



GOVERNMENT OF INDIA MINISTRY OF COMMUNICATIONS DEPARTMENT OF TELECOMMUNICATIONS TELECOMMUNICATION ENGINEERING CENTRE

Gate No. 5, Khurshid Lal Bhawan, Janpath, New Delhi-110001

CERTIFICATE OF DESIGNATION

M/S UL INDIA PRIVATE LIMITED, BENGALURU

has been assessed and designated as Conformity Assessment Body (CAB) for its facilities at

30/A, I STAGE, VISHVESHWARYA INDUSTRIAL ESTATE, DODDANEKKUNDI, INDUSTRIAL AREA, BENGALURU - 560 048

In the field of Testing

Certificate No. TEC/MRA/CAB/IND-D/59-II

Issue Date: 30/10/2023 Validity: 28/10/2023 to 27/10/2026

This Certificate remains valid for the Scope of Designation as specified in the Annexure subject to the continued validity of NABL Accreditation and satisfied compliance to the Standards/specifications against which lab has been designated and strict compliance to the relevant terms and conditions of TEC CAB Designation Scheme.

(To see the scope of designation of this laboratory, you may also visit TEC website www.tec.gov.in)

Signed for and on behalf of TEC

Vijay Dixit Director (CA) For Designating Authority TEC

Certificate No: TEC/MRA/CAB/IND-D/59-II dated 30/10/2023 issued to M/S UL India Private Limited, Bengaluru 30/A, I stage, Vishveshwarya Industrial Estate, Doddanekkundi, Industrial Area, Bengaluru - 560 048



Validity: - 28/10/2023 to 27/10/2026

Terms & Conditions

This certificate is issued as per the terms and conditions stipulated in the TEC SCHEME FOR DESIGNATING DOMESTIC CONFORMITY ASSESEMENT BODIES AND CERTIFICATION BODIES FOR CONFORMITY ASSESEMENT AND CERTIFICATION OF TELECOMMUNICATION EQUIPMENT ISSUE 3 NO. TEC 04019:2023.

Some of the conditions are reiterated as under:

A. Obligations of the Designated CAB.

- 1. It shall ensure that it maintains its accreditation status from any recognised Indian accreditation body like NABL during validity period of certificate.
- 2. It shall follow the stipulated procedures, rules and policies laid down by Designating Authority (DA) or Mutual Recognition Agreement (MRA)* partner for testing and evaluation.
- 3. In respect of tests for which it is seeking designation, it shall have no interest whatsoever in any business to carry on testing in an unfair or biased manner.
- 4. It shall fully indemnify DA from and against all liabilities, damages, claims, costs, and expenses incurred or sustained by DA as a result of any action taken or omitted by DA relating to the process of designation.
- 5. It shall comply with DA's or MRA partner's terms and conditions for designation and recognition as modified from time to time.
- 6. It shall be under obligation to participate in the online process prescribed by TEC for test and certification against TEC's GR/IR/ER and standards.
- 7. It shall have a record system which shall have a retention period of at least 5 years for documents related to the equipment testing. It shall maintain all the relevant documents including list of products submitted for testing, product-wise testing and evaluation reports. These documents shall be produced before the DA within seven days, as and when required.
- 8. It shall ensure the Intellectual Property Rights of the customers in the course of testing by maintaining professional ethics, secrecy and keeping all the product related information confidential.

^{*}Applicable only if recognized by MRA (Mutual Recognition Agreement) partner.

- 9. It shall notify the DA in writing of occurrence of any of the following incident(s) within 2 weeks of its occurrence
 - a) Cessation of its business of conformity assessment for which it is Designated or accredited
 - b) Changes in its legal, commercial, or Organisational status
 - c) Changes, which may affect continuing compliance with any of the criteria or requirement specified by DA or MRA partner.
 - d) Change of premises

B. REFERENCE TO DESIGNATION STATUS

- 1. Designated CABs may advertise their designation status with regard to standards or parts thereof which are included in the scope of designation.
- 2. The advertisement should not imply, or otherwise suggest that DA or MRA Partner has endorsed the product or imply that the designated CAB is an agent or representative of DA or MRA Partner.
- 3. CABs whose designations have been suspended or withdrawn for any reason, shall discontinue advertisement of their designated status and not make any misleading statements regarding their designation status.

