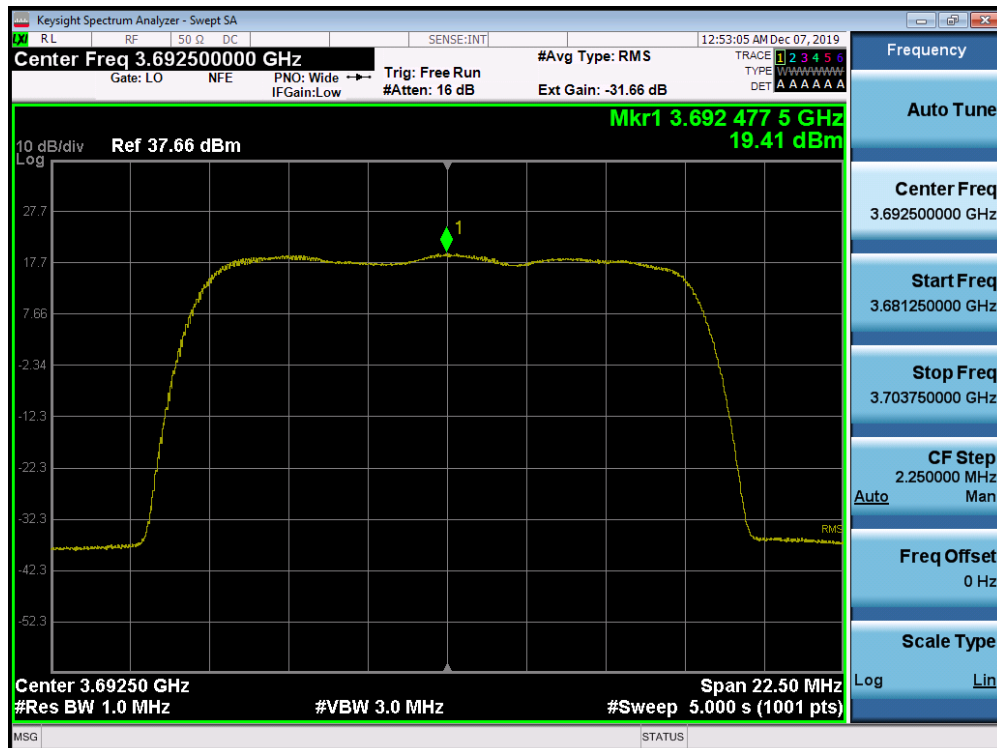


Plot 7-146. Peak Power Spectral Density Plot (1CC Configuration 15MHz 16QAM - High Channel) Port 01

FCC ID: A3LRT4401-48A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (Class II Permissive Change)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 8K19110701.01R01.A3L	Test Dates: 12/2/2019-12/13/2019	EUT Type: RRU(RT4401)		Page 100 of 161

