

SZEMC-TRF-01 Rev. A/1

Report No.: SZCR250700317408

Page: 1 of 12

# RF Exposure Report

**Application No.:** SZCR2507003174AT **Applicant:** DT Research, Inc.

**Address of Applicant:** 3RD FL NO 36 WUQUAN 7TH RD WUGU DISTRICT, NEW TAIPEI,

Manufacturer: DT Research, Inc.

**Address of Manufacturer:** 2000 Concourse Drive, San Jose, CA 95131, USA

Factory: DT Research, Inc. Taiwan Branch

Address of Factory: 6F., No.36 Wuquan 7 th Rd., Wugu Dist.New Taipei City 248 Taiwan

**Equipment Under Test (EUT):** 

**EUT Name:** Multi-mode Smart LTE Module

Model No.: SC200E-NA

Trade Mark:

DT Research

FCC ID: YE3600-SC200ENA

FCC Rules 47 CFR §2.1091

Standard(s): KDB 447498 D04 interim General RF Exposure Guidance v01

**Date of Receipt:** 2025-07-21

Date of Test: 2025-07-24 to 2025-08-19

Date of Issue: 2025-08-20

**Test Result:** Pass\*

Keny Xu **EMC Laboratory Manager** 



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/en/Terms-and-Conditions">https://www.sgs.com/en/Terms-and-Conditions</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only to the fullest extent of the law. Offices office state and sample(s) are retained for 30 days only.

Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443,

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Nanshan District, Shenzhen, Guangdong, China 518057 t (86–755) 26012053 f (86–755) 26710594 www.sgsgroup.com.cn 中国・广东・深圳市南山区科技园中区M-10栋1号厂房 邮编:518057 t (86-755)26012053 f (86-755)26710594 sgs.china@sgs.com

<sup>\*</sup> In the configuration tested, the EUT complied with the standards specified above.



SZEMC-TRF-01 Rev. A/1

Report No.: SZCR250700317408

Page: 2 of 12

Revision Record							
Version	Chapter	Date	Modifier	Remark			
01		2025-08-20		Original			

Authorized for issue by:		
	Bolisonti	
	Edison Li/Project Engineer	
	Exic Fu	
	Eric Fu/Reviewer	



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/en/Terms-and-Conditions">https://www.sgs.com/en/Terms-and-Conditions</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Cilent's instructions, if any. The Company's sole responsibility is to its Cilent and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company, Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: Col.Doccheck@gs.com"

Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (85-75) 83071443, or email: CN.Doccheck@egs.com

No.11Workshop, M-10, Midde Sadios, Science & Technology Park, Nanshan District, Sherzhen, Guargdong, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn

中国・广东・深圳市南山区科技园中区M-10栋1号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com



SZEMC-TRF-01 Rev. A/1

Report No.: SZCR250700317408

Page: 3 of 12

#### 1 Contents

			Page
1	Con	tents	3
2	Gen	eral Information	4
	2.1	General Description of E.U.T.	4
	2.2	Details of E.U.T.	4
	2.3	Separation Distance	6
	2.4	Test Location	7
	2.5	Test Facility	7
3	FCC	Radiofrequency radiation exposure limits	8
	3.1	Blanket 1 mW Blanket Exemption	8
	3.2	MPE-based Exemption	8
	3.3	SAR-based Exemption	9
4	Mea	surement and Calculation	11
	4.1	Maximum transmit power	11
	4.2	RF Exposure Calculation	12



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/en/Terms-and-Conditions">https://www.sgs.com/en/Terms-and-Conditions</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@egs.com"

Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or e mail: CN. Doccheck@egs.com

No.11Workshop, Mrit, Middle Sedios, Science & Technology Park, Nanshan Dictrict, Sherzhan, Guangdong, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn

中国・广东・深圳市南山区科技园中区M-10栋1号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com



SZEMC-TRF-01 Rev. A/1

Report No.: SZCR250700317408

4 of 12 Page:

