TEST REPORT

Applicant:	Particle Industries, Inc.
EUT Description:	Tachyon
Model:	TACH4ROW, TACH8ROW
Brand:	Particle
Standards:	ETSI EN 301 908-13 V13.3.1 ETSI TS 136 521-1 V17.7.0
Date of Receipt:	2025/06/25
Date of Test:	2025/06/25 to 2025/08/28
Date of Issue:	2025/08/28

TOWE. tested the above equipment in accordance with the requirements set forth in the above standards. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

the results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. It is the manufacturer's responsibility to assure that additional production units of the model are manufactured with identical electrical and mechanical components. All sample tested were in good operating condition throughout the entire test program. Measurement Uncertainties are published for informational purposes only and were not taken into account unless noted otherwise. without written approval of TOWE, the test report shall not be reproduced except in full.

Jim Huang
Approved By:

Carey Chen
Reviewed By:

Revision History

Rev.	Issue Date	Description	Revised by
01	2025/08/28	Original	Carey Chen

Summary of Test Results

Test Item	Test Requirement	Test Method	Result
	ETSI EN 301 908-13	ETSI TS 136 521-1	
Transmitter maximum output power for Single Carrier	Clause 4.2.2.1	Clause 6.2.2	Pass
Transmitter spurious emissions for Single Carrier	Clause 4.2.4.1	Clause 6.6.3.1, 6.6.3.2, 6.6.3.3	Pass
Transmitter spurious emissions for Carrier Aggregation (DL CA and UL CA)	Clause 4.2.4.2	Clause 6.6.3.1A, 6.6.3.2A, 6.6.3.3A	Pass
Transmitter maximum output power for Carrier Aggregation (DL CA and UL CA)	Clause 4.2.2.2	Clause 6.2.2A	Reference report 2406RSU046-E4 & 2406RSU046-E5
Transmitter spectrum emission mask for Single Carrier	Clause 4.2.3.1	Clause 6.6.2.1, 6.6.2.2	
Transmitter spectrum emission mask for Carrier Aggregation (DL CA and UL CA)	Clause 4.2.3.2	Clause 6.6.2.1A	
Transmitter minimum output power for Single Carrier	Clause 4.2.5.1	Clause 6.3.2	
Transmitter minimum output power for Carrier Aggregation (DL CA and UL CA)	Clause 4.2.5.2	Clause 6.3.2A	
Receiver Adjacent Channel Selectivity (ACS) for Single Carrier	Clause 4.2.6.1	Clause 7.5	
Receiver Adjacent Channel Selectivity (ACS) for Carrier Aggregation in DL-only bands	Clause 4.2.6.2	Clause 7.5A	
Receiver Blocking Characteristics for Single Carrier-In-band blocking	Clause 4.2.7.1	Clause 7.6.1	
Receiver Blocking Characteristics for Single Carrier-Out of-band blocking	Clause 4.2.7.1	Clause 7.6.2	
Receiver Blocking Characteristics for Single Carrier-Narrow band blocking	Clause 4.2.7.1	Clause 7.6.3	
Receiver Blocking Characteristics for Carrier Aggregation in DL-only bands-In-band blocking	Clause 4.2.7.2	Clause 7.6.1A	
Receiver Blocking Characteristics for Carrier Aggregation in DL-only bands-Out of-band blocking	Clause 4.2.7.2	Clause 7.6.2A	
Receiver Blocking Characteristics for Carrier Aggregation in DL-only bands-Narrow band blocking	Clause 4.2.7.2	Clause 7.6.3A	
Receiver Spurious Response for Single Carrier	Clause 4.2.8.1	Clause 7.7	
Receiver Spurious Response for Carrier Aggregation in DL-only bands	Clause 4.2.8.2	Clause 7.7A	
Receiver Intermodulation Characteristics for Single Carrier	Clause 4.2.9.1	Clause 7.8.1	
Receiver Intermodulation Characteristics for Carrier Aggregation in DL-only bands	Clause 4.2.9.2	Clause 7.8.1A	
Receiver Spurious Emissions for Single Carrier	Clause 4.2.10.1	Clause 7.9	
Receiver Spurious Emissions in DL-only bands	Clause 4.2.10.2	Clause 7.9A	
Transmitter adjacent channel leakage power ratio for Single Carrier	Clause 4.2.11.1	Clause 6.6.2.3	
Transmitter adjacent channel leakage power ratio for intra-band contiguous Carrier Aggregation (DL CA and UL CA)	Clause 4.2.11.2	Clause 6.6.2.3A	
Receiver Reference Sensitivity Level for Single Carrier	Clause 4.2.12.1	Clause 7.3	

Test Item	Test Requirement	Test Method	Result
	ETSI EN 301 908-13	ETSI TS 136 521-1	
Receiver Reference Sensitivity Level for Carrier Aggregation in DL-only bands	Clause 4.2.12.2	Clause 7.3A	
Remark: 1. Pass: Meet the requirement. 2. The EUT and test equipment were configured for testing according to ETSI EN 301 908-13 and ETSI TS 136 521-1.			