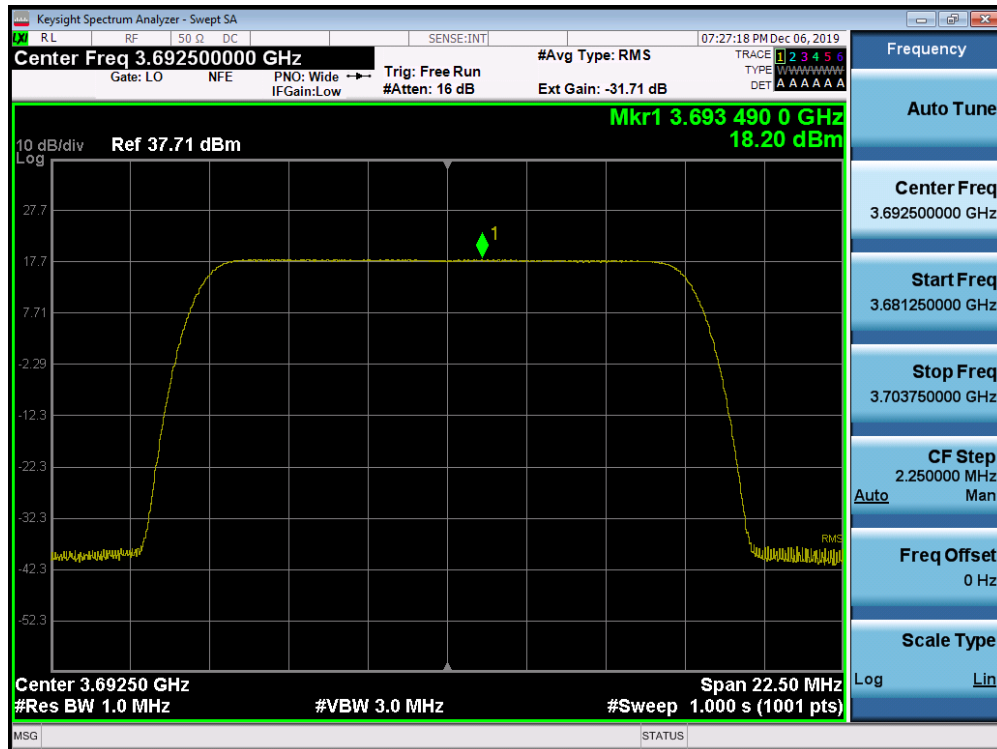


Plot 7-147. Peak Power Spectral Density Plot (1CC Configuration 15MHz 16QAM - High Channel) Port 02

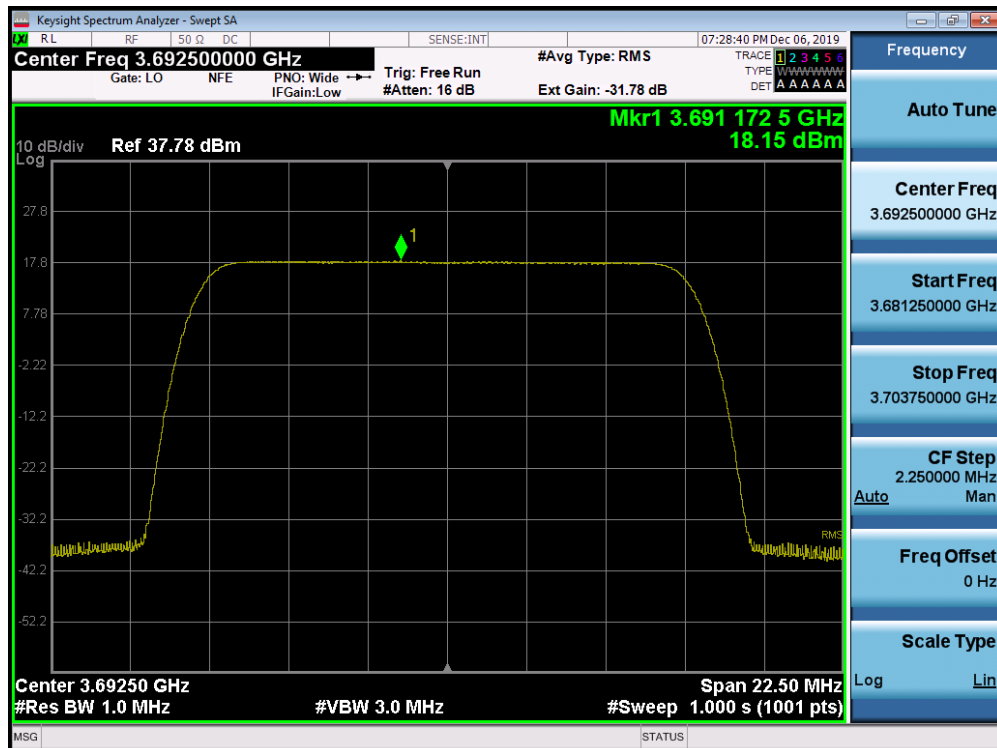


Plot 7-148. Peak Power Spectral Density Plot (1CC Configuration 15MHz 16QAM - High Channel) Port 03