C. POST-DESIGNATION SURVEILLANCE

As and when required, DA shall conduct surveillance assessments and other non-routine assessments on the Designated CABs to ensure that standards of practices are maintained as well as to investigate complaints made against them.

D. SUSPENSION OR WITHDRAWAL OF DESIGNATION

- 1. DA shall suspend or withdraw the designation of a CAB if
 - a. Its accreditation is withdrawn.
 - b. It is found that the CAB is not complying with the stipulated criteria or requirements.
 - c. It is guilty of any offence involving fraud or dishonesty.
 - d. DA concludes that there is a just cause for withdrawing the designation.
- 2. A CAB whose designation, and recognition in case of MRA, has been suspended or withdrawn shall be removed from the list of designated CABs, in case it fails to take corrective measures.
- 3. DA shall keep the designation of a Designated CAB under suspension, until the completion of formal review process.

E. AMENDMENT TO THE SCHEME

DA reserves the rights to amend the scheme, as and when required, for the purpose of streamlining designation process.

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Gate No. 5, Khurshid Lal Bhawan, Janpath, New Delhi - 110 001

SCOPE OF DESIGNATION (ANNEXURE)

Laboratory Name: M/S UL India Private Limited, Bengaluru

30/A, I stage, Vishveshwarya Industrial Estate,

Doddanekkundi, Industrial Area, Bengaluru - 560 048

Certificate Number: TEC/MRA/CAB/IND-D/59-II Page 1 of 16

Sl.	Telecom	Test Parameter or Type of Testing	Standard/
No.	Equipment/		Specification
	Product		
	•		
1.	EMI/EMC	Conducted Emission Test	TEC/SD/DD/EMC
	Testing of	CISPR 32/	-221/05/OCT-16
	Telecommuni	EN 55032	
	cation	Conducted Emission Test	TEC/SD/DD/EMC
	Equipment	CISPR 11	-221/05/OCT-16
		Radiated Emission Test	TEC/SD/DD/EMC
		CISPR 32/	-221/05/OCT-16
		EN 55032	
		Radiated Emission Test	TEC/SD/DD/EMC
		CISPR 11	-221/05/OCT-16
		Electrostatic Discharge Immunity Test	TEC/SD/DD/EMC
		IEC 61000-4-2/	-221/05/OCT-16
		EN 61000-4-2	
		Radiated Radio Frequency Electromagnetic	TEC/SD/DD/EMC
		Field Immunity Test	-221/05/OCT-16
		IEC 61000-4-3/	
		EN 61000-4-3	
		Electrical Fast Transient (EFT)/ Burst	TEC/SD/DD/EMC
		Immunity Test	-221/05/OCT-16
		IEC 61000-4-4/	
		EN 61000-4-4	
		Surge Immunity Test	TEC/SD/DD/EMC
		IEC61000-4-5/	-221/05/OCT-16
		EN 61000-4-5	
		Conducted RF Immunity Test	TEC/SD/DD/EMC
		IEC 61000-4-6/	-221/05/OCT-16
		EN 61000-4-6	

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Certificate Number: TEC/MRA/CAB/IND-D/59-II Page 2 of 16

