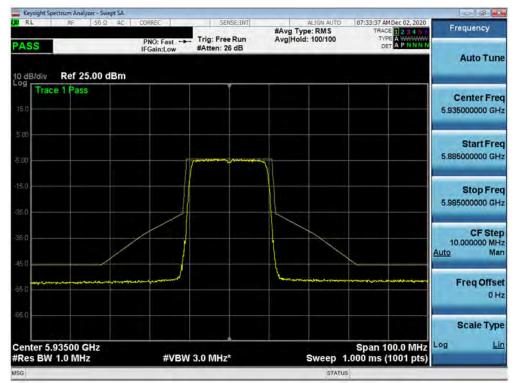


RLT RF SOR AC		SENSE:INT SOU	#Avg Type: RMS Avg Hold: 100/100	06:51:21 AM Oct 20, 2020 TRACE 1 2 3 4 5 6 TYPE A WWWWWW DET A P N N N N	Trace/Detector
dB/div Ref 16.00 dBm	IFGain:Low #A	Atten: 26 dB	an Strange doord	kr1 6.417 9 GHz -5.337 dBm	Select Trace
g Trace 1 Pass		Ĭ			Clear Writ
	1				Trace Averag
.a.					Max Hol
					Min Ho
0					View Blank Trace Or
enter 6.41500 GHz Res BW 1.0 MHz	#VBW 3.0			Span 100.0 MHz 1.000 ms (1001 pts)	Moi 1 of

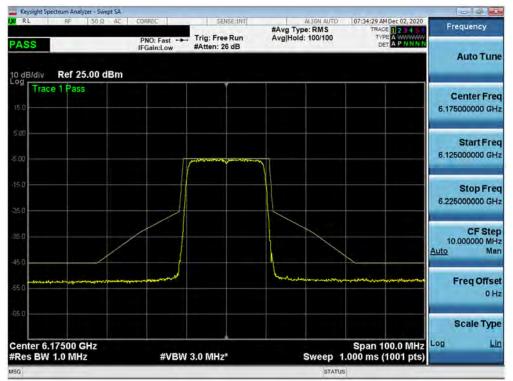




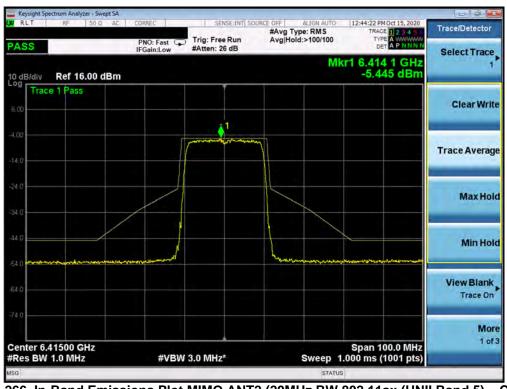
Plot 7-264. In-Band Emissions Plot MIMO ANT2 (20MHz BW 802.11ax (UNII Band 5) - Ch. 2)

FCC ID: A3LSMG998U	PCTEST Presad to be patt fol @ winnered	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Dogo 156 of 212
1M2009230152-31-R1.A3L	10/05 - 12/02/2020	Portable Handset		Page 156 of 212
© 2020 PCTEST		·		V 9.0 02/01/2019





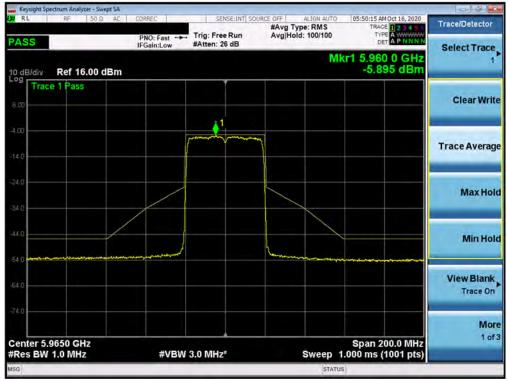
Plot 7-265. In-Band Emissions Plot MIMO ANT2 (20MHz BW 802.11ax (UNII Band 5) - Ch. 45)



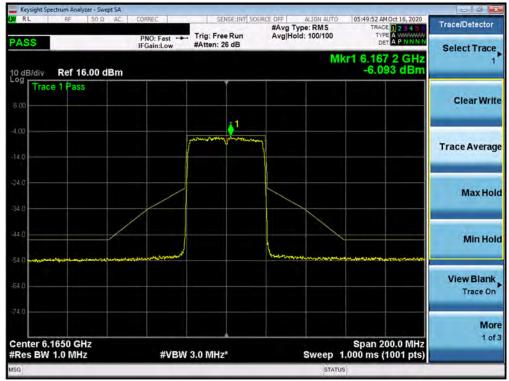
Plot 7-266. In-Band Emissions Plot MIMO ANT2 (20MHz BW 802.11ax (UNII Band 5) - Ch. 93)

FCC ID: A3LSMG998U	PECTEST Presad to be patir tel @	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Dogo 157 of 010
1M2009230152-31-R1.A3L	10/05 - 12/02/2020	Portable Handset		Page 157 of 212
© 2020 PCTEST	•			V 9.0 02/01/2019





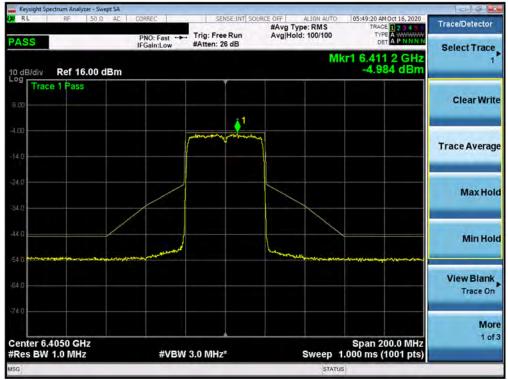
Plot 7-267. In-Band Emissions Plot MIMO ANT2 (40MHz BW 802.11ax (UNII Band 5) – Ch. 3)



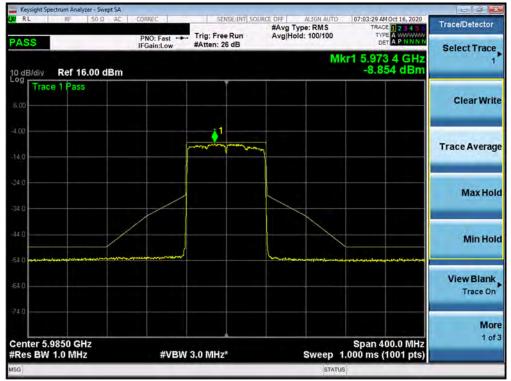
Plot 7-268. In-Band Emissions Plot MIMO ANT2 (40MHz BW 802.11ax (UNII Band 5) - Ch. 43)

FCC ID: A3LSMG998U	PCTEST Tresal to be) still to define	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Dogo 159 of 010
1M2009230152-31-R1.A3L	10/05 - 12/02/2020	Portable Handset		Page 158 of 212
© 2020 PCTEST		·		V 9.0 02/01/2019





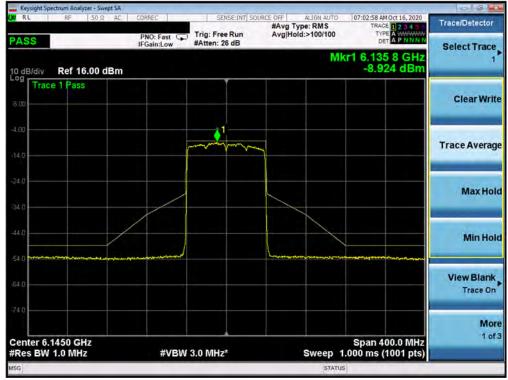
Plot 7-269. In-Band Emissions Plot MIMO ANT2 (40MHz BW 802.11ax (UNII Band 5) - Ch. 91)



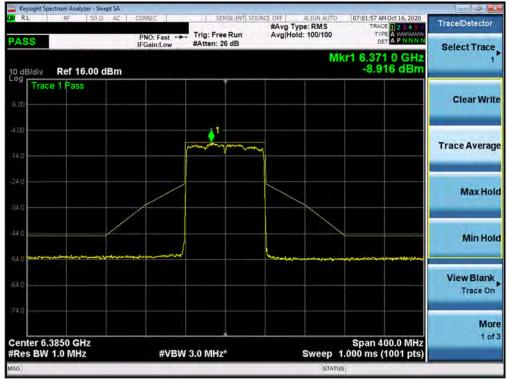
Plot 7-270. In-Band Emissions Plot MIMO ANT2 (80MHz BW 802.11ax (UNII Band 5) - Ch. 7)

FCC ID: A3LSMG998U	PETEST Presad To Law patt of @	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Dogo 150 of 010
1M2009230152-31-R1.A3L	10/05 - 12/02/2020	Portable Handset		Page 159 of 212
© 2020 PCTEST	•	·		V 9.0 02/01/2019





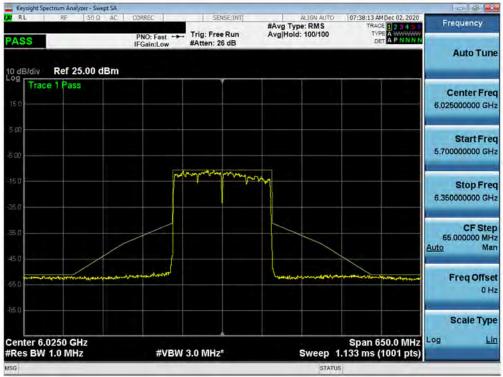
Plot 7-271. In-Band Emissions Plot MIMO ANT2 (80MHz BW 802.11ax (UNII Band 5) - Ch. 39)



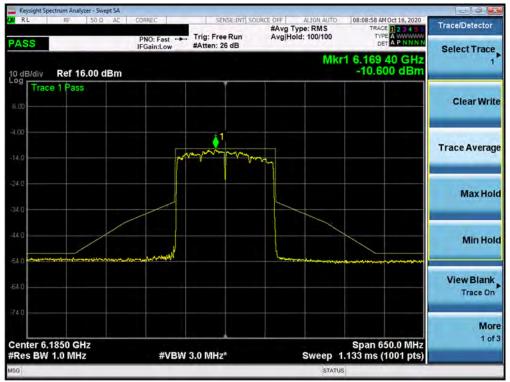
Plot 7-272. In-Band Emissions Plot MIMO ANT2 (80MHz BW 802.11ax (UNII Band 5) - Ch. 87)

FCC ID: A3LSMG998U	PCTEST Presal to be part of @ allocat	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Daga 160 of 212
1M2009230152-31-R1.A3L	10/05 - 12/02/2020	Portable Handset		Page 160 of 212
© 2020 PCTEST	•	·		V 9.0 02/01/2019





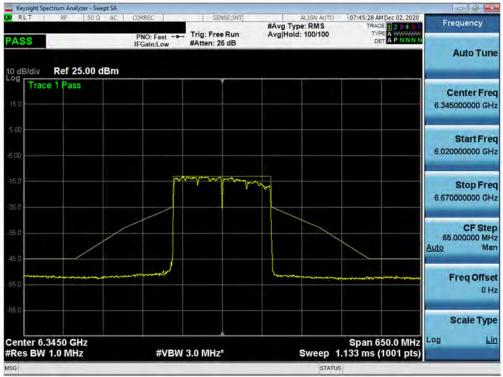
Plot 7-273. In-Band Emissions Plot MIMO ANT2 (160MHz BW 802.11ax (UNII Band 5) - Ch. 15)



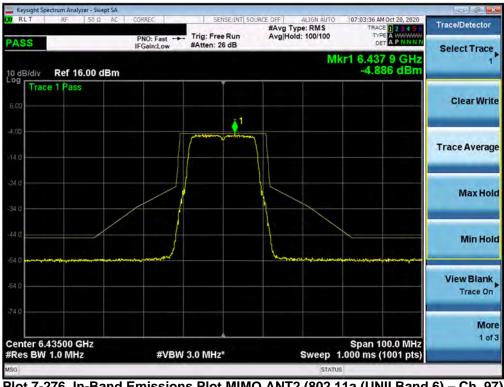
Plot 7-274. In-Band Emissions Plot MIMO ANT2 (160MHz BW 802.11ax (UNII Band 5) - Ch. 47)

FCC ID: A3LSMG998U	PETEST Presad to be patt of @	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Dogo 161 of 010
1M2009230152-31-R1.A3L	10/05 - 12/02/2020	Portable Handset		Page 161 of 212
© 2020 PCTEST	•			V 9.0 02/01/2019





Plot 7-275. In-Band Emissions Plot MIMO ANT2 (160MHz BW 802.11ax (UNII Band 5) - Ch. 79)

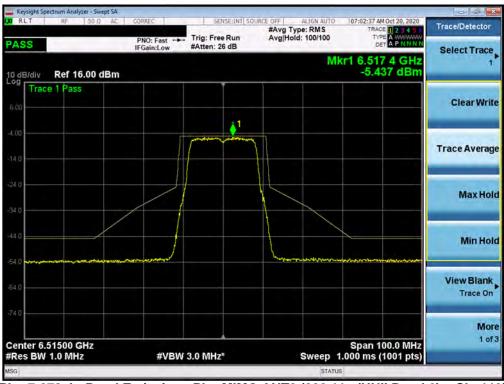


Plot 7-276. In-Band Emissions Plot MIMO ANT2 (802.11a (UNII Band 6) – Ch. 97)

