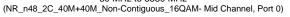


, Spectrum Analyz Swept SA	ter 1	+				Frequency	· · · · · · · · · · · · · · · · · · ·
PT -	Input: RF Coupling: DC Align: Auto	Input Z: 50 0 Corr CCorr RCal Freq Ref: Ext (S) NFE: Adaptive	#Atten: 6 dB Preamp: Off	PNO: Fast Gate: Off IF Gain: Low Sig Track: Off	#Avg Type: Power (RMS 1 2 3 4 5 Avg Hold: 200/200 Trig: Free Run A N N N N	1.78000000 GHz	Settings
1 Spectrum Scale/Div 10 dE Log	7 3		Ref Level -26.02	2 dBm	Mkr1 3.515 0 G -56.640 dE	Swept Span	
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						Start Freq 30.000000 MHz	
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						AUTO TUNE CF Step 350.000000 MHz	
						Auto Man	
						Freq Offset 0 Hz	Local
Start 30 MHz #Res BW 1.0 MH	HZ		#Video BW 3.0	MHz*	Stop 3.530 G Sweep 4.67 ms (7001 p	ts Lin	LOCA
100		Nov 22, 2021 2:47:52 PM				Signal Track (Span Zoom)	

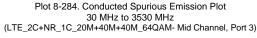
Plot 8-280. Conducted Spurious Emission Plot 30 MHz to 3530 MHz





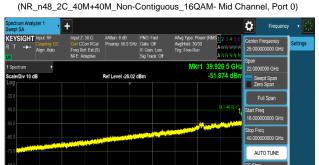
Plot 8-282. Conducted Spurious Emission Plot 6.2 GHz to 18 GHz (NR\_n48\_2C\_40M+40M\_Non-Contiguous\_16QAM- Mid Channel, Port 0)

Ö KEYSIGHT Input F 3.041 0 G 00 GH: Ref Level -26.02 dBm 55.267 c ale/Div 10 dB Swept Span Zero Span Start Freq 30.000000 MHz 1 ip Freq AUTO TUNE CF Step 350.0000 000 MH Auto Man req Offset X Axis Sc Log Lin Local #Video BW 3.0 MHz\* art 30 MHz les BW 1.0 MHz Stop 3.530 Gi Sweep 4.67 ms (7001 pl 手ってこ? Feb 16, 2022 3:15:45 PM 🗩 .: 🔖





Plot 8-281. Conducted Spurious Emission Plot 3.72 GHz to 6.2 GHz



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Plot 8-283. Conducted Spurious Emission Plot 18 GHz to 40 GHz (NR\_n48\_2C\_40M+40M\_Non-Contiguous\_16QAM- Mid Channel, Port 0)



Plot 8-285. Conducted Spurious Emission Plot 3.72 GHz to 6.2 GHz

(LTE\_2C+NR\_1C\_20M+40M+40M\_64QAM- Mid Channel, Port 3)

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Plot 8-286. Conducted Spurious Emission Plot 6.2 GHz to 18 GHz (LTE\_2C+NR\_1C\_20M+40M+40M\_64QAM- Mid Channel, Port 3) Plot 8-287. Conducted Spurious Emission Plot 18 GHz to 40 GHz (LTE\_2C+NR\_1C\_20M+40M+40M\_64QAM- Mid Channel, Port 3)

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# 8.9 Radiated spurious emission

#### **Test Overview**

Radiated spurious emissions measurements are performed using the field strength method described in ANSI C63.26-2015 with the EUT transmitting into an integral antenna. Measurements on signals operating below 1GHz are performed using vertically and horizontally polarized broadband trilog antennas. Measurements on signals operating above 1GHz are performed using vertically and horizontally and horizontally polarized broadband trilog antennas.

#### Test Procedure Used

ANSI C63.26 - Section 5.5.4 KDB 971168 D01 v03r01 - Section 7

#### Test Setting

- 1. Start frequency was set to 30 MHz and stop frequency was set to at least 10 \* the fundamental frequency
- 2. RBW = 1 MHz
- 3. VBW  $\geq$  3 x RBW
- 4. No. of sweep points > 2 x span / RBW
- 5. Detector = Below 1 GHz Peak for the prescan, (In cases where the level is within 2 dB of the limit, the

final measurement is taken using RMS detector.)

#### Above 1GHz RMS for the prescan

- 6. Trace mode = Max Hold (In cases where the level is within 2 dB of the limit, the final measurement is taken using triggering/gating and trace averaging.)
- 7. The trace was allowed to stabilize.

#### <u>Limit</u>

- Within 0 MHz to 10 MHz above and below the assigned channel ≤ -13 dBm/MHz
- Greater than 10 MHz above and below the assigned channel ≤ -25 dBm/MHz
- Any emission below 3530 MHz and above 3720 MHz ≤ -40 dBm/MHz

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

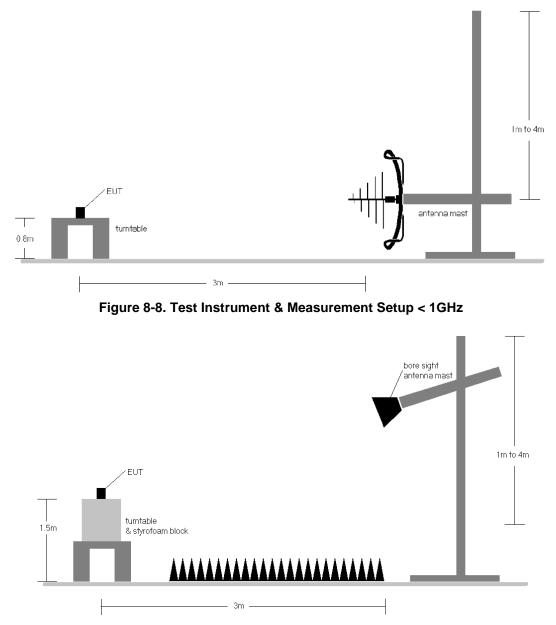


Figure 8-9. Test Instrument & Measurement Setup > 1GHz

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1. The average EIRP reported below is calculated per 5.2.7 of ANSI C63.26-2015 which states:

The measured e.i.r.p is converted to E-field in V/m. Then the distance correction is applied before converted back to calculated e.i.r.p.as explained in KDB 971168 D01 D01 v03r01.

# Effective Isotropic Radiated Power Sample Calculation

Field Strength [dBµV/m]	= Measured Value [dBm] + AFCL [dB/m] + 107
	= -85.42 dBm + (23.34 dBm) + 107 = 47.61 dBµV/m
e.i.r.p. [dBm]	= E[dB µV/m] + 20 log <sub>10</sub> (d[m]) - 104.8
	= 47.61 + (20*log (3)) - 104.8
	= -46.85 dBm e.i.r.p.

#### \*AFCL (dB/m) contains measurement antenna factor(dB/m) and cable loss(dB) as below:

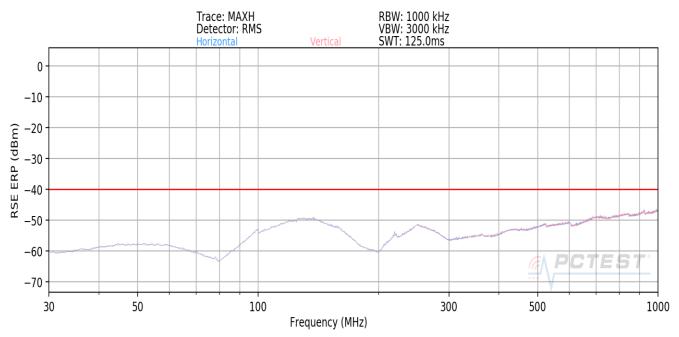
Frequency [MHz]	Antenna Factor (dB/m)	Chamber measurement cable loss + amplifier [dB]	AFCL (dB/m)
992.19	23.34	2.69	26.03
17992.98	47.74	-23.84	23.90

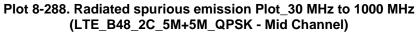
- 2. The EUT was tested in both horizontal and vertical antenna polarizations and in all possible test configurations and positioning. The worst case emissions are reported with the EUT positioning, modulations, channel bandwidth configurations shown in the tables below.
- 3. The spectrum is measured from 30 MHz to the 10th harmonic of the fundamental frequency of the transmitter. The worst-case emissions are reported.
- 4. 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.
- 5. Spurious emissions were measured with all EUT antennas transmitting simultaneously and all antenna ports terminated
- 6. The "-" shown in the following RSE tables are used to denote a noise floor measurement.

