

SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch

SZEMC-TRF-01 Rev. A/2

Report No.: SZCR250900403204

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TEST REPORT

Application No.: SZCR2509004032AT
Applicant: IV Ensure, Inc.
Address of Applicant: 1700 Pacific Ave, Suite 2425, Dallas, TX USA
Manufacturer: IV Ensure, Inc.
Address of Manufacturer: 1700 Pacific Ave, Suite 2425, Dallas, TX USA
EUT Description: IVED-04
Model No.: IVED-04
Trade Mark: IVENSURE
FCC ID: 2BSBFIVED04
Standards: FCC 47 CFR Part 2.1091
 FCC KDB 447498 D01 v06
Date of Receipt: 2025/09/12
Date of Issue: 2025/11/27

Test Result:	PASS*
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* In the configuration tested, the EUT complied with the standards specified above.

Keny Xu

Keny Xu

EMC Laboratory Manager



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 Shenzhen Branch Testing & EMC Laboratory

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Revision Record				
Version	Chapter	Date	Modifier	Remark
01		2025/11/27		Original

Authorized for issue by:				
		Donjon . Huang		
		Donjon Huang/Project Engineer		
		Eric Fu		
		Eric Fu/Reviewer		



SGS-CSTC Standards Technical Services Co., Ltd.
Shenzhen Branch Testing Center Laboratory

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Member of the SGS Group (SGS SA)

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3 General Information

3.1 General Description of EUT

EUT Description:	IVED-04		
Model No.:	IVED-04		
Trade Mark:	IVENSURE		
Hardware Version:	1.0		
Software Version:	37.00.218		
Power Supply:	DC 3.8V		
Antenna Type:	☐ External, ☒ Integrated		
Antenna Gain:	GSM850: -2.12dB i		GSM1900: 0.99dBi
	NB-IoT:		
	NB-IoT Band 2: 0.99dBi		NB-IoT Band 4: 2.33dBi
	NB-IoT Band 5: -2.12dBi		NB-IoT Band 12: -2.99dBi
	NB-IoT Band 13: -1.64dBi		NB-IoT Band 25: 0.99dBi
	NB-IoT Band 26: -2.12dBi		NB-IoT Band 66: 2.33dBi
	NB-IoT Band 71: -3.37dBi		NB-IoT Band 85: -2.99dBi
	CAT M1:		
	Cat M1 Band 2: 0.99dBi		Cat M1 Band 4: 2.33dBi
	Cat M1 Band 5: -2.12dBi		Cat M1 Band 12: -2.99dBi
	Cat M1 Band 13: -1.64dBi		Cat M1 Band 25: 0.99dBi
	Cat M1 Band 26: -2.12dBi		Cat M1 Band 66: 2.33dBi
	Cat M1 Band 85: -2.99dBi		
	Bluetooth: 1.8dBi		
	Note: The antenna gain are derived from the gain information report provided by the manufacturer.		
Remark: As above information is provided and confirmed by the applicant. SGS is not liable to the accuracy, suitability, reliability or/and integrity of the information.			



3.2 Test Location

All tests were performed at:

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen Branch

No. 1 Workshop, M-10, Middle Section, Science & Technology Park, Nanshan District, Shenzhen, Guangdong, China. 518057.

Tel: +86 755 2601 2053 Fax: +86 755 2671 0594

No tests were sub-contracted.

3.3 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

• **A2LA (Certificate No. 3816.01)**

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory is accredited by the American Association for Laboratory Accreditation(A2LA). Certificate No. 3816.01.

• **VCCI (Member No. 1937)**

The 3m Fully-anechoic chamber for above 1GHz, 10m Semi-anechoic chamber for below 1GHz, Shielded Room for Mains Port Conducted Interference Measurement and Telecommunication Port Conducted Interference Measurement of SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen EMC laboratory have been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: G-20026, R-14188, C-12383 and T-11153 respectively.

• **FCC –Designation Number: CN1336**

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory has been recognized as an accredited testing laboratory.

Designation Number: CN1336. Test Firm Registration Number: 787754.

• **Innovation, Science and Economic Development Canada**

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory has been recognized by ISED as an accredited testing laboratory.

CAB identifier: CN0006.

IC#: 4620C.



4 RF Exposure Evaluation

4.1 RF Exposure Compliance Requirement

4.1.1 Limits

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm ²)	Averaging time (minutes)
(A) Limits for Occupational/Controlled Exposures				
0.3-3.0	614	1.63	*(100)	6
3.0-30	1842/f	4.89/f	*(900/f ²)	6
30-300	61.4	0.163	1.0	6
300-1500	/	/	f/300	6
1500-100,000	/	/	5	6
(B) Limits for General Population/Uncontrolled Exposure				
0.3-1.34	614	1.63	*(100)	30
1.34-30	824/f	2.19/f	*(180/f ²)	30
30-300	27.5	0.073	0.2	30
300-1500	/	/	f/1500	30
1500-100,000	/	/	1.0	30

F=frequency in MHz
 *=Plane-wave equivalent power density
 RF exposure compliance will need to be determined with respect to 1.1307(c) and (d) of the FCC rules. The emissions should be within the limits at 300kHz in Table 1 of 1.1310(use the 300kHz limits for 150kHz:614V/m,1.63A/m).

Friis Formula

Friis transmission formula: $P_d = (P_{out} * G) / (4 * \pi * R^2)$

Where

P_d = power density in mW/cm²

P_{out} = output power to antenna in mW

G = gain of antenna in linear scale

π = 3.1416

R = distance between observation point and center of the radiator in cm

P_d is the limit of MPE, 1 mW/cm². If we know the maximum gain of the antenna and the total power input to the antenna, through the calculation, we will know the distance r where the MPE limit is reached.



