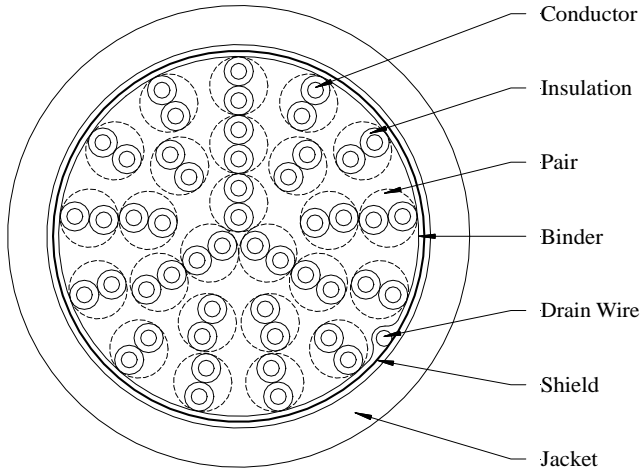


# 25 PAIR 26 AWG CAT 5E TYPE CABLE

## CUSTOMER PROPRIETARY

THIS CONFIDENTIAL DOCUMENT HAS BEEN RELEASED WITH THE UNDERSTANDING THAT IT SHALL NOT BE SENT TO ANYONE OTHER THAN THE ORIGINAL INTENDED RECIPIENT WITHOUT PRIOR AUTHORIZATION FROM TE CONNECTIVITY/MADISON CABLE



### CONSTRUCTION

**Pair Component**

**Conductor:** 26 AWG Solid Tin Plated Copper, 0.0159 Inch Diameter  
**Insulation:** 0.006 Inches of Polypropylene, 0.028 Inch Diameter  
**Pair<sup>1</sup>:** 2 Insulated Conductors Twisted Together, Lay Lengths Varied Between Pairs to Minimize Crosstalk

<sup>1</sup> Tight Twist (Data) lay lengths are used in order to meet Telecom Industry Standards.

**Final Assembly**

**Core:** 3 Pairs (#1-3) Cabled Together  
**Layer 1:** 9 Pairs (#4-12) Cabled Around Core  
**Layer 2:** 13 Pairs (#13-25) Cabled Around Layer 1  
**Binder:** Polyester Tape, 50% Overlap  
**Drain Wire:** 26 AWG Solid Tin Plated Copper, 0.0159 Inch Diameter  
**Shield:** Aluminum/Polyester Tape, Aluminum Side Facing In, 25% Overlap  
**Jacket:** 0.0275 Inches of PVC, Color – Telephone Gray<sup>2</sup>  
**Diameter:** 0.380 Inches Nominal  
**Print Legend (Black Ink):** "MADISON CABLE {Mfg Location Code}<sup>3</sup> (UL) TYPE CMR 75°C 26 AWG CSA TYPE CMG 60°C MS# 101-9467 RoHS COMPLIANT {Date Code}<sup>4</sup>"

<sup>2</sup> Per ANSI/EIA-359-A N5/

<sup>3</sup> Manufacturing Location Code, if applicable.

<sup>4</sup> Date Code is a 6-digit code with the first two digits identifying the calendar day, the middle two digits identifying the calendar month and the last two identifying the calendar year of manufacturing. Example: 04/05/95 for cable manufactured on May 4, 1995.

### COLOR CODE

Pair #	Conductor #1	Conductor #2
1	White/Blue	Blue/White
2	White/Orange	Orange/White
3	White/Green	Green/White
4	White/Brown	Brown/White
5	White/Gray	Gray/White
6	Red/Blue	Blue/Red
7	Red/Orange	Orange/Red
8	Red/Green	Green/Red
9	Red/Brown	Brown/Red
10	Red/Gray	Gray/Red
11	Black/Blue	Blue/Black
12	Black/Orange	Orange/Black
13	Black/Green	Green/Black
14	Black/Brown	Brown/Black
15	Black/Gray	Gray/Black
16	Yellow/Blue	Blue/Yellow
17	Yellow/Orange	Orange/Yellow
18	Yellow/Green	Green/Yellow
19	Yellow/Brown	Brown/Yellow
20	Yellow/Gray	Gray/Yellow
21	Violet/Blue	Blue/Violet
22	Violet/Orange	Orange/Violet
23	Violet/Green	Green/Violet
24	Violet/Brown	Brown/Violet
25	Violet/Gray	Gray/Violet