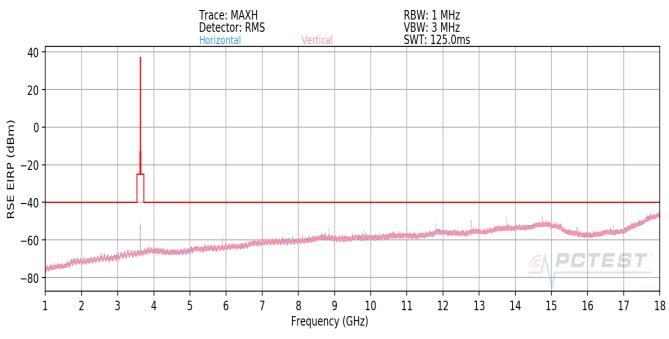
FCC: A3LRT4401-48A		MEASUREMENT REPORT (Class II Permissive Change)	SAMSUNG	Approved by: Technical Manager
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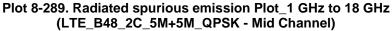
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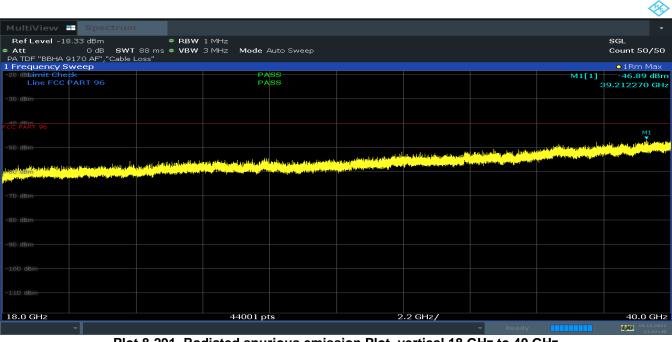


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Ref Level -18.33 dbm       • RBW 1 MHz       SSL Count 50/50         Att       O db       SW1 88 ms       • VBW 3 MHz       Mode Auto Sweep       • TRM Max         Tore "BHA 9170 AP","Cable Loss"       • PASS       • M1[1]       • FRM Max         Count 50/50       • PASS       • PASS       • M1[1]       • FRM Max         Count 50/50       • PASS       • PAS					<b></b>
Att       0.48       SWIT 28 ms ° VBW 3 MHz       Mode Auto Sweep       Count 50/50         PATDF "BHA 9170 AFF", "Cable Loss"       0.18m Max       0.18m Max       0.18m Max         Bar DF "BHA 9170 AFF", "Cable Loss"       0.18m Max       0.18m Max       0.18m Max         Bar DF "BHA 9170 AFF", "Cable Loss"       0.18m Max       0.18m Max       0.18m Max         Bar DF "BHA 9170 AFF", "Cable Loss"       0.18m Max       0.18m Max       0.18m Max         Bar DF "BHA 9170 AFF", "Cable Loss"       0.18m Max       0.18m Max       0.18m Max         Bar DF "BHA 9170 AFF", "Cable Loss"       0.18m Max       0.18m Max       0.18m Max       0.18m Max         Bar DF "BHA 9170 AFF", "Cable Loss"       0.18m Max       0.18m Max       0.18m Max       0.18m Max         Bar DF "BHA 9170 AFF", "Cable Loss"       0.18m Max       0.18m Max       0.18m Max       0.18m Max         Bar DF "BHA 196       0.18m Max       0.18m Max       0.18m Max       0.18m Max       0.18m Max         Bar DF "BHA 196       0.18m Max       0.18m Max       0.18m Max       0.18m Max       0.18m Max         Bar DF "BHA 196       0.18m Max       0.18m Max       0.18m Max       0.18m Max       0.18m Max       0.18m Max         Bar DF MA 196       0.18m Max       0.18m Max <t< th=""><th>MultiView 🖬 Spectrum</th><th></th><th></th><th></th><th>-</th></t<>	MultiView 🖬 Spectrum				-
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18.0 GHz 44001 pts 2.2 GHz/ 40.0 GH					
	18.0 GHz	44001 pts	2.2 GHz/		40.0 GHz

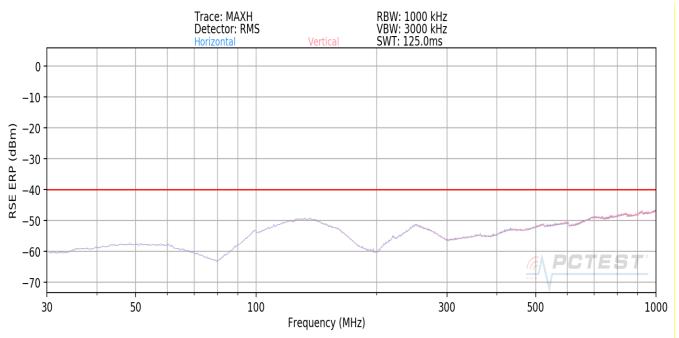
Plot 8-290. Radiated spurious emission Plot\_horizontal 18 GHz to 40 GHz (LTE\_B48\_2C\_5M+5M\_QPSK - Mid Channel)



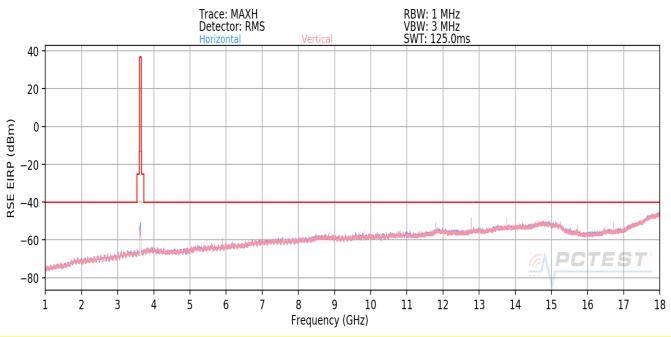
Plot 8-291. Radiated spurious emission Plot\_vertical 18 GHz to 40 GHz (LTE\_B48\_2C\_5M+5M\_QPSK - Mid Channel)

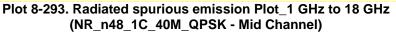
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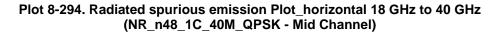


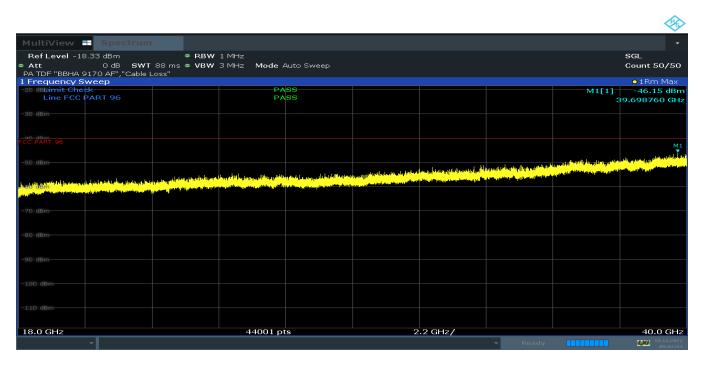
FCC: A3LRT4401-48A		MEASUREMENT REPORT (Class II Permissive Change)	SAMSUNG	Approved by: Technical Manager	
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MultiView 🖿 Spectrum							•
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-80 dBm-							
-90 dBm-							
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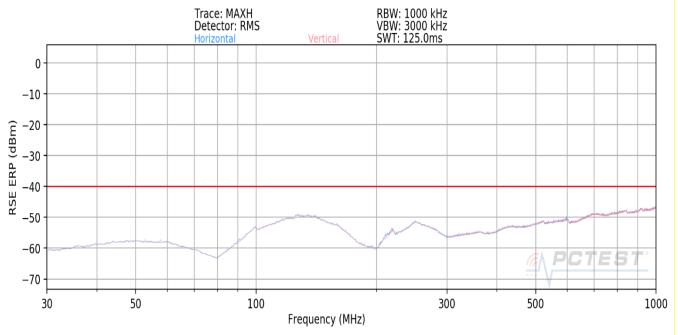


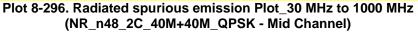


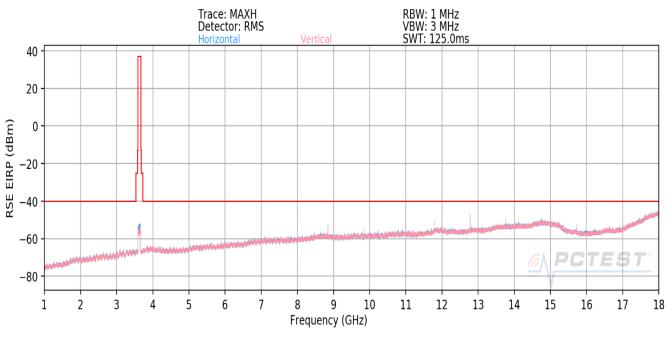
#### Plot 8-295. Radiated spurious emission Plot\_vertical 18 GHz to 40 GHz (NR\_n48\_1C\_40M\_QPSK - Mid Channel)

