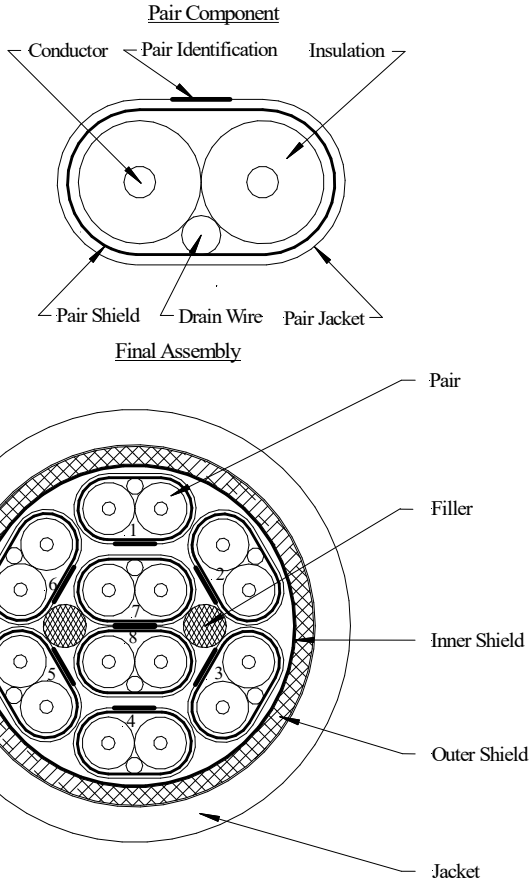


8 PAIR 26 AWG 25 GHz TURBOTWIN™ CABLE

PROPRIETARY DESIGN

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: 26AWG Solid Silver Plated Copper, 0.0162 Inch [0.41 mm] Diameter
Insulation: 0.0198Inches [0.504 mm] of Polyolefin, 0.056 Inch [1.42 mm] Diameter, Color – Natural
Pair: 2 Singles Laid Flat and Parallel
Drain Wire: 27AWG Solid Tin Plated Copper, 0.0142 Inch [0.36 mm] Diameter
Pair Shield: Aluminum/Polyester Tape, Aluminum Side Facing In, 25% Overlap
Pair Jacket: Polyester Tape
Pair Minor Diameter: 0.064 Inches [1.62 mm] Nominal
Pair Major Diameter: 0.119 Inches [3.04 mm] Nominal
Pair Identification: To be printed on entire length of pair in 1/2 Inch [13 mm] intervals, see Table 1

Final Assembly

Core: 2 Pairs (#7-8) Cabled Together
Layer: 6 Pairs (#1-6) Cabled Around The Core With Optional Fillers
Inner Shield: Aluminum/Polyester Tape, Aluminum Side Facing Out, 25% Overlap
Outer Shield: 38AWG Tin Plated Copper Braid, 80% Coverage
Jacket: 0.020 Inches [0.51mm] of PVC, Color - Black
Diameter: 0.374 Inches [9.50 mm] Nominal
Print Legend (White Ink): "MADISON CABLE {Mfg. Location Code}¹ (UL) TYPE CL2 75°C 26 AWG C(UL) TYPE CM 75°C TurboTwin™ 25G 104-2060 SUBSTANCE COMPLIANT 2011/65/EU {Date Code}²"

¹ Manufacturing location code, if applicable

² Date Code is a 4-digit code with the first two digits identifying the calendar week and the last two identifying the calendar year of manufacturing. Example – 0206 for cable manufactured in the second week of January 2006

TABLE 1

Pairs #	Pair Identification
1	- 1 - 1 - 1 - 1
2	-- 2 -- 2 -- 2 -- 2
3	--- 3 --- 3 --- 3 --- 3
4	- 4 - 4 - 4 - 4
5	-- 5 -- 5 -- 5 -- 5
6	--- 6 --- 6 --- 6 --- 6
7	- 7 - 7 - 7 - 7
8	-- 8 -- 8 -- 8 -- 8

ELECTRICAL CHARACTERISTICS³

Production Performance Testing:

Differential Impedance: 100 ± 5 Ohms @ TDR
Attenuation (SDD21)⁴: 15.5 db/5m Maximum @ 12.89 GHz
Return Loss (SDD11/22): ≤ -19.5 + 2√f for 0.01 GHz ≤ f ≤ 4.1 GHz
 ≤ -13.6 + 14Log (f/5.5) for 4.1 GHz < f ≤ 19 GHz

SCD21-SDD21:

≤ -12 for 0.01 GHz ≤ f ≤ 12.89 GHz
 ≤ -29 + (29/22) * f for 12.89 GHz < f ≤ 15.7 GHz
 ≤ -8.3 for 15.7 GHz < f ≤ 19 GHz

Differential to Common Mode Return Loss (SCD11):

≤ -24 + (20/25.78) * f for 0.01 GHz ≤ f ≤ 12.89 GHz
 ≤ -17 + (6/25.78) * f for 12.89 GHz < f ≤ 19 GHz

Pair-to-Pair IL Variation: 0.5 dB @ 12.89 GHz Nominal (abs (Max IL – Min IL)) among all pairs

Qualification Testing:

Mutual Capacitance⁵: 12 pF/ft [39 pF/m] Nominal
Insertion Loss Deviation: ILD_{min} = -0.8
 ILD_{max} = +0.8
NEXT: -50 dB Maximum from 0.01 GHz to 19 GHz
FEXT: -50 dB Maximum from 0.01 GHz to 19 GHz
Conductor DC Resistance⁵: 0.04 Ohms/ft [133 Ohms/km] Nominal @ 20°C

³All SI measurements made @ 20°C

⁴ Tested/Functional to 25 GHz over a 5meter length

⁵ Values are for informational purposes only



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REVISION HISTORY

1	12/11/17	HL	Initial Release
2	03/14/18	HL	Revised Insulation, Pair OD
3	04/13/18	HL	Revised Drain Wire and Component OD
4	05/22/18	HL	Revised the Cable OD
5	08/15/18	HL	Revised Electrical and Mech. Characteristics
6	09/29/18	HL	Revised to Remove the Under Development

Spec Number:	104-2060	Prepared By:	H. Lu	Page
Part Number:	16PE2LF006	Reviewed By:	W. Yao	1 of 2
Customer:				
Customer #:				

Users should evaluate the suitability of this product for their application. Contact factory for latest revision of specification. TE Connectivity reserves the right to make changes in materials or processing, which do not affect compliance with any specification, without notification to the Buyer.

8 PAIR 26 AWG 25 GHZ TURBOTWIN™ CABLE

PHYSICAL CHARACTERISTICS

Temperature Rating:

Operating: -10°C to +60°C

Transport/Installation: -25°C to +80°C

MECHANICAL CHARACTERISTICS

Product Validation Test: Per QS-500A (Exhibit)

INDUSTRY STANDARDS

IEEE 802.3bj: Physical Layer Specifications and Management Parameters for 100 Gb/s Operation Over Backplanes and Copper Cables

InfiniBand™ Architecture (Extended Data Rate): 1X = 25 Gb/s
4X = 100 Gb/s

SAFETY CERTIFICATION

UL Listing: Type CL2 as specified in Article 725 of the National Electrical Code

C(UL) Listing: Type CM as specified in Article 800 of the National Electrical Code

RoHS II Material Compliance: In accordance with EU Directive 2011/65/EU for the Restriction of Hazardous Substances



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