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NATIONAL STANDARD OF THE

PEOPLE'S REPUBLIC OF CHINA

GB/T 11322.1-2013

Replacing GB/T 11322.1-1997

Radio frequency cables -- Part 0: Guide to the design of detail specifications -- Section 1: Coaxial cables

射频电缆 第0部分：详细规范设计指南 第1篇 同轴电缆

(English Translation)

Issued by: Standardization Administration of China

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Foreword

This section drafted in accordance with GB/T 1.1-2009 given rules.

This Part replaces GB/T 11322.1-1997 "RF cables - Part 0. Guide to the design specification details a coaxial cable".

This section compared with the GB/T 11322.1-1997 main technical changes are as follows.

--- Increased half air and foam FEP PE material values \u200b\u200b(see Table 4);

--- Increasing the nominal outside diameter of 9.00mm medium as a preferred value (see Table 11);

--- Recommended media outer diameter D2 is preferably a value of 0.87mm, 1.50mm, 2.95mm, 3.70mm, 4.80mm, 7.25 mm, 9.00mm, 11.50mm, 17.30mm (see 4.2);

--- Increasing the characteristic impedance of different media types and media and the outside diameter of the tolerance value (see Table 13);

--- Increasing the outer diameter of the medium is preferably solid PE values \u200b\u200bin 9.00mm and 11.50mm; foamed PE increased medium outer diameter of the preferred value 2.95mm, 3.70mm, 9.00mm, 11.50mm and 17.30mm (see Table 13).

This section uses redrafted law revision adopted IEC 60096-0-1:2000 "radio frequency cables - Part 0. Detail Specification Design Guide the first one coaxial cable. " this part of IEC 60096-0-1:2000 technical differences are as follows.

--- Increasing the nominal outside diameter of 9.00mm medium as a preferred value (see Table 11);

--- Added "nominal outside diameter D2 of the medium is preferably 0.87mm, 1.50mm, 2.95mm, 3.70mm, 4.80mm, 7.25mm, 9.00mm, 11.50mm, 17.30mm "(see 4.2);

--- Solid PE media to the outer diameter of the nominal value, increased 9.00mm and 11.50mm, tolerance of 0.40mm to 17.30mm 0.30mm; foam PE media Nominal outer diameter increased 2.95mm, 3.70mm, 9.00mm, 11.50mm and 17.30mm (see Table 13);

--- Increase the formula F = 10D2 D1 (N) (see Table 24).

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To IEC 60096-0-1:2000 errors were the following modifications.

--- 5.2 D1e = D3exp (-Z0 epsilon2/60) to D1e = D3exp (-Z0 epsilon2/60;

--- Figure 1 k4 (W/m2K1) to k4 (W/m2K1.25);

--- 6.3 C2 =

epsilon21)

3Z0

· 104 (pF/m) to C2 = epsilon2

32) Z0

· 104 (pF/m).

Please note that some of the content of this section may involve patents, the issuing authority of this standard does not assume the responsibility to identify these patents.

This part is proposed by the Ministry of Industry and Information Technology of the People's Republic of China.

This section is under the jurisdiction of the National electronic equipment with a high-frequency cables and connectors Standardization Technical Committee (SAC/TC190).

This section drafted by. China Electronics Technology Group Corporation No. 23 Research Institute.

1 Scope

This section provides the nominal characteristic impedance and the outer diameter of the media and other design parameters recommended values.

This section applies to provide guidance with a braided metal strip or tubular outer conductor of the coaxial cable RF design.

2 Symbol

The standard used in symbols and their meanings are shown in Table 1.

Table 1 symbols and their meanings

Symbol Meaning Unit

Alpha total attenuation per unit length, 20 °C dB/m AlphaT total attenuation per unit length, T != 20 °C dB/m alphax composition caused by attenuating portion x, 20 °C dB/m betax part of the braiding angle x ° (degrees) X density gammax part of the material g/cm3 Loss angle rad deltax part x material the relative dielectric constant epsilonx x component of the material -Conductivity part Xx x material, 20 °C m/ohm \u200b\u200b· mm2 sumx thermal

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resistivity of the material component of x K · m/W Bx relevant components x weave density -co in free space propagation speed m/s X Cx part unit length capacitance pF/m dx part mm diameter x singlet Dx part x mm outer diameter Dxe electrical components of an effective diameter x mm Dxm average diameter part x mm the maximum allowable E2 medium voltage gradient (peak) kV/mm MHz frequency f hx relevant part of the cover layer thickness mm x

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