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MEASUREMENT REPORT LTE/Sub 6GHz NR

Applicant Name:

Samsung Electronics Co., Ltd. 129, Samsung-ro, Yeongtong-gu, Suwon-si Gyeonggi-do, 16677, Korea

Date of Testing: 4/26 - 07/29/2020 Test Site/Location: PCTEST Lab. Columbia, MD, USA Test Report Serial No.: 1M2004230075-03-R1.A3L

FCC ID:

A3LSMT978U

APPLICANT:

Samsung Electronics Co., Ltd.

Application Type: Model: EUT Type: FCC Classification: FCC Rule Part(s): Test Procedure(s): Certification SM-T978U Portable Tablet PCS Licensed Transmitter (PCB) 22, 24, & 27 ANSI C63.26-2015, ANSI/TIA-603-E-2016, KDB 971168 D01 v03r01

This equipment has been shown to be capable of compliance with the applicable technical standards as indicated in the measurement report and was tested in accordance with the measurement procedures specified in §2.947. Test results reported herein relate only to the item(s) tested.

This revised Test Report (S/N: 1M2004230075-03-R1.A3L) supersedes and replaces the previously issued test report on the same subject device for the same type of testing as indicated. Please discard or destroy the previously issued test report(s) and dispose of it accordingly.

I attest to the accuracy of data. All measurements reported herein were performed by me or were made under my supervision and are correct to the best of my knowledge and belief. I assume full responsibility for the completeness of these measurements and vouch for the qualifications of all persons taking them.

Randy Ortanez President



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MEASUREMENT REPORT FCC Part 22, 24, & 27



			ERP		EIRP			
Mode	FCC Rule Part	Tx Frequency (MHz)	Max. Pow er (W)	Max. Pow er (dBm)	Max. Power (W)	Max. Pow er (dBm)	Emission Designator	Modulation
LTE Band 71	27	665.5 - 695.5	0.081	19.11			4M50G7D	QPSK
LTE Band 71	27	665.5 - 695.5	0.067	18.28			4M49W7D	16QAM
LTE Band 71	27	665.5 - 695.5	0.046	16.60			4M51W7D	64QAM
LTE Band 71	27	665.5 - 695.5	0.024	13.75			4M49W7D	256QAM
LTE Band 71	27	668 - 693	0.083	19.19			9M03G7D	QPSK
LTE Band 71	27	668 - 693	0.069	18.42			8M98W7D	16QAM
LTE Band 71	27	668 - 693	0.050	16.97			9M01W7D	64QAM
LTE Band 71	27	668 - 693	0.026	14.09			9M00W7D	256QAM
LTE Band 71	27	670.5 - 690.5	0.082	19.16			13M5G7D	QPSK
LTE Band 71	27	670.5 - 690.5	0.069	18.38			13M5W7D	16QAM
LIE Band 71	27	670.5 - 690.5	0.046	16.62			13M5W7D	64QAM
LIE Band /1	27	670.5 - 690.5	0.027	14.28			13M5W7D	256QAM
LIE Band /1	27	673 - 688	0.086	19.36			18M0G7D	QPSK
LIE Band 71	27	673 - 688	0.072	18.57			18M0W7D	16QAM
LTE Band 71	27	673 - 688	0.047	10.72			17109007D	64QAIVI
LTE Band 71	27	673 - 688	0.027	14.34	0.124	20.02	1810007D	
LTE Band 12	27	699.7 - 715.3	0.075	10.70	0.124	20.93	11/10/9G7D	
LTE Band 12	27	699.7 - 715.3	0.061	17.87	0.100	20.02	1M10W7D	16QAM
LTE Band 12	27	600 7 715 3	0.048	10.80	0.079	19.00	1M09W7D	2560AM
LTE Band 12	27	700 5 714 5	0.022	19.01	0.030	21.06	2MZ0CZD	
LTE Band 12	27	700.5 - 714.5	0.078	18.07	0.120	21.00	21070070	
LTE Band 12	27	700.5 - 714.5	0.004	17.04	0.105	10.22	21070070	640AM
LTE Band 12	27	700.5 - 714.5	0.031	13.55	0.003	15.13	21070070	2560AM
LTE Band 12	27	700.5 - 713.5	0.023	18.00	0.037	21.05	4M50G7D	OPSK
LTE Band 12	27	701.5 - 713.5	0.070	18.05	0.127	20.20	4M50W/7D	
LTE Band 12	27	701.5 - 713.5	0.004	17.08	0.103	19.23	4M51W7D	640AM
LTE Band 12	27	701.5 - 713.5	0.025	14.06	0.001	16.20	4M50W7D	2560AM
LTE Band 12	27	704 - 711	0.020	18.87	0.126	21.02	9M01G7D	QPSK
LTE Band 12	27	704 - 711	0.064	18.09	0.106	20.24	8M96W7D	16QAM
LTE Band 12	27	704 - 711	0.050	17.03	0.083	19.18	8M97W7D	64QAM
LTE Band 12	27	704 - 711	0.023	13.68	0.038	15.83	8M95W7D	256QAM
LTE Band 13	27	779.5 - 784.5	0.084	19.22	0.137	21.37	4M50G7D	QPSK
LTE Band 13	27	779.5 - 784.5	0.070	18.42	0.114	20.57	4M50W7D	16QAM
LTE Band 13	27	779.5 - 784.5	0.053	17.24	0.087	19.39	4M52W7D	64QAM
LTE Band 13	27	779.5 - 784.5	0.028	14.42	0.045	16.57	4M49W7D	256QAM
LTE Band 13	27	782	0.084	19.24	0.138	21.39	8M94G7D	QPSK
LTE Band 13	27	782	0.071	18.53	0.117	20.68	8M94W7D	16QAM
LTE Band 13	27	782	0.054	17.36	0.089	19.51	8M94W7D	64QAM
LTE Band 13	27	782	0.027	14.25	0.044	16.40	8M94W7D	256QAM
LTE Band 26/5	22H	824.7 - 848.3	0.075	18.74	0.123	20.89	1M09G7D	QPSK
LTE Band 26/5	22H	824.7 - 848.3	0.061	17.84	0.100	19.99	1M10W7D	16QAM
LTE Band 26/5	22H	824.7 - 848.3	0.047	16.77	0.078	18.92	1M10W7D	64QAM
LTE Band 26/5	22H	824.7 - 848.3	0.025	13.99	0.041	16.14	1M09W7D	256QAM
LIE Band 26/5	22H	825.5 - 847.5	0.079	18.95	0.129	21.10	2M70G7D	QPSK
LTE Band 26/5	22H	825.5 - 847.5	0.061	17.88	0.101	20.03	2M/1W7D	16QAM
LIE Band 26/5	22H	825.5 - 847.5	0.049	16.93	0.081	19.08	2M70W7D	64QAM
LTE Band 26/5	22H	825.5 - 847.5	0.026	14.18	0.043	16.33	2IVI70W7D	256QAM
LTE Band 26/5	22H	826.5 - 846.5	0.077	18.84	0.126	20.99	41VI50G7D	QPSK
LTE Band 26/5	22H	820.5 - 846.5	0.062	17.94	0.102	20.09	4IVI51W7D	16QAM
LTE Band 26/5	22H	820.5 - 846.5	0.051	17.05	0.083	19.20	41VI52VV7D	04QAM
LTE Band 26/F	22П	820 940.3	0.025	18.07	0.040	21.12	9M02C7D	OPer
LTE Band 26/5	221	829 - 844	0.079	18.22	0.129	20.38	8M96\//7D	
LTE Band 26/5	22H	829 - 844	0.007	16.23	0.103	19.02	8M99\/7D	640AM
LTE Band 26/5	22H	829 - 844	0.043	13.82	0.000	15.02	8M97W7D	2560AM
LTE Band 26	22H	831 5 - 841 5	0.024	18.87	0.126	21.02	13M5G7D	OPSK
LTE Band 26	22H	831 5 - 841 5	0.065	18 16	0.120	20.31	13M5W7D	160AM
LTE Band 26	22H	831.5 - 841.5	0.045	16.53	0.074	18.68	13M5W7D	64QAM
LTE Band 26	22H	831.5 - 841.5	0.024	13.81	0.039	15.96	13M5W7D	256QAM

EUT Overview (<1 GHz)

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				EII	RP	EF	RP	Emission
Mode	Bandwidth	Modulation	Dange [MHz]	Max. Power	Max. Power	Max. Power	Max. Power	Designator
				[W]	[dBm]	[W]	[dBm]	Designator
		π/2 BPSK	673.0 - 688.0	0.129	21.10	0.078	18.95	17M9G7D
		QPSK	673.0 - 688.0	0.130	21.14	0.079	18.99	18M0G7D
	20 MHz	16QAM	673.0 - 688.0	0.097	19.88	0.059	17.73	17M9W7D
		64QAM	673.0 - 688.0	0.073	18.65	0.045	16.50	17M9W7D
		256QAM	673.0 - 688.0	0.046	16.60	0.028	14.45	17M9W7D
		π/2 BPSK	670.5 - 690.5	0.138	21.39	0.084	19.24	13M5G7D
		QPSK	670.5 - 690.5	0.140	21.46	0.085	19.31	13M5G7D
	15 MHz	16QAM	670.5 - 690.5	0.107	20.30	0.065	18.15	13M5W7D
		64QAM	670.5 - 690.5	0.079	18.98	0.048	16.83	13M5W7D
NP Rond p71		256QAM	670.5 - 690.5	0.053	17.23	0.032	15.08	13M5W7D
ININ Dallu II/ I		π/2 BPSK	668.0 - 693.0	0.136	21.33	0.083	19.18	9M03G7D
		QPSK	668.0 - 693.0	0.134	21.27	0.082	19.12	9M03G7D
	10 MHz	16QAM	668.0 - 693.0	0.102	20.08	0.062	17.93	9M00W7D
		64QAM	668.0 - 693.0	0.074	18.72	0.045	16.57	9M02W7D
		256QAM	668.0 - 693.0	0.051	17.05	0.031	14.90	9M01W7D
		π/2 BPSK	665.5 - 695.5	0.136	21.32	0.083	19.17	4M53G7D
		QPSK	665.5 - 695.5	0.135	21.30	0.082	19.15	4M54G7D
	5 MHz	16QAM	665.5 - 695.5	0.107	20.29	0.065	18.14	4M53W7D
		64QAM	665.5 - 695.5	0.084	19.26	0.051	17.11	4M53W7D
		256QAM	665.5 - 695.5	0.056	17.45	0.034	15.30	4M53W7D

EUT Overview (NR n71)

			Tri Francisco a	EF	RP	EI	RP	Emission
Mode	Bandwidth	Modulation	Range [MHz]	Max. Power [W]	Max. Power [dBm]	Max. Power [W]	Max. Power [dBm]	Designator
		π/2 BPSK	834.0 - 839.0	0.107	20.29	0.175	22.44	18M0G7D
		QPSK	834.0 - 839.0	0.103	20.11	0.168	22.26	18M0G7D
	20 MHz	16QAM	834.0 - 839.0	0.081	19.06	0.132	21.21	17M9W7D
		64QAM	834.0 - 839.0	0.059	17.67	0.096	19.82	17M9W7D
		256QAM	834.0 - 839.0	0.038	15.85	0.063	18.00	17M8W7D
		π/2 BPSK	831.5 - 841.5	0.102	20.10	0.168	22.25	13M5G7D
		QPSK	831.5 - 841.5	0.104	20.19	0.171	22.34	13M5G7D
	15 MHz	16QAM	831.5 - 841.5	0.078	18.90	0.127	21.05	13M5W7D
		64QAM	831.5 - 841.5	0.057	17.53	0.093	19.68	13M5W7D
NP Pond nF		256QAM	831.5 - 841.5	0.038	15.85	0.063	18.00	13M5W7D
INK Dallu IIS		π/2 BPSK	829.0 - 844.0	0.110	20.42	0.181	22.57	9M03G7D
		QPSK	829.0 - 844.0	0.107	20.31	0.176	22.46	9M02G7D
	10 MHz	16QAM	829.0 - 844.0	0.083	19.21	0.137	21.36	9M00W7D
		64QAM	829.0 - 844.0	0.059	17.70	0.097	19.85	9M01W7D
		256QAM	829.0 - 844.0	0.040	15.98	0.065	18.13	8M97W7D
		π/2 BPSK	826.5 - 846.5	0.102	20.10	0.168	22.25	4M53G7D
		QPSK	826.5 - 846.5	0.102	20.08	0.167	22.23	4M50G7D
	5 MHz	16QAM	826.5 - 846.5	0.080	19.05	0.132	21.20	4M53W7D
		64QAM	826.5 - 846.5	0.058	17.64	0.095	19.79	4M53W7D
		256QAM	826.5 - 846.5	0.038	15.85	0.063	18.00	4M51W7D

EUT Overview (NR n5)

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			EIRP				
Mode	FCC Rule Part	Tx Frequency (MHz)	Max. Power (W)	Max. Power (dBm)	Emission Designator	Modulation	
LTE Band 66/4	27	1710.7 - 1779.3	0.217	23.37	1M10G7D	QPSK	
LTE Band 66/4	27	1710.7 - 1779.3	0.175	22.42	1M10W7D	16QAM	
LTE Band 66/4	27	1710.7 - 1779.3	0.109	20.38	1M10W7D	64QAM	
LTE Band 66/4	27	1710.7 - 1779.3	0.097	19.87	1M09W7D	256QAM	
LTE Band 66/4	27	1711.5 - 1778.5	0.242	23.83	2M70G7D	QPSK	
LTE Band 66/4	27	1711.5 - 1778.5	0.187	22.72	2M70W7D	16QAM	
LTE Band 66/4	27	1711.5 - 1778.5	0.113	20.51	2M70W7D	64QAM	
LTE Band 66/4	27	1711.5 - 1778.5	0.098	19.90	2M71W7D	256QAM	
LTE Band 66/4	27	1712.5 - 1777.5	0.242	23.84	4M52G7D	QPSK	
LTE Band 66/4	27	1712.5 - 1777.5	0.182	22.60	4M52W7D	16QAM	
LTE Band 66/4	27	1712.5 - 1777.5	0.115	20.60	4M53W7D	64QAM	
LTE Band 66/4	27	1712.5 - 1777.5	0.099	19.96	4M50W7D	256QAM	
LTE Band 66/4	27	1715 - 1775	0.240	23.80	9M04G7D	QPSK	
LTE Band 66/4	27	1715 - 1775	0.170	22.31	8M98W7D	16QAM	
LTE Band 66/4	27	1715 - 1775	0.106	20.24	8M99W7D	64QAM	
LTE Band 66/4	27	1715 - 1775	0.092	19.64	8M98W7D	256QAM	
LTE Band 66/4	27	1717.5 - 1772.5	0.224	23.50	13M5G7D	QPSK	
LTE Band 66/4	27	1717.5 - 1772.5	0.169	22.29	13M5W7D	16QAM	
LTE Band 66/4	27	1717.5 - 1772.5	0.112	20.50	13M5W7D	64QAM	
LTE Band 66/4	27	1717.5 - 1772.5	0.095	19.78	13M5W7D	256QAM	
LTE Band 66/4	27	1720 - 1770	0.233	23.67	18M0G7D	QPSK	
LTE Band 66/4	27	1720 - 1770	0.205	23.11	18M0W7D	16QAM	
LTE Band 66/4	27	1720 - 1770	0.160	22.05	18M0W7D	64QAM	
LTE Band 66/4	27	1720 - 1770	0.099	19.94	18M0W7D	256QAM	
LTE Band 25/2	24E	1850.7 - 1914.3	0.230	23.62	1M10G7D	QPSK	
LTE Band 25/2	24E	1850.7 - 1914.3	0.168	22.25	1M10W7D	16QAM	
LTE Band 25/2	24E	1850.7 - 1914.3	0.119	20.76	1M10W7D	64QAM	
LTE Band 25/2	24E	1850.7 - 1914.3	0.078	18.92	1M09W7D	256QAM	
LTE Band 25/2	24E	1851.5 - 1913.5	0.228	23.57	2M70G7D	QPSK	
LTE Band 25/2	24E	1851.5 - 1913.5	0.203	23.07	2M71W7D	16QAM	
LTE Band 25/2	24E	1851.5 - 1913.5	0.118	20.72	2M71W7D	64QAM	
LTE Band 25/2	24E	1851.5 - 1913.5	0.074	18.70	2M70W7D	256QAM	
LTE Band 25/2	24E	1852.5 - 1912.5	0.235	23.71	4M52G7D	QPSK	
LTE Band 25/2	24E	1852.5 - 1912.5	0.202	23.05	4M51W7D	16QAM	
LTE Band 25/2	24E	1852.5 - 1912.5	0.118	20.73	4M52W7D	64QAM	
LTE Band 25/2	24E	1852.5 - 1912.5	0.081	19.07	4M50W7D	256QAM	
LTE Band 25/2	24E	1855 - 1910	0.239	23.79	9M03G7D	QPSK	
LTE Band 25/2	24E	1855 - 1910	0.202	23.05	8M98W7D	16QAM	
LTE Band 25/2	24E	1855 - 1910	0.129	21.09	9M01W7D	64QAM	
LTE Band 25/2	24E	1855 - 1910	0.077	18.84	8M99W7D	256QAM	
LTE Band 25/2	24E	1857.5 - 1907.5	0.232	23.66	13M5G7D	QPSK	
LTE Band 25/2	24E	1857.5 - 1907.5	0.196	22.93	13M5W7D	16QAM	
LTE Band 25/2	24E	1857.5 - 1907.5	0.130	21.13	13M5W7D	64QAM	
LTE Band 25/2	24E	1857.5 - 1907.5	0.074	18.67	13M5W7D	256QAM	
LTE Band 25/2	24E	1860 - 1905	0.236	23.72	18M0G7D	QPSK	
LTE Band 25/2	24E	1860 - 1905	0.198	22.97	18M0W7D	16QAM	
LTE Band 25/2	24E	1860 - 1905	0.127	21.02	17M9W7D	64QAM	
LTE Band 25/2	24E	1860 - 1905	0.073	18.65	18M0W7D	256QAM	