#### **General Information**

#### 2.1 General Description of E.U.T.

	☐ Portable device
Product Type:	☐ Mobile device
	⊠ Fixed device

#### 2.2 Details of E.U.T.

Power supply:	DC 3.8V powered by test mainboard		
For Bluetooth Classic			
Operation Frequency:	2402MHz to 2480MHz		
Bluetooth Version:	V5.0		
Spectrum Spread	Frequency Hopping Spread Spectrum(FHSS)		
Technology:			
Modulation Type:	GFSK, π/4DQPSK, 8DPSK		
Number of Channels:	79		
Channel Spacing:	1MHz		
Antenna Type:	PIFA Antenna		
Antenna Gain:	4.3dBi		
For Bluetooth LE			
Operation Frequency:	2402MHz to 2480MHz		
Bluetooth Version:	V5.0		
Channel Spacing:	2MHz		
Modulation Type:	GFSK		
Number of Channels:	40		
Data rate:	1Mbps		
Antenna Type:	PIFA Antenna		
Antenna Gain:	4.3dBi		
For 2.4G WiFi:			
Operation Frequency:	802.11b/g/n(20MHz): 2412MHz to 2462MHz		
	802.11n(40MHz): 2422MHz to 2452MHz		



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/en/Terms-and-Conditions">https://www.sgs.com/en/Terms-and-Conditions</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Cilent's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, which is the company of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@egs.com")

No.1 Workshop, Nr.10, Middle Section, Science & Technology Part, Nansten District, Sherzhen, Guangdong, China 518057 t (86–755) 26012053 f (86–755) 26710594 www.sgsgroup.com.cn 中国・广东・深圳市南山区科技园中区M-10栋1号厂房 邮编:518057 t(86-755)26012053 f(86-755)26710594 sgs.china@sgs.com



SZEMC-TRF-01 Rev. A/1

Report No.: SZCR250700317408

5 of 12 Page:

Modulation Type:	802.11b: DSSS(CCK, DQPSK, DBPSK)			
	802.11g/n: OFDM(QPSK, BPSK, 16QAM, 64QAM)			
Channel Numbers:	802.11b/g/n 20MHz: 11 Channels			
	802.11n/ 40MHz: 7 Channels			
Channel Spacing:	5MHz			
Antenna Type:	PIFA Antenna			
Antenna Gain:	4.3dBi			

5G WiFi:			T	_				
Operation Frequency:	Band	Mode	Frequency Range(MHz)	Number of channels				
	UNII Band I	802.11a/n/ac(20MHz)	5180-5240	4				
		802.11n/ac(40MHz)	5190-5230	2				
		802.11ac(80MHz)	5210	1				
	UNII Band II-A	802.11a/n(20MHz)	5260-5320	4				
		802.11n(40MHz)	5270-5310	2				
		802.11ac(80MHz)	5290	1				
	UNII Band II-C	802.11a/n(20MHz)	5500-5700	11				
		802.11n(40MHz)	5510-5670	5				
		802.11ac(80MHz)	5530-5610	2				
	UNII Band III	802.11a/n(20MHz)	5745-5825	5				
		802.11n(40MHz)	5755-5795	2				
		802.11ac(80MHz)	5775	1				
Modulation Type:	802.11a: OFDM(	802.11a: OFDM(QPSK, BPSK, 16QAM, 64QAM)						
	802.11n: OFDM(	802.11n: OFDM(QPSK, BPSK, 16QAM, 64QAM)						
	802.11ac: OFDM(QPSK, BPSK, 16QAM, 64QAM, 256QAM)							
DFS Function:	Slave without rac	Slave without radar detection						
TPC Function:	Not support	Not support						
Antenna Type:	PIFA Antenna							



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/en/Terms-and-Conditions">https://www.sgs.com/en/Terms-and-Conditions</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Cilent's instructions, if any. The Company's sole responsibility is to its Cilent and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company, Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN\_Doccheck@gs.com"

No.1 Workshop, Nr.10, Middle Section, Science & Technology Part, Nansten District, Sherzhen, Guangdong, China 518057 t (86–755) 26012053 f (86–755) 26710594 www.sgsgroup.com.cn 中国・广东・深圳市南山区科技园中区M-10栋1号厂房 邮编:518057 t(86-755)26012053 f(86-755)26710594 sgs.china@sgs.com