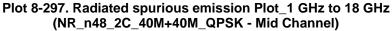
FCC: A3LRT4401-48A	ENGINEERING LARORATORY, INC.	MEASUREMENT REPORT (Class II Permissive Change)	SAMSUNG	Approved by: Technical Manager	
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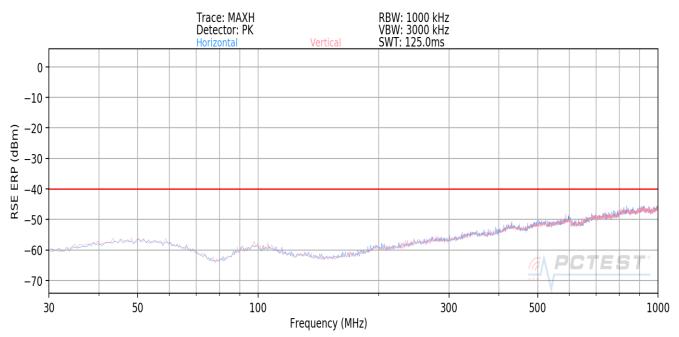
Plot 8-298. Radiated spurious emission Plot\_horizontal 18 GHz to 40 GHz (NR\_n48\_2C\_40M+40M\_QPSK - Mid Channel)

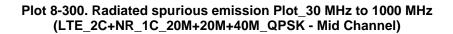
MultiView 🕶 Spectrum						
Ref Level -18.33 dBm	• RBW 1 MHz					SGL
	ms • VBW 3 MHz Mode A	uto Sweep				Count 50/50
PA TDF "BBHA 9170 AF","Cable Loss						
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						5.254770 012
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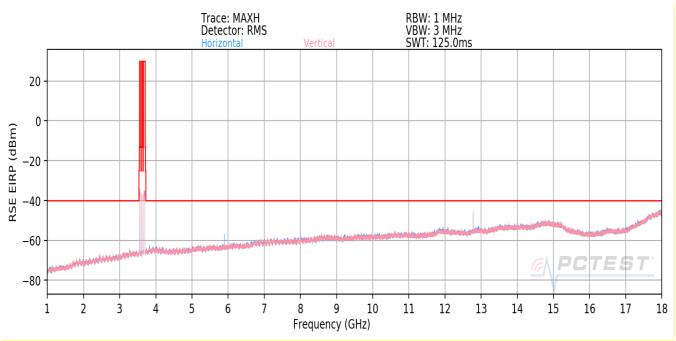
Plot 8-299. Radiated spurious emission Plot\_vertical 18 GHz to 40 GHz (NR\_n48\_2C\_40M+40M\_QPSK - Mid Channel)

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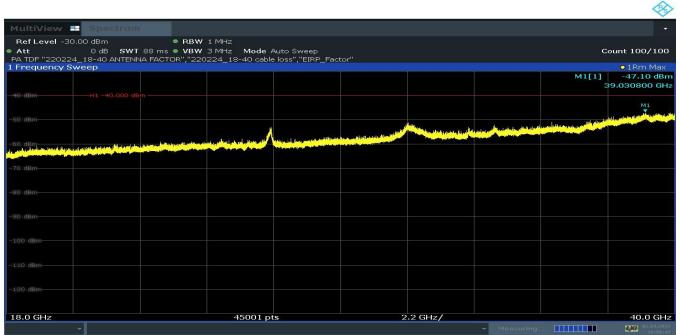




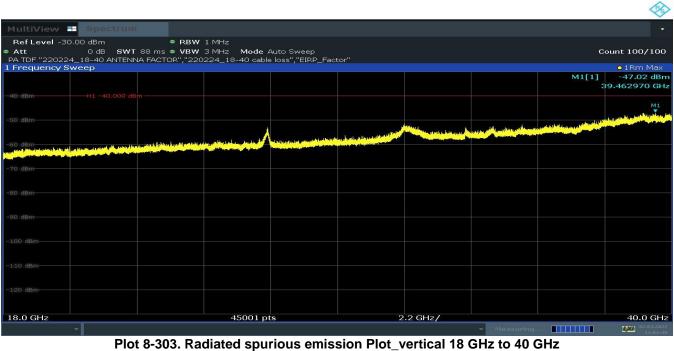
Plot 8-301. Radiated spurious emission Plot\_1 GHz to 18 GHz (LTE\_2C+NR\_1C\_20M+20M+40M\_QPSK - Mid Channel)

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Plot 8-302. Radiated spurious emission Plot\_horizontal 18 GHz to 40 GHz (LTE\_2C+NR\_1C\_20M+20M+40M\_QPSK - Mid Channel)



(LTE\_2C+NR\_1C\_20M+20M+40M\_QPSK - Mid Channel)

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Bandwidth (MHz):	NR_n48_1C_40M_QPSK - Mid Channel
Frequency (MHz):	1 <sup>st</sup> Carrier :3625.0
Modulation Signal:	QPSK

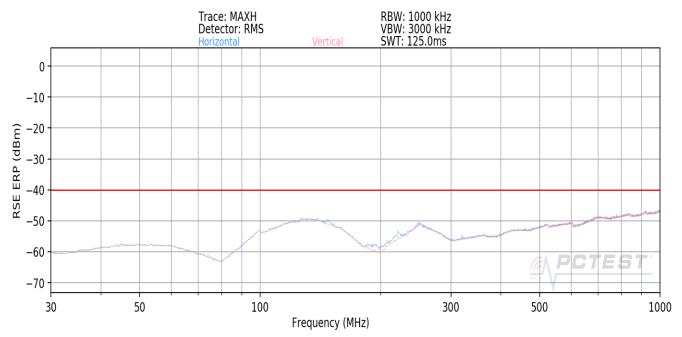
Frequency [MHz]	Ant. Pol. [H/V]	Antenna Heigh [cm]	Turntable azimuth [degree]	Analyzer Level [dBm/MHz]	AFCL [dBm]	Field Strength [ <sup>dB</sup> #∛/m]	RSE EIRP [dBm/MHz]	Limit [dBm/MHz]	Margin [dB]
992.19	Н	100	50	-85.42	23.34	47.61	-46.85	-40.00	-6.85
992.82	V	100	120	-85.24	23.35	47.80	-46.66	-40.00	-6.66
17992.98	Н	160	201	-82.29	47.74	48.62	-45.84	-40.00	-5.84
17993.51	V	150	178	-82.47	47.74	48.43	-46.03	-40.00	-6.03

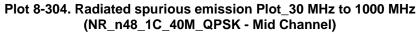
Table 8-73. Worst Radiated spurious emission Summary Data (NR\_n48\_1C\_40M\_QPSK - Mid Channel)

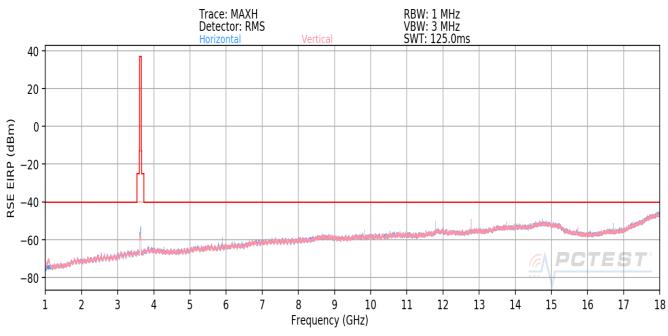
FCC: A3LRT4401-48A		MEASUREMENT REPORT (Class II Permissive Change)	SAMSUNG	Approved by: Technical Manager	
Test Report S/N:	Test Dates:	EUT Type:		Daga 157 of 171	
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#### **%** Additionally test for AC voltage source







Plot 8-305. Radiated spurious emission Plot\_1 GHz to 18 GHz (NR\_n48\_1C\_40M\_QPSK - Mid Channel)

FCC: A3LRT4401-48A		MEASUREMENT REPORT (Class II Permissive Change)	SAMSUNG	Approved by: Technical Manager	
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1ultiView 🛨 Spectrum							
Ref Level -18.33 dBm	● RBW	1 MHz					SGL
	88 ms • VBW 3	3 MHz Mode A	Auto Sweep				Count 50/5
A TDF "BBHA 9170 AF","Cable L Frequency Sweep	oss"						o1Rm Ma
0 dBtrimit Check		PA				M1[1]	-46.49 dB
Line FCC PART 96		PA	ss				39.473760 G
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	and the second secon	وملاده والمتحدية يفشارها والمتحم ومساده	امر بطر الم الألفان عن عامر و <sub>م</sub> وري الكريم.				
	a se and a faith of the second se	م <sup>عظل</sup> في إلى التحريق يَضَلَّق هو مع الت <sup>علي</sup> في إسام	<del>ک مطرف داشتان بر طرفان و رود شورو روما اطلاع</del>				
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	and the second						
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0 dBm							
0 d8m							
20 dBm							

~

Plot 8-306. Radiated spurious emission Plot\_Horizontal 18 GHz to 40 GHz (NR\_n48\_1C\_40M\_QPSK - Mid Channel)

