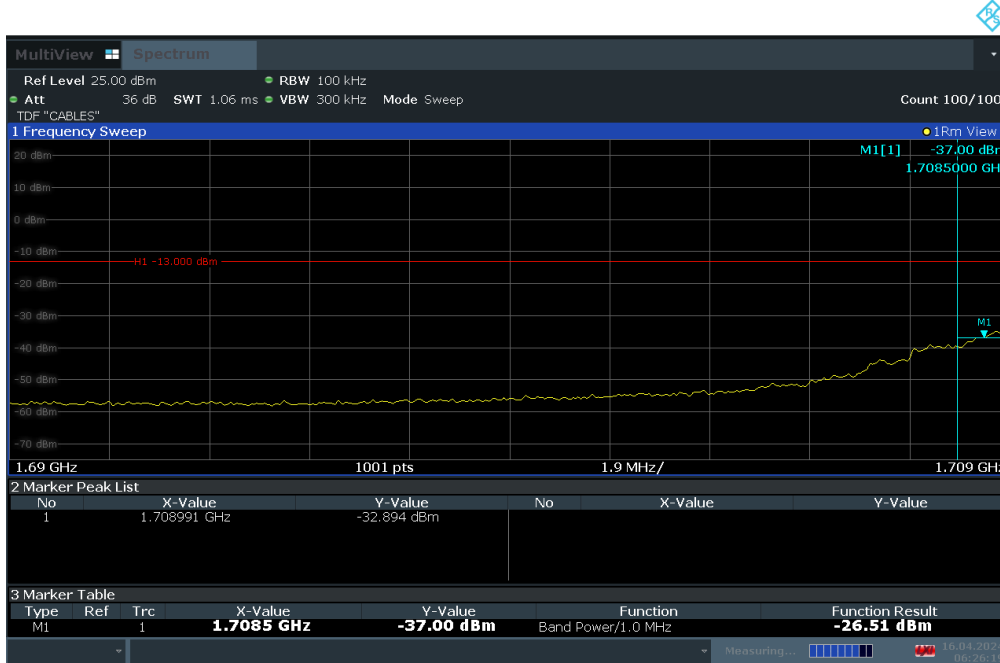


06:26:36 16.04.2024

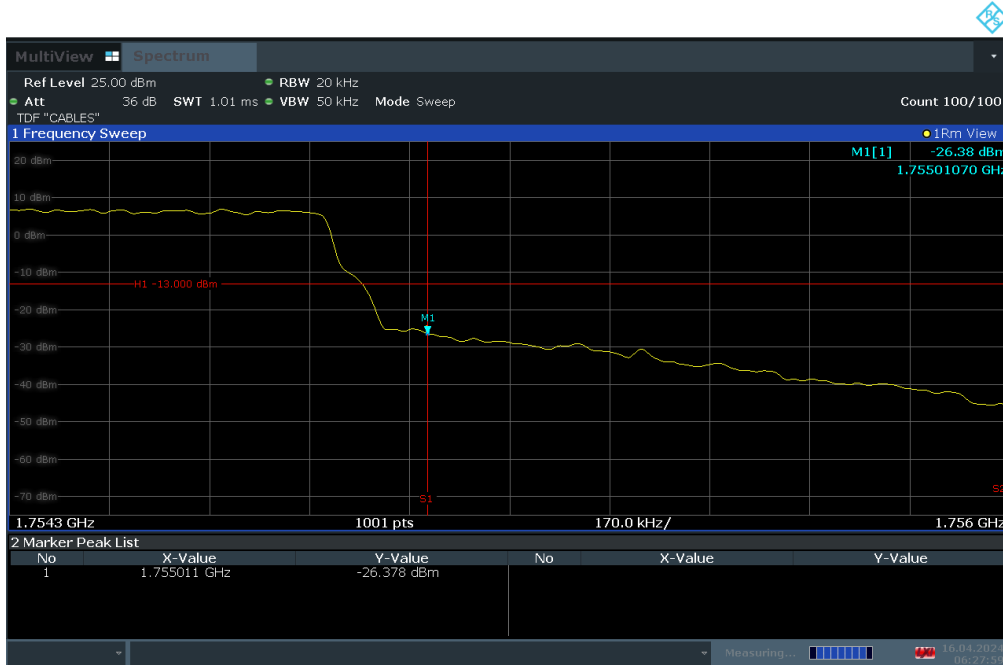
Plot 7-91. Lower Band Edge Plot (LTE Band 4 – 1.4MHz QPSK – Full RB)



06:26:19 16.04.2024

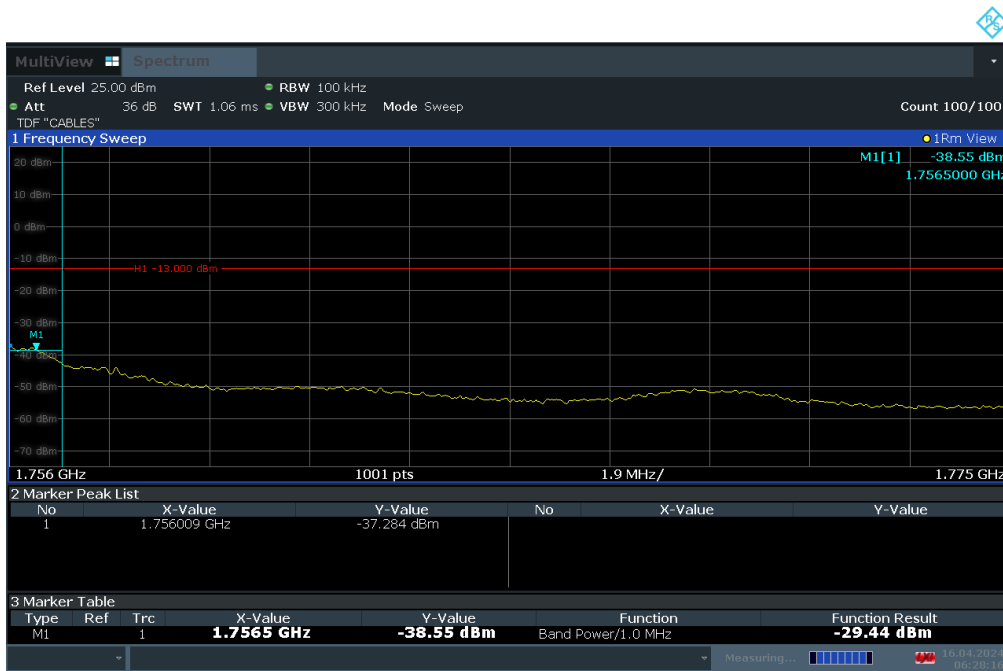
Plot 7-92. Lower Extended Band Edge Plot (LTE Band 4 – 1.4MHz QPSK – Full RB)

FCC ID: BCG-A3001	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1C2405230021-05.BCG	Test Dates: 04/11/2024 - 08/01/2024	EUT Type: Watch	Page 64 of 123



06:27:59 16.04.2024

Plot 7-93. Upper Band Edge Plot (LTE Band 4 – 1.4MHz QPSK – Full RB)

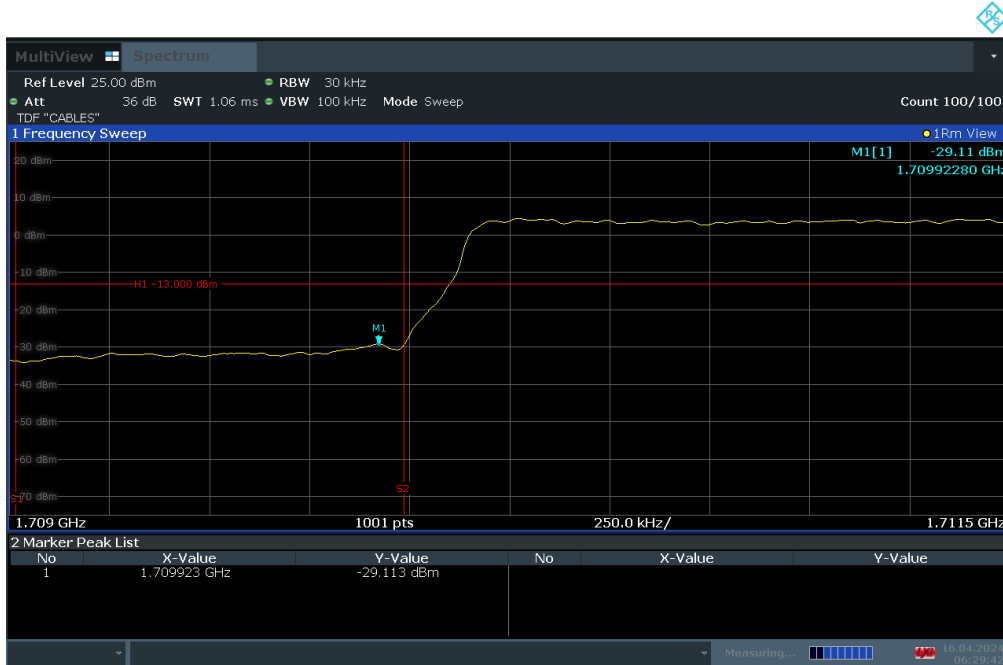


06:28:16 16.04.2024

Plot 7-94. Upper Extended Band Edge Plot (LTE Band 4 – 1.4MHz QPSK – Full RB)

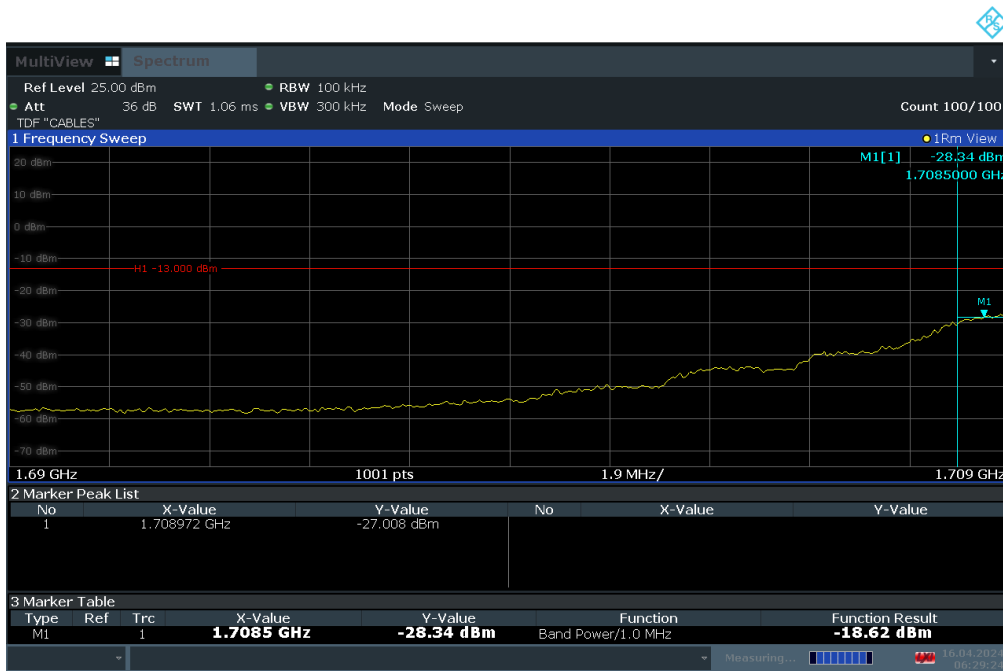
FCC ID: BCG-A3001			PART 27 MEASUREMENT REPORT	Approved by: Technical Manager
Test Report S/N: 1C2405230021-05.BCG	Test Dates: 04/11/2024 - 08/01/2024	EUT Type: Watch		Page 65 of 123

V2.2 09/07/2023



06:29:42 16.04.2024

Plot 7-95. Lower Band Edge Plot (LTE Band 4 - 3MHz QPSK – Full RB)

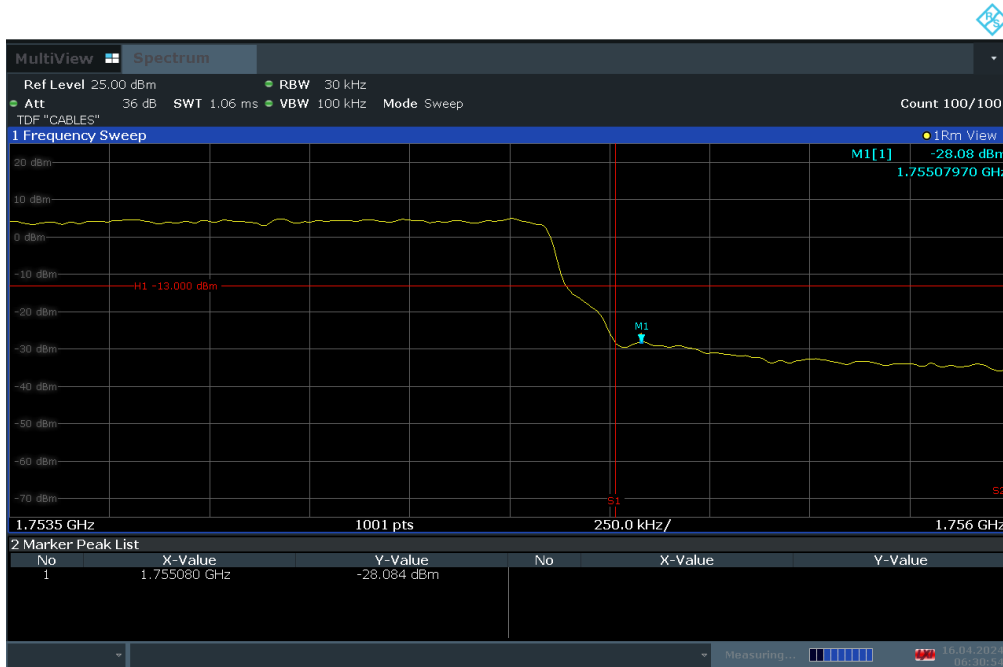


06:29:25 16.04.2024

Plot 7-96. Lower Extended Band Edge Plot (LTE Band 4 - 3MHz QPSK – Full RB)

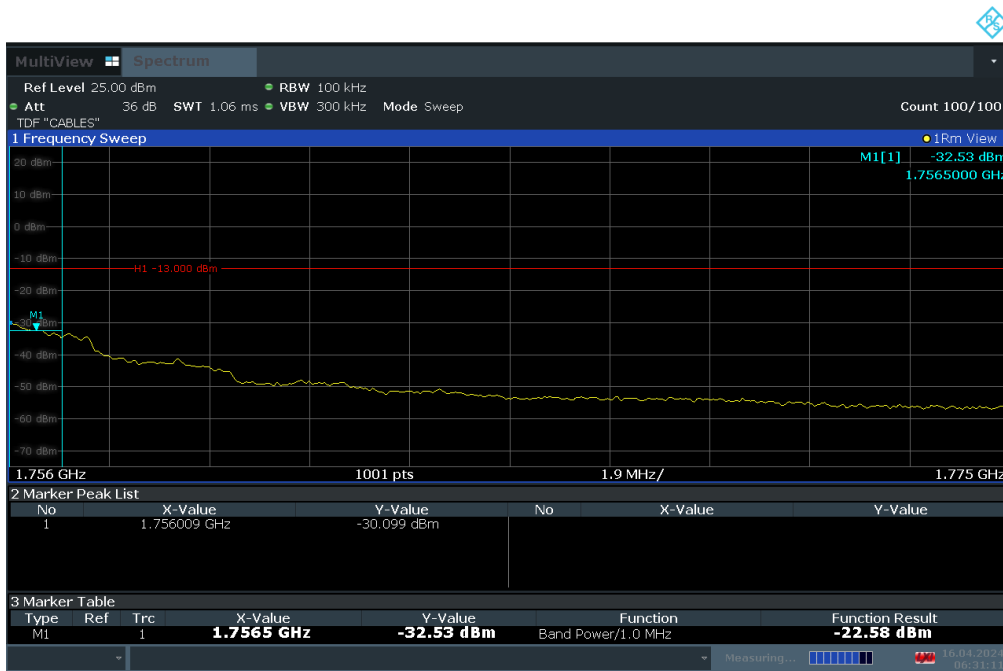
FCC ID: BCG-A3001	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1C2405230021-05.BCG	Test Dates: 04/11/2024 - 08/01/2024	EUT Type: Watch	Page 66 of 123

V2.2 09/07/2023



06:30:55 16.04.2024

Plot 7-97. Upper Band Edge Plot (LTE Band 4 - 3MHz QPSK – Full RB)

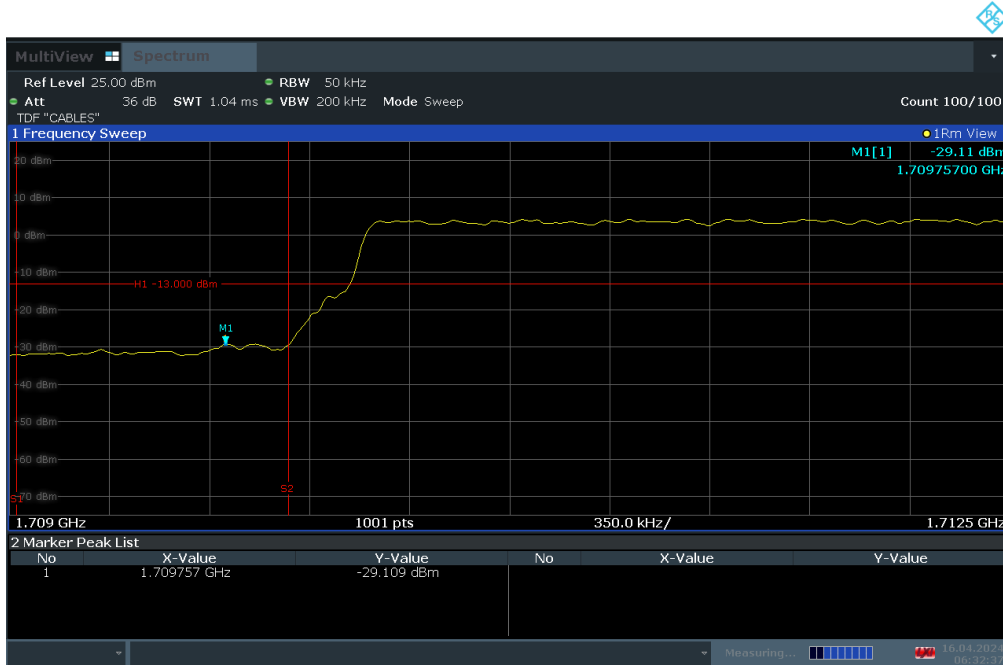


06:31:12 16.04.2024

Plot 7-98. Upper Extended Band Edge Plot (LTE Band 4 - 3MHz QPSK – Full RB)

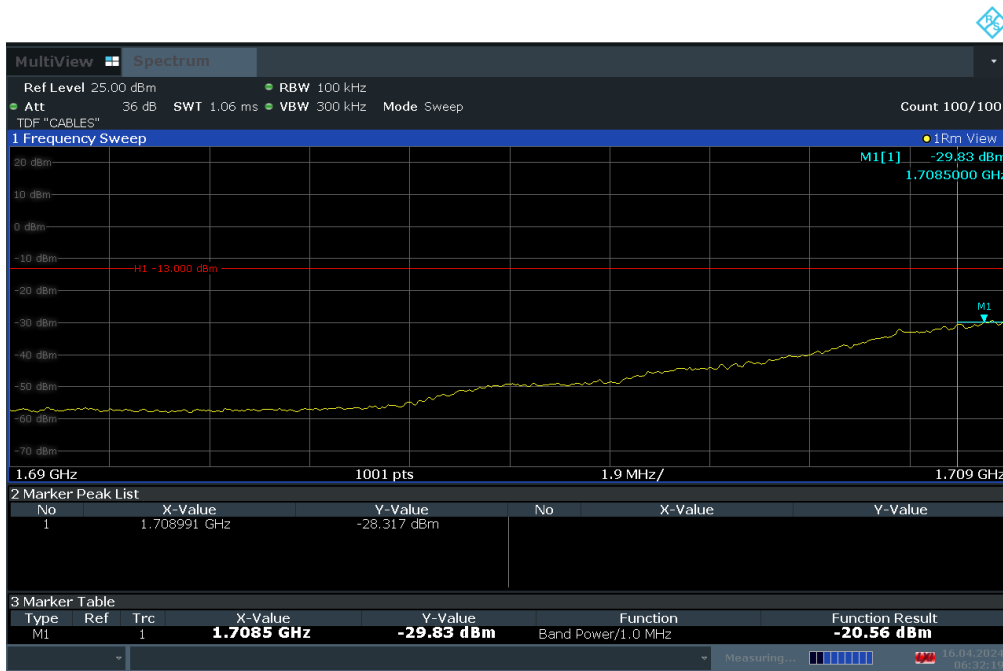
FCC ID: BCG-A3001	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1C2405230021-05.BCG	Test Dates: 04/11/2024 - 08/01/2024	EUT Type: Watch	Page 67 of 123

V2.2 09/07/2023



06:32:37 16.04.2024

Plot 7-99. Lower Band Edge Plot (LTE Band 4 - 5MHz QPSK – Full RB)

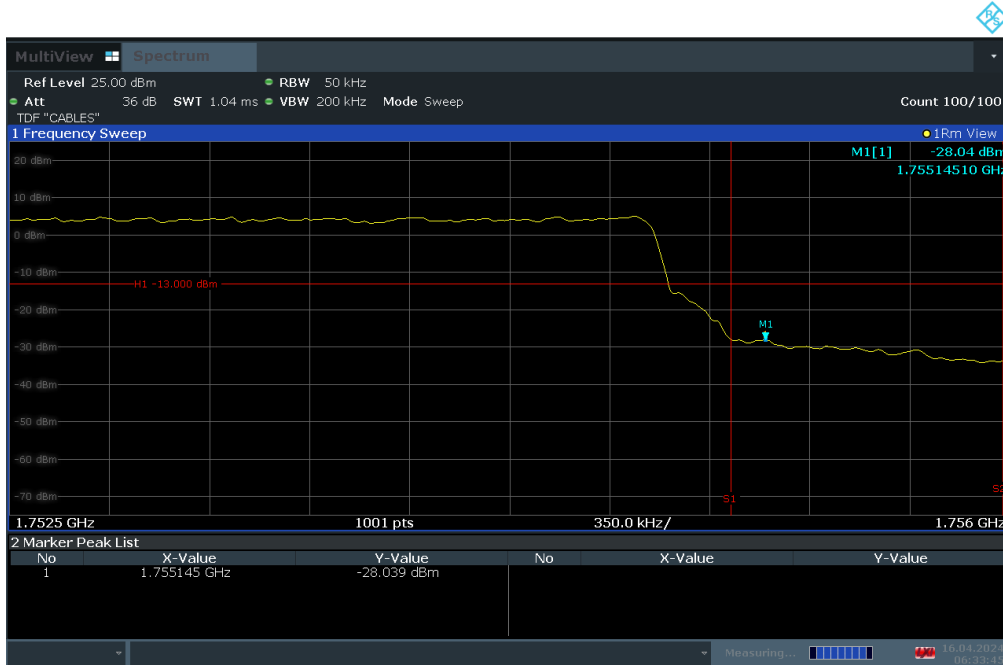


06:32:20 16.04.2024

Plot 7-100. Lower Extended Band Edge Plot (LTE Band 4 - 5MHz QPSK – Full RB)

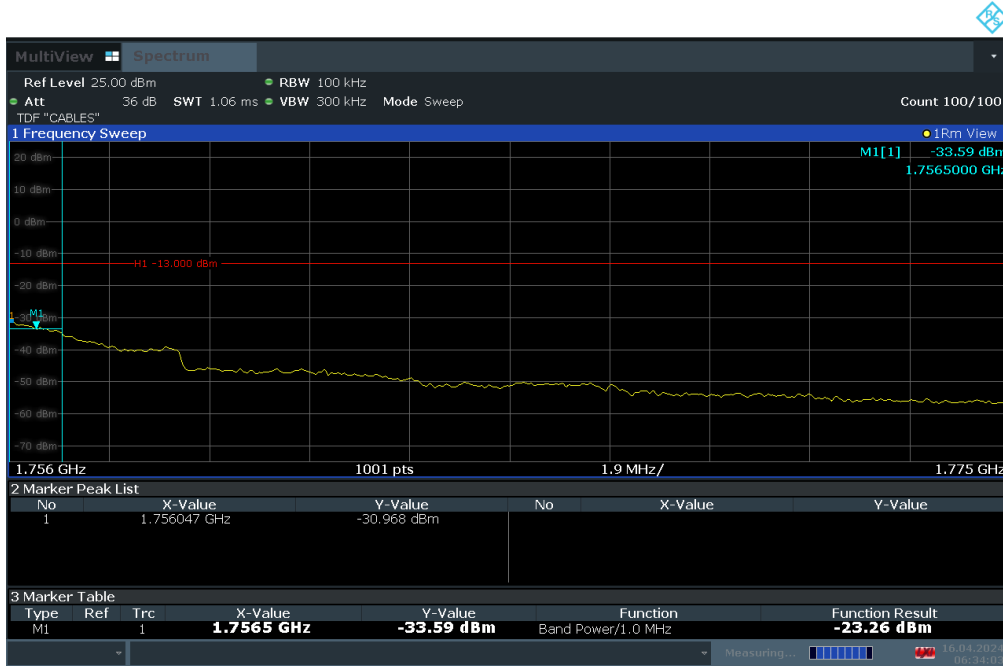
FCC ID: BCG-A3001	PART 27 MEASUREMENT REPORT	Approved by: Technical Manager
Test Report S/N: 1C2405230021-05.BCG	Test Dates: 04/11/2024 - 08/01/2024	EUT Type: Watch
		Page 68 of 123

