

- Ø ×					sysight Spectrum Analyzer - Swept SA
Frequency	04:43:05 PM May 27, 2020 TRACE 2 3 4 5 6 TYPE MWWWWW DET A NNNNN	#Avg Type: RMS	SENSE:INT Trig: Free Run Atten: 10 dB	PNO: Fast	L RF 50 Ω DC
Auto Tune	r1 26.620 0 GHz -44.14 dBm	Mi	Fillen To ab		B/div Ref 0.00 dBm
Center Fred 21.000000000 GH:					
Start Free 15.00000000 GH:	DL1 -25.00 dBm				
Stop Free 27.000000000 GH:	an alarah se analasar alikar alara	terterresolations the ante	a a second and the second s	T Ere I and the second s	ali a fikisha marijaya shi fikis
CF Step 1.200000000 GH Auto Ma		n a Baile an Annaichte Anna Bhailte Airte	North States and a state of the		na de la grande de la grande de la grande de la grande de la deserva La dese portes de la grande de la grande de la grande de la defenda
Freq Offse 0 H					
Scale Type Log <u>Lir</u>	010p 21.000 0112	Sween	3.0 MHz	#\/B\M	t 15.000 GHz
	0.80 ms (24001 pts)	Sweep 2	3.0 MHz	#VBW	s BW 1.0 MHz

Plot 7-288. Conducted Spurious Plot (Band 41 - 20.0MHz QPSK - RB Size 1, RB Offset 99 - High Channel)

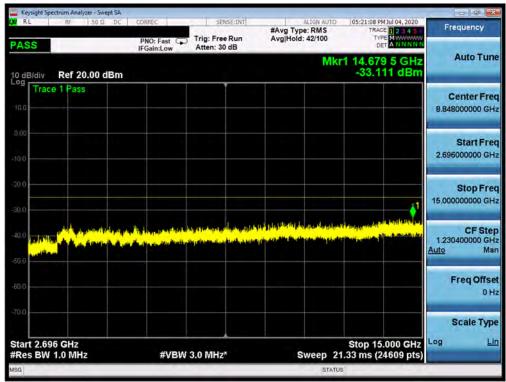
FCC ID: A3LSMN981W	PCTEST Prod Jobe part of @	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNC	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Dogo 169 of 257
1M2005050082-03.A3L	5/5 – 7/15/2020	Portable Handset		Page 168 of 357
© 2020 PCTEST	·	•		V 9.0 02/01/2019



NR Band n41

👝 Keysight Spectrum Analyzer - Sw			2000		- 6
PASS	PNO: Fast 😱	SENSE:INT	#Avg Type: RMS	05:20:58 PM Jul 04, 2020 TRACE 2 3 4 5 0 TYPE M	Frequency
10 dB/div Ref 20.00	IFGain:Low	Atten: 30 dB	MI	(r1 2.326 0 GHz -39.652 dBm	Auto Tun
Trace 1 Pass					Center Fre 1.213000000 GF
10.0					Start Fr 30.000000 M
20.0 					Stop Fr 2.396000000 G
40.0 50.0 	han far an	ng hinnississississiste	a de se de la casa de s	1	CF St 236.600000 M <u>Auto</u> M
50.0					Freq Offs 0
70.0 Start 0.030 GHz ≄Res BW 1.0 MHz	#VBW	3.0 MHz	Sweep 3	Stop 2.396 GHz 3.155 ms (4733 pts)	Scale Ty
ASG			STATU		

Plot 7-289. Conducted Spurious Plot (n41 - 100MHz DFT-s-OFDM-QPSK - RB Size 1, RB Offset 1 - Low Channel)



Plot 7-290. Conducted Spurious Plot (n41 - 100MHz DFT-s-OFDM-QPSK - RB Size 1, RB Offset 1 - Low Channel)

FCC ID: A3LSMN981W	PCTEST Proof Joine part of B	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Dage 160 of 257
1M2005050082-03.A3L	5/5 – 7/15/2020	Portable Handset	Page 169 of 357
© 2020 PCTEST	-		V 9.0 02/01/2019



Keysight Spectrum Analyzer - Swept S		1			
RL RF 50 2 D	PNO: Fast	SENSE:INT	#Avg Type: RMS	05:21:22 PM Jul 04, 2020 TRACE 2 2 4 5 0 TVPE MWWWWW DET A NNNNN	Frequency
10 dB/div Ref 0.00 dBm	IFGain:Low	Atten: 10 dB	Mkr	1 26.780 5 GHz -46.431 dBm	Auto Tune
10.0 Trace 1 Pass					Center Fre 21.000000000 GH
800					Start Fre 15.000000000 GH
50.0	a da da ka ka (mini ka	une konstenity a tot attraits		The set is the based of the arriver	Stop Fre 27.000000000 GH
attensiden in Blainkilder Boon States (1994)	THE REAL STREET, STREET, STREET,		u of a distant weight of the state of the st		CF Ste 1.200000000 GH Auto Ma
0.0					Freq Offs 0 F
90.0 Start 15.000 GHz Res BW 1.0 MHz	#\/B\M	3.0 MHz	Swaap 20	Stop 27.000 GHz 0.80 ms (24001 pts)	Scale Typ
sg	#V DV4	5.0 10112	Sweep 20		

Plot 7-291. Conducted Spurious Plot (n41 - 100MHz DFT-s-OFDM-QPSK - RB Size 1, RB Offset 1 - Low Channel)



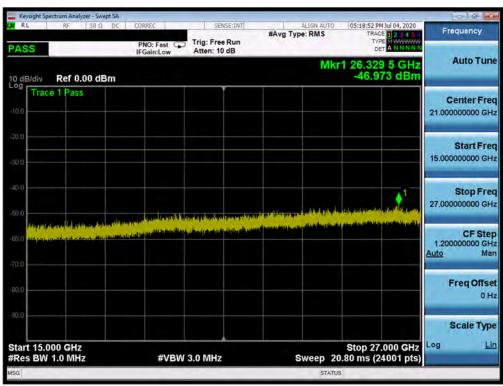
Plot 7-292. Conducted Spurious Plot (n41 - 100MHz DFT-s-OFDM-QPSK - RB Size 1, RB Offset 1 - Mid Channel)

FCC ID: A3LSMN981W	PCTEST Preid Joise part of @	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Dama 470 of 057
1M2005050082-03.A3L	5/5 – 7/15/2020	Portable Handset		Page 170 of 357
© 2020 PCTEST	·	•		V 9.0 02/01/2019



Keysight Spectrum Analyzer - Swept SA RL RF 50 Q DC	CORREC	SENSE:INT	ALIGN AUTO	05:18:36 PM Jul 04, 2020	- 6 ×
PASS	PNO: Fast	Trig: Free Run Atten: 30 dB	#Avg Type: RMS Avg[Hold: 63/100	TRACE 1 2 3 4 5 6 TYPE MWWWWW DET A N N N N	Frequency
i0 dB/div Ref 20.00 dBm	I Gall. Low		Mkr	1 14.964 0 GHz -32.326 dBm	Auto Tun
10.0 Trace 1 Pass					Center Free 8.871500000 GH
10.0					Start Fre 2.743000000 GH
30.0				1	Stop Fre 15.000000000 GH
	ullanny, hetherete	An information of the line of the second	a bi da dina dan da barta dan dar pina Kabupatén da da pina da dan pina dari		CF Ste 1.225700000 GH Auto Ma
50.0					Freq Offse 0 H
Start 2.743 GHz Res BW 1.0 MHz	#VBW 3	0 MHz*	Sweep 21	Stop 15.000 GHz .25 ms (24515 pts)	Scale Typ Log <u>Li</u>
sg			STATUS		

Plot 7-293. Conducted Spurious Plot (n41 - 100MHz DFT-s-OFDM-QPSK - RB Size 1, RB Offset 1 - Mid Channel)



Plot 7-294. Conducted Spurious Plot (n41 - 100MHz DFT-s-OFDM-QPSK - RB Size 1, RB Offset 1 - Mid Channel)

FCC ID: A3LSMN981W	PCTEST Preid Joise part of @	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Dama 474 of 257
1M2005050082-03.A3L	5/5 – 7/15/2020	Portable Handset		Page 171 of 357
© 2020 PCTEST	•	•		V 9.0 02/01/2019



	n Analyzer - Swept SA	Annua				a 6 🗙
	8F 50 Q DC	CORREC	SENSE:INT	#Avg Type: RMS	05:23:01 PM Jul 04, 2020 TRACE 1 2 3 4 5 6 TVPE	Frequency
	ef 20.00 dBm	IFGain:Low	Atten: 30 dB	MI	cr1 2.457 5 GHz -38.866 dBm	Auto Tune
10,0 Trace 1	Pass					Center Free 1.260000000 GH
10.0						Start Fre 30.000000 MH
30.0 30.0						Stop Fre 2.490000000 GH
40.0 50.0 9.344 (14.44 4	and one first distant of the start	initial and a line of the	and a state of the	ala an internet	مانان او الدانية أنها العالم الدو العداد الد	CF Ste 246.000000 MH <u>Auto</u> Ma
50.0.						Freq Offse 0 H
70.0						Scale Typ
Start 0.030 G #Res BW 1.0		#VBW	3.0 MHz	Sweep 3	Stop 2.490 GHz 3.280 ms (4921 pts)	Log <u>Li</u>
MSG		_		STATU	s	

Plot 7-295. Conducted Spurious Plot (n41 - 100MHz DFT-s-OFDM-QPSK - RB Size 1, RB Offset 1 - High Channel)



Plot 7-296. Conducted Spurious Plot (n41 - 100MHz DFT-s-OFDM-QPSK - RB Size 1, RB Offset 1 - High Channel)

FCC ID: A3LSMN981W	PCTEST Preed to be pert of @	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Dama 470 af 057
1M2005050082-03.A3L	5/5 – 7/15/2020	Portable Handset		Page 172 of 357
© 2020 PCTEST	•	·		V 9.0 02/01/2019



06					sight Spectrum Analyzer - !
Frequency	05:23:27 PM Jul 04, 2020 TRACE 1 2 3 4 5 6	#Avg Type: RMS	SENSE:INT	50 Q DC CORREC	. RF 50
	TYPE MWWWWWW DET A NNNNN		Trig: Free Run Atten: 10 dB	PNO: Fast 💭 IFGain:Low	S
Auto Tun	1 26.685 5 GHz -46.445 dBm	Mkr		0 dBm	3/div Ref 0.00
Center Fre 21.000000000 GH					Trace 1 Pass
Start Fre 15.000000000 GF					
Stop Fre 27.000000000 GF	Line al alexandralistic and the	na kyra af synayd a da swaadd fan d		ha and conference in the average	
CF Ste 1.20000000 GF Auto Ma			na an a		A Server Sector Solding and Logical Solding and Solding an
Freq Offs 0 F					
Scale Typ					

Plot 7-297. Conducted Spurious Plot (n41 - 100MHz DFT-s-OFDM-QPSK - RB Size 1, RB Offset 1 - High Channel)

FCC ID: A3LSMN981W	PCTEST Preddjote pert of @	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Dogo 172 of 257
1M2005050082-03.A3L	5/5 - 7/15/2020	Portable Handset		Page 173 of 357
© 2020 PCTEST		•		V 9.0 02/01/2019



7.4 Band Edge Emissions at Antenna Terminal

Test Overview

All out of band emissions are measured with a spectrum analyzer connected to the antenna terminal of the EUT while the EUT is operating at its maximum duty cycle, at maximum power, and at the appropriate frequencies. All data rates were investigated to determine the worst case configuration. All modes of operation were investigated and the worst case configuration results are reported in this section.

The minimum permissible attenuation level of any spurious emission is $43 + 10 \log_{10}(P_{[Watts]})$, where P is the transmitter power in Watts.

The minimum permissible attenuation level for Band 30 is > 43 + 10 log10 (P[Watts] at 2300-2305MHz & 2345-2360MHz, > 55 + 10 log10 (P[Watts]) at 2320-2324MHz & 2341-2345MHz, > 61 + 10 log10 (P[Watts]) at 2324-2328MHz & 2337-2341MHz, > 67 + 10 log10 (P[Watts]) at 2288-2292MHz & 2328-2337MHz, and > 70 + 10 log10 (P[Watts]) at frequencies < 2288MHz & >2365MHz.

The minimum permissible attenuation level for Band 7 is as noted in the Test Notes on the following page.

Test Procedure Used

KDB 971168 D01 v03r01 - Section 6.0

Test Settings

- 1. Start and stop frequency were set such that the band edge would be placed in the center of the plot
- 2. Span was set large enough so as to capture all out of band emissions near the band edge
- 3. RBW \geq 1% of the emission bandwidth
- 4. VBW \geq 3 x RBW
- 5. Detector = RMS
- 6. Number of sweep points $\geq 2 \times \text{Span/RBW}$
- 7. Trace mode = trace average for continuous emissions, max hold for pulse emissions
- 8. Sweep time = auto couple
- 9. The trace was allowed to stabilize

Test Setup

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



Figure 7-3. Test Instrument & Measurement Setup

FCC ID: A3LSMN981W	PCTEST Theod Jo Teo part of B	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNC	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Dega 174 of 257
1M2005050082-03.A3L	5/5 - 7/15/2020	Portable Handset		Page 174 of 357
© 2020 PCTEST		•		V 9.0 02/01/2019



Test Notes

Per 22.917(b), 24.238(a), and 27.53(h) in the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed to demonstrate compliance with the out-of-band emissions limit. The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emission are attenuated at least 26 dB below the transmitter power.

Per 27.53(g) for operations in the 663 - 698 MHz and 698 – 746MHz bands, in the 100 kHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least 30 kHz may be employed to demonstrate compliance with the out-of-band emissions limit.

Per 27.53(c)(5) for operations in the 776-788 MHz band, in the 100 kHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least 30 kHz may be employed to demonstrate compliance with the out-of-band emissions limit.

For all plots showing emissions in the 763 – 775MHz and 793 – 805MHz band, the FCC limit per 27.53(c)(4) is 65 + 10 $\log_{10}(P) = -35$ dBm in a 6.25kHz bandwidth.

Per 27.53(a)(5) in the 1 MHz bands immediately outside and adjacent to the channel blocks at 2305, 2310, 2315, 2320, 2345, 2350, 2355, and 2360 MHz, a resolution bandwidth of at least 1 percent of the emission bandwidth of the fundamental emission of the transmitter may be employed. A narrower resolution bandwidth is permitted in all cases to improve measurement accuracy provided the measured power is integrated over the full required measurement bandwidth (i.e., 1 MHz). The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.

Per 27.53(m) for operations in the BRS/EBS bands, the attenuation factor shall be not less than $40 + 10 \log (P) dB$ on all frequencies between the channel edge and 5 megahertz from the channel edge, $43 + 10 \log (P) dB$ on all frequencies between 5 megahertz and X megahertz from the channel edge, and 55 + 10 log (P) dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth. In addition, the attenuation factor shall not be less that $43 + 10 \log (P) dB$ on all frequencies between 2490.5 MHz and 2496 MHz and 55 + 10 log (P) dB at or below 2490.5 MHz.