FCC ID: A3LSMG998U	PREAD TO LAW patter of Comment	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Dage 162 of 212
1M2009230152-31-R1.A3L	10/05 - 12/02/2020	Portable Handset		Page 162 of 212
© 2020 PCTEST	•	•		V 9.0 02/01/2019



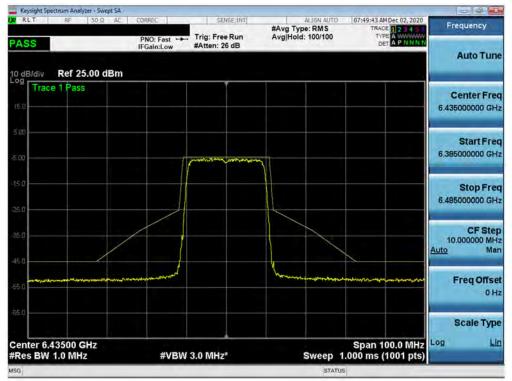
4.00 -14.0 -24.0 -34.0 -44.0 -44.0 -44.0 -54.0 -	enter 6.47500 GHz Res BW 1.0 MHz	Span 100.0 MHz 10 ms (1001 pts)
D dB/div Ref 16.00 dBm -5.180 dBm Clear W Trace 1 Pass Clear W 140 140 140 140 140 140 140 140		Mo
De del/div Ref 16.00 dBm -5.180 dBm Clear V Trace 1 Pass 500 140 140 140 140 140 140 140 140 140 1		View Blank Trace Or
AB/div Ref 16.00 dBm -5.180 dBm Clear V		Min Ho
DeB/div Ref 16.00 dBm -5.180 dBm Clear 1 Trace 1 Pass Clear 1 Ad		MaxHo
dB/div Ref 16.00 dBm -5.180 dBm	.σ	Trace Averag
dB/div Ref 16.00 dBm -5.180 dBm	čo	Clear Wri
	DCDC	6.471 5 GHz -5.180 dBm
ASS PNO: Fast Trig: Free Run Avg Hold: 100/100 TYPE A	ASS	DET A P NNNN Select Trace



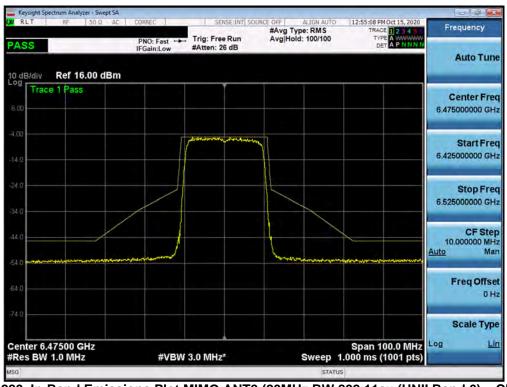
Plot 7-278. In-Band Emissions Plot MIMO ANT2 (802.11a (UNII Band 6) – Ch. 113)

FCC ID: A3LSMG998U	PECTEST Presal to be patried @	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Dogo 162 of 010
1M2009230152-31-R1.A3L	10/05 - 12/02/2020	Portable Handset		Page 163 of 212
© 2020 PCTEST	•	•		V 9.0 02/01/2019





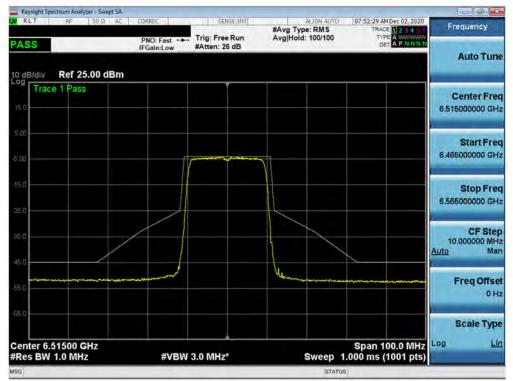
Plot 7-279. In-Band Emissions Plot MIMO ANT2 (20MHz BW 802.11ax (UNII Band 6) - Ch. 97)



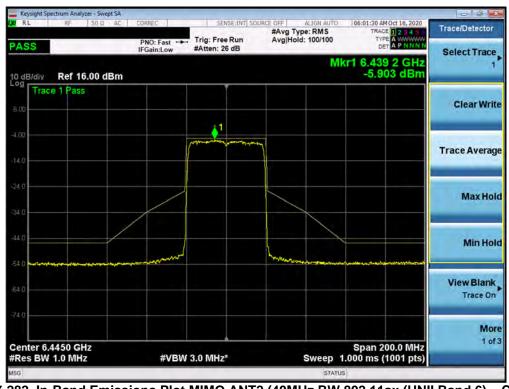
Plot 7-280. In-Band Emissions Plot MIMO ANT2 (20MHz BW 802.11ax (UNII Band 6) - Ch. 105)

FCC ID: A3LSMG998U	PCTEST Presad to be patt fol @ winnered	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Da as 404 st 040
1M2009230152-31-R1.A3L	10/05 - 12/02/2020	Portable Handset		Page 164 of 212
© 2020 PCTEST	•			V 9.0 02/01/2019





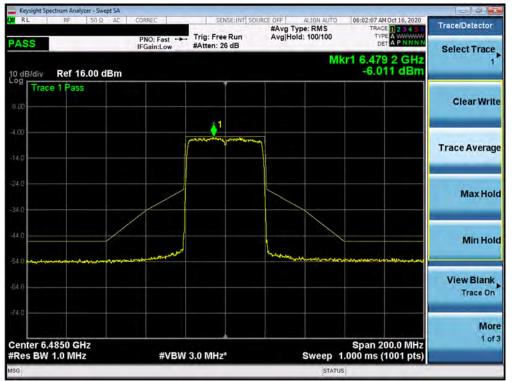
Plot 7-281. In-Band Emissions Plot MIMO ANT2 (20MHz BW 802.11ax (UNII Band 6) - Ch. 113)



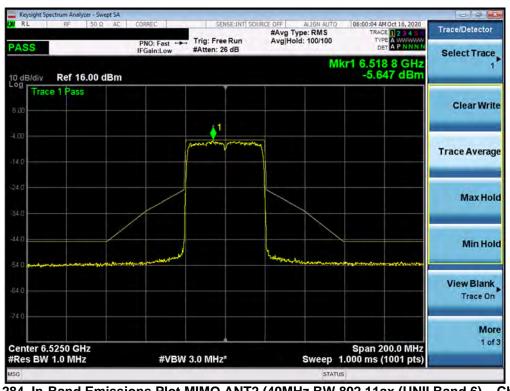
Plot 7-282. In-Band Emissions Plot MIMO ANT2 (40MHz BW 802.11ax (UNII Band 6) - Ch. 99)

FCC ID: A3LSMG998U	PECTEST Presad to be patir tel @	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Dogo 165 of 010
1M2009230152-31-R1.A3L	10/05 - 12/02/2020	Portable Handset		Page 165 of 212
© 2020 PCTEST	•			V 9.0 02/01/2019





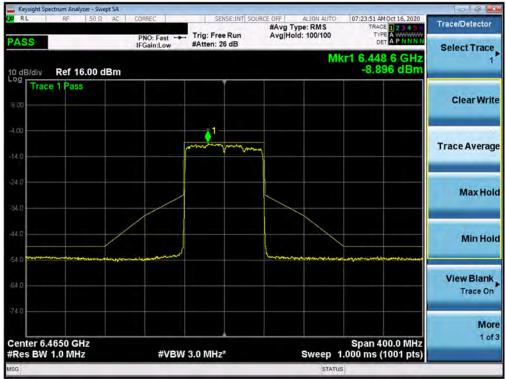
Plot 7-283. In-Band Emissions Plot MIMO ANT2 (40MHz BW 802.11ax (UNII Band 6) - Ch. 107)



Plot 7-284. In-Band Emissions Plot MIMO ANT2 (40MHz BW 802.11ax (UNII Band 6) - Ch. 115)

FCC ID: A3LSMG998U	PREMA To be patter &	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Dage 100 of 212
1M2009230152-31-R1.A3L	10/05 - 12/02/2020	Portable Handset	Page 166 of 212
© 2020 PCTEST			V 9.0 02/01/2019





Plot 7-285. In-Band Emissions Plot MIMO ANT2 (80MHz BW 802.11ax (UNII Band 6) - Ch. 103)

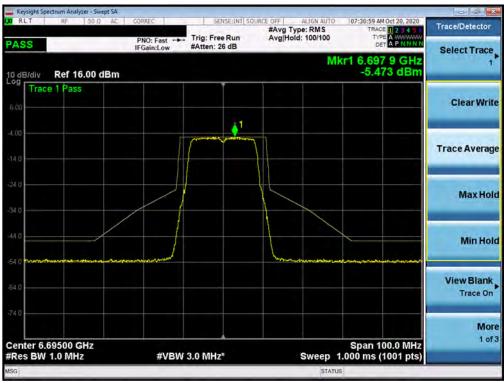


Plot 7-286. In-Band Emissions Plot MIMO ANT2 (160MHz BW 802.11ax (UNII Band 6) - Ch. 111)

FCC ID: A3LSMG998U	PETEST Presad to be patt of @	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Dogo 167 of 010
1M2009230152-31-R1.A3L	10/05 - 12/02/2020	Portable Handset		Page 167 of 212
© 2020 PCTEST	•	·		V 9.0 02/01/2019



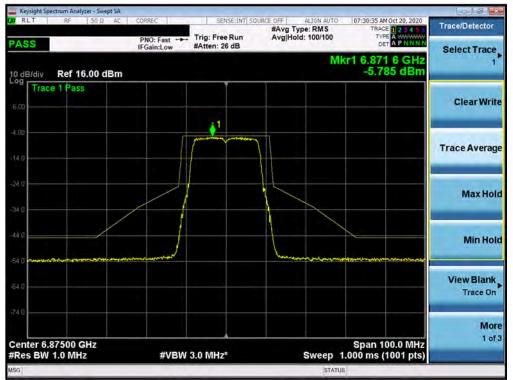
enter 6.535 Res BW 1.0		#VI	BW 3.0 MHz*	Sweep 1	Span 100.0 MHz .000 ms (1001 pts)	
						Mor 1 of
54.Q						View Blank Trace On
14.0 54.0		manna		Lunna		Min Hol
34.α ———						-
4.0.		/				Max Hol
4.0						Trace Averag
.00			21			Clear Wri
dB/div Re	ef 16.00 dB Pass	m			-5.409 dBm	
ASS		PNO: Fast IFGain:Low		Avg[Hold: 100/100	DET A P NNNN T1 6.531 8 GHz	Select Trace
	RF 50 Ω	AC CORREC	SENSE:INT S	#Avg Type: RMS	07:31:24 AM Oct 20, 2020 TRACE 1 2 3 4 5 0	Trace/Detector



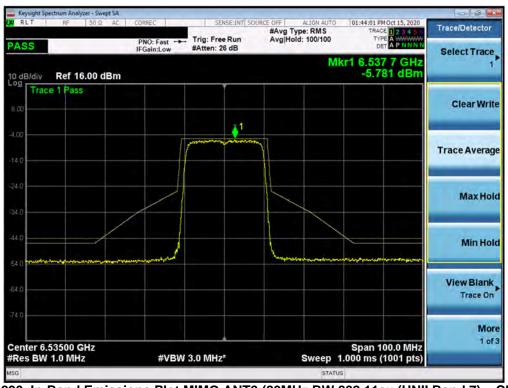
Plot 7-288. In-Band Emissions Plot MIMO ANT2 (802.11a (UNII Band 7) – Ch. 149)

FCC ID: A3LSMG998U	PECTEST Presad To Law justif of @	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Dage 169 of 212
1M2009230152-31-R1.A3L	10/05 - 12/02/2020	Portable Handset		Page 168 of 212
© 2020 PCTEST	•	•		V 9.0 02/01/2019





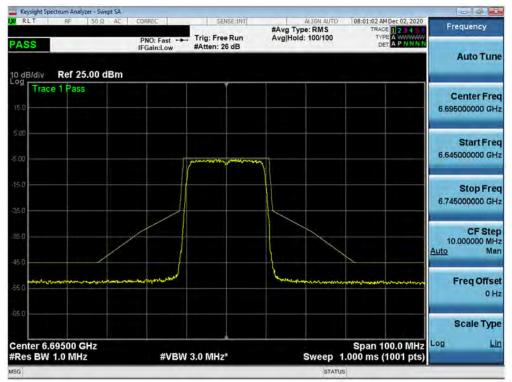
Plot 7-289. In-Band Emissions Plot MIMO ANT2 (802.11a (UNII Band 7) – Ch. 185)



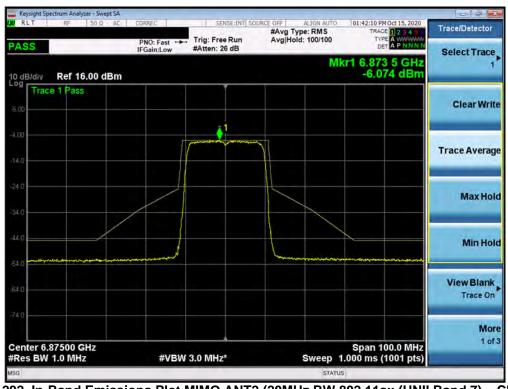
Plot 7-290. In-Band Emissions Plot MIMO ANT2 (20MHz BW 802.11ax (UNII Band 7) - Ch. 117)

