



Introduction

What is Class A?

The demands for screening attenuation and transfer impedance of the CATV cables are defined by European Standard EN50117-2:

1. Drop, indoor 5 MHz to 1000 MHz
2. Drop, outdoor 5 MHz to 1000 MHz
3. Trunk and Distribution 5 MHz to 1000 MHz
4. Drop, indoor 5 MHz to 3000 MHz
5. Drop, outdoor 5 MHz to 3000 MHz

EN-50117-1 is the version for coax cables. Part 1 is the generic specification. This part requires that the test method of transfer impedance and the screening attenuation accords to EN 50289-1-6.

EN 50117 Screening Classes

Class A++	≥ 105 dB from 30 MHz to 1000 MHz (screening attenuation) ≥ 95 dB from 1000 MHz to 2000 MHz (screening attenuation) ≥ 85 dB from 2000 MHz to 3000 MHz (screening attenuation) ≤ 0.9 mOhm/m from 5 to 30 MHz (transfer impedance)
Class A+	≥ 95 dB from 30 MHz to 1000 MHz (screening attenuation) ≥ 85 dB from 1000 MHz to 2000 MHz (screening attenuation) ≥ 75 dB from 2000 MHz to 3000 MHz (screening attenuation) ≤ 2.5 mOhm/m from 5 to 30 MHz (transfer impedance)
Class A	≥ 85 dB from 30 MHz to 1000 MHz (screening attenuation) ≥ 75 dB from 1000 MHz to 2000 MHz (screening attenuation) ≥ 65 dB from 2000 MHz to 3000 MHz (screening attenuation) ≤ 5 mOhm/m from 5 to 30 MHz (transfer impedance)
Class B	≥ 75 dB from 30 MHz to 1000 MHz (screening attenuation) > 65 dB from 1000 MHz to 2000 MHz (screening attenuation) > 55 dB from 2000 MHz to 3000 MHz (screening attenuation) ≤ 15 mOhm/m from 5 to 30 MHz (transfer impedance)
Class C	≥ 75 dB from 30 MHz to 1000 MHz (screening attenuation) > 65 dB from 1000 MHz to 2000 MHz (screening attenuation) > 55 dB from 2000 MHz to 3000 MHz (screening attenuation) ≤ 50 mOhm/m from 5 to 30 MHz (transfer impedance)

New Technologies Need Better Cables

- From analog to digital.
- More protection from electromagnetic interference for multimedia applications (telephony, internet or video-on-demand).
- Interactive services like Two-Way-TV (TWTV) need return-path capable cables, according to class A.
- Backwards: 5 - 30 (65) MHz - Forward: 47 (80) - 862 MHz.

Euroclass – European Union to Harmonize Test Standards and Transform All the National Regulations

The Construction Products Directive (CPD) was adopted in 1989. In 2002, the European Union published a series of harmonised test standards, called: Euroclass according to a classification in decreasing quality order from A to F:

Euroclass (draft: 2003)

- A - no inflammable material
- B* - Low flame height and heat production
- C* - Moderate flame height and heat production
- D* - Heat production comparable to that of burning construction wood
- E - Moderate flame height
- F - No fire performance requirement

* B = EN50399-2-2, C and D = EN50399-2-1

CENELEC is currently working on a final version to cover the next years.