

Part Number: AQ012J50

### Features

- Plenum Rated Cable, Beige Jacket
- 1/2", Corrugated, Aluminum Outer Conductor, Jacketed CMP, NFPA-262, UL-444, Canadian CSA 22.2/ FT6
- For use 150MHz through 4000MHz

### Performance Standards

- NFPA-70, Article 810, Communication Systems, NFPA-72, NFPA-130
- NFPA-262 CMP, Canada CSA 22.2/FT6, UL-444
- TL9000 H-V - All Cables designed and manufactured under this quality management system
- RoHS 2011/65/EU Compliant

| Physical Dimensions                    |                       |
|----------------------------------------|-----------------------|
| Center Diameter, in (mm)               | 0.188 (4.78)          |
| Diameter Over Outer Conductor, in (mm) | 0.550 (13.97)         |
| Maximum Diameter Over Jacket, in (mm)  | 0.63 (16.00)          |
| Center Conductor                       | Copper-Clad Aluminium |
| Outer Conductor                        | Corrugated Aluminium  |
| Jacket Color                           | Off White             |

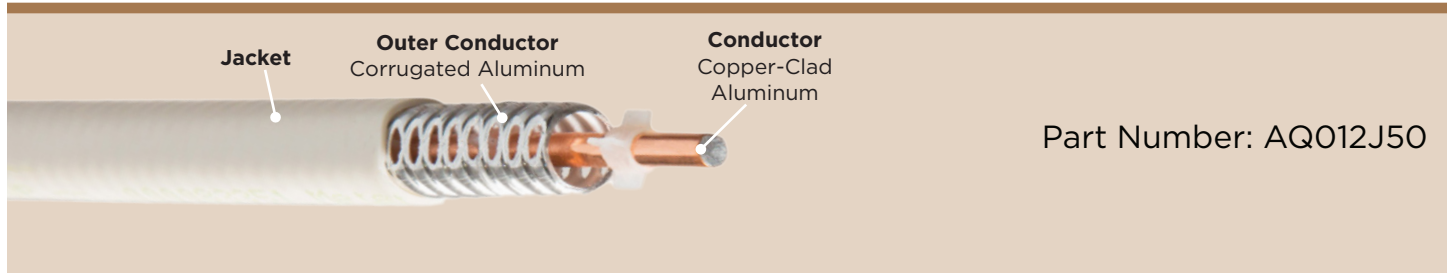
| Mechanical Characteristics              |                           |
|-----------------------------------------|---------------------------|
| Minimum Bend Radius, in (mm) - Single   | 2 (50.8)                  |
| Minimum Bend Radius, in (mm) - Multiple | 5 (127)                   |
| Cable Weight, lb (kg)                   | 0.12 (0.18)               |
| Tensile Strength, lb (kg)               | 250 (114)                 |
| Flat Plate Crush, lb/in (kg/mm)         | 50 (0.89)                 |
| Number of Bends, minimum                | 10                        |
| Recommended Install Temp., °F (°C)      | +5° to 194° (-15° to 90°) |
| Recommended Storage Temp., °F (°C)      | +5° to 194° (-15° to 90°) |
| Recommended Operating Temp., °F (°C)    | +5° to 194° (-15° to 90°) |

### Scope

Built with our unique air dielectric design and jacketed CMP, the Trilogy cable is compliant with numerous safety and performance standards, including NFPA-262 and UL-444. These certifications guarantee that the cable will perform optimally even in the most challenging conditions, such as high-rise buildings and complex industrial settings. The advanced corrugated construction ensures both flexibility and durability, making installation easier while providing robust protection against physical damage and environmental factors.

Trilogy radiating cables are meticulously engineered to excel in environments where conventional cables may fall short. These cables possess the distinctive capability to emit radio frequency signals along their length, rendering them particularly suitable for applications such as subterranean tunnels, expansive buildings, and transportation systems where comprehensive signal coverage is imperative.

Its low coupling loss and superior attenuation characteristics make it ideal for environments where maximum data transmission speed and reliability are paramount. Additionally, the cable is domestically manufactured and complies with Title 49, reinforcing its adherence to the Buy America standards.



| Electrical Characteristics                                                                                                 |               |
|----------------------------------------------------------------------------------------------------------------------------|---------------|
| Maximum Frequency, GHz                                                                                                     | 10            |
| Peak Power Rating, KW                                                                                                      | 35            |
| Capacitance, pF/ft (m)                                                                                                     | 22 (72.12)    |
| Inductance, $\mu$ H/ft (m)                                                                                                 | 0.057 (0.187) |
| VSWR min. (dB)                                                                                                             | 1.25 (19.0)   |
| VSWR typical, 700-960 / 1700-2200 MHz (dB)                                                                                 | 1.13 (24.3)   |
| Impedance, Ohms                                                                                                            | 50 +/- 2      |
| Velocity of Propagation                                                                                                    | 94%           |
| Standard Conditions                                                                                                        |               |
| For Attenuation: VSWR 1.0, Ambient Temperature 20°C (68°F)                                                                 |               |
| For Average Power: VSWR 1.0, Ambient Temperature 40°C (104°F), Inner Conductor Temperature 100°C (212°F), No Solar Loading |               |

| Attenuation and Average Power |             |          |                          |
|-------------------------------|-------------|----------|--------------------------|
| Frequency<br>MHz              | Attenuation |          | Coupling Loss<br>95%, dB |
|                               | dB/100 ft   | dB/100 m |                          |
| 150                           | 0.88        | 2.89     | 54 (56)                  |
| 220                           | 1.13        | 3.71     | 60 (61)                  |
| 450                           | 1.71        | 5.61     | 67 (68)                  |
| 500                           | 1.81        | 5.94     | 71 (72)                  |
| 700                           | 2.19        | 7.18     | 69 (72)                  |
| 800                           | 2.39        | 7.84     | 69 (71)                  |
| 900                           | 2.55        | 8.37     | 71 (73)                  |
| 960                           | 2.67        | 8.76     | 72 (74)                  |
| 1700                          | 3.71        | 12.17    | 70 (71)                  |
| 1800                          | 3.84        | 12.60    | 70 (71)                  |
| 1900                          | 3.95        | 12.96    | 70 (71)                  |
| 2000                          | 4.06        | 13.32    | 69 (70)                  |
| 2100                          | 4.27        | 14.01    | 68 (69)                  |
| 2200                          | 4.53        | 14.86    | 67 (68)                  |
| 2400                          | 5.06        | 16.60    | 66 (67)                  |
| 2600                          | 5.18        | 16.99    | 67 (68)                  |
| 2700                          | 5.22        | 17.13    | 68 (69)                  |
| 3500                          | 5.80        | 19.03    | 67 (68)                  |
| 3600                          | 5.93        | 19.46    | 67 (67)                  |
| 3700                          | 6.04        | 19.82    | 67 (67)                  |

### Notes

- Coupling Loss and Attenuation Values are measured in accordance with the IEC 61196-4 Free Space Test Method
- Coupling Loss values are measured with a radial (below 750 MHz) or orthogonal (above 750 MHz) orientated dipole antenna
- The Coupling Loss values in parentheses are the mean values of all three spatial orientations (radial, parallel and orthogonal) of dipole antenna
- Coupling Loss Tolerance of  $\pm 10$  dB at 6 ft (2m), 95%
- Attenuation Tolerance of  $\pm 10\%$  at 68°F
- As is the case with all radiating cables, performance in RF confined areas may differ from values in a free space.