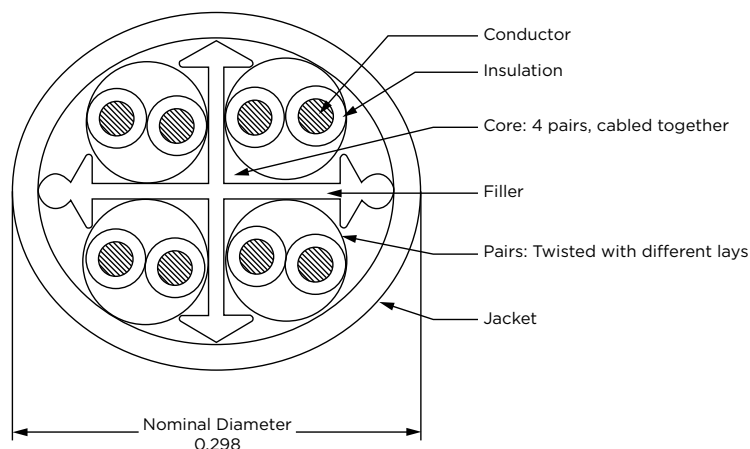


640 Series LSZH Cat 6A UTP Cable

TE640Z1



TE Connectivity Category 6A cables exceed ANSI/TIA-568-C Category 6A and ISO/IEC 11801 Category 6A performance requirements by significant margins on all parameters. The TE Category 6A System complies with all of the performance requirements for current and proposed applications such as 10-Gigabit Ethernet (10GBASE-T), Gigabit Ethernet (1000BASE-Tx), 10/100BASE-Tx, token ring, 155 Mbps ATM, 100 Mbps TP-PMD, ISDN, analog and digital video and analog and digital voice (VoIP). TE's 640 cable also features a patented oblique elliptical offset filler to minimize alien crosstalk.

TE Connectivity Category 6A UTP cables are available in standard colors including white, gray, blue and yellow. Category 6A Cables from TE feature lead-free jacketing. Packaging is on reels, with standard put-ups being 1000 foot splice-free lengths.

SPECIFICATION

Horizontal cabling shall be 23 AWG, 4-pair UTP, IEC 60332-1 flame rated and be independently verified for compliance. Cable jacketing shall be white, gray, blue or yellow and shall be lead-free. Cable shall exceed all ANSI/TIA and ISO Category 6A/Class E requirements as well as meet the performance requirements listed in the table shown on page 2.

Cable performance shall be independently verified and characterized to 650 MHz. Cable shall be supplied on reels. Independent verification for flammability compliance shall be to IEC 60332-1 flame. Horizontal cable shall be TE catalog number TE640Z1.

640 Series LSZH Cat 6A UTP Cable

TE640Z1

PERFORMANCE DATA

FREQ MHZ	Ohms FITTED IMPEDANCE	dB/100 m INSERTION LOSS		dB/100 m RETURN LOSS		dB/100 m PAIR-PAIR NEXT		dB/100 m PSNEXT	
	Spec	Max	Spec	Min	Spec	Min	Spec	Min	Spec
1	100 +/- 5	1.8	2.1	29.1	20.0	87.9	75.3	86.7	72.3
4	100 +/- 3	3.5	3.8	31.1	23.0	75.5	66.3	74.4	63.3
8	100 +/- 3	4.9	5.3	36.0	24.5	68.9	61.8	66.9	58.8
10	100 +/- 3	5.6	5.9	36.9	25.0	69.1	60.3	66.4	57.3
16	100 +/- 3	7.1	7.5	33.6	25.0	66.7	57.2	66.2	54.2
20	100 +/- 3	7.9	8.4	38.7	25.0	66.4	55.8	63.8	52.8
25	100 +/- 3	8.9	9.4	41.4	24.3	64.0	54.3	61.2	51.3
31.25	100 +/- 3	10.0	10.5	37.9	23.6	63.1	52.9	60.8	49.9
62.5	100 +/- 3	14.2	15.0	34.2	21.5	65.8	48.4	63.8	45.4
100	100 +/- 3	18.0	19.1	35.8	20.1	53.7	45.3	51.5	42.3
155	100 +/- 3	22.7	24.1	31.6	18.8	54.1	42.4	51.5	39.4
200	100 +/- 3	25.9	27.6	30.2	18.0	49.8	40.8	46.9	37.8
250	100 +/- 3	29.0	31.1	29.2	17.3	46.7	39.3	45.8	36.3
300	100 +/- 3	31.8	34.3	30.2	17.3	53.2	38.1	50.0	35.1
350	100 +/- 3	34.4	37.2	27.6	17.3	42.2	37.1	40.7	34.1
400	100 +/- 3	37.0	40.1	26.0	17.3	41.5	36.3	40.1	33.3
450	100 +/- 3	39.5	42.7	27.9	17.3	37.9	35.5	37.3	32.5
500	100 +/- 3	41.6	45.3	26.2	17.3	43.7	34.8	39.2	31.8
550	100 +/- 3	43.8	-	23.2	-	42.8	-	40.0	-
600	100 +/- 3	45.7	-	24.2	-	44.8	-	42.7	-
650	100 +/- 3	47.8	-	21.5	-	34.2	-	32.4	-

