

M32139 Connectors

Aptiv M32139 connectors are high-density rectangular (Nano series) connectors that conform to MIL-DTL-32139. They employ a bayonet coupling mechanism for rapid, secure mating and are known for their rugged performance in military, aerospace, and industrial applications. These compact and durable connectors are ideal for signal and low-power applications where space is at a premium, and quick, reliable connectivity is required.



KEY FEATURES & BENEFITS

- 0.025" (0.635 mm) contact pitch — roughly half the size of Micro-D (0.050"), enabling extreme miniaturization.
- Contact counts from 9 to 85 positions (varies by layout and format: single, or dual row).
- Rectangular, circular, and hybrid - variants available for flexible integration in board-to-board, cable, or panel-mount configurations.
- Operating temperature: -55 °C to +125 °C standard (up to +200 °C for high-temp versions).
- Available in PCB, crimp, or pigtail terminations.
- Hermetic Sealing Options: Specialized versions for vacuum or pressure applications

PRODUCT SPECIFICATIONS

Electrical Properties	
Contact Resistance	33 milliohm max contact only and 87 milliohms max with 6" wire @ 1A
Current Rating	1A max per contact.
Dielectric WithStanding Voltage	250 VAC at sea level, 100 VAC at 70,000 feet. 1mA leakage current max.
Insulation Resistance	100 VDC and 5000 Megohms min.

Mechanical Properties	
Engaging Force	5 oz max.
Separation Force	.4 oz min.
Vibration	EIA-364-28 Condition IV, 1 microsecond max discontinuity
Shock	EIA-364-27 Condition G, 1 microsecond max discontinuity
Durability	EIA-364-09, 200 matings
Salt Spray	EIA 364-26 Condition B-48 hours

PRODUCT SPECIFICATIONS CONTD.

Material Specifications	
Signal Pin Contacts	C17410 Beryllium Copper per ASTM B768
Signal Socket Contacts	C17410 Beryllium Copper per ASTM B768
Contact Plating	Gold Plating per ASTM B488
PC Tails	C17410 Beryllium Copper per ASTM B768
PC Tail Plating	60/40 Tin/Lead plating per SAE-AMS-P-81728, or Gold plating per ASTM B488
Insulator Material	LCP(Liquid Crystal Polymer) GLCP-30F or PPS per MIL-M-24519 GST-40F

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M32139 Mil-Spec Part Number Definition