Remark:

Review this report and original report, this report also updates the following standard:

Original report standard:	The newest report standard:
ETSI EN 301 908-13 V13.2.1 ETSI TS 136 521-1 V16.9.0	ETSI EN 301 908-13 V13.3.1 ETSI TS 136 521-1 V17.7.0

So, Spurious emission band UE co-existence of all frequency bands was retested, and the Transmitter maximum output power for Single Carrier was tested, and the other data please refer to the previous report with report number 2406RSU046-E4 & 2406RSU046-E5 issued by MRT Technology (Suzhou) Co., Ltd.

Table of Contents

1 General Description

1.1 Lab Information

1.1.1 Testing Location

These measurements tests were conducted at the Sushi TOWE Wireless Testing(Shenzhen) Co., Ltd. facility located at F401 and F101, Building E, Hongwei Industrial Zone, Liuxian 3rd Road, Bao'an District, Shenzhen, China.
Tel.: +86-755-27212361
Contact Email: info@towewireless.com

1.1.2 Test Facility / Accreditations

A2LA (Certificate Number: 7088.01)
This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017 General requirements for the competence of testing and calibration laboratories. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communiqué dated April 2017).

FCC Designation No.: CN1353
Sushi TOWE Wireless Testing(Shenzhen) Co., Ltd. has been recognized as an accredited testing laboratory. Designation Number: CN1353.

ISED CAB identifier: CN0152
Sushi TOWE Wireless Testing(Shenzhen) Co., Ltd. has been recognized by ISED as an accredited testing laboratory.
CAB identifier: CN0152
Company Number: 31000

1.2 Client Information

1.2.1 Applicant

Applicant:	Particle Industries, Inc.
Address:	548 Market St, PMB 34833, San Francisco, CA 94104, USA

1.2.2 Manufacturer

Manufacturer:	Particle Industries, Inc.
Address:	548 Market St, PMB 34833, San Francisco, CA 94104, USA

1.3 Product Information

EUT Description:	Tachyon		
Model:	TACH4ROW, TACH8ROW		
Brand:	Particle		
Hardware Version:	V1.2		
Software Version:	1.0.160		
IMEI:	863174060028643		
Operating frequency bands:	Band	TX Frequency	RX Frequency
	LTE Band 1	1920MHz ~ 1980MHz	2110MHz ~ 2170MHz
	LTE Band 3	1710MHz ~ 1785MHz	1805MHz ~ 1880MHz
	LTE Band 5	824MHz ~ 849MHz	869MHz ~ 894MHz
	LTE Band 7	2500MHz ~ 2570MHz	2620MHz ~ 2690MHz
	LTE Band 8	880MHz ~ 915MHz	925MHz ~ 960MHz
	LTE Band 20	832MHz ~ 862MHz	791MHz ~ 821MHz
	LTE Band 28	703MHz ~ 748MHz	758MHz ~ 803MHz
	LTE Band 32	/	1452MHz ~ 1496MHz
	LTE Band 34	2010MHz ~ 2025MHz	2010MHz ~ 2025MHz
	LTE Band 38	2570MHz ~ 2620MHz	2570MHz ~ 2620MHz
	LTE Band 40	2300MHz ~ 2400MHz	2300MHz ~ 2400MHz
	LTE Band 41	2496MHz ~ 2690MHz	2496MHz ~ 2690MHz
	LTE Band 42	3400MHz ~ 3600MHz	3400MHz ~ 3600MHz
LTE CA:	UL CA_3C; UL CA_7C; UL CA_8B; UL CA_38C; UL CA_40C; UL CA_42C; UL CA_1A-3A; UL CA_1A-7A; UL CA_1A-8A; UL CA_1A-20A; UL CA_1A-28A; UL CA_1-42A; UL CA_3A-7A; UL CA_3A-8A; UL CA_3A-20A; UL CA_3A-28A; UL CA_3A-42A; UL CA_7A-20A; UL CA_7A-28A; UL CA_8A-40A; DL CA_20A-32A;		
Power Class:	Class 2: LTE Band 41(Non-EU); Class 3: All Frequency Bands		
Type of Modulation:	QPSK, 16QAM, 64QAM, 256QAM		
Antenna Type:	☐ External, ☒ Integrated		
Antenna Gain:	Band	Ant1(dBi)	
	LTE Band 1	-0.4	
	LTE Band 3	-0.4	
	LTE Band 5	-0.5	
	LTE Band 7	0.0	
	LTE Band 8	-2.7	
	LTE Band 20	-1.1	
	LTE Band 28	-0.5	
	LTE Band 34	-0.2	
	LTE Band 38	0.4	
	LTE Band 40	-1.1	

	LTE Band 41	1.0
	LTE Band 42	1.2

Remark:
1. The above EUT's information was declared by applicant, please refer to the specifications or user's manual for more detailed description.
2. According to the customer's Letter of model difference, TACH4ROW and TACH8ROW are identical with each other, except for RAM and model number difference.