Sl. No.	Telecom Equipment/ Product	Test Parameter or Type of Testing	Standard/ Specification
EMI/EMC Testing of Telecommuni cation Equipment		Voltage Dips, Short Interruption & Voltage Variations Immunity Test IEC61000-4-11/ EN 61000-4-11 Voltage Dips, Short Interruptions and Voltage variations on DC Input Power Port Immunity Tests IEC 61000-4-29/ EN 61000-4-29	TEC/SD/DD/EMC -221/05/OCT-16 TEC/SD/DD/EMC -221/05/OCT-16
2.	Equipment Operating in 2.4 GHz and 5 GHz	RF Output Power Clause- 4.3.1.2/ 4.3.2.2 Power Spectral Density Clause- 4.3.2.3	ETSI EN 300 328 V2.1.1 (2016-11) ETSI EN 300 328 V2.1.1 (2016-11)
Frequency Bands		Duty cycle, Tx-Sequence Tx-gap Clause- 4.3.1.3/ 4.3.2.4 Accumulated transmit time, Frequency Occupation & Hopping Sequence Clause- 4.3.1.4	ETSI EN 300 328 V2.1.1 (2016-11) ETSI EN 300 328 V2.1.1 (2016-11)
		Hopping Frequency Separation Clause- 4.3.1.5 Medium Utilization Clause- 4.3.1.6/ 4.3.2.5 Adaptivity	ETSI EN 300 328 V2.1.1 (2016-11) ETSI EN 300 328 V2.1.1 (2016-11) ETSI EN 300 328
		Clause- 4.3.1.7/4.3.2.6 Occupied Channel Bandwidth Clause- 4.3.1.8/ 4.3.2.7	V2.1.1 (2016-11) ETSI EN 300 328 V2.1.1 (2016-11)

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SCOPE OF DESIGNATION (ANNEXURE)

Laboratory Name: M/S UL India Private Limited, Bengaluru

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Doddanekkundi, Industrial Area, Bengaluru - 560 048

Certificate Number: TEC/MRA/CAB/IND-D/59-II Page 3 of 16

Sl. No.	Telecom Equipment/ Product	, , , , , , , , , , , , , , , , , , ,	
	110000		
	Equipment Operating	Transmitter Unwanted Emissions in the OOB domain	ETSI EN 300 328 V2.1.1 (2016-11)
	in 2.4 GHz	Clause- 4.3.1.9/ 4.3.2.8	V 2.1.1 (2010-11)
	and 5 GHz	Transmitter Unwanted Emissions in the	ETSI EN 300 328
	Frequency Bands	Spurious Domain – Conducted and Radiated Clause- 4.3.1.10/4.3.2.9	V2.1.1 (2016-11)
	Janus	Receiver Spurious Emission –Conducted and Radiated Clause- 4.3.1.11/4.3.2.10	ETSI EN 300 328 V2.1.1 (2016-11)
		Receiver Blocking	ETSI EN 300 328
		Clause- 4.3.1.12/4.3.2.11	V2.1.1 (2016-11)
Maximum Condu		Maximum Conducted Output Power	FCC Part 15
Cla		Clause- 15.247(b)	Subpart C
Power Spectral Density		Power Spectral Density	FCC Part 15
		Clause- 15.247(e)	Subpart C
			FCC Part 15 Subpart C
		Band Edge Compliance (Emissions in the Non-Restricted Frequency Band) and conducted Spurious Emission Clause- 15.247(d)	FCC Part 15 Subpart C
		Radiated Emission, Transmitter Spurious Emission, Receiver Spurious Emission, Unwanted Emissions Clause 15.209, 15.205	FCC Part 15 Subpart C

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Certificate Number: TEC/MRA/CAB/IND-D/59-II Page 4 of 16

Sl. No.	Telecom Equipment/ Product	Test Parameter or Type of Testing	Standard/ Specification
	Equipment Operating in 2.4 GHz	Bandwidth Occupancy (20dB Bandwidth) Clause- 15.247(a)(1)/15.215(c)	FCC Part 15 Subpart C
	and 5 GHz Frequency	Number of Hopping Channel Clause- 15.247 (a)(1)	FCC Part 15 Subpart C
	Bands	Carrier Frequency Separation Clause- 15.247(a)(1)	FCC Part 15 Subpart C
		Time of Occupancy Clause- 15.247(a)(1)	FCC Part 15 Subpart C
		Carrier Frequencies Clause- 4.2.1	ETSI EN 301 893 V2.1.1 (2017-05)
		Nominal and Occupied Channel Bandwidth Clause- 4.2.2	ETSI EN 301 893 V2.1.1 (2017-05)
		RF Output Power Transmit Power Control (TPC) Power Density Clause- 4.2.3	ETSI EN 301 893 V2.1.1 (2017-05)
		Transmitter Unwanted Emissions within the 5 GHz RLAN bands Clause- 4.2.4.2	ETSI EN 301 893 V2.1.1 (2017-05)
		Transmitter Unwanted Emissions outside the 5 GHz RLAN bands –Conducted and Radiated Clause- 4.2.4.1	ETSI EN 301 893 V2.1.1 (2017-05)
		Receiver Spurious Emission- Conducted and Radiated Clause- 4.2.5	ETSI EN 301 893 V2.1.1 (2017-05)
		Adaptivity Clause- 4.2.7	ETSI EN 301 893 V2.1.1 (2017-05)

