5307703 | P3® 500 JCAM109

75 Ohm P3® Trunk and Distribution Cable, black PE jacket with integrated figure 8 self-supporting galvanized solid steel messenger

- *Product complies with the Build America, Buy America Act (BABAA) requirements of the Infrastructure Investment and Jobs Act of 2021 (Pub. L. 117- 58, §§ 70901-70953), or is the subject of a waiver approved by the Secretary of Commerce or designee. Compliance requirements and waiver applicability vary based on government funding program. Check the laws and regulations for your specific program.

Product Classification

Regional Availability	North America
Product Type	Coaxial hardline cable
Product Brand	P3®
Government Requirements	Build America Buy America (BABA) compliant*
Warranty	One year

General Specifications

Cable Type	500 Series
Construction Type	Swaged
Jacket Color	Black
Location of Manufacturing	Catawba, North Carolina
Short Description	P3 500 JCAM109 SM PR2171

Dimensions

Cable Length	731.52 m | 2400 ft
Diameter Over Center Conductor, nominal	2.769 mm | 0.109 in
Diameter Over Dielectric, nominal	11.481 mm | 0.452 in
Diameter Over Jacket, nominal	14.224 mm | 0.56 in
Diameter Over Messenger Wire, nominal	2.769 mm | 0.109 in
Diameter Over Outer Conductor, nominal	12.7 mm | 0.5 in
Jacket Thickness, nominal	0.762 mm | 0.03 in
Outer Conductor Thickness, nominal	0.61 mm | 0.024 in

Electrical Specifications

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Capacitance	50.197 pF/m | 15.3 pF/ft
Capacitance Tolerance	±1.0 pF/ft
Characteristic Impedance	75 ohm
Characteristic Impedance Tolerance	±2 ohm
dc Resistance Note	Nominal values based on a standard condition of 20 °C (68 °F)
dc Resistance, Inner Conductor, nominal	4.429 ohms/km | 1.35 ohms/kft
dc Resistance, Loop, nominal	5.643 ohms/km | 1.72 ohms/kft
dc Resistance, Outer Conductor, nominal	1.214 ohms/km | 0.37 ohms/kft
Jacket Spark Test Voltage	5000 Vac
Nominal Velocity of Propagation (NVP)	87 %
Operating Frequency Band	5–3000 MHz
Structural Return Loss	24 dB @ 1003–1218 MHz | 24 dB @ 1219–1794 MHz | 30 dB @ 5–1002 MHz
Structural Return Loss, Grade N	≥24 dB @ 1003–1218 MHz | ≥24 dB @ 1219–1794 MHz | ≥30 dB @ 5–1002 MHz

Attenuation

Frequency (MHz)	Attenuation (dB/100 m)	Attenuation (dB/100 ft)
5.0	0.52	0.16
55.0	1.77	0.54
85.0	2.23	0.68
204.0	3.51	1.07
211.0	3.58	1.09
250.0	3.94	1.2
300.0	4.3	1.31
350.0	4.69	1.43
400.0	5.02	1.53
450.0	5.35	1.63
500.0	5.67	1.73
550.0	5.97	1.82
600.0	6.3	1.92
750.0	7.09	2.16
865.0	7.68	2.34
1002.0	8.32	2.54
1218.0	9.28	2.83

1500.0	10.68	3.26
1794.0	11.88	3.62
1800.0	11.91	3.63
2000.0	12.68	3.87
2200.0	13.44	4.1
2500.0	14.52	4.43
2700.0	15.22	4.64
3000.0	16.25	4.95

Material Specifications

Center Conductor Material	Copper-clad aluminum
Dielectric Material	Foam PE
Jacket Material	PE
Messenger Wire Material	Steel
Outer Conductor Material	Aluminum

Mechanical Specifications

Minimum Bend Radius, bonded	88.9 mm | 3.5 in
Messenger Wire Breaking Strength, minimum	816.466 kg | 1800 lb
Pulling Tension, maximum	136.078 kg | 300 lb

Environmental Specifications

Environmental Space	Aerial

Packaging and Weights

Packaging Type	Reel
Weight, gross	261.917 kg/km | 176 lb/kft

Regulatory Compliance/Certifications

Agency	Classification
CHINA-ROHS	Below maximum concentration value
ISO 9001:2015	Designed, manufactured and/or distributed under this quality management system
REACH-SVHC	Compliant as per SVHC revision on www.commscope.com/ProductCompliance
ROHS	Compliant
UK-ROHS	Compliant