FCC ID: A3LSMN981W	PCTEST Presid Joine particle	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Daga 175 of 257
1M2005050082-03.A3L	5/5 - 7/15/2020	Portable Handset	Page 175 of 357
© 2020 PCTEST	-	·	V 9.0 02/01/2019



Band 71



Plot 7-298. Lower Band Edge Plot (Band 71 - 5.0MHz QPSK - Full RB Configuration)



Plot 7-299. Upper Band Edge Plot (Band 71 - 5.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMN981W	PCTEST Preddjote pert of B	MEASUREMENT REPORT (CERTIFICATION)	SAMSONS	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Dogo 176 of 257
1M2005050082-03.A3L	5/5 - 7/15/2020	Portable Handset		Page 176 of 357
© 2020 PCTEST		·		V 9.0 02/01/2019

2020 PCTEST



X RL RF 50Ω DC	PNO: Wide	SENSE:INT Trig: Free Run Atten: 36 dB	#Avg Type: RMS	02:06:34 PM Jun 01, 2020 TRACE 2 3 4 5 0 TYPE A WARMON DET A NNNNN	Frequency
10 dB/div Ref 25.00 dBm			Mk	r1 662.992 MHz -27.51 dBm	Auto Tune
15.0					Center Free 663.000000 MH
5.00		- f		yarafan anan an	Start Free 659.000000 MH
15.0		1. m		0L1 -13.00 dBn	Stop Fre 667.000000 MH
35.0	minneuronad	with			CF Ste 800.000 kH Auto Ma
55 0					Freq Offse 0 H
65 0 Center 663.000 MHz					Scale Type
Res BW 100 kHz	#VBW	300 kHz	Sweep 4	4.000 ms (1001 pts)	

Plot 7-300. Lower Band Edge Plot (Band 71 - 10.0MHz QPSK - Full RB Configuration)



Plot 7-301. Upper Band Edge Plot (Band 71 - 10.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMN981W	PCTEST"	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Dogo 177 of 257
1M2005050082-03.A3L	5/5 – 7/15/2020	Portable Handset	Page 177 of 357
© 2020 PCTEST			V 9.0 02/01/2019



RL RF 505	NFE PNO: Wide	Trig: Free Run Atten: 36 dB	#Avg Type: RMS	02:08:18 PM Jun 01, 2020 TRACE 2 3 4 5 0 TYPE A WARNWY DET A NNNNN	Frequency
0 dB/div Ref 25.00			Mł	r1 663.000 MHz -27.36 dBm	Auto Tune
15,0					Center Fred 663.000000 MH;
5.00					Start Free 657.000000 MH;
25.0		1,1		DL1 -13.00 dBm	Stop Free 669.000000 MH;
35,0		and an address of the second			CF Step 1.200000 MH Auto Mar
55.0					Freq Offse 0 H
es 0 Center 663.000 MHz ⊄Res BW 150 kHz		3W 470 kHz	Current	Span 12.00 MHz 1.000 ms (1001 pts)	Scale Type Log <u>Lir</u>

Plot 7-302. Lower Band Edge Plot (Band 71 - 15.0MHz QPSK - Full RB Configuration)



Plot 7-303. Upper Band Edge Plot (Band 71 - 15.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMN981W	PCTEST Predd John part of B	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNE	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Dogo 179 of 257
1M2005050082-03.A3L	5/5 – 7/15/2020	Portable Handset		Page 178 of 357
© 2020 PCTEST	•	•		V 9.0 02/01/2019



RL RF 50Ω D	CORREC	SENSE:INT	ALIGN AUTO	02:16:50 PM Jun 01, 2020	Contraction of the local
NFI	E PNO: Wide C	Trig: Free Run Atten: 36 dB	#Avg Type: RMS	TRACE 2 3 4 5 0 TYPE A WHENNY DET A NNNNN	Frequency
O dB/div Ref 25.00 dB			Mk	r1 662.952 MHz -28.63 dBm	Auto Tune
15.0					Center Free 663.000000 MH
5.00			in and the second s	La a a a a a a a a a a a a a a a a a a	Start Free 655,000000 MH
15.0				OL1 -13.00 dBm	Stop Fre 671.000000 MH
35.0 45.0	and the second s	avia materia			CF Ste 1.600000 MH Auto Ma
55.0					Freq Offse 0 H
E5 0 Center 663.000 MHz				Span 16.00 MHz 1.000 ms (1001 pts)	Scale Typ Log Li
#Res BW 200 kHz	#VBW	620 kHz	Sweep 1		

Plot 7-304. Lower Band Edge Plot (Band 71 - 20.0MHz QPSK - Full RB Configuration)



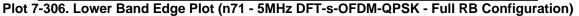
Plot 7-305. Upper Band Edge Plot (Band 71 - 20.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMN981W	PCTEST"	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Dogo 170 of 257
1M2005050082-03.A3L	5/5 – 7/15/2020	Portable Handset	Page 179 of 357
© 2020 PCTEST			V 9.0 02/01/2019



NR Band n71







Plot 7-307. Upper Band Edge Plot (n71 - 5MHz DFT-s-OFDM-QPSK - Full RB Configuration)

FCC ID: A3LSMN981W	PCTEST Preddjobe pert of @	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Dage 100 of 257
1M2005050082-03.A3L	5/5 - 7/15/2020	Portable Handset		Page 180 of 357
© 2020 PCTEST	·	·		V 9.0 02/01/2019





Plot 7-308. Lower Band Edge Plot (n71 - 10MHz DFT-s-OFDM-QPSK - Full RB Configuration)



Plot 7-309. Upper Band Edge Plot (n71 - 10MHz DFT-s-OFDM-QPSK - Full RB Configuration)

FCC ID: A3LSMN981W	PCTEST Proof Jaine particle	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Dage 191 of 257
1M2005050082-03.A3L	5/5 – 7/15/2020	Portable Handset	Page 181 of 357
© 2020 PCTEST			V 9.0 02/01/2019





Plot 7-310. Lower Band Edge Plot (n71 - 15MHz DFT-s-OFDM-QPSK - Full RB Configuration)



Plot 7-311. Upper Band Edge Plot (n71 - 15MHz DFT-s -OFDM-QPSK - Full RB Configuration)

FCC ID: A3LSMN981W	PCTEST Proof Jaine particle	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Dage 192 of 257
1M2005050082-03.A3L	5/5 – 7/15/2020	Portable Handset	Page 182 of 357
© 2020 PCTEST			V 9.0 02/01/2019





Plot 7-312. Lower Band Edge Plot (n71 - 20MHz DFT-s -OFDM-QPSK - Full RB Configuration)



Plot 7-313. Upper Band Edge Plot (n71- 20MHz DFT-s -OFDM-QPSK - Full RB Configuration)

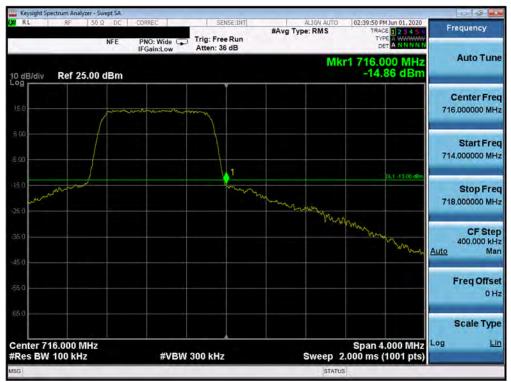
FCC ID: A3LSMN981W	PCTEST"	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Dage 192 of 257
1M2005050082-03.A3L	5/5 – 7/15/2020	Portable Handset	Page 183 of 357
© 2020 PCTEST			V 9.0 02/01/2019



Band 12



Plot 7-314. Lower Band Edge Plot (Band 12 - 1.4MHz QPSK - Full RB Configuration)



Plot 7-315. Upper Band Edge Plot (Band 12 - 1.4MHz QPSK - Full RB Configuration)

FCC ID: A3LSMN981W	PCTEST Proof to be pert of @	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Dage 104 of 257
1M2005050082-03.A3L	5/5 – 7/15/2020	Portable Handset		Page 184 of 357
© 2020 PCTEST		•		V 9 0 02/01/2019



K RL RF 50Ω D		SENSE:INT Trig: Free Run Atten: 36 dB	#Avg Type: RMS	02:43:50 PM Jun 01, 2020 TRACE 2 3 4 5 0 TYPE A WARNIN DET A NNNNN	Frequency
10 dB/div Ref 25.00 dBr	n		Mk	r1 697.984 MHz -27.58 dBm	Auto Tune
15.0				- marine	Center Free 698.000000 MH
5.00					Start Free 696,000000 MH
25.0		1		OL1 -13.00 dBm	Stop Fre 700.000000 MH
35.0	m	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~			CF Ste 400.000 kH Auto Ma
55 0					Freq Offse 0 H
65 0 Center 698.000 MHz ¢Res BW 100 kHz	#VBW	300 kHz	Sweep	Span 4.000 MHz 2.000 ms (1001 pts)	Scale Typ Log <u>Li</u>

Plot 7-316. Lower Band Edge Plot (Band 12 - 3.0MHz QPSK - Full RB Configuration)



Plot 7-317. Upper Band Edge Plot (Band 12 - 3.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMN981W	PCTEST Preid Joine part of ()	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager	
Test Report S/N:	Test Dates:	EUT Type:	Dage 195 of 257	
1M2005050082-03.A3L	5/5 - 7/15/2020	Portable Handset	Page 185 of 357	
© 2020 PCTEST			V 9.0 02/01/2019	



X RL RF 50	NFE	PNO: Wide	SENSE:INT	#Avg Type	ALIGN AUTO	02:45:46 PM Jun 01, 202 TRACE 1 2 3 4 5 TYPE A MANNA DET A NNNN	Frequency
10 dB/div Ref 25.00	dBm				MI	kr1 697.868 MH -32.61 dBr	z Auto Tune n
15.0							Center Free 698.000000 MH
5.00							Start Free 696.000000 MH
-15.0					Ŋ	DL1-13.00 dB	Stop Free 700.000000 MH
35.0			1	m man			CF Stej 400.000 kH <u>Auto</u> Ma
55 0							Freq Offse 0 H
65 0 Center 698.000 MHz #Res BW 100 kHz		#\/B\M	300 kHz		Swaan	Span 4.000 MH 2.000 ms (1001 pts	Scale Type

Plot 7-318. Lower Band Edge Plot (Band 12 - 5.0MHz QPSK - Full RB Configuration)



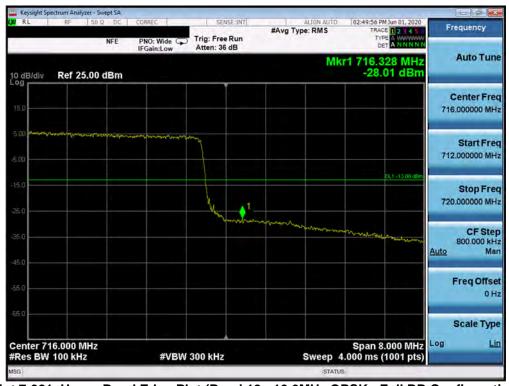
Plot 7-319. Upper Band Edge Plot (Band 12 - 5.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMN981W	PCTEST"	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Dogo 196 of 257
1M2005050082-03.A3L	5/5 - 7/15/2020	Portable Handset	Page 186 of 357
© 2020 PCTEST			V 9.0 02/01/2019



RL RF 50 Q		CORREC	SENSE: JNT	#Avg Type	RMS	02:48:54 PM Jun 01, 2020 TRACE 1 2 3 4 5 TYPE A MARKAN	Frequency
	NFE	PNO: Wide CP IFGain:Low	Atten: 36 dB			DET ANNNN	
0 dB/div Ref 25.00 (dBm				Mki	1 697.912 MH: -32.31 dBn	Auto Tune
15.0							Center Free 698.000000 MH
5.00					ann an the	and a subsequence of the subsection of the subse	Start Free 694.000000 MH
15.0 25.0				and a		0L1-13.00 dBr	Stop Fre 702.000000 MH
35 0	monter	and the second	and a start and a start and a start and a start	~~~			CF Ste 800.000 kH <u>Auto</u> Ma
55.0							Freq Offse 0 H
55 0 Center 698.000 MHz						Span 8.000 MH:	Scale Type
Res BW 100 kHz		#VBW	300 kHz	5	Sweep 4	.000 ms (1001 pts	

Plot 7-320. Lower Band Edge Plot (Band 12 - 10.0MHz QPSK - Full RB Configuration)



Plot 7-321. Upper Band Edge Plot (Band 12 - 10.0MHz QPSK - Full RB Configuration)

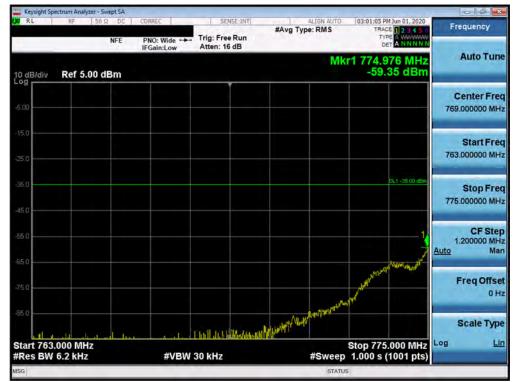
FCC ID: A3LSMN981W	PCTEST"	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Dage 107 of 257
1M2005050082-03.A3L	5/5 - 7/15/2020	Portable Handset	Page 187 of 357
© 2020 PCTEST			V 9.0 02/01/2019



Band 13

RL RF 50	Ω DC	CORREC	SENSE:INT		ALIGN AUTO	03:00:18 PM Jun 01, 2020	Contractor and
	NFE	PNO: Wide C	Trig: Free Run Atten: 36 dB	#Avg Typ	e: RMS	TRACE 2 3 4 5 b TYPE A WWWW DET A NNNNN	Frequency
0 dB/div Ref 25.00	dBm				Mk	r1 776.996 MHz -25.93 dBm	Auto Tun
15.0					h		Center Fre 777.000000 MH
5.00				and a second			Start Fre 775.000000 MH
250			1			DL1 -13.00 dBm	Stop Fre 779.000000 MH
5 m	- harry afre	munit	wind				CF Ste 400.000 kl Auto M
45.0 mathanananan 55.0							Freq Offs 01
es 0 Center 777.000 MHz ≉Res BW 100 kHz		#VBW	300 kHz		Sweep 2	Span 4.000 MHz .000 ms (1001 pts)	Scale Typ Log <u>L</u>
SG		#VDVV	300 KH2		sweep 2		

Plot 7-322. Lower Band Edge Plot (Band 13 - 5.0MHz QPSK - Full RB Configuration)



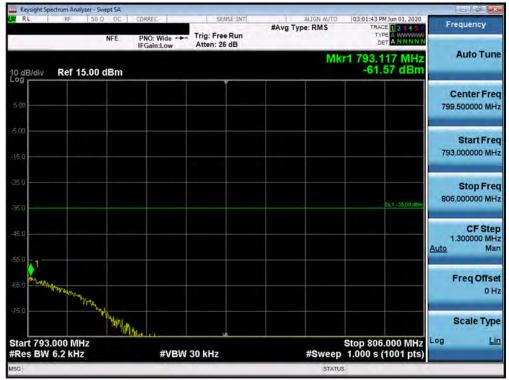
Plot 7-323. Lower Emission Mask Plot (Band 13 - 5.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMN981W	PCTEST Proid Joine part of B	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager	
Test Report S/N:	Test Dates:	EUT Type:		Dega 100 of 257	
1M2005050082-03.A3L	5/5 - 7/15/2020	Portable Handset		Page 188 of 357	
© 2020 PCTEST	·	·		V 9.0 02/01/2019	



NFE F	NO: Wide C Trig: Free Gain:Low Atten: 36	Run	ALIGN AUTO	03:01:25 PM Jun 01, 2020 TRACE 2 3 4 5 0 TYPE A WINNWY DET A NNNNN	Frequency
IO dB/div Ref 25.00 dBm	Guineon		Mk	1 787.004 MHz -24.89 dBm	Auto Tune
15.0					Center Free 787.000000 MH
5.00					Start Fre 785,000000 MH
is 0 25.0	high high	1		CL1 -13.00 dBm	Stop Fre 789.000000 MH
is.0		Immun	minning		CF Ste 400.000 kH Auto Ma
is 0					Freq Offso 0 H
65 0 Center 787.000 MHz FRes BW 100 KHz	#VBW 300 kHz		Sween 2	Span 4.000 MHz .000 ms (1001 pts)	Scale Typ Log <u>Li</u>

Plot 7-324. Upper Band Edge Plot (Band 13 - 5.0MHz QPSK - Full RB Configuration)



