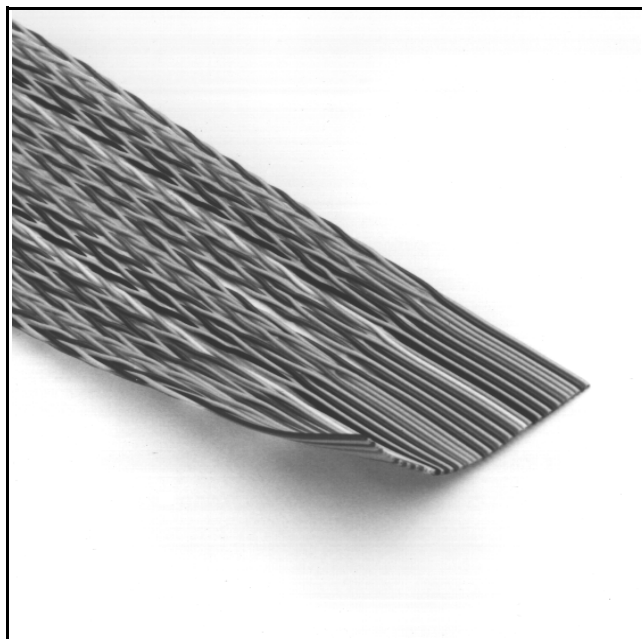


# 3M™ Twisted Pair Flat Cable

.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: April 13, 2007

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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 C  AWM IA 80C 150V FT1 EU <50V

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

## Electrical

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

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

	<b>Unbalanced</b>	<b>Balanced</b>
<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>	0.16 $\mu\text{H/ft}$ [ 0.53 $\mu\text{H/m}$ ]	0.20 $\mu\text{H/ft}$ [ 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 Compliant 2005/95/EC" means that the product or part ("Product") does not contain any of the substances in excess of the maximum concentration values in EU Directive 2002/95/EC, as amended by Commission Decision 2005/618/EC, unless the substance is in an application that is exempt under EU RoHS. This information represents 3M's knowledge and belief which may be based in whole or in part on information provided by third party suppliers to 3M.

In the event any product is proven not to conform with 3M's Regulatory Information Appendix, then 3M's entire liability and Buyer's exclusive remedy will be in accordance with the Warranty stated below.

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

# 3M™ Twisted Pair Flat Cable

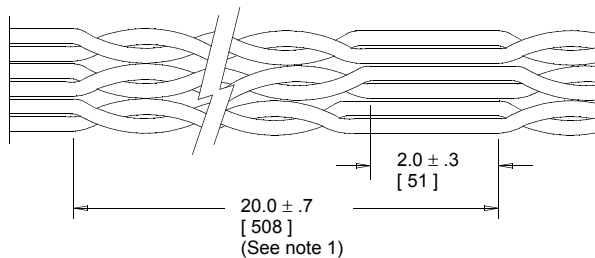
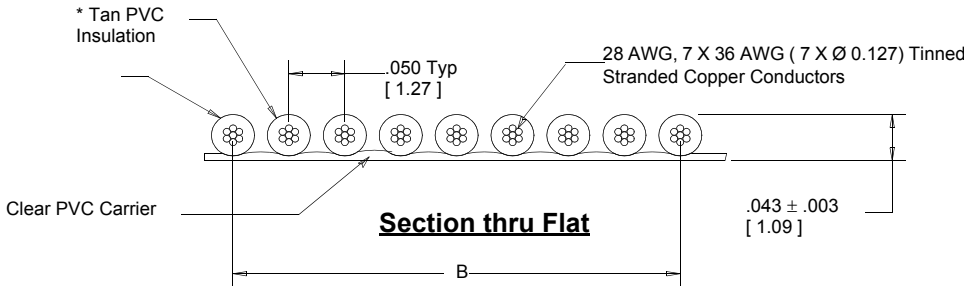
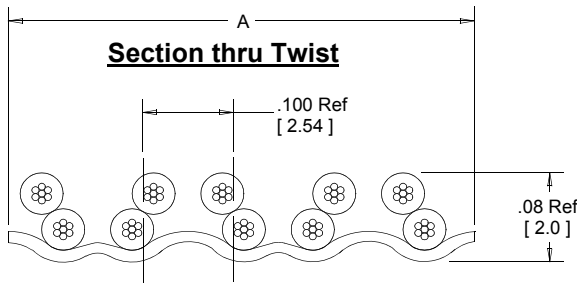
.050" 28 AWG Stranded, Mass Terminatable Pair, PVC

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 ]

Note: Contact 3M for availability of additional conductor counts.



Variable Flat-Repeat Length Suffix Table		
Alternative Twist and Flat Repeats		
Suffix	Repeat (in.)	Flat (in.)
Blank (Standard)	20.0	2.0
TO	22.0	4.0
TB	7.5	1.0
TD	43.0	3.0
BP	9.0	1.5
BA	10.5	2.0
BW	34.0	2.0

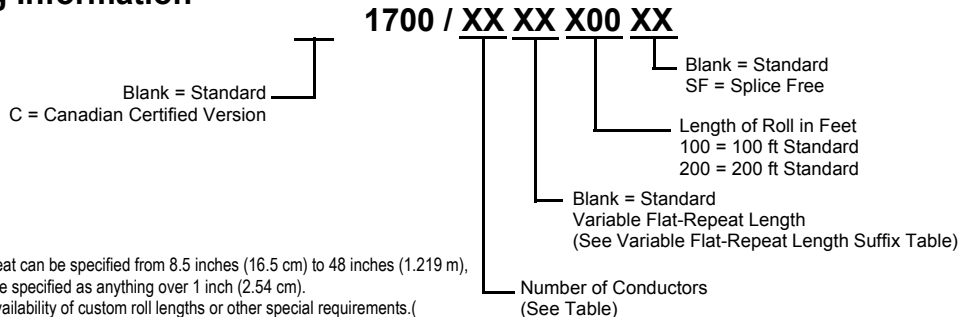
- \* 10 Color Repeat
- Brown/Tan
  - Red/Tan
  - Orange/Tan
  - Yellow/Tan
  - Green/Tan
  - Blue/Tan
  - Violet/Tan
  - Gray/Tan
  - White/Tan
  - Black/Tan

Inch [mm]

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

[ ] Dimensions for Reference only

## Ordering Information



Note:

- The twist-flat repeat can be specified from 8.5 inches (16.5 cm) to 48 inches (1.219 m), and the flat can be specified as anything over 1 inch (2.54 cm).
- Contact 3M for availability of custom roll lengths or other special requirements.

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