EUT Overview (Mid Bands)

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				Ell	RP	Emission
Mode	Bandwidth	Modulation	Range [MHz]	Max. Power	Max. Power	Designator
				[W]	[dBm]	Deelghater
		π/2 BPSK	1720 - 1770	0.294	24.68	18M0G7D
		QPSK	1720 - 1770	0.298	24.75	19M0G7D
	20 MHz	16QAM	1720 - 1770	0.235	23.71	19M0W7D
		64QAM	1720 - 1770	0.161	22.07	19M0W7D
		256QAM	1720 - 1770	0.108	20.34	19M0W7D
		π/2 BPSK	1717.5 - 1772.5	0.303	24.82	13M5G7D
		QPSK	1717.5 - 1772.5	0.290	24.63	14M1G7D
	15 MHz	16QAM	1717.5 - 1772.5	0.228	23.59	14M2W7D
		64QAM	1717.5 - 1772.5	0.162	22.11	14M2W7D
NR Band n66		256QAM	1717.5 - 1772.5	0.110	20.40	14M2W7D
NIX Dand 100		π/2 BPSK	1715 - 1775	0.281	24.49	9M00G7D
		QPSK	1715 - 1775	0.293	24.67	9M34G7D
	10 MHz	16QAM	1715 - 1775	0.231	23.63	9M33W7D
		64QAM	1715 - 1775	0.168	22.25	9M32W7D
		256QAM	1715 - 1775	0.114	20.57	9M32W7D
		π/2 BPSK	1712.5 - 1777.5	0.275	24.39	4M48G7D
		QPSK	1712.5 - 1777.5	0.288	24.59	4M49G7D
	5 MHz	16QAM	1712.5 - 1777.5	0.226	23.55	4M50W7D
		64QAM	1712.5 - 1777.5	0.165	22.17	4M50W7D
		256QAM	1712.5 - 1777.5	0.112	20.51	4M49W7D

EUT Overview (NR n66)

				Ell	RP	Emission
Mode	Bandwidth	Modulation	Range [MHz]	Max. Power	Max. Power	Designator
				[W]	[dBm]	Designator
		π/2 BPSK	1860 - 1905	0.329	25.17	18M0G7D
		QPSK	1860 - 1905	0.329	25.18	19M0G7D
	20 MHz	16QAM	1860 - 1905	0.253	24.03	19M0W7D
		64QAM	1860 - 1905	0.191	22.82	19M1W7D
		256QAM	1860 - 1905	0.123	20.90	19M0W7D
		π/2 BPSK	1857.5 - 1907.5	0.333	25.23	13M5G7D
	15 MHz	QPSK	1857.5 - 1907.5	0.341	25.33	14M2G7D
		16QAM	1857.5 - 1907.5	0.282	24.50	14M2W7D
		64QAM	1857.5 - 1907.5	0.191	22.81	14M2W7D
NP Rand n25/2		256QAM	1857.5 - 1907.5	0.121	20.84	14M2W7D
NIN DAHU H23/2		π/2 BPSK	1855 - 1910	0.364	25.61	8M96G7D
		QPSK	1855 - 1910	0.321	25.06	9M32G7D
	10 MHz	16QAM	1855 - 1910	0.259	24.13	9M33W7D
		64QAM	1855 - 1910	0.196	22.91	9M35W7D
		256QAM	1855 - 1910	0.124	20.92	9M37W7D
		π/2 BPSK	1852.5 - 1912.5	0.333	25.23	4M52G7D
		QPSK	1852.5 - 1912.5	0.320	25.06	4M51G7D
	5 MHz	16QAM	1852.5 - 1912.5	0.247	23.93	4M52W7D
		64QAM	1852.5 - 1912.5	0.192	22.84	4M52W7D
		256QAM	1852.5 - 1912.5	0.122	20.87	4M51W7D

EUT Overview (NR n25/2)

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			EIRP				
Mode	FCC Rule Part	Tx Frequency (MHz)	Max. Pow er (W)	Max. Pow er (dBm)	Emission Designator	Modulation	
LTE Band 7	27	2502.5 - 2567.5	0.127	21.03	4M52G7D	QPSK	
LTE Band 7	27	2502.5 - 2567.5	0.110	20.42	4M50W7D	16QAM	
LTE Band 7	27	2502.5 - 2567.5	0.100	20.01	4M54W7D	64QAM	
LTE Band 7	27	2502.5 - 2567.5	0.042	16.22	4M51W7D	256QAM	
LTE Band 7	27	2505 - 2565	0.127	21.04	9M03G7D	QPSK	
LTE Band 7	27	2505 - 2565	0.114	20.56	8M97W7D	16QAM	
LTE Band 7	27	2505 - 2565	0.086	19.34	9M00W7D	64QAM	
LTE Band 7	27	2505 - 2565	0.046	16.61	8M98W7D	256QAM	
LTE Band 7	27	2507.5 - 2562.5	0.127	21.05	13M5G7D	QPSK	
LTE Band 7	27	2507.5 - 2562.5	0.115	20.62	13M5W7D	16QAM	
LTE Band 7	27	2507.5 - 2562.5	0.087	19.37	13M5W7D	64QAM	
LTE Band 7	27	2507.5 - 2562.5	0.046	16.63	13M5W7D	256QAM	
LTE Band 7	27	2510 - 2560	0.132	21.21	18M0G7D	QPSK	
LTE Band 7	27	2510 - 2560	0.113	20.53	18M0W7D	16QAM	
LTE Band 7	27	2510 - 2560	0.087	19.41	17M9W7D	64QAM	
LTE Band 7	27	2510 - 2560	0.043	16.33	17M9W7D	256QAM	
LTE Band 41 (PC2)	27	2498.5 - 2687.5	0.467	26.70	4M51G7D	QPSK	
LTE Band 41 (PC2)	27	2498.5 - 2687.5	0.344	25.37	4M53W7D	16QAM	
LTE Band 41 (PC2)	27	2498.5 - 2687.5	0.255	24.06	4M53W7D	64QAM	
LTE Band 41 (PC2)	27	2498.5 - 2687.5	0.144	21.60	4M50W7D	256QAM	
LTE Band 41 (PC2)	27	2501 - 2685	0.473	26.75	9M01G7D	QPSK	
LTE Band 41 (PC2)	27	2501 - 2685	0.336	25.26	8M99W7D	16QAM	
LTE Band 41 (PC2)	27	2501 - 2685	0.236	23.74	8M99W7D	64QAM	
LTE Band 41 (PC2)	27	2501 - 2685	0.129	21.11	8M98W7D	256QAM	
LTE Band 41 (PC2)	27	2503.5 - 2682.5	0.463	26.66	13M5G7D	QPSK	
LTE Band 41 (PC2)	27	2503.5 - 2682.5	0.320	25.06	13M5W7D	16QAM	
LTE Band 41 (PC2)	27	2503.5 - 2682.5	0.248	23.94	13M5W7D	64QAM	
LTE Band 41 (PC2)	27	2503.5 - 2682.5	0.131	21.19	13M5W7D	256QAM	
LTE Band 41 (PC2)	27	2506 - 2680	0.466	26.68	17M9G7D	QPSK	
LTE Band 41 (PC2)	27	2506 - 2680	0.458	26.61	17M9W7D	16QAM	
LTE Band 41 (PC2)	27	2506 - 2680	0.268	24.28	17M9W7D	64QAM	
LTE Band 41 (PC2)	27	2506 - 2680	0.152	21.82	17M9W7D	256QAM	

EUT Overview (High Bands)

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				Ell	Fmission	
Mode	Bandwidth	Modulation	Range [MHz]	Max. Power	Max. Power	Designator
		π/2 BPSK	2546.0 - 2640.0	0.330	25.19	97M2G7D
	(00.14)	QPSK	2546.0 - 2640.0	0.337	25.28	96M9G7D
	100 MHz	16QAM	2546.0 - 2640.0	0.246	23.91	97M0W7D
		64QAM	2546.0 - 2640.0	0.188	22.74	96M8W7D
		256QAM	2546.0 - 2640.0	0.122	20.88	96M7W7D
		π/2 BPSK	2541.0 - 2645.0	0.301	24.79	87M2G7D
		QPSK	2541.0 - 2645.0	0.298	24.75	87M6G7D
	90 MHz	16QAM	2541.0 - 2645.0	0.224	23.51	87M7W7D
		64QAM	2541.0 - 2645.0	0.175	22.43	87M6W7D
		256QAM	2541.0 - 2645.0	0.112	20.50	87M6W7D
		π/2 BPSK	2536.0 - 2650.0	0.360	25.56	77M3G7D
		QPSK	2536.0 - 2650.0	0.383	25.83	77M9G7D
	80 MHz	16QAM	2536.0 - 2650.0	0.244	23.88	77M6W7D
		64QAM	2536.0 - 2650.0	0.186	22.69	77M5W7D
		256QAM	2536.0 - 2650.0	0.122	20.86	77M6W7D
	60 MHz	π/2 BPSK	2526.0 - 2660.0	0.339	25.30	58M0G7D
		QPSK	2526.0 - 2660.0	0.363	25.60	58M2G7D
NR Band n41		16QAM	2526.0 - 2660.0	0.265	24.23	58M3W7D
		64QAM	2526.0 - 2660.0	0.201	23.04	58M3W7D
		256QAM	2526.0 - 2660.0	0.132	21.21	58M0W7D
		π/2 BPSK	2521.0 - 2665.0	0.343	25.35	46M1G7D
		QPSK	2521.0 - 2665.0	0.366	25.64	47M6G7D
	50 MHz	16QAM	2521.0 - 2665.0	0.266	24.25	47M6W7D
		64QAM	2521.0 - 2665.0	0.205	23.11	47M8W7D
		256QAM	2521.0 - 2665.0	0.135	21.30	47M7W7D
		π/2 BPSK	2516.0 - 2670.0	0.369	25.67	35M9G7D
		QPSK	2516.0 - 2670.0	0.378	25.78	36M0G7D
	40 MHz	16QAM	2516.0 - 2670.0	0.226	23.55	35M9W7D
		64QAM	2516.0 - 2670.0	0.215	23.33	36M0W7D
		256QAM	2516.0 - 2670.0	0.140	21.45	35M9W7D
		π/2 BPSK	2506.0 - 2680.0	0.346	25.39	18M0G7D
		QPSK	2506.0 - 2680.0	0.356	25.52	18M0G7D
	20 MHz	16QAM	2506.0 - 2680.0	0.220	23.43	18M0W7D
		64QAM	2506.0 - 2680.0	0.206	23.15	18M1W7D
		256QAM	2506.0 - 2680.0	0.129	21.12	18M1W7D

EUT Overview (NR n41)

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1.0 INTRODUCTION

1.1 Scope

Measurement and determination of electromagnetic emissions (EMC) of radio frequency devices including intentional and/or unintentional radiators for compliance with the technical rules and regulations of the Federal Communications Commission and the Innovation, Science and Economic Development Canada.

1.2 PCTEST Test Location

These measurement tests were conducted at the PCTEST facility located at 7185 Oakland Mills Road, Columbia, MD 21046. The measurement facility is compliant with the test site requirements specified in ANSI C63.4-2014.

1.3 Test Facility / Accreditations

Measurements were performed at PCTEST located in Columbia, MD 21046, U.S.A.

- PCTEST is an ISO 17025-2005 accredited test facility under the American Association for Laboratory Accreditation (A2LA) with Certificate number 2041.01 for Specific Absorption Rate (SAR), Hearing Aid Compatibility (HAC) testing, where applicable, and Electromagnetic Compatibility (EMC) testing for FCC and Innovation, Science, and Economic Development Canada rules.
- PCTEST TCB is a Telecommunication Certification Body (TCB) accredited to ISO/IEC 17065-2012 by A2LA (Certificate number 2041.03) in all scopes of FCC Rules and ISED Standards (RSS).
- PCTEST facility is a registered (2451B) test laboratory with the site description on file with ISED.

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2.0 PRODUCT INFORMATION

2.1 Equipment Description

The Equipment Under Test (EUT) is the **Samsung Portable Tablet FCC ID: A3LSMT978U**. The test data contained in this report pertains only to the emissions due to the EUT's LTE function.

Test Device Serial No.: 04097, 03743

2.2 Device Capabilities

This device contains the following capabilities:

850/1700/1900 WCDMA/HSPA, Multi-band LTE, 5G NR (n71, n5, n66, n25, n2, n41), 802.11b/g/n/ac/ax WLAN, 802.11a/n/ac/ax UNII, Bluetooth (1x, EDR, LE)

LTE Band 26 (814.7 – 849 MHz) overlaps the entire frequency range of LTE Band 5 (824 – 849 MHz). Therefore, test data provided in this report covers Band 5 and the portion of Band 26 subject to Part 22.

LTE Band 66 (1710 - 1780 MHz) overlaps the entire frequency range of LTE Band 4 (1710 - 1755 MHz). Therefore, test data provided in this report covers Band 4 as well as Band 66.