MultiView 🖿 Spectrum					-
Ref Level -18.33 dBm	• RBW 1 MHz				SGL
Att 0 dB SWT PA TDF "BBHA 9170 AF","Cable L	88 ms • VBW 3 MHz Mode Aut	o Sweep			Count 50/50
1 Frequency Sweep	_055				o1Rm Max
-20 dBtrimit Check Line FCC PART 96	PASS PASS			M1[1]	-46.50 dBm 9.501260 GHz
				3	9.501260 GH2
-30 dBm					
40 dBm					
FCC PART 96					M1
-50 dBm-	a traj provi na polo traj alta di contra consecto se poli traj di contra consecto di consecto di consecto di co			ماستان والمراجع	والمرابق والمتعادي ومراديا وم
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A REAL PROPERTY AND A REAL PROPERTY A REAL PROPERTY AND A REAL PROPERTY AND A REAL PRO		a Martin Marth			
-70 dBm-					
-80 dBm-					
-90 dBm					
-100 dBm-					
-110 dBm-					
18.0 GHz	44001 pts	2	.2 GHz/		40.0 GHz
÷			- Ready		19.11.2021 15:21:48

Plot 8-307. Radiated spurious emission Plot\_Vertical 18 GHz to 40 GHz (NR\_n48\_1C\_40M\_QPSK - Mid Channel)

FCC: A3LRT4401-48A	ENGINEERING LARORATORY, INC.	MEASUREMENT REPORT (Class II Permissive Change)	SAMSUNG	Approved by: Technical Manager	
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Bandwidth (MHz):	NR_n48_1C_40M_QPSK - Mid Channel
Frequency (MHz):	1 <sup>st</sup> Carrier :3625.0
Modulation Signal:	QPSK

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Heigh [cm]	Turntable azimuth [degree]	Analyzer Level [dBm/MHz]	AFCL [dBm]	Field Strength [dB,⊮/m]	RSE EIRP [dBm/MHz]	Limit [dBm/MHz]	Margin [dB]
993.27	Н	150	0	-85.36	26.04	47.68	-46.78	-40.00	-6.78
991.88	V	100	100	-85.19	26.03	47.84	-46.62	-40.00	-6.62
12779.42	Н	163	202	-72.36	13.35	47.99	-46.47	-40.00	-6.47
12779.39	V	150	182	-73.89	13.35	46.46	-48.00	-40.00	-8.00

 
 Table 8-74. Worst Radiated spurious emission Summary Data (NR\_n48\_1C\_40M\_QPSK - Mid Channel)

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# 8.10 Frequency Stability § 2.1055

#### **Test Overview and Limit**

Frequency stability testing is performed in accordance with the guidelines of KDB 971168 D01 v03r01. The frequency stability of the transmitter is measured by:

- a.) **Temperature:** The temperature is varied from -30°C, +20°C and +50°C using an environmental chamber.
- b.) **Primary Supply Voltage:** The primary supply voltage is varied from 85% to 115% of the nominal value for DC powered equipment.

#### Test Description

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

#### <u>Limit</u>

The frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block.

#### Test Setup

The EUT was connected via an RF cable to a spectrum analyzer with the EUT placed inside an environmental chamber.

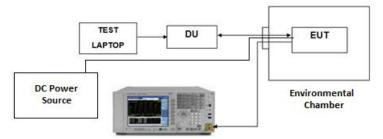


Figure 8-10.Test Instrument & Measurement Setup

#### Test Notes

None.

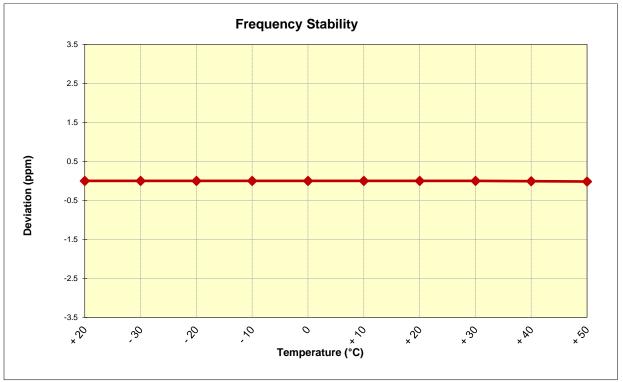
FCC: A3LRT4401-48A		MEASUREMENT REPORT (Class II Permissive Change)	SAMSUNG	Approved by: Technical Manager	
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OPERATING FREQUENCY:	3,625,005,000	Hz
REFERENCE VOLTAGE:	48.00	VDC

VOLTAGE (%)	POWER (VDC)	<b>TEMP</b> (°C)	FREQUENCY (Hz)	Freq. Dev. (Hz)	Deviation (%)
100 %		+ 20(Ref)	3,625,004,998.99	0.00	0.0000000
100 %		- 30	3,625,004,997.60	-1.39	0.0000000
100 %		- 20	3,625,005,000.46	1.47	0.0000000
100 %		- 10	3,625,004,996.48	-2.51	-0.0000001
100 %	48.00	0	3,625,004,997.57	-1.42	0.0000000
100 %	40.00	+ 10	3,625,004,999.48	0.49	0.0000000
100 %		+ 20	3,625,004,998.99	0.00	0.0000000
100 %		+ 30	3,625,004,998.11	-0.88	0.0000000
100 %		+ 40	3,625,004,963.53	-35.46	-0.0000010
100 %		+ 50	3,625,004,940.88	-58.11	-0.0000016
85 %	40.80	+ 20	3,625,004,997.14	-1.85	-0.0000001
115 %	55.20	+ 20	3,625,004,997.63	-1.36	0.0000000

Table 8-75. Frequency Stability Summary Data (NR\_n48\_1C\_10M)



Plot 8-308. Frequency Stability Graph (NR\_n48\_1C\_10M)

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# 9.0 CONCLUSION

The data collected relate only to the item(s) tested and show that the **Samsung Electronics Co., Ltd. RRU(RT4401) FCC ID: A3LRT4401-48A.** complies with all of the requirements of Part 96 of the FCC Rules.

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# **10.0 APPENDIX. A**

# 10.1 Conducted Average Output Power (EIRP)

#### **Test Overview**

A transmitter port of EUT is connected to the input of a signal analyzer. All measurements are performed as RMS average measurements while the EUT is operating at its maximum duty cycle, at maximum power, and at the appropriate frequencies.

#### **Test Description**

KDB 971168 D01 v03r01 – Section 5.4 KDB 662911 D01 v02r01 – Section E)1) In-Band Power Measurements ANSI C63.26-2015 – Section 5.2.4 ANSI C63.26 - Section 5.2.5

The measurement was made using a direct connection between the RF output of the EUT and the spectrum analyzer. The spectrum analyzer settings were as follows:

- 1. Conducted power measurements are performed using the signal analyzer's "channel power" measurement capability for signals with continuous operation.
- 2. RBW =  $1 \sim 5\%$  of the expected OBW
- 3. VBW  $\geq$  3 x RBW
- 4. Span = 2 ~ 3 x OBW
- 5. No. of sweep points  $\geq$  2 x span / RBW
- 6. Detector = RMS
- 7. Trigger Settings is set to "RF Power" for signals with non-continuous operation with the sweep times set to

"auto". Refer test note 3 for details.

- 8. Trace mode = Trace-Averaging (RMS) set to average over 100 sweeps
- 9. The trace was allowed to stabilize

#### Test Setup

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

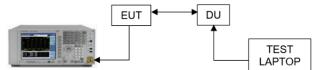


Figure 10-1. Test Instrument & Measurement Setup

# <u>Limit</u>

#### N/A

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- 1. Conducted Average Output Power test result used to Grant of Authorization power and MPE.
- 2. Periodic trigger was used with gating ON. Gate sweeptime, Gate delay and gate length were set accordingly to capture ON time of the transmission.
- 3. MIMO Calculations are done considering output channel power for all ports and respective margins are calculated according to procedures in section 6.4 of ANSI C63.26 and section D of KDB 971168 D01 v03r01.
- Consider the following factors for MIMO Power: Conducted power for each port is measured in dBm. Powers are summed up in linear using the measure-and-sum technique defined in KDB 971168 D01 v03r01-Section D. Conducted power per port (dBm) is converted to a linear value (mW). A summation of linear powers for all ports gives us the total MIMO conducted power in milliWatts (mW).
- The EUT have multiple antennas transmitting correlated signals with the equal antenna gains and two outputs driving a cross-polarized antennas with N<sub>ANT</sub>=2.
   Directional gain is to be computed as follows;
  - \* Directional gain =  $G_{ANT}$  + 10 log( $N_{ANT}$ ) dBi
- 6. Worst e.i.r.p Case Scenario gain antenna was selected to perform all RF testing that can got maximum power setting. And High gain antenna power setting will be reduced according to difference value of antenna gain declared by applicant.
- 7. Applied antenna gain as below:

Bandwidth	Antenna gain (dBi)	Directional gain (dBi)
All Bandwidth	9.0	12.0

8. Sample Calculation:

Let us assume the following numbers:

- e) Total MIMO Conducted Power as 2597.54 mW
- f) Antenna Gain = 11.50 dBi

Factors		Value	Unit
Summed MIMO Conducted Power (linear sum)		2597.54	mW
Summed MIMO Conducted Power (dBm)	= 10 * log (2597.54) =	34.15	dBm/10MHz
Antenna Gain		12.00	dBi
Total MIMO EIRP		46.15	dBm/10MHz