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Sl. No.	, , , , , , , , , , , , , , , , , , ,		Standard/ Specification
	Equipment Operating in 2.4 GHz and 5 GHz Frequency Bands	Dynamic Frequency Selection (DFS) Clause- 4.2.6 Receiver Blocking Clause- 4.2.8 Maximum Conducted Output Power Clause 15.407(a) 6 dB Bandwidth & 99% Occupied Channel Bandwidth Clause- 15.407(a) Maximum Power Spectral Density Clause- 15.407(a) Band Edge Compliance (Emissions in the Non- Restricted Frequency Band) and Conducted Spurious Emission Clause- 15.407(b) Emission Bandwidth (X dB Bandwidth) Clause- 15.407(a) Dynamic Frequency Selection Clause- 15.407(h) Radiated Emission, Transmitter Spurious Emission, Receiver Spurious Emission, Unwanted Emissions Clause- 15.209 & 15.407(b)	ETSI EN 301 893 V2.1.1 (2017-05) ETSI EN 301 893 V2.1.1 (2017-05) FCC Part 15 Subpart E
		Designation of Centre Frequencies & Frequency Error Clause- 4.2.1	ETSI EN 302 502 V2.1.1 (2017-03)

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Sl. No.	Telecom Equipment/ Product	Test Parameter or Type of Testing		Standard/ Specification
	Equipment Operating in 2.4 GHz and 5 GHz Frequency Bands	EIRP Spectral Density Clause- 4.2.2 & 4.2.4 Transmitter Unwanted Emissions within the 5725 MHz to 5875 MHz Band Clause- 4.2.3.2 Transmitter Unwanted Emissions outside the 5 GHz RLAN Bands –Conducted & Radiated Clause- 4.2.3.1		V2.1.1 (2017-03)
		Receiver Spurious Radiated Clause- 4.2.5	ETSI EN 302 502 V2.1.1 (2017-03)	
3.	Point of Sale Devices	Interface: GSM/GPRS/ EDGE	Transmitter Maximum Output Power and Burst Timing for GSM EN 301 511 V 12.5.1 (2017-03) (GSM) Clause- 4.2.5:2017 Transmitter Output Power for GPRS/EDGE EN 301 511 V 12.5.1 (2017-03) (GSM) Clause- 4.2.10:2017 Transmitter - Output RF Spectrum for GSM EN 301 511 V 12.5.1 (2017-03) (GSM) Clause- 4.2.6:2017	TEC ER No. TEC17672301 TEC ER No. TEC17672301 TEC ER No. TEC17672301

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Certificate Number: TEC/MRA/CAB/IND-D/59-II Page 7 of 16

Sl.	Telecom	Test Parameter or Type of Testing	Standard/
No	Equipment/		Specification
	Product		_

