

ANNEX A - MEASUREMENT RESULTS

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1 MAXIMUM OUTPUT POWER

Antenna gain (dBi)		3.2								
LTE Band 106_Uplink frequency band : 897.5 to 900.5 MHz										
BW (MHz)	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	EIRP Average (dBm)	ERP Average (dBm)	ERP Limit (dBm)	Margin (dB)
1.4	134314	898.2	QPSK	1	0	22.93	26.13	23.98	34.77	-10.79
				1	5	22.90	26.10	23.95	34.77	-10.82
				3	2	22.92	26.12	23.97	34.77	-10.80
				6	0	21.95	25.15	23.00	34.77	-11.77
	134322	899	QPSK	1	0	22.78	25.98	23.83	34.77	-10.94
				1	5	22.82	26.02	23.87	34.77	-10.90
				3	2	22.92	26.12	23.97	34.77	-10.80
				6	0	21.96	25.16	23.01	34.77	-11.76
	134330	899.8	QPSK	1	0	22.87	26.07	23.92	34.77	-10.85
				1	5	22.90	26.10	23.95	34.77	-10.82
				3	2	22.79	25.99	23.84	34.77	-10.93
				6	0	21.97	25.17	23.02	34.77	-11.75
1.4	134314	898.2	16QAM	1	0	21.75	24.95	22.80	34.77	-11.97
				1	5	21.83	25.03	22.88	34.77	-11.89
				3	2	21.94	25.14	22.99	34.77	-11.78
				6	0	21.13	24.33	22.18	34.77	-12.59
	134322	899	16QAM	1	0	22.27	25.47	23.32	34.77	-11.45
				1	5	22.16	25.36	23.21	34.77	-11.56
				3	2	21.92	25.12	22.97	34.77	-11.80
				6	0	21.11	24.31	22.16	34.77	-12.61
	134330	899.8	16QAM	1	0	22.22	25.42	23.27	34.77	-11.50
				1	5	22.18	25.38	23.23	34.77	-11.54
				3	2	22.00	25.20	23.05	34.77	-11.72
				6	0	21.05	24.25	22.10	34.77	-12.67
1.4	134314	898.2	64QAM	1	0	21.32	24.52	22.37	34.77	-12.40
				1	5	21.16	24.36	22.21	34.77	-12.56
				3	2	21.07	24.27	22.12	34.77	-12.65
				6	0	20.93	24.13	21.98	34.77	-12.79
	134322	899	64QAM	1	0	21.94	25.14	22.99	34.77	-11.78
				1	5	21.84	25.04	22.89	34.77	-11.88
				3	2	21.80	25.00	22.85	34.77	-11.92
				6	0	20.95	24.15	22.00	34.77	-12.77
	134330	899.8	64QAM	1	0	21.82	25.02	22.87	34.77	-11.90
				1	5	21.81	25.01	22.86	34.77	-11.91
				3	2	21.43	24.63	22.48	34.77	-12.29
				6	0	20.89	24.09	21.94	34.77	-12.83

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Antenna gain (dBi)		3.2								
LTE Band 106_Uplink frequency band : 897.5 to 900.5 MHz										
BW (MHz)	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	EIRP Average (dBm)	ERP Average (dBm)	ERP Limit (dBm)	Margin (dB)
3	134322	899	QPSK	1	0	22.94	26.14	23.99	34.77	-10.78
				1	14	22.72	25.92	23.77	34.77	-11.00
				8	4	22.08	25.28	23.13	34.77	-11.64
				15	0	21.95	25.15	23.00	34.77	-11.77
			16QAM	1	0	22.12	25.32	23.17	34.77	-11.60
				1	14	22.01	25.21	23.06	34.77	-11.71
				8	4	21.20	24.40	22.25	34.77	-12.52
				15	0	21.08	24.28	22.13	34.77	-12.64
			64QAM	1	0	21.74	24.94	22.79	34.77	-11.98
				1	14	21.61	24.81	22.66	34.77	-12.11
				8	4	21.06	24.26	22.11	34.77	-12.66
				15	0	20.92	24.12	21.97	34.77	-12.80