FCC ID: A3LSMG998U		MEASUREMENT REPORT (CERTIFICATION)	MSUNG	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Daga 160 of 212
1M2009230152-31-R1.A3L	10/05 - 12/02/2020	Portable Handset		Page 169 of 212
© 2020 PCTEST	•			V 9.0 02/01/2019





Plot 7-291. In-Band Emissions Plot MIMO ANT2 (20MHz BW 802.11ax (UNII Band 7) - Ch. 149)



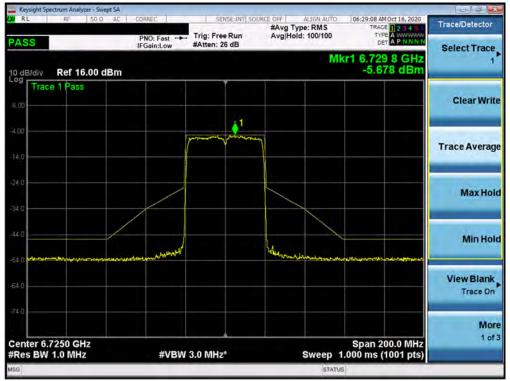
Plot 7-292. In-Band Emissions Plot MIMO ANT2 (20MHz BW 802.11ax (UNII Band 7) - Ch. 185)

FCC ID: A3LSMG998U	PETEST Presad To Law patt rel @	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Dage 170 of 212
1M2009230152-31-R1.A3L	10/05 - 12/02/2020	Portable Handset	Page 170 of 212
© 2020 PCTEST	•		V 9.0 02/01/2019





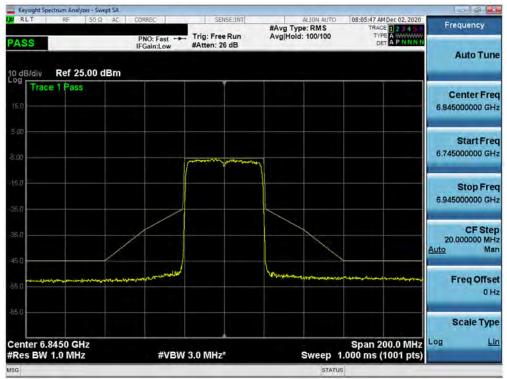
Plot 7-293. In-Band Emissions Plot MIMO ANT2 (40MHz BW 802.11ax (UNII Band 7) - Ch. 123)



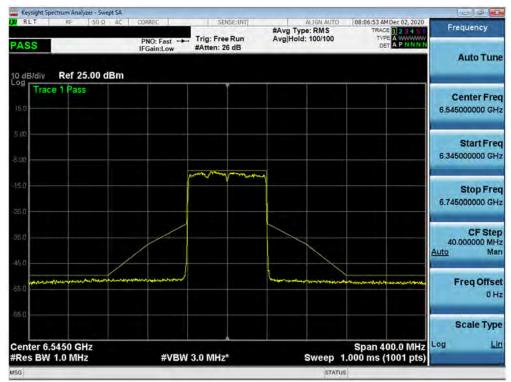
Plot 7-294. In-Band Emissions Plot MIMO ANT2 (40MHz BW 802.11ax (UNII Band 7) - Ch. 147)

FCC ID: A3LSMG998U	PETEST Presad to be patt of @	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Dega 171 of 010
1M2009230152-31-R1.A3L	10/05 - 12/02/2020	Portable Handset		Page 171 of 212
© 2020 PCTEST	•	·		V 9.0 02/01/2019





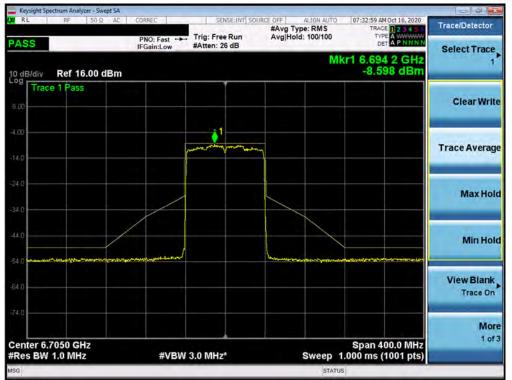
Plot 7-295. In-Band Emissions Plot MIMO ANT2 (40MHz BW 802.11ax (UNII Band 7) - Ch. 179)



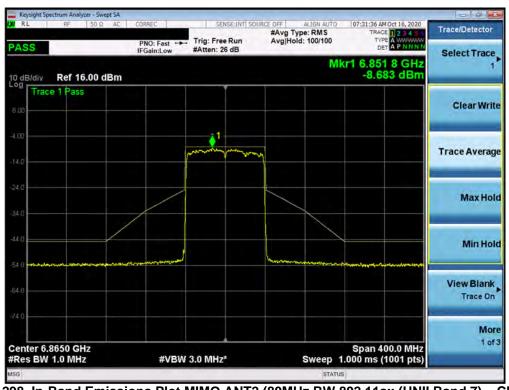
Plot 7-296. In-Band Emissions Plot MIMO ANT2 (80MHz BW 802.11ax (UNII Band 7) - Ch. 119)

FCC ID: A3LSMG998U	PETEST Presad to be patt of @	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Dage 170 of 010
1M2009230152-31-R1.A3L	10/05 - 12/02/2020	Portable Handset		Page 172 of 212
© 2020 PCTEST	•	·		V 9.0 02/01/2019





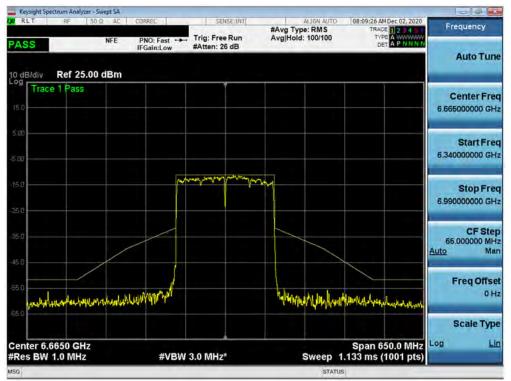
Plot 7-297. In-Band Emissions Plot MIMO ANT2 (80MHz BW 802.11ax (UNII Band 7) - Ch. 151)



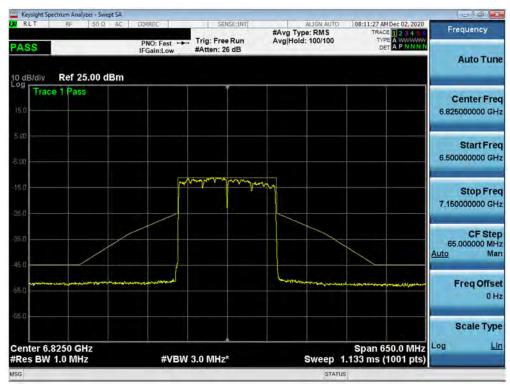
Plot 7-298. In-Band Emissions Plot MIMO ANT2 (80MHz BW 802.11ax (UNII Band 7) - Ch. 185)

FCC ID: A3LSMG998U	PREMA To be patter &	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Dogo 172 of 212
1M2009230152-31-R1.A3L	10/05 - 12/02/2020	Portable Handset	Page 173 of 212
© 2020 PCTEST			V 9.0 02/01/2019





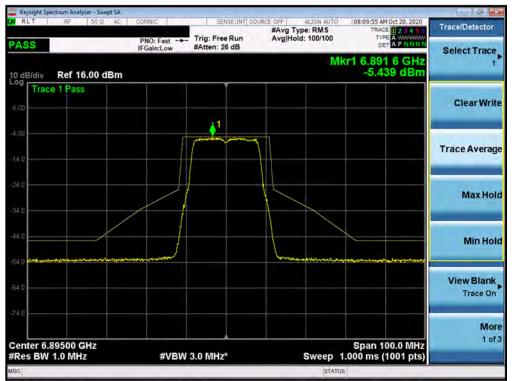
Plot 7-299. In-Band Emissions Plot MIMO ANT2 (160MHz BW 802.11ax (UNII Band 7) - Ch. 143)



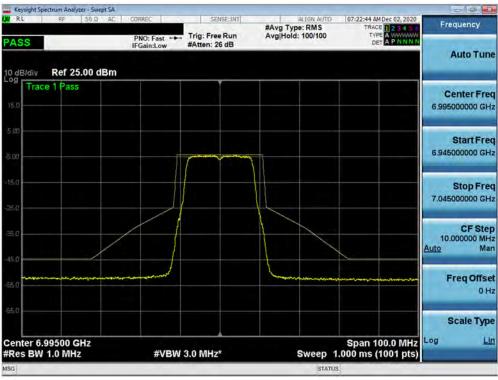
Plot 7-300. In-Band Emissions Plot MIMO ANT2 (160MHz BW 802.11ax (UNII Band 7) - Ch. 175)

FCC ID: A3LSMG998U	PREMA To be patt to &	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Dage 174 of 212
1M2009230152-31-R1.A3L	10/05 - 12/02/2020	Portable Handset	Page 174 of 212
© 2020 PCTEST			V 9.0 02/01/2019





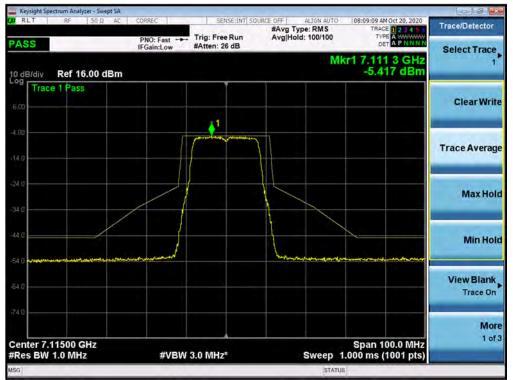




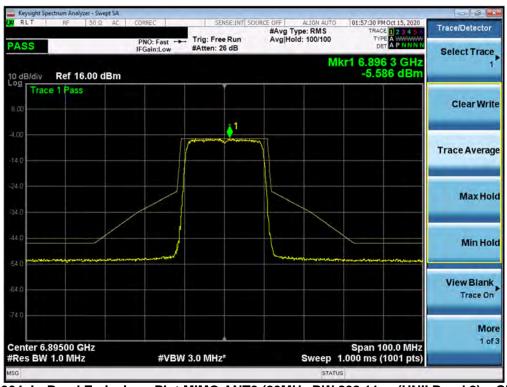
Plot 7-302. In-Band Emissions Plot MIMO ANT2 (802.11a (UNII Band 8) - Ch. 209)

FCC ID: A3LSMG998U	PREMA The be patter & demonstration	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Daga 175 of 212
1M2009230152-31-R1.A3L	10/05 - 12/02/2020	Portable Handset	Page 175 of 212
© 2020 PCTEST	•		V 9.0 02/01/2019





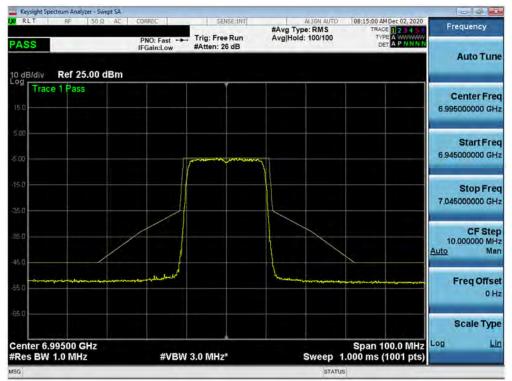
Plot 7-303. In-Band Emissions Plot MIMO ANT2 (802.11a (UNII Band 8) – Ch. 233)



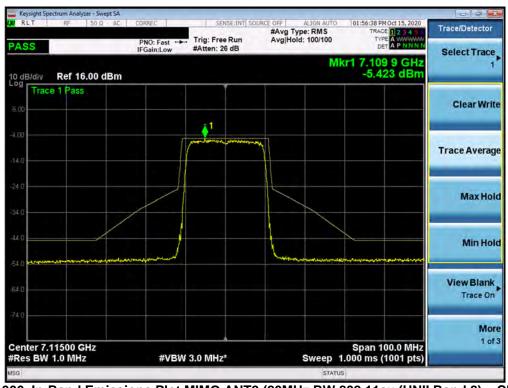
Plot 7-304. In-Band Emissions Plot MIMO ANT2 (20MHz BW 802.11ax (UNII Band 8) - Ch. 189)

FCC ID: A3LSMG998U	PETEST Presad to be patt of @	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Dega 176 of 010
1M2009230152-31-R1.A3L	10/05 - 12/02/2020	Portable Handset		Page 176 of 212
© 2020 PCTEST				V 9.0 02/01/2019