FCC ID: A3LRT4401-48A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (Class II Permissive Change)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 8K19110701.01R01.A3L	Test Dates: 12/2/2019-12/13/2019	EUT Type: RRU(RT4401)		Page 101 of 161

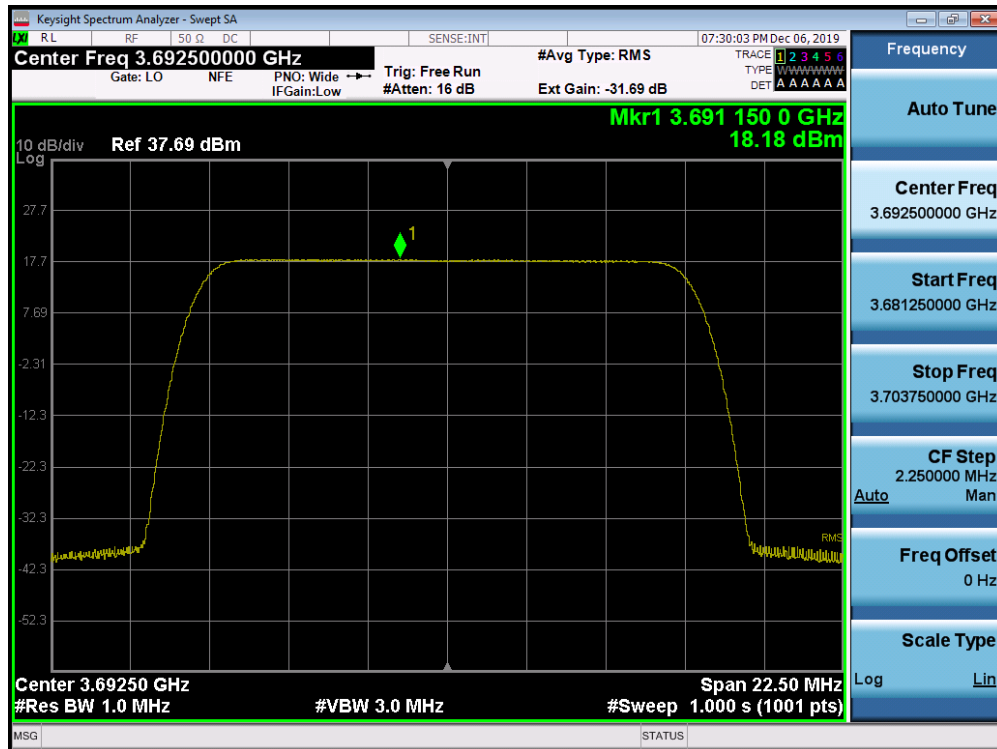


Plot 7-149. Peak Power Spectral Density Plot (1CC Configuration 15MHz 64QAM - High Channel) Port 00