LTE Band 25 (1850 - 1915 MHz) overlaps the entire frequency range of LTE Band 2 (1850 - 1910 MHz). Therefore, test data provided in this report covers Band 2 as well as Band 25.

Sub 6GHz NR Band n71 (663 – 698 MHz) operates using 15kHz Subcarrier Spacing with both CP-OFDM and DFT-s OFDM waveforms. The band supports BPSK, QPSK, 16QAM, 64QAM, and 256QAM modulation. The test data provided in this report represents the worst case configuration.

Sub 6GHz NR Band n5 (824 – 849 MHz) operates using 15kHz Subcarrier Spacing with both CP-OFDM and DFTs OFDM waveforms. The band supports BPSK, QPSK, 16QAM, 64QAM, and 256QAM modulation. The test data provided in this report represents the worst case configurations.

Sub 6GHz NR Band n66 (1710 – 1780 MHz) operates using 15kHz Subcarrier Spacing with both CP-OFDM and DFT-s OFDM waveforms. The band supports BPSK, QPSK, 16QAM, 64QAM, and 256QAM modulation. The test data provided in this report represents the worst case configurations.

Sub 6GHz NR Band n25 (1850 – 1915 MHz) operates using 15kHz Subcarrier Spacing with both CP-OFDM and DFT-s OFDM waveforms. The band supports BPSK, QPSK, 16QAM, 64QAM, and 256QAM modulation. The test data provided in this report represents the worst case configurations.

Sub 6GHz NR Band n2 (1850 – 1910 MHz) operates using 15kHz Subcarrier Spacing with both CP-OFDM and DFT-s OFDM waveforms. The band supports BPSK, QPSK, 16QAM, 64QAM, and 256QAM modulation. The test data provided in this report represents the worst case configurations.

Sub 6GHz NR Band n41 (2496 – 2690 MHz) operates using 30kHz Subcarrier Spacing with both CP-OFDM and DFT-s OFDM waveforms. The band supports BPSK, QPSK, 16QAM, 64QAM, and 256QAM modulation. The test data provided in this report represents the worst case configurations.

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2.3 Test Configuration

The EUT was tested per the guidance of ANSI/TIA-603-E-2016 and KDB 971168 D01 v03r01. See Section 7.0 of this test report for a description of the radiated and antenna port conducted emissions tests.

2.4 EMI Suppression Device(s)/Modifications

No EMI suppression device(s) were added and no modifications were made during testing.

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3.0 DESCRIPTION OF TESTS

3.1 Measurement Procedure

The measurement procedures described in the document titled "Land Mobile FM or PM – Communications Equipment – Measurements and Performance Standards" (ANSI/TIA-603-E-2016) and "Procedures for Compliance Measurement of the Fundamental Emission Power of Licensed Wideband (> 1 MHz) Digital Transmission Systems" (KDB 971168 D01 v03r01) were used in the measurement of the EUT.

3.2 Radiated Power and Radiated Spurious Emissions

The radiated test facilities consisted of an indoor 3 meter semi-anechoic chamber used for final measurements and exploratory measurements, when necessary. The measurement area is contained within the semi-anechoic chamber which is shielded from any ambient interference. The test site inside the chamber is a 6m x 5.2m elliptical, obstruction-free area in accordance with Figure 5.7 of Clause 5 in ANSI C63.4-2014. Absorbers are arranged on the floor between the turn table and the antenna mast in such a way so as to maximize the reduction of reflections for measurements above 1GHz. For measurements below 1GHz, the absorbers are removed. A raised turntable is used for radiated measurement. The turn table is a continuously rotatable, remote-controlled, metallic turntable and 2 meters (6.56 ft.) in diameter. The turn table is flush with the raised floor of the chamber in order to maintain its function as a ground plane. An 80cm tall test table made of Styrodur is placed on top of the turn table. A Styrodur pedestal is placed on top of the test table to bring the total table height to 1.5m.

The equipment under test was transmitting while connected to its integral antenna and is placed on a turntable 3 meters from the receive antenna. The receive antenna height is adjusted between 1 and 4 meter height, the turntable is rotated through 360 degrees, and the EUT is manipulated through all orthogonal planes representative of its typical use to achieve the highest reading on the receive spectrum analyzer. Radiated power levels are also investigated with the receive antenna horizontally and vertically polarized. The maximized power level is recorded using the spectrum analyzer "Channel Power" function with the integration band set to the emissions' occupied bandwidth, a RMS detector, RBW = 100kHz, VBW = 300kHz, and a 1 second sweep time over a minimum of 10 sweeps, per the guidelines of KDB 971168 D01 v03r01.

Per the guidance of ANSI/TIA-603-E-2016, a half-wave dipole is then substituted in place of the EUT. For emissions above 1GHz, a horn antenna is substituted in place of the EUT. The substitute antenna is driven by a signal generator with the level of the signal generator being adjusted to obtain the same receive spectrum analyzer level previously recorded from the spurious emission from the EUT. The power of the emission is calculated using the following formula:

 $P_{d [dBm]} = P_{g [dBm]} - cable loss [dB] + antenna gain [dBd/dBi]$

Where, P_d is the dipole equivalent power, P_g is the generator output into the substitution antenna, and the antenna gain is the gain of the substitute antenna used relative to either a half-wave dipole (dBd) or an isotropic source (dBi). The substitute level is equal to $P_{g [dBm]}$ – cable loss [dB].

The calculated P_d levels are then compared to the absolute spurious emission limit of -13dBm which is equivalent to the required minimum attenuation of 43 + 10 log₁₀(Power [Watts]). For Band 7 and 41, the calculated P_d levels are compared to the absolute spurious emission limit of -25dBm which is equivalent to the required minimum attenuation of 55 + 10 log₁₀(Power [Watts]).

All radiated measurements are performed in a chamber that meets the site requirements per ANSI C63.4-2014. Additionally, radiated emissions below 30MHz are also validated on an Open Area Test Site to assert correlation with the chamber measurements per the requirements of KDB 474788 D01.

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4.0 MEASUREMENT UNCERTAINTY

The measurement uncertainties shown below were calculated in accordance with the requirements of ANSI C63.4-2014. All measurement uncertainty values are shown with a coverage factor of k = 2 to indicate a 95% level of confidence. The measurement uncertainty shown below meets or exceeds the U_{CISPR} measurement uncertainty values specified in CISPR 16-4-2 and, thus, can be compared directly to specified limits to determine compliance.

Contribution	Expanded Uncertainty (±dB)
Conducted Bench Top Measurements	1.13
Radiated Disturbance (<1GHz)	4.98
Radiated Disturbance (>1GHz)	5.07
Radiated Disturbance (>18GHz)	5.09

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5.0 TEST EQUIPMENT CALIBRATION DATA

Test Equipment Calibration is traceable to the National Institute of Standards and Technology (NIST). Measurements antennas used during testing were calibrated in accordance to the requirements of ANSI C63.5-2017.

Manufacturer	Model	Description	Cal Date	Cal Interval	Cal Due	Serial Number
-	LTx2	Licensed Transmitter Cable Set	4/9/2020	Annual	4/9/2021	LTx2
-	LTx3	Licensed Transmitter Cable Set	10/30/2019	Annual	10/30/2020	LTx3
Agilent	N9038A	MXE EMI Receiver	7/17/2019	Annual	7/17/2020	MY51210133
Anritsu	MT8821C	Radio Communication Analyzer	3/10/2020	Annual	3/10/2021	6200901190
Anritsu	MS46322A	Vector Network Analyzer	8/19/2019	Annual	8/19/2020	1521001
Anritsu	36585K-2F	Precision Autocal 2-Port	7/16/2019	Annual	7/16/2020	1628014
Com-Power	AL-130	9kHz - 30MHz Loop Antenna	10/10/2019	Biennial	10/10/2021	121034
EMCO	3160-09	Small Horn (18 - 26.5GHz)	8/9/2018	Biennial	8/9/2020	135427
Espec	ESX-2CA	Environmental Chamber	6/13/2019	Annual	6/13/2020	17620
ETS Lindgren	3117	1-18 GHz DRG Horn (Medium)	2/14/2019	Biennial	2/14/2021	125518
ETS Lindgren	3164-08	Quad Ridge Horn Antenna	3/12/2020	Biennial	3/12/2022	128337
ETS-Lindgren	3115	Double Ridged Guide Horn 750MHz - 18GHz	3/12/2020	Biennial	3/12/2022	150693
Mini Circuits	TVA-11-422	RF Power Amp		N/A		QA1317001
Mini-Circuits	SSG-4000HP	Synthesized Signal Generator		N/A		11403100002
Rohde & Schwarz	CMU200	Base Station Simulator		N/A		107826
Rohde & Schwarz	CMU200	Base Station Simulator		N/A		836536/0005
Rohde & Schwarz	CMW500	Radio Communication Tester	8/26/2019	Annual	8/26/2020	100976
Rohde & Schwarz	CMW500	Radio Communication Tester	6/26/2019	Annual	6/26/2020	112347
Rohde & Schwarz	TS-PR26	18-26.5 GHz Pre-Amplifier	11/1/2019	Annual	11/1/2020	100040
Rohde & Schwarz	TC-TA18	Cross-Pol Antenna 400MHz-18GHz	12/12/2018	Biennial	12/12/2020	101058
Rohde & Schwarz	SFUNIT-Rx	Shielded Filter Unit	7/11/2019	Annual	7/11/2020	102134
Rohde & Schwarz	SFUNIT-Rx	Shielded Filter Unit	7/8/2019	Annual	7/8/2020	102133
Sunol	DRH-118	Horn Antenna (1-18GHz)	10/3/2019	Biennial	10/3/2021	A050307
Sunol	DRH-118	Horn Antenna (1-18 GHz)	8/27/2019	Biennial	8/27/2021	A042511

Table 5-1. Test Equipment

Notes:

- 1. For equipment listed above that has a calibration date or calibration due date that falls within the test date range, care was taken to ensure that this equipment was used after the calibration date and before the calibration due date.
- 2. Equipment with a calibration date of "N/A" shown in this list was not used to make direct calibrated measurements.

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6.0 SAMPLE CALCULATIONS

Emission Designator

QPSK Modulation

Emission Designator = 8M62G7D

LTE BW = 8.62 MHz

G = Phase Modulation

7 = Quantized/Digital Info

D = Data transmission, telemetry, telecommand

QAM Modulation

Emission Designator = 8M45W7D

LTE BW = 8.45 MHz W = Amplitude/Angle Modulated 7 = Quantized/Digital Info D = Data transmission, telemetry, telecommand

Spurious Radiated Emission – LTE Band

Example: Middle Channel LTE Mode 2nd Harmonic (1564 MHz)

The average spectrum analyzer reading at 3 meters with the EUT on the turntable was -81.0 dBm. The gain of the substituted antenna is 8.1 dBi. The signal generator connected to the substituted antenna terminals is adjusted to produce a reading of -81.0 dBm on the spectrum analyzer. The loss of the cable between the signal generator and the terminals of the substituted antenna is 2.0 dB at 1564 MHz. So 6.1 dB is added to the signal generator reading of -30.9 dBm yielding -24.80 dBm. The fundamental EIRP was 25.501 dBm so this harmonic was 25.501 dBm - (-24.80).

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7.0 TEST RESULTS

7.1 Summary

Company Name:	Samsung Electronics Co., Ltd.
FCC ID:	<u>A3LSMT978U</u>
FCC Classification:	PCS Licensed Transmitter (PCB)
Mode(s):	<u>LTE</u>

FCC Part Section(s)	Test Description	Test Limit	Test Condition	Test Result	Reference
2.1049	Occupied Bandwidth	N/A			Section 7.2
2.1051 22.917(a) 24.238(a) 27.53(c) 27.53(g) 27.53(h)	Out of Band Emissions	> 43 + 10 log ₁₀ (P[Watts]) at Band Edge and for all out-of- band emissions			Section 7.3, 7.4
27.53(m)	Out of Band Emissions	Undesirable emissions must meet the limits detailed in 27.53(m)			Section 7.3, 7.4
27.53(a)	Out of Band Emissions	Undesirable emissions must meet the limits detailed in 27.53(a)			Section 7.3, 7.4
24.232(d)	Peak-Average Ratio	< 13 dB	CONDUCTED	PASS	Section 7.5
2.1046	Transmitter Conducted Output Power	N/A			See RF Exposure Report
22.917(a) 27.53(h) 27.53(m)	Uplink Carrier Aggregation	Undesirable emissions must meet the limits detailed in 22.917(a), 27.53(h), 27.53(m)			Section 7.6
2.1055 22.355 24.235 27.54	Frequency Stability	< 2.5 ppm (Part 22) and fundamental emissions stay within authorized frequency block (Part 24, 27)			Section 7.10

Table 7-1. Summary of Conducted Test Results

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FCC Part Section(s)	Test Description	Test Limit	Test Condition	Test Result	Reference
22.913(a)(5)	Effective Radiated Power / Equivalent Isotropic Radiated Power (Band 5/26)	< 7 Watts max. ERP			Section 7.7
27.50(b)(10) 27.50(c)(10)	Effective Radiated Power / Equivalent Isotropic Radiated Power (Band 71, 12, 13)	< 3 Watts max. ERP			Section 7.7
24.232(c) 27.50(h)(2)	Equivalent Isotropic Radiated Power (Band 2/25, 7, 41)	< 2 Watts max. EIRP			Section 7.7
27.50(d)(4)	Equivalent Isotropic Radiated Power (Band 4/66)	< 1 Watts max. EIRP		PASS	Section 7.7
2.1053 22.917(a) 24.238(a) 27.53(c) 27.53(g) 27.53(h)	Undesirable Emissions (Band 12, 13, 26/5, 66/4, 25/2)	> 43 + 10 log ₁₀ (P[Watts]) for all out-of-band emissions	RADIATED		Section 7.8
27.53(f)	Undesirable Emissions (Band 13)	< -70 dBW/MHz (for wideband signals) < -80 dBW (for discrete emissions less than 700Hz BW) For all emissions in the band 1559 – 1610 MHz			Section 7.8
27.53(m)	Undesirable Emissions (Band 7, 41)	Undesirable emissions must meet the limits detailed in 27.53(m)			Section 7.8
22.917(a) 27.53(h) 27.53(m)	Uplink Carrier Aggregation	Undesirable emissions must meet the limits detailed in 22.917(a), 27.53(h), 27.53(m)			Section 7.8

 Table 7-2. Summary of Radiated Test Results

Notes:

- 1) All modes of operation and data rates were investigated. The test results shown in the following sections represent the worst case emissions.
- 2) The analyzer plots (Sections 7.2, 7.3, 7.4, 7.5) were all taken with a correction table loaded into the analyzer. The correction table was used to account for the losses of the cables, directional couplers, and attenuators used as part of the system to maintain a link between the call box and the EUT at all frequencies of interest.
- 3) All antenna port conducted emissions testing was performed on a test bench with the antenna port of the EUT connected to the spectrum analyzer through calibrated cables, attenuators, and couplers.
- 4) For conducted spurious emissions, automated test software was used to measure emissions and capture the corresponding plots necessary to show compliance. The measurement software utilized is PCTEST "LTE Automation," Version 5.3.

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7.2 Occupied Bandwidth

Test Overview

The occupied bandwidth, that is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers radiated are each equal to 0.5 percent of the total mean power radiated by a given emission shall be measured. All modes of operation were investigated and the worst case configuration results are reported in this section.