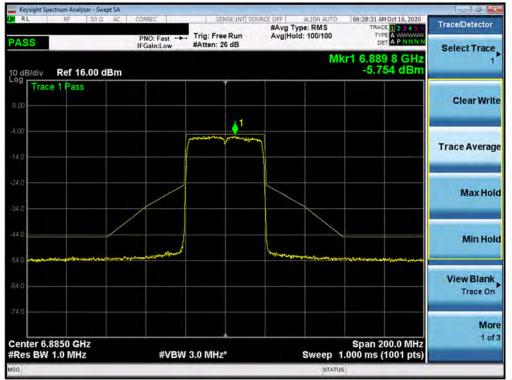
Plot 7-305. In-Band Emissions Plot MIMO ANT2 (20MHz BW 802.11ax (UNII Band 8) - Ch. 209)



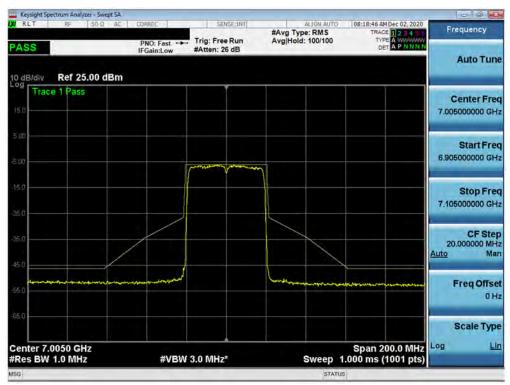
Plot 7-306. In-Band Emissions Plot MIMO ANT2 (20MHz BW 802.11ax (UNII Band 8) - Ch. 233)

FCC ID: A3LSMG998U	PECTEST Presad to be patir tel @	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Dego 177 of 010
1M2009230152-31-R1.A3L	10/05 - 12/02/2020	Portable Handset		Page 177 of 212
© 2020 PCTEST	•			V 9.0 02/01/2019





Plot 7-307. In-Band Emissions Plot MIMO ANT2 (40MHz BW 802.11ax (UNII Band 8) - Ch. 187)



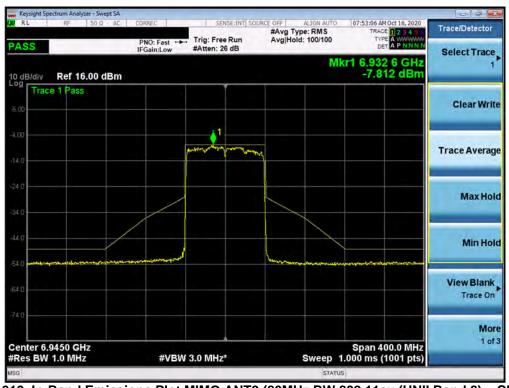
Plot 7-308. In-Band Emissions Plot MIMO ANT2 (40MHz BW 802.11ax (UNII Band 8) - Ch. 203)

FCC ID: A3LSMG998U	PCTEST Presad to be patit of @	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Dage 179 of 212
1M2009230152-31-R1.A3L	10/05 - 12/02/2020	Portable Handset	Page 178 of 212
© 2020 PCTEST			V 9.0 02/01/2019





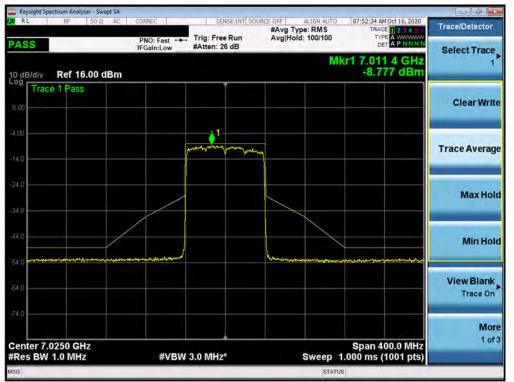
Plot 7-309. In-Band Emissions Plot MIMO ANT2 (40MHz BW 802.11ax (UNII Band 8) - Ch. 227)



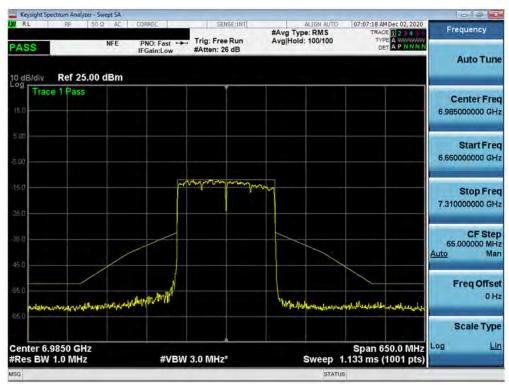
Plot 7-310. In-Band Emissions Plot MIMO ANT2 (80MHz BW 802.11ax (UNII Band 8) - Ch. 199)

FCC ID: A3LSMG998U	PECTEST Presad to be patir of @	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Dogo 170 of 010
1M2009230152-31-R1.A3L	10/05 - 12/02/2020	Portable Handset		Page 179 of 212
© 2020 PCTEST	•			V 9.0 02/01/2019





Plot 7-311. In-Band Emissions Plot MIMO ANT2 (80MHz BW 802.11ax (UNII Band 8) - Ch. 215)



Plot 7-312. In-Band Emissions Plot MIMO ANT2 (160MHz BW 802.11ax (UNII Band 8) - Ch. 207)

FCC ID: A3LSMG998U	PREMA To be patt to Bernard	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Dogo 190 of 212
1M2009230152-31-R1.A3L	10/05 - 12/02/2020	Portable Handset	Page 180 of 212
© 2020 PCTEST	•		V 9.0 02/01/2019



7.6 Contention Based Protocol – 802.11a/ax §15.407(d)(6)

Test Overview and Limit

Indoor access points, subordinate devices and client devices operating in the 5.925-7.125 GHz band (herein referred to as unlicensed devices) are required to use technologies that include a contention-based protocol to avoid co-channel interference with incumbent devices sharing the band. To ensure incumbent co-channel operations are detected in a technology-agnostic manner, unlicensed devices are required to detect co-channel radio frequency energy (energy detect) and avoid simultaneous transmission.

Unlicensed indoor low-power devices must detect co-channel radio frequency power that is at least -62 dBm or lower. Upon detection of energy in the band, unlicensed low power indoor devices must vacate the channel and stay off the channel as long as detected radio frequency power is equal to or greater than the threshold (-62 dBm). The -62 dBm (or lower) threshold is referenced to a 0 dBi antenna gain.

To ensure incumbent operations are reliably detected in the band, low power indoor devices must detect RF energy throughout their intended operating channel.

Test Procedure Used

ANSI C63.10-2013 – Section 12.3.2.2 KDB 987594 D02

Test Settings

- 1) Configure the EUT to transmit with a constant duty cycle.
- 2) Set the operating parameters of the EUT including power level, operating frequency, modulation and bandwidth.
- 3) Set the signal analyzer center frequency to the nominal EUT channel center frequency. The span range of the signal analyzer shall be between two times and five times the OBW of the EUT. Connect the output port of the EUT to the signal analyzer 2, as shown in Figure 2. Ensure that the attenuator 2 provides enough attenuation to not overload the signal analyzer 2 receiver.
- 4) Monitoring the signal analyzer 2, verify the EUT is operating and transmitting with the parameters set at step two.
- 5) Using an AWGN signal source, generate (but do not transmit, i.e., RF OFF) a 10 MHz-wide AWGN signal. Use Table 1 to determine the center frequency of the 10 MHz AWGN signal relative to the EUT's channel bandwidth and center frequency.
- 6) Set the AWGN signal power to an extremely low level (more than 20 dB below the -62 dBm threshold). Connect the AWGN signal source, via a 3-dB splitter, to the signal analyzer 1 and the EUT as shown in Figure 2.
- 7) Transmit the AWGN signal (RF ON) and verify its characteristics on the signal analyzer 1.
- 8) Monitor the signal analyzer 2 to verify if the AWGN signal has been detected and the EUT has ceased transmission. If the EUT continues to transmit, then incrementally increase the AWGN signal power level until the EUT stops transmitting.
- 9) (Including all losses in the RF paths) Determine and record the AWGN signal power level (at the EUT's antenna port) at which the EUT ceased transmission. Repeat the procedure at least 10 times to verify the EUT can detect an AWGN signal with 90% (or better) level of certainty.
- **10)** Refer to Table 1 to determine number of times the detection threshold testing needs to be repeated. If testing is required more than once, then go back to step 5, choose a different center frequency for the AWGN signal and repeat the process.

FCC ID: A3LSMG998U	PCTEST Presad to be patt fol @ winnered	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Dage 191 of 212
1M2009230152-31-R1.A3L	10/05 - 12/02/2020	Portable Handset	Page 181 of 212
© 2020 PCTEST			V 9.0 02/01/2019



Test Setup

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

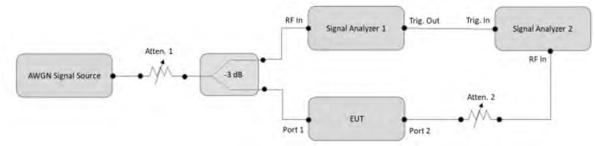
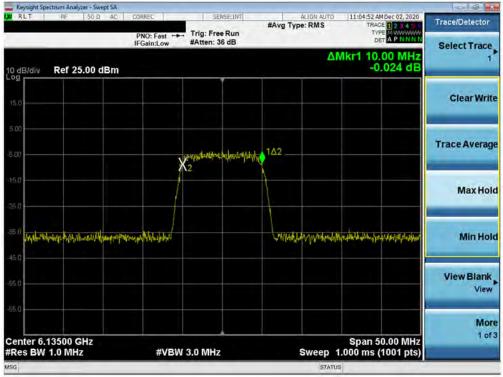


Figure 7-5. Test Instrument & Measurement Setup

Test Notes

- 1. Per guidance from KDB 987594 D02, contention based protocol was tested using an AWGN signal with a bandwidth of 10MHz (see Plot 7-313). The amplitude of the signal was increased until detected by the EUT, signaled by the ceasing of transmission (see Plot 7-314), marker indicates the point at which the AWGN signal is introduced.
- 2. Per 987594 D02, the detection threshold at the antenna port is calculated in the following way, where G is the gain of the antenna. D



Detection Threshold =	-62.0 [dBm] -	- G[dBi]
-----------------------	---------------	----------

Plot 7-313. AWGN Sample Signal

FCC ID: A3LSMG998U	PECTEST Presal to be patried @	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Dega 192 of 212
1M2009230152-31-R1.A3L	10/05 - 12/02/2020	Portable Handset	Page 182 of 212
© 2020 PCTEST		•	V 9.0 02/01/2019



Keysight Spectrum Analyzer - Swept SA	-				- 6 ×
RLT RF 50Ω AC		SENSE:INT SOU Trig: Free Run #Atten: 36 dB	Avg Type: Log-Pwr	01:49:21 PM Dec 14, 2020 TRACE 1 2 3 4 5 6 TYPE WWWWW DET P NNNNN	Frequency
IO dB/div Ref 20.00 dBm	II Gam.cow			Mkr1 2.591 s -3.18 dBm	Auto Tune
10.0					Center Fred 6.135000000 GH
0.00					Start Free 6.135000000 GH
20.0					Stop Fre 6.135000000 GH
	di la constant de la c	di asi tida (ti sa a di li a		ik temenantinsiktentana	CF Ste 1.000000 MH Auto Ma
50 D					Freq Offse 0 H
20 0 Center 6.135000000 GHz				opulloni	Scale Type
Res BW 1.0 MHz	VBW 1.0		Sweep	10.00 s (10001 pts)	

Plot 7-314. Contention Based Protocol Timing Plot

Band	Channel	Channel Freq [MHz]	Channel BW [MHz]	Incumbent Freq [MHz]	Detection Power Level [dBm]	Antenna Gain [dBi]	Detection Limit [dBm]	Modified Detection Limit [dBm]	Margin [dB]
	37	6135	20	6135	-69.91	-2.93	-62.0	-59.07	-10.84
UNII				6110	-65.69	-2.93	-62.0	-59.07	-6.62
Band 5	47	6185	160	6175	-69.05	-2.93	-62.0	-59.07	-9.98
				6240	-66.25	-2.93	-62.0	-59.07	-7.18
	101	6455	20	6455	-67.87	-3.78	-62.0	-58.22	-9.65
UNII				6435	-63.11	-3.78	-62.0	-58.22	-4.89
Band 6	111	6505	160	6495	-66.69	-3.78	-62.0	-58.22	-8.47
				6575	-63.25	-3.78	-62.0	-58.22	-5.03
	149	6695	20	6695	-67.82	-3.68	-62.0	-58.32	-9.5
UNII				6595	-63.43	-3.68	-62.0	-58.32	-5.11
Band 7	143	6665	160	6655	-67.41	-3.68	-62.0	-58.32	-9.09
				6735	-64.45	-3.68	-62.0	-58.32	-6.13
	213	7015	20	7015	-68.55	-3.78	-62.0	-58.22	-10.33
UNII				6915	-64.76	-3.78	-62.0	-58.22	-6.54
Band 8	207	6985	160	6975	-67.97	-3.78	-62.0	-58.22	-9.75
				7055	-63.3	-3.78	-62.0	-58.22	-5.08

Table 7-8. Contention Based Protocol – Incumbent Detection Results

FCC ID: A3LSMG998U	PCTEST Presad to be patt fol @ winnered	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Dogo 192 of 212
1M2009230152-31-R1.A3L	10/05 - 12/02/2020	Portable Handset		Page 183 of 212
© 2020 PCTEST		·		V 9.0 02/01/2019