Point of Sale	Interface:	Transmitter - Output RF	TEC ER No.
Devices	GSM/	Spectrum for GPRS/EDGE	TEC17672301
	GPRS/	EN 301 511 V 12.5.1	
	EDGE	(2017-03) (GSM)	
		Clause- 4.2.11:2017	
		Spurious Emissions - MS	TEC ER No.
		allocated a channel	TEC17672301
		EN 301 511 V 12.5.1	
		(2017-03) (GSM)	
		Clause- 4.2.12:2017	
		Spurious Emissions - MS in	TEC ER No.
		idle mode	TEC17672301
		EN 301 511 V 12.5.1	
		(2017-03) (GSM)	
		Clause- 4.2.13:2017	
		Frequency Error and Phase	TEC ER No.
		Error for GSM	TEC17672301
		EN 301 511 V 12.5.1	
		(2017-03) (GSM)	
		Clause- 4.2.1:2017	
		Frequency Error and Phase	TEC ER No.
		Error for GPRS/EDGE	TEC17672301
		EN 301 511 V 12.5.1	
		(2017-03) (GSM)	
		Clause- 4.2.4:2017	
		Reference Sensitivity Level	TEC ER No.
		(Speech Channels)	TEC17672301
		EN 301 511 V 12.5.1	
		(2017-03) (GSM)	
		Clause- 4.2.42:2019	

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SCOPE OF DESIGNATION (ANNEXURE)

Laboratory Name: M/S UL India Private Limited, Bengaluru

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Doddanekkundi, Industrial Area, Bengaluru - 560 048

Certificate Number: TEC/MRA/CAB/IND-D/59-II Page 8 of 16

Sl.	Telecom	Test Parameter or Type of Testing	Standard/
No	Equipment/		Specification
	Product		_

Point of Sale	Interface:	Adjacent Channel Rejection -	TEC ER No.
Devices	GSM/	Speech channels	TEC17672301
Bevices	GPRS/	EN 301 511 V 12.5.1	12017072301
	EDGE	(2017-03) (GSM)	
	EDGE	Clause- 4.2.38:2019	
		Receiver Blocking	TEC ER No.
		EN 301 511 V 12.5.1	TEC17672301
		(2017-03) (GSM)	1EC17072301
		Clause- 4.2.20:2017	
	Interface:	Spectrum Emissions Mask	TEC ER No.
	WCDMA or	EN 301 908-2 (UMTS)	TEC17672301
	HSPA	Clause- 4.2.3.1	1EC17072301
		Transmitter Spurious	TEC ER No.
		Emissions	TEC17672301
		EN 301 908-2 (UMTS)	12017072301
		Clause- 4.2.4.1	
		Receiver Spurious Emission	TEC ER No.
		EN 301 908-2 (UMTS)	TEC17672301
		Clause- 4.2.10	12017072501
		Transmitter Minimum Output	TEC ER No.
		Power	TEC17672301
		EN 301 908-2 (UMTS)	
		Clause- 4.2.5.1	
		Receiver Reference Sensitivity	TEC ER No.
		Level	TEC17672301
		EN 301 908-2 (UMTS)	
		Clause- 4.2.13	
		Receiver Adjacent Channel	TEC ER No.
		Selectivity (ACS)	TEC17672301

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Sl.	Telecom	Test Parameter or Type of Testing	Standard/
No.	Equipment/		Specification
	Product		

Point of Sale Devices	Interface: WCDMA or	EN 301 908-2 (UMTS) Clause- 4.2.6	
	HSPA	Receiver In-band blocking EN 301 908-2 (UMTS) Clause- 4.2.7	TEC ER No. TEC17672301
	Interface: LTE or LTE-A	Maximum Output Power EN 301 908-13 (LTE) Clause- 4.2.2.1	TEC ER No. TEC17672301
		Spectrum Emissions Mask EN 301 908-13 (LTE) Clause- 4.2.3.1	TEC ER No. TEC17672301
		Spurious Emissions EN 301 908-13 (LTE) Clause- 4.2.4.1	TEC ER No. TEC17672301
		Receiver Spurious Emission EN 301 908-13 (LTE) Clause- 4.2.10.1	TEC ER No. TEC17672301
		Receiver Reference Sensitivity level EN 301 908-13 (LTE) Clause- 4.2.12	TEC ER No. TEC17672301
		Receiver Adjacent Channel Selectivity (ACS) EN 301 908-13 (LTE) Clause- 4.2.6.1	TEC ER No. TEC17672301
		Receiver In-band blocking EN 301 908-13 (LTE) Clause- 4.2.7.1	TEC ER No. TEC17672301