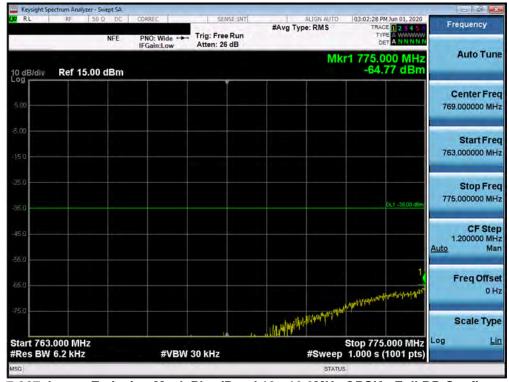
Plot 7-325. Upper Emission Mask Plot (Band 13 - 5.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMN981W	PCTEST Proof Joine partial	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Dage 190 of 257
1M2005050082-03.A3L	5/5 – 7/15/2020	Portable Handset	Page 189 of 357
© 2020 PCTEST			V 9.0 02/01/2019





Plot 7-326. Lower Band Edge Plot (Band 13 - 10.0MHz QPSK - Full RB Configuration)



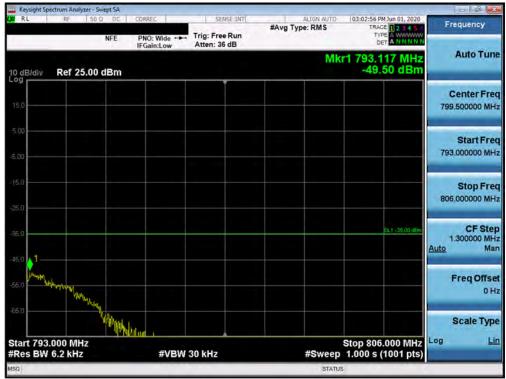
Plot 7-327. Lower Emission Mask Plot (Band 13 - 10.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMN981W	PCTEST Dreid Jate part of B	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNC	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Dage 100 of 257
1M2005050082-03.A3L	5/5 – 7/15/2020	Portable Handset		Page 190 of 357
© 2020 PCTEST	-			V 9.0 02/01/2019



RL RF 50 Q DC	CORREC	SENSE:INT	ALIGN AUTO	03:02:43 PM Jun 01, 2020	Frequency
NFE	PNO: Wide C	Trig: Free Run Atten: 36 dB	#Avg Type: RMS	TRACE 2 3 4 5 6 TYPE A WINNWAW DET A NNNNN	Frequency
IO dB/div Ref 25.00 dBm	In Galil. Low		Mk	r1 787.040 MHz -29.50 dBm	Auto Tune
-og					Center Free 787.000000 MH:
5 00	12-2-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-				Start Fre 783,000000 MH
iā 0 25.0		1_		CL1 -13.00 dBm	Stop Fre 791.000000 MH
35.0		Per Lanna	mannen		CF Ste 800.000 kH Auto Ma
55 0					Freq Offse 0 H
65.0					Scale Typ
Center 787.000 MHz #Res BW 100 kHz	#VBW	300 kHz	Sweep	Span 8.000 MHz 4.000 ms (1001 pts)	Log <u>Li</u>
ISG			STATU	s	

Plot 7-328. Upper Band Edge Plot (Band 13 - 10.0MHz QPSK - Full RB Configuration)

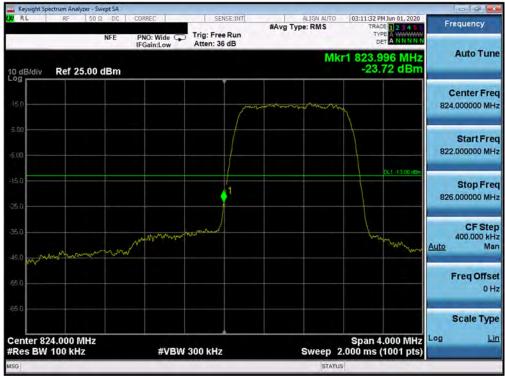


Plot 7-329. Upper Band Emission Mask Plot (Band 13 - 10.0MHz QPSK - Full RB Configuration)

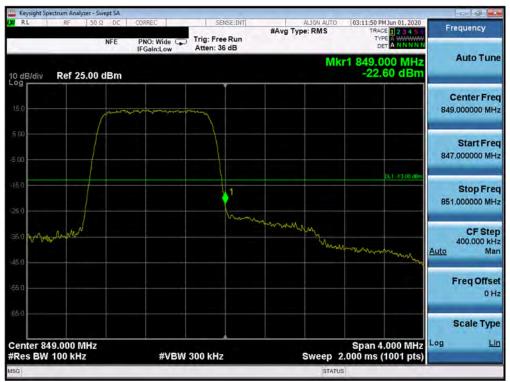
FCC ID: A3LSMN981W		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Dogo 101 of 257
1M2005050082-03.A3L	5/5 – 7/15/2020	Portable Handset		Page 191 of 357
© 2020 PCTEST		·		V 9.0 02/01/2019



Band 5



Plot 7-330. Lower Band Edge Plot (Band 5 - 1.4MHz QPSK - Full RB Configuration)



Plot 7-331. Upper Band Edge Plot (Band 5 - 1.4MHz QPSK - Full RB Configuration)

FCC ID: A3LSMN981W	PCTEST Preed to be pert of @	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Dogo 100 of 257
1M2005050082-03.A3L	5/5 – 7/15/2020	Portable Handset		Page 192 of 357
© 2020 PCTEST	•	•		V 9.0 02/01/2019



NFE PNO: Wide (Trig: Free Run Atten: 36 dB	#Avg Type: RMS	TRACE 2 3 4 5 6 TYPE A WINWWW DET A NNNNN	Frequency
dBm		Mł	r1 823.984 MHz -18.31 dBm	Auto Tune
		-		Center Fred 824.000000 MH;
				Start Free 822,000000 MH
	1		DL1 -13.00 dBm	Stop Free 826.000000 MH
warman and and and and and and and and and a				CF Stej 400.000 kH Auto Ma
				Freq Offse 0 H
	W 200 Idla		Span 4.000 MHz	Scale Type Log <u>Li</u> i
	IFGain:Low	dBm	NFE PNO: Wide Trig: Free Run Atten: 36 dB	NFE PNO: Wide Trig: Free Run Type Atten: 36 dB Mkr1 823.984 MHz iBm -18.31 dBm

Plot 7-332. Lower Band Edge Plot (Band 5 - 3.0MHz QPSK - Full RB Configuration)



Plot 7-333. Upper Band Edge Plot (Band 5 - 3.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMN981W	PCTEST"	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Daga 102 of 257
1M2005050082-03.A3L	5/5 – 7/15/2020	Portable Handset	Page 193 of 357
© 2020 PCTEST			V 9.0 02/01/2019



X RL RF 50 S		Vide 😱 Trig: Fr		#Avg Type: RMS	03:17:22 PM Jun 01, 2020 TRACE 2 3 4 5 0 TYPE A WARMANN DET A NN NN N	Frequency
10 dB/div Ref 25.00	IFGain: dBm	Low Atten: 3	6 dB	M	r1 824.000 MHz -21.247 dBm	Auto Tune
15.0				in the second second		Center Free 824.000000 MH
5.00						Start Free 822.000000 MH
iā 0 25.0			.1↓ M		DL1 -13 00 dBn	Stop Fre 826.000000 MH
35.0 45.0 амарианур Салбол а	Mrthuman	mound				CF Ste 400,000 kH Auto Ma
55.0						Freq Offse 0 H
65 0 Center 824.000 MHz					Span 4.000 MHz	Scale Type
Res BW 100 kHz		#VBW 300 kH	z	Sweep Statu	2.000 ms (1001 pts)	

Plot 7-334. Lower Band Edge Plot (Band 5 - 5.0MHz QPSK - Full RB Configuration)



Plot 7-335. Upper Band Edge Plot (Band 5 - 5.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMN981W	PCTEST Provid Joine part of B	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Dogo 104 of 257
1M2005050082-03.A3L	5/5 - 7/15/2020	Portable Handset	Page 194 of 357
© 2020 PCTEST			V 9.0 02/01/2019



X RL RF 50	Ω DC NFE	PNO: Wide	SENSE:INT	#Avg Type: RMS	03:18:58 PM Jun 01, 2020 TRACE 2 3 4 5 0 TYPE A WWWW DET A NNNNN	Frequency
10 dB/div Ref 25.00	dBm	IP Galli Low		M	r1 823.944 MHz -30.88 dBm	Auto Tune
15.0						Center Free 824.000000 MH:
5.00				tallan yafan talan yafan talan yafan ya	Alayuray yarakindan denga yaraki	Start Free 820.000000 MH
25.0					0L1 -13 00 d8m	Stop Free 828.000000 MH
35.0 10 10 10 10 10 10 10 10 10 10 10 10 10 1	township	matterena	Supple on Marth			CF Stej 800,000 kH <u>Auto</u> Ma
45 0 55 0						Freq Offse 0 H
65 0 Center 824.000 MHz					Span 8.000 MHz	Scale Type
Res BW 100 kHz		#VBW	300 kHz	Sweep	4.000 ms (1001 pts)	

Plot 7-336. Lower Band Edge Plot (Band 5 - 10.0MHz QPSK - Full RB Configuration)



Plot 7-337. Upper Band Edge Plot (Band 5 - 10.0MHz QPSK - Full RB Configuration)

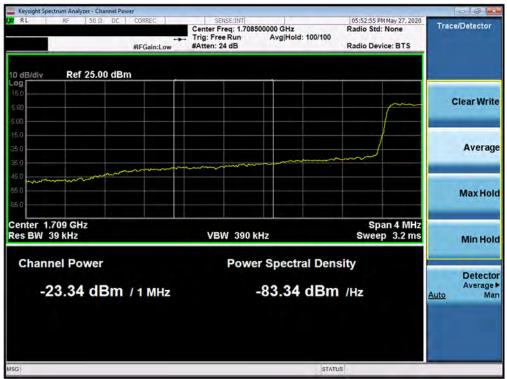
FCC ID: A3LSMN981W		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Dage 105 of 257
1M2005050082-03.A3L	5/5 – 7/15/2020	Portable Handset	Page 195 of 357
© 2020 PCTEST			V 9.0 02/01/2019



Band 66/4



Plot 7-338. Lower Band Edge Plot (Band 66/4 - 1.4MHz QPSK - Full RB Configuration)



Plot 7-339. Lower Extended Band Edge Plot (Band 66/4 - 1.4MHz QPSK - Full RB Configuration)

FCC ID: A3LSMN981W	PCTEST Proid Jobe part of B	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Dage 106 of 257
1M2005050082-03.A3L	5/5 – 7/15/2020	Portable Handset	Page 196 of 357
© 2020 PCTEST		•	V 9.0 02/01/2019





Plot 7-340. Upper Band Edge Plot (Band 4 - 1.4MHz QPSK - Full RB Configuration)



Plot 7-341. Upper Extended Band Edge Plot (Band 4 - 1.4MHz QPSK - Full RB Configuration)

FCC ID: A3LSMN981W	PCTEST Predd John Part of B	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Dage 107 of 257
1M2005050082-03.A3L	5/5 – 7/15/2020	Portable Handset		Page 197 of 357
© 2020 PCTEST	·	•		V 9.0 02/01/2019



RL RF 50 Ω DC	CORREC	SENSE:INT		05:53:18 PM May 27, 2020	Frequency
		rig: Free Run Atten: 36 dB	#Avg Type: RMS	TRACE 2 3 4 5 6 TYPE A WARWAW DET A N.N.N.N.N	
dB/div Ref 25.00 dBm	IFGam.Low		Mkr	1.780 024 GHz -30.50 dBm	Auto Tune
5.0					Center Free 1.780000000 GH
00	mmmm	m			Start Free 1.778000000 GH
50				GL1 -13.00 dBm	Stop Fre 1.782000000 GH
50 montant		himurriu	more the more that the second se	munin	CF Ste 400,000 kH <u>Auto</u> Ma
i0					Freq Offse 0 H
enter 1.780000 GHz				Span 4.000 MHz	Scale Typ
Res BW 15 kHz	#VBW 5	l kHz	Sweep	6.667 ms (1001 pts)	

Plot 7-342. Upper Band Edge Plot (Band 66 - 1.4MHz QPSK - Full RB Configuration)



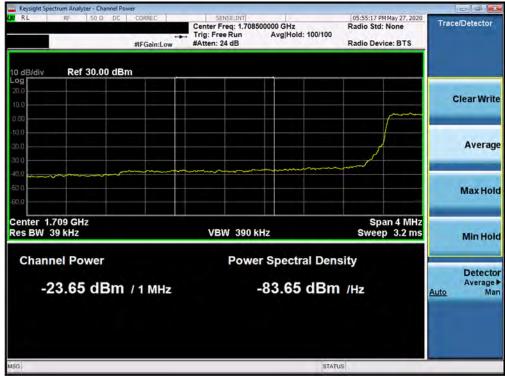
Plot 7-343. Upper Extended Band Edge Plot (Band 66 - 1.4MHz QPSK - Full RB Configuration)

FCC ID: A3LSMN981W	PCTEST Predd Johne part of @	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Dogo 109 of 257
1M2005050082-03.A3L	5/5 - 7/15/2020	Portable Handset		Page 198 of 357
© 2020 PCTEST		•		V 9.0 02/01/2019



			Maryanat			1 dBm	Cente 1.7100000	rt Freq
			and a man	Mariana			1.7100000 Sta	00 GH; rtFred
		-	manno					
					Di	L1 -13.00 dBm		
	_	1					Sto 1.7120000	p Fre 00 GH
m	are and						400.0	F Ste 000 kH Ma
						_	Freq	Offse 0 H
					Span 4.0			e Type
		#VBW 130 kHz			#VBW 130 kHz Sweep 6	Span 4.0	Span 4.000 MHz #VBW 130 kHz Sweep 6.667 ms (1001 pts)	#VBW 130 kHz Sweep 6.667 ms (1001 pts)

Plot 7-344. Lower Band Edge Plot (Band 66/4 - 3.0MHz QPSK - Full RB Configuration)



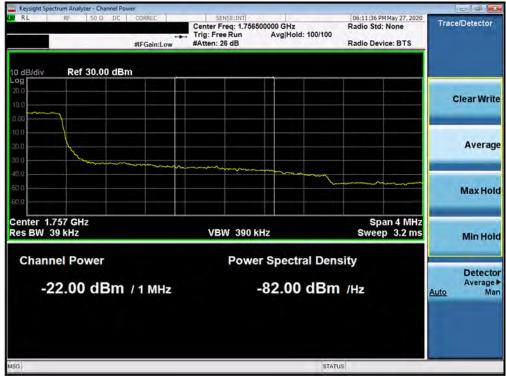
Plot 7-345. Lower Extended Band Edge Plot (Band 66/4 - 3.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMN981W	PCTEST Proid Joine part of B	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager			
Test Report S/N:	Test Dates:	EUT Type:	Dama 400 of 257			
1M2005050082-03.A3L	5/5 – 7/15/2020	Portable Handset	Page 199 of 357			
> 2020 PCTEST V 9.0 02/01/2019						



CORREC SENSE:INT 06:11	:31 PM May 27, 2020
	TRACE 2345 Frequency
Mkr1 1.75	5 000 GHz Auto Tune 25.48 dBm
	Center Free 1.755000000 GH
mathematica	Start Free 1.753000000 GH
	CL1-13 (0 den Stop Fre 1.757000000 GH
	CF Ste 400.000 kH Auto Ma
	Freq Offso 0 H
Spr #VBW 130 kHz Sweep 6.667 r	an 4.000 MHz ns (1001 pts)
STATUS	

Plot 7-346. Upper Band Edge Plot (Band 4 - 3.0MHz QPSK - Full RB Configuration)



Plot 7-347. Upper Extended Band Edge Plot (Band 4 - 3.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMN981W	PCTEST Preed to be part of @	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Daga 200 of 257
1M2005050082-03.A3L	5/5 – 7/15/2020	Portable Handset		Page 200 of 357
© 2020 PCTEST	•	•		V 9.0 02/01/2019