		а 	CBP Dete	ction (1	= Detec	tion, Bla	nk = No	Detectio	on)					
Band	Channel	Channel Freq [MHz]	Channel BW [MHz]	1	2	3	4	5	6	7	8	9	10	Detection Rate (%)
	37	6135	20	1	1	1	1	1	1	1	1	1	1	100
UNII				1	1	1	1	1	1	1	1	1	1	100
Band 5	47	6185	160	1	1	1	1	1	1	1	1	1	1	100
				1	1	1	1	1	1	1	1	1	1	100
	101	6455	20	1	1	1	1	1	1	1	1	1	1	100
UNII				1	1	1	1	1	1	1	1	1	1	100
Band 6	111 65	6505	160	1	1	1	1	1	1	1	1	1	1	100
				1	1	1	1	1	1	1	1	1	1	100
	149	6695	20	1	1	1	1	1	1	1	1	1	1	100
UNII				1	1	1	1	1	1	1	1	1	1	100
Band 7	143	6665	160	1	1	1	1	1	1	1	1	1	1	100
				1	1	1	1	1	1	1	1	1	1	100
	213	7015	20	1	1	1	1	1	1	1	1	1	1	100
UNII				1	1	1	1	1	1	1	1	1	1	100
Band 8	207	6985	160	1	1	1	1	1	1	1	1	1	1	100
				1	1	1	1	1	1	1	1	1	1	100

Table 7-9. Contention Based Protocol – Incumbent Detection Trial Results

FCC ID: A3LSMG998U	PECTEST Presad To Law justif of @	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager	
Test Report S/N:	Test Dates:	EUT Type:		Dage 194 of 212	
1M2009230152-31-R1.A3L	10/05 - 12/02/2020	Portable Handset		Page 184 of 212	
© 2020 PCTEST	•	·		V 9.0 02/01/2019	



7.7 Radiated Spurious Emission Measurements – Above 1GHz §15.205, §15.209

Test Overview and Limit

All out of band radiated spurious emissions are measured with a spectrum analyzer connected to a receive antenna while the EUT is operating at its maximum duty cycle, at its maximum power control level, as defined in ANSI C63.10-2013 and KDB 789033 D02 v02r01, and at the appropriate frequencies. All channels, modes (e.g. 802.11a, 802.11ax (20/40/80/160MHz), and modulations/data rates were investigated among all UNII bands. Only the radiated emissions of the configuration that produced the worst case emissions are reported in this section.

For transmitters operating in the 5.925-7.125 GHz band: All emissions outside of the 5.925-7.125 GHz band shall not exceed an EIRP of −27 dBm/MHz.

Frequency	Field Strength [µV/m]	Measured Distance [Meters]
Above 960.0 MHz	500	3

Table 7-10. Radiated Limits

Test Procedures Used

ANSI C63.10-2013 – Sections 12.7.7.2, 12.7.6, 12.7.5 KDB 789033 D02 v02r01 – Section G

Test Settings

Average Measurements above 1GHz (Method AD)

- 1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
- 2. RBW = 1MHz
- 3. VBW = 3MHz
- 4. Detector = power average (RMS)
- 5. Number of measurement points = 1001 (Number of points must be $\geq 2 \times \text{span/RBW}$)
- 6. Averaging type = power (RMS)
- 7. Sweep time = auto couple
- 8. Trace was averaged over 100 sweeps

Peak Measurements above 1GHz

- 1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
- 2. RBW = 1MHz
- 3. VBW = 3MHz
- 4. Detector = peak
- 5. Sweep time = auto couple
- 6. Trace mode = max hold
- 7. Trace was allowed to stabilize

FCC ID: A3LSMG998U	PCTEST Presal to be part of @ allocat	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Dage 195 of 212
1M2009230152-31-R1.A3L	10/05 - 12/02/2020	Portable Handset		Page 185 of 212
© 2020 PCTEST	•			V 9.0 02/01/2019



Peak Measurements below 1GHz

- 1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
- 2. Span was set greater than 1MHz
- 3. RBW = 120kHz
- 4. Detector = CISPR quasi-peak
- 5. Sweep time = auto couple
- 6. Trace was allowed to stabilize

Test Setup

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

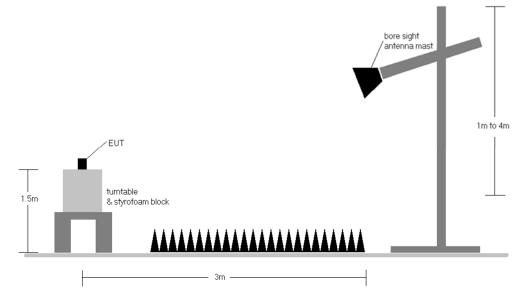


Figure 7-6. Test Instrument & Measurement Setup

FCC ID: A3LSMG998U	PREAST IN LAW PARTY OF COMPANY	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Daga 106 of 010
1M2009230152-31-R1.A3L	10/05 - 12/02/2020	Portable Handset		Page 186 of 212
© 2020 PCTEST				V 9.0 02/01/2019



Test Notes

- 1. All emissions that lie in the restricted bands (denoted by a * next to the frequency) specified in §15.205 the limit shown in Table 7-10.
- 2. All spurious emissions lying in restricted bands specified in §15.205 are below the limit shown in Table 7-10. All spurious emissions that do not lie in a restricted band are subject to an average limit of -27dBm/MHz. At a distance of 3 meters, the field strength limit in dBμV/m can be determined by adding a "conversion" factor of 95.2dB to the EIRP limit of -27dBm/MHz to obtain the limit for out of band spurious emissions of 68.2dBμV/m.
- All spurious emissions that do not lie in a restricted band are subject to a peak limit not to exceed 20dB of the average limit [68.2dBµV/m]. If a peak measurement passes the average limit it was determined no further investigation is necessary.
- 4. The antenna is manipulated through typical positions, polarity and length during the tests. The EUT is manipulated through three orthogonal planes.
- 5. This unit was tested with its standard battery.
- 6. The spectrum is measured from 9kHz to the 10th harmonic of the fundamental frequency of the transmitter using CISPR quasi peak detector below 1GHz. Above 1 GHz, average and peak measurements were taken using linearly polarized horn antennas. The worst-case emissions are reported however emissions whose levels were not within 20dB of the respective limits were not reported.
- 7. Emissions below 18GHz were measured at a 3 meter test distance while emissions above 18GHz were measured at a 1 meter test distance with the application of a distance correction factor.
- 8. The wide spectrum spurious emissions plots shown on the following pages are used only for the purpose of emission identification. Any emissions found to be within 20dB of the limit are fully investigated and the results are shown in this section.
- 9. The "-" shown in the following RSE tables are used to denote a noise floor measurement.
- 10. In the case where a peak-detector measurement passed the given RMS limit it was determined sufficient to demonstrate compliance.

Sample Calculations

Determining Spurious Emissions Levels

- Field Strength Level $[dB\mu V/m]$ = Analyzer Level [dBm] + 107 + AFCL [dB/m]
- AFCL [dB/m] = Antenna Factor [dB/m] + Cable Loss [dB]
- ο Margin [dB] = Field Strength Level [dBμV/m] Limit [dBμV/m]

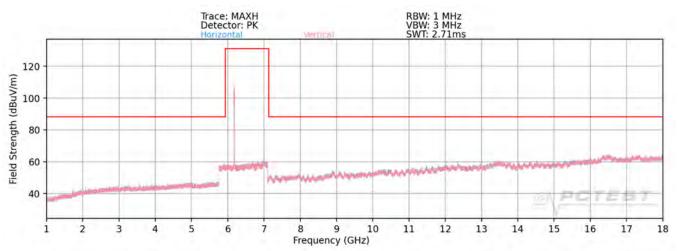
Radiated Band Edge Measurement Offset

The amplitude offset shown in the radiated restricted band edge plots was calculated using the formula:
 Offset (dB) = (Antenna Factor + Cable Loss + Attenuator) – Preamplifier Gain

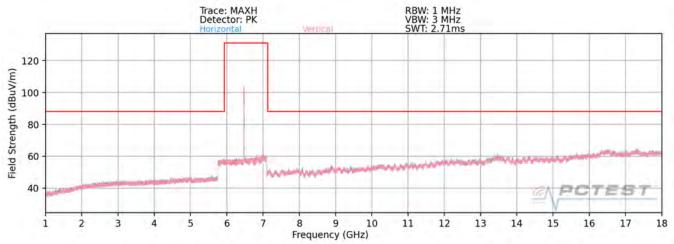
FCC ID: A3LSMG998U	PCTEST Presad to be patt fol @ winnered	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	EUT Type:	
1M2009230152-31-R1.A3L	10/05 - 12/02/2020	Portable Handset		Page 187 of 212
© 2020 PCTEST	•			V 9.0 02/01/2019



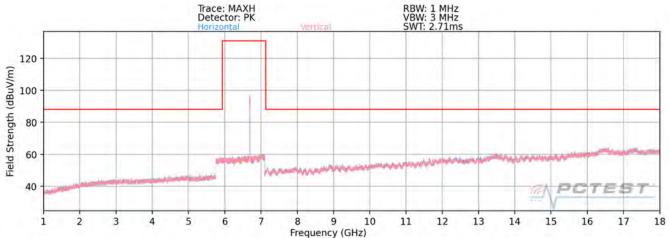




Plot 7-315. Radiated Spurious Plot above 1GHz MIMO (802.11ax – UNII Band 5 – 20MHz – Ch.45)



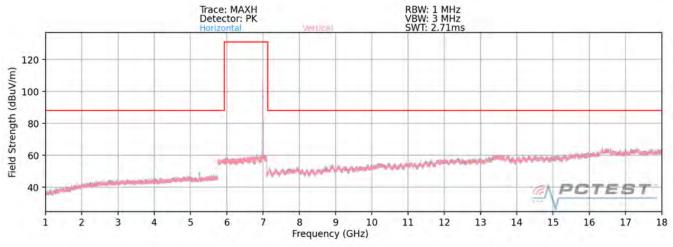




Plot 7 314. Radiated Spurious Plot above 1GHz MIMO (802.11ax- UNII Band 7 - 20MHz - Ch.149)

FCC ID: A3LSMG998U	PREMA THE SPACE ST	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Degre 199 of 212
1M2009230152-31-R1.A3L	10/05 - 12/02/2020	Portable Handset	Page 188 of 212
© 2020 PCTEST			V 9.0 02/01/2019





Plot 7 314. Radiated Spurious Plot above 1GHz MIMO (802.11ax- UNII Band 8 - 20MHz - Ch.209)

FCC ID: A3LSMG998U	PETEST Presad to be patt of @	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Dage 190 of 212
1M2009230152-31-R1.A3L	10/05 - 12/02/2020	Portable Handset		Page 189 of 212
© 2020 PCTEST		•		V 9.0 02/01/2019



7.6.2 MIMO Radiated Spurious Emission Measurements §15.407(b) §15.205 & §15.209

Worst Case Mode:802.11axWorst Case Transfer Rate:MCS0Distance of Measurements:1 & 3 MetersOperating Frequency:5935MHzChannel:2

	Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correctio n Factor [dB]	Field Strength [dBµV/m]	Limit [dBµV/m]	Margin [dB]
*	11870.00	Average	V	-	-	-80.52	15.74	0.00	42.22	53.98	-11.76
*	11870.00	Peak	V	-	-	-68.88	15.74	0.00	53.86	73.98	-20.12
*	17805.00	Average	V	-	-	-81.91	24.74	0.00	49.83	53.98	-4.15
*	17805.00	Peak	V	-	-	-71.21	24.74	0.00	60.53	73.98	-13.45
*	23740.00	Average	V	-	-	-63.35	2.52	-9.54	36.63	53.98	-17.35
*	23740.00	Peak	V	-	-	-50.95	2.52	-9.54	49.03	73.98	-24.95
	29675.00	Peak	V	-	-	-50.83	3.77	-9.54	50.40	68.20	-17.80

Table 7-11. Radiated Measurements MIMO (UNII Band 5 – Low Channel – 20MHz)

Worst Case Mode: Worst Case Transfer Rate: Distance of Measurements: Operating Frequency: Channel:

802.11ax
MCS0
1 & 3 Meters
6175MHz
45

	Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correctio n Factor [dB]	Field Strength [dBµV/m]	Limit [dBµV/m]	Margin [dB]
*	12350.00	Average	V	-	-	-80.92	16.88	0.00	42.96	53.98	-11.02
*	12350.00	Peak	V	-	-	-69.30	16.88	0.00	54.58	73.98	-19.40
*	18525.00	Average	V	-	-	-63.15	-0.07	-9.54	34.24	53.98	-19.74
*	18525.00	Peak	V	-	-	-51.28	-0.07	-9.54	46.11	73.98	-27.87
	24700.00	Peak	V	-	-	-51.06	3.04	-9.54	49.44	68.20	-18.76
	30875.00	Peak	V	-	-	-51.54	4.26	-9.54	50.17	68.20	-18.03

Table 7-12. Radiated Measurements MIMO (UNII Band 5 – Mid Channel – 20MHz)

FCC ID: A3LSMG998U	PCTEST Presal to be) still (& directed	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Dogo 100 of 212
1M2009230152-31-R1.A3L	10/05 - 12/02/2020	Portable Handset		Page 190 of 212
© 2020 PCTEST				V 9.0 02/01/2019