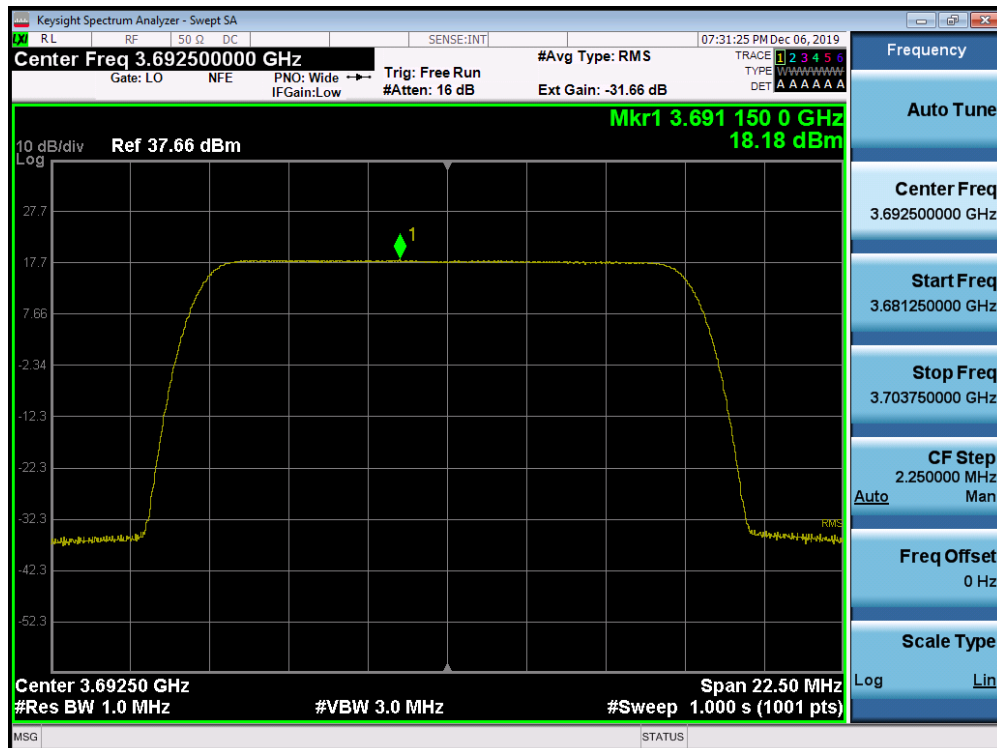


Plot 7-150. Peak Power Spectral Density Plot (1CC Configuration 15MHz 64QAM - High Channel) Port 01

FCC ID: A3LRT4401-48A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (Class II Permissive Change)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 8K19110701.01R01.A3L	Test Dates: 12/2/2019-12/13/2019	EUT Type: RRU(RT4401)		Page 102 of 161

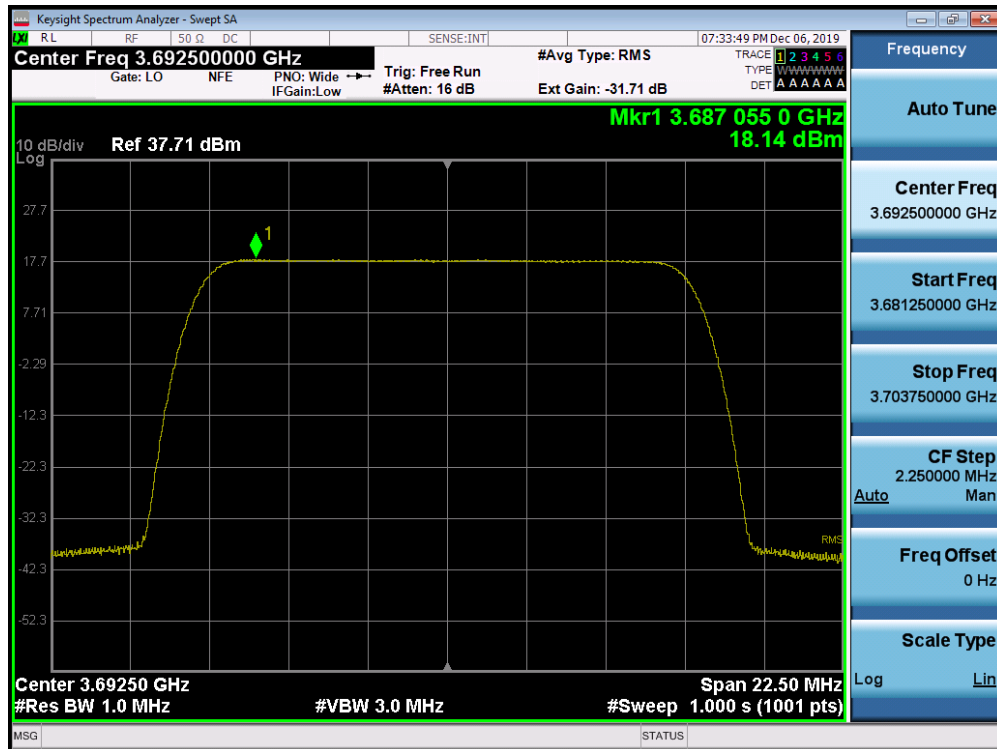


Plot 7-151. Peak Power Spectral Density Plot (1CC Configuration 15MHz 64QAM - High Channel) Port 02