RL RF 50 Q DC	CORREC	SENSE:INT		05:55:41 PM May 27, 2020	Contraction of the local division of the loc
	PNO: Wide 😱	Trig: Free Run Atten: 36 dB	#Avg Type: RMS	TRACE 2 3 4 5 0 TYPE A WARMAN DET A NNNNN	Frequency
0 dB/div Ref 25.00 dBm	1 Gameon		Mkr	1 1.780 000 GHz -25.956 dBm	Auto Tuni
og					Center Free 1.780000000 GH
5 00	mulana	~			Start Fre 1.778000000 GH
50 50		1		0L1 -13 00 dBm	Stop Fre 1.782000000 GH
15.0		Mining	an fan ser an	and the work of the work of the	CF Ste 400.000 kH Auto Ma
ii 0					Freq Offse 0 H
enter 1.780000 GHz Res BW 36 kHz	#VBW	130 kHz	Sween	Span 4.000 MHz 6.667 ms (1001 pts)	Scale Typ Log <u>Li</u>

Plot 7-348. Upper Band Edge Plot (Band 66 - 3.0MHz QPSK - Full RB Configuration)



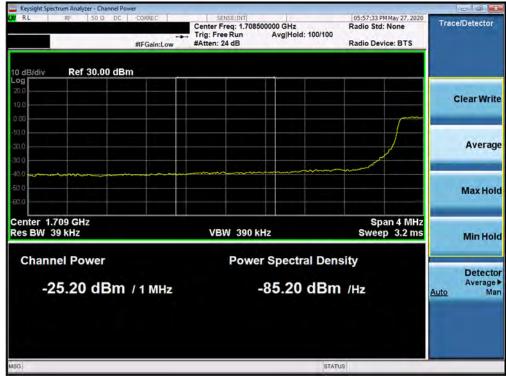
Plot 7-349. Upper Extended Band Edge Plot (Band 66 - 3.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMN981W	PCTEST Proof Joine part of B	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Daga 201 of 257
1M2005050082-03.A3L	5/5 – 7/15/2020	Portable Handset	Page 201 of 357
© 2020 PCTEST	•		V 9.0 02/01/2019



RL RF 50 Ω DC	CORREC	SENSE:INT	#Avg Type: RMS	05:57:27 PM May 27, 2020 TRACE 2 3 4 5 0	Frequency
	PNO: Wide 🖵 IFGain:Low	Trig: Free Run Atten: 36 dB		DET A NNNNN	
0 dB/div Ref 25.00 dBm			Mkr	1 1.709 992 GHz -29.17 dBm	Auto Tune
15.0					Center Fred 1.710000000 GH
5.00			and and an and a second se		Start Free 1.708000000 GH
25.0				0L1 -13 00 dBm	Stop Fre 1.712000000 GH
35.0 marine and and a second s	mannam	- Annone -			CF Ste 400,000 kH Auto Ma
55 0					Freq Offse 0 H
66 0				Span 4.000 MHz	Scale Typ Log <u>Li</u>
Res BW 62 kHz	#VBW	220 kHz	Sweep	6.667 ms (1001 pts)	

Plot 7-350. Lower Band Edge Plot (Band 66/4 - 5.0MHz QPSK - Full RB Configuration)



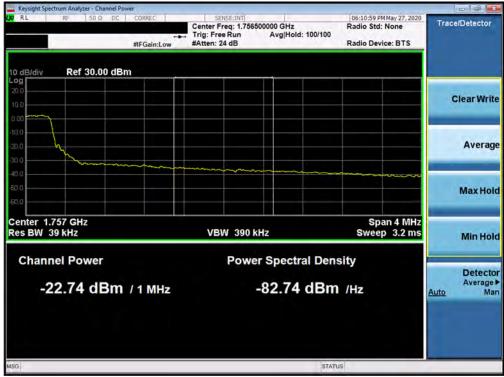
Plot 7-351. Lower Extended Band Edge Plot (Band 66/4 - 5.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMN981W	PCTEST Predljobe part of @	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Dage 202 of 257
1M2005050082-03.A3L	5/5 - 7/15/2020	Portable Handset	Page 202 of 357
© 2020 PCTEST	•		V 9.0 02/01/2019



PNO: Wide 🖵	Trig: Free Run Atten: 36 dB	#Avg Type: RMS	TYPE A WINNINN	Frequency
		Mkr	1.755 000 GHz -23.76 dBm	Auto Tune
				Center Free 1.755000000 GH
A Barran Lington Andrew Astronych				Start Fre 1.753000000 GH
	1		0L1 -13.00 dBm	Stop Fre 1.757000000 GH
	and in the second s	and all man and an enter and	nenselanstiketerre beseterer gesteke geter byer	CF Ste 400.000 kH Auto Ma
				Freq Offs 0 F
#\/P\//	120 147	Swaan	Span 4.000 MHz	Scale Typ Log Li
	IFGain:Low	IFGein:Low Atten: 36 dB	PNO: Wide Trig: Free Run Atten: 36 dB Mkr	PNO: Wide Trig: Free Run Atten: 36 dB Mkr1 1.755 000 GHz -23.76 dBm Ct 1.1500 eBe Ct 1.1500 eBe Ct 1.1500 eBe Ct 1.1500 eBe

Plot 7-352. Upper Band Edge Plot (Band 4 - 5.0MHz QPSK - Full RB Configuration)



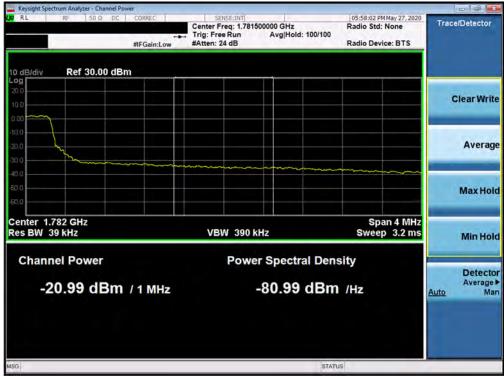
Plot 7-353. Upper Extended Band Edge Plot (Band 4 - 5.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMN981W	PCTEST Preed to be part of @	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Dogo 202 of 257
1M2005050082-03.A3L	5/5 – 7/15/2020	Portable Handset		Page 203 of 357
© 2020 PCTEST	•	•		V 9.0 02/01/2019



RL RF 50 Q DC	CORREC	SENSE:INT		05:57:58 PM May 27, 2020	Frequency
	PNO: Wide 🖵	Trig: Free Run Atten: 36 dB	#Avg Type: RMS	TRACE 1 2 3 4 5 6 TYPE A WWWWW DET A NNNNN	requercy
0 dB/div Ref 25.00 dBm	Gameow		Mkr	1 1.780 024 GHz -27.13 dBm	Auto Tuni
15.0					Center Free 1.780000000 GH
5 00	****				Start Fre 1.778000000 GH
25.0		1		CL1 -13.00 dBm	Stop Fre 1.782000000 GH
45.0			and a specific and a	udapatan anala daga dan pangkangkan ana ang	CF Ste 400.000 kH Auto Ma
55 0					Freq Offse 0 H
Senter 1.780000 GHz				Span 4.000 MHz	Scale Typ
Res BW 62 kHz	#VBW :	220 kHz	Sweep	6.667 ms (1001 pts)	

Plot 7-354. Upper Band Edge Plot (Band 66 - 5.0MHz QPSK - Full RB Configuration)



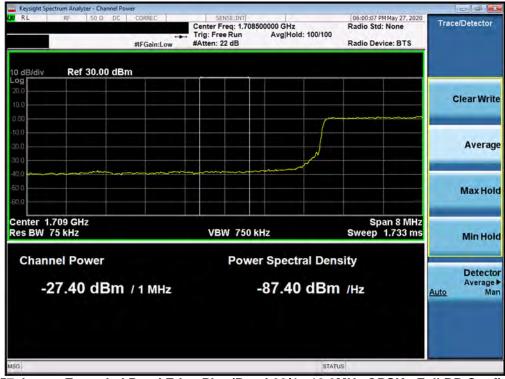
Plot 7-355. Upper Extended Band Edge Plot (Band 66 - 5.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMN981W	PCTEST Predd Johne part of @	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Daga 204 of 257
1M2005050082-03.A3L	5/5 - 7/15/2020	Portable Handset		Page 204 of 357
© 2020 PCTEST		•		V 9.0 02/01/2019



RL RF 50Ω DC	PNO: Wide	SENSE:INT Trig: Free Run Atten: 36 dB	#Avg Type: RMS	06:00:00 PM May 27, 2020 TRACE 2 3 4 5 0 TYPE A WARNIN DET A NINNIN	Frequency
0 dB/div Ref 25.00 dBm	i demicon		Mkr	1 1.710 000 GHz -32.68 dBm	Auto Tune
15.0					Center Fred 1.710000000 GH
5.00			Ang ang Pana Ang Pangal Salara Ing Pangalan ang Pa		Start Free 1.706000000 GH
15 0 25 0				0L1 -13.00 dBm	Stop Free 1.714000000 GH
35 0	an a				CF Ste 800.000 kH Auto Ma
56 0					Freq Offse 0 H
Center 1.710000 GHz Res BW 120 kHz	#\/B\M	430 kHz	Sween	Span 8.000 MHz 13.33 ms (1001 pts)	Scale Type Log <u>Li</u> r

Plot 7-356. Lower Band Edge Plot (Band 66/4 - 10.0MHz QPSK - Full RB Configuration)



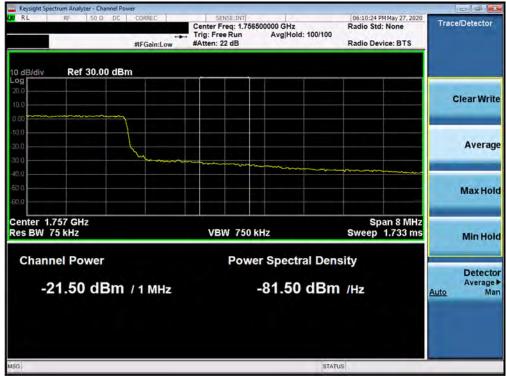
Plot 7-357. Lower Extended Band Edge Plot (Band 66/4 - 10.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMN981W	PCTEST Dreid Jate part of B	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNC	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Dage 205 of 257
1M2005050082-03.A3L	5/5 – 7/15/2020	Portable Handset		Page 205 of 357
© 2020 PCTEST				V 9.0 02/01/2019



RL RF 50 Q DC	CORREC	SENSE:INT		06:10:19 PM May 27, 2020	Frequency
	PNO: Wide C	Trig: Free Run Atten: 36 dB	#Avg Type: RMS	TYPE A WITHING	
0 dB/div Ref 25.00 dBm			Mkr	1 1.755 032 GHz -27.12 dBm	Auto Tune
15.0					Center Fred 1.755000000 GH
5 00 		γ			Start Free 1.751000000 GH
iā 0		the 1		CL1 -13 00 dBm	Stop Fre 1.759000000 GH
35.0			and a second a second a second a	and and any house of the second stage	CF Ste 800,000 kH Auto Ma
56 0					Freq Offse 0 H
Senter 1.755000 GHz				Span 8.000 MHz	Scale Typ
Res BW 120 kHz	#VBW	430 kHz	Sweep	13.33 ms (1001 pts)	

Plot 7-358. Upper Band Edge Plot (Band 4 - 10.0MHz QPSK - Full RB Configuration)



Plot 7-359. Upper Extended Band Edge Plot (Band 4 - 10.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMN981W	PCTEST PredJohe pert of B	MEASUREMENT REPORT (CERTIFICATION)	SAMSONS	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Dage 200 of 257
1M2005050082-03.A3L	5/5 - 7/15/2020	Portable Handset		Page 206 of 357
© 2020 PCTEST		·		V 9.0 02/01/2019



#Avg Type: RMS Free Run : 36 dB Mkr1 1.780 080 GHz -28.09 dBm Center Freq 1.78000000 GHz 1.776000000 GHz 1.776000000 GHz
Center Fred Center Fred Categories Center Fred Categories Center Fred Categories Center Fred Categories Catego
1.78000000 GH
1.776000000 GH
041-13.00 dPm
5top Fre 1.784000000 GH
CF Ste 800,000 kH Auto Ma
Freq Offse 0 H
Spap 2 000 MHz
Span 8.000 MHz Log Li Hz Sweep 13.33 ms (1001 pts)

Plot 7-360. Upper Band Edge Plot (Band 66 - 10.0MHz QPSK - Full RB Configuration)



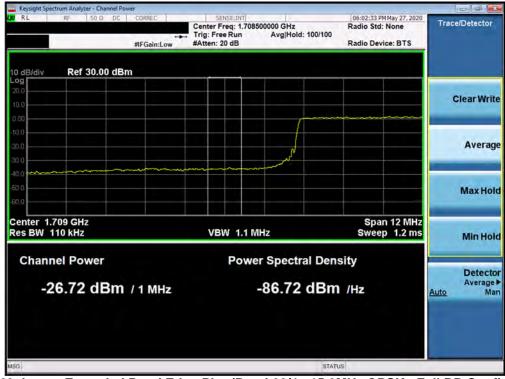
Plot 7-361. Upper Extended Band Edge Plot (Band 66 - 10.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMN981W	PCTEST Prod/she part of @	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNE	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Dama 007 of 057
1M2005050082-03.A3L	5/5 – 7/15/2020	Portable Handset		Page 207 of 357
© 2020 PCTEST	*			V 9.0 02/01/2019



X RL RF 50 Ω DC	PNO: Wide	SENSE:INT Trig: Free Run Atten: 36 dB	#Avg Type: RMS	06:02:28 PM May 27, 2020 TRACE 2 3 4 5 0 TYPE A WARNIN DET A NNNNN	Frequency
10 dB/div Ref 25.00 dBn	1		Mkr	1 1.710 000 GHz -31.82 dBm	Auto Tune
15.0					Center Fred 1.710000000 GH
5.00			hanna an	americana and and and and and and and and and	Start Free 1.704000000 GH
25.0				OL1 -13 00 dBm	Stop Free 1.716000000 GH
35 0	yether marine	man W			CF Ste 1.200000 MH Auto Ma
55 0					Freq Offse 0 H
E5.0 Center 1.710000 GHz				Span 12.00 MHz	Scale Type
≉Res BW 180 kHz	#VBW	620 kHz	Sweep	1.000 ms (1001 pts)	

Plot 7-362. Lower Band Edge Plot (Band 66/4 - 15.0MHz QPSK - Full RB Configuration)



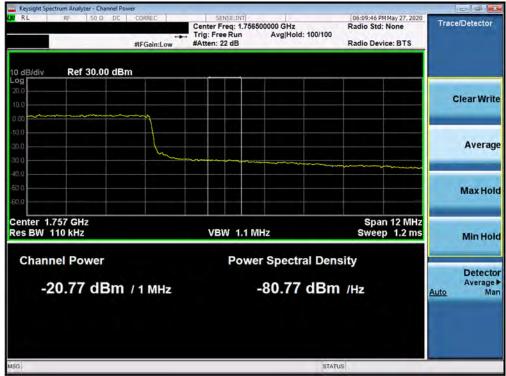
Plot 7-363. Lower Extended Band Edge Plot (Band 66/4 - 15.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMN981W	PCTEST Dread Jointe part of @	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNC	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Dage 200 of 257
1M2005050082-03.A3L	5/5 – 7/15/2020	Portable Handset		Page 208 of 357
© 2020 PCTEST		·		V 9.0 02/01/2019



RL RF 50Ω DC	CORREC	SENSE:INT	#Avg Type: RMS	06:09:41 PM May 27, 2020 TRACE 1 2 3 4 5 6	Frequency
	PNO: Wide C	Trig: Free Run Atten: 36 dB	word type this	TYPE A WWWWW DET A NNNNN	
0 dB/div Ref 25.00 dBm			Mkr	1 1.755 000 GHz -25.88 dBm	Auto Tune
15.0					Center Free 1.755000000 GH
5.00	and the second sec				Start Fre 1.749000000 GH
180 250		1		0L1 -13.00 dBm	Stop Fre 1.761000000 GH
45.0					CF Ste 1.200000 MH Auto Ma
55 O					Freq Offse 0 H
Eenter 1.755000 GHz Res BW 180 kHz	#\/B\\(620 kHz	Swaap	Span 12.00 MHz 1.000 ms (1001 pts)	Scale Type