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Sl.	Telecom	Test Parameter or Type of Testing	Standard/
No.	Equipment/		Specification
	Product		

Point of Sale	Interface:	Permitted Range of	TEC ER No.
Devices	RFID	Operating Frequencies	TEC17672301
		ETSI EN 300 330 V 2.1.1	
		(2017-02) Clause- 4.3.1	
		Annexure-G6	
		Frequency of Operation	TEC ER No.
		ETSI EN 300 330 V 2.1.1	TEC17672301
		(2017-02)	
		Clause- 6.2.2 Annexure-G 6	
		ETSI EN 300 220-1 V 3.1.1	
		Clause- 5.1.2 Annexure-G 5	
		Modulation Bandwidth	TEC ER No.
		ETSI EN 300 330 V2.1.1	TEC17672301
		(2017-02) Clause- 4.3.3,	
		Clause- 6.2.3	
		Annexure- G 6	
		Transmitter Radiated	TEC ER No.
		Spurious domain Emission	TEC17672301
		limits > 30 MHz	
		ETSI EN 300 330 V2.1.1	
		(2017-02) Clause- 4.3.9	
		(For equipment under class	
		1, 2 and 4 in clause- 6.1.2),	
		Clause- 6.2.9 Annexure- G 6	
		Receiver Spurious Emissions	TEC ER No.
		ETSI EN 300 330 V2.1.1	TEC17672301
		(2017-02) Clause- 4.4.2,	
		Clause- 6.3.1 Annexure- G6	

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Sl.	Telecom	Test Parameter or Type of Testing	Standard/
No.	Equipment/		Specification
	Product		

	Point of Sale Devices	Interface: RFID	EIRP for Interface ETSI EN 300 220-1 V3.1.1 Clause- 5.2.2 Annexure- G5 Maximum Transmit Power	TEC ER No. TEC17672301 TEC ER No.
			ETSI EN 300 220-1 V3.1.1 Clause- 5.2.2 Annexure- G5	TEC17672301
			Unwanted Emissions in the Spurious domain ETSI EN 300 220-1 V3.1.1 Clause- 5.9.3 Annexure- G5	TEC ER No. TEC17672301
			Transmitter radiated Spurious domain emission limits <30 MHz ETSI EN 300 330 V 2.1.1 (2017-02) Clause-4.3.8, 6.2.8 Annexure-G6	TEC ER No. TEC17672301
4.	Feedback Device	Interface: GSM/GPRS/ EDGE	Transmitter Maximum Output Power and Burst Timing for GSM EN 301 511 V 12.5.1 (2017-03) (GSM) Clause- 4.2.5:2017 Transmitter Output Power	TEC ER No. TEC23232106 TEC ER No.
			for GPRS/EDGE EN 301 511 V 12.5.1 (2017-03) (GSM) Clause- 4.2.10:2017	TEC23232106

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GOVERNMENT OF INDIA MINISTRY OF COMMUNICATIONS DEPARTMENT OF TELECOMMUNICATIONS TELECOMMUNICATION ENGINEERING CENTRE



Gate No. 5, Khurshid Lal Bhawan, Janpath, New Delhi - 110 001

SCOPE OF DESIGNATION (ANNEXURE)

Laboratory Name: M/S UL India Private Limited, Bengaluru

30/A, I stage, Vishveshwarya Industrial Estate,

Doddanekkundi, Industrial Area, Bengaluru - 560 048

Certificate Number: TEC/MRA/CAB/IND-D/59-II Page 12 of 16

Sl.	Telecom	Test Parameter or Type of Testing	Standard/
No.	Equipment/		Specification
	Product		