4.1.2 Test Procedure

Software provided by client enabled the EUT to transmit data at lowest, middle and highest channel individually

4.1.3 EUT RF Exposure Evaluation

Output Power Into Antenna & RF Exposure Evaluation Distance:

This confirmed that the device comply with MPE limit.

Operating Band	Frequency (MHz)	Antenna Gain (dBi)	Max Conducted Power (dBm)	EIRP (ERP) (dBm)	EIRP(ERP) Limit (dBm)	Power Density at R = 20 cm (mW/cm ²)	Limit (mW/cm ²)	Gain according to EIRP (ERP) (dBi)	Gain according to Pd (dBi)	Max Gain Allowed (dBi)	Result Ratio	conclusion
GSM850	824.2	-2.12	32.00	27.73	33.00	0.0233	0.5495	3.15	11.60	3.15	0.0424	Pass
GSM1900	1850.2	0.99	30.00	30.99	33.00	0.0301	1.0000	3.00	16.20	3.00	0.0301	Pass
NB-IoT Band 2	1850.1	0.99	25.00	25.99	33.00	0.0790	1.0000	8.00	12.01	8.00	0.0790	Pass
NB-IoT Band 4	1710.1	2.33	25.00	27.33	30.00	0.1076	1.0000	5.00	12.01	5.00	0.1076	Pass
NB-IoT Band 5	824.1	-2.12	25.00	20.73	38.45	0.0386	0.5494	15.60	9.41	9.41	0.0703	Pass
NB-IoT Band 12	699.1	-2.99	25.00	19.86	34.77	0.0316	0.4661	11.92	8.69	8.69	0.0678	Pass
NB-IoT Band 13	777.1	-1.64	25.00	21.21	34.77	0.0431	0.5181	11.92	9.15	9.15	0.0832	Pass
NB-IoT Band 25	1850.1	0.99	25.00	25.99	33.00	0.0790	1.0000	8.00	12.01	8.00	0.0790	Pass
NB-IoT Band 26 (814-824)	814.1	-2.12	25.00	20.73	NA	0.0386	0.5427	NA	9.35	9.35	0.0711	Pass
NB-IoT Band 26 (824-849)	824.1	-2.12	25.00	20.73	38.45	0.0386	0.5494	15.60	9.41	9.41	0.0703	Pass
NB-IoT Band 66	1710.1	2.33	25.00	27.33	30.00	0.1076	1.0000	5.00	12.01	5.00	0.1076	Pass
NB-IoT Band 71	663.1	-3.37	22.00	16.48	34.77	0.0145	0.4421	14.92	11.46	11.46	0.0328	Pass
NB-IoT Band 85	698.1	-2.99	25.00	19.86	34.77	0.0316	0.4654	11.92	8.69	8.69	0.0679	Pass
LTE Cat M1 Band 2	1850.7	0.99	25.00	25.99	33.00	0.0790	1.0000	8.00	12.01	8.00	0.0790	Pass
LTE Cat M1 Band 4	1710.7	2.33	25.00	27.33	30.00	0.1076	1.0000	5.00	12.01	5.00	0.1076	Pass
LTE Cat M1 Band 5	824.7	-2.12	25.00	20.73	38.45	0.0386	0.5498	15.60	9.41	9.41	0.0702	Pass
LTE Cat M1 Band 12	699.7	-2.99	25.00	19.86	34.77	0.0316	0.4665	11.92	8.70	8.70	0.0678	Pass
LTE Cat M1 Band 13	779.5	-1.64	25.00	21.21	34.77	0.0431	0.5197	11.92	9.16	9.16	0.0830	Pass
LTE Cat M1 Band 25	1850.7	0.99	25.00	25.99	33.00	0.0790	1.0000	8.00	12.01	8.00	0.0790	Pass
LTE Cat M1 Band 26 (814-824)	814.7	-2.12	25.00	20.73	NA	0.0386	0.5431	NA	9.36	9.36	0.0711	Pass
LTE Cat M1 Band 26 (824-849)	824.7	-2.12	25.00	20.73	38.45	0.0386	0.5498	15.60	9.41	9.41	0.0702	Pass
LTE Cat M1 Band 66	1710.7	2.33	25.00	27.33	30.00	0.1076	1.0000	5.00	12.01	5.00	0.1076	Pass
LTE Cat M1 Band 85	700.5	-2.99	25.00	19.86	34.77	0.0316	0.4670	11.92	8.70	8.70	0.0677	Pass
Bluetooth	2402.0	1.80	-4.00	-2.20	30.00	0.0001	1.0000	34.00	41.01	34.00	0.0001	Pass

Remark: Frame-average power=Burst power+ Division Factors(-9.19)



4.1.4 Exposure calculations for multiple sources

In order to ensure compliance with the MPE for a controlled environment, the sum of the ratios of the power density to the corresponding MPE should not exceed unity. That is

$$\sum_{i=1}^n \frac{S_i}{MPE_i} \leq 1$$

The product also has multiple transmitters The Simultaneous Transmission Possibilities are as below:

Simultaneous Tx Combination	Configuration
1	WWAN + Bluetooth

No.	Mode	Power Density (mW/cm ²)	MPE Limit (mW/cm ²)	Result Ratio	Total Ratio	Limit	Result
1	NB-IoT Band 4*	0.1076	1.0000	0.1076	0.1077	1.0000	Pass
	Bluetooth	0.0001	1.0000	0.0001			

Remark: This WWAN Band was recalculated on worst Band.

---End of Report---