Plot 7-364. Upper Band Edge Plot (Band 4 - 15.0MHz QPSK - Full RB Configuration)



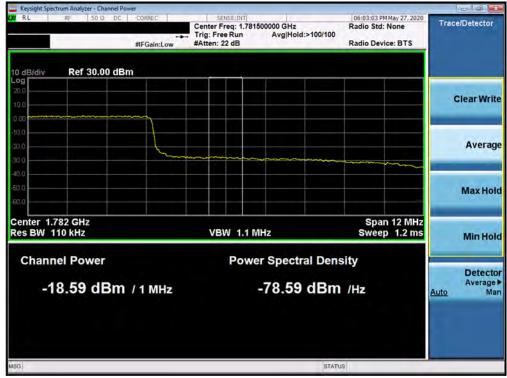
Plot 7-365. Upper Extended Band Edge Plot (Band 4 - 15.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMN981W	PCTEST Predd Jote part of @	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNE	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Dogo 200 of 257
1M2005050082-03.A3L	5/5 – 7/15/2020	Portable Handset		Page 209 of 357
© 2020 PCTEST	•	·		V 9.0 02/01/2019



RL RF 50Ω DC	CORREC	SENSE:INT	#Avg Type: RMS	06:02:59 PM May 27, 2020 TRACE 1 2 3 4 5 0	Frequency
	PNO: Wide 😱 IFGain:Low	Trig: Free Run Atten: 36 dB	ming type. tune	TYPE A WARWAW DET A NNNNN	
dB/div Ref 25.00 dBm			Mkr	1 1.780 228 GHz -24.39 dBm	Auto Tune
5.0					Center Fred 1.780000000 GH
00		η			Start Fre 1.774000000 GH
5.0		hall	m	0L1 -13 00 dBm	Stop Fre 1.786000000 GH
5.0					CF Ste 1.200000 MH Auto Ma
50					Freq Offso 0 H
enter 1.780000 GHz				Span 12.00 MHz	Scale Typ
Res BW 180 kHz	#VBW	620 kHz	Sweep	1.000 ms (1001 pts)	

Plot 7-366. Upper Band Edge Plot (Band 66 - 15.0MHz QPSK - Full RB Configuration)



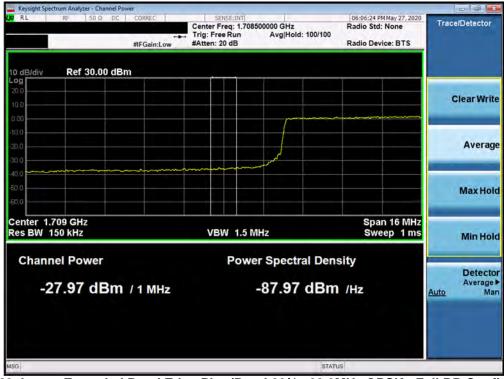
Plot 7-367. Upper Extended Band Edge Plot (Band 66 - 15.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMN981W	PCTEST Presid (size part of (size)	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Daga 210 of 257
1M2005050082-03.A3L	5/5 - 7/15/2020	Portable Handset	Page 210 of 357
© 2020 PCTEST			V 9.0 02/01/2019



RL RF 50Ω DC	CORREC	SENSE:INT		06:06:19 PM May 27, 2020	Frequency
	PNO: Wide C	Trig: Free Run Atten: 36 dB	#Avg Type: RMS	TRACE 2 3 4 5 N TYPE A WWWWW DET A NNNN	
10 dB/div Ref 25.00 dBn	1		Mkr	1 1.710 000 GHz -31.59 dBm	Auto Tune
15,0					Center Fred 1.710000000 GH
5.00			ya pangan na pangan n Na pangan na	and a second and a s	Start Free 1.702000000 GH
25.0				0L1 -13.00 dBm	Stop Fre 1.718000000 GH
35.0	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	and the second s			CF Ste 1.600000 MH Auto Ma
55 0					Freq Offse 0 H
65.0					Scale Type
Center 1.710000 GHz #Res BW 240 kHz	#VBW	820 kHz	Sweep	Span 16.00 MHz 1.000 ms (1001 pts)	
SG			STATU	JS	

Plot 7-368. Lower Band Edge Plot (Band 66/4 - 20.0MHz QPSK - Full RB Configuration)



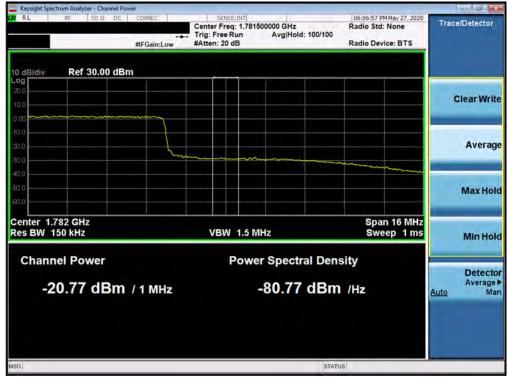
Plot 7-369. Lower Extended Band Edge Plot (Band 66/4 - 20.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMN981W	PCTEST Prod Jobe part of @	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Daga 211 of 257
1M2005050082-03.A3L	5/5 - 7/15/2020	Portable Handset	Page 211 of 357
© 2020 PCTEST			V 9.0 02/01/2019



α RL RF 50 Ω D	C CORREC	SENSE:INT	#Avg Type: RMS	06:06:49 PM May 27, 2020 TRACE 2 3 4 5	Frequency
	PNO: Wide 😱	Trig: Free Run Atten: 36 dB	#Avg Type: RMS	TYPE A WWWWW DET A NNNNN	() () ()
0 dB/div Ref 25.00 dBr	n		Mkr	1 1.780 096 GHz -26.02 dBm	Auto Tune
15,0					Center Fred 1.780000000 GH
5.00	mmmentaination	7			Start Free 1.772000000 GH
25.0		h 1		OL1 -13.00 dBm	Stop Fre 1.788000000 GH
35.0				and the second sec	CF Ste 1.600000 MH Auto Ma
55 0					Freq Offse 0 H
					Scale Typ
Center 1.780000 GHz #Res BW 240 kHz	#VBW	820 kHz	Sweep	Span 16.00 MHz 1.000 ms (1001 pts)	
SG			STAT		-

Plot 7-370. Upper Band Edge Plot (Band 66 - 20.0MHz QPSK - Full RB Configuration)

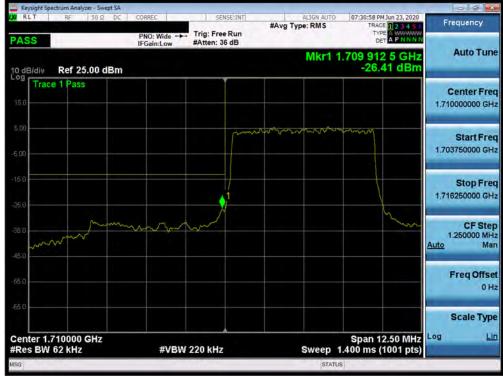


Plot 7-371. Upper Extended Band Edge Plot (Band 66 - 20.0MHz QPSK - Full RB Configuration)

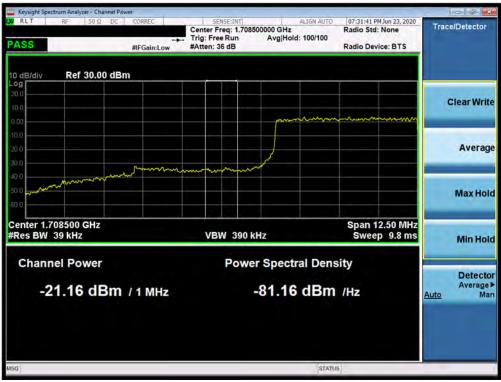
FCC ID: A3LSMN981W	PCTEST Proid Joins part of B	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Dama 010 at 257
1M2005050082-03.A3L	5/5 – 7/15/2020	Portable Handset	Page 212 of 357
2020 PCTEST V 9.0 02/01/2019			



NR Band n66



Plot 7-372. Lower Band Edge Plot (n66 - 5MHz DFT-s-OFDM-QPSK - Full RB Configuration)



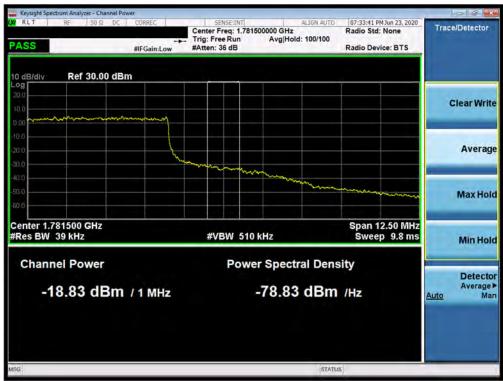
Plot 7-373. Lower Extended Band Edge Plot (n66 - 5MHz DFT-s-OFDM-QPSK - Full RB Configuration)

FCC ID: A3LSMN981W	PCTEST Preid Jolie part of B	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Dama 040 at 057
1M2005050082-03.A3L	5/5 – 7/15/2020	Portable Handset	Page 213 of 357
2202 PCTEST V 9.0 02/01/2019			





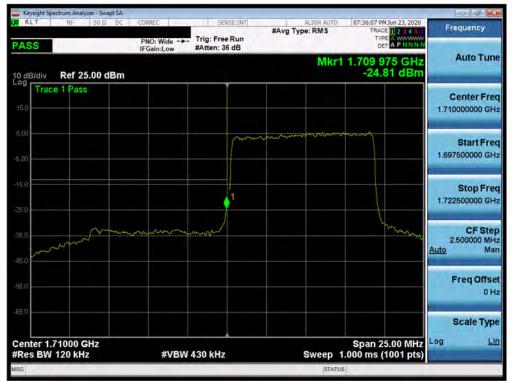
Plot 7-374. Upper Band Edge Plot (n66 - 5MHz DFT-s-OFDM-QPSK - Full RB Configuration)



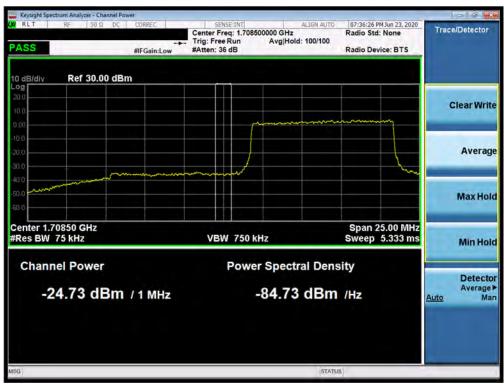
Plot 7-375. Upper Extended Band Edge Plot (n66 - 5MHz DFT-s-OFDM-QPSK - Full RB Configuration)

FCC ID: A3LSMN981W	PCTEST Proid to be part of B	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager	
Test Report S/N:	Test Dates:	EUT Type:	Dage 214 of 257	
1M2005050082-03.A3L	5/5 – 7/15/2020	Portable Handset	Page 214 of 357	
2020 PCTEST V 9.0 02/01/2019				





Plot 7-376. Lower Band Edge Plot (n66 - 10MHz DFT-s-OFDM-QPSK - Full RB Configuration)



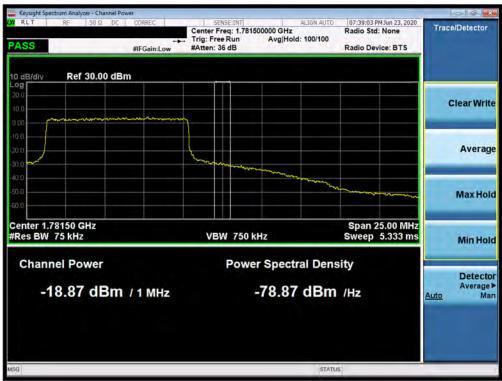
Plot 7-377. Lower Extended Band Edge Plot (n66 - 10MHz DFT-s-OFDM-QPSK - Full RB Configuration)

FCC ID: A3LSMN981W	PCTEST Prood Joine part of @	MEASUREMENT REPORT (CERTIFICATION)	Quality Manager	
Test Report S/N:	Test Dates:	EUT Type:		
1M2005050082-03.A3L	5/5 – 7/15/2020	Portable Handset	Page 215 of 357	
2020 PCTEST V 9.0 02/01/2019				





Plot 7-378. Upper Band Edge Plot (n66 - 10MHz DFT-s-OFDM-QPSK - Full RB Configuration)



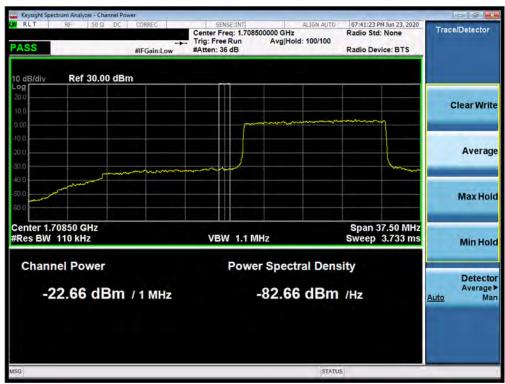
Plot 7-379. Upper Extended Band Edge Plot (n66 - 10MHz DFT-s-OFDM-QPSK - Full RB Configuration)

FCC ID: A3LSMN981W	PCTEST Prod/she part of @	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Dama 010 at 057
1M2005050082-03.A3L	5/5 – 7/15/2020	Portable Handset		Page 216 of 357
© 2020 PCTEST				V 9.0 02/01/2019





Plot 7-380. Lower Band Edge Plot (n66 - 15MHz DFT-s-OFDM-QPSK - Full RB Configuration)



Plot 7-381. Lower Extended Band Edge Plot (n66 - 15MHz DFT-s-OFDM-QPSK - Full RB Configuration)

FCC ID: A3LSMN981W	PCTEST Prood Joine part of @	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Dama 017 at 057
1M2005050082-03.A3L	5/5 – 7/15/2020	Portable Handset		Page 217 of 357
2020 PCTEST V 9.0 02/01/2019				





Plot 7-382. Upper Band Edge Plot (n66 - 15MHz DFT-s-OFDM-QPSK - Full RB Configuration)



Plot 7-383. Upper Extended Band Edge Plot (n66 - 15MHz DFT-s-OFDM-QPSK - Full RB Configuration)

FCC ID: A3LSMN981W	PCTEST Prood Joine part of @	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNE	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Dama 010 at 057
1M2005050082-03.A3L	5/5 – 7/15/2020	Portable Handset		Page 218 of 357
2020 PCTEST V 9.0 02/01/2019				





Plot 7-384. Lower Band Edge Plot (n66 - 20MHz DFT-s-OFDM-QPSK - Full RB Configuration)



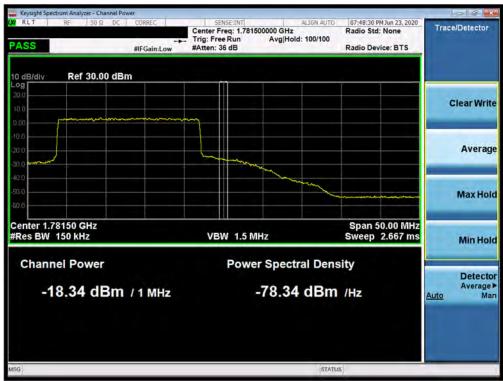
Plot 7-385. Lower Extended Band Edge Plot (n66 - 20MHz DFT-s-OFDM-QPSK - Full RB Configuration)

FCC ID: A3LSMN981W	PCTEST Prood Joine part of @	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Dama 010 at 057
1M2005050082-03.A3L	5/5 – 7/15/2020	Portable Handset		Page 219 of 357
© 2020 PCTEST				V 9.0 02/01/2019





Plot 7-386. Upper Band Edge Plot (n66 - 20MHz DFT-s-OFDM-QPSK - Full RB Configuration)