Worst Case Mode:	802.11ax			
Worst Case Transfer Rate:	MCS0			
Distance of Measurements:	1 & 3 Meters			
Operating Frequency:	6415MHz			
Channel:	93			

	Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correctio n Factor [dB]	Field Strength [dBµV/m]	Limit [dBµV/m]	Margin [dB]
	12830.00	Peak	V	-	-	-68.93	17.57	0.00	55.64	68.20	-12.56
*	19245.00	Average	V	-	-	-62.96	0.82	-9.54	35.32	53.98	-18.66
*	19245.00	Peak	V	-	-	-50.82	0.82	-9.54	47.46	73.98	-26.52
	25660.00	Peak	V	-	-	-50.74	4.39	-9.54	51.11	68.20	-17.09
	32075.00	Peak	V	-	-	-50.87	5.38	-9.54	51.97	68.20	-16.23

Table 7-13. Radiated Measurements MIMO (UNII Band 5 – High Channel – 20MHz)

Worst Case Mode: Worst Case Transfer Rate: Distance of Measurements: Operating Frequency: Channel: 802.11ax MCS0 1 & 3 Meters 6435MHz 97

	Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBµV/m]	Limit [dBµV/m]	Margin [dB]
	12870.00	Peak	V	-	-	-69.64	17.89	0.00	55.25	68.20	-12.95
*	19305.00	Average	V	-	-	-62.93	0.70	-9.54	35.22	53.98	-18.75
*	19305.00	Peak	V	-	-	-51.09	0.70	-9.54	47.06	73.98	-26.91
	25740.00	Peak	V	-	-	-50.70	4.23	-9.54	50.99	68.20	-17.21
	32175.00	Peak	V	-	-	-51.43	5.13	-9.54	51.16	68.20	-17.04

Table 7-14. Radiated Measurements MIMO (UNII Band 6 – Low Channel – 20MHz)

FCC ID: A3LSMG998U	PCTEST Presad to be patt fol @ winnered	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager	
Test Report S/N:	Test Dates:	EUT Type:		Page 191 of 212	
1M2009230152-31-R1.A3L	10/05 - 12/02/2020	Portable Handset			
© 2020 PCTEST		•		V 9.0 02/01/2019	



Worst Case Mode:	802.11ax
Worst Case Transfer Rate:	MCS0
Distance of Measurements:	1 & 3 Meters
Operating Frequency:	6475MHz
Channel:	105

	Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBµV/m]	Limit [dBµV/m]	Margin [dB]
	12950.00	Peak	V	-	-	-68.16	18.42	0.00	57.26	68.20	-10.94
*	19425.00	Average	V	-	-	-62.33	0.76	-9.54	35.89	53.98	-18.09
*	19425.00	Peak	V	-	-	-50.06	0.76	-9.54	48.16	73.98	-25.82
	25900.00	Peak	V	-	-	-50.83	4.37	-9.54	51.00	68.20	-17.20
	32375.00	Peak	V	-	-	-50.23	5.10	-9.54	52.32	68.20	-15.88

 Table 7-15. Radiated Measurements MIMO (UNII Band 6 – Mid Channel – 20MHz)

Worst Case Mode: Worst Case Transfer Rate: Distance of Measurements: Operating Frequency: Channel: 802.11ax MCS0 1 & 3 Meters 6515MHz 113

	Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBµV/m]	Limit [dBµV/m]	Margin [dB]
	13030.00	Peak	V	-	-	-68.76	18.03	0.00	56.27	68.20	-11.93
*	19545.00	Average	V	-	-	-63.10	0.88	-9.54	35.24	53.98	-18.74
*	19545.00	Peak	V	-	-	-51.14	0.88	-9.54	47.20	73.98	-26.78
	26060.00	Peak	V	-	-	-50.19	4.61	-9.54	51.87	68.20	-16.33
	32575.00	Peak	V	-	-	-49.91	5.09	-9.54	52.64	68.20	-15.56

Table 7-16. Radiated Measurements MIMO (UNII Band 6 – High Channel – 20MHz)

FCC ID: A3LSMG998U	PCTEST Presad to be patt fol @ winnered	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Dage 100 of 010
1M2009230152-31-R1.A3L	10/05 - 12/02/2020	Portable Handset		Page 192 of 212
© 2020 PCTEST		•		V 9.0 02/01/2019



Worst Case Mode:	802.11ax
Worst Case Transfer Rate:	MCS0
Distance of Measurements:	1 & 3 Meters
Operating Frequency:	6535MHz
Channel:	117

	Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBµV/m]	Limit [dBµV/m]	Margin [dB]
	13070.00	Peak	н	-	-	-68.46	18.10	0.00	56.64	68.20	-11.56
*	19605.00	Average	Н	-	-	-62.83	0.98	-9.54	35.61	73.98	-38.37
*	19605.00	Peak	Н	-	-	-50.45	0.98	-9.54	47.99	68.20	-20.21
	26140.00	Peak	н	-	-	-51.35	4.49	-9.54	50.60	68.20	-17.60
	32675.00	Peak	Н	-	-	-50.53	4.88	-9.54	51.81	68.20	-16.39

 Table 7-17. Radiated Measurements MIMO (UNII Band 7 – Low Channel – 20MHz)

Worst Case Mode: Worst Case Transfer Rate: Distance of Measurements: Operating Frequency: Channel: 802.11ax MCS0 1 & 3 Meters 6695MHz 149

	Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBµV/m]	Limit [dBµV/m]	Margin [dB]
*	13390.00	Average	Н	-	-	-80.91	18.25	0.00	44.34	53.98	-9.64
*	13390.00	Peak	н	-	-	-69.30	18.25	0.00	55.95	73.98	-18.03
*	20085.00	Average	Н	-	-	-62.15	0.94	-9.54	36.24	53.98	-17.74
*	20085.00	Peak	Н	-	-	-50.13	0.94	-9.54	48.26	73.98	-25.72
	26780.00	Peak	Н	-	-	-50.71	4.32	-9.54	51.06	68.20	-17.14
	33475.00	Peak	Н	-	-	-49.73	5.85	-9.54	53.58	68.20	-14.62

 Table 7-18. Radiated Measurements MIMO (UNII Band 7 – Mid Channel – 20MHz)

FCC ID: A3LSMG998U	PREMA Tic be patt of @uniment	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Dama 400 at 040
1M2009230152-31-R1.A3L	10/05 - 12/02/2020	Portable Handset		Page 193 of 212
© 2020 PCTEST		·		V 9.0 02/01/2019



Worst Case Mode:	802.11ax
Worst Case Transfer Rate:	MCS0
Distance of Measurements:	1 & 3 Meters
Operating Frequency:	6875MHz
Channel:	185

	Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBµV/m]	Limit [dBµV/m]	Margin [dB]
	13750.00	Peak	Н	-	-	-69.90	19.27	0.00	56.37	68.20	-11.83
*	20625.00	Average	Н	-	-	-63.74	1.47	-9.54	35.19	53.98	-18.79
*	20625.00	Peak	Н	-	-	-51.03	1.47	-9.54	47.90	73.98	-26.08
	27500.00	Peak	Н	-	-	-50.91	3.49	-9.54	50.04	68.20	-18.16
	34375.00	Peak	Н	-	-	-50.05	7.16	-9.54	54.57	68.20	-13.63

 Table 7-19. Radiated Measurements MIMO (UNII Band 7 – High Channel – 20MHz)

Worst Case Mode: Worst Case Transfer Rate: Distance of Measurements: Operating Frequency: Channel: 802.11ax MCS0 1 & 3 Meters 6895MHz 189

	Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBµV/m]	Limit [dBµV/m]	Margin [dB]
	13790.00	Peak	н	-	-	-73.40	19.03	0.00	52.63	68.20	-15.57
*	20685.00	Average	н	-	-	-63.99	1.38	-9.54	34.85	53.98	-19.13
*	20685.00	Peak	н	-	-	-52.31	1.38	-9.54	46.53	73.98	-27.45
	27580.00	Peak	н	-	-	-50.70	3.48	-9.54	50.24	68.20	-17.96
	34475.00	Peak	Н	-	-	-51.22	7.52	-9.54	53.76	68.20	-14.44

Table 7-20. Radiated Measurements MIMO (UNII Band 8 – Low Channel – 20MHz)

FCC ID: A3LSMG998U	PCTEST Tresal to be) still to defended	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Dogo 104 of 212
1M2009230152-31-R1.A3L	10/05 - 12/02/2020	Portable Handset		Page 194 of 212
© 2020 PCTEST		·		V 9.0 02/01/2019



Worst Case Mode:	802.11ax
Worst Case Transfer Rate:	MCS0
Distance of Measurements:	1 & 3 Meters
Operating Frequency:	6995MHz
Channel:	209

	Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBµV/m]	Limit [dBµV/m]	Margin [dB]
	13990.00	Peak	Н	-	-	-73.54	18.51	0.00	51.97	68.20	-16.23
*	20985.00	Average	Н	-	-	-63.37	1.88	-9.54	35.97	53.98	-18.01
*	20985.00	Peak	Н	-	-	-51.49	1.88	-9.54	47.85	73.98	-26.13
	27980.00	Peak	н	-	-	-50.36	3.63	-9.54	50.73	68.20	-17.47
	34975.00	Peak	Н	-	-	-52.08	8.01	-9.54	53.39	68.20	-14.81

 Table 7-21. Radiated Measurements MIMO (UNII Band 8 – Mid Channel – 20MHz)

Worst Case Mode: Worst Case Transfer Rate: Distance of Measurements: Operating Frequency: Channel: 802.11ax MCS0 1 & 3 Meters 7115MHz 233

	Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBµV/m]	Limit [dBµV/m]	Margin [dB]
	14230.00	Peak	н	-	-	-72.51	19.33	0.00	53.82	68.20	-14.38
*	21345.00	Average	Н	-	-	-63.87	1.90	-9.54	35.49	53.98	-18.49
*	21345.00	Peak	Н	-	-	-51.83	1.90	-9.54	47.53	73.98	-26.45
	28460.00	Peak	н	-	-	-51.25	3.74	-9.54	49.95	68.20	-18.25
	35575.00	Peak	Н	-	-	-50.27	6.97	-9.54	54.15	68.20	-14.05

Table 7-22. Radiated Measurements MIMO (UNII Band 8 – High Channel – 20MHz)

FCC ID: A3LSMG998U	PCTEST Presad to be patt fol @ winnered	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Dage 105 of 212
1M2009230152-31-R1.A3L	10/05 - 12/02/2020	Portable Handset		Page 195 of 212
© 2020 PCTEST				V 9.0 02/01/2019



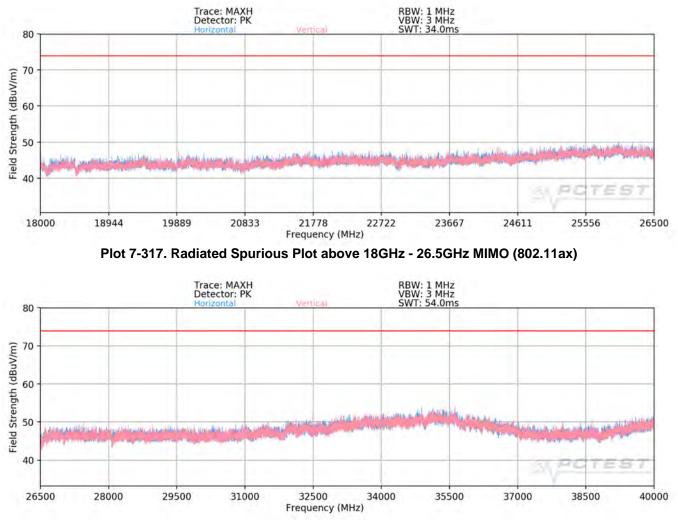
Worst Case Mode:	802.11ax
Worst Case Transfer Rate:	MCS0
Distance of Measurements:	1 & 3 Meters
Operating Frequency:	5935
Channel:	2

	Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correctio n Factor [dB]	Field Strength [dBµV/m]	Limit [dBµV/m]	Margin [dB]
*	11870.00	Average	V	-	-	-80.98	12.28	0.00	38.30	53.98	-15.68
*	11870.00	Peak	V	-	-	-69.33	12.28	0.00	49.95	73.98	-24.03
*	17805.00	Average	V	-	-	-82.10	21.65	0.00	46.55	53.98	-7.43
*	17805.00	Peak	V	-	-	-70.64	21.65	0.00	58.01	73.98	-15.97

Table 7-23. Radiated Measurements MIMO with WCP

FCC ID: A3LSMG998U	PETEST Presad to be patt of @	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Dage 106 of 212
1M2009230152-31-R1.A3L	10/05 - 12/02/2020	Portable Handset		Page 196 of 212
© 2020 PCTEST		·		V 9.0 02/01/2019





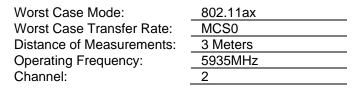
MIMO Radiated Spurious Emissions Measurements (Above 18GHz)

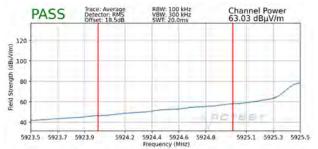
Plot 7-318. Radiated Spurious Plot 26.5GHz - 40GHz MIMO (802.11ax)

