



Product: [9V28026](#)

Flat Vari-Twist Cable .050" Pitch, 9V280XX Series, #28-26c, PVC Ins on PVC Substrate

Product Description

Flat Vari-Twist Cable .050" Pitch, 9V280XX Series, 26 Conductors, 28 AWG (7x36) Tinned Copper, PVC Insulated Conductors on PVC Substrate

Technical Specifications

Product Overview

Suitable Applications:	Internal interconnection, internal wiring of electronic equipment, reduced crosstalk in balanced mode, can be mass-terminatable in flat sections with standard IDC connectors
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Physical Characteristics (Overall)

Conductor

AWG	Stranding	Material	No. of Pairs
28	7x36	TC - Tinned Copper	13

Conductor Count:	26
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Insulation

Material	Nominal Wall Thickness
PVC - Polyvinyl Chloride	0.010 in

Color Chart

Number	Color
1	Brown/Tan
2	Red/Tan
3	Orange/Tan
4	Yellow/Tan
5	Green/Tan
6	Blue/Tan
7	Purple/Tan
8	Gray/Tan
9	White/Tan
10	Black/Tan
Over 10 pair	Repeat as required

Construction and Dimensions

Conductor Spacing Center-Center Flat Section:	.050 +/- .005 in
Conductor Spacing Center-Center Outside:	1.250 +/- .015 in
Substrate Thickness and Material:	.010 in, Clear PVC
Twisted Pair Spacing Center-Center:	0.100 in
Overall Flat Section Length:	2.0 +.50 - 0 in
Overall Twisted Length:	18 in
OuterJacket1, Nominal Width:	1.326 in
OuterJacket1, Nom Thick Flat Section:	0.042 in
OuterJacket1, Nom Thick Twisted Section:	0.084 in

Electrical Characteristics

Conductor DCR

Nominal Conductor DCR

68.2 Ohm/1000ft

Capacitance

Element Nom. Capacitance Conductor to Conductor

@ 1 kHz 20 pF/ft

@ 1 MHz 16 pF/ft

Min Insulation Resistance: 10,000 MOhm

Inductance

Element Nominal Inductance

@ 1 MHz 0.24 μ H/ft

Impedance

Nominal Balanced Characteristic Impedance Ω	Nominal Characteristic Impedance	Nominal Characteristic Impedance Description	Nominal Unbalanced Characteristic Impedance
115 Ohm	115 Ohm	Balanced	100 Ohm
	110 Ohm	Unbalanced	

High Frequency (Nominal/Typical)

Frequency [MHz] Nom. Insertion Loss

10 MHz 3.5 dB/100ft

20 MHz 5.5 dB/100ft

30 MHz 7.2 dB/100ft

40 MHz 8.8 dB/100ft

50 MHz 10.2 dB/100ft

60 MHz 12 dB/100ft

70 MHz 13 dB/100ft

80 MHz 14.2 dB/100ft

90 MHz 15 dB/100ft

100 MHz 16 dB/100ft

Table Notes: 18" of twisted pairs and 2" of flat section. The transition area is included in the twisted length to assure a full 2 inches of flat termination area.

Delay

Nominal Delay Nominal Velocity of Propagation (VP) [%]

1.6 ns/ft 64%

Balanced Crosstalk

Description Start Frequency [MHz] Stop Frequency [MHz] dB Suppression

10 ft. sample length 10 MHz 100 MHz 35 dB

Unbalanced Crosstalk

Element Typical Unbalanced NEXT % Typical Unbalanced FEXT % Typical Cross Talk Pulse Rise Time (ns)

10 ft. sample length all grounds connected together. 5.8 5.2 3 ns

10 ft. sample length all grounds connected together. 4 3.2 5 ns

10 ft. sample length all grounds connected together. 2.5 2.8 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: -20°C to +105°C

Mechanical Characteristics

Bulk Cable Weight: 42 lbs/1000ft

Min. Bend Radius/Minor Axis:	1.25 in
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Standards

UL AWM Style Compliance:	AWM 2693, AWM 2697
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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
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Flammability, LSOH, Toxicity Testing

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

Plenum/Non-Plenum

Plenum (Y/N):	No
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Related Part Numbers

Variants

Item #	Color	Length	UPC
9V28026 000H100	None	100 ft	612825222149

Footnote:	E - MAY CONTAIN MORE THAN 1 PIECE. MINIMUM LENGTH OF ANY ONE PIECE IS 25'.
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History

Update and Revision:	Revision Number: 0.316 Revision Date: 02-03-2025
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