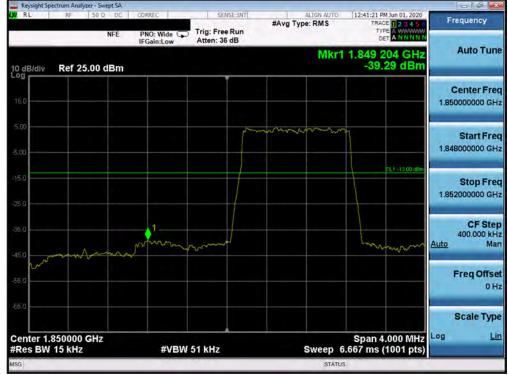


Plot 7-387. Upper Extended Band Edge Plot (n66 - 20MHz DFT-s-OFDM-QPSK - Full RB Configuration)

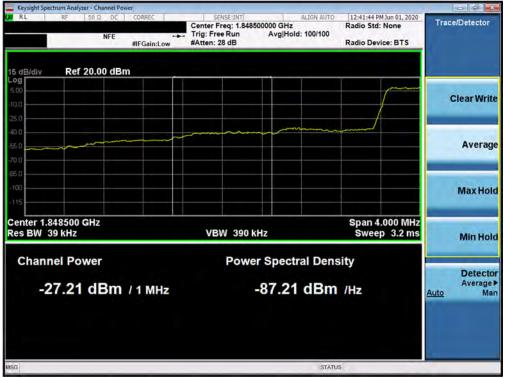
FCC ID: A3LSMN981W	PCTEST Prod/she part of @	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Dama 000 at 057
1M2005050082-03.A3L	5/5 – 7/15/2020	20 Portable Handset		Page 220 of 357
© 2020 PCTEST				V 9.0 02/01/2019



Band 25/2



Plot 7-388. Lower Band Edge Plot (Band 25/2 - 1.4MHz QPSK - Full RB Configuration)



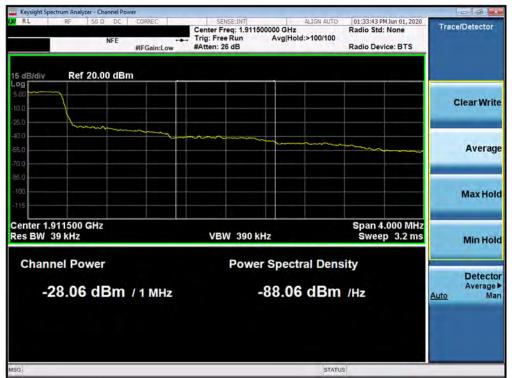
Plot 7-389. Lower Extended Band Edge Plot (Band 25/2 - 1.4MHz QPSK - Full RB Configuration)

FCC ID: A3LSMN981W	PCTEST PredJohe pert of B	MEASUREMENT REPORT (CERTIFICATION)	SAMSONS	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Dama 001 of 057
1M2005050082-03.A3L	5/5 – 7/15/2020	Portable Handset		Page 221 of 357
© 2020 PCTEST				V 9.0 02/01/2019



RL RF 50 Ω DC CORF	EC SENSE:INT	ALIGN AUTO	01:33:30 PM Jun 01, 2020	Frequency
NFE PNO IFG	D: Wide C Trig: Free Run ain:Low Atten: 36 dB	#Avg Type: RMS	TRACE 2 3 4 5 5 TYPE A WARNING DET A NNNNN	
dB/div Ref 25.00 dBm		Mkr1	1.910 044 GHz -32.50 dBm	Auto Tun
5.0				Center Fre 1.910000000 GH
00	waterstry			Start Fre 1.908000000 GH
5.0			GL1 -13 00 dBm	Stop Fre 1.912000000 GH
50 manda and	him	mining		CF Ste 400.000 kH Auto Ma
50			an many many	Freq Offse 0 H
50				Scale Typ
enter 1.910000 GHz Res BW 15 kHz	#VBW 51 kHz	Sweep 6	Span 4.000 MHz .667 ms (1001 pts)	Log <u>Li</u>

Plot 7-390. Upper Band Edge Plot (Band 2 - 1.4MHz QPSK - Full RB Configuration)



Plot 7-391. Upper Extended Band Edge Plot (Band 2 - 1.4MHz QPSK - Full RB Configuration)

FCC ID: A3LSMN981W	PCTEST Preed to be part of @	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Dama 000 at 057
1M2005050082-03.A3L	5/5 – 7/15/2020	Portable Handset		Page 222 of 357
© 2020 PCTEST	•	•		V 9.0 02/01/2019



RL RF 50Ω DC	CORREC	SENSE:INT	ALIGN AUTO	12:42:05 PM Jun 01, 2020	Frequency
NFE		Free Run n: 36 dB	#Avg Type: RMS	TYPE A WWWWW DET A NNNNN	Frequency
0 dB/div Ref 25.00 dBm			Mkr1	1.915 028 GHz -32.82 dBm	Auto Tune
15.0					Center Free 1.915000000 GH:
5.00					Start Free 1.913000000 GH
25.0				DL1 -13.00 dBm	Stop Free 1.917000000 GH
35.0		linn	Amon my my	Δ	CF Ste 400.000 kH Auto Ma
55.0			- hr	and one with the	Freq Offse 0 H
550 Center 1.915000 GHz Res BW 15 kHz	#VBW 51 kl		Sween	Span 4.000 MHz 5.667 ms (1001 pts)	Scale Type

Plot 7-392. Upper Band Edge Plot (Band 25 - 1.4MHz QPSK - Full RB Configuration)



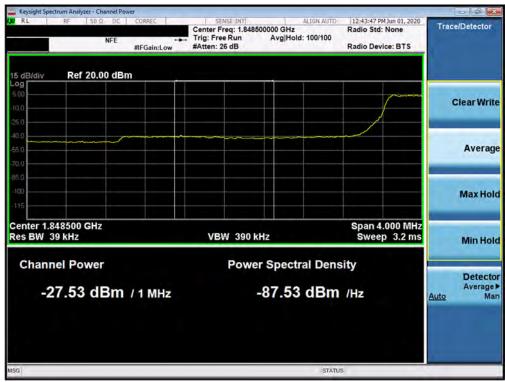
Plot 7-393. Upper Extended Band Edge Plot (Band 25 - 1.4MHz QPSK - Full RB Configuration)

FCC ID: A3LSMN981W	PCTEST Prod/softe part of @	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNC	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Dogo 222 of 257
1M2005050082-03.A3L	5/5 - 7/15/2020	Portable Handset		Page 223 of 357
© 2020 PCTEST	*			V 9.0 02/01/2019



RL RF 50	NFE	PNO: Wide	Trig: Free Atten: 36		#Avg Typ	ALIGN AUTO e: RMS	TRAC	I Jun 01, 2020	Fr	equency
10 dB/div Ref 25.00	dBm	IFGain:Low	Atten: 00	0		Mkr1	1.849 9 -27.8	96 GHz 31 dBm		Auto Tune
15.0										Center Free
5.00				ſ					1.84	Start Free
5.0				1				0L1-15.00.dBm	1.85	Stop Fre
50	~~~~		\sim						Auto	CF Ste 400.000 kH Ma
55.0									1	Freq Offse 0 H
65 0 Center 1.850000 GH: ≉Res BW 36 kHz	z	#\/D\M	130 kHz			Swoon 2	Span 4. .000 ms (.000 MHz		Scale Type

Plot 7-394. Lower Band Edge Plot (Band 25/2 - 3.0MHz QPSK - Full RB Configuration)



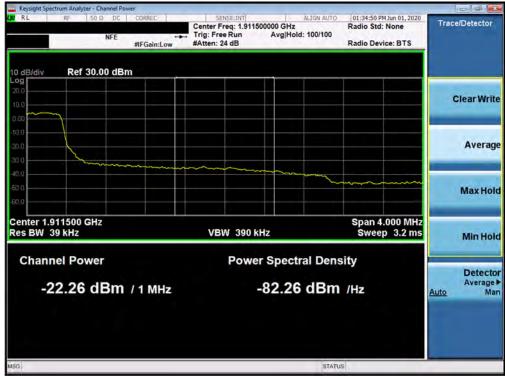
Plot 7-395. Lower Extended Band Edge Plot (Band 25/2 - 3.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMN981W	PCTEST Proid to be part of the	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Dama 004 of 057
1M2005050082-03.A3L	5/5 – 7/15/2020	Portable Handset	Page 224 of 357
© 2020 PCTEST		· · · · · · · · · · · · · · · · · · ·	V 9.0 02/01/2019



RL RF 50 Q DC	PNO: Wide	SENSE:INT	#Avg Type: RMS	TRACE 1 2 3 4 5 0 TYPE A WITHIN	Frequency
10 dB/div Ref 25.00 dBm	IFGain:Low	Atten: 36 dB	Mkr1	1.910 008 GHz -26.37 dBm	Auto Tune
15.0					Center Free 1.910000000 GH
5.00	m	m			Start Fre 1.908000000 GH
25.0		1		OL1 -13.00 dBm	Stop Fre 1.912000000 GH
35.0		Mun	m	mm	CF Ste 400,000 kH Auto Ma
55 0					Freq Offso 0 H
Center 1.910000 GHz Res BW 36 kHz	#VBW	130 kHz	Sweep 2	Span 4.000 MHz 2.000 ms (1001 pts)	Scale Typ Log <u>Li</u>

Plot 7-396. Upper Band Edge Plot (Band 2 - 3.0MHz QPSK - Full RB Configuration)



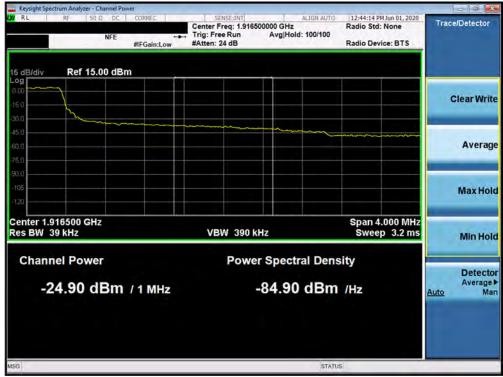
Plot 7-397. Upper Extended Band Edge Plot (Band 2 - 3.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMN981W	PCTEST Predljobe pert of @	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Da as 005 of 057
1M2005050082-03.A3L	5/5 – 7/15/2020	5/5 – 7/15/2020 Portable Handset		Page 225 of 357
© 2020 PCTEST	•			V 9.0 02/01/2019



CORREC	SENSE:INT	ALIGN AUTO	12:44:08 PM Jun 01, 2020	Frequency
PNO: Wide	Trig: Free Run Atten: 36 dB	wavg Type. Rms		
		Mkr1	1.915 000 GHz -26.63 dBm	Auto Tune
				Center Fred 1.915000000 GH
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	$\gamma$			Start Free 1.913000000 GH
	1		DL1 -13.00 dBm	Stop Fre 1.917000000 GH
	- And			CF Ste 400,000 kH <u>Auto</u> Ma
				Freq Offse 0 H
<i>i</i> 0/E111			Span 4.000 MHz	Scale Type Log <u>Li</u>
	PNO: Wide C	PNO: Wide Trig: Free Run IFGain:Low Atten: 36 dB	PNO: Wide Trig: Free Run IFGain:Low Trig: Free Run Atten: 36 dB Mikr1	PNO: Wide Trig: Free Run Atten: 36 dB Mkr1 1.915 000 GHz -26.63 dBm CLI-1300 een CLI-1300 een CLI-1300 een CLI-1300 een CLI-1300 een CLI-1300 een

Plot 7-398. Upper Band Edge Plot (Band 25 - 3.0MHz QPSK - Full RB Configuration)



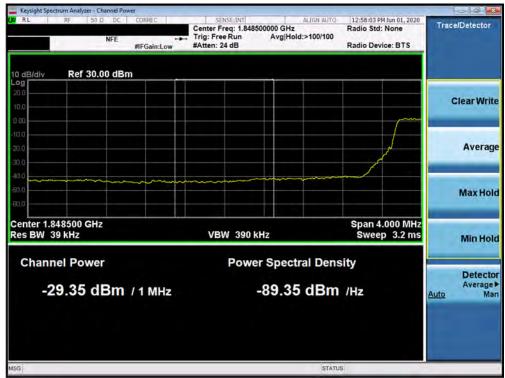
Plot 7-399. Upper Extended Band Edge Plot (Band 25 - 3.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMN981W	PCTEST Prod Jobe part of @	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Dage 226 of 257
1M2005050082-03.A3L	5/5 - 7/15/2020	Portable Handset		Page 226 of 357
© 2020 PCTEST				V 9.0 02/01/2019



RL RF 50	R DC C	DRREC	SENSE:INT	#A	ALIGN AUTO	12:57:57 PM Jun 01, 202 TRACE 1 2 3 4 5	
	NFE I	PNO: Wide 😱 FGain:Low	Trig: Free Run Atten: 36 dB	#Avg i	ype: KWS	TYPE A WINNIN	N
0 dB/div Ref 25.00	dBm				Mkr1	1.849 996 GH -29.44 dBr	z Auto Tune n
15.0							Center Free 1.85000000 GH
5.00							Start Fre 1.848000000 GH
15.0 15.0						DL1-13.00 dB	Stop Fre 1.852000000 GH
15 0	~~~~^^		mon				CF Ste 400.000 kH Auto Ma
50							Freq Offse 0 H
550 Center 1.850000 GH2 Res BW 62 kHz	z	#\/D\\/	200 kHz		Swaap	Span 4.000 MH 2.000 ms (1001 pts	Scale Typ

Plot 7-400. Lower Band Edge Plot (Band 25/2 - 5.0MHz QPSK - Full RB Configuration)



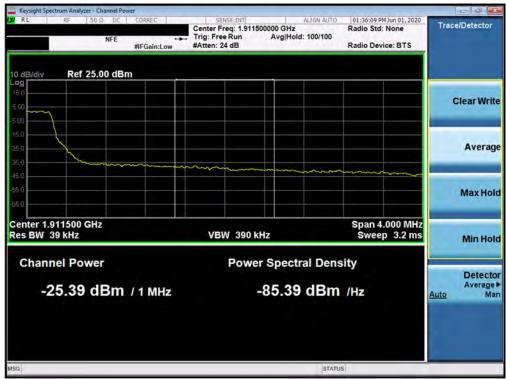
Plot 7-401. Lower Extended Band Edge Plot (Band 25/2 - 5.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMN981W	PCTEST Prod/she part of @	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager	
Test Report S/N:	Test Dates:	EUT Type:		Dama 207 at 257	
1M2005050082-03.A3L	5/5 – 7/15/2020	Portable Handset		Page 227 of 357	
© 2020 PCTEST				V 9.0 02/01/2019	



RL RF 56Ω DC CORREC	SENSE:INT	ALIGN AUTO	01:35:58 PM Jun 01, 2020	Erecuencia
NFE PNO: Wi IFGain:Lo	de 🖵 Trig: Free Run Atten: 36 dB	#Avg Type: RMS	TRACE 1 2 3 4 5 6 TYPE A WWWWWW DET A NNNNN	Frequency
0 dB/div Ref 25.00 dBm		Mkr	1.910 000 GHz -27.747 dBm	Auto Tune
15.0				Center Free 1.910000000 GH
5.00	m			Start Free 1.908000000 GH
25.0	4 1		DL1 -13.00 dBin	Stop Fre 1.912000000 GH
25 0	thema		mun	CF Ste 400.000 kH Auto Ma
55.0				Freq Offse 0 H
65 0 Center 1.910000 GHz #Res BW 62 KHz #	VBW 200 kHz	Swaan	Span 4.000 MHz 2.000 ms (1001 pts)	Scale Type

Plot 7-402. Upper Band Edge Plot (Band 2 - 5.0MHz QPSK - Full RB Configuration)



