SLOVENSKI STANDARD
SIST EN 4604-004:2009

01-marec-2009

Aeronavtika - Kabli, elektriļ ni, za prenos signala - 004. del: Mikrokoaksialni kabel, visoka odpornost, 50 ohmov, 200 ÁC, tip WS - Standard za proizvod

Aerospace series - Cable, electrical, for signal transmission - Part 004: Cable, microcoaxial, high immunity, 50 Ohms, 200 °C, type WS - Product standard

Luft- und Raumfahrt - Elektrisch Leitungen für Signalübertragungen - Teil 004: Mikrokoaxialkabel, 50 Ohm, 200 °C, Typ WS - Produktnorm

Série aérospatiale - Câbles électriques pour transmission de signaux - Partie 004 : Câble, microcoaxial, haute immunité, 50 Ohms, 200 °C, type WS - Norme de produit

Ta slovenski standard je istoveten z: **EN 4604-004:2007**

ICS:

49.060	Letalska in vesoljska elektriļ na oprema in sistemi	Aerospace electric equipment and systems

SIST EN 4604-004:2009 **en,de**

EUROPEAN STANDARD

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English Version

Aerospace series - Cable, electrical, for signal transmission - Part 004: Cable, microcoaxial, high immunity, 50 Ohms, 200 °C, type WS - Product standard

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Luft- und Raumfahrt - Elektrisch Leitungen für Signalübertragungen - Teil 004: Mikrokoaxialkabel, 50 Ohm, 200 °C, Typ WS - Produktnorm

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

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Foreword

This document (EN 4604-004:2007) has been prepared by the Aerospace and Defence Industries Association of Europe - Standardization (ASD-STAN).

After enquiries and votes carried out in accordance with the rules of this Association, this Standard has received the approval of the National Associations and the Official Services of the member countries of ASD, prior to its presentation to CEN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by May 2008, and conflicting national standards shall be withdrawn at the latest by May 2008.

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According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.

1 Scope

This standard specifies the required characteristics, of a microcoaxial, 50 Ω, type WS, for use in aircraft electrical systems at operating temperature between – 55 °C to 200 °C, intended for radio-communications and especially for high frequency up to 3 GHz.

2 Normative references

The following referenced documents are indispensable for the application 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 3475-100*, *Aerospace series — Cables, electrical, aircraft use — Test methods — Part 100: General*.

EN 4604-001, *Aerospace series — Cable, electrical, for signal transmission — Part 001: Technical specification.*

EN 4604-002, *Aerospace series — Cable, electrical, for signal transmission — Part 002: General.*

TR 6058, *Aerospace series — Cable code identification list.* 1)

ASTM B 298-99, *Standard specification for silver-coated soft or annealed copper wire.* 2)

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 3475-100 apply.

4 Required characteristics

4.1 Material, construction, dimensions and mass

4.1.1 Material

See Table 1.

Table 1

	Material	Finish	Colour
Conductor	Multi strand core copper per ASTM B 298-99	1 µm silver plated	—
Dielectric	Fluorocarbon	—	—
Screen (foil)	High permeability tape	—	—
Shield	Braid, copper per ASTM B 298-99	1 µm silver plated	—
Jacket	2 polyimide tapes	—	Amber

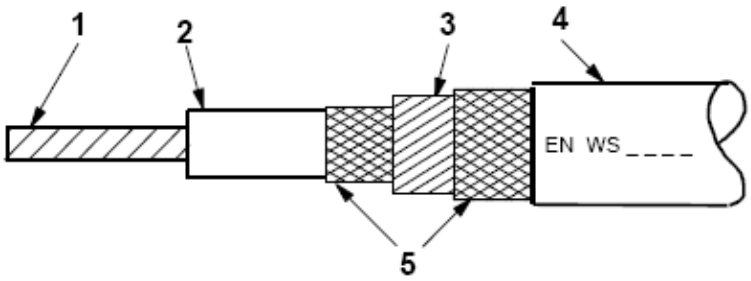
* And all parts quoted in Table 4.

1) Published as ASD Technical Report at the date of publication of this standard.

2) Published by: American Society for Testing and Materials (ASTM), 1916 Race Street, Philadelphia, PA 19103, USA.

4.1.2 Construction, dimensions and mass

See Figure 1 and Table 2.



Key

1 Conductor
2 Dielectric
3 Screen
4 Jacket
5 Shield

Figure 1

Table 2 — Dimensions and mass

Diameter mm						Mass g/m
Conductor	Dielectric	Shield		Cable		
nom.	nom.	min.	max.	min.	max.	max.
0,48 (7 × 0,16) mm	1,50	2,06	2,36	2,24	2,56	20

Strands diameter for shield = 0,085 mm nominal.

4.2 General characteristics

— Operating temperature: – 55 °C to 200 °C

— Minimum bend radius:
  — in static use: 15 mm
  — in dynamic use: 28 mm

— Performances are guaranteed up to 3 GHz.

4.3 Electrical characteristics

— Characteristic impedance: Zc = (50 ± 5) Ω

— Capacitance per unit length: (95 ± 10) pF/m

— Transfer impedance up to 100 MHz: 45 mΩ/m max. see Figure 4.

— Attenuation versus frequency: see Table 3 and Figure 2.

— Maximum power handling (at sea level): see Table 3 and Figure 3.

— Velocity of propagation: 0,69 c nom.

— Operating voltage: 1,3 kV RMS.

