

TAC 009  
ISSUE 3  
DECEMBER 2021

**TYPE ACCEPTANCE CRITERIA FOR  
5G NEW RADIO USER EQUIPMENT FOR  
INTERWORKING OPERATION WITH  
OTHER RADIOS**



## AMENDMENT TABLE

Item	Issue No.	Paragraph	Descriptions
1	Issue 1 April 2020	All	First release
2	Issue 2 December 2020	4	Addition of the paired band 832.5 – 837.5 MHz / 877.5 – 882.5 MHz for 5G NR user equipment for interworking operation with other radios
3	Issue 3 December 2021	4	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 for interworking operation with other radios
		5(a)	Change of the original test item on transmitter power to test item 5(a)(i)  Addition of new test item 5(a)(ii)
			Split of the original test item on output RF spectrum emissions into two, i.e. test items 5(a)(iii) and (iv)
		5(b)	Addition of new test item 5(b)(i)  Renaming of test items 5(b)(ii) to (vi)

## 1. SCOPE

This document sets out the criteria for type acceptance of 5G New Radio (“NR”) user equipment for interworking operation with other radios (hereafter referred to as “the equipment”).

## 2. ELECTRICAL SAFETY REQUIREMENTS

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

## 3. RADIO FREQUENCY SAFETY REQUIREMENTS

3.1 The equipment operating below 6 GHz shall comply with the radio frequency safety requirements as stipulated in HKCA 2001 “Compliance Test Specification – Safety and Electrical Protection Requirements for Subscriber Telecommunications Equipment” issued by the Communications Authority.

3.2 The equipment operating in the 24.25 – 28.35 GHz band shall comply with the radio frequency safety requirements applicable to general public as stipulated in Code of Federal Regulations (USA); Title 47 Telecommunication; Chapter 1 Federal Communications Commission, Part 30 Upper Microwave Flexible Use Service; Subpart C – Technical Standards; Section 30.207.

## 4. OPERATING FREQUENCIES

The equipment shall operate in the following frequency bands:

<b>Band Arrangement</b>	<b>Downlink (Mobile Receive)</b>	<b>Uplink (Mobile Transmit)</b>
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	
	24.25 – 28.35 GHz	

## 5. TECHNICAL REQUIREMENTS

The equipment shall meet the technical requirements as stipulated in the specification TS 38.521-3 titled “Third Generation Partnership Project; Technical Specification Group Radio Access Network; NR; User Equipment (UE) conformance specification; Radio transmission and reception; Part 3: Range 1 and Range 2 Interworking operation with other radios” 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 38.521-3</i>
(i)	UE maximum output power for DC	Clause 6.2B.1
(ii)	Minimum output power for EN-DC	Clause 6.3B.1
(iii)	Out-of-band emissions for EN-DC	Clause 6.5B.2
(iv)	Spurious emissions for EN-DC	Clause 6.5B.3

(b) Receiver

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

**6. 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 5 above.

**7. REFERENCE**

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

Code of Federal Regulations (USA); Title 47 Telecommunication; Chapter 1 Federal Communications Commission, Part 30 Upper Microwave Flexible Use Service; Subpart C – Technical Standards; Section 30.207

3GPP TS 38.101-3 titled “3rd Generation Partnership Project; Technical Specification Group Radio Access Network; NR; User Equipment (UE) radio transmission and reception; Part 3: Range 1 and Range 2 Interworking operation with other radios”

3GPP TS 38.521-3 titled “3rd Generation Partnership Project; Technical Specification Group Radio Access Network; NR; User Equipment (UE) conformance specification; Radio transmission and reception; Part 3: Range 1 and Range 2 Interworking operation with other radios”

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