2 Test Configuration

2.1 Standards Specification

No.	Reference Standards	Standards Title
1	ETSI EN 301 908-13 V13.3.1	IMT cellular networks; Harmonised Standard for access to radio spectrum; Part 13: Evolved Universal Terrestrial Radio Access (E-UTRA) User Equipment (UE)
2	ETSI TS 136 521-1 V17.7.0	LTE; Evolved Universal Terrestrial Radio Access (E-UTRA); User Equipment (UE) conformance specification; Radio transmission and reception; Part 1: Conformance testing (3GPP TS 36.521-1 version 17.7.0 Release 17)

2.2 Test Channel and Bandwidth

FDD Band 1					
Range	Bandwidth [MHz]	Uplink		Downlink	
		Channel	Frequency[MHz]	Channel	Frequency[MHz]
Low	5	18025	1922.5	25	2112.5
	10	18050	1925.0	50	2115.0
	15	18075	1927.5	75	2117.5
	20	18100	1930.0	100	2120.0
Mid	5/10/15/20	18300	1950.0	300	2140.0
High	5	18575	1977.5	575	2167.5
	10	18550	1975.0	550	2165.0
	15	18525	1972.5	525	2162.5
	20	18500	1970.0	500	2160

FDD Band 3					
Range	Bandwidth [MHz]	Uplink		Downlink	
		Channel	Frequency[MHz]	Channel	Frequency[MHz]
Low	1.4	19207	1710.7	1207	1805.7
	3	19215	1711.5	1215	1806.5
	5	19225	1712.5	1225	1807.5
	10	19250	1715.0	1250	1810.0
	15	19275	1717.5	1275	1812.5
	20	19300	1720.0	1300	1815.0
Mid	1.4/3/5/10/15/20	19575	1747.5	1575	1842.5
High	1.4	19943	1784.3	1943	1879.3
	3	19935	1783.5	1935	1878.5
	5	19925	1782.5.0	1925	1877.5
	10	19900	1780	1900	1875.0
	15	19875	1777.5	1875	1872.5
	20	19850	1775.0	1850	1870.0

FDD Band 5					
Range	Bandwidth [MHz]	Uplink		Downlink	
		Channel	Frequency[MHz]	Channel	Frequency[MHz]
Low	1.4	20407	824.7	2407	869.7
	3	20415	825.5	2415	870.5
	5	20425	826.5	2425	871.5
	10	20450	829.0	2450	874.0
Mid	1.4/3/5/10	20525	836.5	2525	881.5
High	1.4	20643	848.3	2643	893.3
	3	20635	847.5	2635	892.5
	5	20625	846.5	2625	891.5
	10	20600	844.0	2600	889.0

FDD Band 7					
Range	Bandwidth [MHz]	Uplink		Downlink	
		Channel	Frequency[MHz]	Channel	Frequency[MHz]
Low	5	20775	2502.5	2775	2622.5
	10	20800	2505.0	2800	2625.0
	15	20825	2507.5	2825	2627.5
	20	20850	2510.0	2850	2630.0
Mid	5/10/15/20	21100	2535.0	3100	2655.0
High	5	21425	2567.5	3425	2687.5
	10	21400	2565.0	3400	2685.0
	15	21375	2562.5	3375	2682.5
	20	21350	2560.0	3350	2680.0

FDD Band 8					
Range	Bandwidth [MHz]	Uplink		Downlink	
		Channel	Frequency[MHz]	Channel	Frequency[MHz]
Low	1.4	21457	880.7	3457	925.7
	3	21465	881.5	3465	926.5
	5	21475	882.5	3475	927.5
	10	21500	885.0	3500	930.0
Mid	1.4/3/5/10	21625	897.5	3625	942.5
High	1.4	21793	914.3	3793	959.3
	3	21785	913.5	3785	958.5
	5	21775	912.5	3775	957.5
	10	21750	910.0	3750	955.0

