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**TYPE ACCEPTANCE CRITERIA FOR
ACTIVE ANTENNA SYSTEM (AAS)
BASE STATION EQUIPMENT
OPERATING BELOW 6 GHz**



1. SCOPE

This document sets out the criteria for type acceptance of Active Antenna System (AAS) base station equipment supporting single RAT UTRA, single RAT E-UTRA, and Multi-Standard Radio (UTRA, E-UTRA, 5G NR) and operating in frequency bands below 6 GHz (hereafter referred to as “the equipment”).¹

2. OPERATING FREQUENCIES

The equipment shall operate in the following frequency bands:

Band Arrangement	Downlink (Base Station Transmit)	Uplink (Base Station Receive)
Paired Band	877.5 – 882.5 MHz	832.5 – 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	

3. TECHNICAL REQUIREMENTS

- 3.1 The equipment shall meet the technical requirements stipulated in the specification TS 37.145-1 titled “3rd Generation Partnership Project; Technical Specification Group Radio Access Network; Active Antenna System (AAS) Base Station (BS) conformance testing; Part 1: Conducted conformance testing” published by the Third Generation Partnership Project (3GPP) in respect of the following:

Transmitter

<i>Item</i>	<i>Transmitter Characteristics</i>	<i>Relevant Clause in 3GPP TS 37.145-1</i>
(i)	Maximum output power	Clause 6.2.2
(ii)	Adjacent Channel Leakage power Ratio	Clause 6.6.3
(iii)	Spectrum emission mask	Clause 6.6.4
(iv)	Operating band unwanted emission	Clause 6.6.5
(v)	Spurious emission	Clause 6.6.6 excluding Clause 6.6.6.5.2.6 on co-location with other base stations
(vi)	Transmitter intermodulation	Clause 6.7

¹ Abbreviations:

E-UTRA Evolved UTRA
NR New Radio
RAT Radio Access Technology
UTRA Universal Terrestrial Radio Access

Receiver

<i>Item</i>	<i>Receiver Characteristics</i>	<i>Relevant Clause in 3GPP TS 37.145-1</i>
(i)	Reference sensitivity level	Clause 7.2
(ii)	Adjacent channel selectivity and narrowband blocking	Clause 7.4
(iii)	Blocking	Clause 7.5 excluding Clause 7.5.5.1.2, 7.5.5.3.2 and 7.5.5.4.2 on co-location requirements
(iv)	Receiver spurious emissions	Clause 7.6
(v)	Receiver intermodulation	Clause 7.7

3.2 Additional Spurious Emissions Requirements

The spurious emissions of the equipment falling onto the 3.7 – 4.2 GHz band shall not exceed – 52 dBm/MHz.

4. **EVALUATION METHOD**

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

5. **REFERENCE**

- (a) TS 37.105 titled “3rd Generation Partnership Project; Technical Specification Group Radio Access Network; Active Antenna System (AAS) Base Station (BS) transmission and reception” published by 3GPP
- (b) TS 37.145-1 titled “3rd Generation Partnership Project; Technical Specification Group Radio Access Network; Active Antenna System (AAS) Base Station (BS) conformance testing; Part 1: Conducted conformance testing ” published by 3GPP

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