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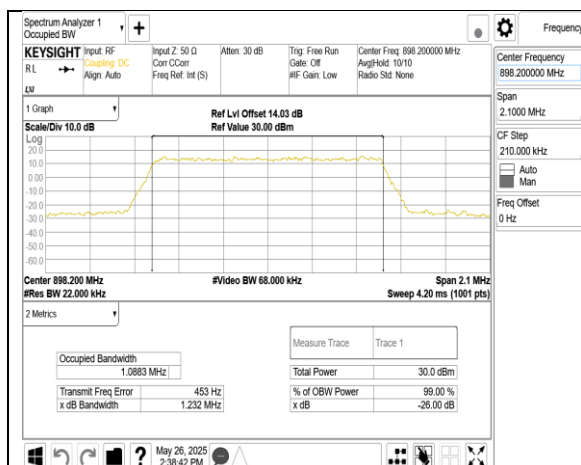
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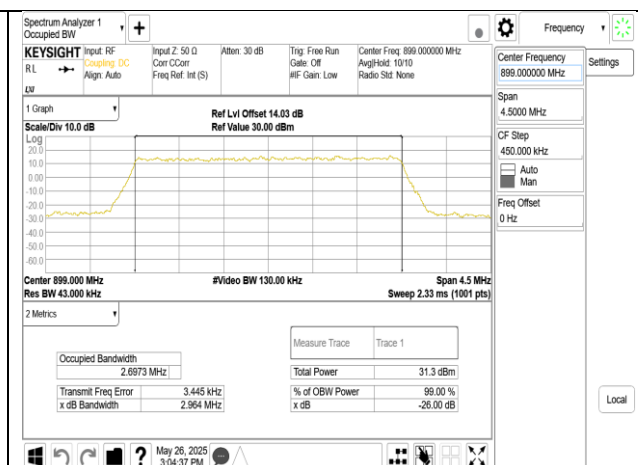
2 OCCUPIED BANDWIDTH MEASUREMENT

LTE BAND 106 Channel bandwidth: 1.4MHz							
Freq. (MHz)	CH	99% BW (MHz)			26 dB BW (MHz)		
		QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
898.2	134314	1.0859	1.0878	1.0883	1.228	1.219	1.232
899.0	134322	1.0852	1.0843	1.0862	1.227	1.222	1.229
899.8	134330	1.0869	1.0855	1.0869	1.223	1.219	1.224

LTE BAND 106 Channel bandwidth: 3MHz							
Freq. (MHz)	CH	99% BW (MHz)			26 dB BW (MHz)		
		QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
899.0	134322	2.6877	2.6973	2.6953	2.936	2.964	2.973



Band106 1.4MHz 64QAM RB6 0 CH134314



Band106 3MHz 16QAM RB15 0 CH134322

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3 OUT OF BAND EMISSION AT ANTENNA TERMINALS



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Band106_3MHz_QPSK_RB15_0_CH134322

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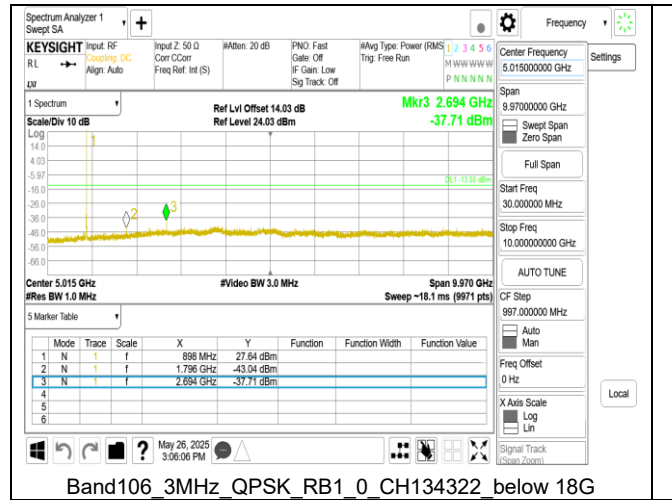
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4 SPURIOUS EMISSION AT ANTENNA TERMINALS:



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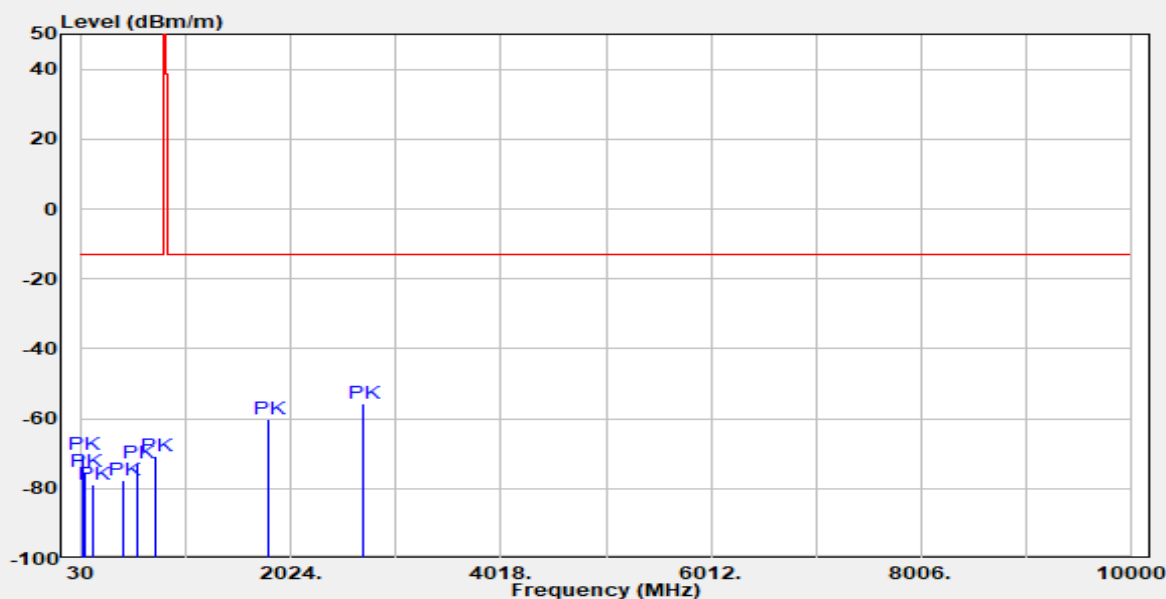
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5 FIELD STRENGTH OF SPURIOUS RADIATION MEASUREMENT

