Federal Communications Commission

§ 2.201

Subpart C—Emissions

§ 2.201 Emission, modulation, and transmission characteristics.

The following system of designating emission, modulation, and transmission characteristics shall be employed.

(a) Emissions are designated according to their classification and their necessary bandwidth.

(b) Three symbols are used to describe the basic characteristics of emissions. Emissions are classified and symbolized according to the following characteristics:

1. First symbol—type of modulation of the main carrier;
2. Second symbol—nature of signal(s) modulating the main carrier;
3. Third symbol—type of information to be transmitted.

NOTE TO PARAGRAPH (b): Two additional symbols for the classification of emissions may be added for a more complete description of an emission. See Appendix I, Sub-Section II.B of the ITU Radio Regulations for the specifications of these fourth and fifth symbols. Use of these symbols is not required by the Commission.

(c) First Symbol—types of modulation of the main carrier:

1. Emission of an unmodulated carrier .......................... N
2. Emission in which the main carrier is amplitude-modulated:
   - Double-sideband ........................................ A
   - Single-sideband, full carrier ....... H
   - Single-sideband, reduced or variable level carrier ............. R
   - Single-sideband, suppressed carrier ........................ J
3. Emission in which the main carrier is angle-modulated:
   - Frequency modulation ............... F
   - Phase modulation ....................... G

NOTE: Whenever frequency modulation "F" is indicated, Phase modulation "G" is also acceptable.

4. Emission in which the main carrier is amplitude and angle-modulated either simultaneously or in a pre-established sequence .. D

§ 2.108 Policy regarding the use of the fixed-satellite allocations in the 3.6–3.7, 4.5–4.8, and 5.85–5.925 GHz bands.

The use of the fixed-satellite allocations in the United States in the above bands will be governed by footnote US245. Use of the fixed-satellite service allocations in these bands is for the international fixed-satellite service, that is, for international inter-continental communications. Case-by-case electromagnetic compatibility analysis is required with all users of the bands. It is anticipated that one earth station on each coast can be successfully coordinated. Specific locations of these earth stations depend upon service requirements and case-by-case EMC analyses that demonstrate compatible operations.
§ 2.202 Bandwidths.

(a) Occupied bandwidth. The frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers radiated are each equal to 0.5 percent of the total mean power radiated by a given emission. In some cases, for example multi-channel frequency-division systems, the percentage of 0.5 percent may lead to certain difficulties in the practical application of the definitions of occupied and necessary bandwidth; in such cases a different percentage may prove useful.

(b) Necessary bandwidth. For a given class of emission, the minimum value of the occupied bandwidth sufficient to ensure the transmission of information at the rate and with the quality required for the system employed, under specified conditions. Emissions useful for the good functioning of the receiving equipment as, for example, the emission corresponding to the carrier of reduced carrier systems, shall be included in the necessary bandwidth.

(1) The necessary bandwidth shall be expressed by three numerals and one letter. The letter occupies the position of the decimal point and represents the