

Product: 9R28010

Rainbow Ribbon Cable .050" Pitch, 9R280XX Series, #28-10c, PVC Ins

Product Description

Rainbow Ribbon Cable .050" Pitch, 9R280XX Series, 10 Conductor, 28 AWG (7x36) Tinned Copper, PVC Insulated Conductors on PVC Substrate

Technical Specifications

Product Overview

Suitable Applications:	Internal interconnection, internal wiring of electronic equipment, color-coded for quick identification & circuit tracing, easy breakouts for circuit routing, designed for mass-termination with standard IDC connectors

Physical Characteristics (Overall)

Conductor

AWG	Stranding	Material
28	7x36	TC - Tinned Copper

Conductor Count:	10

Insulation

Material	Nominal Wall Thickness
PVC - Polyvinyl Chloride	0.010 in

Color Chart

Number	Color
1	Brown
2	Red
3	Orange
4	Yellow
5	Green
6	Blue
7	Purple
8	Gray
9	White
10	Black

Construction and Dimensions

Conductor Spacing Center-Center:	.050 +/- .003 in
Conductor Spacing Center-Center Outside:	.450 +/- .006 in
Substrate Thickness and Material:	.010 in, Clear PVC
OuterJacket1, Nominal Width:	.500 +/- .006 in
OuterJacket1, Nom Thick Flat Section:	0.036 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:	GS=Ground-Signal Mode; 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 Temp Range:	-20°C to +105°C

Mechanical Characteristics

Bulk Cable Weight:	12 lbs/1000ft
Min. Bend Radius During Installation:	1.5 in
Min. Bend Radius/Minor Axis:	0.5 in

Standards

UL AWM Style Compliance:	AMW 20932

Applicable Environmental and Other Programs

EU Directive 2000/53/EC (ELV):	Yes

EU Directive 2003/11/EC (BFR):	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	Put-Up Type	Length	UPC
9R28010 000100	None	Reel	100 ft	612825221791

History

Update and Revision:	Revision Number: 0.318 Revision Date: 12-15-2021

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