5.1 Spurious Emission

Report Number :TERF2504001355ER
Operation Mode :LTE B106
Test Mode :Tx
EUT Pol :H Plane
Test Frequency :899 MHz

Test Site :SAC 2
Test Date :2024-05-28
Temp./Humi. :23.1°C/58%
Antenna Pol. :Vertical
Engineer :Bob Chao



Freq.	EIRP/ERP	SG	Antenna	Cable	Limit	Margin
MHz	dBm	Output Level dBm	Gain dBi/dBd	Loss dB	dBm	dB
44.44	-70.49	-56.71	-12.55	-1.22	-13.00	-57.49
65.03	-75.09	-65.27	-8.34	-1.48	-13.00	-62.09
139.83	-78.99	-75.02	-1.81	-2.16	-13.00	-65.99
422.10	-77.56	-77.92	4.10	-3.75	-13.00	-64.56
565.66	-72.73	-72.68	4.29	-4.34	-13.00	-59.73
730.56	-70.54	-69.18	3.57	-4.92	-13.00	-57.54
1798.00	-60.03	-62.11	9.88	-7.80	-13.00	-47.03
2697.00	-55.64	-56.86	10.86	-9.64	-13.00	-42.64

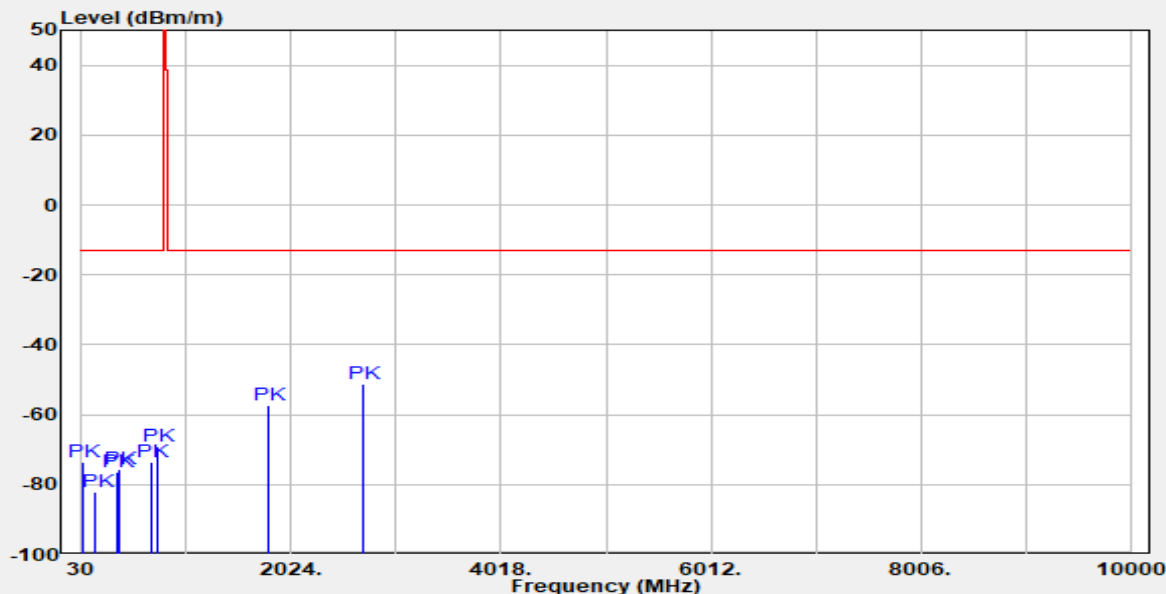
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Report Number :TERF2504001355ER
Operation Mode :LTE B106
Test Mode :Tx
EUT Pol :H Plane
Test Frequency :899 MHz