V2.2 09/07/2023



06:33:46 16.04.2024

Plot 7-101. Upper Band Edge Plot (LTE Band 4 - 5MHz QPSK – Full RB)

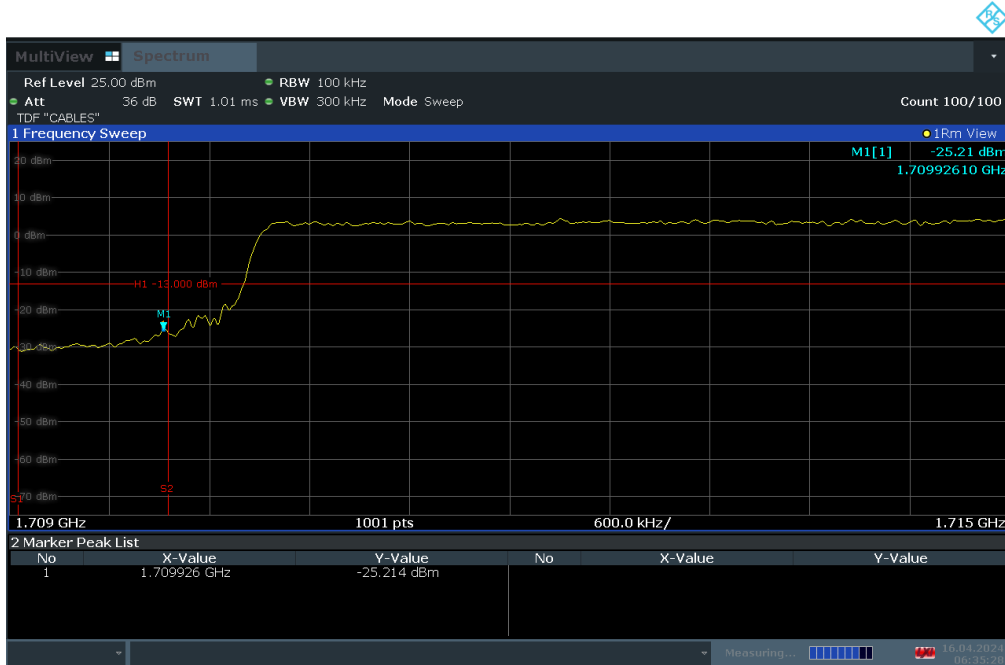


06:34:03 16.04.2024

Plot 7-102. Upper Extended Band Edge Plot (LTE Band 4 - 5MHz QPSK – Full RB)

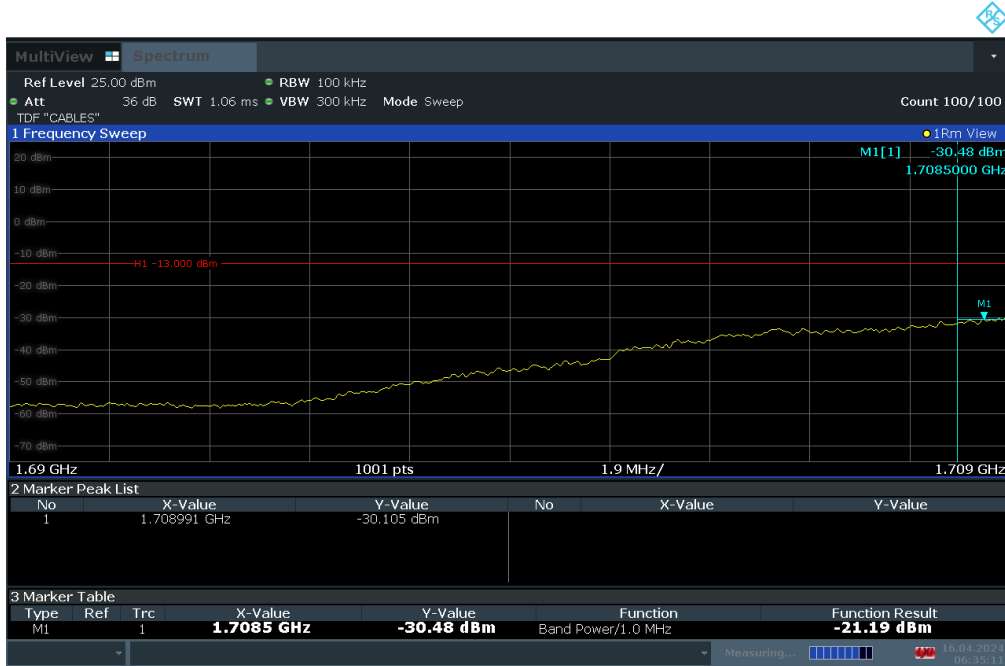
FCC ID: BCG-A3001	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1C2405230021-05.BCG	Test Dates: 04/11/2024 - 08/01/2024	EUT Type: Watch	Page 69 of 123

V2.2 09/07/2023



06:35:29 16.04.2024

Plot 7-103. Lower Band Edge Plot (LTE Band 4 - 10MHz QPSK – Full RB)

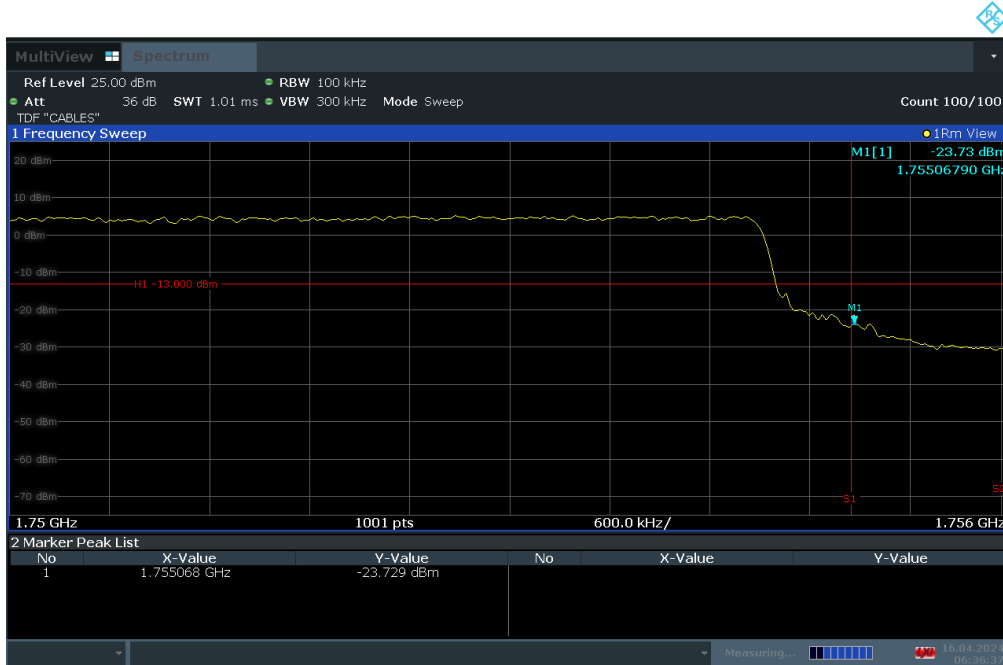


06:35:11 16.04.2024

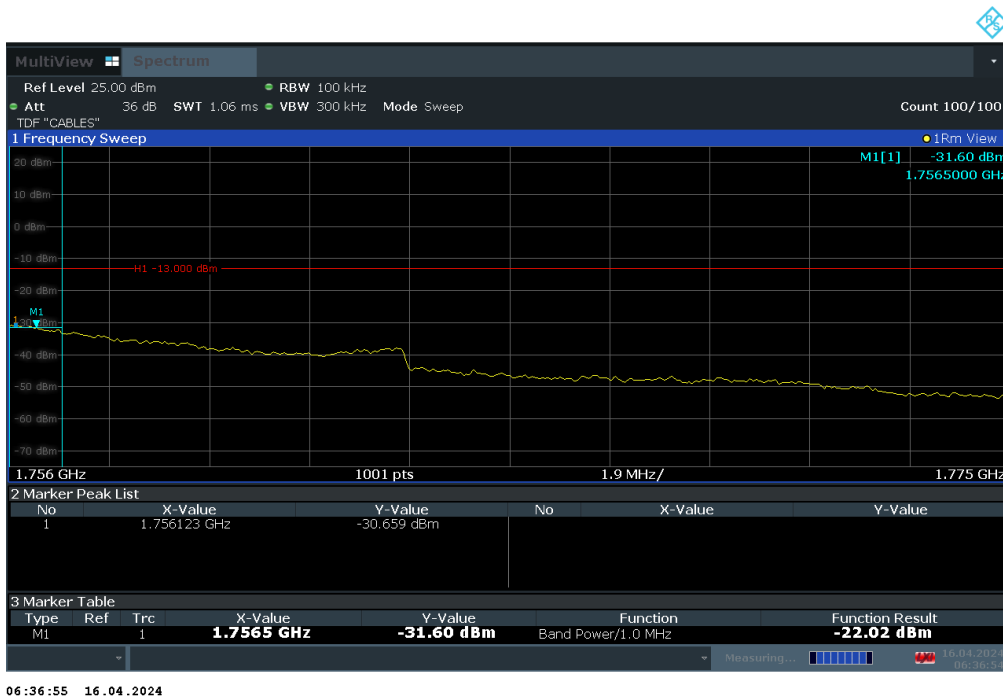
Plot 7-104. Lower Extended Band Edge Plot (LTE Band 4 - 10MHz QPSK – Full RB)

FCC ID: BCG-A3001	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1C2405230021-05.BCG	Test Dates: 04/11/2024 - 08/01/2024	EUT Type: Watch	Page 70 of 123

V2.2 09/07/2023

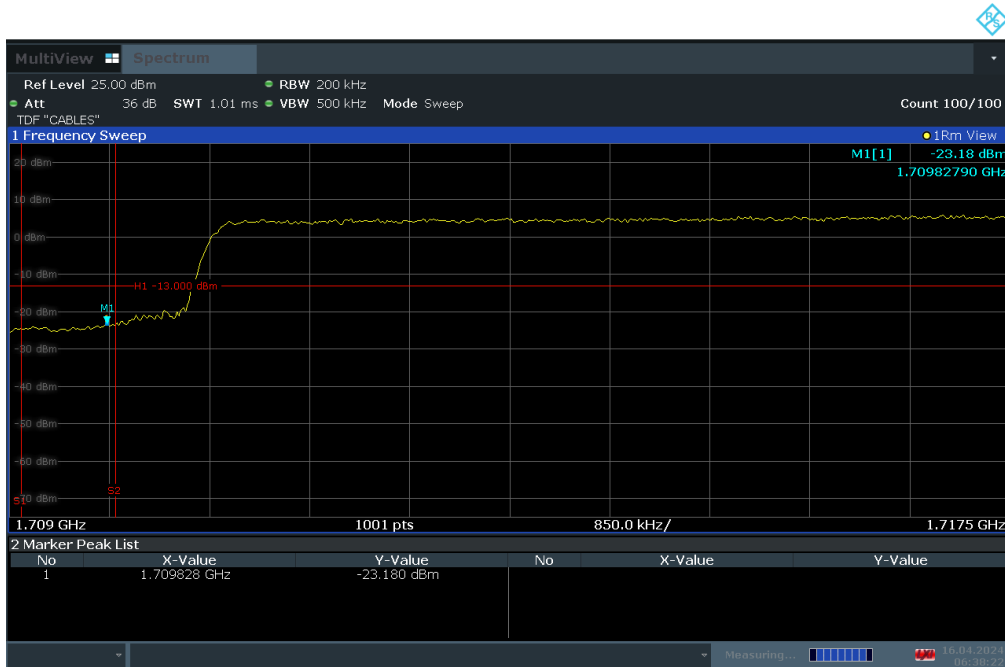


Plot 7-105. Upper Band Edge Plot (LTE Band 4 - 10MHz QPSK – Full RB)



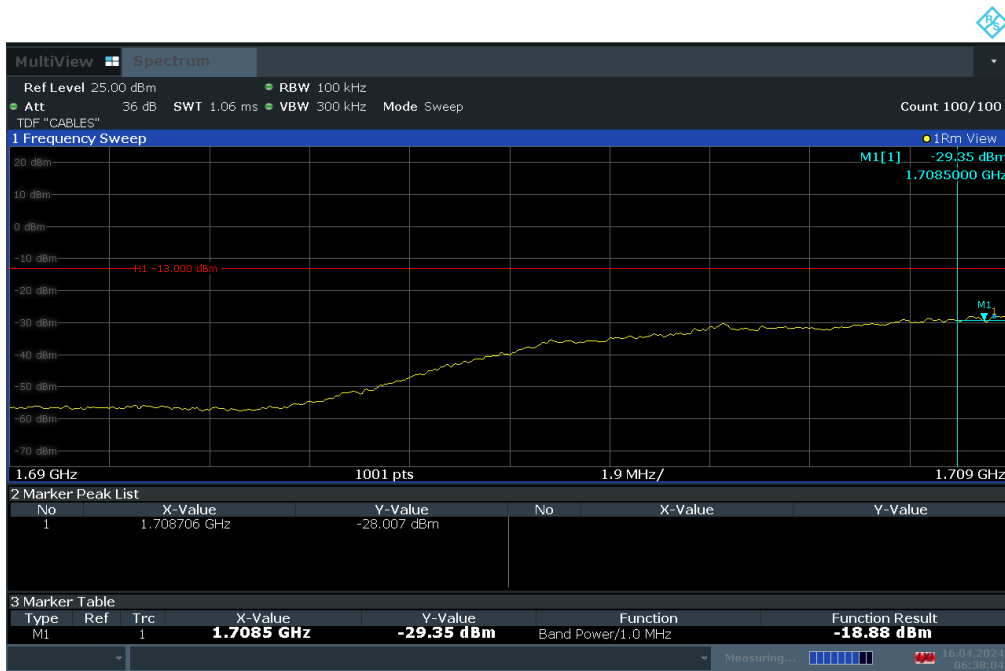
Plot 7-106. Upper Extended Band Edge Plot (LTE Band 4 - 10MHz QPSK – Full RB)

FCC ID: BCG-A3001			PART 27 MEASUREMENT REPORT	Approved by: Technical Manager
Test Report S/N: 1C2405230021-05.BCG	Test Dates: 04/11/2024 - 08/01/2024	EUT Type: Watch		Page 71 of 123



06:38:23 16.04.2024

Plot 7-107. Lower Band Edge Plot (LTE Band 4 - 15MHz QPSK – Full RB)

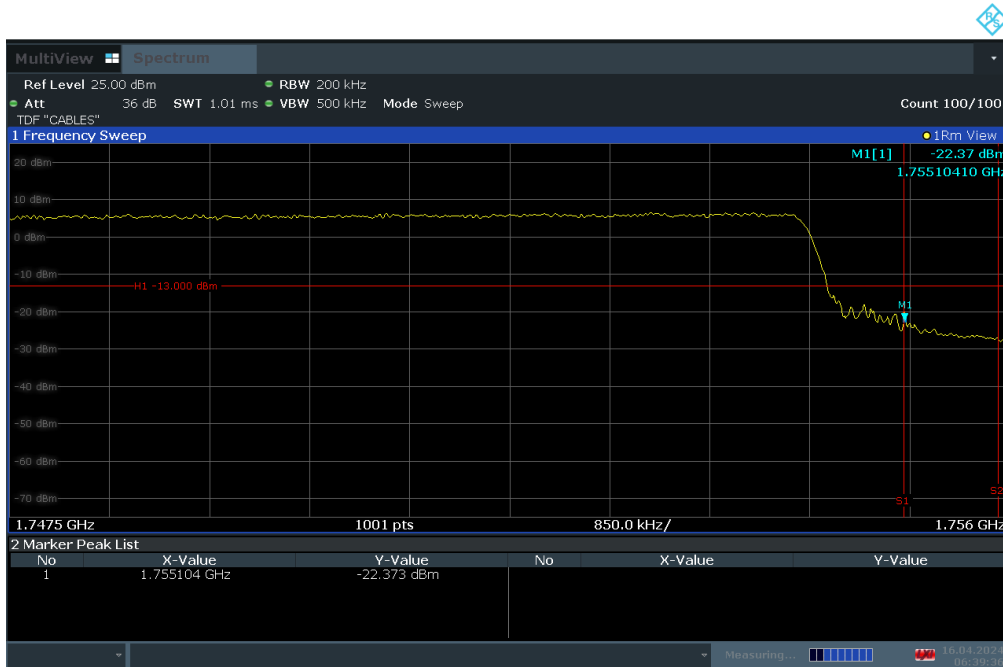


06:38:05 16.04.2024

Plot 7-108. Lower Extended Band Edge Plot (LTE Band 4 - 15MHz QPSK – Full RB)

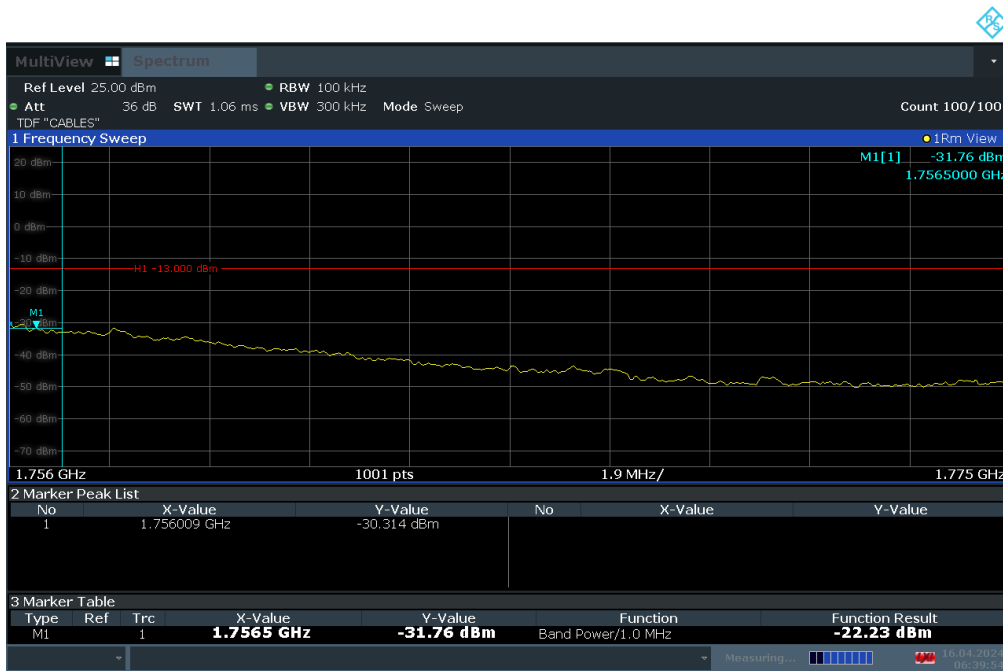
FCC ID: BCG-A3001	PART 27 MEASUREMENT REPORT	Approved by: Technical Manager
Test Report S/N: 1C2405230021-05.BCG	Test Dates: 04/11/2024 - 08/01/2024	EUT Type: Watch
		Page 72 of 123

V2.2 09/07/2023



06:39:37 16.04.2024

Plot 7-109. Upper Band Edge Plot (LTE Band 4 - 15MHz QPSK – Full RB)

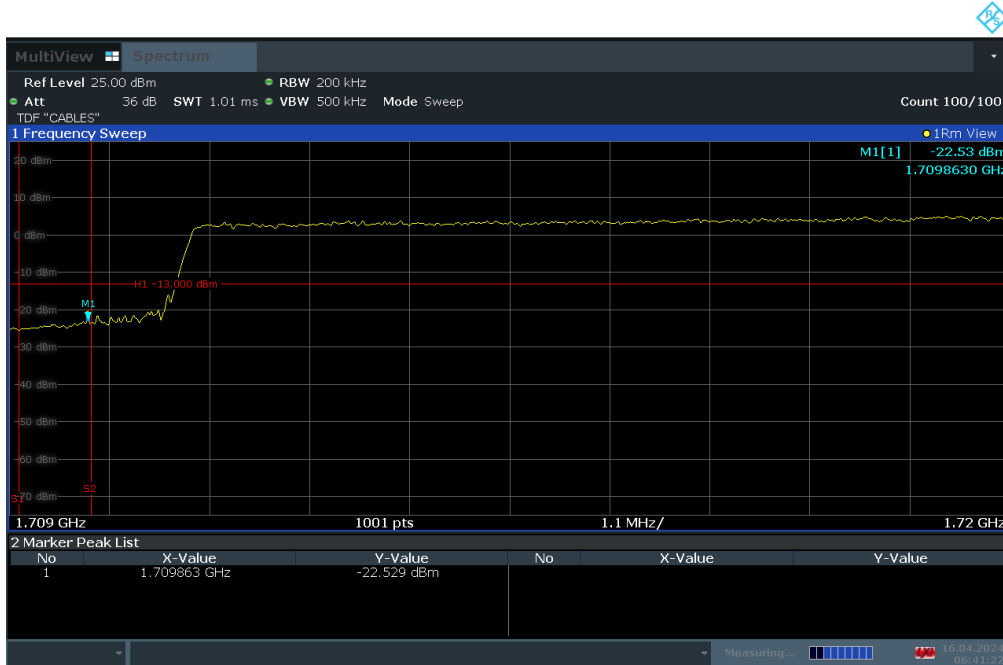


06:39:55 16.04.2024

Plot 7-110. Upper Extended Band Edge Plot (LTE Band 4 - 15MHz QPSK – Full RB)

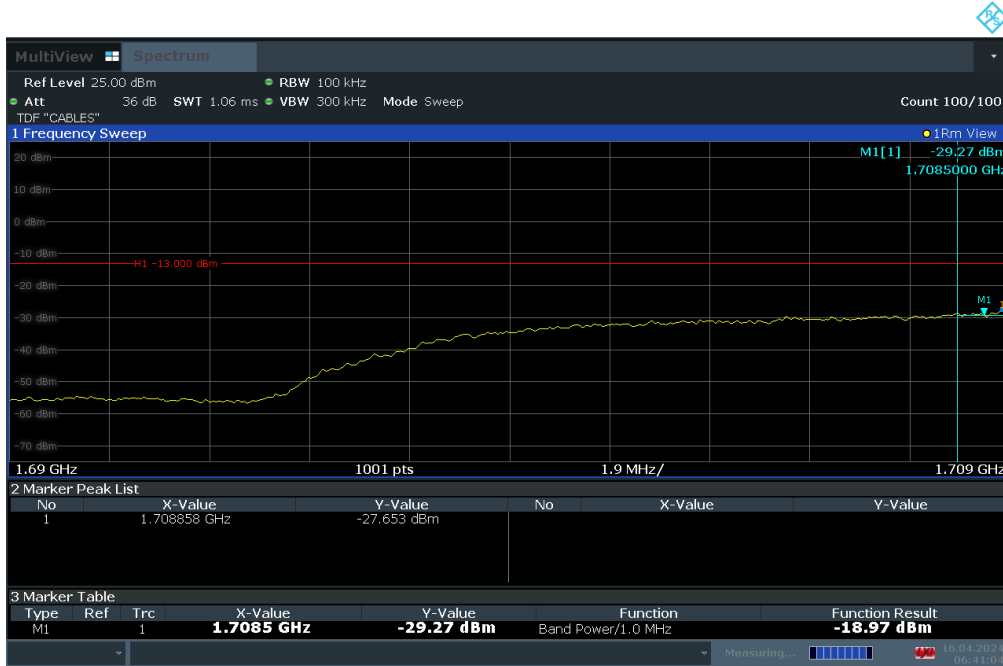
FCC ID: BCG-A3001	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1C2405230021-05.BCG	Test Dates: 04/11/2024 - 08/01/2024	EUT Type: Watch	Page 73 of 123

V2.2 09/07/2023



06:41:23 16.04.2024

Plot 7-111. Lower Band Edge Plot (LTE Band 4 - 20MHz QPSK – Full RB)

