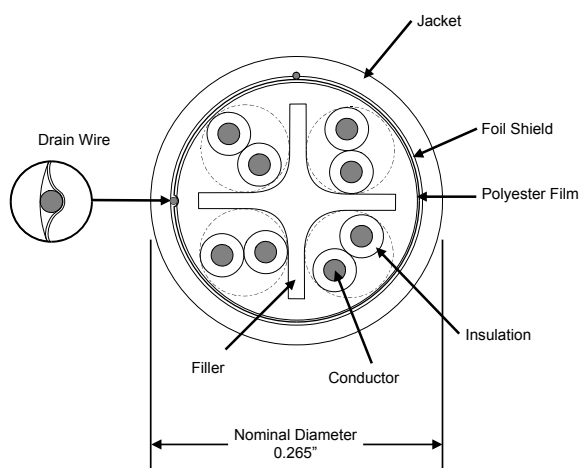


640 Series CMR Cat 6a F/UTP Cable Cut Sheet

TE640RF



Description

TE Connectivity's Category 6a F/UTP cables meet or exceed specifications of ANSI/TIA-568-C Category 6a and ISO/IEC 11801:2002/Amd 1:2008 Class EA up to 500 MHz when used as a component in a properly installed TE F/UTP channel. The TE Category 6a F/UTP System complies with all of the performance requirements for current and proposed applications such as Gigabit Ethernet (1000BASE-Tx), 10/100BASE-Tx, token ring, 155 Mbps ATM, 100 Mbps TP-PMD, ISDN, analog and digital video, analog and digital voice (VoIP), and exceeds all requirements for IEEE 802.3an 10 Gigabit Ethernet on all parameters.

640 Series Category 6a F/UTP cables are packaged on reels. Standard jacket colors are white, gray, blue and yellow.

Specification

Horizontal cabling shall be 24 AWG, 4-pair F/UTP, NEC/NFPA CMR rated and shall be independently tested for compliance. Cable jacketing shall be white, gray, blue or yellow. Cable shall meet all the requirements of ANSI/TIA-568-C.2 as well as the performance requirements listed in the table shown on page 2.

Cable shall be independently tested for performance to the following specifications:

1. ANSI/TIA-568-C.2
2. ISO/IEC 11801:2002/Amd 1:2008
3. IEEE 802.3an

Independent verification for flammability compliance shall be to NEC article 800 and NFPA 70; CMR ANSI/UL 1666. Cable shall be supplied on reels. Horizontal cable shall be TE catalog part number TE640RF.

ORDERING INFORMATION

Product Description	Packaging	Blue	White	Gray	Yellow
Category 6a F/UTP Cable, 4-Pair, CMR	1000ft Reel	TE640RF-BL02	TE640RF-WT02	TE640RF-GY02	TE640RF-YL02

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PERFORMANCE DATA

FREQ MHZ	FITTED IMPEDANCE Ohms	INSERTION LOSS dB/100m		RETURN LOSS dB/100m		PAIR-PAIR NEXT dB/100m		PSNEXT dB/100m	
	Spec	Max	Spec	Min	Spec	Min	Spec	Min	Spec
1	100+/-5	1.8	2.1	24.2	20.0	91.2	74.3	89.0	72.3
4	100+/-3	3.5	3.8	28.0	22.9	80.2	65.3	78.4	63.3
8	100+/-3	4.9	5.3	27.3	24.5	72.4	60.8	71.7	58.8
10	100+/-3	5.5	5.9	30.1	25.0	76.1	59.3	73.5	57.3
16	100+/-3	7.0	7.5	29.6	25.0	66.0	56.2	65.7	54.2
20	100+/-3	7.9	8.4	29.8	25.0	70.3	54.8	68.5	52.8
25	100+/-3	8.9	9.4	30.1	24.3	63.9	53.3	63.4	51.3
31.25	100+/-3	9.9	10.5	30.3	23.6	65.9	51.9	64.6	49.9
62.5	100+/-3	14.2	15.0	24.6	21.5	63.2	47.4	61.1	45.4
100	100+/-3	18.2	19.1	22.8	20.1	56.6	44.3	54.9	42.3
155	100+/-3	22.8	24.1	26.9	18.8	50.3	41.4	49.3	39.4
200	100+/-3	26.1	27.6	28.0	18.0	53.8	39.8	51.0	37.8
250	100+/-3	29.3	31.1	24.7	17.3	50.4	38.3	48.0	36.3
300	100+/-3	32.2	34.3	20.7	16.8	51.2	37.1	49.5	35.1
350	100+/-3	34.8	37.2	21.1	16.3	50.2	36.1	46.7	34.1
400	100+/-3	37.4	40.1	19.6	15.9	44.3	35.3	42.3	33.3
450	100+/-3	39.9	42.7	18.9	15.5	45.2	34.5	43.5	32.5
500	100+/-3	42.2	45.3	15.7	15.2	47.2	33.8	45.1	31.8
550	100+/-3	44.6	-	11.3	-	36.9	-	35.9	-
600	100+/-3	476.3	-	13.9	-	33.8	-	33.3	-

