



NSAI
Standards

Irish Standard
I.S. EN 50083-2-4:2019

Cable networks for television signals,
sound signals and interactive services -
Part 2-4: Interference Mitigation Filters
operating in the 700 MHz and 800 MHz
bands for DTT reception

I.S. EN 50083-2-4:2019

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National Foreword

I.S. EN 50083-2-4:2019 is the adopted Irish version of the European Document EN 50083-2-4:2019, Cable networks for television signals, sound signals and interactive services - Part 2-4: Interference Mitigation Filters operating in the 700 MHz and 800 MHz bands for DTT reception

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EUROPEAN STANDARD

EN 50083-2-4

NORME EUROPÉENNE

EUROPÄISCHE NORM

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English Version

**Cable networks for television signals, sound signals and
interactive services - Part 2-4: Interference Mitigation Filters
operating in the 700 MHz and 800 MHz bands for DTT reception**

Réseaux de distribution par câbles pour signaux de
télévision, signaux de radiodiffusion sonore et services
interactifs - Partie 2-4: Filtres d'atténuation de brouillage
fonctionnant dans les bandes 700 MHz et 800 MHz pour la
réception TNT

Kabelnetze für Fernsehsignale, Tonsignale und interaktive
Dienste - Teil 2-4: Filter zur Vermeidung von Störungen in
den 700 MHz- und 800 MHz-Bändern für DTT-Empfang

This European Standard was approved by CENELEC on 2019-11-25. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CENELEC member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CENELEC member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

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European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

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European Foreword

This document (EN 50083-2-4:2019) has been prepared by CLC/TC 209 “Cable networks for television signals, sound signals and interactive services”.

The following dates are fixed:

- latest date by which this document has (dop) 2020-11-25
to be implemented at national level by
publication of an identical national
standard or by endorsement
- latest date by which the national (dow) 2022-11-25
standards conflicting with this document
have to be withdrawn

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CENELEC shall not be held responsible for identifying any or all such patent rights.

EN 50083-2-4:2019 (E)**Introduction**

Standards and deliverables of EN 60728 series and EN 50083 series deal with cable networks including equipment and associated methods of measurement for headend reception, processing and distribution of television and sound signals and for processing, interfacing and transmitting all kinds of data signals for interactive services using all applicable transmission media. These signals are typically transmitted in networks by frequency-multiplexing techniques.

This includes, for instance:

- a) regional and local broadband cable networks;
- b) extended satellite and terrestrial television distribution systems;
- c) individual satellite and terrestrial television receiving systems;

and all kinds of equipment, systems and installations used in such cable networks, distribution and receiving systems.

The extent of this standardization work is from the antennas and/or special signal source inputs to the headend or other interface points to the network up to the terminal input of the customer premises equipment.

The standardization work will consider coexistence with users of the RF spectrum in wired and wireless transmission systems.

The standardization of any user terminals (i.e. tuners, receivers, decoders, multimedia terminals etc.) as well as of any coaxial, balanced and optical cables and accessories thereof is excluded.

This document introduces the requirements for DTT filters¹ with stop-bands for the 700 MHz and 800 MHz bands. These filters are for use in individual and MATV antenna installations for reception of DTT signals when the 700 MHz band will be used by telecommunication services in addition to the 800 MHz band.

These requirements extend those of CLC/TS 50083-2-3 for mitigation filters for LTE services operating in the 800 MHz band only and ETSI EN 303 354 V.1.1.1 (2017-03), that deals with "Amplifiers and active antennas for TV broadcast reception in domestic premises; Harmonized standard covering the essential requirements of article 3.2 of Directive 2014/53/EU". The ETSI document is mainly applicable to new equipment available on the market, while this document has the purpose to allow the existing individual and MATV antenna installations as well as amplifiers designed for the full spectrum of band 4 and 5 for reception of DTT signals to avoid or mitigate the interference due to the new telecommunication services when the 700 MHz band is added to the 800 MHz band already used.

¹ These DTT filters are not designed to be used for CATV networks.

1 Scope

This document provides requirements for passive filters intended to reduce RF interference from mobile Base Stations (BS) and User Equipment (UE) to receiving equipment and master antenna cable distribution systems of broadcast DVB-T and DVB-T2 signals in the VHF and UHF bands. While primarily intended to be used with VHF/UHF DVB-T and DVB-T2 receivers and signal distribution systems, filters can also be useful for mitigation of interference to VHF FM or DAB radio.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 50083-2, *Cable networks for television signals, sound signals and interactive services - Part 2: Electromagnetic compatibility for equipment*

EN 60529:1991, *Degrees of protection provided by enclosures (IP Code)*(IEC 60529:1989)

EN 60728-11, *Cable networks for television signals, sound signals and interactive services — Part 11: Safety* (IEC 60728-11)

EN 61169-2, *Radio-frequency connectors - Part 2: Sectional specification - Radio frequency coaxial connectors of type 9,52* (IEC 61169 2)

EN 61169-24, *Radio-frequency connectors - Part 24: Sectional specification - Radio frequency coaxial connectors with screw coupling, typically for use in 75 ohm cable networks (type F)* (IEC 61169 24)

3 Terms, definitions and abbreviations

3.1 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at <http://www.electropedia.org/>
- ISO Online browsing platform: available at <http://www.iso.org/obp>

3.1.1

bandwidth

width of a frequency band over which a given characteristic of an equipment or transmission channel does not differ from its reference value by more than a specified amount or ratio

3.1.2

pass-band

frequency band throughout which the attenuation is less than a specified value

3.1.3

stop-band

frequency band throughout which the attenuation is greater than a specified value

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