SZEMC-TRF-01 Rev. A/1

Report No.: SZCR250700317408

Page: 6 of 12

Antenna Gain:	4.6dBi					
For LTE Band						
LTE Operation	LTE FDD Band 2, 4, 5, 7, 12, 13, 14, 17, 25, 26, 41, 66, 71					
Frequency Band:						
Modulation Type:	QPSK, 16QAM					
Antenna Type:	PIFA Antenna					
Antenna Gain:	LTE Band 2: 1850 to 1910MHz, PIFA Antenna, 2.90dBi					
	LTE Band 4: 1710 to 1755MHz, PIFA Antenna, 3.10dBi					
	LTE Band 5: 824 to 849MHz, PIFA Antenna, 2.00dBi					
	LTE Band 7: 2500 to 2570MHz, PIFA Antenna, 3.50dBi					
	LTE Band 12: 699 to 716MHz, PIFA Antenna, 3.90dBi					
	LTE Band 13: 777 to 787MHz, PIFA Antenna, 3.70dBi					
	LTE Band 14: 788 to 798MHz, PIFA Antenna, 3.20dBi					
	LTE Band 17: 704 to 716MHz, PIFA Antenna, 3.90dBi					
	LTE Band 25: 1850 to 1915MHz, PIFA Antenna, 2.90dBi					
	LTE Band 26: 814 to 849MHz, PIFA Antenna, 2.00dBi					
	LTE Band 41: 2496 to 2690MHz, PIFA Antenna, 3.50dBi					
	LTE Band 66: 1710 to 1780MHz, PIFA Antenna, 3.10dBi					
	LTE Band 71: 663 to 698MHz, PIFA Antenna, 3.90dBi					

#### 2.3 Separation Distance

Minimum test separation distance:	20cm
-----------------------------------	------

Remark: This minimum test separation distance is determined by the smallest distance from the antenna and radiating structures or outer surface of the device, according to the host form factor, exposure conditions and platform requirements, to any part of the body or extremity of a user or bystander.



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/en/Terms-and-Conditions">https://www.sgs.com/en/Terms-and-Conditions</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Cilent's instructions, if any. The Company's sole responsibility is to its Cilent and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@egs.com")

or email: CN.Doccheck@sgs.com No.1 Workshop, NF1, Middle Section, Science & Technology Part, Narshan District, Sherzhen, Guangdong, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn 中国・广东・深圳市南山区科技园中区M-10栋1号厂房 邮编:518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com



SZEMC-TRF-01 Rev. A/1

Report No.: SZCR250700317408

Page: 7 of 12

#### 2.4 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.

#### 2.5 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.



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/en/Terms-and-Conditions">https://www.sgs.com/en/Terms-and-Conditions</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Cilent's instructions, if any. The Company's sole responsibility is to its Cilent and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@egs.com")

No.1 Wortshop, Mr. III, Middle Section, Science & Technology Park, Nanshan District, Sherzhen, Guangdong, China 518057 t (86–755) 26012053 f (86–755) 26710594 www.sgsgroup.com.cn



SZEMC-TRF-01 Rev. A/1

Report No.: SZCR250700317408

8 of 12 Page:

#### 3 FCC Radiofrequency radiation exposure limits

Test exemptions apply for devices used in general population/uncontrolled exposure environments. according to the SAR-based, or MPE-based exemption thresholds.

#### 3.1 Blanket 1 mW Blanket Exemption

The 1 mW Blanket Exemption of §1.1307(b)(3)(i)(A) applies for single fixed, mobile, and portable RF sources with available maximum time-averaged power of no more than 1 mW, regardless of separation distance.

The 1-mW blanket exemption applies at separation distances less than 0.5 cm, including where there is no separation. This exemption shall not be used in conjunction with other exemption criteria other than those for multiple RF sources in paragraph §1.1307(b)(3)(ii)(A).