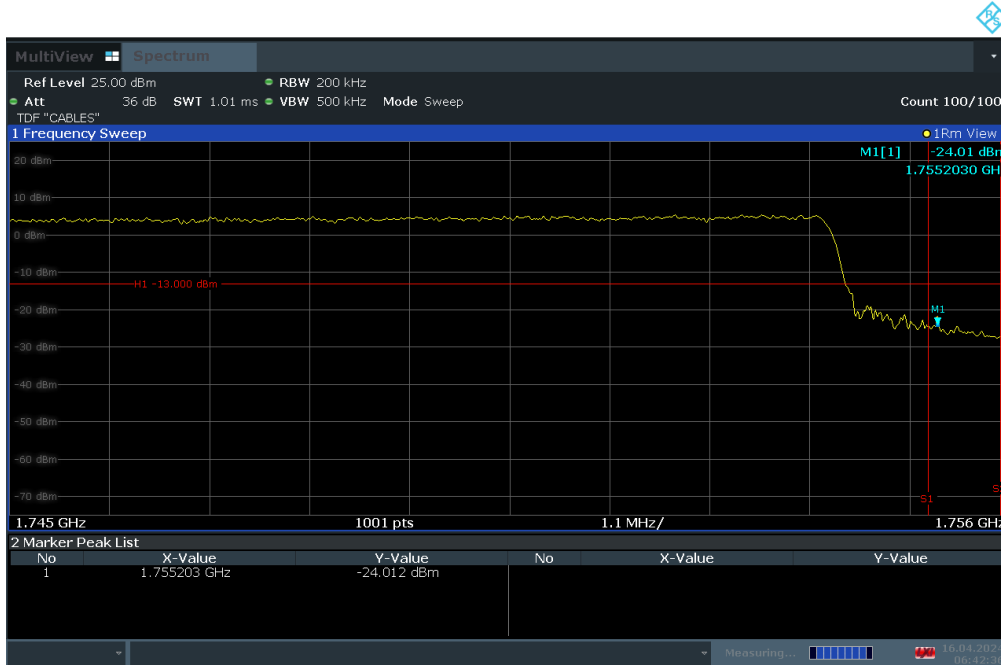


06:41:05 16.04.2024

Plot 7-112. Lower Extended Band Edge Plot (LTE Band 4 - 20MHz QPSK – Full RB)

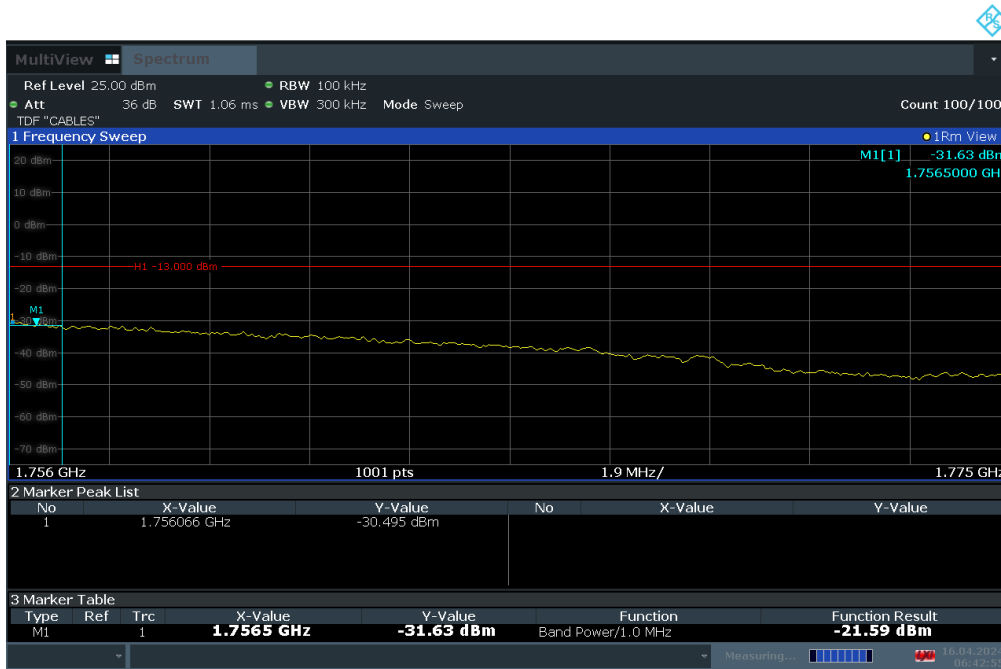
FCC ID: BCG-A3001	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1C2405230021-05.BCG	Test Dates: 04/11/2024 - 08/01/2024	EUT Type: Watch	Page 74 of 123

V2.2 09/07/2023



06:42:37 16.04.2024

Plot 7-113. Upper Band Edge Plot (LTE Band 4 - 20MHz QPSK – Full RB)

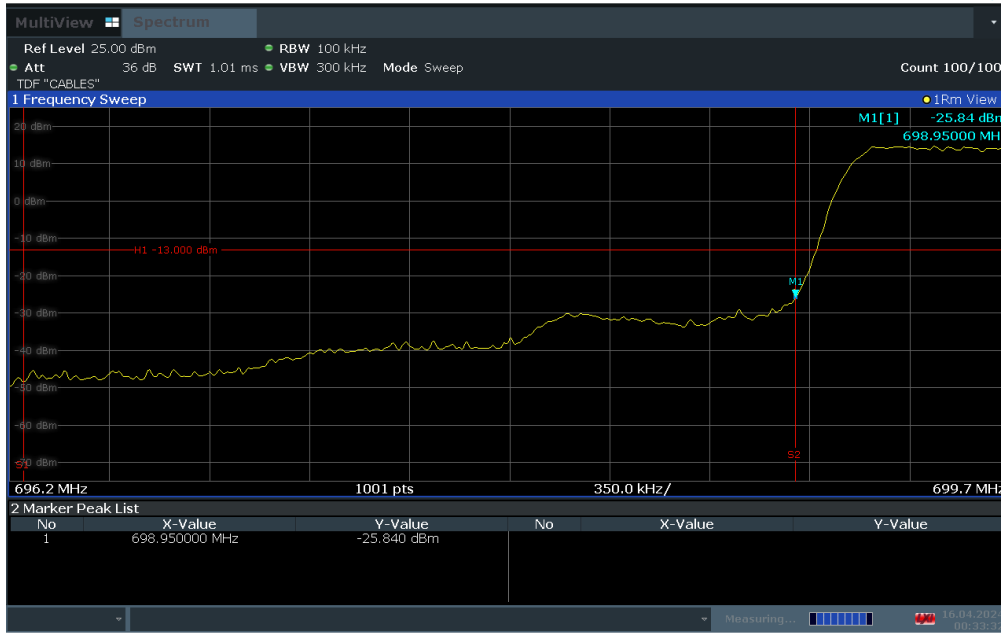


06:42:56 16.04.2024

Plot 7-114. Upper Extended Band Edge Plot (LTE Band 4 - 20MHz QPSK – Full RB)

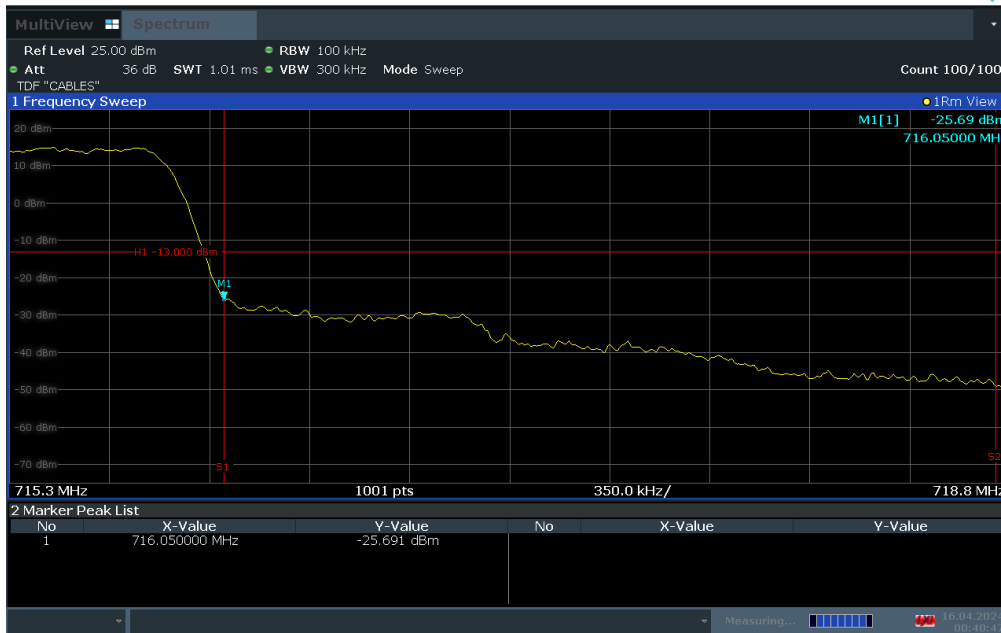
FCC ID: BCG-A3001	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1C2405230021-05.BCG	Test Dates: 04/11/2024 - 08/01/2024	EUT Type: Watch	Page 75 of 123

V2.2 09/07/2023



00:33:32 16.04.2024

Plot 7-115. Lower Band Edge Plot (LTE Band 12 – 1.4MHz QPSK – Full RB)

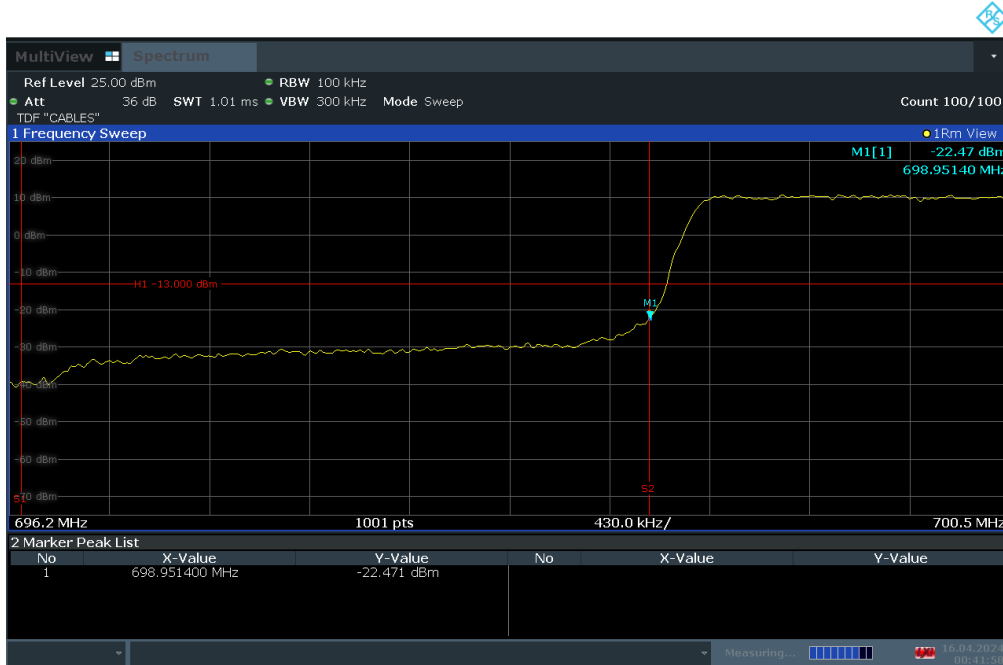


00:40:48 16.04.2024

Plot 7-116. Upper Band Edge Plot (LTE Band 12 – 1.4MHz QPSK – Full RB)

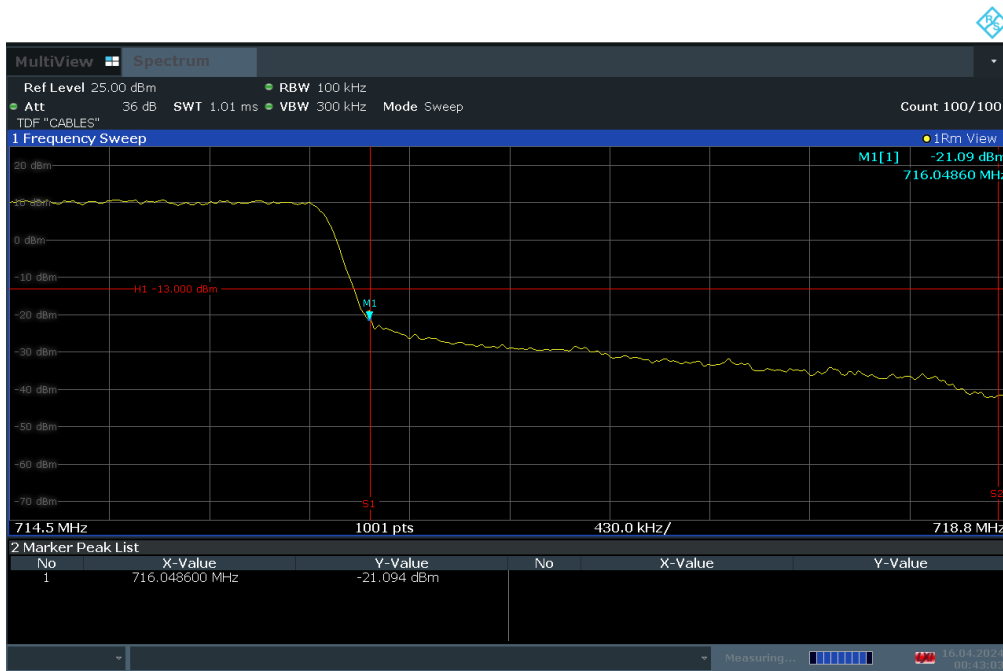
FCC ID: BCG-A3001	PART 27 MEASUREMENT REPORT	Approved by: Technical Manager
Test Report S/N: 1C2405230021-05.BCG	Test Dates: 04/11/2024 - 08/01/2024	EUT Type: Watch
		Page 76 of 123

V2.2 09/07/2023



00:41:58 16.04.2024

Plot 7-117. Lower Band Edge Plot (LTE Band 12 - 3MHz QPSK – Full RB)

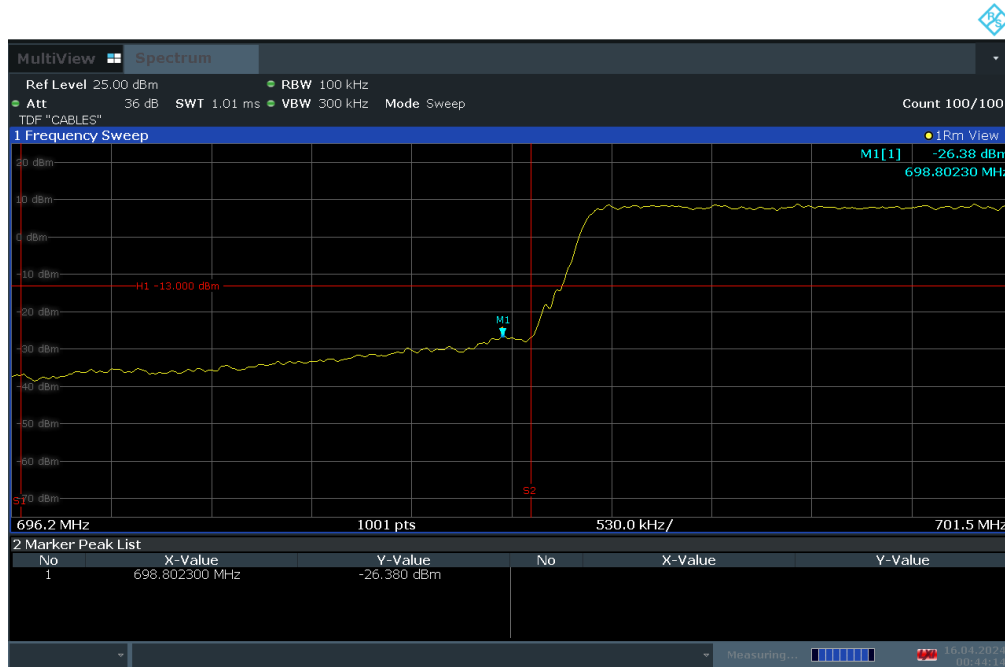


00:43:04 16.04.2024

Plot 7-118. Upper Band Edge Plot (LTE Band 12 - 3MHz QPSK – Full RB)

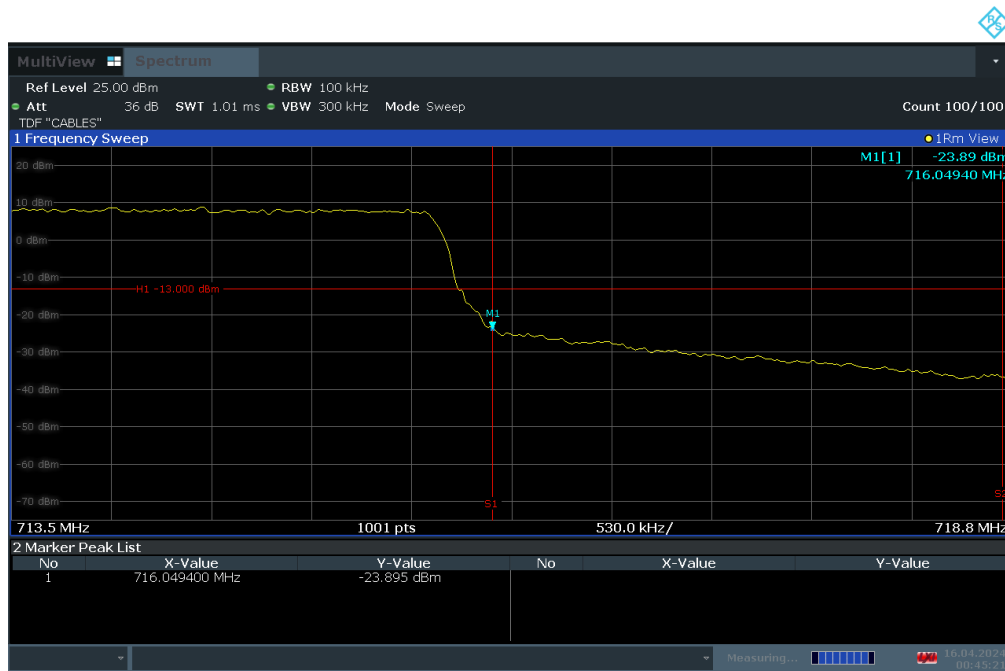
FCC ID: BCG-A3001	PART 27 MEASUREMENT REPORT	Approved by: Technical Manager
Test Report S/N: 1C2405230021-05.BCG	Test Dates: 04/11/2024 - 08/01/2024	EUT Type: Watch
		Page 77 of 123

V2.2 09/07/2023



00:44:15 16.04.2024

Plot 7-119. Lower Band Edge Plot (LTE Band 12 - 5MHz QPSK – Full RB)

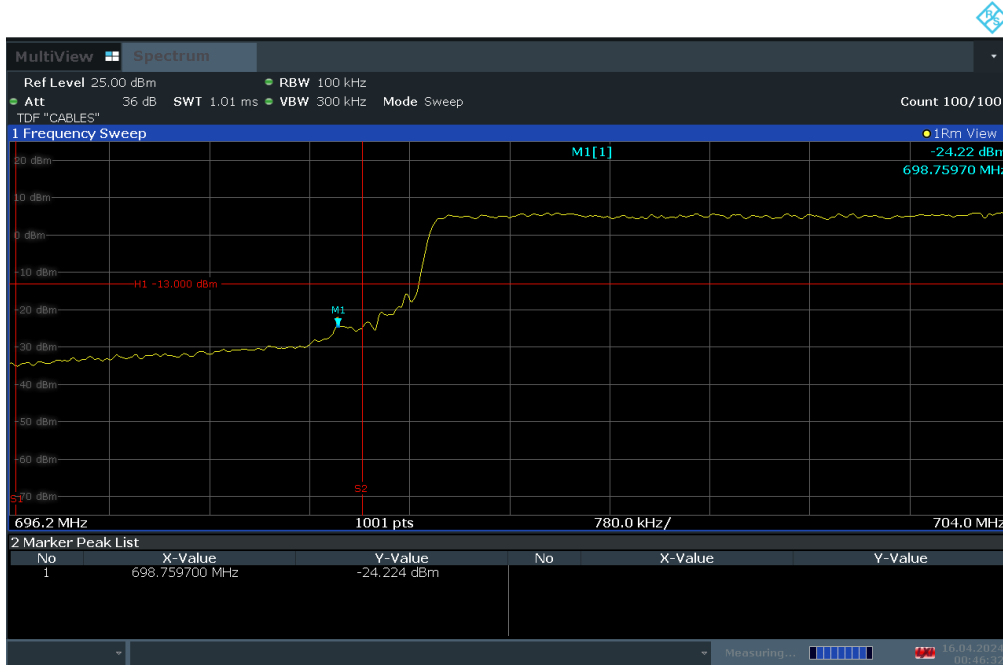


00:45:21 16.04.2024

Plot 7-120. Upper Band Edge Plot (LTE Band 12 - 5MHz QPSK – Full RB)

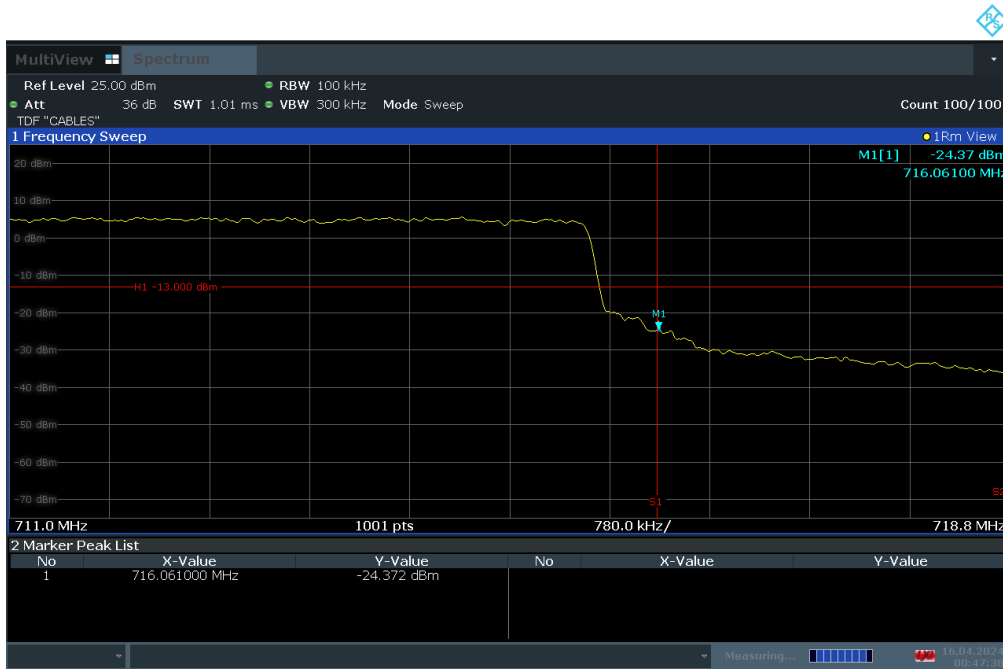
FCC ID: BCG-A3001	PART 27 MEASUREMENT REPORT	Approved by: Technical Manager
Test Report S/N: 1C2405230021-05.BCG	Test Dates: 04/11/2024 - 08/01/2024	EUT Type: Watch
		Page 78 of 123

V2.2 09/07/2023



00:46:33 16.04.2024

Plot 7-121. Lower Band Edge Plot (LTE Band 12 - 10MHz QPSK – Full RB)

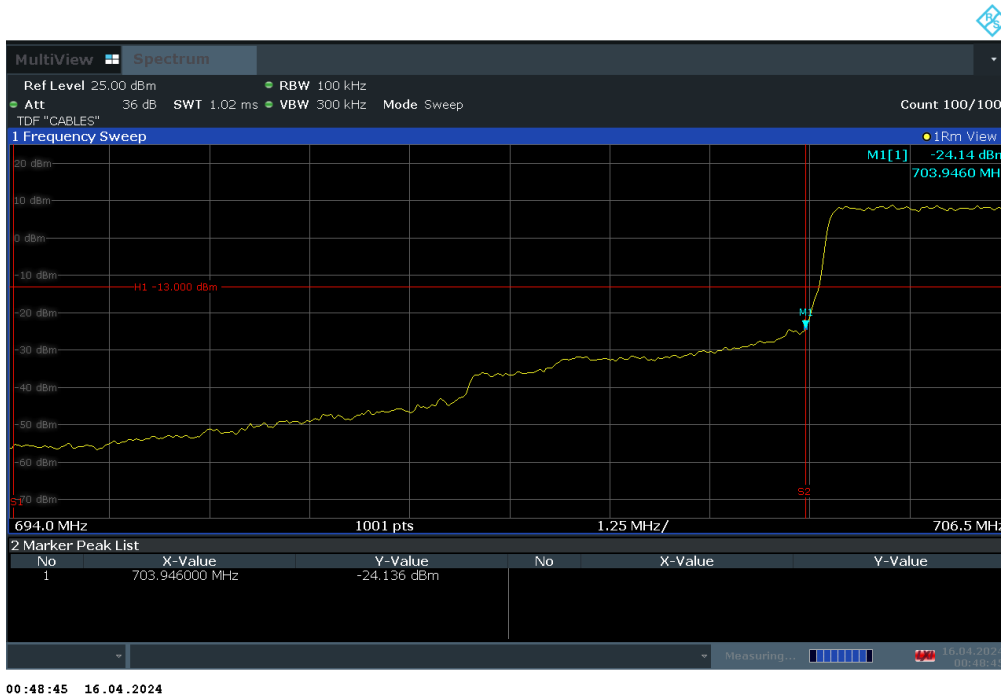


00:47:39 16.04.2024

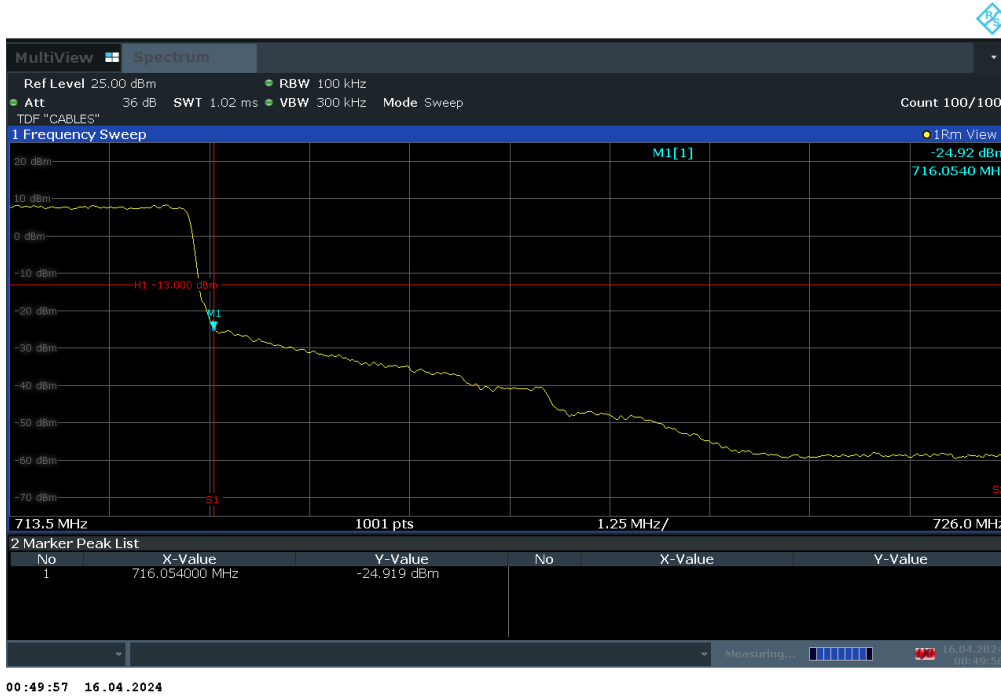
Plot 7-122. Upper Band Edge Plot (LTE Band 12 - 10MHz QPSK – Full RB)