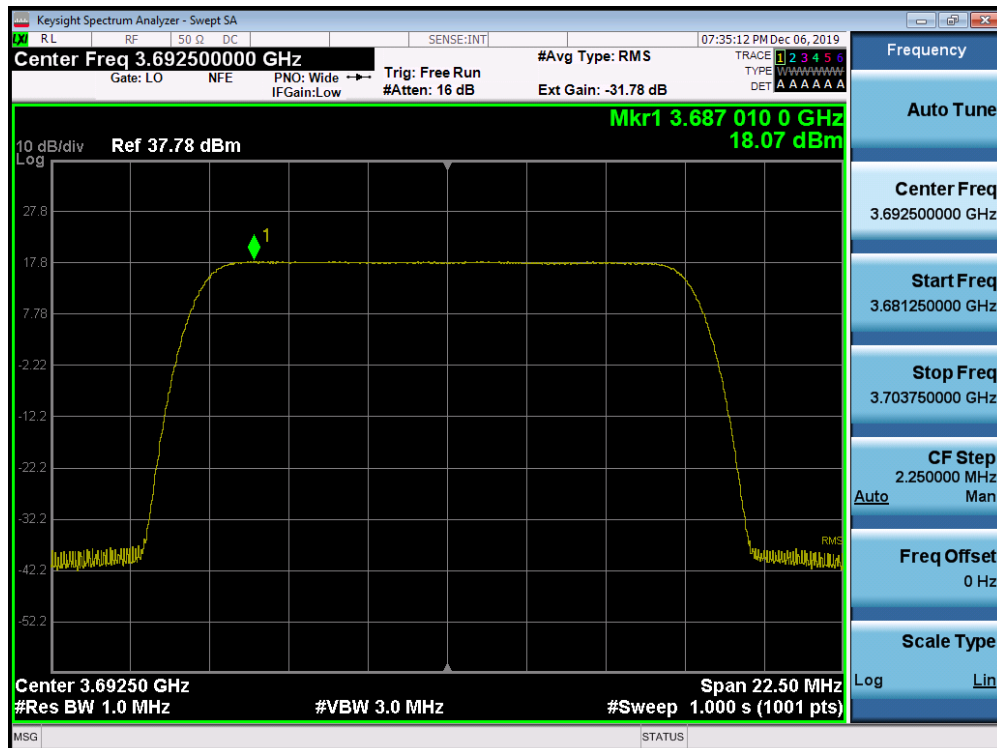


Plot 7-152. Peak Power Spectral Density Plot (1CC Configuration 15MHz 64QAM - High Channel) Port 03

FCC ID: A3LRT4401-48A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (Class II Permissive Change)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 8K19110701.01R01.A3L	Test Dates: 12/2/2019-12/13/2019	EUT Type: RRU(RT4401)		Page 103 of 161

