



Product: [2L28050](#)

Flat Gray Ribbon Cable 1mm Pitch, 2L280XX Series, #28-50c, PVC Ins

Product Description

Flat Gray Ribbon Cable 1.00mm Pitch, 2L280XX Series, 50 Conductor, 28 AWG (7x36) Tinned Copper, PVC Insulation

Technical Specifications

Product Overview

| | |
|------------------------|---|
| Suitable Applications: | Internal interconnection, internal wiring of electronic equipment, designed for the disk drive market where the 2.00mm IDC connector is widely used |
|------------------------|---|

Physical Characteristics (Overall)

Conductor

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

| | |
|------------------|----|
| Conductor Count: | 50 |
|------------------|----|

Insulation

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

Color Chart

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

| | |
|--------------|----------------------------------|
| Table Notes: | First Conductor has Black Stripe |
|--------------|----------------------------------|

Construction and Dimensions

| | |
|--|-------------------|
| Conductor Spacing Center-Center: | .0394 +/- .003 in |
| Conductor Spacing Center-Center Outside: | 1.929 +/- .012 in |
| OuterJacket1, Nominal Width: | 1.964 +/- .012 in |
| OuterJacket1, Nom Thick Flat Section: | 0.0394 in |

Electrical Characteristics

Conductor DCR

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

Capacitance

| Element | Nom. Capacitance Conductor to Conductor |
|---------------|---|
| @ 1 kHz (GSG) | 20 pF/ft |
| @ 1 MHz (GS) | 9.5 pF/ft |
| @ 1 MHz (GSG) | 16.5 pF/ft |

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

Inductance

| Element | Nominal Inductance |
|--------------|--------------------|
| @ 1 MHz (GS) | 0.24 µH/ft |

@ 1 MHz (GSG) 0.16 µH/ft

Impedance

| Nominal Balanced Characteristic Impedance Description | Nominal Characteristic Impedance | Nominal Characteristic Impedance Description |
|---|----------------------------------|--|
| (GS) | 130 Ohm | (GS) |
| (GSG) | 90 Ohm | (GSG) |

High Frequency (Nominal/Typical)

| Frequency [MHz] | Nom. Insertion Loss |
|-----------------|---------------------|
| 10 MHz | 3.3 dB/100ft |
| 20 MHz | 5.1 dB/100ft |
| 30 MHz | 7 dB/100ft |
| 40 MHz | 8.3 dB/100ft |
| 50 MHz | 9.8 dB/100ft |
| 60 MHz | 11.6 dB/100ft |
| 70 MHz | 13.1 dB/100ft |
| 80 MHz | 14.2 dB/100ft |
| 90 MHz | 16.4 dB/100ft |
| 100 MHz | 17.6 dB/100ft |

Table Notes: GSG=Ground-Signal-Ground

Delay

| Nominal Delay | Nominal Velocity of Propagation (VP) [%] |
|---------------|--|
| 1.47 ns/ft | 69% |

Unbalanced Crosstalk

| Element | Typical Unbalanced NEXT % | Typical Unbalanced FEXT % | Typical Cross Talk Pulse Rise Time (ns) |
|----------------------|---------------------------|---------------------------|---|
| 10 ft. sample length | 4.3 | 6.7 | 3 ns |
| 10 ft. sample length | 3.8 | 3.4 | 5 ns |
| 10 ft. sample length | 3.6 | 2.5 | 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 Temp Range: | -40°C to +105°C |
|-----------------------|-----------------|

Mechanical Characteristics

| | |
|---------------------------------------|---------------|
| Bulk Cable Weight: | 57 lbs/1000ft |
| Min. Bend Radius During Installation: | 1.4 in |
| Min. Bend Radius/Minor Axis: | 1.4 in |

Standards

| | |
|--------------------------|------|
| UL AWM Style Compliance: | 2651 |
| CSA AWM Compliance: | 1 A |

Applicable Environmental and Other Programs

| | |
|--|-----|
| EU Directive 2000/53/EC (ELV): | Yes |
| EU Directive 2011/65/EU (RoHS 2): | Yes |
| EU Directive 2012/19/EU (WEEE): | Yes |
| EU Directive 2015/863/EU (RoHS 2 amendment): | Yes |
| EU Directive Compliance: | Yes |
| EU CE Mark: | Yes |
| MII Order #39 (China RoHS): | Yes |

Suitability

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

Flammability, LSOH, Toxicity Testing

| | |
|--------------------|-------|
| UL Flammability: | VW-1 |
| CSA Flammability: | FT1 |
| UL voltage rating: | 300 V |

Plenum/Non-Plenum

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

Part Number

Variants

| Item # | Color | Length | UPC |
|-----------------|-------|--------|--------------|
| 2L28050 008H100 | Gray | 100 ft | 612825127567 |

History

| | |
|----------------------|--|
| Update and Revision: | Revision Number: 0.328 Revision Date: 12-15-2021 |
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