Category 6E 550 MHz CMP-LP

Image not to scale. See Table 1 for dimensions.

CONSTRUCTION:

1. **Conductor:** Bare solid copper
2. **Insulation:** Fluorinated Polyethylene FPE
3. **Separator:** Spline separator cabled and jacketed
4. **Rip Cord:** Rip cord for ease of jacket removal
5. **Jacket:** Flame Retardant Polyvinyl Chloride PVC.

APPLICATIONS AND FEATURES:

Southwire Cat 6E unshielded twisted pair cable is a high performance data communication cable. This ethernet cable is designed for indoor and riser network installations type CMP (Plenum rated communication cable), may be used in Ethernet Networking system, PoE applications, Video MPEG4 / M-JPEG/ Digital / Analog / Baseband / Broadband and other Multimedia Voice applications.

- DC Resistance: <9.38 ohm/100m
- DC Resistance Unbalance: <5.00%
- Mutual Capacitance: <5.60 nF/100m
- Capacitance Unbalance (Pair to Ground): <330 pF/100m
- Insulation Resistance: >500 MOhm/100m
- Impedance (mean): >100+/- 15% (1 < freq < 250MHz)
- Propagation Delay Skew: <45 nano sec /100m

SPECIFICATIONS:

- UL 444 Listed CMP
- IEEE 802.3 and IEC 61156-5 Ed. 2.0
- RoHS-3 Complies with European Directive 2015/863
- NFPA 262
- TIA/EIA 568.D.2 test to 550MHz, beyond 250MHz only for reference
- NEC Article 800

SAMPLE PRINT LEGEND:

6EP CAT 6E SOUTHWIRE ® TAPPAN™ I99997 E118871 LBI 23AWG 4PR UTP TYPE CMP LP (0.6A) 105C C(UL)US LISTED ETL VERIFIED TO TIA/EIA 568.D.2 CATEGORY 6 RoHS 2 COMPLIANT YYMMDD 0000FT

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Table 1 – Weights and Measurements

Stock Number	Cond. Size	Number of Pairs	Jacket Thickness	Approx. OD	Approx. Weight
	AWG/Kcmil	pair	mil	inch	lb/1000ft
I99997	23	4	14	0.228	31

All dimensions are nominal and subject to normal manufacturing tolerances
◊ Cable marked with this symbol is a standard stock item

Table 2 – Weights and Measurements (Metric)

Stock Number	Cond. Size	Number of Pairs	Jacket Thickness	Approx. OD	Approx. Weight
	AWG/Kcmil	pair	mm	mm	lb/km
I99997	23	4	0.36	5.79	46

Table 3 – Electrical Perforamce

Freq.	Attenuation		NEXT		ACR		PSNEXT		PSACR		ACRF		PS ACRF		RL	
(MHz)	(dB/100m)		(dB/100m)		(dB/100m)		(dB/100m)		(dB/100m)		(dB/100m)		(dB/100m)		(ns/100m)	
	Std.	Avg.	Std.	Avg.	"Std"	Avg.	Min.	Avg.	"Std"	Avg.	Std.	Avg.	Min.	Avg.	Min.	Avg.
1	2	1.6	74.3	97.7	72.3	96.1	72.3	90.1	70.3	88.5	67.8	91.9	64.8/td>	82.8	20.0	33.2
4	3.8	3.5	65.1	86.5	61.3	83.0	63.1	79.9	59.3	76.4	55.5	79.7	52.5	71.3	23.1	37.7
8	5.3	5.0	60.9	81.7	55.6	76.7	58.9	75.1	53.6	70.1	49.9	73.1	46.9	65.2	24.5	37.6
10	6.1	5.7	59.1	80.9	53.0	75.2	57.1	73.9	51.0	68.2	47.5	71.2	44.5	63.4	25.0	37.4
16	7.5	7.2	56.3	77.5	48.8	70.3	54.3	70.6	46.8	63.4	43.7	66.7	40.7	59.4	25.0	37.6
20	8.5	8.1	54.7	77.1	46.2	70.0	52.7	69.7	44.2	61.6	41.6	64.5	38.6	57.0	25.0	38.8
25	9.6	9.1	53.2	74.7	43.6	65.6	51.2	67.9	41.6	58.8	39.7	62.8	36.7	54.9	24.3	37.2
31.25	10.7	10.3	51.8	73.5	41 .1	63.2	49.8	66.4	39.1	56.1	37.8	60.5	34.8	53.0	23.6	38.1
62.5	15.4	14.6	47.3	75.9	31.9	61.3	45.3	62.1	29.9	47.5	31.8	55.2	28.8	46.3	21.5	36.6
100	19.8	18.9	44.3	66.3	24.5	47.4	42.3	58.9	22.5	40.0	27.8	49.3	24.8	41.4	20.1	33.3
200	29.0	27.3	39.8	61.8	10.8	34.5	37.8	54.7	8.8	27.4	21.8	42.3	18.8	34.3	18.0	28.9
250	32.8	30.7	38.3	60.3	5.5	29.6	36.3	53.3	3.5	22.6	19.8	39.5	16.8	30.7	17.3	28.8
300	- -	33.8	- -	58.7	- -	24.9	- -	51.4	- -	17.6	- -	35.8	- -	26.5	- -	28.2
400	- -	39.6	- -	56.3	- -	16.7	- -	49.9	- -	10.3	- -	29.0	- -	20.4	- -	25.5
500	- -	44.7	- -	54.8	- -	10.1	- -	46.7	- -	2.0	- -	21.9	- -	13.3	- -	25.4
550	- -	46.8	- -	54.4	- -	7.6	- -	46.3	- -	0.0	- -	19.5	- -	11.1	- -	24.2
600	- -	48.8	- -	53.9	- -	5.1	- -	45.8	- -	(2.5)	- -	17.1	- -	8.8	- -	22.9

Attenuation:
Std. is a TIA 568C.2 Maximum (also called “Insertion Loss”) Lower is better.
NEXT:
Std. is a TIA 568C.2 Minimum. (Near End Crosstalk) Higher is better.
ACR:
NEXT minus Attenuation ; (“Attenuation to Crosstalk Ratio”) Higher is better.
SNEXT:
Std. is a TIA 568C.2 Minimum. (Power Sum Near End Crosstalk) Higher is better.
PSACR:
PSNEXT minus Attenuation ; (“Attenuation to PSNEXT Ratio”) Higher is better.
ACRF:
Std. is a TIA 568C.2 Minimum. (Attenuation Crosstalk Ratio at Far End) Higher is better.
PSACRF:
Std. is a TIA 568C.2 Minimum. (Power Sum Atten.’ to Crosstalk Ratio) Higher is better.
RL:
Std. is a TIA 568C.2 Minimum. (Return Loss) Higher is better.