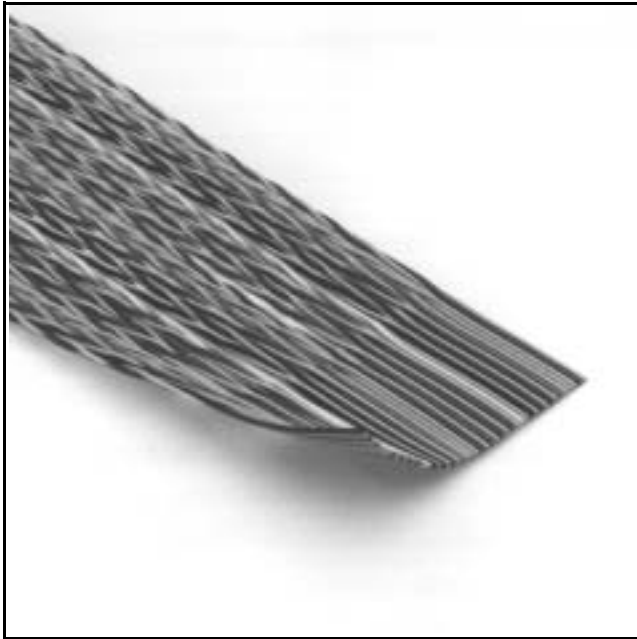


# 3M™ Twisted Pair Flat Cable

.050" 28 AWG Stranded, Mass Terminatable Pair, PVC

1700 Series



- Wires are color-coded for easy identification
- Twist and flat repeat has variable length option
- Can be mass terminated to a broad line of IDC connectors
- Provides reduced crosstalk in balanced drive applications
- 28 AWG stranded wire provides flexibility and extended product life
- 10 color repeat
- RoHS\* compliant

Date Modified: June 28, 2005



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## Physical

**Insulation Material:** Polyvinyl Chloride (PVC)

Color: 10 Color Repeat with Tan Common

**Marking:** None

Canadian Option:  AWM 20462 105C 300V VW1 3M NU  AWM IA 80C 150V FT1 EU <50V

**Conductors:** 28 AWG 7 x 36 [ 7 x 0.127 ] Tinned Stranded Copper

## Electrical

**Voltage Rating:** USA: 300V Canada: 150V EU: <50V

**Insulation Resistance:**  $> 1 \times 10^9 \Omega/10 \text{ ft. [ 3m ]}$

	Unbalanced	Balanced
<b>Characteristic Impedance:</b>	101 $\Omega$	122 $\Omega$
<b>Capacitance:</b>	15.9 pF/ft (52.2 pF/m)	13.3 pF/ft (43.6 pF/m)
<b>Inductance:</b>	16 $\mu\text{H/ft}$ (0.52 $\mu\text{H/m}$ )	.20 $\mu\text{H/ft}$ (0.66 $\mu\text{H/m}$ )
<b>Propagation Delay:</b>	1.61 ns/ft (5.28 ns/m)	1.63 ns/ft (5.35 ns/m)
<b>Velocity of Propagation:</b>	63%	62%

Note: Unbalanced is measured between ground-signal-ground conductors. Balanced is measured between conductors within a pair.

## Environmental

**Temperature Rating:** USA: -20° C to +105° C Canada: -20° C to +80° C

**Flammability Rating:** USA: VW-1 Canada: FT1

\* RoHS = Directive 2002/95/EC, Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment  
"RoHS compliant" means that the product or part does not contain any of the following substances in excess of the following maximum concentration values in any homogeneous material, unless the substance is in an application that is exempt under RoHS: (a) 0.1% (by weight) for lead, mercury, hexavalent chromium, polybrominated biphenyls or polybrominated diphenyl ethers; or (b) 0.01% (by weight) for cadmium. Unless otherwise stated by 3M in writing, this information represents 3M's knowledge and belief based upon information provided by third party suppliers to 3M.