The 1-mW exemption is independent of service type and covers the full range of 100 kHz to 100 GHz, but it shall not be used in conjunction with other exemption criteria or in devices with higher-power transmitters operating in the same time-averaging period. Exposure from such higher-power transmitters would invalidate the underlying assumption that exposure from the lower-power transmitter is the only contributor to SAR in the relevant volume of tissue.

#### 3.2 MPE-based Exemption

General frequency and separation-distance dependent MPE-based effective radiated power (ERP) thresholds are in Table B.1 [Table 1 of §1.1307(b)(1)(i)(C)] to support an exemption from further evaluation from 300 kHz through 100 GHz.

Table B.1—Thresholds For Single RF Sources Subject to Routine Environmental Evaluation

RF Source Frequency			Minimum Distance			Threshold ERP	
f∟ MHz		f <sub>H</sub> MHz	λ∟ / 2π		λ <sub>H</sub> / 2π	W	
0.3	- 1.34		159 m	_	35.6 m	1,920 R <sup>2</sup>	
1.34	_	30	35.6 m	_	1.6 m	3,450 R <sup>2</sup> /f <sup>2</sup>	
30	_	300	1.6 m	_	159 mm	3.83 R <sup>2</sup>	
300	_	1,500	159 mm	_	31.8 mm	0.0128 R <sup>2</sup> f	
1,500	_	100,000	31.8 mm	_	0.5 mm	19.2R <sup>2</sup>	

Subscripts L and H are low and high; λ is wavelength.

From §1.1307(b)(3)(i)(C), modified by adding Minimum Distance columns.

The table applies to any RF source (i.e. single fixed, mobile, and portable transmitters) and specifies power and distance criteria for each of the five frequency ranges used for the MPE limits. These criteria apply at separation distances from any part of the radiating structure of at least  $\lambda/2\pi$ . The thresholds are

中国・广东・深圳市南山区科技园中区M-10栋1号厂房 邮编:518057



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/en/Terms-and-Conditions">https://www.sgs.com/en/Terms-and-Conditions</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Cilent's instructions, if any. The Company's sole responsibility is to its Cilent and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@egs.com")

No.1 Wortshop, Mr. III, Middle Section, Science & Technology Park, Nanshan District, Sherzhen, Guangdong, China 518057 t (86–755) 26012053 f (86–755) 26710594 www.sgsgroup.com.cn

t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com



SZEMC-TRF-01 Rev. A/1

Report No.: SZCR250700317408

Page: 9 of 12

based on the general population MPE limits with a single perfect reflection, outside of the reactive nearfield, and in the main beam of the radiator.

For mobile devices that are not exempt per Table B.1 [Table 1 of §1.1307(b)(1)(i)(C)] at distances from 20 cm to 40 cm and in 0.3 GHz to 6 GHz, evaluation of compliance with the exposure limits in §1.1310 is necessary if the ERP of the device is greater than *ERP*<sub>20cm</sub> in Formula (B.1) [repeated from §2.1091(c)(1); also in §1.1307(b)(1)(i)(B)].

$$P_{\text{th}} \text{ (mW)} = ERP_{20 \text{ cm}} \text{ (mW)} = \begin{cases} 2040f & 0.3 \text{ GHz} \le f < 1.5 \text{ GHz} \\ \\ 3060 & 1.5 \text{ GHz} \le f \le 6 \text{ GHz} \end{cases}$$
(B. 1)

If the ERP is not easily obtained, then the available maximum time-averaged power may be used (i.e., without consideration of ERP only if the physical dimensions of the radiating structure(s) do not exceed the electrical length of  $\lambda/4$  or if the antenna gain is less than that of a half-wave dipole.

SAR-based exemptions are constant at separation distances between 20 cm and 40 cm to avoid discontinuities in the threshold when transitioning between SAR-based and MPE-based exemption criteria at 40 cm, considering the importance of reflections.

Limit calculation								
Frequency range Frequency (MHz) $R(N2\pi)$ (m) Threshold ERP(W)								
300~1500MHz	915	0.0522	0.032					
1500~100000MHz	2480	0.0193	0.007					

#### 3.3 SAR-based Exemption

SAR-based thresholds are derived based on frequency, power, and separation distance of the RF source. The formula defines the thresholds in general for either available maximum time-averaged power or maximum time-averaged ERP, whichever is greater.