Test Procedure Used

KDB 971168 D01 v03r01 - Section 4.2

Test Settings

- 1. The signal analyzer's automatic bandwidth measurement capability was used to perform the 99% occupied bandwidth and the 26dB bandwidth. The bandwidth measurement was not influenced by any intermediate power nulls in the fundamental emission.
- 2. RBW = 1 5% of the expected OBW
- 3. VBW \geq 3 x RBW
- 4. Detector = Peak
- 5. Trace mode = max hold
- 6. Sweep = auto couple
- 7. The trace was allowed to stabilize
- 8. If necessary, steps 2 7 were repeated after changing the RBW such that it would be within
 - 1-5% of the 99% occupied bandwidth observed in Step 7

Test Setup

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



Figure 7-1. Test Instrument & Measurement Setup

Test Notes

None.

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Band 71



Plot 7-1. Occupied Bandwidth Plot (Band 71 - 5.0MHz QPSK - Full RB Configuration)



Plot 7-2. Occupied Bandwidth Plot (Band 71 - 5.0MHz 16-QAM - Full RB Configuration)

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Plot 7-3. Occupied Bandwidth Plot (Band 71 - 5.0MHz 64-QAM - Full RB Configuration)



Plot 7-4. Occupied Bandwidth Plot (Band 71 - 5.0MHz 256-QAM - Full RB Configuration)

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Plot 7-5. Occupied Bandwidth Plot (Band 71 - 10.0MHz QPSK - Full RB Configuration)



Plot 7-6. Occupied Bandwidth Plot (Band 71 - 10.0MHz 16-QAM - Full RB Configuration)

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Plot 7-7. Occupied Bandwidth Plot (Band 71 - 10.0MHz 64-QAM - Full RB Configuration)



Plot 7-8. Occupied Bandwidth Plot (Band 71 - 10.0MHz 256-QAM - Full RB Configuration)

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Keysight Spectrum Analyzer - Docupied BW				
2 RL RF S0 0 DC	RFGain:Low #Atter	SENSE:INT r Free; 680.500000 MHz Free Run Avg Hold: 10 h: 36 dB	0/100 Radio Std: None Radio Device: BTS	Trace/Detector
10 dB/div Ref 40.00 dBm				
30.0				Clear Write
i0.0	from the second	and the second second second		
Cat				Averag
200 manual in all manual	1	\	and an and a farmer of the states of	
30.0 million has a constant			an and a start of the second start of the seco	
40.0 50.0				Max Hold
Center 680.5 MHz Res BW 360 kHz	#	VBW 1.1 MHz	Span 37.5 MH Sweep 1 m	z S Min Hole
Occupied Bandwidth	495 MH-	Total Power	31.7 dBm	Detecto
Transmit Freq Error	-415 Hz	% of OBW Power	99.00 %	Auto Ma
x dB Bandwidth	14.77 MHz	x dB	-26.00 dB	
				A
so			STATUS	

Plot 7-9. Occupied Bandwidth Plot (Band 71 - 15.0MHz QPSK - Full RB Configuration)



Plot 7-10. Occupied Bandwidth Plot (Band 71 - 15.0MHz 16-QAM - Full RB Configuration)

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KL 1 18- 150 D DC	#FGain:Low #Atter	r Freq: 680.500000 MHz FreeRun Avg[Hold: n: 36 dB	100/100 Ra	930:54 PRMay 05, 2020 Idio Std: None Idio Device: BTS	Trace/Detector
10 dB/div Ref 40.00 dB	m 	manut			Clear Write
Cox Cox 20 0			annon -		Average
6.0 M.M.M.M.M.M.M. 6.0 90.0				Minumulana	Max Hold
Center 680.5 MHz Res BW 360 kHz Occupied Bandwid	#	VBW 1.1 MHz Total Power	29.7 d	Span 37.5 MHz Sweep 1 ms Bm	Min Hole
1 Transmit Freq Error x dB Bandwidth	3.521 MHz 4.198 kHz 14.82 MHz	% of OBW Powe	er 99.00) % dB	Detecto Peaki Auto <u>Mar</u>
			20.00		

Plot 7-11. Occupied Bandwidth Plot (Band 71 - 15.0MHz 64-QAM - Full RB Configuration)



Plot 7-12. Occupied Bandwidth Plot (Band 71 - 15.0MHz 256-QAM - Full RB Configuration)

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Plot 7-13. Occupied Bandwidth Plot (Band 71 - 20.0MHz QPSK - Full RB Configuration)



Plot 7-14. Occupied Bandwidth Plot (Band 71 - 20.0MHz 16-QAM - Full RB Configuration)

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Plot 7-15. Occupied Bandwidth Plot (Band 71 - 20.0MHz 64-QAM - Full RB Configuration)



Plot 7-16. Occupied Bandwidth Plot (Band 71 - 20.0MHz 256-QAM - Full RB Configuration)

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NR Band n71



Plot 7-17. Occupied Bandwidth Plot (n71 5MHz BPSK-DFT-s-OFDM- Full RB Configuration)



Plot 7-18. Occupied Bandwidth Plot (n71 5MHz QPSK-CP-OFDM - Full RB Configuration)

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Plot 7-19. Occupied Bandwidth Plot (n71 5MHz 16QAM-CP-OFDM - Full RB Configuration)



Plot 7-20. Occupied Bandwidth Plot (n71 5MHz 64QAM-CP-OFDM- Full RB Configuration)

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2 RL ≈F 502 DC	Connec Cent #IFGein:Low #Atte	SENSE:INT er Freq: 680.500000 MHz Free Run Avg H n: 36 dB	ALIGN AUTO [01:4 Radi old: 100/100 Radi	6:10 AM May 21, 2020 o Std: None o Device: BTS	Trace/Detector
10 dBydiv Ref 30.00 dBm					Clear Write
2010 2010 2010 2010			maria	martha	Average
40 0 50 0 60 ()					Max Hold
Center 680.500 MHz Res BW 120 kHz		/BW 1.2 MHz	Sp	an 12.50 MHz Sweep 1 ms	Min Hold
Occupied Bandwidt 4. Transmit Freq Error x dB Bandwidth	h 5323 MHz 10.872 kHz 5.299 MHz	Total Power % of OBW Po x dB	28.9 dBr wer 99.00 9 -26.00 d	n % B	Detector Peak≯ Auto <u>Man</u>
150			STATUS		

Plot 7-21. Occupied Bandwidth Plot (n71 5MHz 256QAM-CP-OFDM- Full RB Configuration)



Plot 7-22. Occupied Bandwidth Plot (n71 10MHz BPSK-DFT-s-OFDM - Full RB Configuration)

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Keysight Spectrum Analyzer - Occupied BV	v coaster	CENCE HIT	ALLON AUTO	01-58-22 AM May 21, 2020	0 0 0
	#IFGain:Low #Atte	Free Run Avg H n: 36 dB	old:>100/100	adio Std: None	Trace/Detector
10 dBydiv Ref 30.00 dBr	n	·····			Clear Write
200 Malmadon Maran			Junean	~~~~	Average
40 (t) 53 (t) 50 (t)					Max Hold
Center 680.50 MHz Res BW 240 kHz	- 44	#VBW 750 kHz		Span 25.00 MHz Sweep 1 ms	Min Hol
Occupied Bandwidt 9. Transmit Freg Error	h 0267 MHz -185.57 kHz	Total Power % of OBW Po	32.1 d wer 99.0	IBm 0 %	Detecto Peak Auto Ma
x dB Bandwidth	9.922 MHz	x dB	-26.00	dB	
50)			STATUS		

Plot 7-23. Occupied Bandwidth Plot (n71 10MHz QPSK-CP-OFDM - Full RB Configuration)



Plot 7-24. Occupied Bandwidth Plot (n71 10MHz 16QAM-CP-OFDM - Full RB Configuration)

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N RL RF SUD DC	CORREC Cente Trig: #IFGein:Low #Atte	sense:int Freq: 680,500000 MHz Free Run Avg Ho n: 36 dB	ALIGN AUTO	Radio Dev	M May 21, 2026 I: None vice: BTS	Trace	Detector
10 dB/div Ref 30.00 dBn	n					c	lear Write
200 200 200 perlypy where the			World World	Mm	muh		Average
40 () 53 0 50 0							Max Hold
Center 680.50 MHz Res BW 240 kHz	#	VBW 750 kHz		Span 2 Swi	25.00 MHz eep 1 ms		Min Hold
Occupied Bandwidt 9. Transmit Freq Error x dB Bandwidth	h 0154 MHz -198.15 kHz 10.06 MHz	Total Power % of OBW Pov x dB	30.7 wer 99 -26 <i>.</i>	/ dBm 0.00 % 00 dB		Auto	Detector Peak) <u>Mar</u>
50			STATLE	5		-	_

Plot 7-25. Occupied Bandwidth Plot (n71 10MHz 64QAM-CP-OFDM- Full RB Configuration)



Plot 7-26. Occupied Bandwidth Plot (n71 10MHz 256QAM-CP-OFDM- Full RB Configuration)

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Plot 7-27. Occupied Bandwidth Plot (n71 15MHz BPSK-DFT-s-OFDM - Full RB Configuration)



Plot 7-28. Occupied Bandwidth Plot (n71 15MHz QPSK-CP-OFDM - Full RB Configuration)

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	#FGein:Low	enter Freq: 680.500000 M rig: Freq: 680. Avg Atten: 36 dB	Hz Hold: 100/100	Radio Devi	None ce: BTS	Trace/Detector
						Clear Write
1.00 100 200			formal	MULAN	- A.B.	Average
10 0 46 0 57 0						Max Hold
Center 680.50 MHz Res BW 360 kHz		#VBW 1.1 MHz	- 2	Span 37 Swe	7.50 MHz ep 1 ms	Min Hole
Cccupied Bandwidt 13 Transmit Freq Error x dB Bandwidth	n 5.481 MHz -350.61 kHz 14.60 MHz	x dB	r 3 Power -2	99.00 % 26.00 dB		Detecto Peaki Auto <u>Mar</u>
50			STU	WILS-		

Plot 7-29. Occupied Bandwidth Plot (n71 15MHz 16QAM-CP-OFDM - Full RB Configuration)



Plot 7-30. Occupied Bandwidth Plot (n71 15MHz 64QAM-CP-OFDM- Full RB Configuration)

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0 RL RF 50 0 DC	CORREC #IFGein:Low Cente Trig: I #Atter	sEMSESTINT r Freq: 680.500000 MHz Free Run Avg Hold: n: 36 dB	ALIGN AUTO 102:16:09/ Radio Sto >100/100 Radio De	AM May 21, 2020 i: None vice: BTS	Trace/Detector
					Clear Write
200 Junhart Minue			Internet		Average
40.0 53.0 53.0					Max Hold
Center 680.50 MHz Res BW 360 kHz	#	VBW 1.1 MHz	Span Sw	37.50 MHz eep 1 ms	Min Hold
Occupied Bandwidt 13 Transmit Freq Error x dB Bandwidth	h 3. 544 MHz -347.36 kHz 14.72 MHz	Total Power % of OBW Powe x dB	29.0 dBm er 99.00 % -26.00 dB		Detector Peak Auto <u>Mar</u>
50			STATUS		

Plot 7-31. Occupied Bandwidth Plot (n71 15MHz 256QAM-CP-OFDM- Full RB Configuration)



Plot 7-32. Occupied Bandwidth Plot (n71 20MHz BPSK-DFT-s-OFDM - Full RB Configuration)

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Plot 7-33. Occupied Bandwidth Plot (n71 20MHz QPSK-CP-OFDM - Full RB Configuration)



Plot 7-34. Occupied Bandwidth Plot (n71 20MHz 16QAM-CP-OFDM - Full RB Configuration)

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Plot 7-35. Occupied Bandwidth Plot (n71 20MHz 64QAM-CP-OFDM- Full RB Configuration)



Plot 7-36. Occupied Bandwidth Plot (n71 20MHz 256QAM-CP-OFDM- Full RB Configuration)

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Band 12



Plot 7-37. Occupied Bandwidth Plot (Band 12 - 1.4MHz QPSK - Full RB Configuration)



Plot 7-38. Occupied Bandwidth Plot (Band 12 - 1.4MHz 16-QAM - Full RB Configuration)

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Plot 7-39. Occupied Bandwidth Plot (Band 12 - 1.4MHz 64-QAM - Full RB Configuration)



Plot 7-40. Occupied Bandwidth Plot (Band 12 - 1.4MHz 256-QAM - Full RB Configuration)

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Plot 7-41. Occupied Bandwidth Plot (Band 12 - 3.0MHz QPSK - Full RB Configuration)



Plot 7-42. Occupied Bandwidth Plot (Band 12 - 3.0MHz 16-QAM - Full RB Configuration)

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Plot 7-43. Occupied Bandwidth Plot (Band 12 - 3.0MHz 64-QAM - Full RB Configuration)



Plot 7-44. Occupied Bandwidth Plot (Band 12 - 3.0MHz 256-QAM - Full RB Configuration)

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RL] № S0 D DC.]	RIFGain:Low	SENSE:INT Center Freq: 707.50 Trig: Free Run #Atten: 36 dB	0000 MHz Avg Hold: 100/10	09:59:46 P Radio Std: 00 Radio Devi	May 05, 2020 None ice: BTS	Trace/Detector
10 dB/div Ref 35.00 dBm			1			
150 500			my			Clear Write
500 				la .		Average
-350 March 4				www.m.h.h	home	Max Hold
Center 707.5 MHz Res BW 120 kHz		#VBW 3901	kHz	Span Swe	12.5 MHz ep 1 ms	Min Hold
Occupied Bandwidth 4.4	1 1966 MH	Total F	Power	31.3 dBm		Detecto
Transmit Freq Error x dB Bandwidth	-6.048 kH 4.980 MH	lz % of O z x dB	BW Power	99.00 % -26.00 dB	-	Auto Mar
MSG			5	TATUS	_	_

Plot 7-45. Occupied Bandwidth Plot (Band 12 - 5.0MHz QPSK - Full RB Configuration)



Plot 7-46. Occupied Bandwidth Plot (Band 12 - 5.0MHz 16-QAM - Full RB Configuration)

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RL 1 RF 1300-DC1	Cente #FGain:Low #Atten	sense: 107.500000 MHz Free Run Avg Hold: 11 n: 36 dB	00/100 Radio De	Vice: BTS	Trace/Detector
10 dB/div Ref 35.00 dBr	n	mannen			Clear Write
500 	n.				Average
350 M			- marine a	natura	Max Hold
Center 707.5 MHz Res BW 120 kHz Occupied Bandwidt	#	VBW 390 kHz Total Power	Span Sw 29.4 dBm	12.5 MHz eep 1 ms	Min Hole
4. Transmit Freq Error x dB Bandwidth	5121 MHz -13.088 kHz 4.948 MHz	% of OBW Power x dB	99.00 % -26.00 dB		Detecto Peaki Auto <u>Mar</u>
50			STATUS		_

Plot 7-47. Occupied Bandwidth Plot (Band 12 - 5.0MHz 64-QAM - Full RB Configuration)



Plot 7-48. Occupied Bandwidth Plot (Band 12 - 5.0MHz 256-QAM - Full RB Configuration)

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Plot 7-49. Occupied Bandwidth Plot (Band 12 - 10.0MHz QPSK - Full RB Configuration)



Plot 7-50. Occupied Bandwidth Plot (Band 12 - 10.0MHz 16-QAM - Full RB Configuration)