FDD Band 20					
Range	Bandwidth [MHz]	Uplink		Downlink	
		Channel	Frequency[MHz]	Channel	Frequency[MHz]
Low	5	24175	834.5	6175	793.5
	10	24200	837.0	6200	796.0
	15	24225	839.5	6225	798.5
	20	24250	842.0	6250	801.0
Mid	5/10/15/20	24300	847.0	6300	806.0
High	5	24425	859.5	6425	818.5
	10	24400	857.0	6400	816.0
	15	24375	854.5	6375	813.5
	20	24350	852.0	6350	811.0

FDD Band 28					
Range	Bandwidth [MHz]	Uplink		Downlink	
		Channel	Frequency[MHz]	Channel	Frequency[MHz]
Low	3	27225	704.5	9225	759.5
	5	27235	705.5	9235	760.5
	10	27260	708.0	9260	763.0
	15	27285	710.5	9285	765.5
	20	27310	713.0	9310	768.0
Mid	3	27375	719.5	9375	774.5
	5	27385	720.5	9385	775.5
	10	27410	723.0	9410	778.0
	15	27435	725.5	9435	780.5
	20	27460	728.0	9460	783.0
High	3	24645	746.5	9645	801.5
	5	27635	745.5	9635	800.5
	10	27610	743.0	9610	798.0
	15	27585	740.5	9585	795.5
	20	27560	738.0	9560	793.0

TDD Band 34			
Range	Bandwidth [MHz]	Uplink & Downlink	
		Channel	Frequency[MHz]
Low	5	36225	2012.5
	10	36250	2015.0
	15	36275	2017.5
Mid	5/10/15	36275	2017.5
High	5	36325	2022.5
	10	36300	2020.0
	15	36275	2017.5

TDD Band 38			
Range	Bandwidth [MHz]	Uplink & Downlink	
		Channel	Frequency[MHz]
Low	5	37775	2572.5
	10	37800	2575.0
	15	37825	2577.5
	20	37850	2580.0
Mid	5/10/15/20	38000	2595.0
High	5	38225	2617.5
	10	38200	2615.0
	15	38175	2612.5
	20	38150	2610.5

TDD Band 40			
Range	Bandwidth [MHz]	Uplink & Downlink	
		Channel	Frequency[MHz]
Low	5	38675	2302.5
	10	38700	2305.0
	15	38725	2307.5
	20	38750	2310.5
Mid	5/10/15/20	39150	2350.0
High	5	39625	2397.5
	10	39600	2395.0
	15	39575	2392.5
	20	39550	2390.0

TDD Band 41			
Range	Bandwidth [MHz]	Uplink & Downlink	
		Channel	Frequency[MHz]
Low	5	39675	2498.5
	10	39700	2501.0
	15	39725	2503.5
	20	39750	2506.0
Mid	5/10/15/20	40620	2593.0
High	5	41565	2687.5
	10	41540	2685.0
	15	41515	2682.5
	20	41490	2680.0

TDD Band 42			
Range	Bandwidth [MHz]	Uplink & Downlink	
		Channel	Frequency[MHz]
Low	5	41615	3402.5
	10	41640	3405
	15	41665	3407.5
	20	41690	3410
Mid	5/10/15/20	42590	3500
High	5	43565	3597.5
	10	43540	3595
	15	43515	3592.5
	20	43490	3590

Table 4.3.1.1.3A-1: Test frequencies for CA_3C

Range	CC-Combo / N_{RB_agg} [RB]	CC1 Note1					CC2 Note1				
		BW [RB]	N_{UL}	f_{UL} [MHz]	N_{DL}	f_{DL} [MHz]	BW [RB]	N_{UL}	f_{UL} [MHz]	N_{DL}	f_{DL} [MHz]
Low	25+100	25	19233	1713.3	1233	1808.3	100	19350	1725	1350	1820
		100	19300	1720	1300	1815	25	19417	1731.7	1417	1826.7
	50+100	50	19255	1715.5	1255	1810.5	100	19399	1729.9	1399	1824.9
		100	19300	1720	1300	1815	50	19444	1734.4	1444	1829.4
	75+100	75	19278	1717.8	1278	1812.8	100	19449	1734.9	1449	1829.9
		100	19300	1720	1300	1815	75	19471	1737.1	1471	1832.1
	100+100	100	19300	1720	1300	1815	100	19498	1739.8	1498	1834.8
Mid	25+100	25	19483	1738.3	1483	1833.3	100	19600	1750.0	1600	1845.0
		100	19550	1745	1550	1840	25	19667	1756.7	1667	1851.7
	50+100	50	19481	1738.1	1481	1833.1	100	19625	1752.5	1625	1847.5
		100	19526	1742.6	1526	1837.6	50	19670	1757.0	1670	1852.0
	75+100	75	19478	1737.8	1478	1832.8	100	19649	1754.9	1649	1849.9
		100	19501	1740.1	1501	1835.1	75	19672	1757.2	1672	1852.2
	100+100	100	19476	1737.6	1476	1832.6	100	19674	1757.4	1674	1852.4
High	25+100	25	19733	1763.3	1733	1858.3	100	19850	1775	1850	1870
		100	19800	1770	1800	1865	25	19917	1781.7	1917	1876.7
	50+100	50	19706	1760.6	1706	1855.6	100	19850	1775	1850	1870
		100	19751	1765.1	1751	1860.1	50	19895	1779.5	1895	1874.5
	75+100	75	19679	1757.9	1679	1852.9	100	19850	1775	1850	1870
		100	19701	1760.1	1701	1855.1	75	19872	1777.2	1872	1872.2
	100+100	100	19652	1755.2	1652	1850.2	100	19850	1775	1850	1870
Note 1: Carriers in increasing frequency order.											