Feedback	Interface:	Transmitter - Output RF	TEC ER No.
Device	GSM/GPRS/	Spectrum for GSM	TEC23232106
	EDGE	EN 301 511 V 12.5.1	
		(2017-03) (GSM)	
		Clause- 4.2.6:2017	
		Transmitter - Output RF	TEC ER No.
		Spectrum for GPRS/EDGE	TEC23232106
		EN 301 511 V 12.5.1	
		(2017-03) (GSM)	
		Clause- 4.2.11:2017	
		Spurious Emissions - MS	TEC ER No.
		allocated a channel	TEC23232106
		EN 301 511 V 12.5.1	
		(2017-03) (GSM)	
		Clause- 4.2.12:2017	
		Spurious Emissions - MS in	TEC ER No.
		idle mode	TEC23232106
		EN 301 511 V 12.5.1	
		(2017-03) (GSM)	
		Clause- 4.2.13:2017	
		Frequency Error and Phase	TEC ER No.
		Error for GSM	TEC23232106
		EN 301 511 V 12.5.1	
		(2017-03) (GSM)	
		Clause- 4.2.1:2017	
		Frequency Error and Phase	TEC ER No.
		Error for GPRS/EDGE	TEC23232106
		EN 301 511 V 12.5.1	
		(2017-03) (GSM)	
		Clause- 4.2.4:2017	

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Gate No. 5, Khurshid Lal Bhawan, Janpath, New Delhi - 110 001

SCOPE OF DESIGNATION (ANNEXURE)

Laboratory Name: M/S UL India Private Limited, Bengaluru

30/A, I stage, Vishveshwarya Industrial Estate,

Doddanekkundi, Industrial Area, Bengaluru - 560 048

Certificate Number: TEC/MRA/CAB/IND-D/59-II Page 13 of 16

Sl.	Telecom	Test Parameter or Type of Testing	Standard/
No	Equipment/		Specification
	Product		

Feedback	Interface:	Reference Sensitivity Level	TEC ER No.
Device	GSM/GPRS/	(Speech Channels)	TEC23232106
	EDGE	EN 301 511 V 12.5.1	
		(2017-03) (GSM)	
		Clause- 4.2.42:2019	
		Adjacent Channel Rejection -	TEC ER No.
		Speech Channels	TEC23232106
		EN 301 511 V 12.5.1	
		(2017-03) (GSM)	
		Clause- 4.2.38:2019	
		Receiver Blocking	TEC ER No.
		EN 301 511 V 12.5.1	TEC23232106
		(2017-03) (GSM)	
		Clause- 4.2.20:2017	
	Interface:	Spectrum Emissions Mask	TEC ER No.
	WCDMA	EN 301 908-2 (UMTS)	TEC23232106
	or HSPA	Clause- 4.2.3.1	
		Transmitter Spurious	TEC ER No.
		Emissions	TEC23232106
		EN 301 908-2 (UMTS)	
		Clause- 4.2.4.1	
		Receiver Spurious Emission	TEC ER No.
		EN 301 908-2 (UMTS)	TEC23232106
		Clause- 4.2.10	
		Transmitter Minimum Output	TEC ER No.
		Power	TEC23232106
		EN 301 908-2 (UMTS)	
		Clause- 4.2.5.1	

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Gate No. 5, Khurshid Lal Bhawan, Janpath, New Delhi - 110 001

SCOPE OF DESIGNATION (ANNEXURE)

Laboratory Name: M/S UL India Private Limited, Bengaluru

30/A, I stage, Vishveshwarya Industrial Estate,

Doddanekkundi, Industrial Area, Bengaluru - 560 048

Certificate Number: TEC/MRA/CAB/IND-D/59-II Page 14 of 16

Sl.	Telecom	Test Parameter or Type of Testing	Standard/
No.	Equipment/		Specification
	Product		

Feedback Device	Interface: WCDMA or HSPA	Receiver Reference Sensitivity Level EN 301 908-2 (UMTS) Clause- 4.2.13 Receiver Adjacent Channel Selectivity (ACS) EN 301 908-2 (UMTS) Clause- 4.2.6	TEC ER No. TEC23232106 TEC ER No. TEC23232106
		Receiver In-band blocking EN 301 908-2 (UMTS) Clause- 4.2.7	TEC ER No. TEC23232106
	Interface: LTE or LTE-A	Maximum Output Power EN 301 908-13 (LTE) Clause- 4.2.2.1	TEC ER No. TEC23232106
		Spectrum Emissions Mask EN 301 908-13 (LTE) Clause- 4.2.3.1	TEC ER No. TEC23232106
		Spurious Emissions EN 301 908-13 (LTE) Clause- 4.2.4.1	TEC ER No. TEC23232106
		Receiver Spurious Emission EN 301 908-13 (LTE) Clause- 4.2.10.1	TEC ER No. TEC23232106
		Receiver Reference Sensitivity Level EN 301 908-13 (LTE) Clause- 4.2.12	TEC ER No. TEC23232106

