



**Product:** [9L28009](#)

Flat Gray Ribbon Cable .050" Pitch, 9L280XX Series, #28-9c, PVC Ins

**Product Description**

Flat Gray Ribbon Cable .050" Pitch, 9L280XX Series, 9 Conductor, 28 AWG (7x36) Tinned Copper, PVC Insulation

**Technical Specifications**

**Product Overview**

|                        |                                                                                                                         |
|------------------------|-------------------------------------------------------------------------------------------------------------------------|
| Suitable Applications: | Internal interconnection, internal wiring of electronic equipment, reliable mass-termination to standard IDC connectors |
|------------------------|-------------------------------------------------------------------------------------------------------------------------|

**Physical Characteristics (Overall)**

**Conductor**

| AWG | Stranding | Material           |
|-----|-----------|--------------------|
| 28  | 7x36      | TC - Tinned Copper |

|                  |   |
|------------------|---|
| Conductor Count: | 9 |
|------------------|---|

**Insulation**

| Material                 | Nominal Wall Thickness |
|--------------------------|------------------------|
| PVC - Polyvinyl Chloride | 0.010 in               |

**Color Chart**

| Color |
|-------|
| Gray  |

|                           |                                |
|---------------------------|--------------------------------|
| Color Chart1 Table Notes: | First Conductor has Red Stripe |
|---------------------------|--------------------------------|

**Construction and Dimensions**

|                                          |                  |
|------------------------------------------|------------------|
| Conductor Spacing:                       | .050 +/- .002 in |
| Conductor Spacing Center-Center Outside: | .400 +/- .006 in |
| OuterJacket1, Nominal Width:             | .450 +/- .006 in |
| OuterJacket1, Nom Thick Flat Section:    | 0.035 in         |

**Electrical Characteristics**

**Conductor DCR**

| Nominal Conductor DCR |
|-----------------------|
| 68.2 Ohm/1000ft       |

**Capacitance**

| Element       | Nom. Capacitance Conductor to Conductor |
|---------------|-----------------------------------------|
| @ 1 kHz (GSG) | 18 pF/ft                                |
| @ 1 MHz (GS)  | 10 pF/ft                                |
| @ 1 MHz (GSG) | 15 pF/ft                                |

|                            |             |
|----------------------------|-------------|
| Min Insulation Resistance: | 10,000 MOhm |
|----------------------------|-------------|

**Inductance**

| Element      | Nominal Inductance |
|--------------|--------------------|
| @ 1 MHz (GS) | 0.29 µH/ft         |

|               |           |
|---------------|-----------|
| @ 1 MHz (GSG) | 0.2 µH/ft |
|---------------|-----------|

Impedance

| Nominal | Balanced | Characteristic Impedance | Description | Nominal | Characteristic Impedance | Nominal | Characteristic Impedance | Description |
|---------|----------|--------------------------|-------------|---------|--------------------------|---------|--------------------------|-------------|
| (GS)    |          |                          |             | 150 Ohm |                          | (GS)    |                          |             |
| (GSG)   |          |                          |             | 105 Ohm |                          | (GSG)   |                          |             |

High Frequency (Nominal/Typical)

| Frequency [MHz] | Nom. Insertion Loss |
|-----------------|---------------------|
| 10 MHz          | 2.8 dB/100ft        |
| 20 MHz          | 4.8 dB/100ft        |
| 30 MHz          | 6.5 dB/100ft        |
| 40 MHz          | 8.3 dB/100ft        |
| 50 MHz          | 9.8 dB/100ft        |
| 60 MHz          | 12 dB/100ft         |
| 70 MHz          | 13 dB/100ft         |
| 80 MHz          | 14 dB/100ft         |
| 90 MHz          | 15.8 dB/100ft       |
| 100 MHz         | 17 dB/100ft         |

|                                               |                               |
|-----------------------------------------------|-------------------------------|
| High Frequency Table (Nominal/Typical) Notes: | GSG=Ground-Signal-Ground Mode |
|-----------------------------------------------|-------------------------------|

Delay

| Nominal Delay | Nominal Velocity of Propagation (VP) [%] |
|---------------|------------------------------------------|
| 1.40 ns/ft    | 72%                                      |

Unbalanced Crosstalk

| Element              | Typical Unbalanced NEXT % | Typical Unbalanced FEXT % | Typical Cross Talk Pulse Rise Time (ns) |
|----------------------|---------------------------|---------------------------|-----------------------------------------|
| 10 ft. sample length | 4.8                       | 7                         | 3 ns                                    |
| 10 ft. sample length | 3.5                       | 4.7                       | 5 ns                                    |
| 10 ft. sample length | 3                         | 3                         | 7 ns                                    |

Current

| Max. Recommended Current [A] |
|------------------------------|
| 1 Amp per Conductor at 20°C  |

Voltage

| Dielectric Withstand Voltage | UL Voltage Rating |
|------------------------------|-------------------|
| 2000 V                       | 300 V             |

Temperature Range

|                              |                 |
|------------------------------|-----------------|
| Operating Temperature Range: | -40°C to +105°C |
|------------------------------|-----------------|

Mechanical Characteristics

|                                 |               |
|---------------------------------|---------------|
| Bulk Cable Weight:              | 10 lbs/1000ft |
| Minimum Minor Axis Bend Radius: | 2.5 in        |

Standards

|                          |          |
|--------------------------|----------|
| UL AWM Style Compliance: | AWM 2651 |
| CSA AWM Compliance:      | I A      |

Applicable Environmental and Other Programs

|                                     |     |
|-------------------------------------|-----|
| EU Directive Compliance:            | Yes |
| EU CE Mark:                         | Yes |
| CA Prop 65 (CJ for Wire and Cable): | Yes |
| MII Order #39 (China RoHS):         | Yes |

Suitability

|                       |     |
|-----------------------|-----|
| Suitability - Indoor: | Yes |
|-----------------------|-----|

Flammability, LS0H, Toxicity Testing

|                    |       |
|--------------------|-------|
| UL Flammability:   | VW-1  |
| UL voltage rating: | 300 V |

Plenum/Non-Plenum

|               |    |
|---------------|----|
| Plenum (Y/N): | No |
|---------------|----|

Related Part Numbers

Variants

| Item #          | Color | Length | UPC          |
|-----------------|-------|--------|--------------|
| 9L28009 008H100 | Gray  | 100 ft | 612825221579 |
| 9L28009 008H300 | Gray  | 300 ft | 612825221586 |

History

|                      |                                                  |
|----------------------|--------------------------------------------------|
| Update and Revision: | Revision Number: 0.329 Revision Date: 02-03-2025 |
|----------------------|--------------------------------------------------|

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