Test Site :SAC 2
Test Date :2024-05-28
Temp./Humi. :23.1°C/58%
Antenna Pol. :Horizontal
Engineer :Bob Chao



Freq.	EIRP/ERP	SG	Antenna	Cable	Limit	Margin
MHz	dBm	Output Level dBm	Gain dBi/dBd	Loss dB	dBm	dB
44.44	-73.74	-59.96	-12.55	-1.22	-13.00	-60.74
165.37	-82.11	-79.27	-0.49	-2.35	-13.00	-69.11
358.61	-76.34	-77.12	4.23	-3.45	-13.00	-63.34
385.67	-75.67	-75.98	3.89	-3.58	-13.00	-62.67
693.16	-73.47	-72.50	3.83	-4.80	-13.00	-60.47
745.64	-69.27	-67.83	3.53	-4.97	-13.00	-56.27
1798.00	-57.19	-59.27	9.88	-7.80	-13.00	-44.19
2697.00	-51.15	-52.36	10.86	-9.64	-13.00	-38.15

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6 FREQUENCY STABILITY MEASUREMENT

Note: The module's normal voltage is 3.3V dc.

Reference Freq.:		LTE B106 Mid Channel		899.0000	MHz	3M QPSK CH 134322
Power Supply Vdc	Temp. (°C)	Freq. (MHz)	(ppm)	Limit		
Freq. ERROR vs. VOLTAGE						
3.795	20	899.000001	0.0006	+/- 2.5 ppm		
3.3	20	899.000012	0.0136			
2.805	20	899.000003	0.0037			
2.4	20	898.999997	-0.0034			
(End Point)						
Freq. ERROR vs. Temp.						
3.3	-30	899.000010	0.0110	+/- 2.5 ppm		
3.3	-20	899.000005	0.0053			
3.3	-10	899.000005	0.0055			
3.3	0	898.999988	-0.0132			
3.3	10	898.999995	-0.0056			
3.3	20	898.999993	-0.0080			
3.3	30	898.999992	-0.0095			
3.3	40	898.999997	-0.0032			
3.3	50	899.000008	0.0085			

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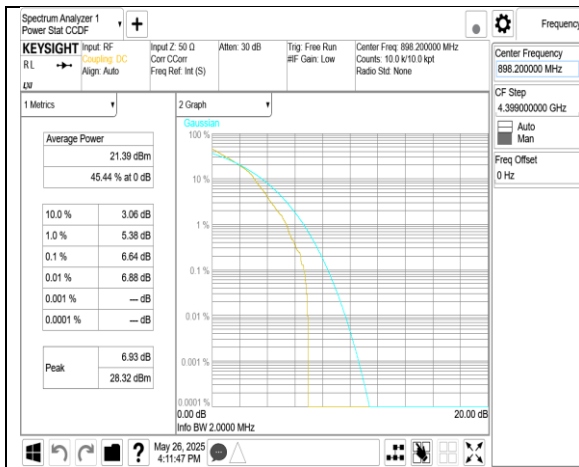
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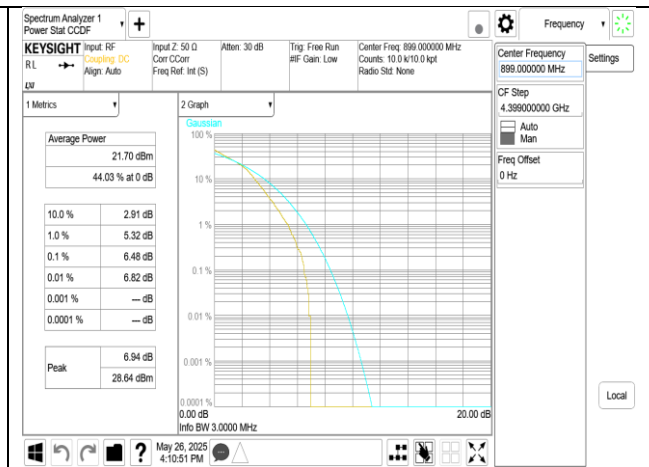
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7 PEAK TO AVERAGE RATIO

LTE BAND 106							
Channel bandwidth: 1.4MHz				Channel bandwidth: 3MHz			
Freq. (MHz)	CH	PAPR (dB)		Freq. (MHz)	CH	PAPR (dB)	
		64QAM	Limit			64QAM	Limit
898.2	134314	6.64	13	899.0	134322	6.48	13
899.0	134322	6.63	13				
899.8	134330	6.37	13				



Band106 1.4MHz 64QAM RB6 0 CH134314



Band106 3MHz 64QAM RB15 0 CH134322

~ End of Report ~

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