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SCOPE OF DESIGNATION (ANNEXURE)

Laboratory Name: M/S UL India Private Limited, Bengaluru

30/A, I stage, Vishveshwarya Industrial Estate,

Doddanekkundi, Industrial Area, Bengaluru - 560 048

Certificate Number: TEC/MRA/CAB/IND-D/59-II Page 15 of 16

Sl.	Telecom	Test Parameter or Type of Testing	Standard/
No.	Equipment/		Specification
	D 1 4		_
	Product		

Feedback	Interface:	Receiver Adjacent Channel	TEC ER No.
Device	LTE or	Selectivity (ACS)	TEC23232106
Device	LTE of	EN 301 908-13 (LTE)	1LC23232100
	LIE-A	Clause- 4.2.6.1	
			TEC ED M
		Receiver In-band blocking	TEC ER No.
		EN 301 908-13 (LTE)	TEC23232106
		Clause- 4.2.7.1	
	Interface:	Frequency of Operation	TEC ER No.
	LPWAN-LoRa	ETSI EN 300 220-1 V3.1.1	TEC23232106
		Clause- 5.1.2 Annexure-G5	
		EIRP for Interface	TEC ER No.
		ETSI EN 300 220-2 V3.1.1	TEC23232106
		Clause- 5.2.2 Annexure-G5	
		Maximum Transmit Power	TEC ER No.
		ETSI EN 300 220-2 V3.1.1	TEC23232106
		Clause- 5.2.2 Annexure-G5	
		Unwanted Emissions in the	TEC ER No.
		Spurious domain	TEC23232106
		ETSI EN 300 220-2 V3.1.1	
		Clause- 5.9.3 Annexure-G5	
		TX Transient	TEC ER No.
		ETSI EN 300 220-2 V3.1.1	TEC23232106
		Clause- 4.3.6 Annexure-G5	
		TX Adjacent Channel Power	TEC ER No.
		ETSI EN 300 220-2 V3.1.1	TEC23232106
		Clause- 4.3.7 Annexure-G5	
		1 22222 1 22223	
			1

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GOVERNMENT OF INDIA MINISTRY OF COMMUNICATIONS DEPARTMENT OF TELECOMMUNICATIONS TELECOMMUNICATION ENGINEERING CENTRE



Gate No. 5, Khurshid Lal Bhawan, Janpath, New Delhi - 110 001

SCOPE OF DESIGNATION (ANNEXURE)

Laboratory Name: M/S UL India Private Limited, Bengaluru

30/A, I stage, Vishveshwarya Industrial Estate,

Doddanekkundi, Industrial Area, Bengaluru - 560 048

Certificate Number: TEC/MRA/CAB/IND-D/59-II Page 16 of 16

Validity: 28/10/2023 to 27/10/2026*

Last Amended on: ----

Sl.	Telecom	Test Parameter or Type of Testing	Standard/
No.	Equipment/		Specification
	Product		

Feedback	Interface:	TX behaviour under low	TEC ER No.
Device	LPWAN-LoRa	voltage conditions	TEC23232106
		ETSI EN 300 220-2 V3.1.1	
		Clause- 4.3.8 Annexure-G5	
		RX Sensitivity	TEC ER No.
		ETSI EN 300 220-2 V3.1.1	TEC23232106
		Clause- 4.4.1 Annexure-G5	
		RX Blocking	TEC ER No.
		ETSI EN 300 220-2 V3.1.1	TEC23232106
		Clause- 5.18.6 Annexure-G5	

AD (CA), TEC

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