

Product: 9L28020

Flat Gray Ribbon Cable .050" Pitch, 9L280XX Series, #28-20c, PVC Ins

Product Description

Flat Gray Ribbon Cable .050" Pitch, 9L280XX Series, 20 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:	20

Insulation

Material	Nominal Wall Thickness
PVC - Polyvinyl Chloride	0.010 in

Color Chart

Color
Gray

Table Notes:	First Conductor has Red Stripe

Construction and Dimensions

Conductor Spacing Center-Center:	.050 +/- .002 in
Conductor Spacing Center-Center Outside:	.950 +/- .008 in
OuterJacket1, Nominal Width:	1.000 +/- .008 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

Table 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 20ºC

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:	23 lbs/1000ft

Standards

UL AWM Style Compliance:	AWM 2651
CSA AWM Compliance:	I 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
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
9L28020 008H100	Gray	100 ft	612825221654

History

Update and Revision:	Revision Number: 0.330 Revision Date: 05-05-2023

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