FCC ID: BCG-A3001	PART 27 MEASUREMENT REPORT	Approved by: Technical Manager
Test Report S/N: 1C2405230021-05.BCG	Test Dates: 04/11/2024 - 08/01/2024	EUT Type: Watch
		Page 79 of 123

V2.2 09/07/2023

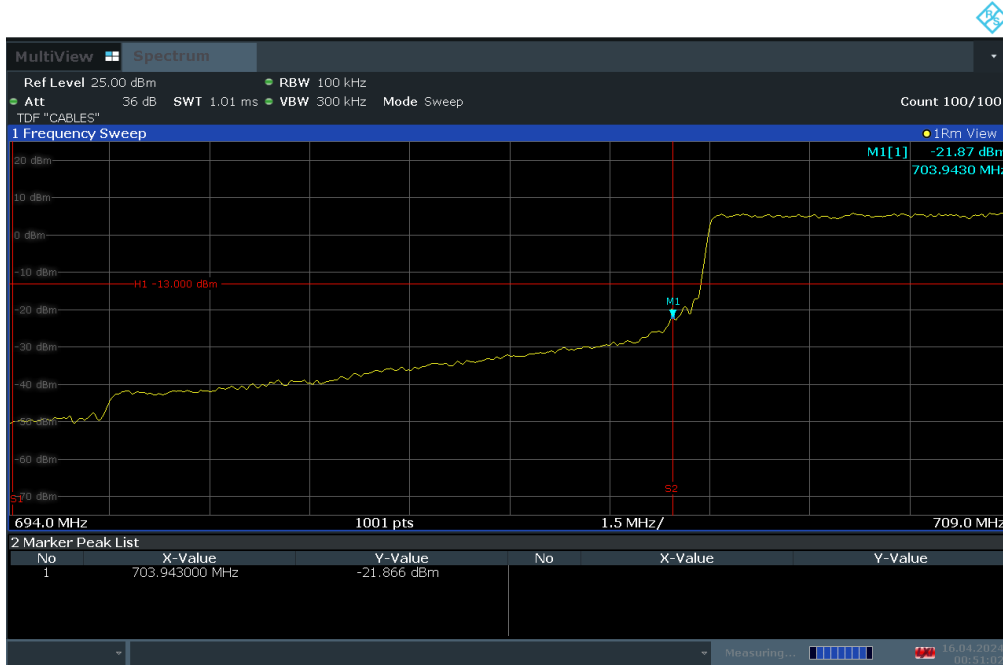


Plot 7-123. Lower Band Edge Plot (LTE Band 17 - 5MHz QPSK – Full RB)



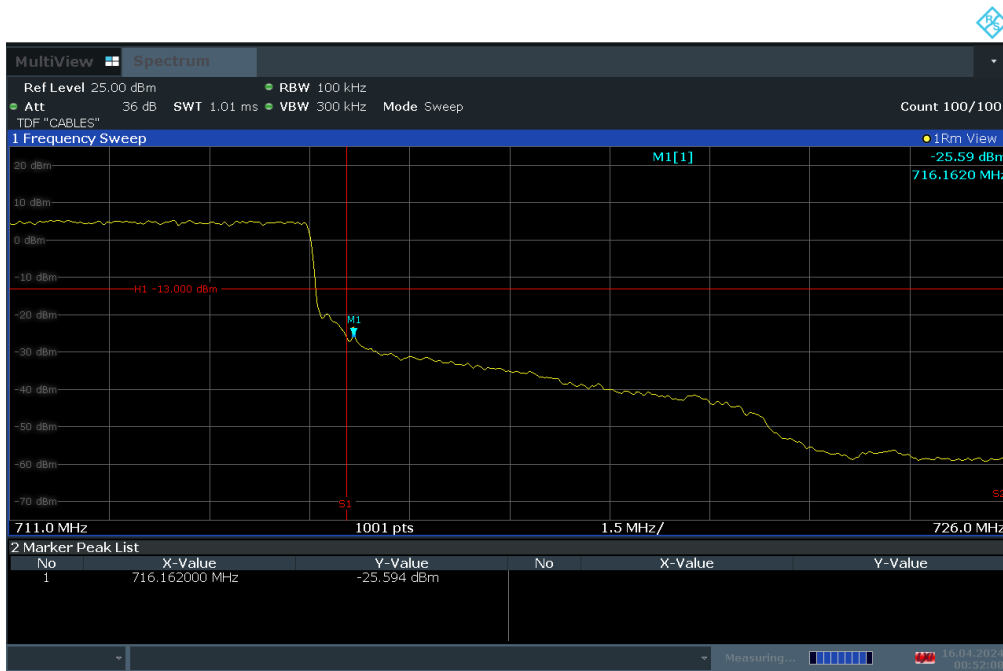
Plot 7-124. Upper Band Edge Plot (LTE Band 17 - 5MHz QPSK – Full RB)

FCC ID: BCG-A3001	PART 27 MEASUREMENT REPORT	Approved by: Technical Manager
Test Report S/N: 1C2405230021-05.BCG	Test Dates: 04/11/2024 - 08/01/2024	EUT Type: Watch
		Page 80 of 123



00:51:03 16.04.2024

Plot 7-125. Lower Band Edge Plot (LTE Band 17 - 10MHz QPSK – Full RB)

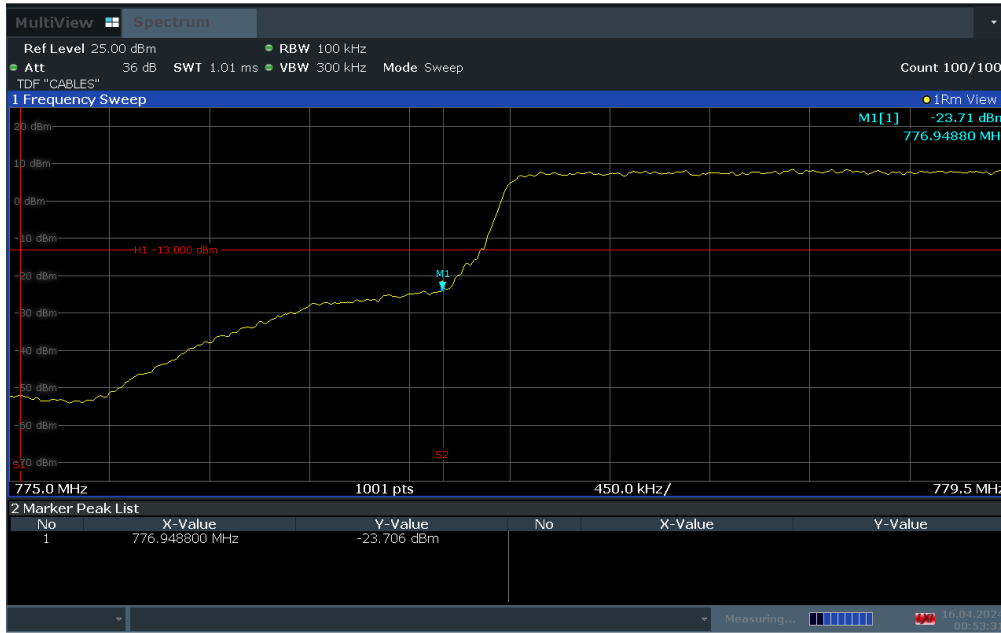


00:52:09 16.04.2024

Plot 7-126. Upper Band Edge Plot (LTE Band 17 - 10MHz QPSK – Full RB)

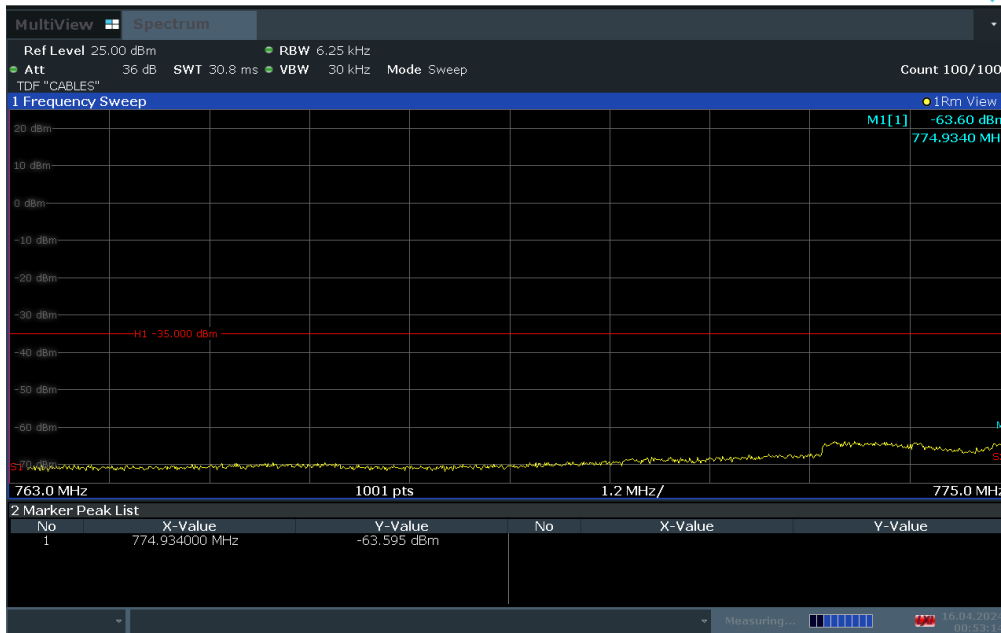
FCC ID: BCG-A3001	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1C2405230021-05.BCG	Test Dates: 04/11/2024 - 08/01/2024	EUT Type: Watch	Page 81 of 123

V2.2 09/07/2023



00:53:32 16.04.2024

Plot 7-127. Lower Band Edge Plot (LTE Band 13 - 5MHz QPSK – Full RB)

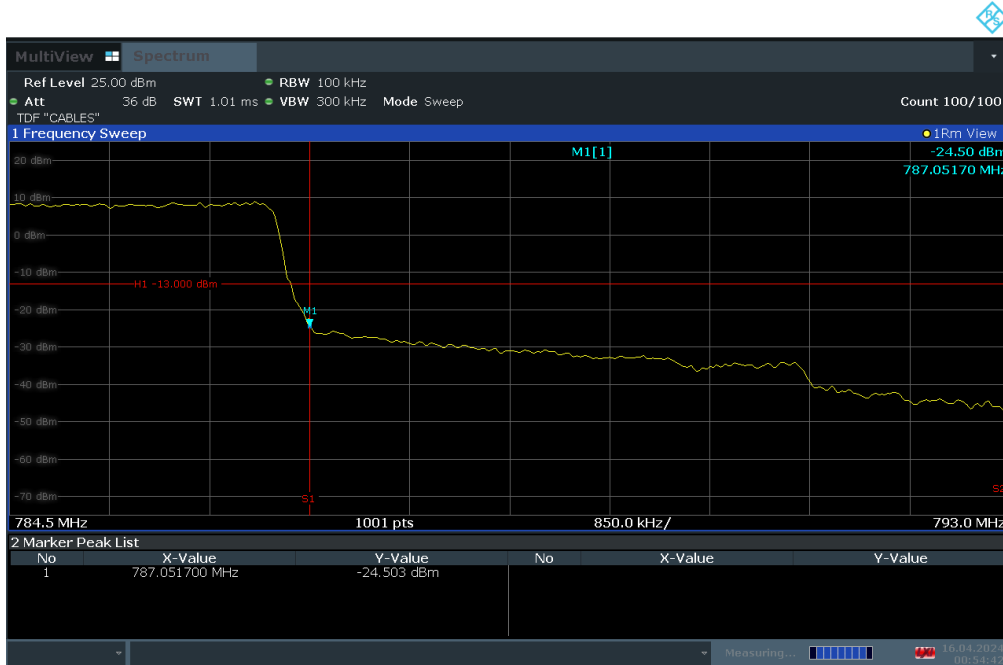


00:53:15 16.04.2024

Plot 7-128. Lower Emission Mask Plot (LTE Band 13 - 5MHz QPSK – Full RB)

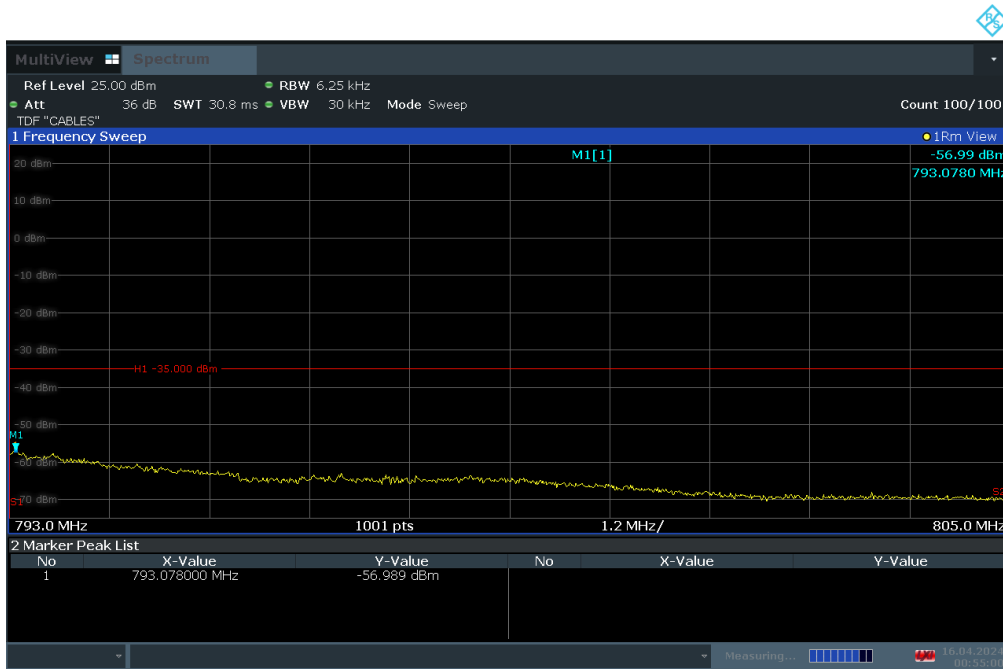
FCC ID: BCG-A3001	PART 27 MEASUREMENT REPORT	Approved by: Technical Manager
Test Report S/N: 1C2405230021-05.BCG	Test Dates: 04/11/2024 - 08/01/2024	EUT Type: Watch
		Page 82 of 123

V2.2 09/07/2023



00:54:42 16.04.2024

Plot 7-129. Upper Band Edge Plot (LTE Band 13 - 5MHz QPSK – Full RB)

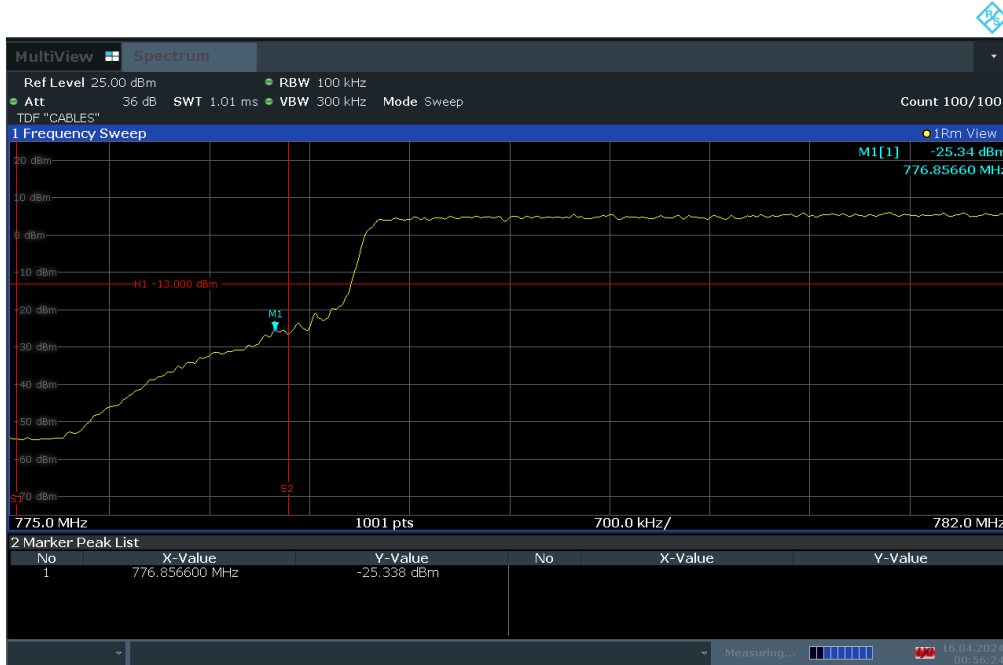


00:55:00 16.04.2024

Plot 7-130. Upper Emission Mask Plot (LTE Band 13 - 5MHz QPSK – Full RB)

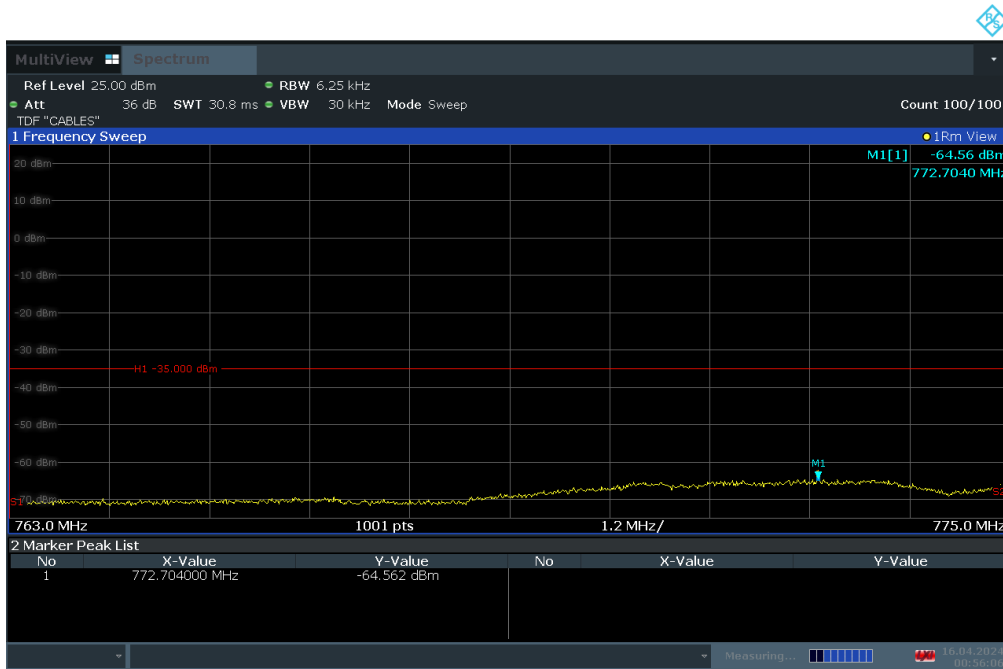
FCC ID: BCG-A3001	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1C2405230021-05.BCG	Test Dates: 04/11/2024 - 08/01/2024	EUT Type: Watch	Page 83 of 123

V2.2 09/07/2023



00:56:24 16.04.2024

Plot 7-131. Lower Band Edge Plot (LTE Band 13 - 10MHz QPSK – Full RB)

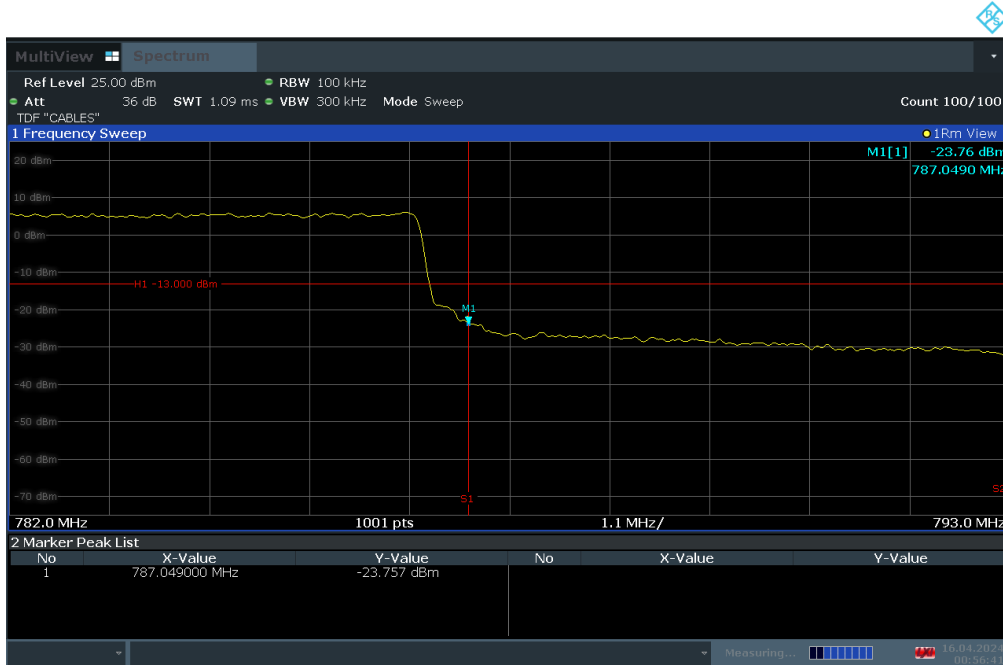


00:56:06 16.04.2024

Plot 7-132. Lower Emission Mask Plot (LTE Band 13 - 10MHz QPSK – Full RB)

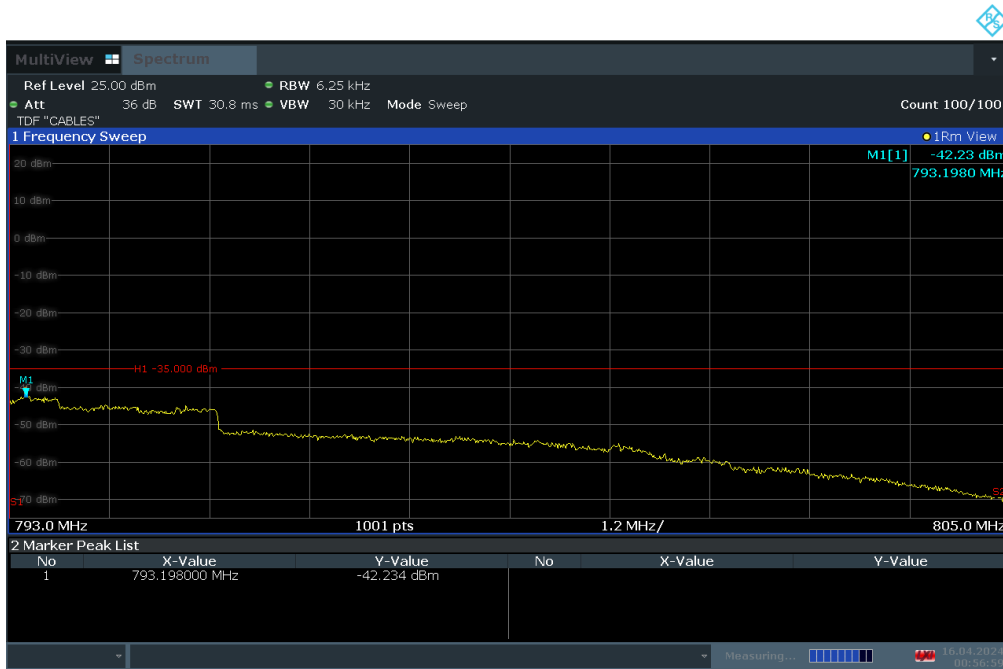
FCC ID: BCG-A3001	PART 27 MEASUREMENT REPORT	Approved by: Technical Manager
Test Report S/N: 1C2405230021-05.BCG	Test Dates: 04/11/2024 - 08/01/2024	EUT Type: Watch
		Page 84 of 123