Table 4.3.1.1.7A-1: Test frequencies for CA_7C

Range	CC-Combo / N_{RB_agg} [RB]	CC1 Note1					CC2 Note1				
		BW [RB]	N_{UL}	f_{UL} [MHz]	N_{DL}	f_{DL} [MHz]	BW [RB]	N_{UL}	f_{UL} [MHz]	N_{DL}	f_{DL} [MHz]
Low	50+100	50	20805	2505.5	2805	2625.5	100	20949	2519.9	2949	2639.9
		100	20850	2510	2850	2630	50	20994	2524.4	2994	2644.4
	75+50	75	20825	2507.5	2825	2627.5	50	20945	2519.5	2945	2639.5
	75+75	75	20825	2507.5	2825	2627.5	75	20975	2522.5	2975	2642.5
	75+100	75	20828	2507.8	2828	2627.8	100	20999	2524.9	2999	2644.9
		100	20850	2510	2850	2630	75	21021	2527.1	3021	2647.1
	100+100	100	20850	2510	2850	2630	100	21048	2529.8	3048	2649.8
Mid	50+100	50	21006	2525.6	3006	2645.6	100	21150	2540	3150	2660
		100	21051	2530.1	3051	2650.1	50	21195	2544.5	3195	2664.5
	75+50	75	21051	2530.1	3051	2650.1	50	21171	2542.1	3171	2662.1
	75+75	75	21025	2527.5	3025	2647.5	75	21175	2542.5	3175	2662.5
	75+100	75	21003	2525.3	3003	2645.3	100	21174	2542.4	3174	2662.4
		100	21026	2527.6	3026	2647.6	75	21197	2544.7	3197	2664.7
	100+100	100	21001	2525.1	3001	2645.1	100	21199	2544.9	3199	2664.9
High	50+100	50	21206	2545.6	3206	2665.6	100	21350	2560	3350	2680
		100	21251	2550.1	3251	2670.1	50	21395	2564.5	3395	2684.5
	75+50	75	21277	2552.7	3277	2672.7	50	21397	2564.7	3397	2684.7
	75+75	75	21225	2547.5	3225	2667.5	75	21375	2562.5	3375	2682.5
	75+100	75	21179	2542.9	3179	2662.9	100	21350	2560	3350	2680
		100	21201	2545.1	3201	2665.1	75	21372	2562.2	3372	2682.2
	100+100	100	21152	2540.2	3152	2660.2	100	21350	2560	3350	2680
Note 1: Carriers in increasing frequency order.											

Table 4.3.1.1. 8 A-1: Test frequencies for CA_8B

Range	CC-Combo / N_{RB_agg} [RB]	CC1 Note1					CC2 Note1				
		BW [RB]	N_{UL}	f_{UL} [MHz]	N_{DL}	f_{DL} [MHz]	BW [RB]	N_{UL}	f_{UL} [MHz]	N_{DL}	f_{DL} [MHz]
Low	25+50	25	21478	882.8	3478	927.8	50	21550	890	3550	935
	50+25	50	21500	885	3500	930	25	21572	892.2	3572	937.2
	50+50	50	21500	885	3500	930	50	21599	894.9	3599	939.9
Mid	25+50	25	21578	892.8	3578	937.8	50	21650	900.0	3650	945.0
	50+25	50	21600	895.0	3600	940.0	25	21672	902.2	3672	947.2
	50+50	50	21576	892.6	3576	937.6	50	21675	902.5	3675	947.5
High	25+50	25	21678	902.8	3678	947.8	50	21750	910	3750	955
	50+25	50	21700	905	3700	950	25	21772	912.2	3772	957.2
	50+50	50	21651	900.1	3651	945.1	50	21750	910	3750	955
Note 1: Carriers in increasing frequency order.											