If the ERP of a device is not easily determined, such as for a portable device with a small form factor, the applicant may use the available maximum time-averaged power exclusively if the device antenna or radiating structure does not exceed an electrical length of  $\lambda/4$ .

As for devices with antennas of length greater than  $\lambda/4$  where the gain is not well defined, but always less than that of a half-wave dipole (length  $\lambda/2$ ), the available maximum time-averaged power generated by the device may be used in place of the maximum time-averaged ERP, where that value is not known.

The separation distance is the smallest distance from any part of the antenna or radiating structure for all persons, during operation at the applicable ERP. In the case of mobile or portable devices, the separation distance is from the outer housing of the device where it is closest to the antenna.



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/en/Terms-and-Conditions">https://www.sgs.com/en/Terms-and-Conditions</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Cilent's instructions, if any. The Company's sole responsibility is to its Cilent and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@egs.com")

or email: CN.Doccheck@sgs.com No.1Workshop, M=1, Middle Section, Science & Technology Part, Nanshan District, Sherzhen, Guangdong, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn 中国・广东・深圳市南山区科技园中区M-10栋1号厂房 邮编:518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com



SZEMC-TRF-01 Rev. A/1

Report No.: SZCR250700317408

Page: 10 of 12

The SAR-based exemption formula of  $\S1.1307(b)(3)(i)(B)$ , repeated here as Formula (B.2), applies for single fixed, mobile, and portable RF sources with available maximum time-averaged power or effective radiated power (ERP), whichever is greater, of less than or equal to the threshold  $P_{th}$  (mW).

This method shall only be used at separation distances from 0.5 cm to 40 cm and at frequencies from 0.3 GHz to 6 GHz (inclusive).  $P_{th}$  is given by Formula (B.2).

$$P_{\text{th}} \text{ (mW)} = \begin{cases} ERP_{20 \text{ cm}} (d/20 \text{ cm})^x & d \le 20 \text{ cm} \\ ERP_{20 \text{ cm}} & 20 \text{ cm} < d \le 40 \text{ cm} \end{cases}$$
(B. 2)

where

$$x = -\log_{10}\left(\frac{60}{ERP_{20}\,\mathrm{cm}\sqrt{f}}\right)$$

and f is in GHz, d is the separation distance (cm), and  $ERP_{20cm}$  is per Formula (B.1).

Example values shown in Table B.2 are for illustration only.

Table B.2—Example Power Thresholds (mW)

Frequency	Distance(mm)									
(MHz)	5	10	15	20	25	30	35	40	45	50
300	39	65	88	110	129	148	166	184	201	217
450	22	44	67	89	112	135	158	180	203	226
835	9	25	44	66	90	116	145	175	207	240
1900	3	12	26	44	66	92	122	157	195	236
2450	3	10	22	38	59	83	111	143	179	219
3600	2	8	18	32	49	71	96	125	158	195
5800	1	6	14	25	40	58	80	106	136	169

Limit calculation					
Frequency range(GHz)	Frequency(GHz)	Χ	Distance(cm)	Pth (mW)	
0.3~1.5	0.915	1.474	0.5	8.133	
1.5~6	2.44	1.901	0.5	2.753	



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/en/Terms-and-Conditions">https://www.sgs.com/en/Terms-and-Conditions</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Cilent's instructions, if any. The Company's sole responsibility is to its Cilent and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@egs.com")

o<mark>r email: CN.Doccheck@sgs.com</mark> No.1 Workshop, N.-10, Middle Sedion, Science & Technology Park, Nanohan District, Sherzhen, Guangdong, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn 中国・广东・深圳市南山区科技园中区M-10栋1号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com



