



Telecom Technical Specifications
Inspection Specifications

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Date: July 15, 2020

Microwave Base Station RF Equipment Type Approval Technical Specifications

NATIONAL COMMUNICATIONS COMMISSION
Date: July 15, 2020

*Should there be any discrepancy between the English and Chinese versions, the Chinese version shall prevail.



Microwave Base Station RF Equipment Type Approval Technical Specifications

1. Legal Base: The regulations hereunder are stipulated pursuant to paragraph 2 of Article 66 of the Telecommunications Management Act .

2. Scope

This type approval regulation is applicable to microwave RF equipment type approval.

3. Basic testing items and technical specifications for base station RF equipment are listed in Appendix .

3.1 Test Item and Criteria

3.1.1 Frequency Stability

3.1.2 Single RF output power

3.1.3 RF emission

3.2. Test Requirement

If the equipment submitted for approval has adopted the latest technology or standards generated by foreign standard institutions, but Appendix does not list the basic functional test items for the equipment, or the test results do not comply with the technical specifications listed in Appendix . The applicant could submit complete technical documents or standard technical specifications generated by foreign standard institution together with test reports for further review and final acceptance.

Appendix

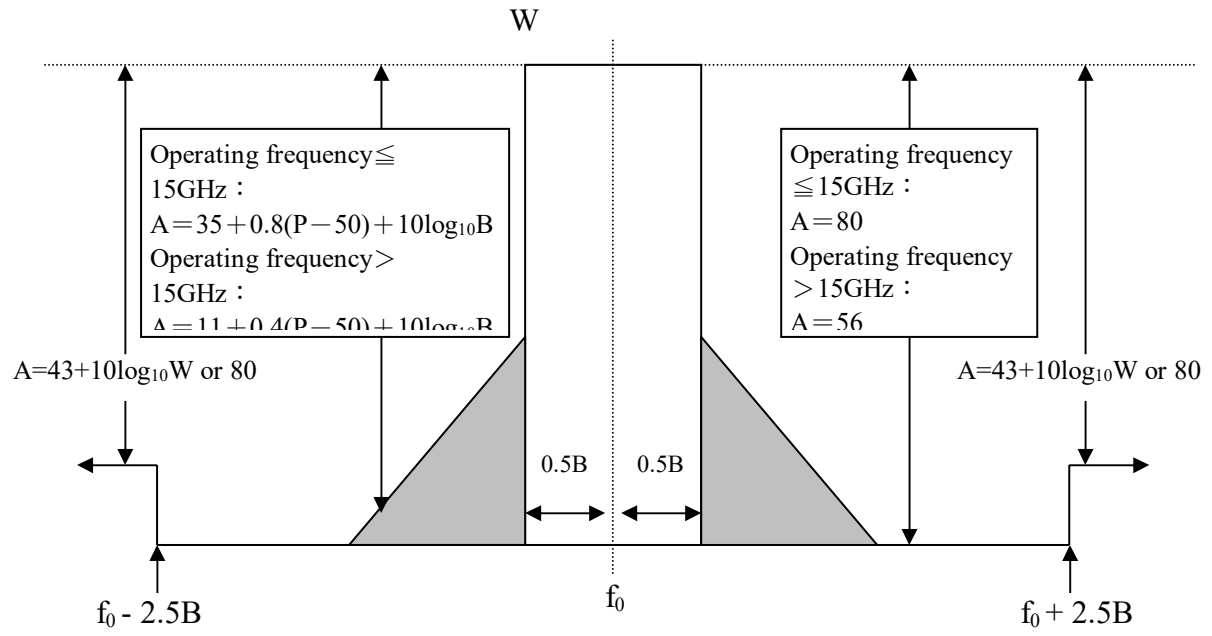
Base Station RF Equipment Basic Functional Testing Items and Technical Specifications

Basic Functional Testing Items	Specifications
Frequency Stability	3700~4200 MHz operating frequency band : central frequency $< \pm 30\text{ppm}$ ° 5925~7110 MHz operating frequency band : central frequency $< \pm 30\text{ppm}$ ° 10700~11700 MHz operating frequency band : central frequency $< \pm 30\text{ppm}$ ° 14800~15350 MHz operating frequency band : central frequency $< \pm 30\text{ppm}$ ° 17700~19700 MHz operating frequency band : central frequency $< \pm 30\text{ppm}$ ° 21200~23600 MHz operating frequency band : central frequency $< \pm 20\text{ppm}$ ° 24500~26000 MHz operating frequency band : central frequency $< \pm 20\text{ppm}$ ° 37000~38800 MHz operating frequency band : central frequency $< \pm 50\text{ppm}$ °
Single RF output power	3700~4200 MHz operating frequency band : output power $< +40\text{dBm}$ ° 5925~7110 MHz operating frequency band : output power $< +40\text{dBm}$ ° 10700~11700 MHz operating frequency band : output power $< +30\text{dBm}$ ° 14800~15350 MHz operating frequency band : output power $< +30\text{dBm}$ ° 17700~19700 MHz operating frequency band : output power $< +30\text{dBm}$ ° 21200~23600 MHz operating frequency band : output power $< +30\text{dBm}$ ° 24500~26000 MHz operating frequency band : output power $< +30\text{dBm}$ ° 37000~38800 MHz operating frequency band : output power $< +30\text{dBm}$ °
RF emission See attached diagram	1.If the operating frequency is under 15 GHz (including 15 GHZ), the radio frequency is between 0.5 to 2.5 times of the carrier center frequency f_0 in both positive and negative directions. The attenuation of the RF emission output power measured at 4 KHz bandwidth of any frequency shall be greater or equal to the calculated value A based on the following equation. However, if the value is less than 50dB, then the value should be set at 50dB. $A = 35 + 0.8(P - 50) + 10\log_{10}B$ dB , the maximum value is 80 dB °. 2.If the operating frequency is above 15 GHz (including 15 GHZ), the radio frequency is between 0.5 to 2.5 times of the central frequency f_0 in both positive and negative directions. The attenuation of the RF emission output power measured at 1 MHz bandwidth of any frequency shall be greater or equal to the calculated value A based on the following equation. However, if the value is less than 11dB, then the value should be set at 11dB : $A = 11 + 0.4(P - 50) + 10\log_{10}B$ dB , the maximum value is 56 dB °. 3.For any radio frequency which is above or below 2.5 times of the carrier center frequency, the attenuation of the RF emission output power measured at 4 KHz bandwidth shall be greater or equal to $43 + 10\log_{10}(\text{average output power}[W])$ or 80dB. The smaller value of these 2 values will be selected. 4.symbol description : - W: average output power ° - A: attenuation value below the average output power using dB as the unit ° - P: the percentage ration between the measured central frequency and the carrier center frequency ° - B: approval model's bandwidth , using MHz as the unit °

Note: 1.Measurements shall be conducted at least at the high, central, and low operating frequency bands.

2.The technical specifications of the basic functional test items are based on ETSI and US FCC CFR 47 Part 101 (10-1-98 Edition) related specifications.

Attached Diagram



Radio Transmitting Frequency