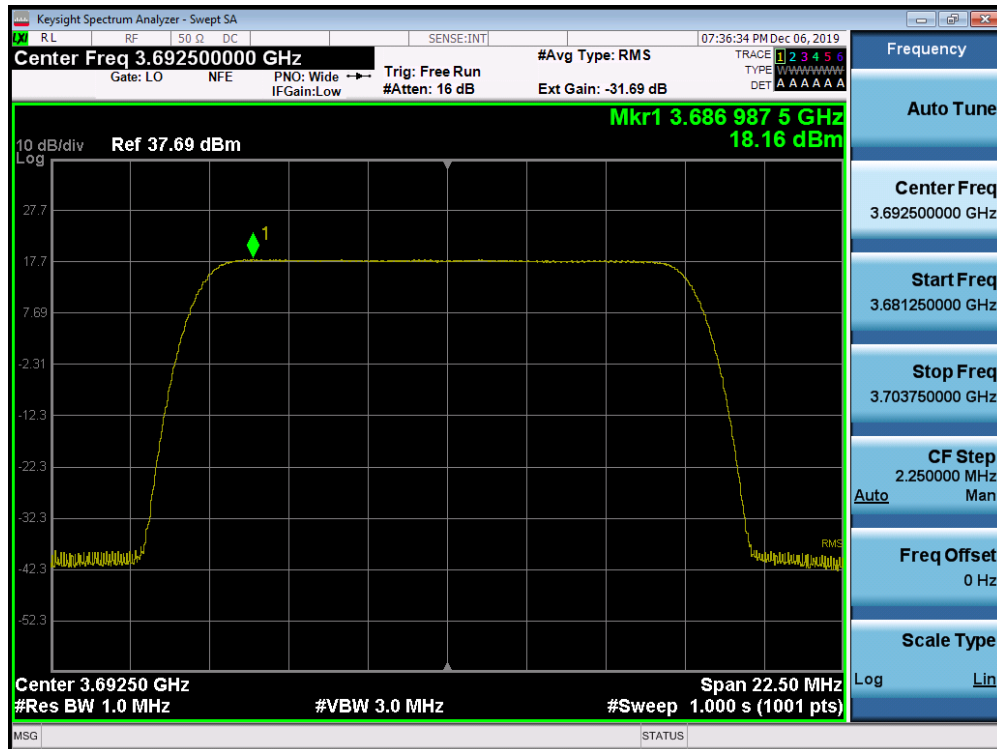


Plot 7-153. Peak Power Spectral Density Plot (1CC Configuration 15MHz 256QAM - High Channel) Port 00

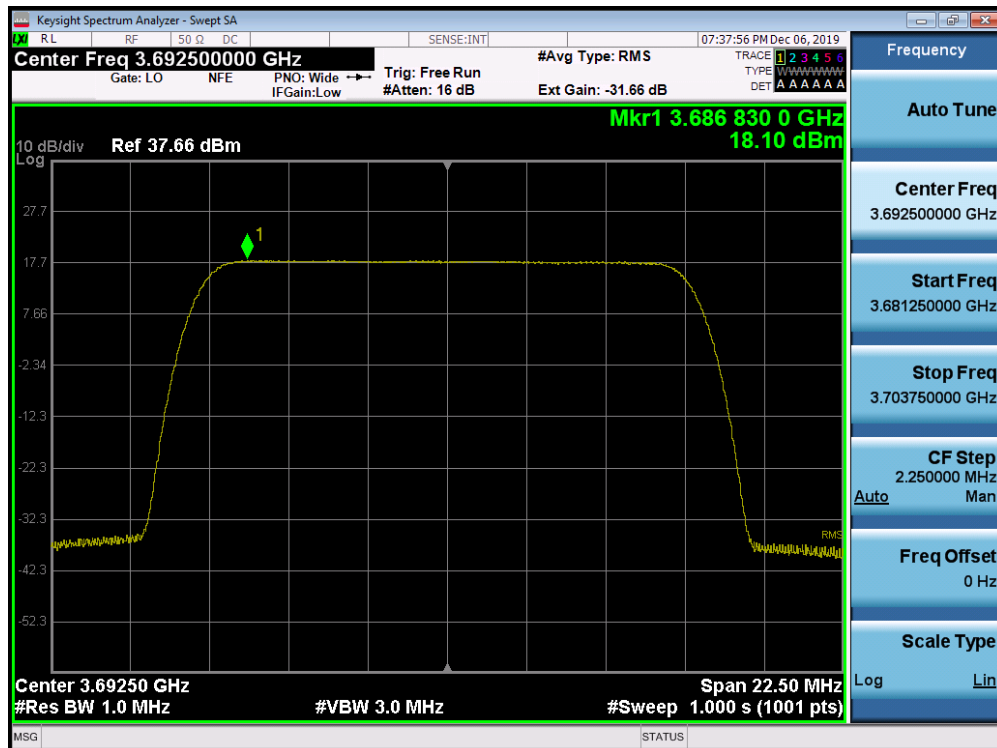


Plot 7-154. Peak Power Spectral Density Plot (1CC Configuration 15MHz 256QAM - High Channel) Port 01