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Keysight Spectrum Analyzer - Docupied Bi	CORREC 1	SENSE INT			18:14:44	M May 05, 2020	6
	#FGain:Low	Center Freq: 707.5 Trig: Free Run #Atten: 36 dB	Avg Hold:	100/100	Radio Sto Radio De	i: None vice: BTS	Trace/Detector
10 dB/div Ref 30.00 dBr	n		- 11				
30.0 10.0	Jarman	hay mental and	mining				Clear Write
15.0							Average
-100 wayne mar allen gan ar	rset.			mark ale	mennenty	mon	
50.0 50.0							Max Hold
Center 707.5 MHz Res BW 240 kHz		#VBW 750) kHz		Spa	an 25 MHz eep 1 ms	Min Hold
Occupied Bandwid 8.	th 9739 MH	Total	Power	29.5	dBm		Detecto
Transmit Freq Error x dB Bandwidth	-14.314 ki 9.881 Mi	Hz % of (Hz xdB	OBW Powe	-26.0	.00 % 00 dB		Auto <u>Mar</u>
MSG				STATUS			

Plot 7-51. Occupied Bandwidth Plot (Band 12 - 10.0MHz 64-QAM - Full RB Configuration)



Plot 7-52. Occupied Bandwidth Plot (Band 12 - 10.0MHz 256-QAM - Full RB Configuration)

FCC ID: A3LSMT978U		MEASUREMENT REPORT (CERTIFICATION)	MSUNG	Approved by: Quality Manager
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Band 13



Plot 7-53. Occupied Bandwidth Plot (Band 13 - 5.0MHz QPSK - Full RB Configuration)



Plot 7-54. Occupied Bandwidth Plot (Band 13 - 5.0MHz 16-QAM - Full RB Configuration)

FCC ID: A3LSMT978U		MEASUREMENT REPORT (CERTIFICATION)	MSUNG	Approved by: Quality Manager
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Plot 7-55. Occupied Bandwidth Plot (Band 13 - 5.0MHz 64-QAM - Full RB Configuration)



Plot 7-56. Occupied Bandwidth Plot (Band 13 - 5.0MHz 256-QAM - Full RB Configuration)

FCC ID: A3LSMT978U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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Plot 7-57. Occupied Bandwidth Plot (Band 13 - 10.0MHz QPSK - Full RB Configuration)



Plot 7-58. Occupied Bandwidth Plot (Band 13 - 10.0MHz 16-QAM - Full RB Configuration)

FCC ID: A3LSMT978U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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Plot 7-59. Occupied Bandwidth Plot (Band 13 - 10.0MHz 64-QAM - Full RB Configuration)



Plot 7-60. Occupied Bandwidth Plot (Band 13 - 10.0MHz 256-QAM - Full RB Configuration)

FCC ID: A3LSMT978U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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Band 26/5



Plot 7-61. Occupied Bandwidth Plot (Band 26/5 - 1.4MHz QPSK - Full RB Configuration)



Plot 7-62. Occupied Bandwidth Plot (Band 26/5 - 1.4MHz 16-QAM - Full RB Configuration)

FCC ID: A3LSMT978U	PCTEST'	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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Keysight Spectrum Analyzer - Docupind BV	CORREC #IFGain:Low	SENSE:DNT Center Freq: 836.500 Trig: Free Run #Atten: 36 dB	000 MHz Avg Hold: 1	10:48:11 Radio Str 00/100 Radio De	PMMay 05, 2020 d: None wice: BTS	Trace/Detector
10 dB/div Ref 40.00 dBm Log 30.0	1	man man and a second				Clear Write
100 0.20 -10.0 -20 0						Average
200 0 40.0 50.0	AV		-Vu	Lammalaar	uturilikn	Max Hold
Center 836.5 MHz Res BW 33 kHz	h	#VBW 110 k	Hz	Spa Sweep 27.9 dBm	n 3.5 MHz 5.867 ms	Min Hold
Transmit Freq Error x dB Bandwidth	1.394 kl 1.394 kl 1.246 Ml	Hz % of Of Hz x dB	BW Power	99.00 % -26.00 dB		Detector Peak≯ Auto <u>Man</u>
MSG				STATUS		

Plot 7-63. Occupied Bandwidth Plot (Band 26/5 - 1.4MHz 64-QAM - Full RB Configuration)



Plot 7-64. Occupied Bandwidth Plot (Band 26/5 - 1.4MHz 256-QAM - Full RB Configuration)

FCC ID: A3LSMT978U		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
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Plot 7-65. Occupied Bandwidth Plot (Band 26/5 - 3.0MHz QPSK - Full RB Configuration)



Plot 7-66. Occupied Bandwidth Plot (Band 26/5 - 3.0MHz 16-QAM - Full RB Configuration)

FCC ID: A3LSMT978U		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
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Plot 7-67. Occupied Bandwidth Plot (Band 26/5 - 3.0MHz 64-QAM - Full RB Configuration)



Plot 7-68. Occupied Bandwidth Plot (Band 26/5 - 3.0MHz 256-QAM - Full RB Configuration)

FCC ID: A3LSMT978U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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Keysight Spectrum Analyzer - Decupied BW	contractor 1	1. cet	and the second				ALL		0 4 2
	#FGain:Low	Center Fro Trig: Free #Atten: 36	eq: 836.500 Run 5 dB	Avg[Hold	: 100/100	Radio St Radio De	d: None wice: BTS	Trace	/Detector
10 dB/div Ref 35.00 dBm			_	-		-			
250 150		~~~~~	an an an	manney				C	lear Write
500 150 250 - Andrew Marine Marine Marine	لي ال				hum	man	man		Average
36.0 45.9 55.0									Max Hold
Center 836.5 MHz Res BW 120 kHz		#VB	W 390 k	KHZ		Spar Sw	12.5 MHz eep 1 ms		Min Hol
Occupied Bandwidth 4.5	5020 MH	łz	Total P	ower	31.	5 dBm			Detecto
Transmit Freq Error x dB Bandwidth	-2.376 k 5.042 M	(Hz Hz	% of Of x dB	BW Powe	er 9 -26	9.00 % .00 dB		Auto	Mar
rsg					STATU	15		-	

Plot 7-69. Occupied Bandwidth Plot (Band 26/5 - 5.0MHz QPSK - Full RB Configuration)



Plot 7-70. Occupied Bandwidth Plot (Band 26/5 - 5.0MHz 16-QAM - Full RB Configuration)

FCC ID: A3LSMT978U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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KL I Nº ISUD-DET	RFGain:Low #Atte	Free Run Avg Hold: n: 36 dB	Radio S 100/100 Radio D	evice: BTS	Trace/Detector
10 dB/div Ref 35.00 dBn	• 	wonner			Clear Write
500 -150 -250 p. Mary barry www.	M		humman	mh.m.	Average
45.0 000 000 000 000 000 000 000 000 000					Max Hold
Center 836.5 MHz Res BW 120 kHz	;	VBW 390 kHz	Spa Sv	n 12.5 MHz veep 1 ms	Min Hold
4. Transmit Freq Error x dB Bandwidth	n 5212 MHz -13.931 kHz 5.002 MHz	% of OBW Powe x dB	r 99.00 % -26.00 dB		Detecto Peak Auto <u>Mar</u>
so			STATUS		

Plot 7-71. Occupied Bandwidth Plot (Band 26/5 - 5.0MHz 64-QAM - Full RB Configuration)



Plot 7-72. Occupied Bandwidth Plot (Band 26/5 - 5.0MHz 256-QAM - Full RB Configuration)

FCC ID: A3LSMT978U	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
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Keysight Spectrum Analyzer - Discupied BW	A	100 C	1000		6 6 0
20 RL RF SOD DC	CORREC Cente #IFGain:Low #Atte	sense:bit ir Freq: 836.500000 MHz Free Run Avg[Hol n: 36 dB	d: 100/100 Radio S Radio L Radio L	2 PMMay 05, 2020 itd: None Device: BTS	Trace/Detector
10 dB/div Ref 30.00 dBm					
10.0	forman	monorm			Clear Write
0.00 10.0 20.0 30.0	- /		hann	and man	Average
-86.0 50.0 60.0					Max Hold
Center 836.5 MHz Res BW 240 kHz	#	VBW 750 kHz	SI S	oan 25 MHz weep 1 ms	Min Hold
Occupied Bandwidth 9.0	h 0253 MHz	Total Power	31.7 dBm		Detector
Transmit Freq Error x dB Bandwidth	29 Hz 9.805 MHz	% of OBW Pov x dB	ver 99.00 % -26.00 dB		Auto Mar
MSG			STATUS		

Plot 7-73. Occupied Bandwidth Plot (Band 26/5 - 10.0MHz QPSK - Full RB Configuration)



Plot 7-74. Occupied Bandwidth Plot (Band 26/5 - 10.0MHz 16-QAM - Full RB Configuration)

FCC ID: A3LSMT978U	PCTEST	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
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Plot 7-75. Occupied Bandwidth Plot (Band 26/5 - 10.0MHz 64-QAM - Full RB Configuration)



Plot 7-76. Occupied Bandwidth Plot (Band 26/5 - 10.0MHz 256-QAM - Full RB Configuration)

FCC ID: A3LSMT978U		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
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KL] № [50 D - DC]	Cente #FGain:Low #Atter	sense:cont r Freq: 836.500000 MHz Free Run Avg[Hold: 10 n: 36 dB	0/100 Radio Device: BTS	Trace/Detector
10 dB/div Ref 40.00 dBn	n			
30.0	And 200 May 194 194 194 194 194 194 194 194 194 194			Clear Write
(0.0 Gai				
100 common parts frist and	street		and an and a state of the state	Averag
0.0 0.0 0.0				Max Hol
Center 836.5 MHz Res BW 360 kHz	#	VBW 1.1 MHz	Span 37.5 M Sweep 1 n	Hz ns Min Hol
Occupied Bandwidt	^h 3.479 MHz	Total Power	31.7 dBm	Detecto
Transmit Freq Error x dB Bandwidth	-1.231 kHz 14.72 MHz	% of OBW Power x dB	99.00 % -26.00 dB	Peak Auto <u>Ma</u>
			STATIES	

Plot 7-77. Occupied Bandwidth Plot (Band 26 - 15.0MHz QPSK - Full RB Configuration)



Plot 7-78. Occupied Bandwidth Plot (Band 26 - 15.0MHz 16-QAM - Full RB Configuration)

FCC ID: A3LSMT978U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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AL] RE [SOD DC]	CORSEC Cente #FGain:Low #Atte	SENSE:INT Pr Freq: 836.500000 MHz Free Run Avg Hold n: 36 dB	d: 100/100	Radio Std Radio Dev	MMay 05, 2020 : None rice: BTS	Trace/Detector
10 dB/div Ref 40.00 dBm						
300	-	mound				Clear Write
600 100						Averag
200 26.0 <mark>ml - Maxan Maxan M</mark> 20.0	กส		humit	innuda	and have not	Max Hold
Center 836.5 MHz Res BW 360 kHz	#	VBW 1.1 MHz		Span Swe	37.5 MHz ep 1 ms	Min Hole
Occupied Bandwidtl 13	n .473 MHz	Total Power	29.4	dBm		Detecto
Transmit Freq Error x dB Bandwidth	-3.857 kHz 14.81 MHz	% of OBW Pow x dB	er 99 -26.	0.00 % 00 dB		Auto Mar
50			STATU	5		

Plot 7-79. Occupied Bandwidth Plot (Band 26 - 15.0MHz 64-QAM - Full RB Configuration)



Plot 7-80. Occupied Bandwidth Plot (Band 26 - 15.0MHz 256-QAM - Full RB Configuration)

FCC ID: A3LSMT978U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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NR Band n5



Plot 7-81. Occupied Bandwidth Plot (n5 5MHz BPSK-DFT-s-OFDM - Full RB Configuration)



Plot 7-82. Occupied Bandwidth Plot (n5 5MHz QPSK-CP-OFDM - Full RB Configuration)

FCC ID: A3LSMT978U		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
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	#IFGain:Low #At	ter Freq: 836.500000 MHz ; Free Run AvgiHold: 10 ten: 36 dB	Radio Std: None Radio Device: BTS	Trace/Detector
10 dB/div Ref 40.00 dBr	n			Clear Write
10.0 10.0 20.0			march	Averag
200				Max Hol
Center 836.500 MHz Res BW 120 kHz		#VBW 50 MHz	Span 12.50 MHz Sweep 1 ms	Min Hol
4. Transmit Freq Error x dB Bandwidth	m 5342 MHz -17.809 kHz 5.278 MHz	% of OBW Power x dB	99.00 % -26.00 dB	Detecto Peaki Auto <u>Ma</u> i
50			STATUS	

Plot 7-83. Occupied Bandwidth Plot (n5 5MHz 16QAM-CP-OFDM - Full RB Configuration)



Plot 7-84. Occupied Bandwidth Plot (n5 5MHz 64QAM-CP-OFDM- Full RB Configuration)

FCC ID: A3LSMT978U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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a RL = = 50 2 C	#FGain:Low	SENSE:[PIT] Center Freq: 836.500000 MHz Trig: Freq Run Avg Ho #Atten: 36 dB	ALIGN AUTO	Radio Device: BTS	Trace/Detector
		~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~			Clear Write
160 -330 -360			\		Average
100 500 600					Max Hold
Center 836.500 MHz Res BW 120 kHz		#VBW 50 MHz		Span 12.50 MHz Sweep 1 ms	Min Hole
Occupied Bandwidt 4. Transmit Freq Error x dB Bandwidth	h 5080 МН; 1.879 кн 5.247 мн	Total Power Z z % of OBW Po z x dB	28.0 wer 99 -26,	6 dBm 9.00 % .00 dB	Detecto Peakl Auto <u>Mar</u>
50			STATU	5	

Plot 7-85. Occupied Bandwidth Plot (n5 5MHz 256QAM-CP-OFDM- Full RB Configuration)



Plot 7-86. Occupied Bandwidth Plot (n5 10MHz BPSK-DFT-s-OFDM - Full RB Configuration)

FCC ID: A3LSMT978U		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
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RLT RF SEΩ DC	AFGain:Low	SENSE INT Center Freq: 836.500 Trig: Free Run #Atten: 36 dB	000 MHz Avg[Hold: 1	Radio S 00/100 Radio L	5 AM May 21, 2020 Std: None Device: BTS	Trace/Detector
10 dB/div Ref 40.00 dBn	n					
30.0		~				Clear Write
10.0						Average
300 mmmmmm 000			/	man for the all	Marmen	_
40.0						Max Hold
Center 836.50 MHz Res BW 240 kHz		#VBW 750 k	Hz	Spar S	veep 1 ms	Min Hold
Occupied Bandwidt 9.	^h 0236 MH	Total P	ower	31.7 dBm		Detecto
Transmit Freq Error x dB Bandwidth	-188.53 ki 9.934 Mi	Hz % of OE Hz x dB	BW Power	99.00 % -26.00 dB		Auto <u>Mar</u>
160			_	STATUS		

Plot 7-87. Occupied Bandwidth Plot (n5 10MHz QPSK-CP-OFDM - Full RB Configuration)



Plot 7-88. Occupied Bandwidth Plot (n5 10MHz 16QAM-CP-OFDM - Full RB Configuration)

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5L1 32 30 000	#FGain:Low	Center Freq: 836.500 Trig: Free Run #Atten: 36 dB	Avg Hold:	100/100	Radio Der	vice: BTS	Trac	e/Detector
	n Januar	••••••	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~					Clear Write
100 200 unan utan mar				hermer	when	men		Average
400 600								Max Hold
Center 836.50 MHz Res BW 240 kHz		#VBW 750	KHZ	20.2	Span 2 Sw	25.00 MHz eep 1 ms		Min Hold
9. Transmit Freq Error x dB Bandwidth	n 0053 MH2 -200.18 kH 10.05 MH	z % of O z x dB	BW Powe	-26.0	00 % 00 dB		Auto	Detecto Peak Mar
				STATUS			_	_