PERFORMANCE DATA

FREQ MHZ	dB/100 m ACR PAIR- PAIR		dB/100 m PSACR		dB/100 m ELFEXT PAIR-PAIR		dB/100 m PSELFEXT		dB/100 m TCL	dB/100 m ELTCTL
	Min	Spec	Min	Spec	Min	Spec	Min	Spec	Min	Min
1	86.2	73.2	84.9	70.2	79.5	68.0	76.3	65.0	40.0	35.0
4	72.0	62.5	71.0	59.5	67.6	56.0	64.4	53.0	40.0	23.0
8	64.0	56.4	62.0	53.4	62.0	49.9	58.5	46.9	40.0	16.9
10	63.6	54.4	60.9	51.4	59.9	48.0	56.5	45.0	40.0	15.0
16	59.8	49.8	59.1	46.8	56.4	43.9	52.7	40.9	38.0	10.9
20	58.6	47.4	56.0	44.4	54.6	42.0	50.7	39.0	37.0	9.0
25	55.3	45.0	52.5	42.0	52.6	40.0	48.8	37.0	36.0	7.0
31.25	53.3	42.4	51.1	39.4	51.0	38.1	47.0	35.1	35.1	-
62.5	51.8	33.4	49.9	30.4	44.6	32.1	41.4	29.1	32.0	-
100	35.9	26.2	33.5	23.2	40.0	28.0	37.6	25.0	30.0	-
155	31.9	18.4	28.8	15.4	35.6	24.2	32.6	21.2	28.1	-
200	24.5	13.2	21.0	10.2	33.6	22.0	32.3	19.0	27.0	-
250	18.4	8.3	17.4	5.3	31.9	20.0	28.0	17.0	26.0	-
300	22.0	3.9	18.9	0.9	30.0	18.5	26.6	15.5	25.2	-
350	8.5	-0.1	6.3	-3.1	27.7	17.1	24.3	14.1	24.6	-
400	5.3	-3.8	3.1	-6.8	25.2	16.0	22.2	13.0	24.0	-
450	-0.6	-7.2	-1.8	-10.2	23.3	14.9	22.1	11.9	23.5	-
500	3.0	-10.4	-1.4	-13.4	22.4	14.0	21.3	11.0	23.0	-
550	0.0	-	-2.8	-	22.5	-	21.4	-	-	-
600	-0.1	-	-2.2	-	23.8	-	20.4	-	-	-
650	-12.5	-	-14.4	-	25.3	-	19.2	-	-	-

NOTE: The above listed discrete frequency electrical performance values are provided for engineering information only. Actual compliance testing is based on swept frequency measurements.

640 Series LSZH Cat 6A UTP Cable

TE640Z1

SPECIFICATIONS

Mutual Capacitance:	5.6 nF/100 m maximum
Conductor DC Resistance:	28.6 Ω /1000' (9.38 Ω /100 m) maximum
Voltage:	300 VDC
Delay Skew:	40 ns/100 m
Propagation Delay:	510 ns/100 m @ 250 MHz
Nominal Velocity of Propagation:	65%
Operating Temperature:	-20° C - 60° C (-4° F - 140° F)
Storage Temperature:	-20° C - 80° C (-4° F - 176° F)
Installation Temperature:	5° C - 50° C (41° F - 122° F)
Bend Radius:	4 × cable diameter
Packaging:	1000' Reel: 39 lbs/kft
Materials:	Conductors: 23 AWG, Solid Copper (0.0220" nominal) Insulation: 0.040" nominal, polyethylene Jacket: 0.298" nominal, LSZH
Compliances:	IEC 60332-1 Flame Test IEC 61034 Smoke Density IEC 60754-1 Acid Gas IEC 60754-2 pH Fire Load: 760 kJ/m (0.21 kWh/m)

ETL Verified TIA-568-C.2 Category 6A Horizontal Cable Requirements
ISO/IEC 11801 Category 6A Horizontal Cable Requirements
2002/95/EC RoHS

ORDERING INFORMATION

Product Description	Packaging	Part Numbers
Category 6A UTP Cable, 4-Pair, LSZH Rated	305 MT Reel	TE640Z1-XXM2

*Additional reel sizes available, please contact TE customer service.

The following jacket colors are available. Replace XX with:

BL= Blue	WT=White	GY=Gray	YL=Yellow	GN=Green
BK=Black	RD=Red	OR=Orange	VT=Violet	BN=Brow

DATA SHEET



Contact us:
Greensboro, NC
USA 27409-8420
Tel: 1-800-553-0938
Fax: 1-717-986-7406

www.te.com/EnterpriseNetworks

TE Connectivity, TE connectivity (logo), Tyco Electronics, TE (logo) are trademarks of the TE Connectivity Ltd. family of companies and its licensors.

While TE Connectivity has made every reasonable effort to ensure the accuracy of the information in this document, TE Connectivity does not guarantee that it is error-free, nor does TE Connectivity make any other representation, warranty or guarantee that the information is accurate, correct, reliable or current. TE Connectivity reserves the right to make any adjustments to the information contained herein at any time without notice. TE Connectivity expressly disclaims all implied warranties regarding the information contained herein, including, but not limited to, any implied warranties of merchantability or fitness for a particular purpose. The dimensions in this document are for reference purposes only and are subject to change without notice. Specifications are subject to change without notice. Consult TE Connectivity for the latest dimensions and design specifications.

Tyco Electronics Corporation, a TE Connectivity Ltd. Company. All Rights Reserved.

312664AE 1/13 Revision © 2013, 2012