FCC ID: A3LSMG998U		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager		
Test Report S/N:	Test Dates:	EUT Type:	Dege 107 of 010		
1M2009230152-31-R1.A3L	10/05 - 12/02/2020	Portable Handset	Page 197 of 212		
© 2020 PCTEST V 9.0 02/01/2019					

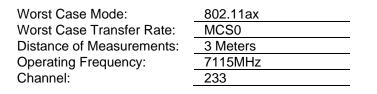


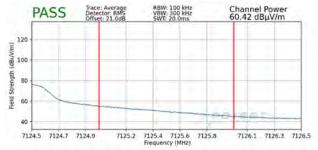
7.6.3 MIMO Radiated Band Edge Measurements (20MHz BW) §15.407(b.5) §15.205 §15.209



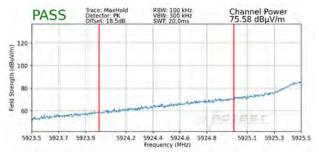


Plot 7-319. Radiated Lower Band Edge Plot MIMO (Average – UNII Band 5)

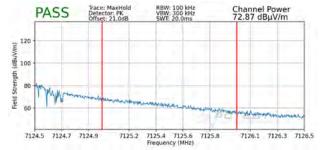




Plot 7-321. Radiated Upper Band Edge Plot MIMO (Average – UNII Band 8)



Plot 7-320. Radiated Lower Band Edge Plot MIMO (Peak – UNII Band 5)

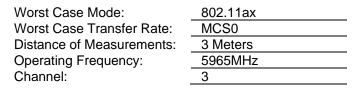


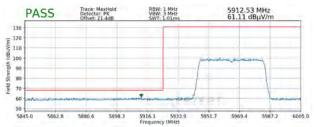
Plot 7-322. Radiated Upper Band Edge Plot MIMO (Peak – UNII Band 8)

FCC ID: A3LSMG998U	PECTEST Presad To Law justif of @	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Dage 109 of 212
1M2009230152-31-R1.A3L	10/05 - 12/02/2020	Portable Handset		Page 198 of 212
© 2020 PCTEST	•	•		V 9.0 02/01/2019



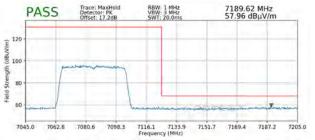
7.6.4 MIMO Radiated Band Edge Measurements (40MHz BW) §15.407(b.5) §15.205 §15.209





Plot 7-323. Radiated Lower Band Edge Plot MIMO (Peak – UNII Band 5)

802.11ax
MCS0
3 Meters
7085MHz
227

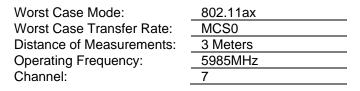


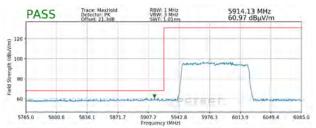
Plot 7-324. Radiated Upper Band Edge Plot MIMO (Peak – UNII Band 8)

FCC ID: A3LSMG998U	PREMA THE SPACE ST	MEASUREMENT REPORT (CERTIFICATION)	SUNG	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Dage 100 of 212
1M2009230152-31-R1.A3L	10/05 - 12/02/2020	Portable Handset	Page 199 of 212	
© 2020 PCTEST				V 9.0 02/01/2019



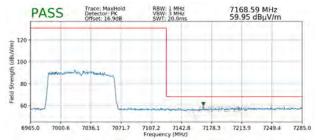
7.6.5 MIMO Radiated Band Edge Measurements (80MHz BW) §15.407(b.5) §15.205 §15.209





Plot 7-325. Radiated Lower Band Edge Plot MIMO (Peak – UNII Band 5)

Worst Case Mode:	802.11ax
Worst Case Transfer Rate:	MCS0
Distance of Measurements:	3 Meters
Operating Frequency:	7025MHz
Channel:	215

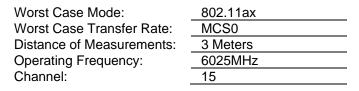


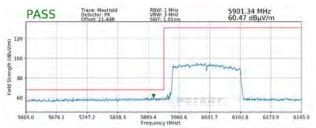
Plot 7-326. Radiated Upper Band Edge Plot MIMO (Peak – UNII Band 8)

FCC ID: A3LSMG998U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Dage 200 of 212
1M2009230152-31-R1.A3L	10/05 - 12/02/2020	Portable Handset		Page 200 of 212
© 2020 PCTEST				V 9.0 02/01/2019



7.6.6 MIMO Radiated Band Edge Measurements (160MHz BW) §15.407(b.5) §15.205 §15.209





Plot 7-327. Radiated Lower Band Edge Plot MIMO (Peak – UNII Band 5)

802.11ax
MCS0
3 Meters
6985MHz
207



Plot 7-328. Radiated Upper Band Edge Plot MIMO (Peak – UNII Band 8)

FCC ID: A3LSMG998U	PREMA The be patit for @ minimum	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Dage 201 of 212
1M2009230152-31-R1.A3L	10/05 - 12/02/2020	Portable Handset		Page 201 of 212
© 2020 PCTEST				V 9.0 02/01/2019



7.8 Radiated Spurious Emissions Measurements – Below 1GHz §15.209

Test Overview and Limit

All out of band radiated spurious emissions are measured with a spectrum analyzer connected to a receive antenna while the EUT is operating at its maximum duty cycle, at maximum power, and at the appropriate frequencies. All data rates and modes were investigated for radiated spurious emissions. Only the radiated emissions of the configuration that produced the worst case emissions are reported in this section.

All emissions <1GHz must not exceed the limit shown in Table 7-24 per Section 15.209

Frequency	Field Strength [µV/m]	Measured Distance [Meters]
0.009 – 0.490 MHz	2400/F (kHz)	300
0.490 – 1.705 MHz	24000/F (kHz)	30
1.705 – 30.00 MHz	30	30
30.00 – 88.00 MHz	100	3
88.00 – 216.0 MHz	150	3
216.0 – 960.0 MHz	200	3
Above 960.0 MHz	500	3

Table 7-24. Radiated Limits

Test Procedures Used

ANSI C63.10-2013

Test Settings

Quasi-Peak Field Strength Measurements

- 1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
- 2. RBW = 120kHz (for emissions from 30MHz 1GHz)
- 3. Detector = quasi-peak
- 4. Sweep time = auto couple
- 5. Trace mode = max hold
- 6. Trace was allowed to stabilize

FCC ID: A3LSMG998U	PREMA THE SPACE ST	MEASUREMENT REPORT (CERTIFICATION)	ISUNG	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Daga 202 of 212
1M2009230152-31-R1.A3L	10/05 - 12/02/2020	Portable Handset		Page 202 of 212
© 2020 PCTEST				V 9.0 02/01/2019



Test Setup

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

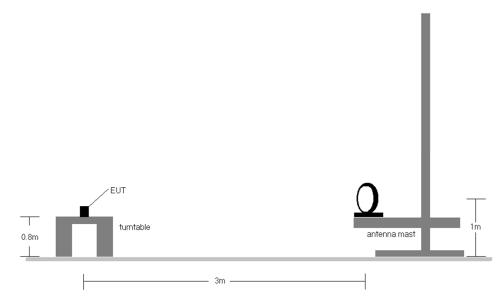
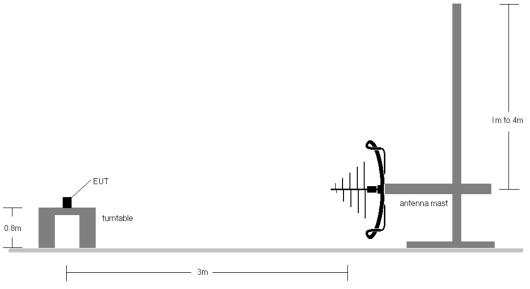
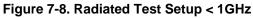


Figure 7-7. Radiated Test Setup < 30MHz





FCC ID: A3LSMG998U	PCTEST Freud to be patt of @element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Dama 202 of 212
1M2009230152-31-R1.A3L	10/05 - 12/02/2020	Portable Handset	Page 203 of 212
© 2020 PCTEST		·	V 9.0 02/01/2019



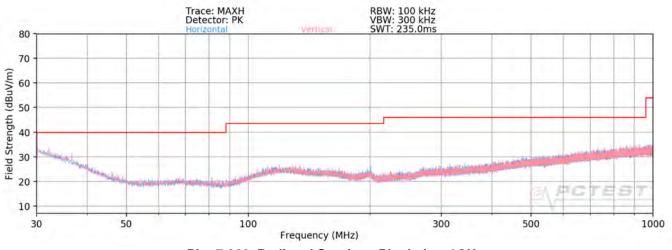
Test Notes

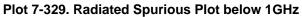
- 1. All emissions lying in restricted bands specified in §15.205 are below the limit shown in Table 7-24.
- 2. The broadband receive antenna is manipulated through vertical and horizontal polarizations during the tests. The EUT is manipulated through three orthogonal planes.
- 3. This unit was tested with its standard battery.
- 4. The spectrum is investigated using a peak detector and final measurements are recorded using CISPR quasi peak detector. The worst-case emissions are reported however emissions whose levels were not within 20dB of the respective limits were not reported.
- 5. Emissions were measured at a 3 meter test distance.
- 6. Emissions are investigated while operating on the center channel of the mode, band, and modulation that produced the worst case results during the transmitter spurious emissions testing.
- 7. No spurious emissions were detected within 20dB of the limit below 30MHz.
- 8. The results recorded using the broadband antenna is known to correlate with the results obtained by using a tuned dipole with an acceptable degree of accuracy. The VSWR for the measurement antenna was found to be less than 2:1.
- The wide spectrum spurious emissions plots shown on the following pages are used only for the purpose of emission identification. There were no emissions detected in the 30MHz – 1GHz frequency range, as shown in the subsequent plots.

FCC ID: A3LSMG998U	PREAD TO LAW patter of Comment	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Dage 204 of 212
1M2009230152-31-R1.A3L	10/05 - 12/02/2020	Portable Handset		Page 204 of 212
© 2020 PCTEST	•	•		V 9.0 02/01/2019



Radiated Spurious Emissions Measurements (Below 1GHz) §15.209





FCC ID: A3LSMG998U	PECTEST Presal to be patried @	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Daga 205 of 212
1M2009230152-31-R1.A3L	10/05 - 12/02/2020	Portable Handset	Page 205 of 212
© 2020 PCTEST			V 9.0 02/01/2019



7.9 Line-Conducted Test Data §15.407

Test Overview and Limit

All AC line conducted spurious emissions are measured with a receiver connected to a grounded LISN while the EUT is operating at its maximum duty cycle, at maximum power, and at the appropriate frequencies. All data rates and modes were investigated for conducted spurious emissions. Only the conducted emissions of the configuration that produced the worst case emissions are reported in this section.

All conducted emissions must not exceed the limits shown in the table below, per Section 15.207).

Frequency of emission (MHz)	Conducted Limit (dBµV)		
	Quasi-peak	Average	
0.15 – 0.5	66 to 56*	56 to 46*	
0.5 – 5	56	46	
5 - 30	60	50	

Table 7-25. Conducted Limits

*Decreases with the logarithm of the frequency.

Test Procedures Used

ANSI C63.10-2013, Section 6.2

Test Settings

Quasi-Peak Field Strength Measurements

- 1. Analyzer center frequency was set to the frequency of the spurious emission of interest
- 2. RBW = 9kHz (for emissions from 150kHz 30MHz)
- 3. Detector = quasi-peak
- 4. Sweep time = auto couple
- 5. Trace mode = max hold
- 6. Trace was allowed to stabilize

Average Field Strength Measurements

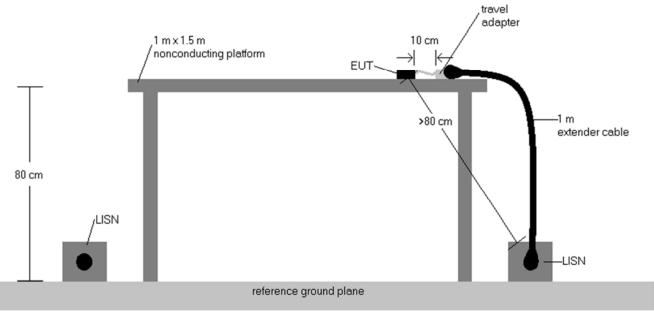
- 1. Analyzer center frequency was set to the frequency of the spurious emission of interest
- 2. RBW = 9kHz (for emissions from 150kHz 30MHz)
- 3. Detector = RMS
- 4. Sweep time = auto couple
- 5. Trace mode = max hold
- 6. Trace was allowed to stabilize

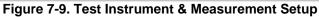
FCC ID: A3LSMG998U	PETEST Presad To Law patt of @	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Dage 206 of 212
1M2009230152-31-R1.A3L	10/05 - 12/02/2020	Portable Handset		Page 206 of 212
© 2020 PCTEST		•		V 9.0 02/01/2019



Test Setup

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



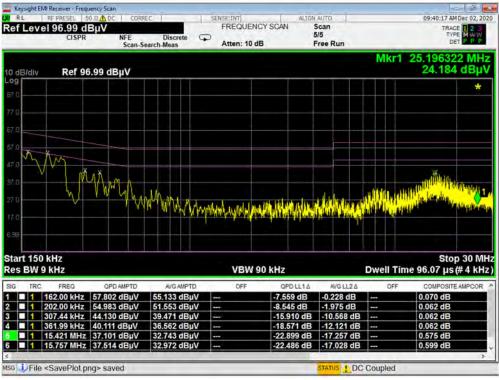


Test Notes

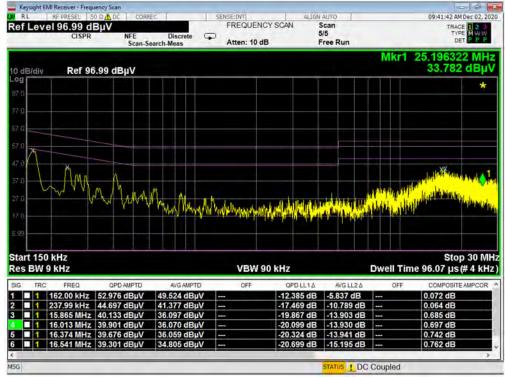
- 1. All modes of operation were investigated and the worst-case emissions are reported using mid channel. The emissions found were not affected by the choice of channel used during testing.
- 2. The limit for an intentional radiator from 150kHz to 30MHz are specified in 15.207.
- 3. Corr. (dB) = Cable loss (dB) + LISN insertion factor (dB)
- 4. QP/AV Level (dB μ V) = QP/AV Analyzer/Receiver Level (dB μ V) + Corr. (dB)
- 5. Margin (dB) = QP/AV Limit (dB μ V) QP/AV Level (dB μ V)
- 6. Traces shown in plot are made using a peak detector.
- 7. Deviations to the Specifications: None.