Table 4.3.1.2.6A-1: Test frequencies for CA_38C

Range	CC-Combo / N_{RB_agg} [RB]	CC1 Note1			CC2 Note1		
		BW [RB]	$N_{UL/DL}$	$f_{UL/DL}$ [MHz]	BW [RB]	$N_{UL/DL}$	$f_{UL/DL}$ [MHz]
Low	75+75	75	37825	2577.5	75	37975	2592.5
	100+100	100	37850	2580	100	38048	2599.8
Mid	75+75	75	37925	2587.5	75	38075	2602.5
	100+100	100	37901	2585.1	100	38099	2604.9
High	75+75	75	38025	2597.5	75	38175	2612.5
	100+100	100	37952	2590.2	100	38150	2610
Note 1:	Carriers in increasing frequency order.						

Table 4.3.1.2.8A-1: Test frequencies for CA_40C

Range	CC-Combo / N_{RB_agg} [RB]	CC1 Note1			CC2 Note1		
		BW [RB]	$N_{UL/DL}$	$f_{UL/DL}$ [MHz]	BW [RB]	$N_{UL/DL}$	$f_{UL/DL}$ [MHz]
Low	50+100	50	38705	2305.5	100	38849	2319.9
		100	38750	2310	50	38894	2324.4
	75+75	75	38725	2307.5	75	38875	2322.5
	75+100	75	38728	2307.8	100	38899	2324.9
		100	38750	2310	75	38921	2327.1
	100+100	100	38750	2310	100	38948	2329.8
Mid	50+100	50	39056	2340.6	100	39200	2355.0
		100	39101	2345.1	50	39245	2359.5
	75+75	75	39075	2342.5	75	39225	2357.5
	75+100	75	39053	2340.3	100	39224	2357.4
		100	39076	2342.6	75	39247	2359.7
	100+100	100	39051	2340.1	100	39249	2359.9
High	50+100	50	39406	2375.6	100	39550	2390
		100	39451	2380.1	50	39595	2394.5
	75+75	75	39425	2377.5	75	39575	2392.5
	75+100	75	39379	2372.9	100	39550	2390
		100	39401	2375.1	75	39572	2392.2
	100+100	100	39352	2370.2	100	39550	2390
Note 1:	Carriers in increasing frequency order.						

Table 4.3.1.2.10A-1: Test frequencies for CA_42C

Range	CC-Combo / N_{RB_agg} [RB]	CC1 Note1			CC2 Note1		
		BW [RB]	$N_{UL/DL}$	$f_{UL/DL}$ [MHz]	BW [RB]	$N_{UL/DL}$	$f_{UL/DL}$ [MHz]
Low	25+100	25	41623	3403.3	100	41740	3415
		100	41690	3410	25	41807	3421.7
	50+100	50	41645	3405.5	100	41789	3419.9
		100	41690	3410	50	41834	3424.4
	75+100	75	41668	3407.8	100	41839	3424.9
		100	41690	3410	75	41861	3427.1
	100+100	100	41690	3410	100	41888	3429.8
Mid	25+100	25	42498	3490.8	100	42615	3502.5
		100	42565	3497.5	25	42682	3509.2
	50+100	50	42496	3490.6	100	42640	3505
		100	42541	3495.1	50	42685	3509.5
	75+100	75	42493	3490.3	100	42664	3507.4
		100	42516	3492.6	75	42687	3509.7
	100+100	100	42491	3490.1	100	42689	3509.9
High	25+100	25	43373	3578.3	100	43490	3590
		100	43440	3585	25	43557	3596.7
	50+100	50	43346	3575.6	100	43490	3590
		100	43391	3580.1	50	43535	3594.5
	75+100	75	43319	3572.9	100	43490	3590
		100	43341	3575.1	75	43512	3592.2
	100+100	100	43292	3570.2	100	43490	3590
Note 1: Carriers in increasing frequency order.							

2.3 Test Mode

Modulation Type	Description
TM 1 mode:	Keep the EUT communication with simulated station in QPSK mode
TM 2 mode:	Keep the EUT communication with simulated station in 16QAM mode
TM 3 mode:	Keep the EUT communication with simulated station in 64QAM mode
TM 4 mode:	Keep the EUT communication with simulated station in 256QAM mode

2.4 Test Environment

Relative Humidity	45-56 % RH Ambient	
Condition	**Temperature(℃)**	**Voltage(V)**
NTNV	25	4.00
LTLV	-20	3.55
LTHV	-20	4.40
HTLV	60	3.55
HTHV	60	4.40
Remark:		
NTNV Normal Temperature, Normal Voltage		
LTLV Low Temperature, Low Voltage		
LTHV Low Temperature, High Voltage		
HTLV High Temperature, Low Voltage		
HTHV High Temperature, High Voltage		

2.5 Support Unit used in test

The EUT has been tested as an independent unit.