FREQ MHZ	ACR				ACRF				TCL dB/100m	ELTCTL dB/100m
	PAIR-PAIR dB/100m		PSACR dB/100m		PAIR-PAIR dB/100m		PSACRF dB/100m			
	Min	Spec	Min	Spec	Min	Spec	Min	Spec	Min	Min
1	89.4	73.2	87.2	70.2	85.6	67.8	85.0	64.8	40.0	35.0
4	76.9	62.5	75.0	59.5	73.0	55.8	72.6	52.8	40.0	23.0
8	67.7	56.4	67.0	53.4	66.9	49.7	66.4	46.7	40.0	16.9
10	70.7	54.4	68.3	51.4	65.1	47.8	64.8	44.8	40.0	15.0
16	59.1	49.8	58.7	46.8	61.4	43.7	60.9	40.7	38.0	10.9
20	62.6	47.4	60.8	44.4	59.5	41.8	59.1	38.8	37.0	9.0
25	55.4	45.0	54.8	42.0	57.9	39.8	57.3	36.8	36.0	7.0
31.25	56.1	42.4	54.8	39.4	56.2	37.9	55.9	34.9	35.1	-
62.5	50.5	33.4	47.6	30.4	49.9	31.9	49.8	28.9	32.0	-
100	38.7	26.2	37.2	23.2	45.6	27.8	45.2	24.8	30.0	-
155	28.2	18.4	27.2	15.4	44.4	24.0	43.7	21.0	28.1	-
200	28.5	13.2	25.7	10.2	40.8	21.8	40.2	18.8	27.0	-
250	22.4	8.3	20.0	5.3	40.2	19.8	39.9	16.8	26.0	-
300	19.9	3.9	17.8	0.9	45.7	18.3	43.1	15.3	25.2	-
350	18.6	-0.1	12.6	-3.1	34.3	16.9	33.3	13.9	24.6	-
400	10.3	-3.8	7.9	-6.8	30.2	15.8	29.8	12.8	24.0	-
450	6.4	-7.2	4.1	-10.2	35.0	14.7	33.8	11.7	23.5	-
500	8.5	-10.4	4.9	-13.4	33.8	13.8	32.1	10.8	23.0	-
550	-6.6	-	-7.6	-	31.5	-	32.3	-	-	-
600	-7.7	-	-9.5	-	30.5	-	29.9	-	-	-

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SPECIFICATIONS

Mutual Capacitance:	5.6 nF/100 m maximum
Conductor DC Resistance:	28.6 Ω /1000 ft (9.38 Ω /100 m)
Voltage:	300 VDC
Delay Skew:	45ns/100m maximum
Propagation Delay:	538ns/100m maximum @ 100MHz
Nominal Velocity of Propagation:	69%
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:	1000ft Reel: 42 lbs/mft
Materials:	Conductors: 24 AWG, Solid Copper, 0.0216" (poly pairs), 0.0224" (FEP pairs) Insulation: Polyethylene, 2 pairs, 0.040" nominal FEP, 2 pairs, 0.042" nominal Jacket: PVC, 0.265" nominal Filler: Polyethylene
Compliances:	UL Subject 444 (UL)-C(UL) Type CMR ICEA S-90-661 TIA-568-C.2 Category 6a Horizontal Cable Requirements ISO/IEC 11801 Category 6a Horizontal Cable Requirements 2002/95/EC RoHS



DATA SHEET

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