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### REVISION HISTORY

#	Date	By	Description
1	01/15/10	HA	Initial Release
2	01/29/10	DC	Added Type to Description; Added Note
3	04/05/10	RL	Added Cust. Name; Made Proprietary
4	10/19/12	SJ	Revised Jacket Wall/OD

<b>Spec Number:</b>	101-9467	<b>Prepared By:</b>	S. Jonna	
<b>Part Number:</b>	50SEJLF005	<b>Reviewed By:</b>	H. Themistocle	M. Dupuis
<b>Customer:</b>	Alcatel			<b>Page</b>
<b>Customer #:</b>	1 AC012270003 (For Reference Only)			1 of 2

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### ELECTRICAL CHARACTERISTICS<sup>5</sup>

Frequency (MHz)	Impedance <sup>6</sup> (Ohms)	RL <sup>7</sup> (dB Min.)	Attenuation (dB/100 m Max.)
1	100 ± 15	20.0	3.2
4	100 ± 15	23.0	6.6
8	100 ± 15	25.0	9.4
10	100 ± 15	25.0	10.9
16	100 ± 15	25.0	13.5
20	100 ± 15	25.0	15.4
25	100 ± 15	24.3	17.4
31.25	100 ± 15	23.6	19.7
62.5	100 ± 15	21.5	29.1
100	100 ± 15	20.1	38.3

Frequency (MHz)	PSNEXT <sup>8</sup> (dB Min.)	PSELFEXT <sup>9</sup> (dB Min.)
1	62.3	60.8
4	53.3	48.8
8	48.8	42.7
10	47.3	40.8
16	44.2	36.7
20	42.8	34.8
25	41.3	32.8
31.25	39.9	30.9
62.5	35.4	24.9
100	32.3	20.8

<sup>5</sup> Values are based on 25 feet Maximum

<sup>6</sup> An Impedance-Like Function Fit to Data By Least Square Method meets this requirement.

<sup>7</sup> Values shown from 1-100 MHz are examples. Return Loss at any frequency between 1 and 10 MHz is  $20 + 5 \log_{10}(f)$  dB Minimum, between 10 and 20 MHz is 25 dB Minimum, and between 20 and 100 MHz is  $25 - 7 \log_{10}(f/20)$  dB Minimum, where  $f$  is the frequency in MHz and measurement is on a 25 feet length. RL is Return Loss measured in accordance with ANSI/TIA/EIA-568-C.2.

<sup>8</sup> Values shown are examples. Power Sum NEXT at any frequency between 1 and 100 MHz is  $32.3 - 15 \log_{10}(f/100)$  dB Minimum, where  $f$  is frequency in MHz and measurement is on a 25 feet length. Power Sum Crosstalk is defined as total energy that a pair receives when all other pairs are energized.

<sup>9</sup> Values shown are examples. Power Sum ELFEXT at any frequency between 1 and 100 MHz is  $20.8 - 20 \log_{10}(f/100)$  dB Minimum, where  $f$  is frequency in MHz and measurement is on a 25 feet length.

**Mutual Capacitance:** 7.0 nF/100 m Maximum @ 1 kHz

**Pair-to-Ground Capacitance Unbalance:** 330 pF/100 m Maximum @ 1 kHz

**Voltage Withstand:** 1000 VAC for 1 Minute

**Conductor DC Resistance:** 14.8 Ohms/100 m Maximum @ 20°C

**Conductor DC Resistance Unbalance:** 5% Maximum

### PHYSICAL CHARACTERISTICS

**Maximum Long Term Operational Temperature Rating:** +75°C

**Minimum Static Temperature Rating:** -40°C

**Minimum Dynamic Temperature Rating:** -20°C

### SAFETY CERTIFICATION

**UL Listing:** Type CMR as specified in Article 800 of the National Electrical Code

**CSA Certification:** Type CMG

**RoHS Compliance:** In Accordance to European Directive 2002/95/EC, Issue 13.2.2003

\* Note: Type designation indicates that this design is consistent with the applicable standard, but may not be in full compliance.



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