This is a free page sample. Access the full version online.

DECLARATION

OF

SPECIFICATION

ENTITLED

RADIO EQUIPMENT AND SYSTEMS

ANGLE-MODULATED CITIZEN'S BAND RADIO EQUIPMENT

(CEPT PR 27 RADIO EQUIPMENT)

TECHNICAL CHARACTERISTICS AND METHODS OF MEASUREMENT

AS

THE IRISH STANDARD SPECIFICATION FOR

RADIO EQUIPMENT AND SYSTEMS

ANGLE-MODULATED CITIZEN'S BAND RADIO EQUIPMENT

(CEPT PR 27 RADIO EQUIPMENT)

TECHNICAL CHARACTERISTICS AND METHODS OF MEASUREMENT

EOLAS - The Irish Science and Technology Agency in exercise of the power conferred by section 20 (3) of the Industrial Research and Standards Act, 1961 (No. 20 of 1961) and the Science and Technology Act, 1987 (No. 30 of 1987), and with the consent of the Minister for Industry and Commerce, hereby declares as follows:

1. This instrument may be cited as the Standard Specification (Radio Equipment and Systems Angle-Modulated Citizen's Band Radio Equipment (CEPT PR 27 Radio Equipment) Technical Characteristics and Methods of Measurement) Declaration, 1991.

2. (1) The Specification set forth in the Schedule to this declaration is hereby declared to be the standard specification for Radio Equipment and Systems Angle-Modulated Citizen's Band Radio Equipment (CEPT PR 27 Radio Equipment)Technical Characteristics and Methods of Measurement. The Schedule comprises the text of ETS 300135:1991.

(2) The said standard specification may be cited as Irish Standard/ETS 300135:1991 or as I.S./ETS 300135:1991.

This is a free page sample. Access the full version online.

EUROPEAN TELECOMMUNICATION STANDARD

ETS 300 135

June 1991

UDC: 621.396

Key words: radio, citizens' band

Radio Equipment and Systems

Angle-modulated Citizens' Band radio equipment (CEPT PR 27 Radio Equipment)

Technical characteristics and methods of measurement

ETSI

European Telecommunications Standards Institute

ETSI Secretariat: B.P.152 . F - 06561 Valbonne Cedex . France

TP. + 33 92 94 42 00 TF. + 33 93 65 47 16 Tx. 47 00 40 F

© European Telecommunications Standards Institute 1991.
All rights reserved.

No part may be reproduced or used except as authorised by contract or other written permission. The copyright and the foregoing restriction on reproduction and use extend to all media in which the information may be embodied.

This is a free page sample. Access the full version online.

Whilst every care has been taken in the preparation and publication of this document, errors in content, typographical or otherwise, may occur. If you have comments concerning its accuracy, please write to "ETSI Standards Management Dept." at the address shown on the title page.

This is a free page sample. Access the full version online.

Contents

Foreword 7

Introduction 7

1 Scope 9

2 Normative references 9

3 Definition, abbreviations and symbols 9
3.1 Definitions 9
3.2 Abbreviations 10
3.3 Symbols 10

4 General 10
4.1 Presentation of equipment for testing purposes 10
4.2 Mechanical and electrical design 10
4.2.1 General 10
4.2.2 Controls 10
4.2.3 Marking 10
4.3 Interpretation of the measurement results 11

5 Technical characteristics 12
5.1 Common characteristics 12
5.1.1 Frequency band 12
5.1.2 Carrier frequencies and channel numbers. 12
5.1.3 Channel separation 12
5.1.4 Multi-channel equipment 12
5.1.5 Type of modulation 13
5.1.6 Push-to-talk (ptt) and voice activated switch 13
5.1.7 Controls 13
5.1.8 Combination with other equipment 13
5.2 Transmitter parameter limits 13
5.2.1 Frequency error 13
5.2.2 Power 13
5.2.3 Frequency deviation 13
5.2.4 Unwanted amplitude modulation 13
5.2.5 Adjacent channel power 13
5.2.6 Spurious emissions of the transmitter 14
5.2.7 Transient frequency behaviour of the transmitter 14
5.2.8 Synthesisers and Phase Locked Loop (PLL) systems 15
5.3 Receiver parameter limits 15
5.3.1 Maximum usable sensitivity 15
5.3.2 Adjacent channel selectivity 15
5.3.3 Intermodulation response rejection 15
5.3.4 Spurious radiations 15

6 Test conditions, power sources and ambient temperatures 15
6.1 Normal and extreme test conditions 15
6.2 Test power source 16
6.3 Normal test conditions 16
6.3.1 Normal temperature and humidity 16
6.3.2 Normal test power source 16
6.3.2.1 Mains voltage and frequency 16
6.3.2.2 Regulated lead-acid battery power sources on vehicles . . 16
6.3.2.3 Other power sources 16
6.4 Extreme test conditions 16
6.4.1 Extreme temperatures 16
6.4.2 Extreme test source voltages 17
6.4.2.1 Mains voltage 17
6.4.2.2 Regulated lead-acid battery power sources on vehicles 17
6.4.2.3 Power sources using other types of battery 17
6.4.2.4 Other power sources 17

This is a free page sample. Access the full version online.

