Indian Standard

METHODS OF MEASUREMENTS FOR AMPLITUDE MODULATED RADIO FREQUENCY SIGNAL GENERATORS (30 kc/s TO 30 Mc/s)

0. FOREWORD

0.1 This Indian Standard was adopted by the Indian Standards Institution on 14 January 1963, after the draft finalized by the Electronic Equipment Sectional Committee had been approved by the Electrotechnical Division Council.

0.2 This standard prescribes the conditions and detailed procedures for the tests to be conducted on all classes of amplitude modulated (sinusoidal modulation) radio frequency signal generators covering a frequency range of 30 kc/s to 30 Mc/s to determine their performance characteristics. However, the methods of measurements included in this standard, may be adopted for frequency ranges higher than 30 Mc/s with suitable instruments and accessories.

0.2.1 The tests prescribed in this standard apply only to complete signal generators; separate consideration for the component parts has not been given in this standard.

0.3 This standard covers methods of measurements primarily for the measurement of frequency, output and modulation of signal generators as well as other characteristics such as residual output voltage, carrier level shift due to modulation, distortion, unwanted modulation and leakage.

0.4 This standard lays down a single method of measurement for each characteristic so as to achieve the required degree of precision. It is, however, not intended to exclude other alternative methods of measurement for which necessary measuring equipment may be available and which are of equal or greater precision than the method prescribed in this standard. Such alternate methods, wherever necessary, have been given in Appendices A, B and C.

0.5 Though the methods specified in this standard for measurement of leakage are quite adequate, the Sectional Committee responsible for the preparation of this standard has taken up the examination of the method

given in IEC Publication 106 Measurement of Radiation from Radio Receivers, with a view to adopting the same later on.

0.6 The requirements of various classes of signal generators are proposed to be covered in a series of standards, the first among them being IS : 2321-1963 Requirements for General Purpose Amplitude Modulated Radio Frequency Signal Generators (30 kc/s to 30 Mc/s).

0.7 In the preparation of this standard, assistance has been derived from the following:

DOCUMENT 13C (SECRETARIAT) 7 IEC RECOMMENDATIONS FOR SPECIFICATION OF THE RADIO FREQUENCY SIGNAL GENERATORS. International Electrotechnical Commission.

DOCUMENT 13C (SECRETARIAT) 8 IEC RECOMMENDATIONS FOR AMPLITUDE MODULATED RADIO FREQUENCY SIGNAL GENERATORS. International Electrotechnical Commission.

NFC 42-600 : 1957 MEASURING INSTRUMENTS HIGH FREQUENCY GENERATORS, MODULATION OF AMPLITUDE. I' Association Francaise de Normalisation.

UNITED KINGDOM. MINISTRY OF SUPPLY. Report No, REMC/24/FR Issue 2, January 1958. Joint Service Standards and Recommendations for Signal Generator Calibration, issued by Radio and Electronic Measurements Committee.

0.8 In reporting the result of a test made in accordance with this standard, if the final value, observed or calculated, is to be rounded off, it shall be done in accordance with IS : 2-1960 Rules for Rounding Off Numerical Values (*Revised*).

0.9 This standard is intended chiefly to cover the technical requirements relating to measurements on signal generators, and it does not include all the necessary provisions of a contract.

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1. SCOPE

1.1 This standard lays down the conditions and detailed procedures for the tests to be conducted on all classes of amplitude modulated (sinusoidal modulation) radio frequency signal generators in the frequency range of 30 kc/s to 30 Mc/s to determine their performance characteristics.

1.1.1 These tests apply to complete signal generators only and not to component parts thereof.