UL File No.: E42769, Style No.: 20462

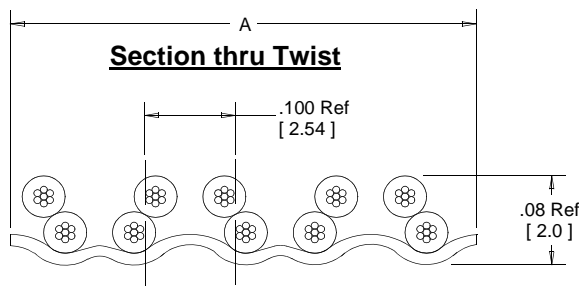
# 3M™ Twisted Pair Flat Cable

.050" 28 AWG Stranded, Mass Terminatable Pair, PVC

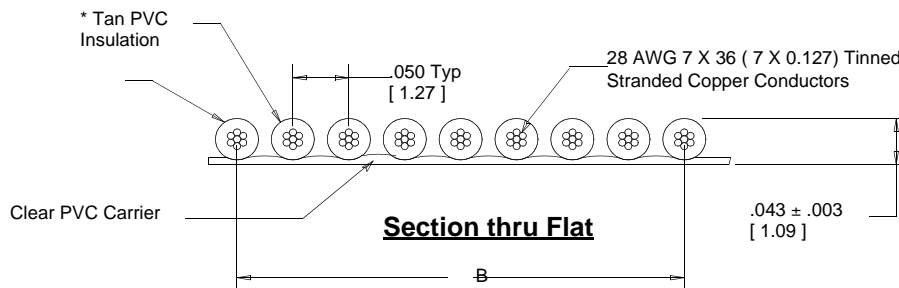
1700 Series



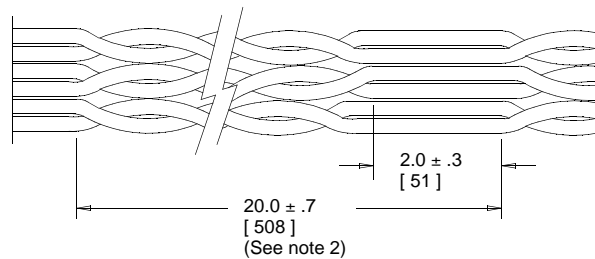
Number of Conductors	3M Part Number	Dimension A	Dimension B
10 (5 pair)	<b>1700/10</b>	0.50 [ 12.7 ]	0.450 ± .010 [ 11.43 ]
14 (7 pair)	<b>1700/14</b>	0.70 [ 17.8 ]	0.650 ± .010 [ 16.51 ]
16 (8 pair)	<b>1700/16</b>	0.80 [ 20.3 ]	0.750 ± .015 [ 19.05 ]
20 (10 pair)	<b>1700/20</b>	1.00 [ 25.4 ]	0.950 ± .015 [ 24.13 ]
26 (13 pair)	<b>1700/26</b>	1.30 [ 33.0 ]	1.250 ± .015 [ 31.75 ]
34 (17 pair)	<b>1700/34</b>	1.70 [ 43.2 ]	1.650 ± .020 [ 41.91 ]
36 (18 pair)	<b>1700/36</b>	1.80 [ 45.7 ]	1.750 ± .020 [ 44.45 ]
40 (20 pair)	<b>1700/40</b>	2.00 [ 50.8 ]	1.950 ± .020 [ 49.53 ]
50 (25 pair)	<b>1700/50</b>	2.50 [ 63.5 ]	2.450 ± .020 [ 62.23 ]
60 (30 pair)	<b>1700/60</b>	3.00 [ 76.2 ]	2.950 ± .020 [ 74.93 ]
64 (32 pair)	<b>1700/64</b>	3.20 [ 81.3 ]	3.150 ± .020 [ 80.01 ]



Variable Length Suffix Table		
Example of alternate twist and flat repeats		
Suffix	Repeat	Flat
TO	22.00	4.00
TB	7.50	1.00
TD	43.00	3.00
BP	9.00	1.50
EA	10.50	2.00
BW	34.00	2.00



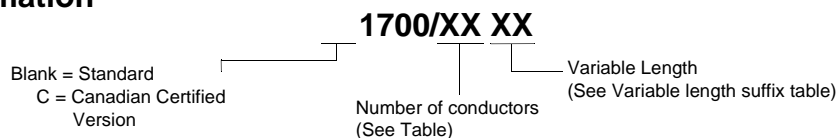
- \* 10 Color Repeat
- Brown/Tan
- Red/Tan
- Orange/Tan
- Yellow/Tan
- Green/Tan
- Blue/Tan
- Violet/Tan
- Gray/Tan
- White/Tan
- Black/Tan



Inch [mm]			
Tolerance Unless Noted			
	.0	.00	.000
Inch	±.1	±.01	±.005

[ ] Dimensions for Reference only

## Ordering Information



**Notes:**

1. Available in standard lengths of 100 feet or 300 feet per roll, please specify when ordering.
2. Standard product has a twist-flat repeat length of 20 inches (50.8 cm), with a 2-inch (5.1 cm) flat portion. The twist-flat repeat can be specified from 8-1/2 inches (16.5 cm) to 48 inches (1.219 m), and the flat can be specified as anything over 1 inch (2.5 cm).
3. For special requirements, please contact your 3M representative.

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# 3M

## Electronics

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[www.3M.com/electronics](http://www.3M.com/electronics)

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*Minimum 10%  
Post-Consumer Fiber*

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