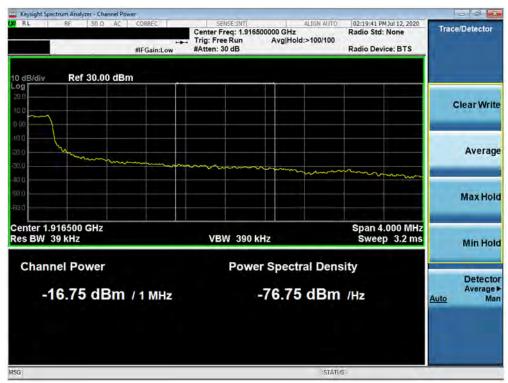
Plot 7-403. Upper Extended Band Edge Plot (Band 2 - 5.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMN981W	PCTEST Proof Joine partial	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	D
1M2005050082-03.A3L	5/5 – 7/15/2020	Portable Handset	Page 228 of 357
© 2020 PCTEST		· · · · · · · · · · · · · · · · · · ·	V 9.0 02/01/2019



PNO: Wide Trig: Free Run Atten: 36 dB Mkr1 1.915 000 GHz -20.22 dBm Center 1.9150000 Cu 1.12000 Conter Center 1.9150000 Cu 1.12000 Conter Center 1.9150000 Cu 1.12000 Conter Center 1.9150000 Conter Center Center 1.9150000 Cu 1.12000 Conter Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center Center C	Keysight Spectrum Analyzer - Swept SA           RL         RF         50 Ω         AC	CORREC	SENSE:INT	ALIGN AUTO	02:19:33 PM Jul 12, 2020	6 8 X
NRKT 1.9150.00 GHz         Center           -20.22 dBm         -20.22 dBm           -20.22 dBm         -20.22 dBm           -20.22 dBm         -20.23 dBm           -20.23 dBm         -20.23 dBm           -20.24 dBm         -20.23 dBm           -20.25 dBm         -20.23 dBm		PNO: Wide CP		#Avg Type: RMS	TYPE A WWWWW	Frequency
150       Center         500       Start         500       0.1.12.00400         160       0.1.12.00400         500       0.1.12.00400         500       0.1.12.00400         500       0.1.12.00400         500       0.1.12.00400         500       0.1.12.00400         500       0.1.12.00400         500       0.1.12.00400         500       0.1.12.00400         500       0.1.12.00400         500       0.1.12.00400         500       0.1.12.00400         500       0.1.12.00400         500       0.1.12.00400         500       0.1.12.00400         500       0.1.12.00400         500       0.1.12.00400         500       0.1.12.00400         500       0.1.12.00400         500       0.1.12.004000         500       0.1.12.004000         500       0.1.12.004000000000000000000000000000000	dB/div Ref 25.00 dBm			Mkr1	1.915 000 GHz -20.22 dBm	Auto Tun
500         0111300400         Start           500         01111300400         Start           500         011111100000         Start           500         0111111000000         Start           500         0111111100000000000000000000000000000		an manage and a state of the st	~			Center Fre 1.915000000 GH
50 50 50 50 50 50 50 50 50 50 50 50 50 5						Start Fre 1.913000000 GH
50 50 50 60 60 enter 1.915000 GHz Span 4.000 MHz Log			Martine Providence	And have to company where	DL1 - 12.00 4Bm	Stop Fre 1.917000000 GH
50 50 Enter 1.915000 GHz Span 4.000 MHz Log					and a second and a s	CF Ste 400.000 kH <u>Auto</u> Ma
enter 1.915000 GHz Span 4.000 MHz						Freq Offse 0 F
Res BW 62 kHz #VBW 220 kHz Sween 6 667 ms (1001 nts)					Span 4.000 MHz	and the second se
	Res BW 62 kHz	#VBW	220 kHz	Sweep 6	6.667 ms (1001 pts)	

Plot 7-404. Upper Band Edge Plot (Band 25 - 5.0MHz QPSK - Full RB Configuration)



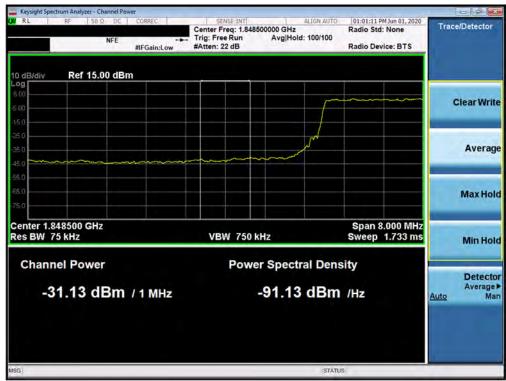
Plot 7-405. Upper Extended Band Edge Plot (Band 25 - 5.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMN981W	PCTEST Prod/she part of @	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager	
Test Report S/N:	Test Dates:	EUT Type:		Dama 000 at 057	
1M2005050082-03.A3L	5/5 – 7/15/2020	Portable Handset		Page 229 of 357	
© 2020 PCTEST				V 9.0 02/01/2019	



RL RF 50	Ω DC	PNO: Wide	Trig: Free F Atten: 36 c	Run	#Avg Type	RMS	TRAC	4 Jun 01, 2020 E 1 2 3 4 5 0 E A HIMANNA T A NNNNN	Fre	quency
10 dB/div Ref 25.00	dBm	in guineon				Mkr1	1.850 0 -33.	00 GHz 80 dBm	4	Auto Tune
15.0										enter Fred 000000 GH
5.00				1	an astrongen menne	montant	and and a state of the	herry white	1.846	Start Free
15.0 25.0				1				(),1 - 15 0) dBm	1.854	Stop Fre
35 0 	an and an	www.	an she was the						Auto	CF Ste 800.000 kH Ma
55. ¢									F	F <b>req Offse</b> 0 H
Center 1.850000 GH	z		430 kHz				Span 8	.000 MHz 1001 pts)		Scale Typ

Plot 7-406. Lower Band Edge Plot (Band 25/2 - 10.0MHz QPSK - Full RB Configuration)



Plot 7-407. Lower Extended Band Edge Plot (Band 25/2 - 10.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMN981W	PCTEST Prod Jobe part of @	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	
1M2005050082-03.A3L	5/5 - 7/15/2020	Portable Handset	Page 230 of 357
© 2020 PCTEST			V 9.0 02/01/2019



RL RF 50 Q DC	CORREC	SENSE:INT	ALIGN AUTO #Avg Type: RMS	01:55:29 PM Jun 01, 2020 TRACE 2 3 4 5 6	Frequency
NFE	PNO: Wide 😱 IFGain:Low	Trig: Free Run Atten: 36 dB	wavg type: Rms	TYPE A WIRMINN DET A NNNNN	
dB/div Ref 25.00 dBm			Mkr1	1.910 000 GHz -31.39 dBm	Auto Tun
5.0					Center Fre 1.910000000 GH
00	an a				Start Fre 1.906000000 GH
5,0				CL1 -13.00 dBm	Stop Fre 1.914000000 Gi
50		Marine Contraction	and the second	here to be a defendent of a frequencies of the second second second second second second second second second s	CF Ste 800.000 kH Auto Ma
50					Freq Offs 0 F
enter 1.910000 GHz Res BW 120 kHz	#VBW	430 kHz	Sweep 4	Span 8.000 MHz .000 ms (1001 pts)	Scale Typ

Plot 7-408. Upper Band Edge Plot (Band 2 - 10.0MHz QPSK - Full RB Configuration)



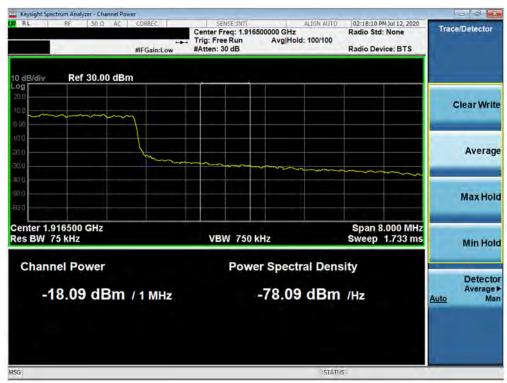
Plot 7-409. Upper Extended Band Edge Plot (Band 2 - 10.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMN981W		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager	
Test Report S/N:	Test Dates:	EUT Type:	Dage 221 of 257	
1M2005050082-03.A3L	5/5 – 7/15/2020	Portable Handset	Page 231 of 357	
© 2020 PCTEST			V 9.0 02/01/2019	



0 RL RF 50 Ω AC	PNO: Wide	SENSE:INT Trig: Free Run Atten: 36 dB	ALIGN AUTO #Avg Type: RMS	02:17:46 PM Jul 12, 2020 TRACE 1 2 3 4 5 TVPE A WWWWW DET A NNNNN	Frequency
0 dB/div Ref 25.00 dBm			Mkr1	1.915 024 GHz -22.30 dBm	Auto Tune
15.0	ware and the second	~~~~			Center Free 1.915000000 GH
5.00					Start Fre 1.911000000 GH
25.0		le 1	and the second second second second	0L1 > 13.00 rtBin	Stop Fre 1.919000000 GH
50				man an a	CF Ste 800.000 kH Auto Ma
љ0					Freq Offse 0 H
Eenter 1.915000 GHz Res BW 120 kHz	41/DM	430 kHz	Swoon	Span 8.000 MHz  3.33 ms (1001 pts)	Scale Typ Log Li

Plot 7-410. Upper Band Edge Plot (Band 25 - 10.0MHz QPSK - Full RB Configuration)



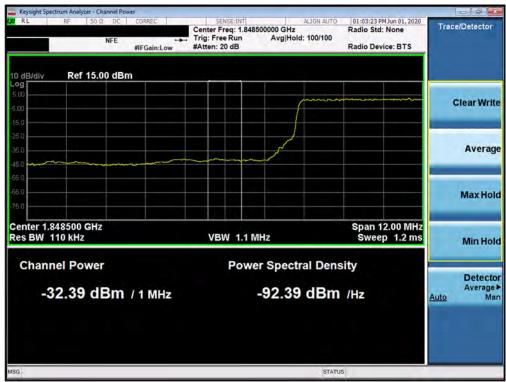
Plot 7-411. Upper Extended Band Edge Plot (Band 25 - 10.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMN981W	PCTEST PredJohe pert of B	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Dama 020 of 257
1M2005050082-03.A3L	5/5 – 7/15/2020	Portable Handset		Page 232 of 357
© 2020 PCTEST				V 9.0 02/01/2019



			TO LOS DE CONTRACTOR	Frequency
NFE PNO: Wide C IFGain:Low	Trig: Free Run Atten: 36 dB	#Avg Type: RMS	TRACE 1 2 3 4 5 5 TYPE A WARWARM DET A NNNNN	
dBm		Mkr1	1.850 000 GHz -34.58 dBm	Auto Tune
				Center Fred 1.850000000 GH:
	ſ		and a second and a second and a second	Start Free 1.844000000 GH
			DL1 -13.00 dBm	Stop Free 1.856000000 GH
warman warman warman warman warman warman warman warman warma wa na warma wa na warma wa na wa na wa na wa na w	^{1#}			CF Ste 1.200000 MH Auto Ma
				Freq Offse 0 H
			00001112.00 WI12	Scale Typ
	dBm	dBm	NFE PNO: Wide Trig: Free Run Atten: 36 dB Mkr1 dBm	NFE       PNO: Wide Pires Run Atten: 36 dB       The Run Atten: 36 dB         Mkr1 1.850 000 GHz -34,58 dBm

Plot 7-412. Lower Band Edge Plot (Band 25/2 - 15.0MHz QPSK - Full RB Configuration)



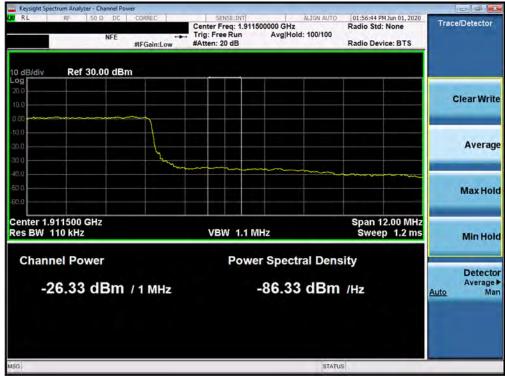
Plot 7-413. Lower Extended Band Edge Plot (Band 25/2 - 15.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMN981W	PCTEST Prod/she part of @	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Dama 000 at 057
1M2005050082-03.A3L	5/5 – 7/15/2020	5/5 – 7/15/2020 Portable Handset		Page 233 of 357
© 2020 PCTEST	*			V 9.0 02/01/2019



α RL RF 50 Ω	DC CORREC	Trig: Free Run Atten: 36 dB	#Avg Type: RMS	01:56:37 PM Jun 01, 2020 TRACE 2 3 4 5 0 TYPE A WARNWY DET A NNNNN	Frequency
0 dB/div Ref 25.00 d			Mkr	1.911 440 GHz -32.34 dBm	Auto Tune
15.0					Center Fred 1.910000000 GH;
5.00					Start Free 1.904000000 GH:
25,0				OL1 -13 00 dBm	Stop Free 1.916000000 GH
35,0		Him	1 million	an marine	CF Step 1.200000 MH Auto Mai
55 0					Freq Offse 0 H
65 0 Center 1.910000 GHz #Res BW 180 kHz		BW 620 kHz		Span 12.00 MHz 1.000 ms (1001 pts)	Scale Type Log <u>Li</u> r

Plot 7-414. Upper Band Edge Plot (Band 2 - 15.0MHz QPSK - Full RB Configuration)



Plot 7-415. Upper Extended Band Edge Plot (Band 2 - 15.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMN981W	PCTEST Predljobe pert of B	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Daga 024 of 257
1M2005050082-03.A3L	-03.A3L 5/5 – 7/15/2020 Portable Handset			Page 234 of 357
© 2020 PCTEST	·	·		V 9.0 02/01/2019



RL RF 50 Ω AC		SENSE:INT	#Avg Type: RMS	02:16:13 PM Jul 12, 2020 TRACE 2 2 4 5 6 TVPE A	Frequency
dB/div Ref 25.00 dBm	IFGain:Low	Atten: 30 db	Mkr1	1.915 000 GHz -22.23 dBm	Auto Tune
5.0	in province	5.045			Center Fred 1.915000000 GH
.00					Start Fre 1.909000000 GH
5.a		1		DL1 -13.00 dBm	Stop Free 1.921000000 GH
50			mann from	the water of the second se	CF Ste 1.200000 MH Auto Ma
50					Freq Offse 0 H
				0000 42 00 MU	Scale Type
enter 1.915000 GHz Res BW 180 kHz	#VBW 6	20 kHz	Sweep 1	Span 12.00 MHz 1.000 ms (1001 pts)	Log Li

Plot 7-416. Upper Band Edge Plot (Band 25 - 15.0MHz QPSK - Full RB Configuration)



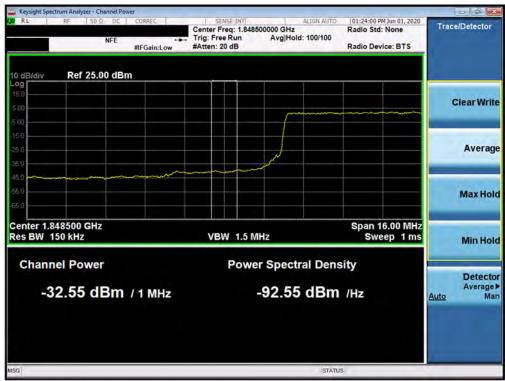
Plot 7-417. Upper Extended Band Edge Plot (Band 25 - 15.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMN981W	PCTEST Prod Jobe part of @	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	
1M2005050082-03.A3L	5/5 - 7/15/2020	Portable Handset	Page 235 of 357
© 2020 PCTEST			V 9.0 02/01/2019



RL RF 50	Ω DC NFE	PNO: Wide	SENSE:INT	#Avg Type	RMS	01:23:54 PM Jun 01, TRACE 1 2 3 TYPE A TYPE	Frequency
0 dB/div Ref 25.00	dBm	IFGain:Low	Atten. 00 0D		Mkr1 1	.850 000 0 -34.45 d	Hz Auto Tune
15.0							Center Fred 1.850000000 GHz
5.00 5.00					al mail and a second		Start Fred 1.842000000 GH:
25.0						DL1-13)	Stop Free 1.858000000 GH
35.0 45.0 mm	-omeno		1 V				CF Ste 1.600000 MH Auto Ma
55.0							Freq Offse 0 H
Center 1.850000 GH: Res BW 240 kHz	z		820 kHz			Span 16.00   00 ms (1001	Scale Type