FCC ID: A3LRT4401-48A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (Class II Permissive Change)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 8K19110701.01R01.A3L	Test Dates: 12/2/2019-12/13/2019	EUT Type: RRU(RT4401)		Page 104 of 161



Plot 7-155. Peak Power Spectral Density Plot (1CC Configuration 15MHz 256QAM - High Channel) Port 02



Plot 7-156. Peak Power Spectral Density Plot (1CC Configuration 15MHz 256QAM - High Channel) Port 03

FCC ID: A3LRT4401-48A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (Class II Permissive Change)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 8K19110701.01R01.A3L	Test Dates: 12/2/2019-12/13/2019	EUT Type: RRU(RT4401)		Page 105 of 161

7.5 Peak-Average Ratio

§96.41(g)

Test Overview

A peak to average ratio measurement is performed at the conducted port of the EUT. The spectrum analyzers Complementary Cumulative Distribution Function (CCDF) measurement profile is used to determine the largest deviation between the average and the peak power of the EUT in a given bandwidth. The CCDF curve shows how much time the peak waveform spends at or above a given average power level. The percent of time the signal spends at or above the level defines the probability for that particular power level.

Test Procedure Used

KDB 971168 D01 v03r01 – Section 5.7

Test Settings

1. The signal analyzer's CCDF measurement profile is enabled
2. Frequency = carrier center frequency
3. Measurement BW $\geq$ OBW or specified reference bandwidth
4. The signal analyzer was set to collect two million samples to generate the CCDF curve
5. The measurement interval was set depending on the type of signal analyzed.
6. An RF-Burst triggering method ensured measurement in the on time of the signal.

Test Setup

The EUT and measurement equipment were set up as shown in the diagram below.

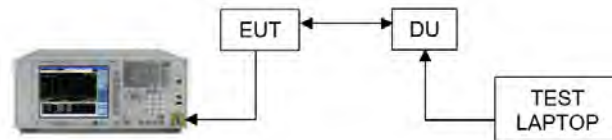


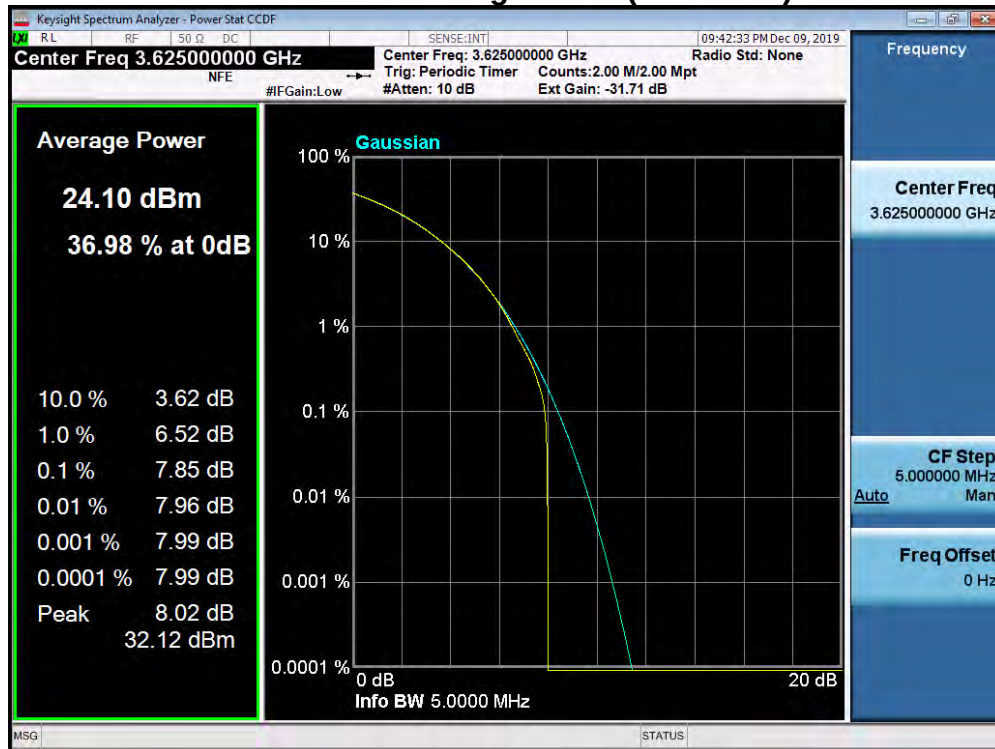
Figure 7-4. Test Instrument & Measurement Setup