Plot 7-89. Occupied Bandwidth Plot (n5 10MHz 64QAM-CP-OFDM- Full RB Configuration)



Plot 7-90. Occupied Bandwidth Plot (n5 10MHz 256QAM-CP-OFDM- Full RB Configuration)

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	#IFGain:Low #A	nter Freq: 836.500000 MHz g: Freq Run Avg Hold: 1 itten: 36 dB	Radio Device: BTS	Trace/Detector
	n Jaman	mansahsan		ClearWrite
	$\mathcal{A}$		·····	Averag
10 20 20				Max Hol
enter 836.50 MHz es BW 360 kHz		#VBW 1.1 MHz	Span 37.50 MHz Sweep 1 ms	Min Hol
Occupied Bandwidt 13 Transmit Freq Error	h 3.497 MHz -373.56 kHz	Total Power % of OBW Power	32.7 dBm	Detecto Peak Auto <u>Ma</u>
x dB Bandwidth	14.57 MHz	x dB	-26.00 dB	
a			STATUS	

Plot 7-91. Occupied Bandwidth Plot (n5 15MHz BPSK-DFT-s-OFDM - Full RB Configuration)



Plot 7-92. Occupied Bandwidth Plot (n5 15MHz QPSK-CP-OFDM - Full RB Configuration)

FCC ID: A3LSMT978U		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
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Clear Wri     Averation     Clear Wri     Averation     Span 37.50 MHz     Res BW 360 kHz     #VBW 1.1 MHz     Span 37.50 MHz     Sweep 1 ms     Min Ho     Occupied Bandwidth     13.471 MHz     Transmit Freq Error     -358.39 kHz   % of OBW Power     y of OBW Power   99.00 %     x dB Bandwidth   14.62 MHz   x dB     Auto   Min		Cen Trig #IFGain:Low #Att	ster Freq: 836.500000 MHz Free Run Avg[Hold: 1 ten: 36 dB	Radio Std: None Radio Device: BTS	Trace/Detector
Average Average Average Average Average Average Average Max Ho Span 37.50 MHz Sweep 1 ms Occupied Bandwidth 13.471 MHz Transmit Freq Error x dB Bandwidth 14.62 MHz x dB Average Average Average Max Ho Span 37.50 MHz Sweep 1 ms 31.2 dBm Detect Peag Auto Max Ho Max Ho	10 dB/div Ref 40.00 dBn	n ministration	mann		ClearWrite
Max Ho Center 836.50 MHz Res BW 360 kHz #VBW 1.1 MHz Span 37.50 MHz System 1 ms Occupied Bandwidth Total Power 31.2 dBm 13.471 MHz Transmit Freq Error -358.39 kHz % of OBW Power 99.00 % x dB Bandwidth 14.62 MHz x dB -26.00 dB	0.00 10.0			h	Averag
Center 836.50 MHz Res BW 360 kHz #VBW 1.1 MHz Span 37.50 MHz Sweep 1 ms Occupied Bandwidth Total Power 31.2 dBm 13.471 MHz Transmit Freq Error -358.39 kHz % of OBW Power 99.00 % x dB Bandwidth 14.62 MHz x dB -26.00 dB	20 0 40 0 5010				Max Hole
Occupied Bandwidth Total Power 31.2 dBm   13.471 MHz Detect   Transmit Freq Error -358.39 kHz % of OBW Power 99.00 %   x dB Bandwidth 14.62 MHz x dB -26.00 dB	Center 836.50 MHz Res BW 360 kHz		#VBW 1.1 MHz	Span 37.50 MH Sweep 1 m	z S Min Hol
	Cccupied Bandwidt 13 Transmit Freq Error x dB Bandwidth	n 3.471 MHz -358.39 kHz 14.62 MHz	% of OBW Power x dB	99.00 % -26.00 dB	Detecto Peaki Auto <u>Ma</u> i

Plot 7-93. Occupied Bandwidth Plot (n5 15MHz 16QAM-CP-OFDM - Full RB Configuration)



Plot 7-94. Occupied Bandwidth Plot (n5 15MHz 64QAM-CP-OFDM- Full RB Configuration)

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B 20100 D 55 20 00 d D	#IFGain:Low #Att	en: 36 dB	actan auto	Radio Device: BTS	Trac	e/Detector
						Clear Write
300 300				mund		Average
100 800 800						Max Hold
Center 836.50 MHz Res BW 360 kHz		#VBW 1.1 MHz		Span 37.50 MH Sweep 1 m	z s	Min Hold
Occupied Bandwidt 13 Transmit Freq Error x dB Bandwidth	th 3.536 MHz -352.16 kHz 14.66 MHz	Total Power % of OBW Pow x dB	28.5 er 99. -26.0	dBm 00 % 0 dB	Auto	Detecto Peak Mar
40			STATIS			

Plot 7-95. Occupied Bandwidth Plot (n5 15MHz 256QAM-CP-OFDM- Full RB Configuration)



Plot 7-96. Occupied Bandwidth Plot (n5 20MHz BPSK-DFT-s-OFDM - Full RB Configuration)

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0 dB/dlv   Ref 35.00 dBm     0 dB/dlv   Ref 35.00 dBm     0 dB/dlv   Clear Write     0 dB/dlv   Average     0 dB/dlv   Max Hol     0 dB/dlv   Span 50.00 MHz     0 dB/dlv   #VBW 1.5 MHz     Span 50.00 MHz   Max Hol     Max Hol   Max Hol     0 ccupied Bandwidth   Total Power   32.1 dBm     17.988 MHz   Transmit Freq Error   -568.22 kHz   % of OBW Power   99.00 %     x dB Bandwidth   19.34 MHz   x dB   -26.00 dB   Max		#FGain:Low	Center Freq: 836.50 Trig: Free Run #Atten: 36 dB	Avg Hold:>	100/100 R	adio Std: N adio Devic	e: BTS	Trace	Detector
Average Average Max Hol Center 836.50 MHz Ever BW 470 kHz Transmit Freq Error x dB Bandwidth 19.34 MHz x dB Bandwidth 19.34 MHz 19.34 MHz	00 dB/div Ref 35.00 dBm	maine						(	lear Write
Image: Section of the section of t	1500 1600 35.0	/			annan d	~			Average
Span 50.00 MHz Span 50.00 MHz   kes BW 470 kHz #VBW 1.5 MHz Sweep 1 ms   Occupied Bandwidth Total Power 32.1 dBm   17.988 MHz Transmit Freq Error -568.22 kHz % of OBW Power 99.00 %   x dB Bandwidth 19.34 MHz x dB -26.00 dB	150 450 560					X	natomine		Max Hold
Image: Construction	Center 836.50 MHz Res BW 470 kHz		#VBW 1.5 P	MHz	32.1 d	Span 50. Swee	.00 MHz p 1 ms		Min Hold
	17. Transmit Freq Error x dB Bandwidth	988 MHz -568.22 kH 19.34 MH	Z z % of O z x dB	BW Power	99.0 -26.00	0 % dB		Auto	Detecto Peakl Mar

Plot 7-97. Occupied Bandwidth Plot (n5 20MHz QPSK-CP-OFDM - Full RB Configuration)



Plot 7-98. Occupied Bandwidth Plot (n5 20MHz 16QAM-CP-OFDM - Full RB Configuration)

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Plot 7-99. Occupied Bandwidth Plot (n5 20MHz 64QAM-CP-OFDM- Full RB Configuration)



Plot 7-100. Occupied Bandwidth Plot (n5 20MHz 256QAM-CP-OFDM- Full RB Configuration)

#### Band 66/4

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Keysight Spectrum Analyzer - Occupied BW				00
CORL RESOLOTAC	RFGain:Low Cente	SENSE: INT A r Freq: 1.745000000 GHz Free Run Avg[Hold: 1 n: 36 dB	Idia Auro (0432:16 PM Apr26, 2 Radio Std: None 100/100 Radio Device: BTS	Trace/Detector
10 dB/div Ref 30.00 dBm			1 - 1	
10.0	from	m		Clear Write
18.9 29.0 30.0	~			Average
460				Max Hold
Center 1.745000 GHz Res BW 33 kHz	#	VBW 30 kHz	Span 3.500 M Sweep 4.067 i	Hz ns Min Hold
Occupied Bandwidt	^h 0960 MHz	Total Power	32.1 dBm	Detector
Transmit Freq Error x dB Bandwidth	-1.634 kHz 1.240 MHz	% of OBW Power x dB	r 99.00 % -26.00 dB	Auto Man
MSC			STATUS	

Plot 7-101. Occupied Bandwidth Plot (Band 66/4 - 1.4MHz QPSK - Full RB Configuration)



Plot 7-102. Occupied Bandwidth Plot (Band 66/4 - 1.4MHz 16-QAM - Full RB Configuration)

FCC ID: A3LSMT978U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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Keysight Spectrum Analyzer - Occupied	8W					094
NFE	CORREC Cen #IFGain:Low #Att	sense: INT ter Freq: 1.745000000 G : Free Run Avg ten: 36 dB	Hz Hold: 100/100	Radio Std: N Radio Device	ione e: BTS	Trace/Detector
10 dB/div Ref 30.00 dE	Im					
30.0 10.0	prosec	man				Clear Write
10.00			$\left\{ \right\}$			-
30.0	and the second		Lun			Average
-45.0						Max Hold
				Snon 25	00 54145	-
Res BW 33 kHz		#VBW 30 kHz		Sweep 4.	.067 ms	Min Hold
Occupied Bandwid	.0982 MHz	Total Power	29.	8 dBm		Detector
Transmit Freq Error x dB Bandwidth	449 Hz 1.237 MHz	% of OBW F x dB	ower 9 -26	9.00 % .00 dB	1	Auto Mar
MSG			STATE	15		

Plot 7-103. Occupied Bandwidth Plot (Band 66/4 - 1.4MHz 64-QAM - Full RB Configuration)



Plot 7-104. Occupied Bandwidth Plot (Band 66/4 - 1.4MHz 256-QAM - Full RB Configuration)

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Keysight Spectrum Analyzer - Occupied BW	Autor in				094
20 RL   RF  50.0 4C	MFGain:Low	sense that enter Freq: 1.745000000 rig: Free Run Av Atten: 36 dB	GHz g Hold:>100/100	Radio Std: None Radio Device: BTS	Trace/Detector
10 dB/div Ref 40.00 dBm				÷	يا — ا
30.0					Clear Write
0.0	france				
-10.0			X		Average
and water and the second	-		Mar M	multimentionen	
-00.0 50.0					Max Hold
Center 1.745000 GHz Res BW 68 kHz		#VBW 220 kHz		Span 7.500 MH Sweep 3.8 m	z Min Hold
Occupied Bandwidt	h	Total Pow	er 32.	1 dBm	
2.1 Transmit Freg Error	-1.188 kHz	% of OBW	Power 9	9.00 %	Detector Peak> Auto Man
x dB Bandwidth	2.989 MHz	x dB	-26	.00 dB	
MSG			STATE	5	

Plot 7-105. Occupied Bandwidth Plot (Band 66/4 - 3.0MHz QPSK - Full RB Configuration)



Plot 7-106. Occupied Bandwidth Plot (Band 66/4 - 3.0MHz 16-QAM - Full RB Configuration)

FCC ID: A3LSMT978U		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
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Keysight Spectrum Analyzer - Occupied BW						66
00 RL   RF   SO,0 AC	#FGain:Low	SENSE:INT Center Freq: 1.74500 Trig: Free Run #Atten: 36 dB	Align ann 0000 GHz Avg[Hold: 100/100	Radio Dev	M Apr26, 2020 I: None vice: BTS	Trace/Detector
10 dB/div Ref 40.00 dBm	· · · · · · · · · · · · · · · · · · ·					1
30.0		and the second				Clear Write
0.0			N			
20.0						Average
36.0 Mithand Marcar And 10.0 50.0	*		- mark	munitupos	Million	Max Hold
Center 1.745000 GHz Res BW 68 kHz		#VBW 220 k	Hz	Span 7 Swee	.500 MHz p 3.8 ms	Min Hold
Occupied Bandwidt	^h 7022 MH	Total P	ower 30	.1 dBm		Detector
Transmit Freq Error x dB Bandwidth	5.423 kl 3.006 Mi	Hz % of OE Hz x dB	3W Power 9	99.00 % 6.00 dB		Auto <u>Man</u>
MSG			STA	TUS .		

Plot 7-107. Occupied Bandwidth Plot (Band 66/4 - 3.0MHz 64-QAM - Full RB Configuration)



Plot 7-108. Occupied Bandwidth Plot (Band 66/4 - 3.0MHz 256-QAM - Full RB Configuration)

FCC ID: A3LSMT978U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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Keysight Spectrum Analyzer - Occupied BW				00
Un RL   RF  50,0 AC	CORREC Cente Trig: I #IFGain:Low	sense inti r Freq: 1.745000000 GHz Free Run Avg Hold n: 36 dB	AdioN AUTO 104-37:37 PM Apr26, 202 Radio Std: None 100/100 Radio Device: BTS	Trace/Detector
10 dB/div Ref 30.00 dBm				الــــــــــــــــــــــــــــــــــــ
20.0	formation	mummin		Clear Write
100 00 0 ml lon mm Mm	$\sim$		hannander	Average
-46.0 -50.0 -60.0				Max Hold
Center 1.745000 GHz Res BW 120 kHz	#	VBW 390 kHz	Span 12.50 MH Sweep 1 m	s Min Hold
Occupied Bandwidth 4.	n 5225 MHz	Total Power	32.4 dBm	Detector
Transmit Freq Error x dB Bandwidth	4.497 kHz 5.007 MHz	% of OBW Powe x dB	er 99.00 % -26.00 dB	Auto Man
MSG			STATUS	

Plot 7-109. Occupied Bandwidth Plot (Band 66/4 - 5.0MHz QPSK - Full RB Configuration)



Plot 7-110. Occupied Bandwidth Plot (Band 66/4 - 5.0MHz 16-QAM - Full RB Configuration)

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Keysight Spectrum Analyzer - Occupied BW					04
00 RL   RF  50 0 4C	AFGain:Low	SENSE:INT Center Freq: 1.74500 Trig: Free Run IAtten: 36 dB	ALIGN AUTO 0000 GHz Avg[Hold:>100/100	Radio Device: BTS	2020 Trace/Detector
10 dB/div Ref 30.00 dBm				-	ية ⁽¹ الج
20.0	John	man	worm		Clear Write
100 100 200			have	hunnan	Average
46.0 -su.o -su.o					Max Hold
Center 1.745000 GHz Res BW 120 kHz		#VBW 390 k	Hz	Span 12.50 M Sweep 1	MH2 ms Min Hold
Occupied Bandwidth 4.5	272 MH	Total Po	ower 30	.4 dBm	Detector
Transmit Freq Error x dB Bandwidth	-2.965 kH 5.008 MH	z % of OE z x dB	BW Power 9 -20	99.00 % 5.00 dB	Auto <u>Mari</u>
MSG			STAT	US .	