FCC ID: A3LSMG998U	PREMA THE LA PARTIE OF PARTIES OF PREMA	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Dega 207 of 212
1M2009230152-31-R1.A3L	10/05 - 12/02/2020	Portable Handset	Page 207 of 212
© 2020 PCTEST		•	V 9.0 02/01/2019





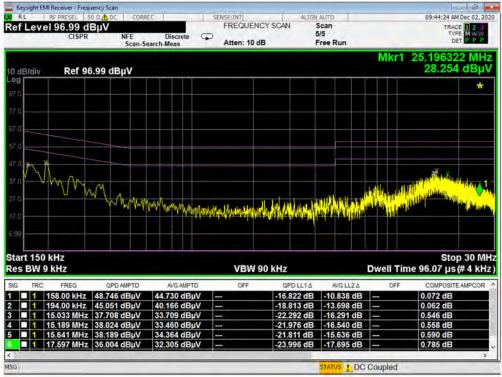
Plot 7-330. Line Conducted Plot with 802.11a UNII Band 5 (L1)



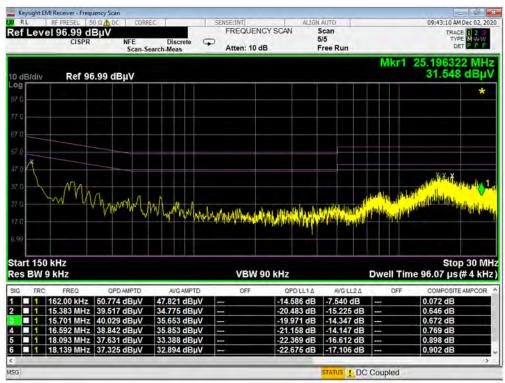
Plot 7-331. Line Conducted Plot with 802.11a UNII Band 5 (N)

FCC ID: A3LSMG998U	PECTEST Presad To Law justif of @	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Dogo 200 of 212
1M2009230152-31-R1.A3L	10/05 - 12/02/2020	Portable Handset		Page 208 of 212
© 2020 PCTEST	•	•		V 9.0 02/01/2019





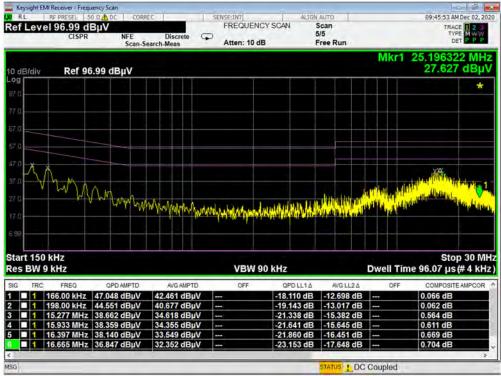
Plot 7-332. Line Conducted Plot with 802.11a UNII Band 6 (L1)



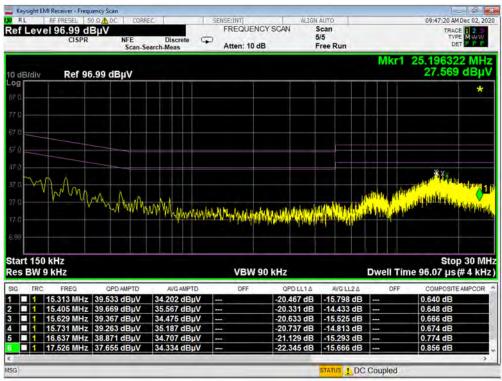
Plot 7-333. Line Conducted Plot with 802.11a UNII Band 6 (N)

FCC ID: A3LSMG998U	PREMA THE SPACE ST	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Dogo 200 of 212
1M2009230152-31-R1.A3L	10/05 - 12/02/2020	Portable Handset		Page 209 of 212
© 2020 PCTEST				V 9.0 02/01/2019





Plot 7-334. Line Conducted Plot with 802.11a UNII Band 7 (L1)



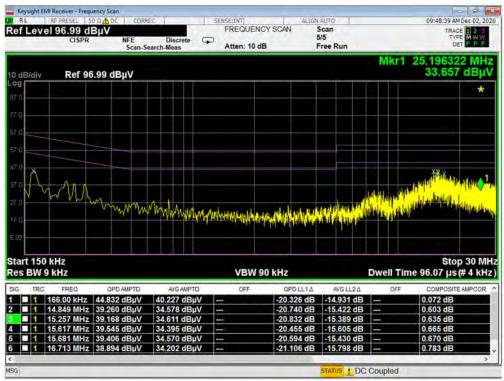
Plot 7-335. Line Conducted Plot with 802.11a UNII Band 7 (N)

FCC ID: A3LSMG998U	PREMA THE SPACE ST	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Dogo 210 of 212
1M2009230152-31-R1.A3L	10/05 - 12/02/2020	Portable Handset		Page 210 of 212
© 2020 PCTEST				V 9.0 02/01/2019



	1 nF	PRESEL 5	uency Scan	CORRE	e 1			ENSE:INT		ALTICA	AUTO				00.50.04	AM Dec 02, 2
RL ef L		06.99 d	and a second	NFE		screte	Ģ		ENCY SCA	N	Scan 5/5 Free Ru	un			TF	RACE 2 3 TYPE MWW DET P P
dB	/div	Ref 96	6.99 dE	suV									M	kr1	25.1963 27.42	322 MH 26 dBµ
aL																*
۹-																
α_					_											
Г																
2 ⊨	-				_											
×															16.18	
8	~ N	Mn.											tion.	ide	, Laboratoria	1 Subler
		· V 1. K										1	10.0	1.1	a second second	
0 -	× .	- V	Mark	A	1 .						141.6	de la			Man and a	Atlat V
	-	γ	Warn	man	NMM	MA.	Lean	historialia	a. all fills	Midnel	. Aiki		Alth	U	Mall	All the her
	~	- Y .	WWW	www	pwWala	hA	happenty	WAANTALIAA	ica sin dalla		in Ailei	hin h	AUST RS.		Hall	Allahanaha
1		- Y	Work	mm	pw ^{Nu} lpu	mh	www	hiyangalida,	icheitheithe	ally have	W		ALL THE		No.	All the top
2		- Yr	Work	www	p=/w/pu	m	www	Nyerselvin,	isteriji i kali p	<u>diştişti</u>		hin h	ALLY BE		Neil Presente	ila in the second
0	150 kł	łz	Nor	ww	pr Man	m/h	www	(keria)/me	isaanna kalina	<u>diyilyil</u> i	w NH		i Alit ^y ika		SI	top 30 M
nt	150 kł 3W 9 k		Myrr.	ww	pr/Mpn	ЪĄ	uw.n.)		W 90 KHz		W AN		Dwe	ll Tim		
nt	3W 9 k	Hz						VBI					Dwe		e 96.07 µ	is (# 4 k
nt	SW 9 K	FREQ	QPD	AMPTD	A	/G AMP	TD	VBI	C	DPD LL1 A	RVO	GLL2A		II Tim	е 96.07 µ сомроз	IS (# 4 K
nt .	3W 9 k IRC 1 15	FREQ 5.37 kHz	QPD 43.639	AMPTD dBµV	A. 39.28	/GAMP	TD. µV	VB	-22	PD LL1A	AV(GLL2A			COMPOS 0.072 dE	IS (# 4 K BITE AMPCO B
nt .	IRC 1 155 1 14.	FREQ	QPD 43.639 37.617	AMPTD dBµV dBµV	A	/GAMP 37 dB 51 dB	TD μV	VBI	-22 -22	DPD LL1 A	AV(-16.4 -16.5	GLL2A			е 96.07 µ сомроз	IS (# 4 K BITE AMPCO B B
nt	TRC 1 152 1 14. 1 15.	FREQ 5.37 kHz 807 MHz	QPD 43.639 37.617 38.619	AMPTD dBµV dBµV dBµV	AA 39.28 33.45	/G AMP 37 dB 51 dB 28 dB	тр. µV µV	VB	-22 -22 -21	PD LL1A .069 dB .383 dB	AV -16.4 -16.5 -16.4	GLL2A 21 dB			COMPOS 0.072 dE 0.532 dE	IS (# 4 K BITE AMPCO B B B B
nt .	IRC 1 154 1 14. 1 15. 1 16. 1 16.	Hz FREQ 5.37 kHz 807 MHz 389 MHz 309 MHz 417 MHz	43.639 37.617 38.619 37.505 37.686	AMPTD dBµV dBµV dBµV dBµV dBµV dBµV	A 39.28 33.45 33.52 33.72 33.72	/GAMP 37 dB 51 dB 28 dB 22 dB 31 dB		VB	-22 -22 -21 -21 -22 -22	PD LL1A .069 dB .383 dB .381 dB .381 dB .381 dB .314 dB	AV -16.4 -16.5 -16.4 -16.2 -16.2	GLL2A 21 dB 49 dB 72 dB 278 dB 209 dB			0.072 dB 0.532 dB 0.572 dB 0.572 dB 0.657 dB 0.672 dB	IS (# 4 K BITE AMPCO B B B B B B B B B
nt	IRC 1 154 1 14. 1 15. 1 16. 1 16.	Hz FREQ 5.37 kHz 807 MHz 389 MHz 309 MHz	43.639 37.617 38.619 37.505 37.686	AMPTD dBµV dBµV dBµV dBµV dBµV dBµV	Ak 39.28 33.45 33.52 33.72	/GAMP 37 dB 51 dB 28 dB 22 dB 31 dB		VB	-22 -22 -21 -21 -22 -22	PD LL1A .069 dB .383 dB .381 dB .495 dB	AV -16.4 -16.5 -16.4 -16.2 -16.2	GLL2A 21 dB 49 dB 72 dB 278 dB			COMPOS 0.072 dB 0.532 dB 0.572 dB 0.657 dB	BITE AMPCOI B B B B B B B B
nt	IRC 1 154 1 14. 1 15. 1 16. 1 16.	Hz FREQ 5.37 kHz 807 MHz 389 MHz 309 MHz 417 MHz	43.639 37.617 38.619 37.505 37.686	AMPTD dBµV dBµV dBµV dBµV dBµV dBµV	A 39.28 33.45 33.52 33.72 33.72	/GAMP 37 dB 51 dB 28 dB 22 dB 31 dB		VB	-22 -22 -21 -21 -22 -22	PD LL1A .069 dB .383 dB .381 dB .381 dB .381 dB .314 dB	AV -16.4 -16.5 -16.4 -16.2 -16.2	GLL2A 21 dB 49 dB 72 dB 278 dB 209 dB			0.072 dB 0.532 dB 0.572 dB 0.572 dB 0.657 dB 0.672 dB	IS (# 4 KI BITE AMPCOI B B B B B B B B B

Plot 7-336. Line Conducted Plot with 802.11a UNII Band 8 (L1)



Plot 7-337. Line Conducted Plot with 802.11a UNII Band 8 (N)

FCC ID: A3LSMG998U	PREMA To be patter &	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Dega 211 of 212
1M2009230152-31-R1.A3L	10/05 - 12/02/2020	Portable Handset		Page 211 of 212
© 2020 PCTEST				V 9.0 02/01/2019



8.0 CONCLUSION

The data collected relate only the item(s) tested and show that the **Samsung Portable Handset FCC ID: A3LSMG998U** is in compliance with FCC Part 15.407.

FCC ID: A3LSMG998U	PECTEST Presal to be part of @	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Dogo 212 of 212
1M2009230152-31-R1.A3L	10/05 - 12/02/2020	Portable Handset	Page 212 of 212
© 2020 PCTEST			V 9.0 02/01/2019