Plot 7-418. Lower Band Edge Plot (Band 25/2 - 20.0MHz QPSK - Full RB Configuration)



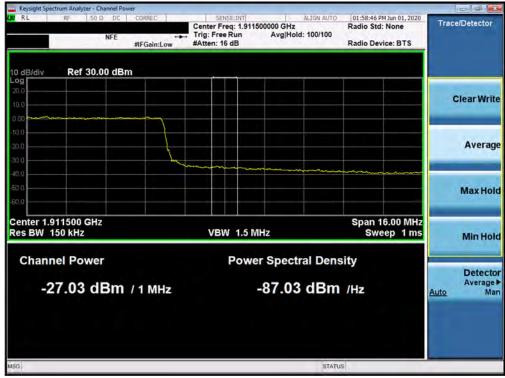
Plot 7-419. Lower Extended Band Edge Plot (Band 25/2 - 20.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMN981W	PCTEST Prod/she part of @	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Dama 020 at 257
1M2005050082-03.A3L	5/5 - 7/15/2020	7/15/2020 Portable Handset		Page 236 of 357
© 2020 PCTEST				V 9.0 02/01/2019



RL RF 50 Q DC	CORREC	SENSE:INT	ALIGN AUTO		Frequency
NFE	PNO: Wide 😱	Trig: Free Run Atten: 36 dB	#Avg Type: RMS	TYPE A WINNINN	Frequency
10 dB/div Ref 25.00 dBm			Mkr1	1.910 000 GHz -31.47 dBm	Auto Tune
15.0					Center Fred 1.910000000 GHz
5.00	an a	7			Start Fred 1.902000000 GH;
i50 25.0				GL1 -13.00 dBm	Stop Free 1.918000000 GH
35.0		hour and a second	imment Minario	and the second second	CF Step 1.600000 MH <u>Auto</u> Mar
55 0					Freq Offse 0 H
Center 1.910000 GHz				Span 16.00 MHz I.000 ms (1001 pts)	Scale Type Log <u>Li</u> r
#Res BW 240 kHz	#VBW	820 kHz	Sweep		

Plot 7-420. Upper Band Edge Plot (Band 2 - 20.0MHz QPSK - Full RB Configuration)



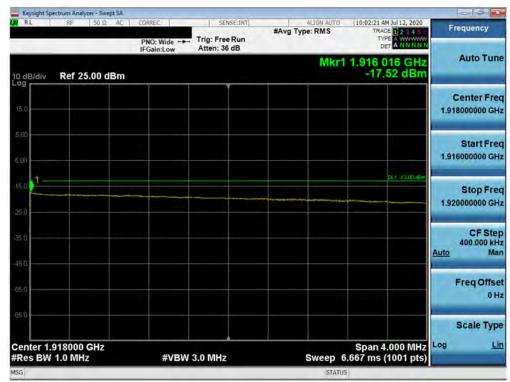
Plot 7-421. Upper Extended Band Edge Plot (Band 2 - 20.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMN981W	PCTEST Predd Johne part of @	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager	
Test Report S/N:	Test Dates:	EUT Type:		Dogo 007 of 057	
1M2005050082-03.A3L	05050082-03.A3L 5/5 – 7/15/2020 Portable Handset			Page 237 of 357	
© 2020 PCTEST		•		V 9.0 02/01/2019	



RL RF 50 Ω AC	PNO: Wide	SENSE:INT Trig: Free Run Atten: 36 dB	ALIGN ALITO #Avg Type: RMS	10:02:07 AM Jul 12, 2020 TRACE 2 2 4 5 6 TYPE A	Frequency
dB/div Ref 25.00 dBm			Mkr1	1.915 000 GHz -23.03 dBm	Auto Tune
5.0	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	40-			Center Fred 1.915000000 GH
.00					Start Free 1.907000000 GH
5.ŭ		1	annon	0(1 43.00 dBm	Stop Free 1.923000000 GH
5ù					CF Ste 1.600000 MH <u>Auto</u> Ma
50					Freq Offse 0 H
enter 1.915000 GHz Res BW 240 kHz	#VBW 8			Span 16.00 MHz .000 ms (1001 pts)	Scale Type

Plot 7-422. Upper Band Edge Plot (Band 25 - 20.0MHz QPSK - Full RB Configuration)



Plot 7-423. Upper Extended Band Edge Plot (Band 25 - 20.0MHz QPSK - Full RB Configuration)

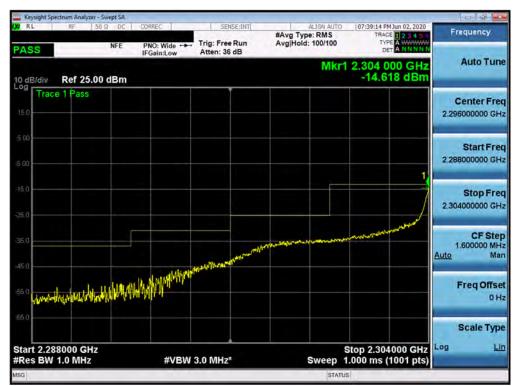
FCC ID: A3LSMN981W	PCTEST Prod/she part of @	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNE	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		D 020 -( 057
1M2005050082-03.A3L	5/5 - 7/15/2020	Portable Handset	Page 238 of 3	
© 2020 PCTEST	*			V 9.0 02/01/2019



## Band 30



Plot 7-424. Lower Band Edge Plot (Band 30 - 5.0MHz QPSK - Full RB Configuration)



Plot 7-425. Lower Extended Band Edge Plot (Band 30 - 5.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMN981W	PCTEST Predit/site pert of @	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Dogo 220 of 257
1M2005050082-03.A3L	5/5 – 7/15/2020	Portable Handset		Page 239 of 357
© 2020 PCTEST	•			V 9 0 02/01/2019



Keysight Spectrum Analyzer - Swept SA           RL         RF         50 Ω         DC	CORREC	SENSE:INT		08:25:17 PM May 27, 2020	
RL RF 3052 DC	PNO: Wide	Trig: Free Run Atten: 36 dB	#Avg Type: RMS	TRACE 2 3 4 5 0 TYPE A WHAT	Frequency
IO dB/div Ref 25.00 dBm	I Guilleon		Mk	r1 2.315 01 GHz -28.92 dBm	Auto Tun
15.0					Center Fre 2.315000000 GH
5 00	tamanayaang tingketingka				Start Fre 2.310000000 GH
25.0				CL1 -13 00 dBm	Stop Fre 2.320000000 GH
35.0		- and the second	Nelementers and a second	minimum	CF Ste 1.000000 MH Auto Ma
55 0				marin	Freq Offse 0 H
66 0 Center 2.315000 GHz #Res BW 62 kHz	#\/P\/	220 kHz	Sween	Span 10.00 MHz 16.67 ms (1001 pts)	Scale Typ
SG	#VBVV	220 MH2	Sweep		

Plot 7-426. Upper Band Edge Plot (Band 30 - 5.0MHz QPSK - Full RB Configuration)



Plot 7-427. Upper Extended Band Edge Plot (Band 30 - 5.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMN981W	PCTEST Presid Joine part of B	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Page 240 of 357
1M2005050082-03.A3L	5/5 - 7/15/2020	Portable Handset	Fage 240 01 557
© 2020 PCTEST			V 9.0 02/01/2019



		#Avg Type: RMS	TRACE 1 2 3 4 5 6	Frequency
PNO: Wide 🖵 IFGain:Low	Trig: Free Run Atten: 36 dB		DET A NNNNN	
		Mkr	1 2.305 000 GHz -30.077 dBm	Auto Tune
				Center Fred 2.305000000 GH
	$\int$			Start Free 2.301000000 GH
	1		DL1 -13 00 dBm	Stop Free 2.309000000 GH
and the second	an a			CF Ste 800,000 kH <u>Auto</u> Ma
				Freq Offse 0 H
				Scale Typ
#VBW	430 kHz	Sweep	Span 8.000 MHz 13.33 ms (1001 pts)	Log <u>Li</u> r
	IFGain:Low	Atten: 36 dB	Atten: 36 dB	PNO: Wide Trig: Free Run Atten: 36 dB Mkr1 2.300.00 GHz -30.077 dBm - 400 mm - 400 m

Plot 7-428. Lower Band Edge Plot (Band 30 - 10.0MHz QPSK - Full RB Configuration)



Plot 7-429. Lower Extended Band Edge Plot (Band 30 - 10.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMN981W	PCTEST Dreid Jate part of B	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNC	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Dage 244 of 257
1M2005050082-03.A3L	5/5 – 7/15/2020	Portable Handset		Page 241 of 357
© 2020 PCTEST	-			V 9.0 02/01/2019



L RF 50 Ω DC	CORREC	SENSE:INT		08:23:27 PM May 27, 2020	Frequency
6	PNO: Wide C	Trig: Free Run Atten: 36 dB	#Avg Type: RMS	TRACE 2 3 4 5 0 TYPE A WARMAN DET A NNNNN	Frequency
IO dB/div Ref 25.00 dBm			Mk	r1 2.315 00 GHz -28.622 dBm	Auto Tune
15,0					Center Fred 2.315000000 GH
5.00	en Rangesfand Schartheastan (son				Start Free 2.310000000 GH;
iā 0 25.0		T.		04.1 -13.00 dBm	Stop Free 2.320000000 GH
45.0			have been allowed and an and an and	na funda ana ana ana ana ana ana ana ana ana	CF Step 1.000000 MH <u>Auto</u> Ma
55 0					Freq Offse 0 H
E6 0 Center 2.315000 GHz				Span 10.00 MHz	Scale Type
Res BW 120 kHz	#VBW	430 kHz	Sweep	Span 10.00 MHz 16.67 ms (1001 pts)	

Plot 7-430. Upper Band Edge Plot (Band 30 - 10.0MHz QPSK - Full RB Configuration)



Plot 7-431. Upper Extended Band Edge Plot (Band 30 - 10.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMN981W	PCTEST Preid Joine part of B	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:	Dage 242 of 257
1M2005050082-03.A3L	5/5 - 7/15/2020	Portable Handset	Page 242 of 357
© 2020 PCTEST			V 9.0 02/01/2019



# Band 7



Plot 7-432. Lower Band Edge Plot (Band 7 - 5.0MHz QPSK - Full RB Configuration)



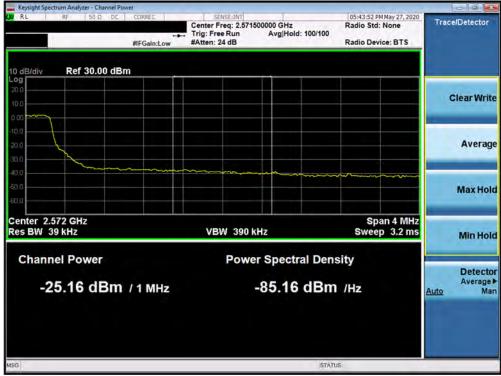
Plot 7-433. Lower Extended Band Edge Plot (Band 7 - 5.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMN981W	PCTEST Preed to be pertial	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Daga 040 of 057
1M2005050082-03.A3L	5/5 – 7/15/2020	Portable Handset		Page 243 of 357
© 2020 PCTEST				V 9.0 02/01/2019



RL RF 50 Q DC	CORREC	SENSE:INT		05:42:53 PM May 27, 2020	Lange Street Str
	PNO: Wide G	Trig: Free Run Atten: 36 dB	#Avg Type: RMS	TRACE 1 2 3 4 5 M TYPE A WWWW DET A NNNNN	Frequency
0 dB/div Ref 25.00 dBm	il damesti		Mkr	1 2.570 012 GHz -28.24 dBm	Auto Tune
15.0					Center Fred 2.570000000 GH
5 00	ana	7			Start Free 2.568000000 GH
25.0		h.1_		DL1 -13.00 dBm	Stop Free 2.572000000 GH
55.0		- The second	Sandah ang ang kang kang kang kang kang kang k	mannapana	CF Stej 400,000 kH <u>Auto</u> Ma
55 Q					Freq Offse 0 H
Eenter 2.570000 GHz Res BW 62 kHz	#VBW	220 kHz	Sweep	Span 4.000 MHz 6.667 ms (1001 pts)	Scale Type Log <u>Lir</u>

Plot 7-434. Upper Band Edge Plot (Band 7 - 5.0MHz QPSK - Full RB Configuration)



Plot 7-435. Upper Extended Band Edge Plot (Band 7 - 5.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMN981W	PCTEST Predd Jote part of @	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNC	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Dega 244 of 257
1M2005050082-03.A3L	5/5 – 7/15/2020	Portable Handset		Page 244 of 357
© 2020 PCTEST	•	·		V 9.0 02/01/2019



α RL RF 50 Ω DC	CORREC PNO: Wide	Trig: Free Run Atten: 36 dB	#Avg Type: RMS	05:39:07 PM May 27, 2020 TRACE 2 3 4 5 0 TYPE A WWWW DET A NNNN	Frequency
0 dB/div Ref 25.00 dBm			Mkr1	2.499 984 GHz -33.31 dBm	Auto Tune
15,0					Center Free 2.500000000 GH
5 00 € 00			98-iqoqualiaangtoquur. 598-qaaloquula	unterna aguntanatagangu ternakonnya	Start Free 2.496000000 GH
25.0				0(1 -13.00 dBm	Stop Fre 2.504000000 GH
55.0	prove the second second second second	response 1 r			CF Ste 800,000 kH <u>Auto</u> Ma
55 0					Freq Offse 0 H
65 0 Center 2.500000 GHz Res BW 120 kHz	#VBW	430 kHz	Sweep 1	Span 8.000 MHz 3.33 ms (1001 pts)	Scale Type

Plot 7-436. Lower Band Edge Plot (Band 7 - 10.0MHz QPSK - Full RB Configuration)



Plot 7-437. Lower Extended Band Edge Plot (Band 7 - 10.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMN981W		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNE	Approved by: Quality Manager	
Test Report S/N:	Test Dates:	EUT Type:		Page 245 of 357	
1M2005050082-03.A3L	5/5 – 7/15/2020	Portable Handset			
© 2020 PCTEST				V 9.0 02/01/2019	



RL RF SO Q DC	PNO: Wide	SENSE:INT	#Avg Type: RMS	05:39:58 PM May 27, 2020 TRACE 2 3 4 5 0 TYPE A	Frequency
Def 25.00 dBm	IFGain:Low	Atten: 36 dB	Mkr1	2.570 000 GHz -30.90 dBm	Auto Tune
o dB/div Ref 25.00 dBm					Center Free 2.570000000 GH
5 00 <b></b>	and any for the second and the second se	~			Start Fre 2.566000000 GH
25.0				DL1 -13.00 dBm	Stop Fre 2.574000000 GH
45.0		- Kinger	AND 20 to the AND Notes of the State of the	ang management and a stand	CF Ste 800,000 kH Auto Ma
55.0					Freq Offs 0 F
55 0 Center 2.570000 GHz Res BW 120 kHz	#VBW	430 kHz	Sween 1	Span 8.000 MHz 3.33 ms (1001 pts)	Scale Typ Log <u>Li</u>

Plot 7-438. Upper Band Edge Plot (Band 7 - 10.0MHz QPSK - Full RB Configuration)



Plot 7-439. Upper Extended Band Edge Plot (Band 7 - 10.0MHz QPSK - Full RB Configuration)

FCC ID: A3LSMN981W		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNC	Approved by: Quality Manager	
Test Report S/N:	Test Dates:	EUT Type:		Page 246 of 357	
1M2005050082-03.A3L	5/5 – 7/15/2020	Portable Handset			
© 2020 PCTEST	•			V 9.0 02/01/2019	