

TAC 008
ISSUE 3
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**TYPE ACCEPTANCE CRITERIA FOR
5G NEW RADIO USER EQUIPMENT
OPERATING BELOW 6 GHz BAND**



AMENDMENT TABLE

Item	Issue No.	Paragraph	Descriptions
1	Issue 1 November 2019	All	First release
2	Issue 2 December 2020	3	Addition of the paired band 832.5 – 837.5 MHz / 877.5 – 882.5 MHz for 5G NR user equipment operating below 6 GHz band
3	Issue 3 December 2021	3	Addition of the paired band 703 – 738 MHz / 758 – 793 MHz, extension of the paired 850 MHz band to 825 – 837.5 MHz / 870 – 882.5 MHz and extension of the unpaired 4.9 GHz band to 4800 – 4960 MHz for 5G NR user equipment operating below 6 GHz band
		4(a)	Change of the original test item on transmitter power to test item 4(a)(i) Addition of new test items 4(a)(ii) and (iii)
			Split of the original test item on output RF spectrum emissions into two, i.e. test items 4(a)(iv) and (v)
		4(b)	Addition of new test item 4(b)(i)
		4	Addition of a remark at the end of clause 4

1. SCOPE

This document sets out the criteria for type acceptance of 5G New Radio (“NR”) user equipment operating below 6 GHz band (hereafter referred to as “the equipment”).

2. SAFETY REQUIREMENTS

The equipment shall comply with HKCA 2001 “Compliance Test Specification – Safety and Electrical Protection Requirements for Subscriber Telecommunications Equipment” issued by the Communications Authority.

3. OPERATING FREQUENCIES

The equipment shall operate in the following frequency bands:

Band Arrangement	Downlink (Mobile Receive)	Uplink (Mobile Transmit)
Paired Band	758 – 793 MHz	703 – 738 MHz
	870 – 882.5 MHz	825 – 837.5 MHz
	925 – 960 MHz	880 – 915 MHz
	1805 – 1880 MHz	1710 – 1785 MHz
	2110 – 2170 MHz	1920 – 1980 MHz
	2620 – 2690 MHz	2500 – 2570 MHz
Unpaired Band	2300 – 2390 MHz	
	3300 – 3400 MHz	
	3400 – 3600 MHz	
	4800 – 4960 MHz	

4. TECHNICAL REQUIREMENTS

The equipment shall meet the technical requirements as stipulated in the specification TS 38.521-1 titled “Third Generation Partnership Project; Technical Specification Group Radio Access Network; NR; User Equipment (UE) conformance specification; Radio transmission and reception; Part 1: Range 1 Standalone” published by the Third Generation Partnership Project (3GPP) in respect of the following:

(a) Transmitter

<i>Item</i>	<i>Transmitter Characteristics</i>	<i>Relevant Clause in 3GPP TS 38.521-1</i>
(i)	UE maximum output power	Clause 6.2.1
(ii)	Minimum output power	Clause 6.3.1
(iii)	Transmit OFF power	Clause 6.3.2
(iv)	Out of band emission	Clause 6.5.2
(v)	Spurious emissions	Clause 6.5.3

(b) Receiver

<i>Item</i>	<i>Receiver Characteristics</i>	<i>Relevant Clause in 3GPP TS 38.521-1</i>
(i)	Reference sensitivity	Clause 7.3
(ii)	Adjacent channel selectivity	Clause 7.5
(iii)	Blocking characteristics	Clause 7.6
(iv)	Spurious response	Clause 7.7
(v)	Intermodulation characteristics	Clause 7.8
(vi)	Spurious emissions	Clause 7.9

Remark:

In cases the equipment supports the features specified in clause 4.3 of 3GPP TS 38.521-1, it shall meet both the general requirements and the additional requirement applicable to the additional sub-clause (suffix A, B, C, D, E) in respect of the above test items. Equipment supports more than one feature shall meet all of the separate corresponding requirements.

5. EVALUATION METHOD

Compliance of the equipment with the technical requirements shall be evaluated in accordance with the procedures specified in the corresponding 3GPP specification as given in clause 4 above.

6. REFERENCE

HKCA 2001 titled “Compliance Test Specification – Safety and Electrical Protection Requirements for Subscriber Telecommunications Equipment” issued by the Communications Authority

3GPP TS 38.101-1 titled “3rd Generation Partnership Project; Technical Specification Group Radio Access Network; NR; User Equipment (UE) radio transmission and reception; Part 1: Range 1, Standalone”

3GPP TS 38.521-1 titled “3rd Generation Partnership Project; Technical Specification Group Radio Access Network; NR; User Equipment (UE) conformance specification; Radio transmission and reception; Part 1: Range 1, Standalone”

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