Table 3 — Frequency, attenuation and power handling

Frequency MHz	50	100	200	400	1 000	3 000
Attenuation dB/100 m	26	36	55	78	140	195
Power handling W	600	400	270	180	120	75

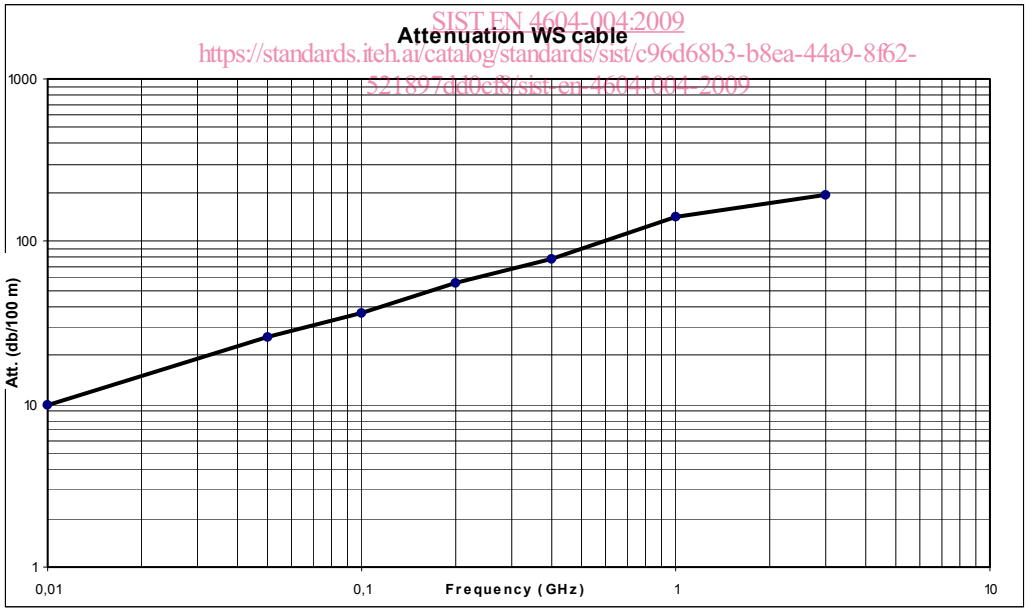


Figure 2 — Attenuation curve

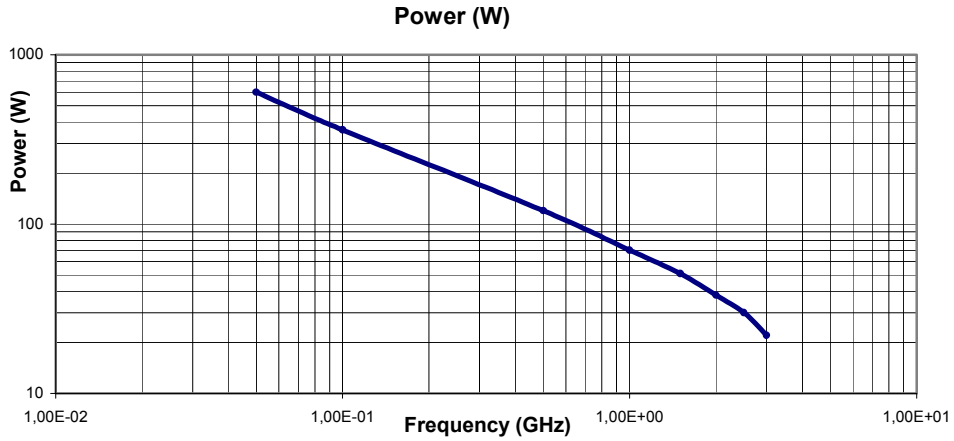


Figure 3 — Power curve (W)

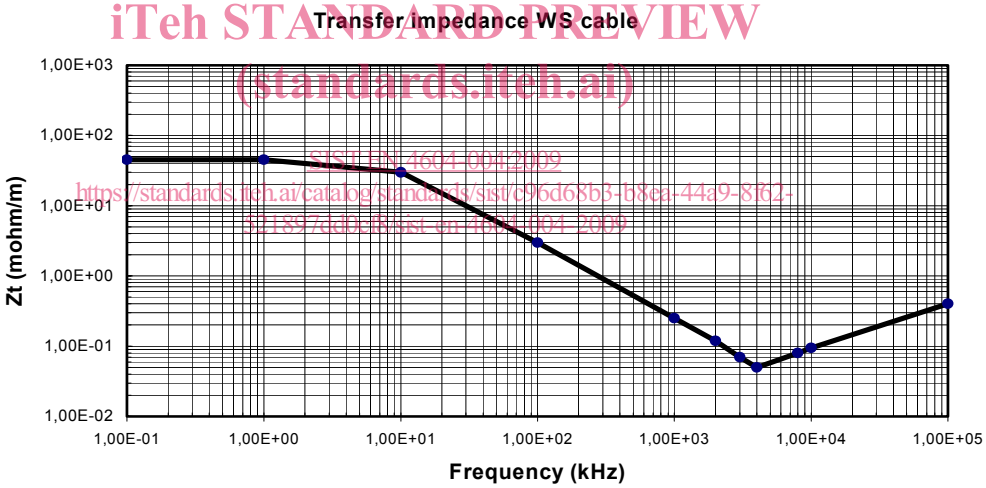


Figure 4 — Transfer impedance ZT

4.4 Tests

See Table 4.