

半柔射频同轴电缆规格书

Semi-flexible RF Coaxial Cable Specification

规格Cable Type: SFX-141/50 FEP



嘉兴市弘讯电子有限公司

Jiaxing topsignal Electronics Co., Ltd.

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修订记录

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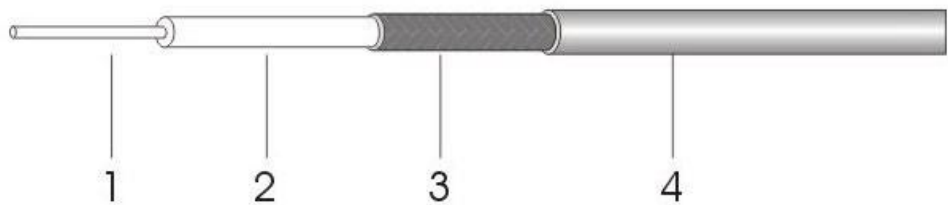
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1 基本要求Basic Requirement

工作温度范围 Working Temperature range	-65℃～200℃
安装温度 Working Humidity range	-20℃～60℃
贮存温度 Storage Temperature	0℃～40℃
使用寿命 Service Life	≥3 years
参考依据 Reference Standards	IEC61196-8

2 外观/结构Appearance/ Construction

2.1 轮廓图 Outline Drawing



3 类型和规格Type and Specs.

3.1 内导体 Inner Conductor

材料 Material:镀银铜线 Silver Plated Copper Wire
内导体直径（包含公差）Inner Conductor Diameter (with tolerance): 0.93 mm±0.02 mm

3.2 绝缘体 Insulation

材料 Material: 实心聚四氟乙烯 Solid Extruded PTFE
绝缘体直径（包含公差）Insulation Diameter (with tolerance): 3.00 mm±0.05 mm

3.3 外导体 Out Conductor

材料 Material: 浸锡铜线编织 Tinned Soaked Copper Wire Braid
外导体直径（包含公差）Outer Conductor Diameter (with tolerance): 3.52 mm±0.10 mm

3.4 护套Jacket

材料 Material: 聚全氟乙丙烯 FEP
护套直径 Jacket Diameter: 4.15 mm±0.10 mm

平均厚度 Average Thickness: 0.31 mm

最小厚度 Minimum Thickness: 0.21 mm

4 标记信息 Marking Information

无印字

5 电气性能 Electrical Characteristics

5.1 内导体直流电阻 Inner Conductor DC Resistance

$\leq 27 \Omega/\text{km}@20^{\circ}\text{C}$

5.2 外导体直流电阻 Outer Conductor DC Resistance

$\leq 16 \Omega/\text{km}@20^{\circ}\text{C}$

5.3 绝缘电阻 Insulation Resistance

$\geq 5000 \text{ M}\Omega \cdot \text{km}@20^{\circ}\text{C}$

5.4 介质耐压 Dielectric Strength

DC 5000 V 60 s: no crack

5.5 特性阻抗 Characteristic Impedance

$50 \Omega \pm 2 \Omega$

5.6 传输速率 Velocity

$70.8\% \pm 0.2\%$

5.7 截止频率 Cut-off Frequency

34 GHz

5.8 屏蔽效率 Shielding Effectiveness

$>100 \text{ dB}@200\text{-}4500 \text{ MHz}$

5.9 海平面20℃下衰减和40℃环境温度下的平均功率Nominal attenuation @20℃ and sea level mean power rating at 40℃ (104°F) ambient temperature.

Freq(MHz)	Attenuation Typical (dB/m)	Maximum Attenuation (dB/m)	Mean Power(W)
800	0.36	0.38	475
1000	0.40	0.42	425
1800	0.56	0.59	315
2000	0.59	0.62	300
2600	0.70	0.74	260
3800	0.87	0.91	215
6000	1.15	1.20	170

5.10 驻波比 VSWR

Frequency(MHz)	VSWR
5-3000	≤ 1.10
3000-6000	≤ 1.30

5.11 电容 (参考) Mutual Capacitance (refer)

95 $\pm$ 2 pF/m5.12 三阶交调 Intermodulation 3rd order

<-120 dBm(700MHz/900MHz/1800 MHz/2100MHz/2600MHz @2*43dBm)

5.13 峰值射频电压 Peak RF Voltage Rating

1.9 kv

5.14 相位差 Phase difference:

1440° $\pm$ 4° @ $\Delta l = 425 \text{ mm} \pm 0.1 \text{ mm}$ @ 2 GHz

5.15 延时 Delay

4.7 ns/m

6 物理、机械性能 Mechanical and Physical Characteristics

6.1 最小单次弯曲半径 Min. Single Bending Radius

8 mm

6.2 最小重复弯曲半径 Min. Repeated Bending Radius

40 mm*20 cycles

6.3 重量 Weight

Nom.47 g/m

6.4 环保 Environment Compliant

RoHS

REACH

6.5 阻燃 Flammability

IEC60332-3-24

UL1354

7.包装存储运输要求 Packaging, Storage, Transportation

7.1 包装 Packaging

胶盘+纸箱包装约 280 米/盘 Plastic spool + Carton box, about 280m/spool.

7.2 存储要求 Storage Requirements

存储温度为 $0^{\circ}\text{C} \sim +40^{\circ}\text{C}$ ，相对湿度 $\leq 80\%$ ，周围空气中无酸性、碱性等腐蚀性气体。

Temperature $0^{\circ}\text{C} \sim +40^{\circ}\text{C}$, relative humidity $\leq 80\%$, the surrounding air without acid, alkaline and other corrosive gases

7.3 运输搬运过程中不要剧烈振动或碰撞.

Don't be violently vibrated or impacted during transportation and carrying.

8.产品应用 Application

通信基站天线系统 Telecommunications antenna system