Test Notes

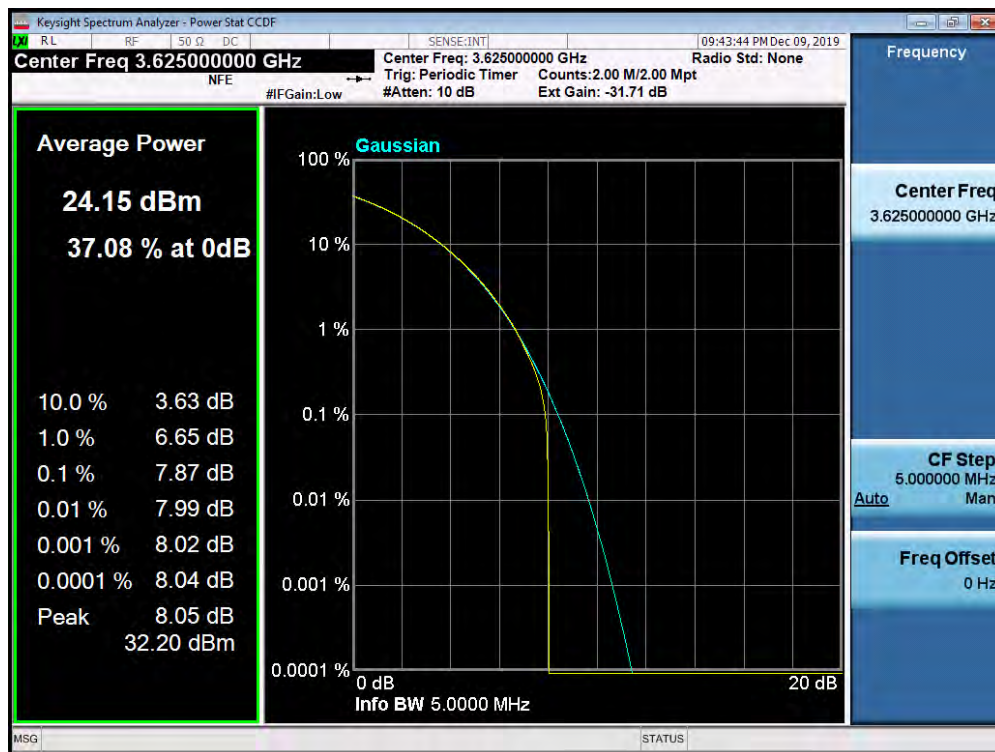
The PAR data is taken from the power with the highest output power on the mid channel.

FCC ID: A3LRT4401-48A		MEASUREMENT REPORT (Class II Permissive Change)		Approved by: Quality Manager
Test Report S/N: 8K19110701.01R01.A3L	Test Dates: 12/2/2019-12/13/2019	EUT Type: RRU(RT4401)		Page 106 of 161

Case01. 1CC - 5MHz Total Bandwidth Configuration (5MHz BW)



Plot 7-157. Common mode PAR Plot (5MHz Total Bandwidth QPSK - Mid Channel)



Plot 7-158. Common mode PAR Plot (5MHz Total Bandwidth 16QAM - Mid Channel)

FCC ID: A3LRT4401-48A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (Class II Permissive Change)	SAMSUNG	Approved by: Quality Manager
Test Report S/N: 8K19110701.01R01.A3L	Test Dates: 12/2/2019-12/13/2019	EUT Type: RRU(RT4401)		Page 107 of 161