DX WAVE HCAAY-50-12 (1/2") PE COAXIAL CABLE

50 Ω • Black PE Jacket • Corrugated Copper Outer Conductor

Part Name	Version	Source Issue Date	Brand
HCAAY-50-12 (1/2") PE Coaxial Cable	V1.0	2026-07-01	DX WAVE

1. Product Overview

Product Type	Coaxial Cable
Characteristic Impedance	50 ± 2 Ω (DC-6 GHz)
Working Frequency Range	0-8.8 GHz
Compliance / Standards	2015/863/EU (RoHS); YD/T 1092

2. Construction

Inner Conductor → Insulation → Corrugated Copper Outer Conductor → Outer Jacket

No.	Construction	Material	Diameter / Specification
1	Inner Conductor	Copper Clad Aluminum	4.80 ± 0.05 mm
2	Insulation	Foam PE	12.6 ± 0.20 mm
3	Outer Conductor	Corrugated copper	Diameter: 13.90 ± 0.25 mm; outside bottom diameter: Nom. 12.2 mm; pitch: 5.10 ± 0.25 mm
4	Outer Jacket	Black PE	15.50 ± 0.20 mm; normal thickness: 0.7 mm; min. thickness: 0.50 mm

3. Electrical Characteristics

No.	Parameter	Value
1	Insulation Resistivity (MΩ·km at 20°C)	≥10000
2	Dielectric Strength (1 minute, V DC)	6000 (No Crack)
3	Characteristic Impedance	50 ± 2 Ω (DC-6 GHz)
4	Mutual Capacitance (reference)	76 pF/m
5	Shielding Effectiveness	≥120 dB (30-1000 MHz)
6	Relative Propagation Velocity (Typical)	87%
7	Intermodulation 3rd Order	/
8	Return Loss (VSWR)	0.69-0.96 GHz ≤1.20; 1.67-2.2 GHz ≤1.20; 2.2-2.7 GHz ≤1.20; 3.3-3.8 GHz ≤1.20; 5.0-5.8 GHz ≤1.30

Attenuation

Frequency (MHz)	Attenuation (dB/100m)
100	1.89
450	4.28
700	5.79
800	5.81
900	6.17
1000	6.52
1800	9.09
2000	9.63
2200	10.12
2500	10.85
2700	11.35
3000	12.06
3400	14.49
3500	14.78
3600	15.05
3800	15.57
4000	16.07
4500	17.13
5000	18.54
5800	19.64
6000	20.16

Nominal attenuation at 20°C cable temperature (typical).

4. Mechanical & Environmental Characteristics

No.	Parameter	Value
1	Reference Weight	Nom. 16.5 kg/100m
2	Double 85 (85°C ±2°C, 85% ±5%, 1000 h)	Result: no crack
3	Min. Bending Radius	Single: 80 mm; Repeated: 125 mm
4.1.1	Before Aging Jacket Tensile Strength	≥13 MPa
4.1.2	Before Aging Jacket Elongation	≥500%
4.2.1	Aged Jacket Tensile Strength and Variety Rate (100°C ±2°C, 240 h)	≥10 MPa; ≤ ±30%
4.2.2	Aged Jacket Elongation Variety Rate (100°C ±2°C, 240 h)	≤ ±30%
5	Flammability	NA
6	Other	Other specification according to YD/T 1092.

Application Environment

No.	Parameter	Value
1	Min. Installation Temperature	-40°C to +60°C
2	Storage Temperature	-40°C to +85°C
3	Operating Temperature	-45°C to +85°C
4	Working Frequency Range	0-8.8 GHz

5. Marking Information

DX WAVE HCAAY-50-12 (1/2") MMDDYY-TTTT-N *****M

6. Packaging, Storage & Transportation

- Packaging: 500 m/reel.
- Storage according to specified application environment.
- Avoid severe vibration, impact, moisture, and corrosive atmosphere during transportation.

7. References

YD/T 1092
2015/863/EU (RoHS) compliant