V2.2 09/07/2023



00:56:41 16.04.2024

Plot 7-133. Upper Band Edge Plot (LTE Band 13 - 10MHz QPSK – Full RB)



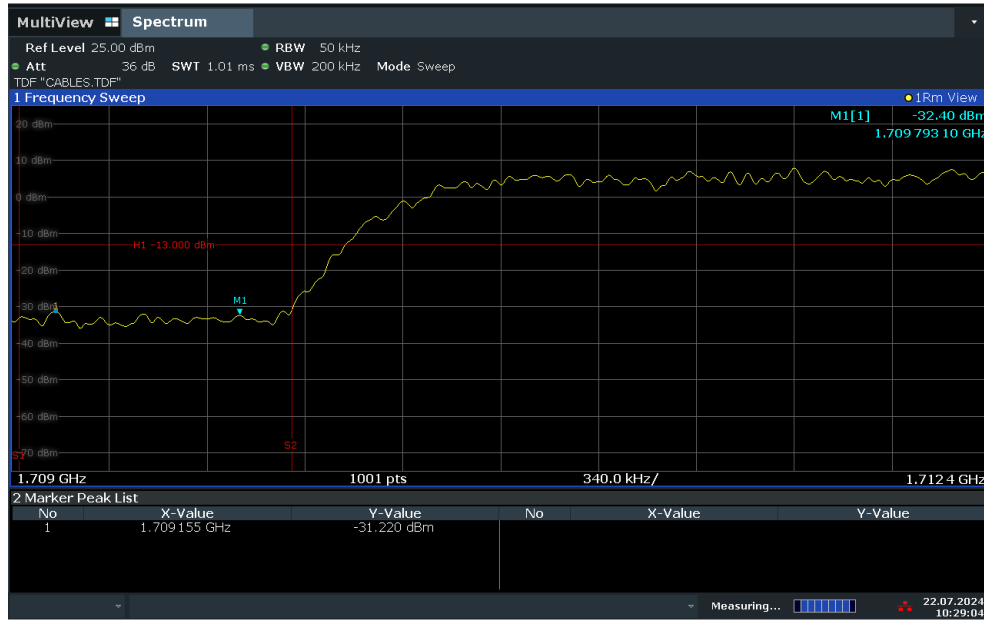
00:56:59 16.04.2024

Plot 7-134. Upper Emission Mask Plot (LTE Band 13 - 10MHz QPSK – Full RB)

FCC ID: BCG-A3001	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1C2405230021-05.BCG	Test Dates: 04/11/2024 - 08/01/2024	EUT Type: Watch	Page 85 of 123

V2.2 09/07/2023

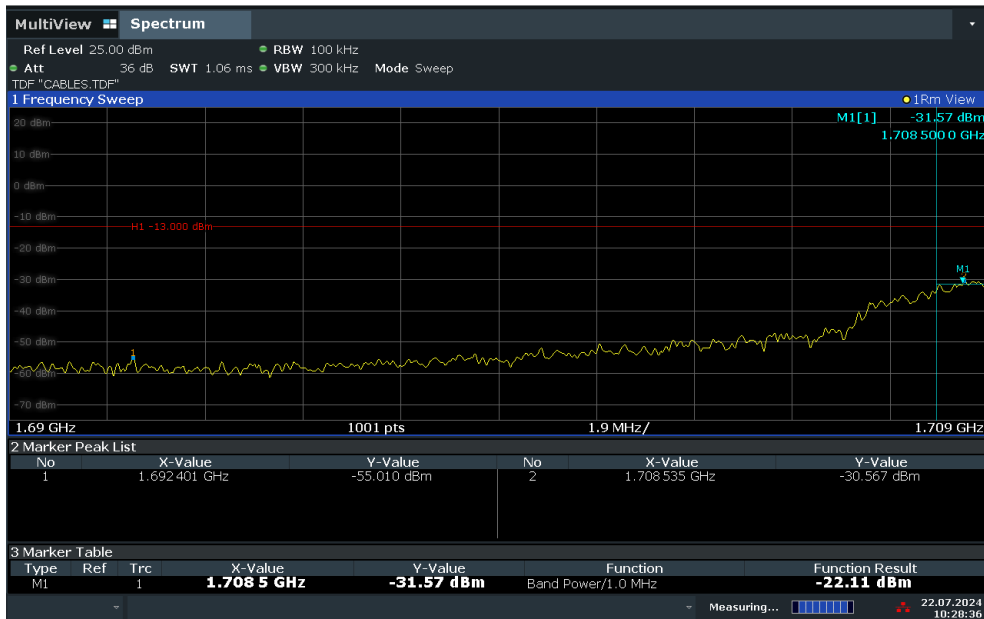
ACLRRResults



10:29:04 22.07.2024

Plot 7-135. Lower Band Edge Plot (WCDMA AWS – Ch. 1312)

ACLRRResults

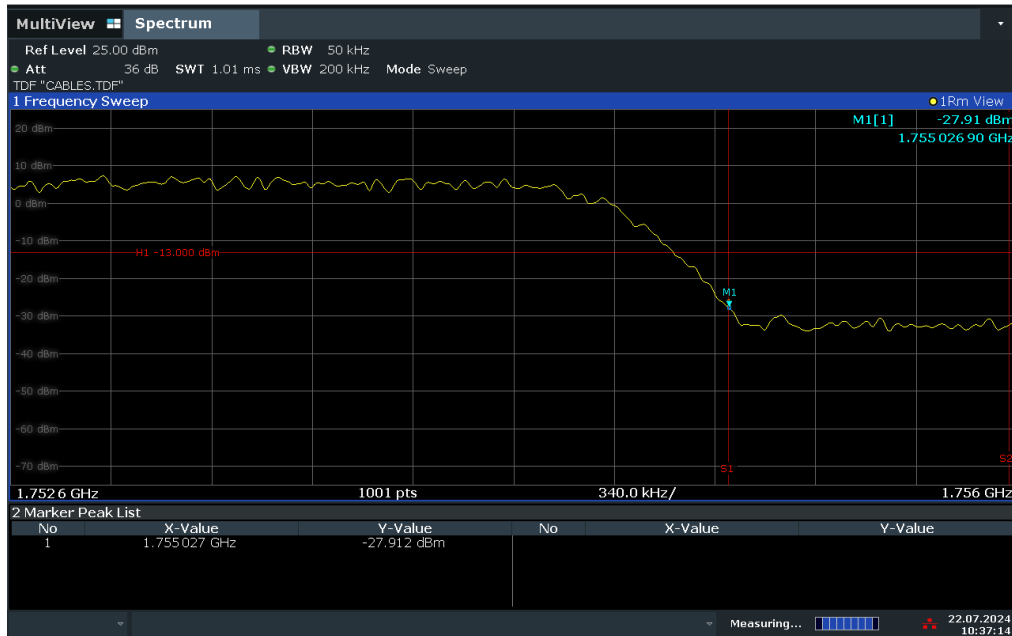


10:28:36 22.07.2024

Plot 7-136. Lower Extended Band Edge Plot (WCDMA AWS – Ch. 1312)

FCC ID: BCG-A3001	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1C2405230021-05.BCG	Test Dates: 04/11/2024 - 08/01/2024	EUT Type: Watch	Page 86 of 123

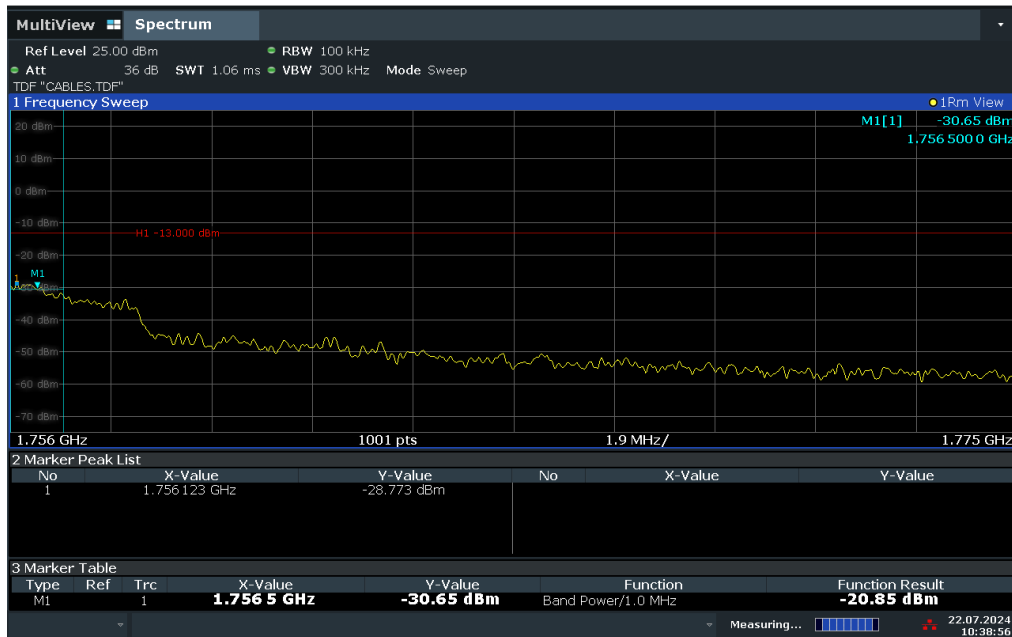
ACLRRResults



10:37:14 22.07.2024

Plot 7-137. Upper Band Edge Plot (WCDMA AWS – Ch. 1513)

ACLRRResults



10:38:57 22.07.2024

Plot 7-138. Upper Extended Band Edge Plot (WCDMA AWS – Ch. 1513)

FCC ID: BCG-A3001	PART 27 MEASUREMENT REPORT	Approved by: Technical Manager
Test Report S/N: 1C2405230021-05.BCG	Test Dates: 04/11/2024 - 08/01/2024	EUT Type: Watch
		Page 87 of 123

V2.2 09/07/2023

7.5 Peak-Average Ratio

§27.50(d)(5)

Test Overview and Limit

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.

The peak to average power ratio (PAPR) of the equipment shall not exceed 13 dB for more than 0.1% of the time.

Test Procedure Used

KDB 971168 D01 v03r01 – Section 5.7.1

Test Settings

1. The signal analyzer’s CCDF measurement profile is enabled
2. Frequency = carrier center frequency
3. Measurement BW ≥ OBW or specified reference bandwidth
4. The signal analyzer was set to collect one million samples to generate the CCDF curve
5. The measurement interval was set depending on the type of signal analyzed. For continuous signals (>98% duty cycle), the measurement interval was set to 1ms. For burst transmissions, the spectrum analyzer is set to use an internal “RF Burst” trigger that is synced with an incoming pulse and the measurement interval is set to less than the duration of the “on time” of one burst to ensure that energy is only captured during a time in which the transmitter is operating at maximum power

Test Setup

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

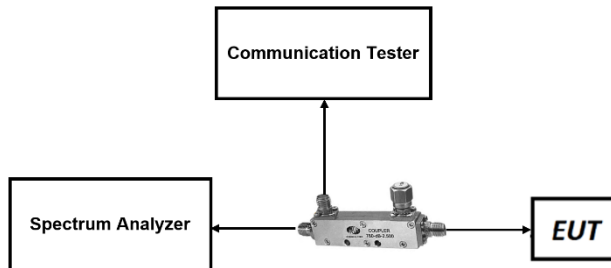



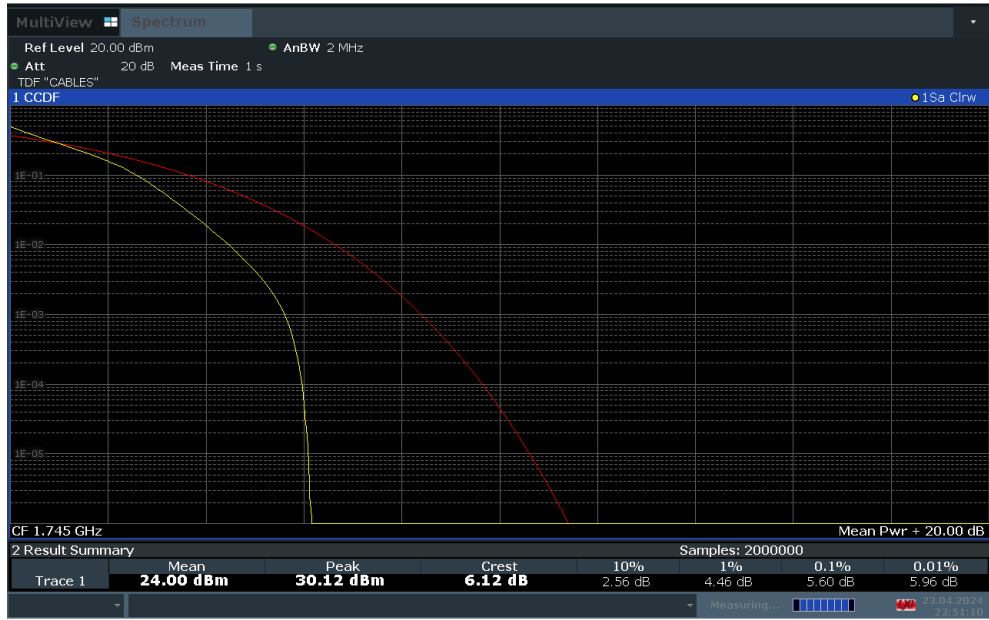
Figure 7-4. Test Instrument & Measurement Setup

Test Notes

None.

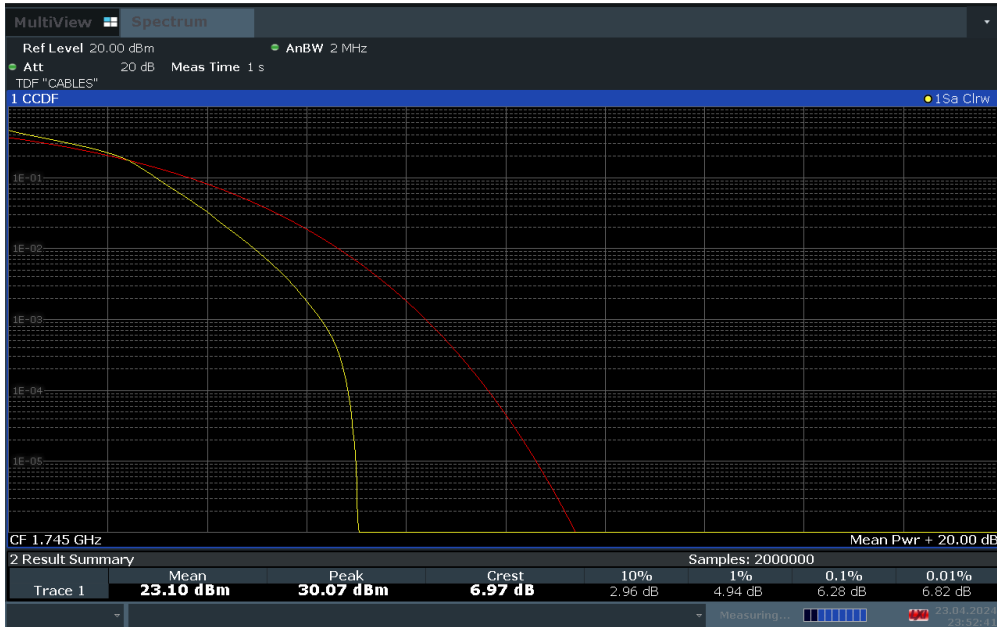
FCC ID: BCG-A3001	 PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1C2405230021-05.BCG	Test Dates: 04/11/2024 - 08/01/2024	EUT Type: Watch	Page 88 of 123

V2.2 09/07/2023



23:51:11 23.04.2024

Plot 7-139. PAR Plot (LTE Band 66 - 1.4MHz QPSK - Full RB)

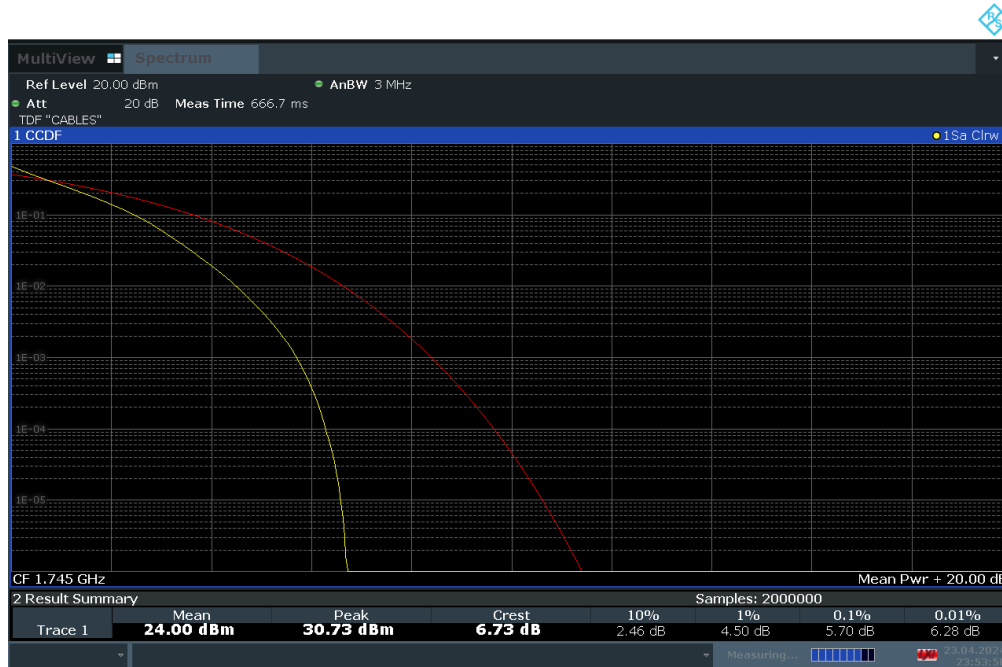


23:52:42 23.04.2024

Plot 7-140. PAR Plot (LTE Band 66 - 1.4MHz 16-QAM - Full RB)

FCC ID: BCG-A3001	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1C2405230021-05.BCG	Test Dates: 04/11/2024 - 08/01/2024	EUT Type: Watch	Page 89 of 123

V2.2 09/07/2023



23:53:59 23.04.2024

Plot 7-141. PAR Plot (LTE Band 66 - 3MHz QPSK - Full RB)



23:55:15 23.04.2024

Plot 7-142. PAR Plot (LTE Band 66 - 3MHz 16-QAM - Full RB)

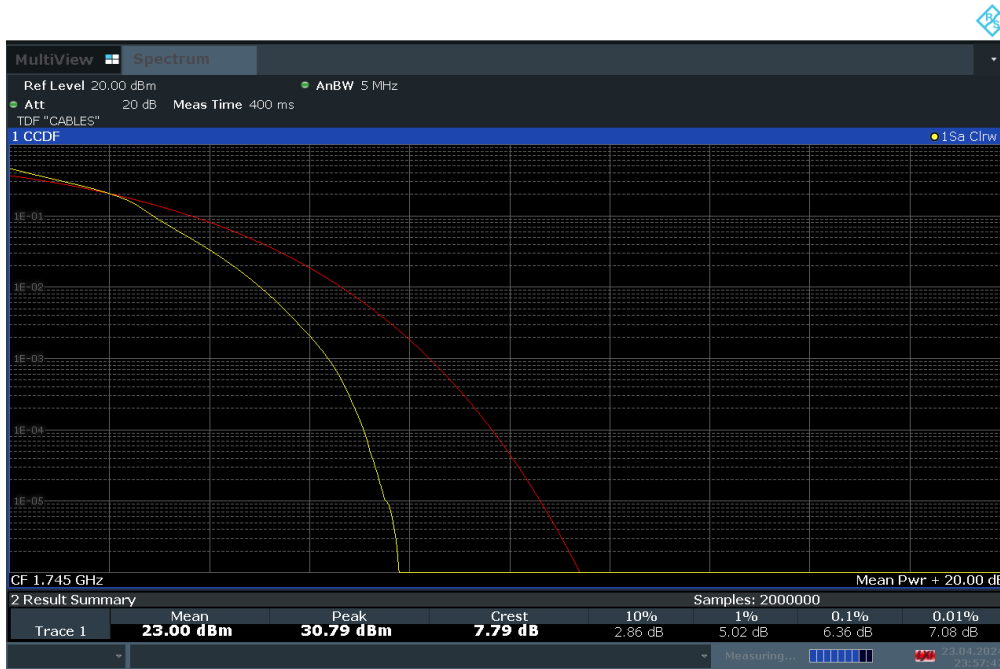
FCC ID: BCG-A3001	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1C2405230021-05.BCG	Test Dates: 04/11/2024 - 08/01/2024	EUT Type: Watch	Page 90 of 123

V2.2 09/07/2023



23:56:31 23.04.2024

Plot 7-143. PAR Plot (LTE Band 66 - 5MHz QPSK - Full RB)

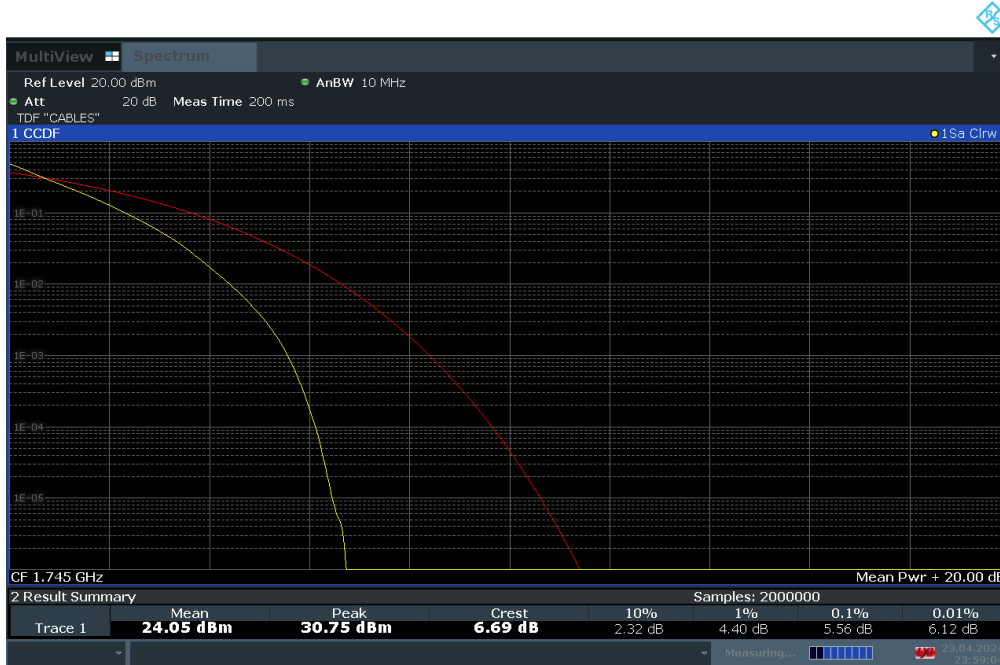


23:57:48 23.04.2024

Plot 7-144. PAR Plot (LTE Band 66 - 5MHz 16-QAM - Full RB)

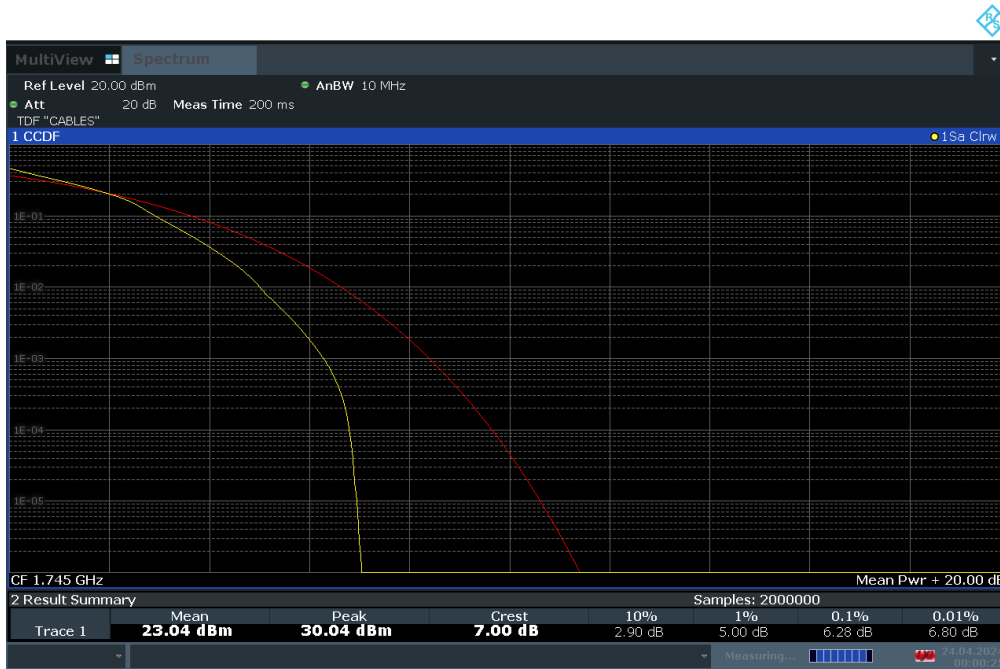
FCC ID: BCG-A3001	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1C2405230021-05.BCG	Test Dates: 04/11/2024 - 08/01/2024	EUT Type: Watch	Page 91 of 123