2.6 Test RF Cable

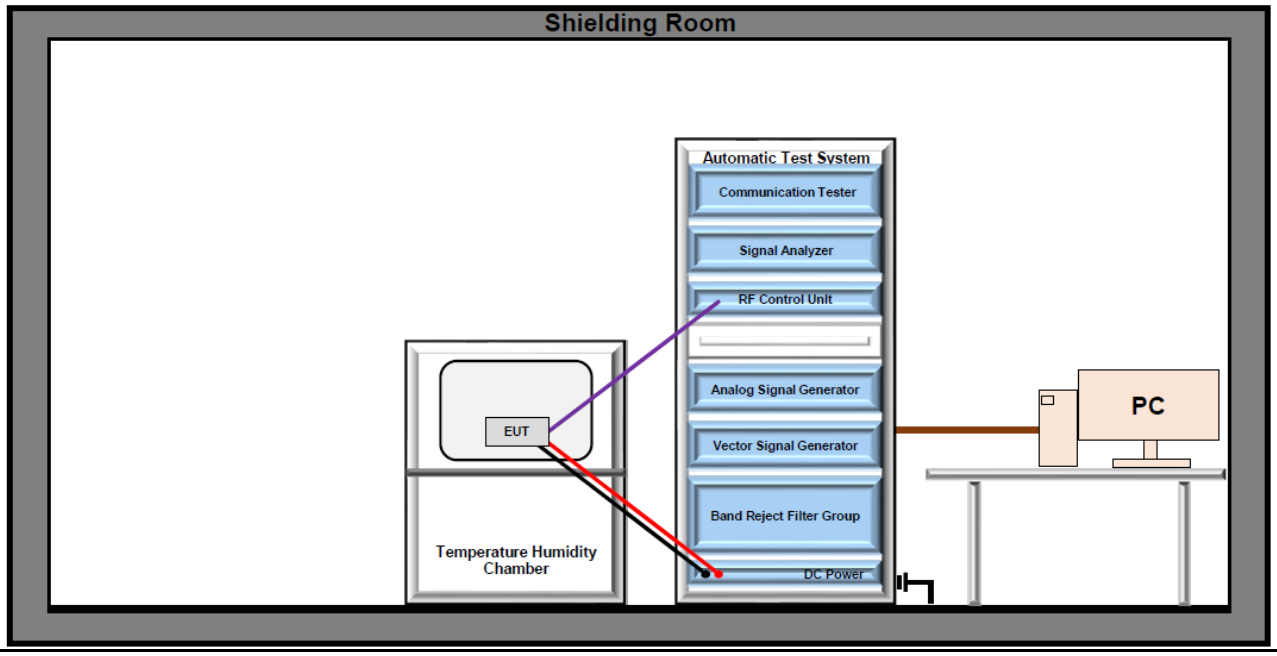
For all conducted test items: The offset level is set spectrum analyzer to compensate the RF cable loss and attenuator factor between RF conducted output port and spectrum analyzer. With the offset compensation, the spectrum analyzer reading level will be exactly the RF output level.
The spectrum analyzer offset is derived from RF cable loss and attenuator factor.
Offset = RF cable loss + attenuator factor.

2.7 Modifications

No modifications were made during testing.

2.8 Test Setup Diagram

Conducted Configuration:



3 Equipment and Measurement Uncertainty

All test and measuring equipment utilized to perform the tests documented in this report are calibrated on a regular basis, whichever is less, and where applicable is traceable to recognized national standards.

3.1 Test Equipment List

RF Conducted 04					
Description	**Manufacturer**	**Model**	**S.N.**	**Last Due**	**Cal Due**
Radio Communication Analyzer	Anritsu	MT8821C	6262170436	2025/03/14	2026/03/13
Signal Analyzer	Keysight	N9020A	US46220152	2025/03/14	2026/03/13
Signal Generator	Keysight	N5182A	MY49060761	2025/03/11	2026/03/10
Signal Generator	R&S	SMR20	101691	2025/03/11	2026/03/10
Hygrometer	BingYu	HTC-1	N/A	2025/05/29	2027/05/28
Band Reject Filter Group	Tonscend	JS0806-F	23B806F0662	N/A	N/A
RF Control Unit	Tonscend	JS0806-1	22L8060650	N/A	N/A
Measurement Software	Tonscend	TS1120 V3.1.46	10770	N/A	N/A

3.2 Measurement Uncertainty

Parameter	**U_{lab}**
Output Power	0.74dB

Uncertainty figures are valid to a confidence level of 95%

4 Test Results

The following tables reflect the requirements of the relevant specification and show the tests performed. Result files verifying these verdicts are available for inspection at TOWE.