SZEMC-TRF-01 Rev. A/1

Report No.: SZCR250700317408

Page: 11 of 12

#### 4 Measurement and Calculation

#### 4.1 Maximum transmit power

#### Standalone transmission

Туре	Test Freq. (MHz)	Max Antenna Gain (dBi)	Max Cond. power (dBm)	Max Cond. power (mW)	Max EIRP (dBm)	Max EIRP (mW)	Limit (mw)	Cond. Ratio	EIRP Ratio	Result
TLE Band 2	1850.7	2.90	25.00	316.23	29.50	891.25	3060.00	0.1033	0.0096	PASS
TLE Band 4	1710.7	3.10	25.00	316.23	29.50	891.25	3060.00	0.1033	0.0096	PASS
TLE Band 5	824.7	2.00	25.00	316.23	28.90	776.25	3060.00	0.1033	0.0094	PASS
TLE Band 7	2502.5	3.50	25.00	316.23	29.50	891.25	3060.00	0.1033	0.0096	PASS
TLE Band 12	699.7	3.90	25.00	316.23	28.90	776.25	3060.00	0.1033	0.0094	PASS
TLE Band 13	779.5	3.70	25.00	316.23	28.90	776.25	3060.00	0.1033	0.0094	PASS
TLE Band 14	790.5	3.20	25.00	316.23	28.90	776.25	3060.00	0.1033	0.0094	PASS
TLE Band 17	706.5	3.90	25.00	316.23	28.90	776.25	3060.00	0.1033	0.0094	PASS
TLE Band 25	1850.7	2.90	25.00	316.23	29.50	891.25	3060.00	0.1033	0.0096	PASS
TLE Band 26	814.7	2.00	25.00	316.23	28.90	776.25	3060.00	0.1033	0.0094	PASS
TLE Band 41	2498.5	3.50	25.00	316.23	29.50	891.25	3060.00	0.1033	0.0096	PASS
TLE Band 66	1710.7	3.10	25.00	316.23	29.50	891.25	3060.00	0.1033	0.0096	PASS
TLE Band 71	665.5	3.90	25.00	316.23	28.90	776.25	3060.00	0.1033	0.0094	PASS
ВТ	2402	4.3	10.00	10.00	14.30	26.92	3060.00	0.0033	0.0047	PASS
2.4G WiFi	2412	4.3	19.50	89.13	23.80	239.88	3060.00	0.0291	0.0078	PASS
5G WiFi	5180	4.6	18.50	70.79	23.10	204.17	3060.00	0.0231	0.0075	PASS

Note 1: Use the maximum power between the conducted power and ERP/EIRP to perform RF exposure exemption evaluation.

#### Simultaneous transmission

Test Mode	BT/2.4G/5G WiFi	LTE	Total Ratio	Limit	Result
Ratio	0.078	0.0096	N/A	N/A	N/A
Scenario 1	<b>7</b>	Ø	0.0174	1.0	Pass



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/en/Terms-and-Conditions">https://www.sgs.com/en/Terms-and-Conditions</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Cilent's instructions, if any. The Company's sole responsibility is to its Cilent and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@egs.com")

oremail: CN.Doccheck@sgs.com No.1 Workshop, Nr.10, Middle Section, Science & Technology Park, Nanshan District, Sherzhen, Guargdong, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn 中国・广东・深圳市南山区科技园中区M-10栋1号厂房 邮编:518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com



SZEMC-TRF-01 Rev. A/1

Report No.: SZCR250700317408

Page: 12 of 12

#### 4.2 RF Exposure Calculation

**Remark**: we used the maximum power between the conducted power and ERP/EIRP to perform RF exposure exemption evaluation.

The Max. EIRP Power is 891.25mW, the best case gain of the Antenna: 4.6dBi.

Evaluation method	Exempt Limit(mW)	Verdict
Blanket 1 mW Blanket Exemption	1mW	N/A
MPE-based Exemption(ERP)	7mW(ERP)	N/A
SAR-based Exemption( <i>P</i> th)	3060	Yes

So, the device is to qualify for SAR test exemption, the exemption report is in lieu of the SAR report.

-- End of the Report--



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/en/Terms-and-Conditions">https://www.sgs.com/en/Terms-and-Conditions</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Cilent's instructions, if any. The Company's sole responsibility is to its Cilent and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@egs.com")