

LT-COAX-1-1/4S-200PE

1-1/4" Flexible Coaxial Cable

The LT-COAX-1-1/4S-200PE Flexible RF Cable is a high-performance 50 Ω coaxial cable engineered for reliable signal transmission in demanding RF and microwave applications. Designed with a corrugated copper outer conductor and physical foam polyethylene dielectric, it combines low attenuation with excellent power handling and superior shielding effectiveness.

With its robust construction, wide operating temperature range, and flexible bending characteristics, this cable is ideally suited for use in telecom infrastructure, broadcasting, defense communications, and other mission-critical RF systems where consistent performance and durability are essential.

Key Features

- Low attenuation for optimized signal transmission
- 50 Ω impedance with excellent VSWR performance
- High shielding effectiveness (>120 dB) for interference protection
- High power handling capability up to 205 kW peak
- Wide operating frequency range up to 3.8 GHz
- Robust corrugated copper outer conductor for durability
- Flexible bending radius for easy installation
- Weather-resistant black PE jacket for outdoor use
- Wide temperature range (-55°C to $+85^{\circ}\text{C}$)

Construction Materials

- Inner Conductor: Helical Copper Tube
- Dielectric: Physical Foam Polyethylene
- Outer Conductor: Corrugated Copper Tube
- Jacket: Black PE

Physical Dimensions

- Inner Conductor Diameter: 13.80 ± 0.2 mm
- Dielectric Diameter: 33.50 ± 0.4 mm
- Outer Conductor Diameter: 36.00 ± 0.4 mm
- Diameter Over Jacket: 38.60 ± 0.5 mm

Electrical Specifications

- Capacitance: 75.0 pF/m
- Impedance: 50 ± 1 Ω
- Velocity: 90 %
- RF Peak Voltage: 4.3 kV
- Peak Power Rating: 205 kW
- Cut-off Frequency: 3.8 GHz
- Shielding Effectiveness >10MHz: >120 dB
- Insulation Resistance: 5000 M Ω ·km

Environmental Specifications

- Storage Temperature: -55°C ~ $+85^{\circ}\text{C}$
- Installation Temperature: -40°C ~ $+60^{\circ}\text{C}$
- Operating Temperature: -55°C ~ $+85^{\circ}\text{C}$

VSWR

- 0.8–1.0 GHz: ≤ 1.13
- 1.7–2.2 GHz: ≤ 1.13
- 2.2–2.7 GHz: ≤ 1.15
- 3.3–3.8 GHz: ≤ 1.20

Mechanical Specifications

- Minimum Bending Radius (single): 120 mm
- Minimum Bending Radius (repeated): 300 mm
- Minimum Number of Bends: 15
- Tensile Strength: 2000 N



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Performance Overview

Frequency (MHz)	Attenuation (dB/100 m)	Attenuation (dB/100 ft)	Average Power Rating (kW)
100	0.83	0.25	12.52
150	1.03	0.31	10.09
200	1.2	0.37	8.67
450	1.83	0.56	5.63
800	2.49	0.76	3.92
900	2.66	0.81	3.61
1000	2.81	0.86	3.36
1800	3.91	1.19	2.09
2000	4.11	1.25	1.93
2200	4.3	1.31	1.79
2500	4.63	1.41	1.59
2600	4.74	1.45	1.54
2700	4.85	1.48	1.49
3000	5.14	1.57	1.36
3200	5.3	1.62	1.28
3300	5.4	1.65	1.24
3400	5.5	1.68	1.2
3500	5.59	1.71	1.17
3600	5.69	1.74	1.14
3800	5.87	1.79	1.08

Notes:

Attenuation values based on cable temperature 20 °C (68 °F).

VSWR ≤ 1.0:1 measured at 100 °C (212 °F) inner conductor temperature.

Average power measured at 40 °C ambient temperature with no solar loading.

Maximum attenuation value shall be 105% of the nominal attenuation value.