The Max Output Power of LTE			
LTE Band 1	Channel	Power(dBm)	Tune up(dBm)
	18575	22.41	25.00
LTE Band 3	Channel	Power(dBm)	Tune up(dBm)
	19575	23.08	25.00
LTE Band 5	Channel	Power(dBm)	Tune up(dBm)
	20425	23.41	25.00
LTE Band 7	Channel	Power(dBm)	Tune up(dBm)
	20775	21.77	25.00
LTE Band 8	Channel	Power(dBm)	Tune up(dBm)
	21750	23.20	25.00
LTE Band 20	Channel	Power(dBm)	Tune up(dBm)
	24175	23.34	25.00
LTE Band 28	Channel	Power(dBm)	Tune up(dBm)
	27375	23.27	25.00
LTE Band 34	Channel	Power(dBm)	Tune up(dBm)
	36325	22.64	25.00
LTE Band 38	Channel	Power(dBm)	Tune up(dBm)
	37775	22.60	25.00
LTE Band 40	Channel	Power(dBm)	Tune up(dBm)
	38675	22.43	25.00
LTE Band 41	Channel	Power(dBm)	Tune up(dBm)
	39675	24.59	25.00
LTE Band 42	Channel	Power(dBm)	Tune up(dBm)
	43565	23.47	25.00

4.1 Test Results Summary

ETSI EN 301 908-13	ETSI TS 136 521-1	Testing Condition	Result						
			Test Items	LTE Band					
				1	3	5	7	8	20
4.2.2.1	6.2.2	NTNV	Transmitter maximum output power for Single Carrier	PASS	PASS	PASS	PASS	PASS	PASS
		LTLV		PASS	PASS	PASS	PASS	PASS	PASS
		LTHV		PASS	PASS	PASS	PASS	PASS	PASS
		HTLV		PASS	PASS	PASS	PASS	PASS	PASS
		HTHV		PASS	PASS	PASS	PASS	PASS	PASS
4.2.4.1	6.6.3.2	NTNV	Spurious emission band UE co-existence	PASS	PASS	PASS	PASS	PASS	PASS
Remark: During the test, the preliminary test was performed in Transmitter output power with five conditions (NTNV, HTHV, HTLV, LTHV and LTLV), and the test data of the worst-case condition was recorded in this report.									

ETSI EN 301 908-13	ETSI TS 136 521-1	Testing Condition	Result						
			Test Items	LTE Band					
				28	34	38	40	41	42
4.2.2.1	6.2.2	NTNV	Transmitter maximum output power for Single Carrier	PASS	PASS	PASS	PASS	PASS	PASS
		LTLV		PASS	PASS	PASS	PASS	PASS	PASS
		LTHV		PASS	PASS	PASS	PASS	PASS	PASS
		HTLV		PASS	PASS	PASS	PASS	PASS	PASS
		HTHV		PASS	PASS	PASS	PASS	PASS	PASS
4.2.4.1	6.6.3.2	NTNV	Spurious emission band UE co-existence	PASS	PASS	PASS	PASS	PASS	PASS
Remark: During the test, the preliminary test was performed in Transmitter output power with five conditions (NTNV, HTHV, HTLV, LTHV and LTLV), and the test data of the worst-case condition was recorded in this report.									

ETSI EN 301 908-13	ETSI TS 136 521-1	Testing Condition	Result						
			Test Items	LTE CA					
				3C	7C	8B	38C	40C	42C
4.2.4.2	6.6.3.2A.1	NTNV	Spurious emission band UE co-existence for CA	PASS	PASS	PASS	PASS	PASS	PASS

ETSI EN 301 908-13	ETSI TS 136 521-1	Testing Condition	Result						
			Test Items	LTE CA					
				1A-3A	1A-7A	1A-8A	1A-20A	1A-28A	1A-42A
4.2.4.2	6.6.3.2A.2	NTNV	Spurious emission band UE co-existence for CA	PASS	PASS	PASS	PASS	PASS	PASS

ETSI EN 301 908-13	ETSI TS 136 521-1	Testing Condition	Result					
			Test Items	LTE CA				
				3A-7A	3A-8A	3A-20A	3A-28A	3A-42A
4.2.4.2	6.6.3.2A.2	NTNV	Spurious emission band UE co-existence for CA	PASS	PASS	PASS	PASS	PASS

ETSI EN 301 908-13	ETSI TS 136 521-1	Testing Condition	Result			
			Test Items	LTE CA		
				7A-20A	7A-28A	8A-40A
4.2.4.2	6.6.3.2A.2	NTNV	Spurious emission band UE co-existence for CA	PASS	PASS	PASS

~The End~