Plot 7-111. Occupied Bandwidth Plot (Band 66/4 - 5.0MHz 64-QAM - Full RB Configuration)



Plot 7-112. Occupied Bandwidth Plot (Band 66/4 - 5.0MHz 256-QAM - Full RB Configuration)

FCC ID: A3LSMT978U		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
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Keysight Spectrum Analyzer - Occupied BW	A				00
00 RL _1 RF  50.0 AC	#FGaln:Low	SENSE:INT Center Freq: 1.745000000 Gi Trig: Free Run Avgli #Atten: 36 dB	ALIGN AUTO Hz Hold:>100/100	Radio Device: B	6, 2020 Trace/Detector
10 dB/div Ref 40.00 dBm					ية <u>الم</u>
30.0					Clear Write
10.0	panner		1		
-10.0			1		Average
200 por allow linear marging	wal la		Whitemapor	monor With	Invite
60.0 50.0					Max Hold
Center 1.74500 GHz Res BW 240 kHz		#VBW 750 kHz		Span 25.00 Sweep	MHz 1 ms Min Hold
Occupied Bandwidt	h.	Total Power	32.	4 dBm	
9.0	0374 MH	z			Detector
Transmit Freq Error	8.815 kH	z % of OBW P	ower 99	9.00 %	Auto Man
x dB Bandwidth	9.821 MH	z xdB	-26	.00 dB	
MSG			STATU	5	

Plot 7-113. Occupied Bandwidth Plot (Band 66/4 - 10.0MHz QPSK - Full RB Configuration)



Plot 7-114. Occupied Bandwidth Plot (Band 66/4 - 10.0MHz 16-QAM - Full RB Configuration)

FCC ID: A3LSMT978U	PCTEST'	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
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Keysight Spectrum Analyzer - Occupied BW						0 9 1
20 RL   RF   50.0 AC	#FGain:Low	SENSE:INT Center Freq: 1.74500 Trig: Free Run #Atten: 36 dB	Aughold: 100/10	Radio Std Radio Dev	Mapr26, 2020 None ice: BTS	Trace/Detector
10 dB/div Ref 40.00 dBm						, <u> </u>
300						Clear Write
10.0	pour	when an	mon			
.10.0						Average
and white make a new William	w		V.M.M.	and all all all all all all all all all al	how	_
-0.0 -0.0						Max Hold
Center 1.74500 GHz Res BW 240 kHz		#VBW 750 k	Hz	Span 2 Swe	5.00 MHz ep 1 ms	Min Hold
Occupied Bandwidth	n	Total P	ower 3	0.2 dBm		
8.9	9921 MH	z				Detector Peak
Transmit Freq Error x dB Bandwidth	10.116 kl	Hz % of Of Hz x dB	BW Power	99.00 % 26.00 dB		Auto <u>Man</u>
MSG			51	TATUS		

Plot 7-115. Occupied Bandwidth Plot (Band 66/4 - 10.0MHz 64-QAM - Full RB Configuration)



Plot 7-116. Occupied Bandwidth Plot (Band 66/4 - 10.0MHz 256-QAM - Full RB Configuration)

FCC ID: A3LSMT978U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager	
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Keysight Spectrum Analyzer - Occupied BV	4					0 9 10
(20 RL   16 ⁶   50,07 42	CORREC #FGain:Low	sense:tht  enter Freq: 1.745000000 GH rig: Free Run Avg H Atten: 36 dB	2 old: 100/100	Radio Std: No Radio Device	or26, 2020 one : BTS	Trace/Detector
10 dB/div Ref 40.00 dBn	n			_		
300	permanan.					Clear Write
100 6.00 -100	m		human	summer and the	Inclus	Average
26.0 						Max Hold
Center 1.74500 GHz Res BW 360 kHz	L	#VBW 1.1 MHz		Span 37. Sweep	50 MHz 5 1 ms	Min Hold
Occupied Bandwidt	^h 3.525 MHz	Total Power	32.7	7 dBm		Detector
Transmit Freq Error x dB Bandwidth	41.129 kHz 14.74 MHz	% of OBW Po x dB	wer 99 -26	9.00 % 00 dB	A	uto <u>Man</u>
MSG			STATU	5		

Plot 7-117. Occupied Bandwidth Plot (Band 66/4 - 15.0MHz QPSK - Full RB Configuration)



Plot 7-118. Occupied Bandwidth Plot (Band 66/4 - 15.0MHz 16-QAM - Full RB Configuration)

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Keysight Spectrum Analyzer - Occupied BW					0 9 1
00 RL   RF   50 D AC	MFGain:Low	SENSE:INT Center Freq: 1.745000000 GHz Trig: Free Run Avg Hold #Atten: 36 dB	Align Auro 64 Rac d; 100/100 Rac	H2:47 PM Apr26, 2020 flo Std: None flo Device: BTS	Trace/Detector
10 dB/div Ref 40.00 dBm					والمستاخ
30.0					Clear Write
10.0	pinne	and and a second and a second second			
-10.0	1		Į		Average
300 milligen morthmen	- d		mount	- and a manufallane	-
40.0					Max Hold
Center 1.74500 GHz			S	pan 37.50 MHz	
Res BW 360 KHZ		#VBW 1.1 WHZ		Sweep 1 ms	Min Hold
Occupied Bandwidt	.486 MH	Total Power	30.2 dE	im	Detector
Transmit Freq Error	26.757 kH	z % of OBW Pow	er 99.00	%	Auto Man
x dB Bandwidth	14.83 MH	z x dB	-26.00 0	iB	
MSG			STATUS		

Plot 7-119. Occupied Bandwidth Plot (Band 66/4 - 15.0MHz 64-QAM - Full RB Configuration)



Plot 7-120. Occupied Bandwidth Plot (Band 66/4 - 15.0MHz 256-QAM - Full RB Configuration)

FCC ID: A3LSMT978U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager	
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Keysight Spectrum Analyzer - Occupied BV	4				0
00 RL   RF   50.07 42	#FGain:Low	SENSE: INT Center Freq: 1.74500 Trig: Free Run #Atten: 36 dB	ALIGN AUTO 0000 GHz Avg[Hold; 100/100	Radio Std: None Radio Device: BT	2020 Trace/Detector
10 dB/div Ref 40.00 dBn	n				1
30.0					Clear Write
10.0	Junior				
dat	_/		- \		Augurt 1
100 parter anoplantina daguara	wood		Lunio	monecilly	Average
36.0					
-40.0					Max Hold
2010					
Center 1.74500 GHz Res BW 470 kHz		#VBW 1.5 M	Hz	Span 50.00 f Sweep 1	ms Min Hold
Occupied Bandwidt	h	Total P	ower 32	7 dBm	
17	.967 MHz	z			Detector Peak
Transmit Freq Error	32.100 kH	z % of OE	W Power 9	9.00 %	Auto Man
x dB Bandwidth	19.60 MH	z xdB	-26	.00 dB	
MSG			SIAT	15	

Plot 7-121. Occupied Bandwidth Plot (Band 66/4 - 20.0MHz QPSK - Full RB Configuration)



Plot 7-122. Occupied Bandwidth Plot (Band 66/4 - 20.0MHz 16-QAM - Full RB Configuration)

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Keysight Spectrum Analyzer - Occupied BW					090
20 RL   RF   S0.0 4C	MFGain:Low	SENSE: UNT Center Freq: 1.745000000 GHz Trig: Free Run Avg Ho #Atten: 36 dB	Alian Auro (04:45 Radio Id: 100/100 Radio	00 PM Apr 26, 2020 Std: None Device: BTS	Trace/Detector
10 dB/div Ref 40.00 dBm				_	والمست ال
30.0					Clear Write
10.0	calman market	- Andrew - A			
-10.0			1		Average
300 manualhours have	mod		homemound	warman and	-
-0.0					Max Hold
Center 1.74500 GHz			Spa	n 50.00 MHz	-
Res BW 4/0 KHZ		#VBW 1.5 MHZ		sweep 1 ms	Min Hold
Occupied Bandwidt	.950 MH	Total Power	30.2 dBm		Detector
Transmit Freq Error x dB Bandwidth	33.037 kH 19.68 MH	z % of OBW Pow z x dB	ver 99.00 % -26.00 dB		Auto <u>Man</u>
MSG			STATUS		

Plot 7-123. Occupied Bandwidth Plot (Band 66/4 - 20.0MHz 64-QAM - Full RB Configuration)



Plot 7-124. Occupied Bandwidth Plot (Band 66/4 - 20.0MHz 256-QAM - Full RB Configuration)

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## NR Band n66



Plot 7-125. Occupied Bandwidth Plot (n66 5MHz BPSK-DFT-s-OFDM - Full RB Configuration)



Plot 7-126. Occupied Bandwidth Plot (n66 5MHz QPSK-CP-OFDM - Full RB Configuration)

FCC ID: A3LSMT978U		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
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	#IFGain:Low #A	nter Freq: 1.74500000 GHz g; Free Run Avg Hold tten: 36 dB	i:>100/100	Radio Std: None Radio Device: BTS	Traci	Detector
10 dB/div Ref 30.00 dBm						lear Write
100 						Average
60.0 20.0 20.0						Max Hold
Center 1.745 GHz Res BW 120 kHz		VBW 1.2 MHz		Span 12.5 MHz Sweep 1 ms		Min Hold
Occupied Bandwidtl 4.4 Transmit Freq Error x dB Bandwidth	h <b>4988 MHz</b> 2.455 kHz 4.853 MHz	Total Power % of OBW Pow x dB	21.0 er 99 -26.	) dBm ).00 % 00 dB	Auto	Detecto Peaki Mar
sa			STATUS	5		

Plot 7-127. Occupied Bandwidth Plot (n66 5MHz 16QAM-CP-OFDM - Full RB Configuration)



Plot 7-128. Occupied Bandwidth Plot (n66 5MHz 64QAM-CP-OFDM- Full RB Configuration)

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Bit div   Ref 30.00 dBm     Go   Max Hol   Average     Go   Go   Go   Go   Go   Go   Go   Go   Max Hol   Average   Max Hol   Max Hol <t< th=""><th></th><th>#FGain:Low</th><th>Center Freq: 1.745000 Trig: Free Run #Atten: 36 dB</th><th>000 GHz Avg Hold:&gt;100/100</th><th>Radio Std: None Radio Device: BTS</th><th>Trace/Detector</th></t<>		#FGain:Low	Center Freq: 1.745000 Trig: Free Run #Atten: 36 dB	000 GHz Avg Hold:>100/100	Radio Std: None Radio Device: BTS	Trace/Detector
Average Average Max Hol Max	0 dB/div Ref 30.00 dBm 20 0		~~~~			ClearWrite
Max Hol Penter 1.745 GHz es BW 120 kHz Occupied Bandwidth 4.4917 MHz Transmit Freq Error x dB Bandwidth 4.790 MHz x dB Comparison 12.5 MHz Sweep 1 ms Min Hol Detector Peak Auto Max Hol Max Hol Max Hol Detector Peak Auto Max Hol Max	0.0					Averag
Span 12.5 MHz ses BW 120 kHz Span 12.5 MHz Sweep 1 ms   Occupied Bandwidth 4.4917 MHz Total Power 19.6 dBm   Understand Detector Peak   Transmit Freq Error 150 Hz % of OBW Power 99.00 %   x dB Bandwidth 4.790 MHz x dB -26.00 dB	00 00 00					Max Hol
4.4917 MHz Transmit Freq Error 150 Hz % of OBW Power 99.00 % x dB Bandwidth 4.790 MHz x dB -26.00 dB	enter 1.745 GHz es BW 120 kHz		VBW 1.2 MHz Total Po	wer 19.0	Span 12.5 MHz Sweep 1 ms 6 dBm	Min Hole
	4.4 Transmit Freq Error x dB Bandwidth	4917 МН: 150 н 4.790 мн	Z Iz % of OB Iz x dB	W Power 99 -26	9.00 % .00 dB	Detecto Peakt Auto <u>Mar</u>

Plot 7-129. Occupied Bandwidth Plot (n66 5MHz 256QAM-CP-OFDM - Full RB Configuration)



Plot 7-130. Occupied Bandwidth Plot (n66 10MHz BPSK-DFT-s-OFDM - Full RB Configuration)

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KL 1 19 [30.0 KC]	et all the second secon	inter Freq: 1.745000000 G ig: Free Run Avg itten: 36 dB	Hz Hold: 100/100	Radio Std: None Radio Device: BTS	Trace/Detector
10 dB/div Ref 30.00 dBm 20 g 20 0	1				ClearWrite
100 100 200			land	~u_u	Averag
0.0				and many	Max Hole
Center 1.745 GHz Res BW 240 kHz		#VBW 750 kHz		Span 25 MHz Sweep 1 ms	Min Hol
Occupied Bandwidt 9.	_h 3365 MHz	Total Power	29.	1 dBm	Detecto
Transmit Freq Error x dB Bandwidth	12.991 kHz 10.09 MHz	% of OBW P x dB	ower 9	9.00 % .00 dB	Auto <u>Ma</u>
sa)			STAT	15	

Plot 7-131. Occupied Bandwidth Plot (n66 10MHz QPSK-CP-OFDM - Full RB Configuration)



Plot 7-132. Occupied Bandwidth Plot (n66 10MHz 16QAM-CP-OFDM - Full RB Configuration)

FCC ID: A3LSMT978U		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
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Keysight Spectrum Analyzer - Dccupied BW		and the second second	a della allana		000
RL   10   310 AC	#IFGain:Low #Atter	r Freq: 1.745000000 GHz FreqRun Avg Hol n: 36 dB	d: 100/100	Radio Device: BTS	Trace/Detector
0 dB/div Ref 30.00 dBm .og 20 0		······			ClearWrit
20 0 30.0	n!		manner	un allen	Averag
40.0 50.0					Max Hol
Center 1.745 GHz Res BW 240 kHz	#	VBW 750 kHz		Span 25 MHz Sweep 1 ms	Min Hol
Occupied Bandwidt 9.3	h 3159 MHz	Total Power	28.6	dBm	Detecto
Transmit Freq Error x dB Bandwidth	22.766 kHz 10.14 MHz	% of OBW Pow x dB	ver 99. -26.0	00 % 0 dB	Auto <u>Ma</u>
50			STATUS		

Plot 7-133. Occupied Bandwidth Plot (n66 10MHz 64QAM-CP-OFDM- Full RB Configuration)



Plot 7-134. Occupied Bandwidth Plot (n66 10MHz 256QAM-CP-OFDM - Full RB Configuration)

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Plot 7-135. Occupied Bandwidth Plot (n66 15MHz BPSK-DFT-s-OFDM - Full RB Configuration)



Plot 7-136. Occupied Bandwidth Plot (n66 15MHz QPSK-CP-OFDM - Full RB Configuration)

FCC ID: A3LSMT978U		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
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RL 1F 500 4C	CORREC	SENSE INT SOURC	E OFF ALIGN AUTO	03:30:11 PMJun 09, 2020	Trace/Detector
	#FGain:Low	Senter Freq: 1.745000 Frig: Free Run Atten: 36 dB	Avg Hold: 100/100	Radio Std: None Radio Device: BTS	-
10 dB/dlv Ref 30.00 dBm					
10.0	Jun		my		Clear Write
100 300 300			Janes	maliken wellingh	Average
80.0 80.0					Max Hold
Center 1.745 GHz Res BW 360 kHz		#VBW 1.1 M	Hz	Span 37.5 MH Sweep 1 ms	s Min Hold
Occupied Bandwidth	h .176 MHz	Total Po	ower 29.	2 dBm	Detecto
Transmit Freq Error x dB Bandwidth	-8.603 kH 15.13 MH	z % of OB z x dB	W Power 9 -26	9.00 % .00 dB	Peak) Auto <u>Mar</u>
50)			STATU	5	

Plot 7-137. Occupied Bandwidth Plot (n66 15MHz 16QAM-CP-OFDM - Full RB Configuration)