V2.2 09/07/2023



23:59:04 23.04.2024

Plot 7-145. PAR Plot (LTE Band 66 - 10MHz QPSK - Full RB)



00:00:26 24.04.2024

Plot 7-146. PAR Plot (LTE Band 66 - 10MHz 16-QAM - Full RB)

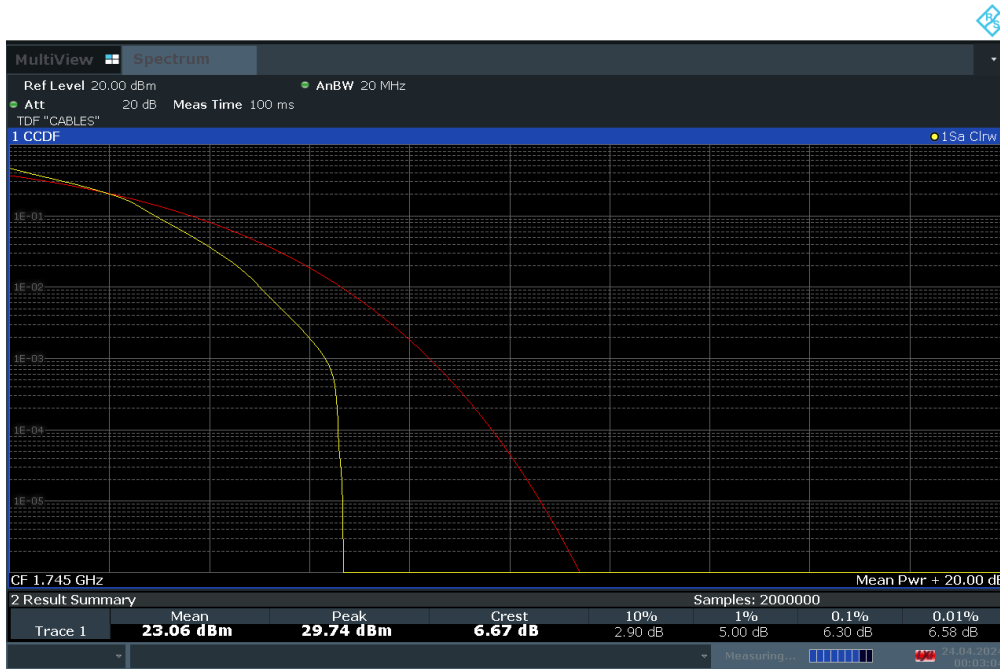
FCC ID: BCG-A3001	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1C2405230021-05.BCG	Test Dates: 04/11/2024 - 08/01/2024	EUT Type: Watch	Page 92 of 123

V2.2 09/07/2023



00:01:43 24.04.2024

Plot 7-147. PAR Plot (LTE Band 66 - 15MHz QPSK - Full RB)

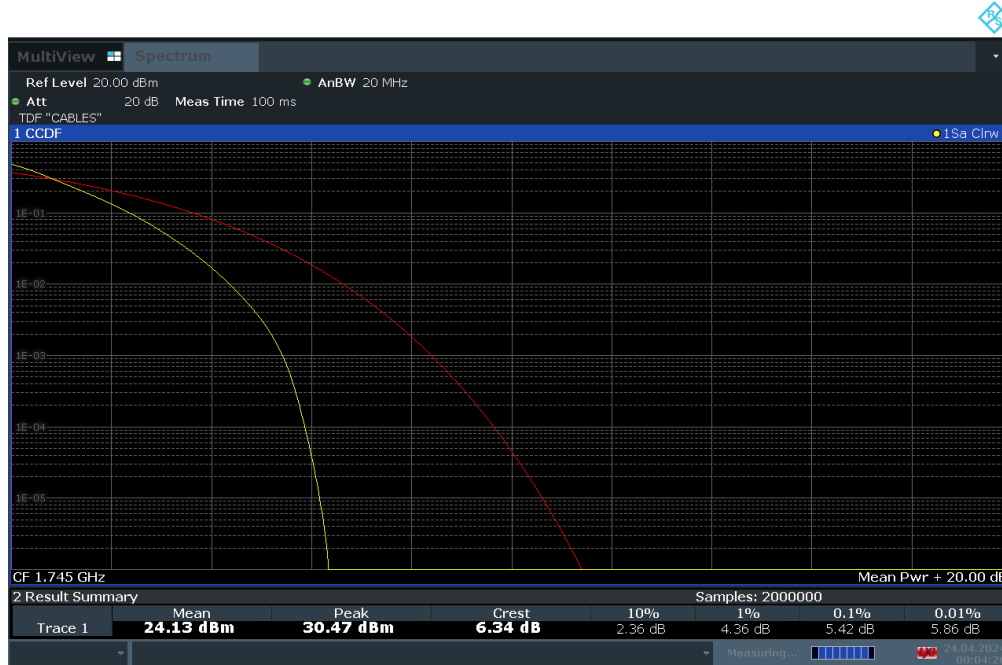


00:03:04 24.04.2024

Plot 7-148. PAR Plot (LTE Band 66 - 15MHz 16-QAM - Full RB)

FCC ID: BCG-A3001	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1C2405230021-05.BCG	Test Dates: 04/11/2024 - 08/01/2024	EUT Type: Watch	Page 93 of 123

V2.2 09/07/2023



00:04:26 24.04.2024

Plot 7-149. PAR Plot (LTE Band 66 - 20MHz QPSK - Full RB)



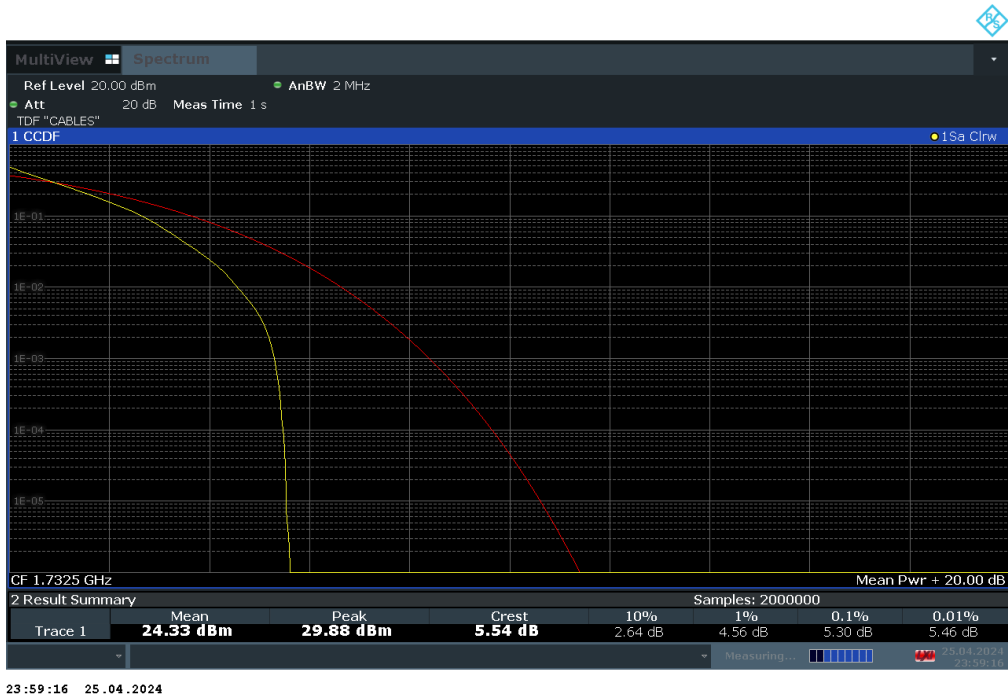
00:05:43 24.04.2024

Plot 7-150. PAR Plot (LTE Band 66 - 20MHz 16-QAM - Full RB)

FCC ID: BCG-A3001	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1C2405230021-05.BCG	Test Dates: 04/11/2024 - 08/01/2024	EUT Type: Watch	Page 94 of 123

V2.2 09/07/2023

LTE Band 4



Plot 7-151. PAR Plot (LTE Band 4 - 1.4MHz QPSK - Full RB)



Plot 7-152. PAR Plot (LTE Band 4 - 1.4MHz 16-QAM - Full RB)

FCC ID: BCG-A3001	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1C2405230021-05.BCG	Test Dates: 04/11/2024 - 08/01/2024	EUT Type: Watch	Page 95 of 123

Unless otherwise specified, no part of this report may be reproduced or utilized in any part, form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from Element Materials Technology. If you have any questions about this or have an enquiry about obtaining additional rights to this report or assembly of contents thereof, please contact ct.info@element.com.



00:02:04 26.04.2024

Plot 7-153. PAR Plot (LTE Band 4 - 3MHz QPSK - Full RB)

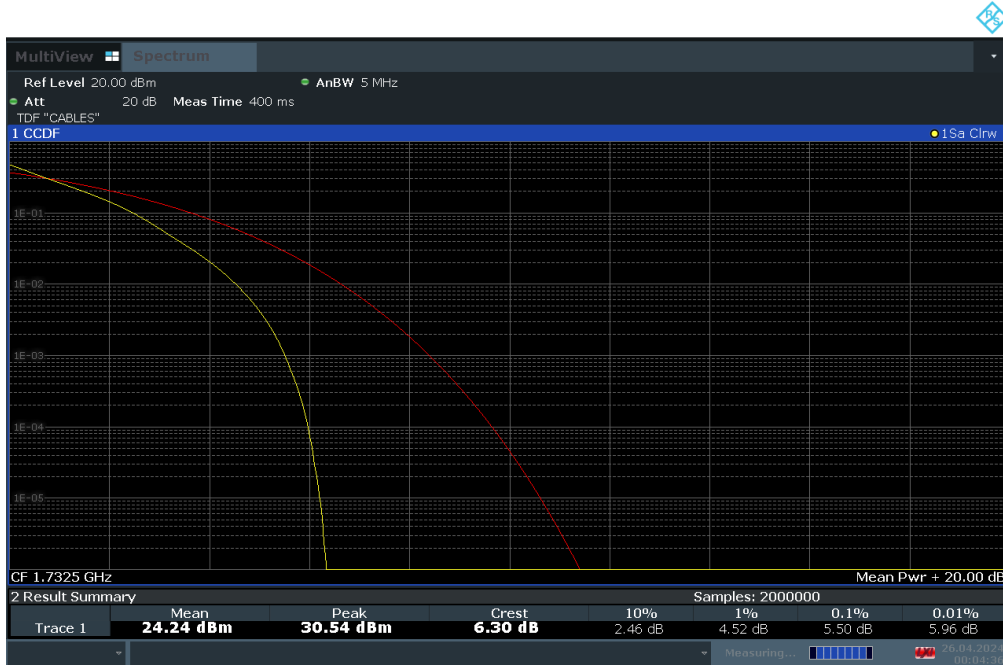


00:03:20 26.04.2024

Plot 7-154. PAR Plot (LTE Band 4 - 3MHz 16-QAM - Full RB)

FCC ID: BCG-A3001	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1C2405230021-05.BCG	Test Dates: 04/11/2024 - 08/01/2024	EUT Type: Watch	Page 96 of 123

V2.2 09/07/2023



00:04:37 26.04.2024

Plot 7-155. PAR Plot (LTE Band 4 - 5MHz QPSK - Full RB)

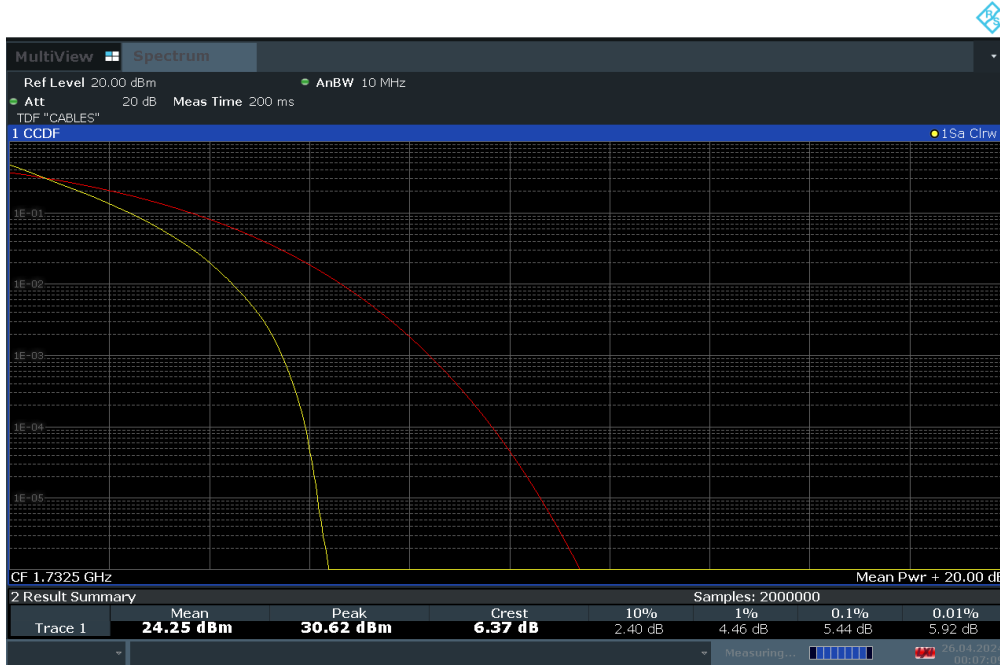


00:05:53 26.04.2024

Plot 7-156. PAR Plot (LTE Band 4 - 5MHz 16-QAM - Full RB)

FCC ID: BCG-A3001	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1C2405230021-05.BCG	Test Dates: 04/11/2024 - 08/01/2024	EUT Type: Watch	Page 97 of 123

V2.2 09/07/2023



00:07:10 26.04.2024

Plot 7-157. PAR Plot (LTE Band 4 - 10MHz QPSK - Full RB)



00:08:32 26.04.2024

Plot 7-158. PAR Plot (LTE Band 4 - 10MHz 16-QAM - Full RB)

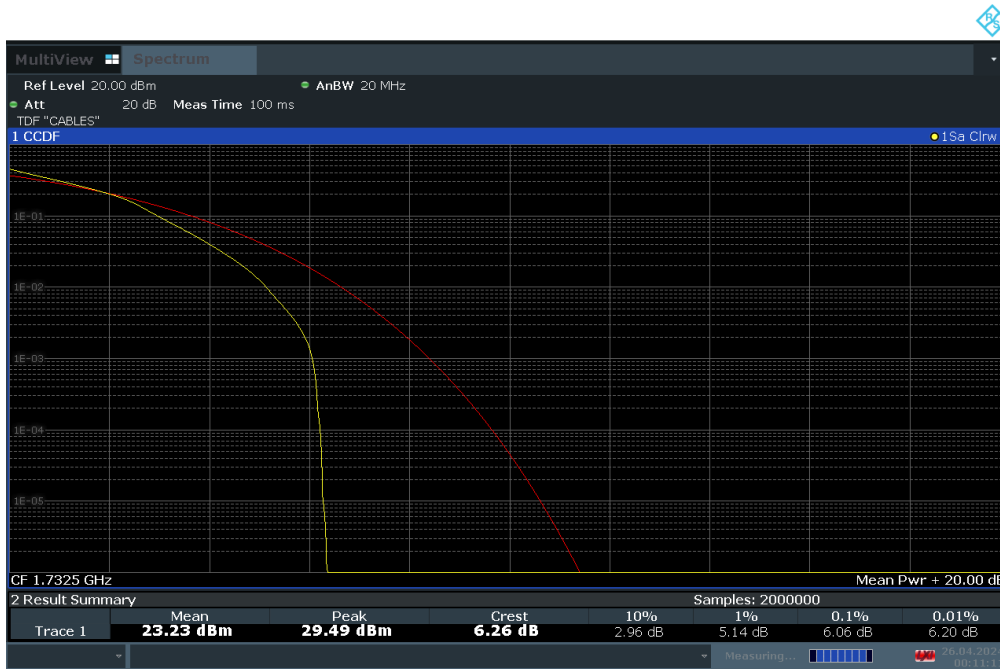
FCC ID: BCG-A3001	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1C2405230021-05.BCG	Test Dates: 04/11/2024 - 08/01/2024	EUT Type: Watch	Page 98 of 123

V2.2 09/07/2023



00:09:50 26.04.2024

Plot 7-159. PAR Plot (LTE Band 4 - 15MHz QPSK - Full RB)

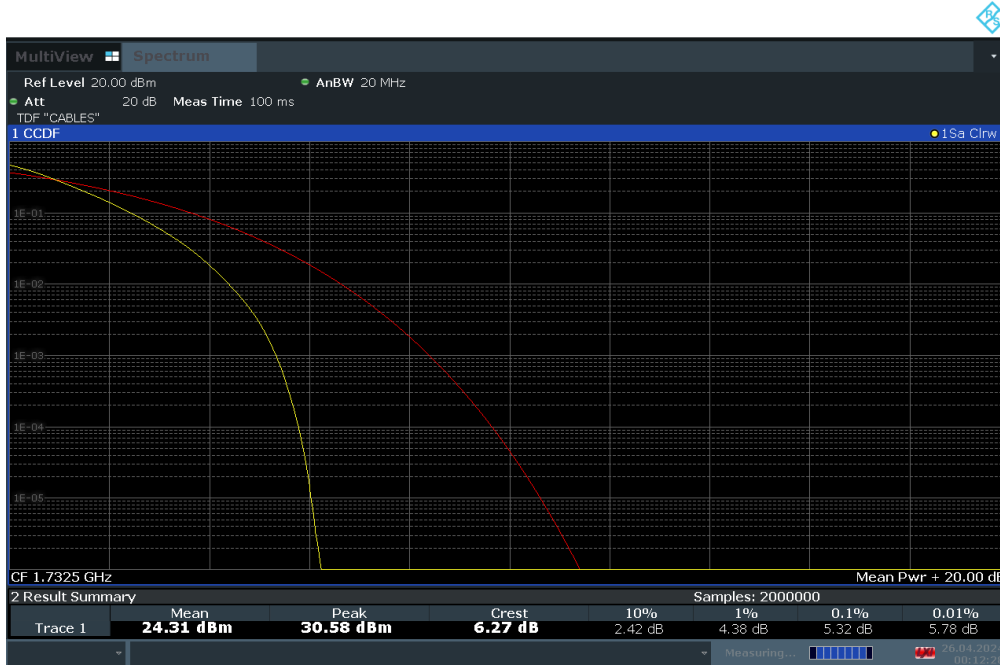


00:11:12 26.04.2024

Plot 7-160. PAR Plot (LTE Band 4 - 15MHz 16-QAM - Full RB)

FCC ID: BCG-A3001	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1C2405230021-05.BCG	Test Dates: 04/11/2024 - 08/01/2024	EUT Type: Watch	Page 99 of 123

V2.2 09/07/2023



00:12:29 26.04.2024

Plot 7-161. PAR Plot (LTE Band 4 - 20MHz QPSK - Full RB)

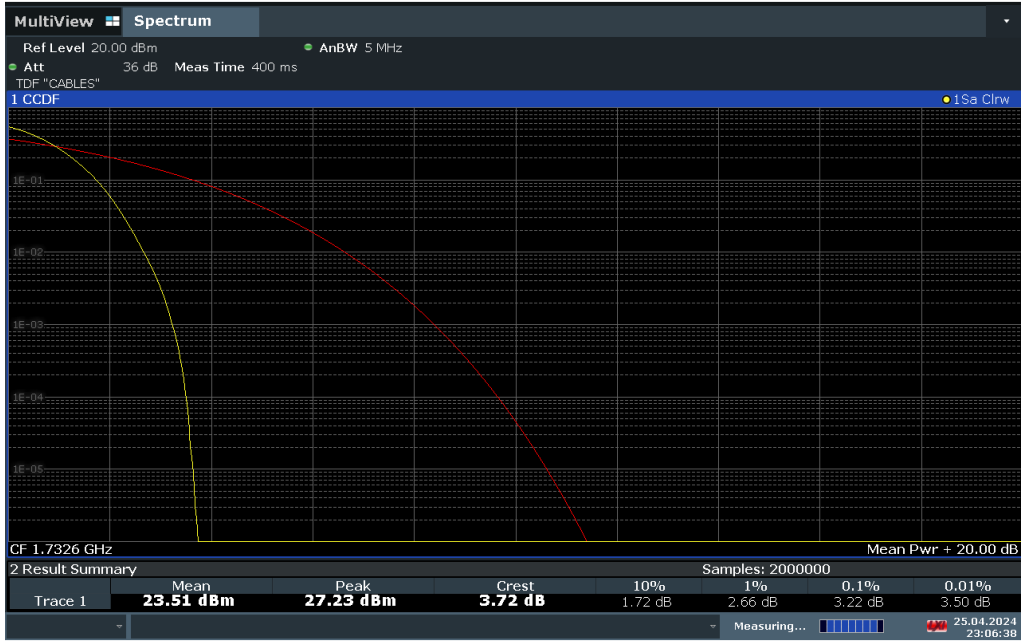


00:13:47 26.04.2024

Plot 7-162. PAR Plot (LTE Band 4 - 20MHz 16-QAM - Full RB)

FCC ID: BCG-A3001	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1C2405230021-05.BCG	Test Dates: 04/11/2024 - 08/01/2024	EUT Type: Watch	Page 100 of 123

V2.2 09/07/2023



23:06:39 25.04.2024

Plot 7-163. PAR Plot (WCDMA, Ch. 1413)

FCC ID: BCG-A3001	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1C2405230021-05.BCG	Test Dates: 04/11/2024 - 08/01/2024	EUT Type: Watch	Page 101 of 123

V2.2 09/07/2023

7.6 Radiated Power (ERP/EIRP)

§27.50(b)(10), §27.50(c)(10), §27.50(d)(4)

Test Overview

Effective Radiated Power (ERP) and Equivalent Isotropic Radiated Power (EIRP) measurements are calculated by adding highest antenna gain to maximum measured conducted output power. All measurements are performed as RMS average measurements while the EUT is operating at its maximum duty cycle, at maximum power, and at the appropriate frequencies.

Test Procedures Used

KDB 971168 D01 v03r01 – Section 5.2.1
ANSI C63.26-2015 – Section 5.2.5.5

Test Settings

The relevant equation for determining the ERP or EIRP from the conducted RF output power measured is:

$$ERP/EIRP = P_{Meas} - LC + GT$$

Where:

ERP/EIRP = Effective or Equivalent Isotropic Radiated Power, respectively (expressed in the same units as P_{Meas}, typically dBW or dBm)

P_{Meas} = measured transmitter output power or PSD, in dBW or dBm

LC = signal attenuation in the connecting cable between the transmitter and antenna in dB

GT = gain of the transmitting antenna, in dBd (ERP) or dBi (EIRP)

Test Setup

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

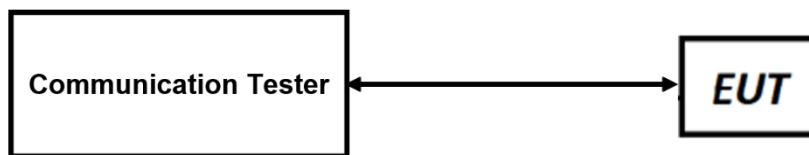




Figure 7-5. ERP/EIRP Measurement Setup

FCC ID: BCG-A3001	 PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1C2405230021-05.BCG	Test Dates: 04/11/2024 - 08/01/2024	EUT Type: Watch	Page 102 of 123

V2.2 09/07/2023

Test Notes

1. The EUT was tested in all possible test configurations. The worst case emissions are reported with the EUT modulations, RB sizes and offsets, and channel bandwidth configurations shown in the tables below.
2. This unit was tested with its standard battery.
3. The Level (dBm) readings in the table were taken with a correction table loaded into the base station simulator. The correction table was used to account for the signal attenuation in the connecting cable between the transmitter and antenna.
4. This device employs UMTS technology with WCDMA (AMR/RMC) and HSDPA capabilities. The EUT was tested under all configurations and the highest power is reported in WCDMA mode with HSDPA Inactive at 12.2 kbps RMC and TPC bits all set to "1."
5. The Ant. Gains (GT) are listed in dBi.