6.5 Procedure for tests at extreme temperatures . . . 17
6.5.1 Test procedure . . . 17

7 General conditions . . . 17
7.1 Arrangements for test signals applied to the receiver input . . . 17
7.2 Receiver mute or squelch facility . . . 18
7.3 Receiver rated audio output power . . . 18
7.4 Normal test modulation . . . 18
7.5 Artificial antenna . . . 18
7.6 Test fixture . . . 18
7.7 Arrangement for test signals at the input of the transmitter . . . 18
7.8 Test site and general arrangements for radiated measurements . . . 18

8 Method of measurement for transmitter parameters . . . 19
8.1 Frequency error . . . 19
8.1.1 Definition . . . 19
8.1.2 Method of measurement . . . 19
8.2 Transmitter carrier power . . . 19
8.2.1 Definition . . . 19
8.2.2 Method of measurement (for equipment other than equipment with integral antenna only) . . . 19
8.2.3 Method of measurement for equipment with integral antenna . . . 19
8.3 Maximum frequency deviation . . . 20
8.3.1 Maximum permissible frequency deviation . . . 20
8.3.1.1 Definition . . . 20
8.3.1.2 Method of measurement . . . 20
8.4 Unwanted amplitude modulation . . . 20
8.4.1 Method of measurement . . . 20
8.5 Adjacent channel power . . . 20
8.5.1 Definition . . . 20
8.5.2 Method of measurement . . . 21
8.6 Spurious emissions . . . 21
8.6.1 Definition . . . 21
8.6.2 Method of measuring the power level in a specified load, subclause 8.6.1 (a) . . . 21
8.6.3 Method of measuring the effective radiated power, subclause 8.6.1 (b) 22
8.6.4 Method of measuring the effective radiated power, subclause 8.6.1 (c) 22
8.7 Transient frequency behaviour of the transmitter . . . 23
8.7.1 Definitions . . . 23
8.7.2 Method of measurement . . . 23

9 Methods of measurement for receiver parameters . . . 26
9.1 Maximum usable sensitivity . . . 26
9.1.1 Definition . . . 26
9.1.2 Method of measuring the SND/ND ratio . . . 26
9.2 Adjacent channel selectivity . . . 26
9.2.1 Definition . . . 26
9.2.2 Method of measurement . . . 26
9.3 Intermodulation response rejection . . . 27
9.3.1 Definition . . . 27
9.3.2 Method of measurement . . . 27
9.4 Spurious radiations . . . 27
9.4.1 Definition . . . 27
9.4.2 Method of measuring the power level in a specified load, subclause 9.4.1 (a) . . . 28
9.4.3 Method of measuring the effective radiated power, subclause 9.4.1 (b) 28
9.4.4 Method of measuring the effective radiated power, subclause 9.4.1 (c) 28

10 Measurement uncertainty . . . 29

Annex A: Radiated measurement . . . 30
A.1 Test sites and general arrangements for measurements involving the use of radiated fields . . . 30
A.1.1 Outdoor test site . . . 30
A.1.1.2 Test site for handportable stations . . . 30
A.1.2 Test antenna . . . 31
A.1.3 Substitution antenna . . . 31
A.1.4 Optional additional indoor site . . . 32
A.2 Guidance on the use of radiation test sites . . . 33
A.2.1 Measuring distance . . . 33

This is a free page sample. Access the full version online.

A.2.2 Test antenna 33
A.2.3 Substitution antenna 33
A.2.4 Artificial antenna 34
A.2.5 Auxiliary cables 34
A.3 Further optional alternative indoor test site using an anechoic chamber 34
A.3.1 Example of the construction of a shielded anechoic chamber 34
A.3.2 Influence of parasitic reflections in anechoic chambers 34
A.3.3 Calibration of the shielded anechoic chamber 36

Annex B: Specification for adjacent channel power measurement arrangements 38
B.1 Power measuring receiver specification 38
B.1.1 IF filter 38
B.1.2 Variable attenuator 39
B.1.3 Rms value indicator 39
B.1.4 Oscillator and amplifier 39

SAI GLOBAL

This is a free preview. Purchase the entire publication at the link below:

Product Page

Looking for additional Standards? Visit Intertek Inform Infostore

Learn about LexConnect, All Jurisdictions, Standards referenced in Australian legislation