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Channel	Port	QPSK	16QAM	64QAM	256QAM
	0	28.10	28.06	28.14	28.02
	1	28.13	27.99	28.17	28.02
	2	28.13	28.23	28.19	28.19
Low	3	28.14	28.20	28.38	28.15
Low	Total Conducted Power (mW)	2597.54	2595.21	2655.60	2580.04
	Total Conducted Power(dBm)	34.15	34.14	34.24	34.12
	Ant. Gain (dBi)	12.00	12.00	12.00	12.00
	e.i.r.p(dBm/MHz)	46.15	46.14	46.24	46.12
	0	28.14	28.22	28.07	28.08
	1	27.97	27.98	27.91	27.96
	2	27.98	28.01	27.93	27.97
Mid	3	28.18	28.18	28.02	28.00
Mid	Total Conducted Power (mW)	2563.96	2581.87	2513.96	2525.43
	Total Conducted Power(dBm)	34.09	34.12	34.00	34.02
	Ant. Gain (dBi)	12.00	12.00	12.00	12.00
	e.i.r.p(dBm/MHz)	46.09	46.12	46.00	46.02
	0	28.11	28.16	28.23	28.17
	1	28.03	28.12	28.26	28.00
	2	28.18	28.09	28.22	28.07
Lliah	3	28.17	28.19	28.14	28.07
High	Total Conducted Power (mW)	2596.28	2606.61	2650.53	2569.52
	Total Conducted Power(dBm)	34.14	34.16	34.23	34.10
	Ant. Gain (dBi)	12.00	12.00	12.00	12.00
	e.i.r.p(dBm/MHz)	46.14	46.16	46.23	46.10

Table 10-1. Conducted Average Output Power Table (NR\_n48\_1C\_10M)

Channel	Port	QPSK	16QAM	64QAM	256QAM
	0	30.91	31.03	31.06	31.01
	1	30.86	31.02	31.06	31.02
	2	30.94	31.06	31.00	31.05
Low	3	30.82	31.01	30.95	31.21
Low	Total Conducted Power (mW)	4901.56	5070.65	5056.32	5121.36
	Total Conducted Power(dBm)	36.90	37.05	37.04	37.09
	Ant. Gain (dBi)	12.00	12.00	12.00	12.00
	e.i.r.p(dBm/MHz)	48.90	49.05	49.04	49.09
	0	31.05	31.06	31.01	31.01
	1	31.04	31.11	31.15	31.05
	2	31.02	31.09	31.12	31.03
Mid	3	31.03	30.92	31.02	31.15
IVIIG	Total Conducted Power (mW)	5076.47	5088.89	5123.93	5106.15
	Total Conducted Power(dBm)	37.06	37.07	37.10	37.08
	Ant. Gain (dBi)	12.00	12.00	12.00	12.00
	e.i.r.p(dBm/MHz)	49.06	49.07	49.10	49.08
	0	31.04	30.97	31.10	30.99
	1	30.99	31.03	31.06	30.97
	2	30.97	31.09	31.04	31.02
Lliah	3	31.12	31.17	31.10	30.99
High	Total Conducted Power (mW)	5071.06	5112.38	5123.51	5027.06
	Total Conducted Power(dBm)	37.05	37.09	37.10	37.01
	Ant. Gain (dBi)	12.00	12.00	12.00	12.00
	e.i.r.p(dBm/MHz)	49.05	49.09	49.10	49.01

Table 10-2. Conducted Average Output Power Table (NR\_n48\_1C\_20M)

FCC: A3LRT4401-48A		MEASUREMENT REPORT (Class II Permissive Change)	SAMSUNG	Approved by: Technical Manager
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Channel	Port	QPSK	16QAM	64QAM	256QAM
	0	32.97	33.06	33.03	32.79
	1	33.01	33.07	33.07	32.82
	2	32.96	33.02	33.02	32.78
Low	3	32.68	32.92	32.74	32.50
Low	Total Conducted Power (mW)	7811.89	8014.02	7920.56	7490.32
	Total Conducted Power(dBm)	38.93	39.04	38.99	38.75
	Ant. Gain (dBi)	12.00	12.00	12.00	12.00
	e.i.r.p(dBm/MHz)	50.93	51.04	50.99	50.75
	0	32.88	33.06	33.00	32.98
	1	33.03	33.10	33.05	33.03
	2	32.85	33.00	32.84	32.83
Mid	3	32.75	32.88	32.79	32.77
Mid	Total Conducted Power (mW)	7761.15	8000.91	7837.80	7806.20
	Total Conducted Power(dBm)	38.90	39.03	38.94	38.92
	Ant. Gain (dBi)	12.00	12.00	12.00	12.00
	e.i.r.p(dBm/MHz)	50.90	51.03	50.94	50.92
	0	32.79	32.66	32.61	32.64
	1	32.83	32.71	32.66	32.70
	2	32.65	32.71	32.55	32.69
Lliada	3	32.57	32.51	32.48	32.51
High	Total Conducted Power (mW)	7467.69	7360.15	7237.89	7338.81
	Total Conducted Power(dBm)	38.73	38.67	38.60	38.66
	Ant. Gain (dBi)	12.00	12.00	12.00	12.00
	e.i.r.p(dBm/MHz)	50.73	50.67	50.60	50.66

Table 10-3. Conducted Average Output Power Table (NR\_n48\_1C\_30M)

Channel	Port	QPSK	16QAM	64QAM	256QAM
	0	34.12	34.09	33.93	33.88
	1	34.09	34.17	33.90	33.97
	2	34.19	34.13	33.90	33.94
Low	3	34.08	34.15	33.92	33.88
Low	Total Conducted Power (mW)	10329.55	10365.02	9847.18	9858.88
	Total Conducted Power(dBm)	40.14	40.16	39.93	39.94
	Ant. Gain (dBi)	12.00	12.00	12.00	12.00
	e.i.r.p(dBm/MHz)	52.14	52.16	51.93	51.94
	0	33.84	34.01	33.86	33.89
	1	33.81	33.94	33.78	33.80
	2	33.84	34.19	33.78	33.79
Mid	3	33.87	34.15	33.84	33.83
IVIIG	Total Conducted Power (mW)	9684.23	10219.48	9628.86	9656.67
	Total Conducted Power(dBm)	39.86	40.09	39.84	39.85
	Ant. Gain (dBi)	12.00	12.00	12.00	12.00
	e.i.r.p(dBm/MHz)	51.86	52.09	51.84	51.85
	0	33.77	33.96	33.75	33.80
	1	33.68	34.15	33.68	33.71
	2	33.78	33.92	33.88	33.92
Lliah	3	33.82	33.95	33.77	33.81
High	Total Conducted Power (mW)	9513.49	10038.19	9530.58	9618.87
	Total Conducted Power(dBm)	39.78	40.02	39.79	39.83
	Ant. Gain (dBi)	12.00	12.00	12.00	12.00
	e.i.r.p(dBm/MHz)	51.78	52.02	51.79	51.83

Table 10-4. Conducted Average Output Power Table (NR\_n48\_1C\_40M)