FCC ID: BCG-A3001	 PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1C2405230021-05.BCG	Test Dates: 04/11/2024 - 08/01/2024	EUT Type: Watch	Page 103 of 123


V2.2 09/07/2023

7.6.1 Antenna FCM – EIRP

LTE Band 66

Bandwidth	Mod.	Frequency [MHz]	Ant. Gain [dBi]	RB Size/Offset	Conducted Power [dBm]	EIRP [dBm]	EIRP [mW]	EIRP Limit [dBm]	Margin [dB]	
1.4 MHz	QPSK	1710.7	-13.30	1 / 0	24.07	10.77	11.940	30.00	-19.23	
		1745.0	-13.30	1 / 3	24.13	10.83	12.106	30.00	-19.17	
		1779.3	-13.30	1 / 3	24.35	11.05	12.735	30.00	-18.95	
	16-QAM	1745.0	-13.30	1 / 3	23.81	10.51	11.246	30.00	-19.49	
3 MHz	QPSK	1711.5	-13.30	1 / 7	24.05	10.75	11.885	30.00	-19.25	
		1745.0	-13.30	1 / 14	24.10	10.80	12.023	30.00	-19.20	
		1778.5	-13.30	1 / 7	24.13	10.83	12.106	30.00	-19.17	
	16-QAM	1711.5	-13.30	1 / 14	23.72	10.42	11.015	30.00	-19.58	
5 MHz	QPSK	1712.5	-13.30	1 / 24	24.23	10.93	12.388	30.00	-19.07	
		1745.0	-13.30	1 / 12	24.20	10.90	12.303	30.00	-19.10	
		1777.5	-13.30	1 / 12	24.11	10.81	12.050	30.00	-19.19	
	16-QAM	1745.0	-13.30	1 / 24	23.78	10.48	11.169	30.00	-19.52	
10 MHz	QPSK	1715.0	-13.30	1 / 49	24.04	10.74	11.858	30.00	-19.26	
		1745.0	-13.30	1 / 0	24.06	10.76	11.912	30.00	-19.24	
		1775.0	-13.30	1 / 0	24.13	10.83	12.106	30.00	-19.17	
	16-QAM	1715.0	-13.30	1 / 0	23.71	10.41	10.990	30.00	-19.59	
15 MHz	QPSK	1717.5	-13.30	1 / 37	24.25	10.95	12.445	30.00	-19.05	
		1745.0	-13.30	1 / 0	24.05	10.75	11.885	30.00	-19.25	
		1772.5	-13.30	1 / 37	24.09	10.79	11.995	30.00	-19.21	
20 MHz	16-QAM	1717.5	-13.30	1 / 74	23.68	10.38	10.914	30.00	-19.62	
		QPSK	1720.0	-13.30	1 / 0	24.12	10.82	12.078	30.00	-19.18
			1745.0	-13.30	1 / 0	24.14	10.84	12.134	30.00	-19.16
			1770.0	-13.30	1 / 50	24.20	10.90	12.303	30.00	-19.10
16-QAM	1720.0	-13.30	1 / 99	23.78	10.48	11.169	30.00	-19.52		

Table 7-2. Antenna FCM EIRP Data (LTE Band 66)

FCC ID: BCG-A3001	 PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1C2405230021-05.BCG	Test Dates: 04/11/2024 - 08/01/2024	EUT Type: Watch	Page 104 of 123

LTE Band 4


Bandwidth	Mod.	Frequency [MHz]	Ant. Gain [dBi]	RB Size/Offset	Conducted Power [dBm]	EIRP [dBm]	EIRP [mW]	EIRP Limit [dBm]	Margin [dB]
1.4 MHz	QPSK	1710.7	-13.30	1 / 0	24.05	10.75	11.885	30.00	-19.25
		1732.5	-13.30	1 / 0	24.18	10.88	12.246	30.00	-19.12
		1754.3	-13.30	1 / 0	24.29	10.99	12.560	30.00	-19.01
	16-QAM	1732.5	-13.30	1 / 3	24.00	10.70	11.749	30.00	-19.30
3 MHz	QPSK	1711.5	-13.30	1 / 7	24.04	10.74	11.858	30.00	-19.26
		1732.5	-13.30	1 / 7	24.20	10.90	12.303	30.00	-19.10
		1753.5	-13.30	1 / 7	24.10	10.80	12.023	30.00	-19.20
	16-QAM	1732.5	-13.30	1 / 7	23.99	10.69	11.722	30.00	-19.31
5 MHz	QPSK	1712.5	-13.30	1 / 0	24.27	10.97	12.503	30.00	-19.03
		1732.5	-13.30	1 / 0	24.34	11.04	12.706	30.00	-18.96
		1752.5	-13.30	1 / 24	24.05	10.75	11.885	30.00	-19.25
	16-QAM	1732.5	-13.30	1 / 12	23.88	10.58	11.429	30.00	-19.42
10 MHz	QPSK	1715.0	-13.30	1 / 49	24.04	10.74	11.858	30.00	-19.26
		1732.5	-13.30	1 / 0	24.15	10.85	12.162	30.00	-19.15
		1750.0	-13.30	1 / 0	24.05	10.75	11.885	30.00	-19.25
	16-QAM	1732.5	-13.30	1 / 0	23.94	10.64	11.588	30.00	-19.36
15 MHz	QPSK	1717.5	-13.30	1 / 74	24.28	10.98	12.531	30.00	-19.02
		1732.5	-13.30	1 / 37	24.08	10.78	11.967	30.00	-19.22
		1747.5	-13.30	1 / 0	24.12	10.82	12.078	30.00	-19.18
	16-QAM	1732.5	-13.30	1 / 0	23.89	10.59	11.455	30.00	-19.41
20 MHz	QPSK	1720.0	-13.30	1 / 99	23.99	10.69	11.722	30.00	-19.31
		1732.5	-13.30	1 / 0	24.24	10.94	12.417	30.00	-19.06
		1745.0	-13.30	1 / 0	24.15	10.85	12.162	30.00	-19.15
	16-QAM	1732.5	-13.30	1 / 0	23.84	10.54	11.324	30.00	-19.46

Table 7-3. Antenna FCM EIRP Data (LTE Band 4)

WCDMA AWS

Frequency [MHz]	Mode	Conducted Power [dBm]	Ant. Gain [dBi]	EIRP [dBm]	EIRP [mW]	EIRP Limit [dBm]	Margin [dB]
1712.40	WCDMA1700	23.71	-13.30	10.41	10.990	30.00	-19.59
1732.60	WCDMA1700	23.58	-13.30	10.28	10.666	30.00	-19.72
1752.60	WCDMA1700	23.67	-13.30	10.37	10.889	30.00	-19.63

Table 7-4. Antenna FCM EIRP Data (WCDMA AWS)

FCC ID: BCG-A3001	 PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1C2405230021-05.BCG	Test Dates: 04/11/2024 - 08/01/2024	EUT Type: Watch	Page 105 of 123

7.6.2 Antenna BCM – ERP

LTE Band 12

Bandwidth	Mod.	Frequency [MHz]	Ant. Gain [dBi]	RB Size/Offset	Conducted Power [dBm]	ERP [dBm]	ERP [mW]	ERP Limit [dBm]	Margin [dB]
1.4 MHz	QPSK	699.7	-30.60	1 / 0	25.50	-7.25	0.188	34.77	-42.02
		707.5	-30.60	1 / 5	25.45	-7.30	0.186	34.77	-42.07
		715.3	-30.60	1 / 5	25.50	-7.25	0.188	34.77	-42.02
	16-QAM	707.5	-30.60	1 / 0	24.92	-7.83	0.165	34.77	-42.60
3 MHz	QPSK	700.5	-30.60	1 / 0	25.46	-7.29	0.187	34.77	-42.06
		707.5	-30.60	1 / 7	25.45	-7.30	0.186	34.77	-42.07
		714.5	-30.60	1 / 7	25.24	-7.51	0.177	34.77	-42.28
	16-QAM	707.5	-30.60	1 / 7	24.91	-7.84	0.164	34.77	-42.61
5 MHz	QPSK	701.5	-30.60	1 / 12	25.41	-7.34	0.185	34.77	-42.11
		707.5	-30.60	1 / 24	25.48	-7.27	0.187	34.77	-42.04
		713.5	-30.60	1 / 24	25.50	-7.25	0.188	34.77	-42.02
	16-QAM	701.5	-30.60	1 / 0	24.95	-7.80	0.166	34.77	-42.57
10 MHz	QPSK	704.0	-30.60	1 / 25	25.47	-7.28	0.187	34.77	-42.05
		707.5	-30.60	1 / 25	25.28	-7.47	0.179	34.77	-42.24
		711.0	-30.60	1 / 0	25.35	-7.40	0.182	34.77	-42.17
	16-QAM	711.0	-30.60	1 / 0	24.88	-7.87	0.163	34.77	-42.64

Table 7-5. Antenna BCM ERP Data (LTE Band 12)

LTE Band 17

Bandwidth	Mod.	Frequency [MHz]	Ant. Gain [dBi]	RB Size/Offset	Conducted Power [dBm]	ERP [dBm]	ERP [mW]	ERP Limit [dBm]	Margin [dB]
5 MHz	QPSK	706.5	-30.60	1 / 0	25.50	-7.25	0.188	34.77	-42.02
		710.0	-30.60	1 / 12	25.48	-7.27	0.187	34.77	-42.04
		713.5	-30.60	1 / 12	25.49	-7.26	0.188	34.77	-42.03
	16-QAM	706.5	-30.60	1 / 24	24.88	-7.87	0.163	34.77	-42.64
10 MHz	QPSK	709.0	-30.60	1 / 0	25.49	-7.26	0.188	34.77	-42.03
		710.0	-30.60	1 / 0	25.39	-7.36	0.184	34.77	-42.13
		711.0	-30.60	1 / 0	25.40	-7.35	0.184	34.77	-42.12
	16-QAM	710.0	-30.60	1 / 0	24.81	-7.94	0.161	34.77	-42.71

Table 7-6. Antenna BCM ERP Data (LTE Band 17)

LTE Band 13

Bandwidth	Mod.	Frequency [MHz]	Ant. Gain [dBi]	RB Size/Offset	Conducted Power [dBm]	ERP [dBm]	ERP [mW]	ERP Limit [dBm]	Margin [dB]
5 MHz	QPSK	779.5	-28.30	1 / 0	25.50	-4.95	0.320	34.77	-39.72
		782.0	-28.30	1 / 24	25.36	-5.09	0.310	34.77	-39.86
		784.5	-28.30	1 / 24	25.49	-4.96	0.319	34.77	-39.73
10 MHz	QPSK	779.5	-28.30	1 / 0	24.85	-5.60	0.275	34.77	-40.37
		782.0	-28.30	1 / 0	25.47	-4.98	0.318	34.77	-39.75
	16-QAM	782.0	-28.30	1 / 49	24.87	-5.58	0.277	34.77	-40.35

Table 7-7. Antenna BCM ERP Data (LTE Band 13)

FCC ID: BCG-A3001			PART 27 MEASUREMENT REPORT				Approved by: Technical Manager	
Test Report S/N: 1C2405230021-05.BCG	Test Dates: 04/11/2024 - 08/01/2024	EUT Type: Watch		Page 106 of 123				

7.7 Radiated Spurious Emissions

§2.1053, §27.53(f)

Test Overview

Radiated spurious emissions measurements are performed using the field strength conversion method described in KDB 971168 with the EUT transmitting into an integral antenna. Measurements on signals operating below 1GHz are performed using horizontally and vertically polarized broadband hybrid antennas. Measurements on signals operating above 1GHz are performed using vertically and horizontally polarized broadband horn antennas. All measurements are performed while the EUT is operating at maximum power and at the appropriate frequencies.


Test Procedures Used

KDB 971168 D01 v03r01 – Section 5.8

ANSI C63.26 2015, TIA-603-E-2016 – Section 2.2.12

Test Settings

1. RBW = 100kHz for emissions below 1GHz and 1MHz for emissions above 1GHz
2. VBW \geq 3 x RBW
3. Span = 1.5 times the OBW
4. No. of sweep points \geq 2 x span / RBW
5. Detector = RMS
6. Trace mode = Average (Max Hold for pulsed emissions)
7. The trace was allowed to stabilize

FCC ID: BCG-A3001	 PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1C2405230021-05.BCG	Test Dates: 04/11/2024 - 08/01/2024	EUT Type: Watch	Page 107 of 123

V2.2 09/07/2023

Test Setup

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

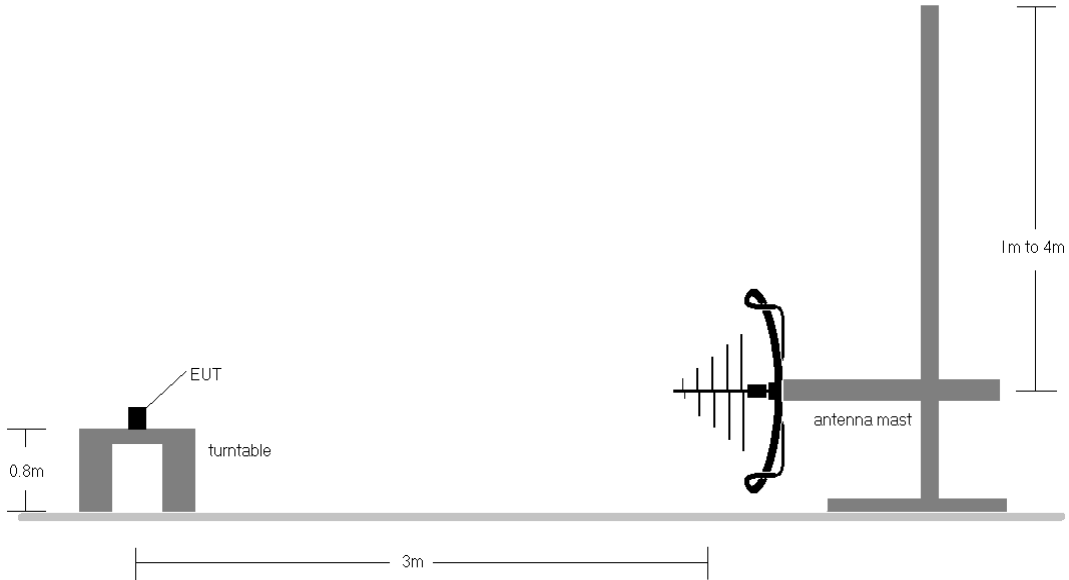


Figure 7-6. Test Instrument & Measurement Setup < 1GHz

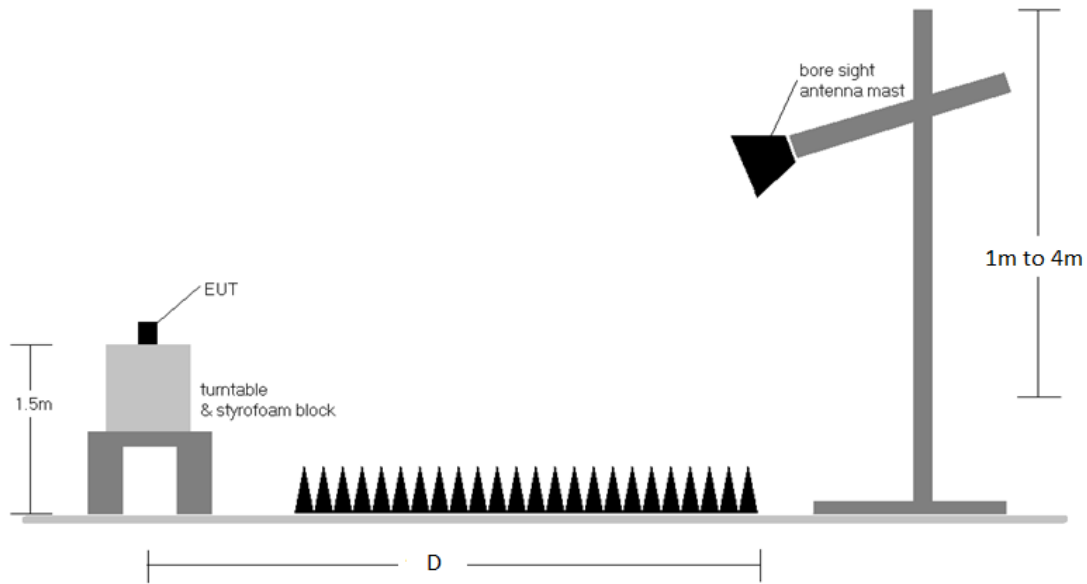



Figure 7-7. Test Instrument & Measurement Setup > 1GHz

<p>FCC ID: BCG-A3001</p>	<p style="text-align: center;">PART 27 MEASUREMENT REPORT</p>		<p>Approved by: Technical Manager</p>
<p>Test Report S/N: 1C2405230021-05.BCG</p>	<p>Test Dates: 04/11/2024 - 08/01/2024</p>	<p>EUT Type: Watch</p>	<p>Page 108 of 123</p>

Test Notes

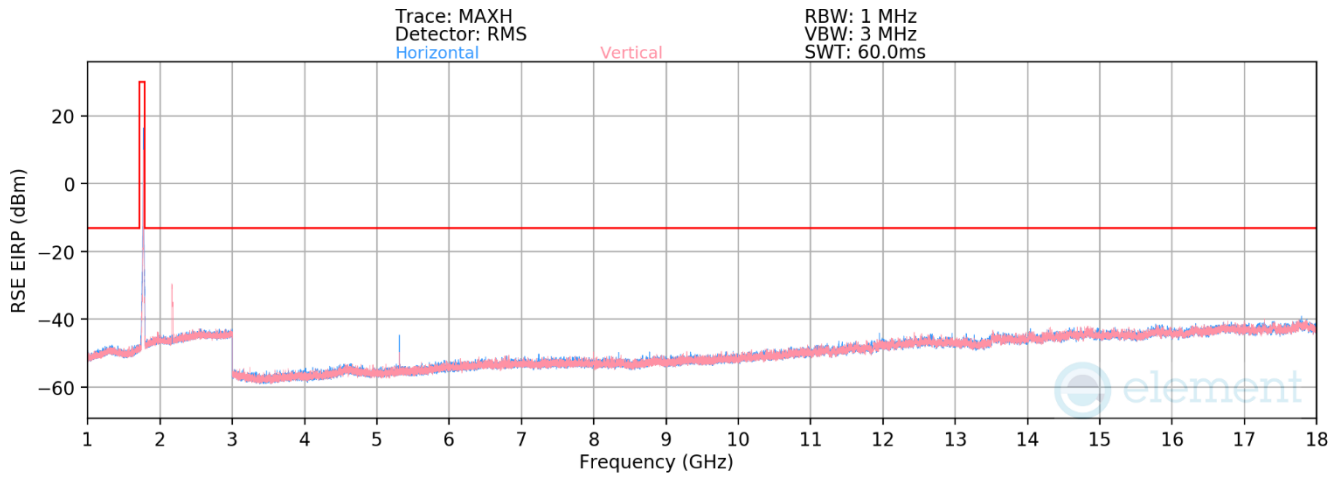
1. Field strengths are calculated using the Measurement quantity conversions in KDB 971168 Section 5.8.4.
 - a. $E(\text{dB}\mu\text{V}/\text{m}) = \text{Measured amplitude level (dBm)} + 107 + \text{Cable Loss (dB)} + \text{Antenna Factor (dB/m)}$
 - b. $\text{EIRP (dBm)} = E(\text{dB}\mu\text{V}/\text{m}) + 20\log D - 104.8$; where D is the measurement distance in meters.
2. The EUT was tested in three orthogonal planes and in all possible test configurations and positioning. The worst case emissions are reported with the EUT positioning, modulations, RB sizes and offsets, and channel bandwidth configurations shown in the tables below.
3. This unit was tested with its standard battery.
4. The spectrum is measured from 9kHz to the 10th harmonic of the fundamental frequency of the transmitter. The worst-case emissions are reported.
5. D is the measurement test distance and emissions 1-18GHz were measured at a 3 meters test distance while emissions above 18GHz were measured at a 1 meter test distance with the application of a distance correction factor.
6. The "-" shown in the following RSE tables are used to denote a noise floor measurement.

FCC ID: BCG-A3001	 PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1C2405230021-05.BCG	Test Dates: 04/11/2024 - 08/01/2024	EUT Type: Watch	Page 109 of 123


V2.2 09/07/2023

7.7.1 Antenna FCM – Radiated Spurious Emission Measurement

LTE Band 66/4



Plot 7-164. Antenna FCM Radiated Spurious Emission above 1GHz (LTE Band 66/4)

FCC ID: BCG-A3001	 PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1C2405230021-05.BCG	Test Dates: 04/11/2024 - 08/01/2024	EUT Type: Watch	Page 110 of 123

V2.2 09/07/2023

Bandwidth (MHz):	20
Frequency (MHz):	1720.0
RB / Offset:	1 / 50

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
3440.0	H	-	-	-78.08	4.25	33.17	-62.09	-13.00	-49.09
5160.0	H	111	121	-72.97	7.58	41.61	-53.65	-13.00	-40.65
6880.0	H	-	-	-80.33	9.84	36.51	-58.75	-13.00	-45.75
8600.0	H	-	-	-80.73	10.41	36.68	-58.58	-13.00	-45.58
10320.0	H	-	-	-80.57	13.39	39.82	-55.44	-13.00	-42.44

Table 7-8. Antenna FCM Radiated Spurious Data (LTE Band 66/4 – Low Channel)

Bandwidth (MHz):	20
Frequency (MHz):	1745.0
RB / Offset:	1 / 50


Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
3490.0	H	-	-	-78.10	4.25	33.15	-62.11	-13.00	-49.11
5235.0	H	309	289	-77.43	7.87	37.44	-57.82	-13.00	-44.82
6980.0	H	-	-	-80.49	9.85	36.36	-58.90	-13.00	-45.90
8725.0	H	-	-	-80.10	10.31	37.22	-58.04	-13.00	-45.04
10470.0	H	-	-	-81.16	13.64	39.48	-55.78	-13.00	-42.78

Table 7-9. Antenna FCM Radiated Spurious Data (LTE Band 66/4 – Mid Channel)

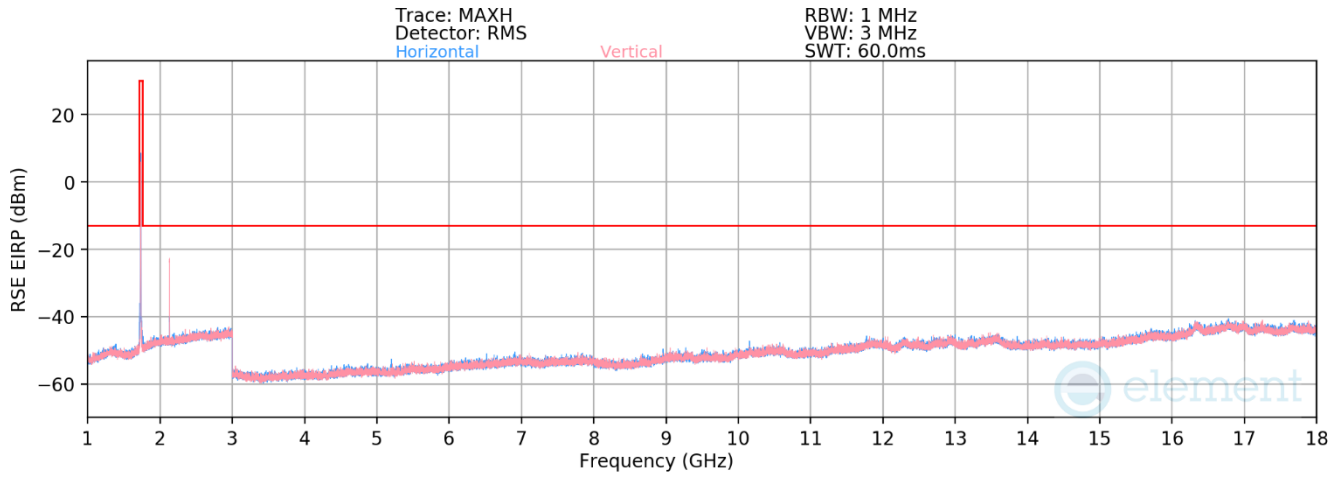
Bandwidth (MHz):	20
Frequency (MHz):	1770.0
RB / Offset:	1 / 50

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
3540.0	H	-	-	-78.51	4.27	32.77	-62.49	-13.00	-49.49
5310.0	H	113	126	-71.06	7.83	43.77	-51.49	-13.00	-38.49
7080.0	H	-	-	-80.34	9.95	36.61	-58.65	-13.00	-45.65
8850.0	H	-	-	-79.88	10.71	37.84	-57.42	-13.00	-44.42
10620.0	H	-	-	-80.87	13.58	39.71	-55.55	-13.00	-42.55


Table 7-10. Antenna FCM Radiated Spurious Data (LTE Band 66/4 – High Channel)

FCC ID: BCG-A3001	 PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1C2405230021-05.BCG	Test Dates: 04/11/2024 - 08/01/2024	EUT Type: Watch	Page 111 of 123

WCDMA AWS



Plot 7-165. Antenna FCM Radiated Spurious Emission above 1GHz (WCDMA AWS)

FCC ID: BCG-A3001	 PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1C2405230021-05.BCG	Test Dates: 04/11/2024 - 08/01/2024	EUT Type: Watch	Page 112 of 123

V2.2 09/07/2023

Mode:	WCDMA RMC
Channel:	1312
Frequency (MHz):	1712.4

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBµV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
3424.8	H	-	-	-78.66	6.05	34.39	-60.87	-13.00	-47.87
5137.2	H	-	-	-81.65	9.47	34.82	-60.44	-13.00	-47.44
6849.6	H	-	-	-81.04	12.06	38.02	-57.24	-13.00	-44.24