Plot 7-138. Occupied Bandwidth Plot (n66 15MHz 64QAM-CP-OFDM- Full RB Configuration)

FCC ID: A3LSMT978U		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
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KL   10   300 20	#IFGain:Low	Center Freq: 1.74500 Trig: Free Run #Atten: 36 dB	0000 GHz Avg Hold: 100/100	Radio Std: None Radio Device: BTS	Trace/Detector
0 dB/div Ref 30.00 dBm					
200	mann				Clear Write
	, J			manimune	Averag
10 3.0 4					Max Hol
enter 1.745 GHz es BW 360 kHz		#VBW 1.1 M	Hz	Span 37.5 MHz Sweep 1 ms	Min Hol
Occupied Bandwidth 14	.214 MH	Total P	ower 25	.9 dBm	Detecto
Transmit Freq Error x dB Bandwidth	-8.436 kH 15.23 MH	z % of OE z xdB	BW Power 9 -26	99.00 % 5.00 dB	Peak Auto <u>Mar</u>
0]			STAT	1/5	_

Plot 7-139. Occupied Bandwidth Plot (n66 15MHz 256QAM-CP-OFDM - Full RB Configuration)



Plot 7-140. Occupied Bandwidth Plot (n66 20MHz BPSK-DFT-s-OFDM - Full RB Configuration)

FCC ID: A3LSMT978U		MEASUREMENT REPORT (CERTIFICATION)	UNG	Approved by: Quality Manager
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	#FGain:Low	Center Freq: 1.74500000 Trig: Free Run A #Atten: 36 dB	00 GHz Avg Hold: 100/100	Radio Std: None Radio Device: BTS	Trace/Detector
0 dB/div Ref 30.00 dBm .og 10.0	-	mm			Clear Write
			-	Haldlandeleya.e.d.	Averag
00 00					Max Hol
enter 1.745 GHz es BW 470 kHz		#VBW 1.5 MH2	:	Span 50 MHz Sweep 1 ms	Min Hol
Occupied Bandwidt 18	h 8.988 MH	Total Pov Z	ver 29.	3 dBm	Detecto
Transmit Freq Error x dB Bandwidth	19.606 kH 20.24 MH	z % of OBW z x dB	/ Power 99 -26	9.00 % .00 dB	Auto <u>Ma</u>
a)			STATU	5	

Plot 7-141. Occupied Bandwidth Plot (n66 20MHz QPSK-CP-OFDM - Full RB Configuration)



Plot 7-142. Occupied Bandwidth Plot (n66 20MHz 16QAM-CP-OFDM - Full RB Configuration)

FCC ID: A3LSMT978U		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
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	#FGain:Low	Center Freq: 1.7450 Trig: Free Run #Atten: 36 dB	00000 GHz Avg Hold: 1	100/100	Radio Std Radio Dev	None	Trac	e/Detector
0 dB/div Ref 30.00 dBm 9g 10 0			many				(	Clear Write
00 10 10 10 Demarkallallallander	rel			walker Lall	morale	when		Averag
10								Max Hol
enter 1.745 GHz es BW 470 kHz	4	#VBW 1.51	WHz		Spa Swe	n 50 MHz ep 1 ms		Min Hol
Occupied Bandwidt 19	h 0.042 MH	Total I Z	Power	28.9	dBm			Detecto
Transmit Freq Error x dB Bandwidth	25.704 kH 23.25 MH	z % of C z x dB	BW Power	-26.	.00 % 00 dB		Auto	Peak Ma
a)				STATUS			_	_

Plot 7-143. Occupied Bandwidth Plot (n66 20MHz 64QAM-CP-OFDM- Full RB Configuration)



Plot 7-144. Occupied Bandwidth Plot (n66 20MHz 256QAM-CP-OFDM - Full RB Configuration)

## Band 25/2

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Plot 7-145. Occupied Bandwidth Plot (Band 25/2 - 1.4MHz QPSK - Full RB Configuration)



Plot 7-146. Occupied Bandwidth Plot (Band 25/2 - 1.4MHz 16-QAM - Full RB Configuration)

FCC ID: A3LSMT978U		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
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Plot 7-147. Occupied Bandwidth Plot (Band 25/2 - 1.4MHz 64-QAM - Full RB Configuration)



Plot 7-148. Occupied Bandwidth Plot (Band 25/2 - 1.4MHz 256-QAM - Full RB Configuration)

FCC ID: A3LSMT978U	Titlet & bits part of @ commerce	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
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Plot 7-149. Occupied Bandwidth Plot (Band 25/2 - 3.0MHz QPSK - Full RB Configuration)



Plot 7-150. Occupied Bandwidth Plot (Band 25/2 - 3.0MHz 16-QAM - Full RB Configuration)

FCC ID: A3LSMT978U		MEASUREMENT REPORT (CERTIFICATION)	Quali	r <b>oved by:</b> ity Manager
Test Report S/N:	Test Dates:	EUT Type:	Dege	02 of 447
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	AFGain:Low #Att	ter Freq: 1.882500000 G : Free Run Avg ten: 36 dB	Hz Hold:>100/100	Radio Device: BTS	Trace/Detector
10 dB/div. Ref 35.00 dBm Log 25 0 15.0	Journam		~		ClearWrite
500 500 					Average
25.0 million Monthe Million 15.0 				M. Manupanana Ma	Max Hold
Center 1.882500 GHz Res BW 68 kHz		#VBW 220 kHz	29	Span 7.500 M Sweep 3.8	NHZ ms Min Hold
2.7 Transmit Freq Error x dB Bandwidth	096 MHz 1.394 kHz 3.002 MHz	% of OBW F x dB	Power 9! -26	9.00 % .00 dB	Detecto Peakt Auto <u>Mar</u>
50			STATU	15	_

Plot 7-151. Occupied Bandwidth Plot (Band 25/2 - 3.0MHz 64-QAM - Full RB Configuration)



Plot 7-152. Occupied Bandwidth Plot (Band 25/2 - 3.0MHz 256-QAM - Full RB Configuration)

FCC ID: A3LSMT978U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
Test Report S/N:	Test Dates:	EUT Type:		Dogo 04 of 447
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RL RE SOR AL	CORREC	SENSE: (NT) 41	IGN AUTO (11:49:38 PM May 04, 20	20 Trace/Detector
	#IFGain:Low #Atten	r Freq: 1.882500000 GHz Free Run Avg Hold:>1 n: 36 dB	Radio Std: None 100/100 Radio Device: BTS	
10 dB/div Ref 30.00 dBm				است از
10.0	mon			ClearWrite
10.0 -10.0 -20.0 	1		warmed warman and	v Average
46.0 80.0 80.0				Max Hol
Center 1.882500 GHz Res BW 120 kHz	#	VBW 390 kHz	Span 12.50 MI Sweep 1 m	iz Min Hol
Occupied Bandwidth	n 5182 MHz	Total Power	32.0 dBm	Detecto
Transmit Freq Error x dB Bandwidth	-2.400 kHz 5.046 MHz	% of OBW Power x dB	99.00 % -26.00 dB	Auto <u>Ma</u>
150			STATUS	

Plot 7-153. Occupied Bandwidth Plot (Band 25/2 - 5.0MHz QPSK - Full RB Configuration)



Plot 7-154. Occupied Bandwidth Plot (Band 25/2 - 5.0MHz 16-QAM - Full RB Configuration)

FCC ID: A3LSMT978U	Titlet & bits part of @ commerce	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager	
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Keysight Spectrum Analyzer - Dccupied BW	CORREC	SENSEMME	1100 0000 (11 40-53 DM M	v 04.2020
	#IFGain:Low #Atter	r Freq: 1.882500000 GHz Free Run Avg Hold h: 36 dB	Radio Std: No >100/100 Radio Device:	BTS
10 dB/div Ref 30.00 dBm				
10.0	Janman	mmmmm		ClearWrite
and a second and a second a se	~		Munnmuhm	Average
46.0 50.0 40.0				Max Hole
Center 1.882500 GHz Res BW 120 kHz	#	VBW 390 kHz	Span 12.5 Sweep	0 MHz 1 ms Min Hol
Occupied Bandwidth 4.	h 5204 MHz	Total Power	29.4 dBm	Detecto
Transmit Freq Error x dB Bandwidth	-3.749 kHz 4.985 MHz	% of OBW Powe x dB	er 99.00 % -26.00 dB	Pesk Auto <u>Ma</u> r
MSG			STATUS	_

Plot 7-155. Occupied Bandwidth Plot (Band 25/2 - 5.0MHz 64-QAM - Full RB Configuration)



Plot 7-156. Occupied Bandwidth Plot (Band 25/2 - 5.0MHz 256-QAM - Full RB Configuration)

FCC ID: A3LSMT978U		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager	
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	#FGain:Low #Atter	r Freq: 1.882500000 GHz Free Run Avg Hold h: 36 dB	Radio St 100/100 Radio De	d: None evice: BTS	Trace/Detector
10 dB/div Ref 35.00 dBm	11	1 1 1			
250		menoning			Clear Write
500 5 (0) 5 (0) 3 (1) Manuferture Vantalander yant Manuer 3 (1) Manuferture Vantalander yant Manuer	1		monounded	manh	Averag
ຣ.ຍ ເຮ.ຍ ອີຖິ					Max Hold
enter 1.88250 GHz tes BW 240 kHz	#	VBW 750 kHz	Span Sv	25.00 MHz /eep 1 ms	Min Hole
Occupied Bandwidth 9.0	) 277 MHz	Total Power	32.0 dBm		Detecto
Transmit Freq Error x dB Bandwidth	-147 Hz 9.849 MHz	% of OBW Pow x dB	er 99.00 % -26.00 dB		Auto <u>Mar</u>
G)			STATUS	,	

Plot 7-157. Occupied Bandwidth Plot (Band 25/2 - 10.0MHz QPSK - Full RB Configuration)



Plot 7-158. Occupied Bandwidth Plot (Band 25/2 - 10.0MHz 16-QAM - Full RB Configuration)

FCC ID: A3LSMT978U		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager	
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Keysight Spectrum Analyzer - Occupied BW		COLUMN ALCON			66
	#FGain:Low #Atter	r Freq: 1.882500000 GHz r Free Run Avg[Hold; n: 36 dB	Radio Str 100/100 Radio De	vice: BTS	Trace/Detector
10 dB/div Ref 35.00 dBm					Clear Writ
500 150 10 Mr.M. John Mannager Mart	J. J		hannon	al Mal Sugar	Averag
(E.0 (5.0)					Max Hol
Center 1.88250 GHz Res BW 240 kHz	#	VBW 750 kHz	Span 2 Sw	25.00 MHz eep 1 ms	Min Hol
Occupied Bandwidth 9.0 Transmit Freq Error x dB Bandwidth	1 0096 MHz 6.269 kHz 9.860 MHz	% of OBW Powe x dB	29.3 dBm er 99.00 % -26.00 dB	4 12	Detecto Peak Auto <u>Ma</u>
SG			STATUS		

Plot 7-159. Occupied Bandwidth Plot (Band 25/2 - 10.0MHz 64-QAM - Full RB Configuration)



Plot 7-160. Occupied Bandwidth Plot (Band 25/2 - 10.0MHz 256-QAM - Full RB Configuration)

FCC ID: A3LSMT978U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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KL 1 KF  50.0 AC.1	AFGain:Low Cente	r Freq: 1.882500000 GHz Free Run Avg Hold h: 36 dB	E>100/100 Radio	o Std: None Device: BTS	Trace/Detector
Ref 40.00 dBm		1 1 1	i i		
no no	ponterono	action and the state of the			Clear Write
au au au			Lenne -		Average
			- All and a second s	valitikinganarua	Max Hole
enter 1.88250 GHz es BW 360 kHz	#	VBW 1.1 MHz	Spa	an 37.50 MHz Sweep 1 ms	Min Hol
Occupied Bandwidt	h .533 MHz	Total Power	32.0 dBn	n	Detecto
Transmit Freq Error x dB Bandwidth	37.231 kHz 14.82 MHz	% of OBW Pow x dB	er 99.00 % -26.00 df	6	Auto <u>Mar</u>
a)			STATUS		

Plot 7-161. Occupied Bandwidth Plot (Band 25/2 - 15.0MHz QPSK - Full RB Configuration)



Plot 7-162. Occupied Bandwidth Plot (Band 25/2 - 15.0MHz 16-QAM - Full RB Configuration)

FCC ID: A3LSMT978U		MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Quality Manager
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	#FGain:Low #Atter	r Freq: 1.882500000 GHz Free Run Avg Hol h: 36 dB	Radio Std d:>100/100 Radio Dev	None rice: BTS	Trace/Detector
10 dB/div Ref 40.00 dBm		and a second second			Clear Write
0.0 1.00 1.00 1.00					Averag
no postilipitanti dinipitanti no			homeworker	Monan	Max Hold
enter 1.88250 GHz les BW 360 kHz	#	VBW 1.1 MHz	Span 3 Swa	7.50 MHz eep 1 ms	Min Hole
Transmit Freq Error x dB Bandwidth	.498 MHz 7.934 kHz 14.78 MHz	% of OBW Pow	ver 99.00 % -26.00 dB		Detecto Peski Auto <u>Mar</u>
G1			STATUS		

Plot 7-163. Occupied Bandwidth Plot (Band 25/2 - 15.0MHz 64-QAM - Full RB Configuration)



Plot 7-164. Occupied Bandwidth Plot (Band 25/2 - 15.0MHz 256-QAM - Full RB Configuration)

FCC ID: A3LSMT978U		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
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	AFGain:Low #Atter	r Freq: 1.882500000 GHz FreeRun Avg Hold h: 36 dB	>100/100 Radio	Device: BTS	Trace/Detector
10 dB/div Ref 40.00 dBm	-				Clear Write
000 000 100 000			minneterment	manulus	Average
80 80 80					Max Hold
enter 1.88250 GHz tes BW 470 kHz	#	VBW 1.5 MHz	Spa	an 50.00 MHz Sweep 1 ms	Min Hol
Transmit Freq Error x dB Bandwidth	968 MHz 10.284 kHz 19.50 MHz	% of OBW Powe	99.00 % -26.00 dE	3	Detecto Peak Auto <u>Ma</u> r
01			STATUS		

Plot 7-165. Occupied Bandwidth Plot (Band 25/2 - 20.0MHz QPSK - Full RB Configuration)



Plot 7-166. Occupied Bandwidth Plot (Band 25/2 - 20.0MHz 16-QAM - Full RB Configuration)

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AL I DO JOU AL I DO	Gain:Low #Att	er Freq: 1.882500000 GH Free Run Avg H en: 36 dB	z old:>100/100	Radio Std Radio Dev	vice: BTS	Trace	Detector
10 dB/div Ref 40.00 dBm	-	and all a she had the same and an analysis				c	lear Write
100 100 100							Averag
15.0 manual (19) Bhurpen du Busser 1946 19.0 29.0			Muhandh	alaw Weren.	Alvinor		Max Hol
Center 1.88250 GHz Res BW 470 kHz	lat. et	#VBW 1.5 MHz	20	Span 5 Swi	50.00 MHz eep 1 ms		Min Hole
Transmit Freq Error x dB Bandwidth	48 MHz 1.640 kHz 19.60 MHz	% of OBW Po	-26	9.00 % .00 dB		Auto	Detecto Peak Mar
01			STATU	5		-	

Plot 7-167. Occupied Bandwidth Plot (Band 25/2 - 20.0MHz 64-QAM - Full RB Configuration)



Plot 7-168. Occupied Bandwidth Plot (Band 25/2 - 20.0MHz 256-QAM - Full RB Configuration)

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