FCC: A3LRT4401-48A		MEASUREMENT REPORT (Class II Permissive Change)	SAMSUNG	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:		Dega 167 of 174
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Port	QPSK	16QAM	64QAM	256QAM
0	27.88	27.63	27.79	27.70
1	27.87	27.71	27.79	27.72
2	28.07	27.81	27.89	27.84
3	28.03	27.86	27.82	27.88
Total Conducted Power (mW)	2502.65	2384.52	2422.87	2402.30
Total Conducted Power(dBm)	33.98	33.77	33.84	33.81
Ant. Gain (dBi)	12.00	12.00	12.00	12.00
e.i.r.p(dBm/MHz)	45.98	45.77	45.84	45.81
0	27.90	27.65	27.86	27.87
1	27.87	27.64	27.71	27.76
2	27.89	27.62	27.74	27.79
3	27.87	27.74	27.80	27.83
Total Conducted Power (mW)	2456.47	2335.26	2397.99	2417.30
Total Conducted Power(dBm)	33.90	33.68	33.80	33.83
Ant. Gain (dBi)	12.00	12.00	12.00	12.00
e.i.r.p(dBm/MHz)	45.90	45.68	45.80	45.83
0	27.88	28.01	27.97	27.74
1	28.01	28.04	28.03	28.03
2	27.99	28.07	27.94	28.02
3	28.09	28.14	28.04	28.07
Total Conducted Power (mW)	2519.85	2562.05	2521.04	2504.70
Total Conducted Power(dBm)	34.01	34.09	34.02	33.99
Ant. Gain (dBi)	12.00	12.00	12.00	12.00
e.i.r.p(dBm/MHz)	46.01	46.09	46.02	45.99
	1 2 3 Total Conducted Power (mW) Total Conducted Power(dBm) Ant. Gain (dBi) e.i.r.p(dBm/MHz) 0 1 2 3 Total Conducted Power (mW) Total Conducted Power(dBm) Ant. Gain (dBi) e.i.r.p(dBm/MHz) 0 1 2 3 Total Conducted Power (mW) Total Conducted Power (mW) 1 2 3 Total Conducted Power (mW) Total Conducted Power (mW) Total Conducted Power (mW)	1       27.87         2       28.07         3       28.03         Total Conducted Power (mW)       2502.65         Total Conducted Power(dBm)       33.98         Ant. Gain (dBi)       12.00         e.i.r.p(dBm/MHz)       45.98         0       27.90         1       27.87         2       27.89         3       27.87         Total Conducted Power (mW)       2456.47         Total Conducted Power (mW)       33.90         Ant. Gain (dBi)       12.00         e.i.r.p(dBm/MHz)       45.93         0       27.88         1       28.01         2       27.99         3       28.09         Total Conducted Power (mW)       2519.85         1       28.09         Total Conducted Power (mW)       2519.85         Total Conducted Power (mW)       34.01         Ant. Gain (dBi)       12.00	1         27.87         27.71           2         28.07         27.81           3         28.03         27.86           Total Conducted Power (mW)         2502.65         2384.52           Total Conducted Power(dBm)         33.98         33.77           Ant. Gain (dBi)         12.00         12.00           e.i.r.p(dBm/MHz)         45.98         45.77           0         27.87         27.65           1         27.87         27.64           2         27.89         27.62           3         27.87         27.74           Total Conducted Power (mW)         2456.47         2335.26           Total Conducted Power (mW)         2456.47         2335.26           Total Conducted Power (mW)         33.90         33.68           Ant. Gain (dBi)         12.00         12.00           e.i.r.p(dBm/MHz)         45.90         45.68           0         27.88         28.01           1         28.01         28.04           2         27.99         28.07           3         28.09         28.14           1         28.01         34.09           3         28.09         28.14	1         27.87         27.71         27.79           2         28.07         27.81         27.89           3         28.03         27.86         27.82           Total Conducted Power (mW)         2502.65         2384.52         2422.87           Total Conducted Power(dBm)         33.98         33.77         33.84           Ant. Gain (dBi)         12.00         12.00         12.00           e.i.r.p(dBm/MHz)         45.98         45.77         45.84           0         27.90         27.65         27.86           1         27.87         27.64         27.71           2         27.89         27.62         27.74           3         27.87         27.74         27.80           Total Conducted Power (mW)         2456.47         2335.26         2397.99           Total Conducted Power (dBm)         33.90         33.68         33.80           Ant. Gain (dBi)         12.00         12.00         12.00           e.i.r.p(dBm/MHz)         45.90         45.68         45.80           0         27.88         28.01         27.97           1         28.01         28.03         27.97           1         28.01

Table 10-5. Conducted Average Output Power Table (LTE\_B48\_2C\_5M+5M)

Channel	Port	QPSK	16QAM	64QAM	256QAM
	0	30.58	30.36	30.58	30.62
	1	30.61	30.48	30.69	30.66
	2	30.65	30.46	30.88	30.52
Low	3	30.62	30.45	30.93	30.60
Low	Total Conducted Power (mW)	4608.58	4424.20	4778.49	4592.93
	Total Conducted Power(dBm)	36.64	36.46	36.79	36.62
	Ant. Gain (dBi)	12.00	12.00	12.00	12.00
	e.i.r.p(dBm/MHz)	48.64	48.46	48.79	48.62
	0	31.56	30.21	31.02	30.97
	1	31.54	30.59	31.52	31.06
	2	31.35	31.09	31.68	31.13
Mid	3	31.00	30.82	31.67	31.58
Mid	Total Conducted Power (mW)	5481.30	4688.16	5625.03	5262.68
	Total Conducted Power(dBm)	37.39	36.71	37.50	37.21
	Ant. Gain (dBi)	12.00	12.00	12.00	12.00
	e.i.r.p(dBm/MHz)	49.39	48.71	49.50	49.21
	0	30.80	30.63	30.41	30.57
	1	31.29	30.71	30.34	30.29
	2	31.14	30.56	30.35	30.47
Lliab	3	30.59	30.28	30.50	30.75
High	Total Conducted Power (mW)	4993.81	4537.94	4386.39	4512.10
	Total Conducted Power(dBm)	36.98	36.57	36.42	36.54
	Ant. Gain (dBi)	12.00	12.00	12.00	12.00
	e.i.r.p(dBm/MHz)	48.98	48.57	48.42	48.54

Table 10-6. Conducted Average Output Power Table (NR\_n48\_2C\_10M+10M)

FCC: A3LRT4401-48A		MEASUREMENT REPORT (Class II Permissive Change)	SAMSUNG	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:		Dega 169 of 174
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0 1 2 3	32.96 33.03 32.93 32.89	33.04 33.03 32.87	33.28 33.06	32.83 32.81
3	32.93			32.81
3		32.87		
•	32.80		33.11	32.78
Tailal Osmala at Damas (as)A()	32.03	32.93	33.00	32.87
Total Conducted Power (mW)	7894.78	7922.60	8192.87	7661.65
Total Conducted Power(dBm)	38.97	38.99	39.13	38.84
Ant. Gain (dBi)	12.00	12.00	12.00	12.00
e.i.r.p(dBm/MHz)	50.97	50.99	51.13	50.84
0	33.14	32.95	32.82	32.66
1	33.04	32.89	32.74	32.59
2	32.85	32.67	32.56	32.39
3	33.07	32.88	32.75	32.58
Total Conducted Power (mW)	8029.56	7707.94	7480.24	7205.68
Total Conducted Power(dBm)	39.05	38.87	38.74	38.58
Ant. Gain (dBi)	12.00	12.00	12.00	12.00
e.i.r.p(dBm/MHz)	51.05	50.87	50.74	50.58
0	33.04	32.85	32.81	32.68
1	33.00	32.77	32.73	32.58
2	32.85	32.69	32.64	32.60
3	32.94	32.75	32.69	32.64
Total Conducted Power (mW)	7904.40	7561.32	7479.19	7321.11
Total Conducted Power(dBm)	38.98	38.79	38.74	38.65
Ant. Gain (dBi)	12.00	12.00	12.00	12.00
e.i.r.p(dBm/MHz)	50.98	50.79	50.74	50.65
	Total Conducted Power(dBm) Ant. Gain (dBi) e.i.r.p(dBm/MHz) 0 1 2 3 Total Conducted Power (mW) Total Conducted Power(dBm) Ant. Gain (dBi) e.i.r.p(dBm/MHz) 0 1 2 3 Total Conducted Power (mW) Total Conducted Power (mW) Total Conducted Power (mW) Total Conducted Power (dBm) Ant. Gain (dBi) e.i.r.p(dBm/MHz)	Total Conducted Power(dBm)         38.97           Ant. Gain (dBi)         12.00           e.i.r.p(dBm/MHz)         50.97           0         33.14           1         33.04           2         32.85           3         33.07           Total Conducted Power (mW)         8029.56           Total Conducted Power (dBm)         39.05           Ant. Gain (dBi)         12.00           e.i.r.p(dBm/MHz)         51.05           0         33.04           1         33.00           2         32.85           3         32.04           1         33.00           2         32.85           3         32.94           Total Conducted Power (mW)         7904.40           Total Conducted Power (mW)         7904.40           Total Conducted Power (mW)         38.98           Ant. Gain (dBi)         12.00           e.i.r.p(dBm/MHz)         50.98	Total Conducted Power(dBm)         38.97         38.99           Ant. Gain (dBi)         12.00         12.00           e.i.r.p(dBm/MHz)         50.97         50.99           0 <b>33.14</b> 32.95           1 <b>33.04</b> 32.89           2 <b>32.85</b> 32.67           3 <b>33.07</b> 32.88           Total Conducted Power (mW) <b>8029.56</b> 7707.94           Total Conducted Power(dBm) <b>39.05</b> 38.87           Ant. Gain (dBi) <b>12.00</b> 12.00           e.i.r.p(dBm/MHz) <b>51.05</b> 50.87           0         33.04         32.85           1         33.00         32.77           2         32.85         32.69           3         32.94         32.75           Total Conducted Power (mW)         7904.40         7561.32           Total Conducted Power (mW)         7904.40         7561.32           Total Conducted Power (mW)         38.98         38.79           Ant. Gain (dBi)         12.00         12.00           e.i.r.p(dBm/MHz)         50.98         50.79	Total Conducted Power(dBm)38.9738.9939.13Ant. Gain (dBi)12.0012.0012.00e.i.r.p(dBm/MHz)50.9750.9951.13033.1432.9532.82133.0432.8932.74232.8532.6732.56333.0732.8832.75Total Conducted Power (mW)8029.567707.947480.24Total Conducted Power (dBm)39.0538.8738.74Ant. Gain (dBi)12.0012.0012.00e.i.r.p(dBm/MHz)51.0550.8750.74033.0432.8532.81133.0032.7732.73232.8532.6932.64332.9432.7532.69Total Conducted Power (mW)7904.407561.327479.19Total Conducted Power (mW)7904.407561.327479.19Total Conducted Power (mW)38.9838.7938.74

Table 10-7. Conducted Average Output Power Table (NR\_n48\_2C\_10M+20M)