7-11. Antenna FCM Radiated Spurious Data (WCDMA AWS – Low Channel)

Mode:	WCDMA RMC
Channel:	1413
Frequency (MHz):	1732.6


Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBµV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
3465.2	H	-	-	-79.64	6.01	33.37	-61.89	-13.00	-48.89
5197.8	H	-	-	-81.32	10.03	35.71	-59.55	-13.00	-46.55
6930.4	H	-	-	-81.60	12.58	37.98	-57.28	-13.00	-44.28

Table 7-12. Antenna FCM Radiated Spurious Data (WCDMA AWS – Mid Channel)

Mode:	WCDMA RMC
Channel:	1513
Frequency (MHz):	1752.6

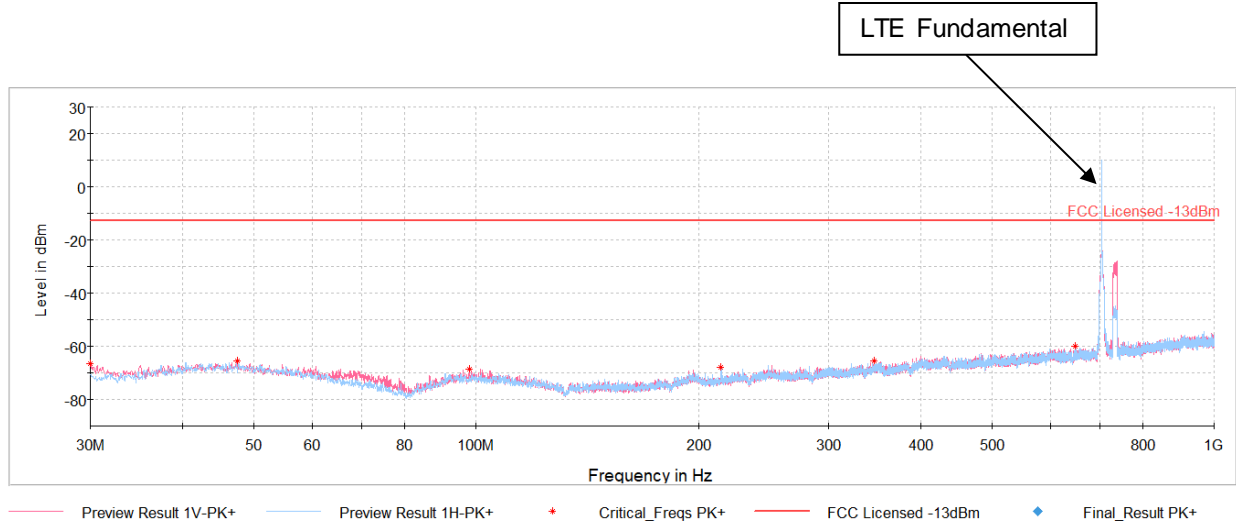
Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBµV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
3505.2	H	-	-	-79.28	6.29	34.01	-61.25	-13.00	-48.25
5257.8	H	-	-	-81.39	9.85	35.46	-59.80	-13.00	-46.80
7010.4	H	-	-	-81.82	12.64	37.82	-57.44	-13.00	-44.44

Table 7-13. Antenna FCM Radiated Spurious Data (WCDMA AWS – High Channel)

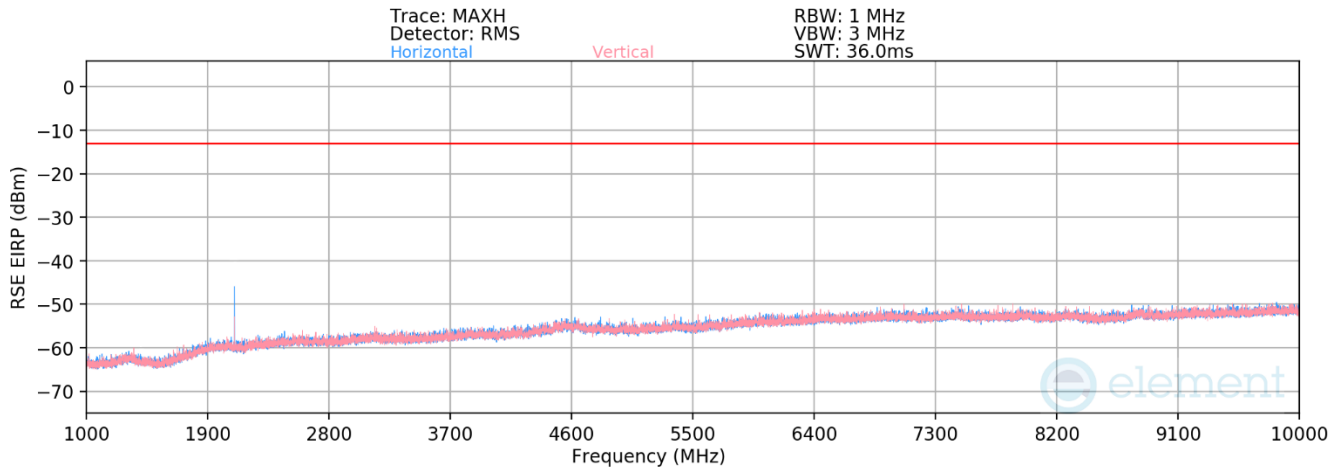
FCC ID: BCG-A3001	 PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1C2405230021-05.BCG	Test Dates: 04/11/2024 - 08/01/2024	EUT Type: Watch	Page 113 of 123

7.7.2 Antenna BCM – Radiated Spurious Emission Measurement

LTE Band 12/17



Plot 7-166. Antenna BCM Radiated Spurious Emission below 1GHz (LTE Band 12/17)



Plot 7-167. Antenna BCM Radiated Spurious Emission above 1GHz (LTE Band 12/17)

FCC ID: BCG-A3001	PART 27 MEASUREMENT REPORT	Approved by: Technical Manager
Test Report S/N: 1C2405230021-05.BCG	Test Dates: 04/11/2024 - 08/01/2024	EUT Type: Watch
		Page 114 of 123

V2.2 09/07/2023

Bandwidth (MHz):	10
Frequency (MHz):	704.0
RB / Offset:	1 / 25

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
1408.0	H	-	-	-77.46	-2.90	26.64	-68.62	-13.00	-55.62
2112.0	H	141	12	-73.59	0.74	34.15	-61.11	-13.00	-48.11
2816.0	H	-	-	-78.01	2.45	31.44	-63.82	-13.00	-50.82
3520.0	H	-	-	-78.60	3.98	32.38	-62.88	-13.00	-49.88
4224.0	H	-	-	-79.26	5.63	33.37	-61.89	-13.00	-48.89

Table 7-14. Antenna BCM Radiated Spurious Data (LTE Band 12/17 – Low Channel)

Bandwidth (MHz):	10
Frequency (MHz):	707.5
RB / Offset:	1 / 25


Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
1415.0	H	-	-	-77.66	-2.38	26.96	-68.30	-13.00	-55.30
2122.5	H	210	329	-75.20	0.86	32.66	-62.60	-13.00	-49.60
2830.0	H	-	-	-77.97	2.42	31.45	-63.81	-13.00	-50.81
3537.5	H	-	-	-78.72	4.05	32.33	-62.93	-13.00	-49.93
4245.0	H	-	-	-79.32	5.70	33.38	-61.88	-13.00	-48.88

Table 7-15. Antenna BCM Radiated Spurious Data (LTE Band 12/17 – Mid Channel)

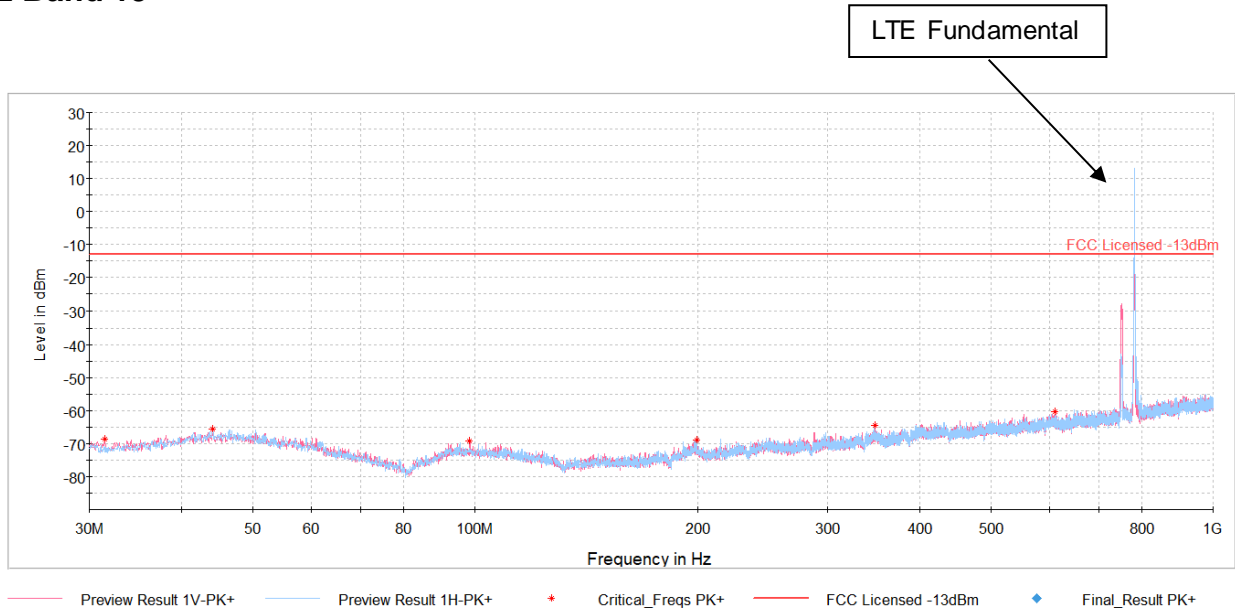
Bandwidth (MHz):	10
Frequency (MHz):	711.0
RB / Offset:	1 / 25

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
1422.0	H	-	-	-76.84	-2.90	27.26	-68.00	-13.00	-55.00
2133.0	H	208	10	-75.47	0.86	32.39	-62.87	-13.00	-49.87
2844.0	H	-	-	-77.99	2.43	31.44	-63.82	-13.00	-50.82
3555.0	H	-	-	-78.37	3.81	32.44	-62.82	-13.00	-49.82
4266.0	H	-	-	-78.88	5.37	33.50	-61.76	-13.00	-48.76

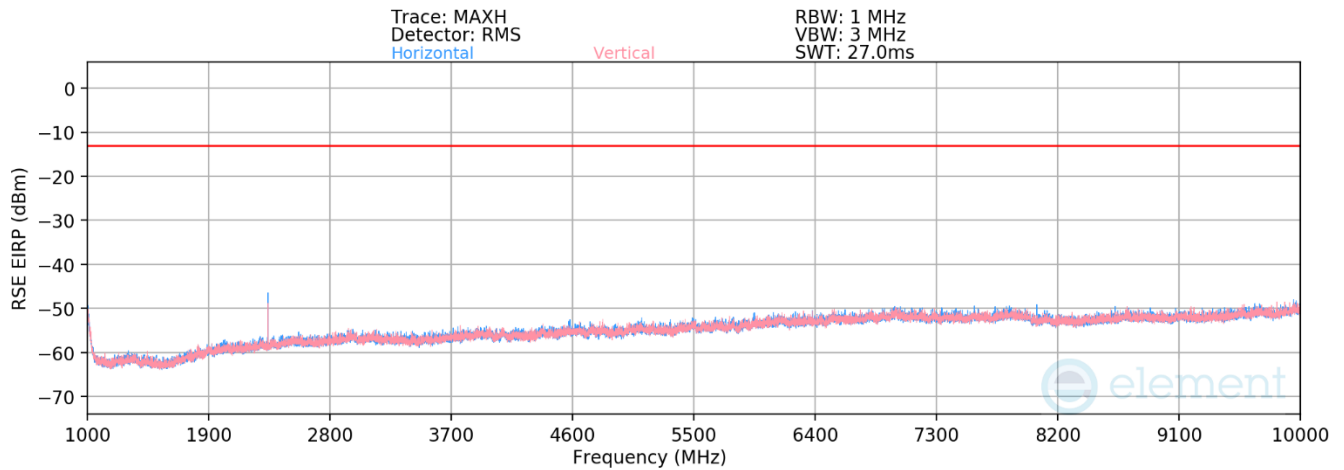
Table 7-16. Antenna BCM Radiated Spurious Data (LTE Band 12/17 – High Channel)

FCC ID: BCG-A3001	 PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1C2405230021-05.BCG	Test Dates: 04/11/2024 - 08/01/2024	EUT Type: Watch	Page 115 of 123

LTE Band 13



Plot 7-168. Antenna BCM Radiated Spurious Emission below 1GHz (LTE Band 13)



Plot 7-169. Antenna BCM Radiated Spurious Emission above 1GHz (LTE Band 13)

FCC ID: BCG-A3001	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1C2405230021-05.BCG	Test Dates: 04/11/2024 - 08/01/2024	EUT Type: Watch	Page 116 of 123

V2.2 09/07/2023

Bandwidth (MHz):	5
Frequency (MHz):	779.5
RB / Offset:	1 / 12

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBµV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
1559.0	H	-	-	-77.25	-3.20	26.55	-68.71	-40.00	-28.71
2338.5	H	102	202	-70.90	1.66	37.76	-57.50	-13.00	-44.50
3118.0	H	-	-	-78.86	4.08	32.22	-63.04	-13.00	-50.04
3897.5	H	-	-	-79.56	5.61	33.06	-62.20	-13.00	-49.20
4677.0	H	-	-	-80.11	7.06	33.95	-61.31	-13.00	-48.31

Table 7-17. Antenna BCM Radiated Spurious Data (LTE Band 13 – Low Channel)

Bandwidth (MHz):	5
Frequency (MHz):	782.0
RB / Offset:	1 / 12


Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBµV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
1564.0	H	-	-	-77.39	-3.18	26.43	-68.83	-40.00	-28.83
2346.0	H	169	7	-73.95	1.65	34.70	-60.56	-13.00	-47.56
3128.0	H	-	-	-78.49	4.11	32.62	-62.64	-13.00	-49.64
3910.0	H	-	-	-79.62	5.54	32.92	-62.34	-13.00	-49.34
4692.0	H	-	-	-80.23	7.11	33.88	-61.38	-13.00	-48.38

Table 7-18. Antenna BCM Radiated Spurious Data (LTE Band 13 – Mid Channel)

Bandwidth (MHz):	5
Frequency (MHz):	784.5
RB / Offset:	1 / 12

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBµV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
1569.0	H	-	-	-77.26	-3.18	26.56	-68.70	-40.00	-28.70
2353.5	H	112	185	-71.19	1.66	37.47	-57.79	-13.00	-44.79
3138.0	H	-	-	-78.76	3.97	32.21	-63.05	-13.00	-50.05
3922.5	H	-	-	-79.77	5.59	32.83	-62.43	-13.00	-49.43
4707.0	H	-	-	-80.48	7.31	33.83	-61.43	-13.00	-48.43

Table 7-19. Antenna BCM Radiated Spurious Data (LTE Band 13 – High Channel)

FCC ID: BCG-A3001	 PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1C2405230021-05.BCG	Test Dates: 04/11/2024 - 08/01/2024	EUT Type: Watch	Page 117 of 123

7.8 Frequency Stability / Temperature Variation

§2.1053, §27.53

Test Overview and Limit

Frequency stability testing is performed in accordance with the guidelines of ANSI C63.26-2015 and TIA-603-E-2016. The frequency stability of the transmitter is measured by:

- a.) **Temperature:** The temperature is varied from -30°C to +50°C in 10°C increments using an environmental chamber.
- b.) **Primary Supply Voltage:** The primary supply voltage is varied from 85% to 115% of the nominal value for non hand-carried battery and AC powered equipment. For hand-carried, battery-powered equipment, primary supply voltage is reduced to the battery operating end point which shall be specified by the manufacturer.

For Part 27, the frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block.

Test Procedure Used

ANSI C63.26-2015

TIA-603-E-2016

Test Settings

1. The carrier frequency of the transmitter is measured at room temperature (20°C to provide a reference).
2. The equipment is turned on in a “standby” condition for fifteen minutes before applying power to the transmitter. Measurement of the carrier frequency of the transmitter is made within one minute after applying power to the transmitter.
3. Frequency measurements are made at 10°C intervals ranging from -30°C to +50°C. A period of at least one half-hour is provided to allow stabilization of the equipment at each temperature level.

Test Setup

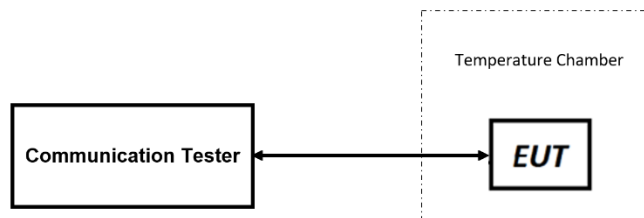



Figure 7-8. Test Instrument & Measurement Setup

Test Notes

None.

FCC ID: BCG-A3001	 PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1C2405230021-05.BCG	Test Dates: 04/11/2024 - 08/01/2024	EUT Type: Watch	Page 118 of 123

V2.2 09/07/2023


Frequency Stability / Temperature Variation

LTE Band 66/4				
Operating Band Lower Boundary (GHz)		1.710		
Ref. Voltage (VDC):		3.80		
Voltage (%)	Power (VDC)	Temp (°C)	Measured Freq. (GHz)	Freq. Delta from Operating Range (GHz)
100 %	3.80	- 30	1.7105815	-0.0005815
		- 20	1.7106012	-0.0006012
		- 10	1.7106627	-0.0006627
		0	1.7106757	-0.0006757
		+ 10	1.7106458	-0.0006458
		+ 20 (Ref)	1.7106487	-0.0006487
		+ 30	1.7106476	-0.0006476
		+ 40	1.7106686	-0.0006686
		+ 50	1.7105466	-0.0005466
Battery Endpoint	3.40	+ 20	1.7106031	-0.0006031

Table 7-20. LTE Band 66/4 Lower Boundary Frequency Stability Data

LTE Band 66/4				
Operating Band Upper Boundary (GHz)		1.780		
Ref. Voltage (VDC):		3.80		
Voltage (%)	Power (VDC)	Temp (°C)	Measured Freq. (GHz)	Freq. Delta from Operating Range (GHz)
100 %	3.80	- 30	1.7793765	-0.0006235
		- 20	1.7793792	-0.0006208
		- 10	1.7794415	-0.0005585
		0	1.7794262	-0.0005738
		+ 10	1.7794370	-0.0005630
		+ 20 (Ref)	1.7794490	-0.0005510
		+ 30	1.7794531	-0.0005469
		+ 40	1.7794324	-0.0005676
		+ 50	1.7795091	-0.0004909
Battery Endpoint	3.40	+ 20	1.7794300	-0.0005700

Table 7-21. LTE Band 66/4 Upper Boundary Frequency Stability Data

FCC ID: BCG-A3001	 PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1C2405230021-05.BCG	Test Dates: 04/11/2024 - 08/01/2024	EUT Type: Watch	Page 119 of 123


Frequency Stability / Temperature Variation

LTE Band 12/17				
Operating Band Lower Boundary (GHz)			0.699	
Ref. Voltage (VDC):			3.80	
Voltage (%)	Power (VDC)	Temp (°C)	Measured Freq. (GHz)	Freq. Delta from Operating Range (GHz)
100 %	3.80	- 30	0.6995100	-0.0005100
		- 20	0.6995035	-0.0005035
		- 10	0.6995178	-0.0005178
		0	0.6995134	-0.0005134
		+ 10	0.6995124	-0.0005124
		+ 20 (Ref)	0.6995125	-0.0005125
		+ 30	0.6995134	-0.0005134
		+ 40	0.6995137	-0.0005137
Battery Endpoint	3.40	+ 20	0.6995107	-0.0005107

Table 7-22. LTE Band 12/17 Lower Boundary Frequency Stability Data

LTE Band 12/17				
Operating Band Upper Boundary (GHz)			0.716	
Ref. Voltage (VDC):			3.80	
Voltage (%)	Power (VDC)	Temp (°C)	Measured Freq. (GHz)	Freq. Delta from Operating Range (GHz)
100 %	3.80	- 30	0.7154832	-0.0005168
		- 20	0.7154783	-0.0005217
		- 10	0.7154783	-0.0005217
		0	0.7154773	-0.0005227
		+ 10	0.7154475	-0.0005525
		+ 20 (Ref)	0.7154783	-0.0005217
		+ 30	0.7154793	-0.0005207
		+ 40	0.7154866	-0.0005134
Battery Endpoint	3.40	+ 20	0.7154743	-0.0005257

Table 7-23. LTE Band 12/17 Upper Boundary Frequency Stability Data

FCC ID: BCG-A3001	 PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1C2405230021-05.BCG	Test Dates: 04/11/2024 - 08/01/2024	EUT Type: Watch	Page 120 of 123


Frequency Stability / Temperature Variation

LTE Band 13				
Operating Band Lower Boundary (GHz)		0.777		
Ref. Voltage (VDC):		3.80		
Voltage (%)	Power (VDC)	Temp (°C)	Measured Freq. (GHz)	Freq. Delta from Operating Range (GHz)
100 %	3.80	- 30	0.7775267	-0.0005267
		- 20	0.7775265	-0.0005265
		- 10	0.7775321	-0.0005321
		0	0.7775343	-0.0005343
		+ 10	0.7775279	-0.0005279
		+ 20 (Ref)	0.7775280	-0.0005280
		+ 30	0.7775350	-0.0005350
		+ 40	0.7775346	-0.0005346
		+ 50	0.7775354	-0.0005354
Battery Endpoint	3.40	+ 20	0.7775302	-0.0005302

Table 7-24. LTE Band 13 Lower Boundary Frequency Stability Data

LTE Band 13				
Operating Band Upper Boundary (GHz)		0.787		
Ref. Voltage (VDC):		3.80		
Voltage (%)	Power (VDC)	Temp (°C)	Measured Freq. (GHz)	Freq. Delta from Operating Range (GHz)
100 %	3.80	- 30	0.7864818	-0.0005182
		- 20	0.7864867	-0.0005133
		- 10	0.7864833	-0.0005167
		0	0.7864953	-0.0005047
		+ 10	0.7864828	-0.0005172
		+ 20 (Ref)	0.7864901	-0.0005099
		+ 30	0.7864833	-0.0005167
		+ 40	0.7864883	-0.0005117
		+ 50	0.7864869	-0.0005131
Battery Endpoint	3.40	+ 20	0.7864963	-0.0005037

Table 7-25. LTE Band 13 Upper Boundary Frequency Stability Data

FCC ID: BCG-A3001	 PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1C2405230021-05.BCG	Test Dates: 04/11/2024 - 08/01/2024	EUT Type: Watch	Page 121 of 123


Frequency Stability / Temperature Variation

WCDMA AWS				
Operating Band Lower Boundary (GHz)			1.710	
Ref. Voltage (VDC):			3.80	
Voltage (%)	Power (VDC)	Temp (°C)	Measured Freq. (GHz)	Freq. Delta from Operating Range (GHz)
100 %	3.80	- 30	1.7103188	-0.0003188
		- 20	1.7103557	-0.0003557
		- 10	1.7103492	-0.0003492
		0	1.7106507	-0.0006507
		+ 10	1.7103521	-0.0003521
		+ 20 (Ref)	1.7103534	-0.0003534
		+ 30	1.7103542	-0.0003542
		+ 40	1.7103518	-0.0003518
		+ 50	1.7103488	-0.0003488
Battery Endpoint	3.40	+ 20	1.7103540	-0.0003540

Table 7-26. WCDMA AWS Lower Boundary Frequency Stability Data


WCDMA AWS				
Operating Band Upper Boundary (GHz)			1.755	
Ref. Voltage (VDC):			3.80	
Voltage (%)	Power (VDC)	Temp (°C)	Measured Freq. (GHz)	Freq. Delta from Operating Range (GHz)
100 %	3.80	- 30	1.7546611	-0.0003389
		- 20	1.7546573	-0.0003427
		- 10	1.7546553	-0.0003447
		0	1.7546652	-0.0003348
		+ 10	1.7546576	-0.0003424
		+ 20 (Ref)	1.7546625	-0.0003375
		+ 30	1.7546517	-0.0003483
		+ 40	1.7546606	-0.0003394
		+ 50	1.7546581	-0.0003419
Battery Endpoint	3.40	+ 20	1.7546626	-0.0003374

Table 7-27. WCDMA AWS Upper Boundary Frequency Stability Data

FCC ID: BCG-A3001	 PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1C2405230021-05.BCG	Test Dates: 04/11/2024 - 08/01/2024	EUT Type: Watch	Page 122 of 123

8.0 CONCLUSION

The data collected relate only to the item(s) tested and show that the **Apple Watch** **FCC ID: BCG-A3001** complies with all the requirements of Part 27 of the FCC rules.

FCC ID: BCG-A3001	 PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1C2405230021-05.BCG	Test Dates: 04/11/2024 - 08/01/2024	EUT Type: Watch	Page 123 of 123

V2.2 09/07/2023