هيئة الاتصالات وتقنية المعلومات
Communications & Information Technology Commission

CITC Technical Specification

Specification for IMT base stations and related Equipment

Document Number: RI119
Revision: Issue 01
Date: 02/03/2021

Issued by The Communications and Information Technology Commission of Saudi Arabia in accordance with article 84 of the Telecommunications Bylaw.

Communications and Information Technology Commission (CITC)
P.O Box 75606 – Riyadh 11588 - Kingdom of Saudi Arabia

Telephone: + 966 1 14618000
Fax: + 966 1 14618120
E-mail: info@citc.gov.sa
Website: www.citc.gov.sa

Contents

Scope

This specification applies to IMT basestations and related Equipment utilizing GSM, UMTS, LTE, NB-IoT, LTE-M and 5G NR Technologies.

Enforcement

This specification shall enter into force on 01/06/2021.

Any previous version of this technical specification is withdrawn.

General Requirements

All equipment must comply with the requirement of CITC specification GEN001, be safe and must not adversely affect other electrical equipment.

All telecommunications and radio terminal equipment must comply with the relevant technical specifications established by CITC. In addition, such equipment may be subject to regulations for Declaration of Conformity or registration. See www.citc.gov.sa for details.

If more than one interface type is offered by a piece of equipment, each interface must meet the applicable technical specifications.

Further information on the characteristics and presentation of network interfaces can be found by visiting operator's website.

It is mandatory that test reports are obtained from a laboratory that has been accredited by a body that is a member of the ILAC Mutual Recognition Arrangement.

Limits and conditions

Testing should be carried out to ensure compliance with the listed specifications.

Frequency band	Max Output Power or Magnetic Field	Usage	Standard	Comments
TX: : 663 - 698 MHz RX: 614 – 652 MHz	43 dBm/5MHz	LTE, NB-IoT, LTE-M, 5G NR	EN 301 908-13 EN 301 489-52	B71/n71 (FDD)

TX: 758 – 788 MHz RX: 703 - 733 MHz	43 dBm/5MHz	LTE, NB-IoT, LTE-M, 5G NR	EN 301 908-13 EN 301 489-52	B28/n28 (FDD)
TX: 791 – 821 MHz RX: 832 – 862 MHz	43 dBm/5MHz	UMTS/, LTE, NB-IoT, LTE-M, 5G NR	EN 301 908-13 EN 301 489-52	B20/n20 (FDD)
TX: 925 – 960 MHz RX: 880 – 915 MHz	43 dBm/5MHz	GSM, UMTS, LTE, NB-IoT, LTE-M, 5G NR	EN 301 502 EN 301 489-50 EN 301 908-1 EN 301 489-52	B8/n8 (FDD) BW for GSM is the system bandwidth
TX: 1805 – 1880 MHz RX: 1710 – 1785 MHz	43 dBm/5MHz	GSM, UMTS, LTE, NB-IoT, LTE-M, 5G NR	EN 301 502 EN 301 489-50 EN 301 908-13 EN 301 489-52	B3/n3 (FDD) BW for GSM is the system bandwidth
TX: 2110 – 2170 MHz RX: 1920 – 1980 MHz	43 dBm/5MHz	UMTS, LTE, NB-IoT, LTE-M, 5G NR	EN 301 908-13 EN 301 489-52	B1/n1 (FDD)
TX: 2300 – 2400 MHz	65 dBm/5MHz EIRP (non AAS)	LTE, LTE-M, 5G NR	EN 301 908-13 EN 301 489-52	B40/n40 (TDD)