Channel	Port	QPSK	16QAM	64QAM	256QAM
	0	34.09	34.06	34.10	34.14
	1	34.19	34.30	34.25	34.37
	2	34.07	34.29	34.23	34.32
Low	3	33.85	34.01	34.04	34.05
Low	Total Conducted Power (mW)	10168.01	10441.39	10414.75	10574.38
	Total Conducted Power(dBm)	40.07	40.19	40.18	40.24
	Ant. Gain (dBi)	12.00	12.00	12.00	12.00
	e.i.r.p(dBm/MHz)	52.07	52.19	52.18	52.24
	0	34.15	34.05	34.12	33.99
	1	34.31	34.10	34.24	34.14
	2	34.18	33.97	34.18	34.04
Mid	3	33.90	33.80	33.96	33.87
IVIIG	Total Conducted Power (mW)	10370.79	10004.80	10343.91	10073.23
	Total Conducted Power(dBm)	40.16	40.00	40.15	40.03
	Ant. Gain (dBi)	12.00	12.00	12.00	12.00
	e.i.r.p(dBm/MHz)	52.16	52.00	52.15	52.03
	0	33.81	33.86	33.91	33.88
	1	33.88	33.88	33.97	33.89
	2	33.75	33.78	33.82	33.73
Lliab	3	33.61	33.68	33.73	33.67
High	Total Conducted Power (mW)	9515.32	9596.90	9725.35	9581.06
	Total Conducted Power(dBm)	39.78	39.82	39.88	39.81
	Ant. Gain (dBi)	12.00	12.00	12.00	12.00
	e.i.r.p(dBm/MHz)	51.78	51.82	51.88	51.81

Table 10-8. Conducted Average Output Power Table (NR\_n48\_2C\_10M+30M)

FCC: A3LRT4401-48A		MEASUREMENT REPORT (Class II Permissive Change)	SAMSUNG	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:		Dega 160 of 171
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Channel	Port	QPSK	16QAM	64QAM	256QAM
	0	34.08	34.15	33.62	34.10
	1	34.12	34.23	33.71	34.18
	2	34.30	34.18	33.59	34.06
Low	3	34.32	34.22	33.61	34.09
Low	Total Conducted Power (mW)	10536.34	10509.25	9232.82	10299.89
	Total Conducted Power(dBm)	40.23	40.22	39.65	40.13
	Ant. Gain (dBi)	12.00	12.00	12.00	12.00
	e.i.r.p(dBm/MHz)	52.23	52.22	51.65	52.13
	0	34.21	34.29	33.94	33.88
	1	34.27	34.44	33.99	33.98
	2	34.21	34.31	33.94	33.90
Mid	3	34.23	34.41	33.99	33.94
Mid	Total Conducted Power (mW)	10594.17	10923.38	9967.06	9875.91
	Total Conducted Power(dBm)	40.25	40.38	39.99	39.95
	Ant. Gain (dBi)	12.00	12.00	12.00	12.00
	e.i.r.p(dBm/MHz)	52.25	52.38	51.99	51.95
	0	33.87	33.75	33.59	33.44
	1	33.96	33.86	33.67	33.54
	2	33.93	33.89	33.62	33.49
Lliada	3	33.90	33.87	33.59	33.54
High	Total Conducted Power (mW)	9853.10	9690.45	9200.73	8960.45
	Total Conducted Power(dBm)	39.94	39.86	39.64	39.52
	Ant. Gain (dBi)	12.00	12.00	12.00	12.00
	e.i.r.p(dBm/MHz)	51.94	51.86	51.64	51.52

Table 10-9. Conducted Average Output Power Table (NR\_n48\_2C\_20M+20M)

Channel	Port	QPSK	16QAM	64QAM	256QAM
	0	34.97	34.98	35.00	34.99
	1	35.10	35.14	34.95	35.02
	2	35.08	34.97	34.63	35.07
Low	3	34.91	34.86	34.85	34.82
Low	Total Conducted Power (mW)	12694.93	12616.10	12247.30	12579.43
	Total Conducted Power(dBm)	41.04	41.01	40.88	41.00
	Ant. Gain (dBi)	12.00	12.00	12.00	12.00
	e.i.r.p(dBm/MHz)	53.04	53.01	52.88	53.00
	0	35.10	35.09	35.04	35.08
	1	35.06	35.15	35.08	35.25
	2	35.24	34.95	34.88	35.03
Mid	3	35.05	34.59	34.52	34.79
IVIIG	Total Conducted Power (mW)	12983.05	12505.38	12320.10	12767.93
	Total Conducted Power(dBm)	41.13	40.97	40.91	41.06
	Ant. Gain (dBi)	12.00	12.00	12.00	12.00
	e.i.r.p(dBm/MHz)	53.13	52.97	52.91	53.06
	0	35.13	34.75	34.80	34.66
	1	34.86	34.76	34.81	34.69
	2	35.15	34.62	34.71	34.57
Lliab	3	35.03	34.52	34.46	34.60
High	Total Conducted Power (mW)	12777.93	11706.38	11797.42	11616.78
	Total Conducted Power(dBm)	41.06	40.68	40.72	40.65
	Ant. Gain (dBi)	12.00	12.00	12.00	12.00
	e.i.r.p(dBm/MHz)	53.06	52.68	52.72	52.65

Table 10-10. Conducted Average Output Power Table (NR\_n48\_2C\_10M+40M)

FCC: A3LRT4401-48A	ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (Class II Permissive Change)	SAMSUNG	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:		Dage 170 of 174
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Channel	Port	QPSK	16QAM	64QAM	256QAM
ondimor	0	36.11	35.95	36.15	36.19
	1	36.24	35.91	36.32	36.19
	2	36.08	35.82	36.07	36.16
Low	3	35.80	35.56	35.86	35.69
Low	Total Conducted Power (mW)	16147.44	15251.86	16307.00	16155.49
	Total Conducted Power(dBm)	42.08	41.83	42.12	42.08
	Ant. Gain (dBi)	12.00	12.00	12.00	12.00
	e.i.r.p(dBm/MHz)	54.08	53.83	54.12	54.08
	0	35.78	35.77	35.73	35.72
	1	35.92	35.84	35.74	35.79
	2	35.80	35.79	35.77	35.89
Mid	3	35.45	35.58	35.45	35.61
IVIIG	Total Conducted Power (mW)	15002.25	15020.04	14774.08	15046.31
	Total Conducted Power(dBm)	41.76	41.77	41.70	41.77
	Ant. Gain (dBi)	12.00	12.00	12.00	12.00
	e.i.r.p(dBm/MHz)	53.76	53.77	53.70	53.77
	0	35.63	36.04	35.87	35.81
	1	35.67	36.03	35.77	35.86
	2	35.71	36.05	35.91	35.89
Lline	3	35.58	35.90	35.75	35.74
High	Total Conducted Power (mW)	14683.74	15944.20	15297.19	15296.68
	Total Conducted Power(dBm)	41.67	42.03	41.85	41.85
	Ant. Gain (dBi)	12.00	12.00	12.00	12.00
	e.i.r.p(dBm/MHz)	53.67	54.03	53.85	53.85

Table 10-11. Conducted Average Output Power Table (NR\_n48\_2C\_20M+40M)

Channel	Port	QPSK	16QAM	64QAM	256QAM
	0	36.68	36.59	36.62	36.62
	1	36.61	36.66	36.79	36.72
	2	36.73	36.55	36.66	36.71
Low	3	36.37	36.30	36.42	36.50
Low	Total Conducted Power (mW)	18282.16	17979.19	18387.05	18445.89
	Total Conducted Power(dBm)	42.62	42.55	42.65	42.66
	Ant. Gain (dBi)	12.00	12.00	12.00	12.00
	e.i.r.p(dBm/MHz)	54.62	54.55	54.65	54.66
	0	36.80	36.65	36.44	36.29
	1	36.70	36.67	36.51	36.31
	2	36.62	36.50	36.54	36.42
Mid	3	36.51	36.28	36.32	36.25
Mid	Total Conducted Power (mW)	18532.77	17981.99	17676.33	17133.89
	Total Conducted Power(dBm)	42.68	42.55	42.47	42.34
	Ant. Gain (dBi)	12.00	12.00	12.00	12.00
	e.i.r.p(dBm/MHz)	54.68	54.55	54.47	54.34
	0	36.25	36.44	36.24	36.35
	1	36.12	36.25	36.12	36.21
	2	36.23	36.27	36.18	36.18
Lliab	3	36.17	36.17	36.11	36.21
High	Total Conducted Power (mW)	16647.16	16998.94	16532.61	16821.34
	Total Conducted Power(dBm)	42.21	42.30	42.18	42.26
	Ant. Gain (dBi)	12.00	12.00	12.00	12.00
	e.i.r.p(dBm/MHz)	54.21	54.30	54.18	54.26

Table 10-12. Conducted Average Output Power Table (NR\_n48\_2C\_30M+40M)

