

BNC Series RF Connector

Aptiv's BNC Series provides fast and positive connections with a bayonet coupling for quick mate/de-mate. Winchester's 50 Ω and 75 Ω BNC connectors provide reliable performance up to 4 GHz for video, test, radio and network applications. Aptiv's BNC connectors are rugged, versatile, and economical making them a popular connector for a wide variety of low-to-mid frequency systems.



KEY FEATURES & BENEFITS

- Quick Connect – Bayonet coupling for fast, secure mating
- Flexible Options – 50 Ω and 75 Ω versions for RF, data, and video
- Wide Frequency Range – Reliable up to 4 GHz for diverse applications
- Durable & Reliable – Withstands frequent connect/disconnect cycles
- Cost-Effective – Economical solution for low-to-mid frequency systems
- Versatile Use – Ideal for video, test, radio, and legacy networking
- Installation Flexibility – Crimp, solder, clamp, and twist-on terminations

PRODUCT SPECIFICATIONS

Electrical Properties	
Impedance	50 Ohms or 75 Ohms (specified per connector)
Frequency Range	DC to 4 GHz (standard 50 Ohm); DC to 2 GHz (standard 75 Ohm); specialized versions may exceed these
Voltage Rating	500 VRMS (max.)
Dielectric Withstanding Voltage	1500 VRMS (min.)
Contact Resistance (Center)	$\leq 1.5 \text{ m}\Omega$
Contact Resistance (Outer)	$\leq 1.0 \text{ m}\Omega$
Insulation Resistance	$\geq 5000 \text{ M}\Omega$
VSWR (50 Ohm)	Typical ≤ 1.30 @ 3 GHz
VSWR (75 Ohm)	Typical ≤ 1.25 @ 1 GHz
Insertion Loss	$\leq 0.1 \text{ dB}$ @ 1 GHz (typical)
RF Leakage	$\geq -55 \text{ dB}$ @ 3 GHz (typical for 50 Ohm)

PRODUCT SPECIFICATIONS CONTD.

Mechanical Properties	
Coupling Mechanism	Bayonet
Mating Cycles	≥ 500 cycles (standard); higher for precision versions
Coupling Nut Retention	100 lbs min.
Cable Retention (typical)	Varies by cable type and termination method (e.g., 20-50 lbs for crimp types)
Body Material	Brass (typically nickel or gold plated)
Center Contact Material	Beryllium Copper, Phosphor Bronze, or Brass (typically gold plated)
Insulator Material	PTFE (Polytetrafluoroethylene), Delrin, or other suitable plastics
Interface Dimensions	Conforms to MIL-STD-348, Interface 304

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Environmental Properties	
Temperature Range	-65°C to +165°C (standard operating range)
Thermal Shock	MIL-STD-202, Method 107, Test Condition B (from -65°C to +165°C)
Vibration	MIL-STD-202, Method 204, Test Condition B (15 G's)
Shock	MIL-STD-202, Method 213, Test Condition I (100 G's)
Moisture Resistance	MIL-STD-202, Method 106
Corrosion (Salt Fog)	MIL-STD-202, Method 101, Test Condition B (48 hours)
Durability	Engineered for reliable performance in various environmental conditions common to industrial, commercial, and military applications.