RX: 2300 – 2400 MHz	44 dBm/5MHz TRP (AAS)			
TX: 2500 – 2690 MHz RX: 2500 – 2690 MHz	65 dBm/5MHz EIRP (non AAS) 44 dBm/5MHz TRP (AAS)	LTE, NB-IoT, LTE-M, 5G NR	EN 301 908-13 EN 301 489-52	B41/n41 (TDD)
TX: 3.4 – 3.6 GHz RX: 3.4 – 3.6 GHz	65 dBm/5MHz EIRP (non AAS) 44 dBm/5MHz TRP (AAS)	LTE, NB-IoT, LTE-M	EN 301 908-13 EN 301 489-52	B42 (TDD)
TX: 3.6 – 3.8 GHz RX: 3.6 – 3.8 GHz	65 dBm/5MHz EIRP (non AAS) 44 dBm/5MHz TRP (AAS)	LTE, NB-IoT, LTE-M	EN 301 908-13 EN 301 489-52	B43 (TDD)
TX: 3.3 – 3.8 GHz RX: 3.3 – 3.8 GHz	65 dBm/5MHz EIRP (non AAS) 44 dBm/5MHz TRP (AAS)	5G NR	EN 301 908-13 EN 301 489-52	n78 (TDD)
TX: 3.3 – 4.2 GHz RX: 3.3 – 4.2 GHz	65 dBm/5MHz EIRP (non AAS)	5G NR	EN 301 908-13 EN 301 489-52	n77 (TDD)

	44 dBm/5MHz TRP (AAS)			
TX: 24.25 – 27.50 GHz RX: 24.25 – 27.50 GHz	26 dBm/200MHz TRP (AAS)	5G NR	TBD	n258 (TDD)
TX: 26.5 – 29.5 GHz RX: 26.5 – 29.5 GHz	26 dBm/200MHz TRP (AAS)	5G NR	TBD	n257 (TDD)

Licensing Requirements

A spectrum, operator and import license is required.

Additional Requirements

There is no additional requirements for this technical specification.

References

The following referenced documents are indispensable for the application of this document. If no issue or revision number is quoted along with the title of a technical specification or standard, the latest published version should be used.

EN 301 502

Global System for Mobile communications (GSM); Base Station (BS) equipment; Harmonized Standard covering the essential requirements of article 3.2 of the Directive 2014/53/E.

EN 301 908-1

Electromagnetic compatibility and Radio spectrum Matters (ERM); Base Stations (BS) and User Equipment (UE) for IMT-2000 Third-Generation cellular networks; Part 1: Harmonized EN for IMT-2000, introduction and common requirements, covering essential requirements of article 3.2 of the R&TTE directive.

EN 301 908-3

Electromagnetic compatibility and Radio spectrum Matters (ERM); Base Stations (BS) and User Equipment (UE) for IMT-2000 Third-Generation cellular networks; Part 3: Harmonized EN for IMT-2000, CDMA Direct Spread (UTRA FDD) (BS) covering essential requirements of article 3.2 of the R&TTE directive.

EN 301 908-7

Electromagnetic compatibility and Radio spectrum Matters (ERM); Base Stations (BS), Repeaters and User Equipment (UE) for IMT-2000 Third-Generation cellular networks; Part 7: Harmonized EN for IMT-2000, CDMA TDD (UTRA TDD) (BS) covering essential requirements of article 3.2 of the R&TTE directive.

EN 301 908-11

Electromagnetic compatibility and Radio spectrum Matters (ERM); Base Stations (BS), Repeaters and User Equipment (UE) for IMT-2000 Third-Generation cellular networks; Part 11: Harmonized EN for IMT-2000, CDMA Direct Spread (UTRA FDD) (Repeaters) covering essential requirements of article 3.2 of the R&TTE directive.

EN 301 489-1

Electromagnetic compatibility and Radio spectrum Matters (ERM); Electromagnetic Compatibility (EMC) standard for radio equipment and services; Part 1: Common technical requirements.

EN 301 489-50

Electro Magnetic Compatibility (EMC) standard for radio equipment and services; Part 50: Specific conditions for Cellular Communication Base Station (BS), repeater and ancillary equipment; Harmonised Standard covering the essential requirements of article 3.1(b) of Directive 2014/53/EU

History

For reference, the latest versions of the technical specifications are published on the CITC website www.citc.gov.sa.

Description	Status	Date
Enhanced version for IMT basestations. Merge of RI002 and RI057	Issue 1	02/03/2021