FCC: A3LRT4401-48A	ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (Class II Permissive Change)	SAMSUNG	Approved by: Technical Manager
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Channel	Port	QPSK	16QAM	64QAM	256QAM
	0	37.07	37.08	37.19	37.07
	1	37.03	37.16	37.18	37.07
	2	37.32	37.35	37.32	37.17
Low	3	37.28	37.33	37.29	37.23
Low	Total Conducted Power (mW)	20880.67	21145.06	21213.04	20683.02
	Total Conducted Power(dBm)	43.20	43.25	43.27	43.16
	Ant. Gain (dBi)	12.00	12.00	12.00	12.00
	e.i.r.p(dBm/MHz)	55.20	55.25	55.27	55.16
	0	36.91	37.01	36.94	37.01
	1	37.02	36.97	37.14	36.99
	2	37.29	37.27	37.33	37.26
Mid	3	37.24	37.35	37.22	37.19
IVIIG	Total Conducted Power (mW)	20598.69	20766.65	20799.02	20580.86
	Total Conducted Power(dBm)	43.14	43.17	43.18	43.13
	Ant. Gain (dBi)	12.00	12.00	12.00	12.00
	e.i.r.p(dBm/MHz)	55.14	55.17	55.18	55.13
	0	36.97	37.03	37.06	36.97
	1	36.98	37.07	37.09	37.00
	2	37.23	37.38	37.26	37.28
Lliab	3	37.24	37.32	37.29	37.31
High	Total Conducted Power (mW)	20547.30	21005.19	20877.46	20717.58
	Total Conducted Power(dBm)	43.13	43.22	43.20	43.16
	Ant. Gain (dBi)	12.00	12.00	12.00	12.00
	e.i.r.p(dBm/MHz)	55.13	55.22	55.20	55.16

Table 10-13. Conducted Average Output Power Table (NR\_n48\_2C\_40M+40M)

Channel	Port	QPSK	16QAM	64QAM	256QAM
0.10.110	0	31.15	30.87	30.90	30.93
	1	31.09	30.76	30.93	30.88
	2	31.12	31.01	31.13	31.19
Low	3	31.10	30.96	31.10	31.15
Low	Total Conducted Power (mW)	5170.90	4922.25	5054.49	5081.80
	Total Conducted Power(dBm)	37.14	36.92	37.04	37.06
	Ant. Gain (dBi)	12.00	12.00	12.00	12.00
	e.i.r.p(dBm/MHz)	49.14	48.92	49.04	49.06
	0	31.05	30.99	31.10	31.07
	1	31.18	31.00	31.15	31.10
	2	30.97	31.01	31.11	31.07
Mid	3	30.97	30.96	31.05	31.02
IVIIG	Total Conducted Power (mW)	5086.22	5024.17	5156.14	5111.75
	Total Conducted Power(dBm)	37.06	37.01	37.12	37.09
	Ant. Gain (dBi)	12.00	12.00	12.00	12.00
	e.i.r.p(dBm/MHz)	49.06	49.01	49.12	49.09
	0	31.02	30.90	31.04	31.08
	1	31.07	30.84	31.09	31.04
	2	31.15	31.07	31.06	31.08
Lliah	3	31.16	30.95	31.10	31.11
High	Total Conducted Power (mW)	5153.46	4967.55	5120.55	5126.45
	Total Conducted Power(dBm)	37.12	36.96	37.09	37.10
	Ant. Gain (dBi)	12.00	12.00	12.00	12.00
	e.i.r.p(dBm/MHz)	49.12	48.96	49.09	49.10

Table 10-14. Conducted Average Output Power Table (LTE\_1C+NR\_1C\_10M+10M)

FCC: A3LRT4401-48A		MEASUREMENT REPORT (Class II Permissive Change)	SAMSUNG	Approved by: Technical Manager
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Channel	Port	QPSK	16QAM	64QAM	256QAM
-	0	35.92	35.63	35.41	35.78
	1	35.61	35.69	35.56	35.90
	2	36.14	35.99	36.12	36.36
Low	3	36.04	35.91	35.98	36.29
Low	Total Conducted Power (mW)	15676.96	15234.09	15128.24	16256.00
	Total Conducted Power(dBm)	41.95	41.83	41.80	42.11
	Ant. Gain (dBi)	12.00	12.00	12.00	12.00
	e.i.r.p(dBm/MHz)	53.95	53.83	53.80	54.11
	0	35.91	35.58	35.61	35.76
	1	35.93	35.86	35.65	35.81
	2	36.47	36.19	36.17	36.34
Mid	3	36.41	36.03	36.10	36.18
Mid	Total Conducted Power (mW)	16628.15	15636.66	15525.77	16032.50
	Total Conducted Power(dBm)	42.21	41.94	41.91	42.05
	Ant. Gain (dBi)	12.00	12.00	12.00	12.00
	e.i.r.p(dBm/MHz)	54.21	53.94	53.91	54.05
	0	35.25	35.38	35.46	35.51
	1	35.34	35.46	35.52	35.57
High	2	35.96	35.99	35.94	36.20
	3	36.08	35.88	36.06	36.02
	Total Conducted Power (mW)	14769.11	14811.53	15043.02	15330.24
	Total Conducted Power(dBm)	41.69	41.71	41.77	41.86
	Ant. Gain (dBi)	12.00	12.00	12.00	12.00
	e.i.r.p(dBm/MHz)	53.69	53.71	53.77	53.86
Table 10-15 Conducted Average Output Power Table (I TE 1C+NR 1C 20M+40M)					

Table 10-15. Conducted Average Output Power Table (LTE\_1C+NR\_1C\_20M+40M)

Channel	Port	QPSK	16QAM	64QAM	256QAM
	0	32.80	32.87	32.78	32.91
	1	32.81	32.69	32.80	32.94
	2	32.93	32.71	32.97	33.04
	3	32.96	32.83	32.98	33.09
Low	Total Conducted Power (mW)	7755.64	7579.27	7769.79	7972.99
	Total Conducted Power(dBm)	38.90	38.80	38.90	39.02
	Ant. Gain (dBi)	12.00	12.00	12.00	12.00
	e.i.r.p(dBm/MHz)	50.90	50.80	50.90	51.02
	0	32.76	32.94	32.79	32.74
	1	32.79	32.90	32.83	32.54
Mid	2	32.78	32.97	32.87	32.72
	3	32.80	32.93	32.83	32.71
	Total Conducted Power (mW)	7591.24	7862.62	7674.84	7411.11
	Total Conducted Power(dBm)	38.80	38.96	38.85	38.70
	Ant. Gain (dBi)	12.00	12.00	12.00	12.00
	e.i.r.p(dBm/MHz)	50.80	50.96	50.85	50.70
	0	32.79	32.84	32.80	32.78
	1	32.72	32.78	32.76	32.74
High	2	32.95	32.83	32.90	32.74
	3	32.94	32.88	32.87	32.71
	Total Conducted Power (mW)	7712.07	7679.35	7679.72	7521.72
	Total Conducted Power(dBm)	38.87	38.85	38.85	38.76
	Ant. Gain (dBi)	12.00	12.00	12.00	12.00
	e.i.r.p(dBm/MHz)	50.87	50.85	50.85	50.76

Table 10-16. Conducted Average Output Power Table (LTE\_2C+NR\_1C\_10M+10M+10M)

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Channel	Port	QPSK	16QAM	64QAM	256QAM
Low	0	36.66	36.95	36.73	36.32
	1	36.71	36.91	36.79	36.38
	2	37.15	37.38	37.32	36.92
	3	37.16	37.33	37.25	36.84
Low	Total Conducted Power (mW)	19710.56	20741.28	20189.02	18381.57
	Total Conducted Power(dBm)	42.95	43.17	43.05	42.64
	Ant. Gain (dBi)	12.00	12.00	12.00	12.00
	e.i.r.p(dBm/MHz)	54.95	55.17	55.05	54.64
	0	36.61	37.10	36.80	36.95
	1	36.66	37.01	36.85	37.01
	2	37.23	37.36	37.22	37.06
Mid	3	37.13	37.37	37.22	36.98
IVIIG	Total Conducted Power (mW)	19664.50	21054.64	20172.62	20048.37
	Total Conducted Power(dBm)	42.94	43.23	43.05	43.02
	Ant. Gain (dBi)	12.00	12.00	12.00	12.00
	e.i.r.p(dBm/MHz)	54.94	55.23	55.05	55.02
	0	36.73	36.71	36.67	36.50
	1	36.81	36.81	36.65	36.56
High	2	37.33	37.14	37.24	37.07
	3	37.34	37.09	37.29	37.04
	Total Conducted Power (mW)	20334.66	19778.35	19923.56	19147.37
	Total Conducted Power(dBm)	43.08	42.96	42.99	42.82
	Ant. Gain (dBi)	12.00	12.00	12.00	12.00
	e.i.r.p(dBm/MHz)	55.08	54.96	54.99	54.82

Table 10-17. Conducted Average Output Power Table (LTE\_2C+NR\_1C\_20M+20M+40M)

FCC: A3LRT4401-48A		MEASUREMENT REPORT (Class II Permissive Change)	SAMSUNG	Approved by: Technical Manager
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