

# ABA Industry, Inc.

## Specification for Approval

### Product Part Number---TUP2304S03XX

U/UTP, 23AWG solid bare copper, CAT.6A, CMP, 650MHz

#### APPLICATION

- Structure cabling for horizontal and building backbone cable.
- Transmission of digital and analogue for data, video and audio applications.
- IEEE 802.3an 10GBASE-T and legacy speeds.
- CDDI / ATM / Token Ring
- IEEE 802.3af (PoE) / IEEE 802.3at (PoE+)

#### STANDARD COMPLIANCES

- ANSI/TIA-568.2-D (2018)
- ISO/IEC 11801-1
- IEC 61156-5 (Edition 2.1)
- NFPA 262 (CMP)
- UL 444
- CSA 22.2 NO.214
- EU Directive 2011/65/EU & 2015/863/EU
- EU Directive 2006/95/EC (LVD)

#### CONSTRUCTION

##### Conductors

- 23 AWG solid bare annealed copper

##### Insulation

- CMP: FEP

##### Color Code

- Pair 1: Blue-White 1.07 ± 0.02 mm
- Pair 2: Orange-White 1.02 ± 0.02 mm
- Pair 3: Green-White 1.06 ± 0.02 mm
- Pair 4: Brown-White 1.02 ± 0.02 mm

##### Separator

- Filler : FEP

##### Rip cord

- Polyester multi-yarn

##### Jacket

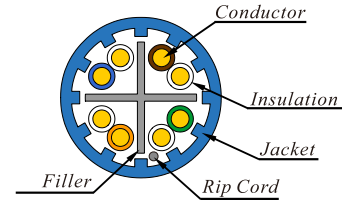
- CMP: LSFR-PVC

##### Marking

ELITE 10GS CAT 6A --- E142890 UTP 4PR 23AWG  
75°C C(UL)US CMP(PCC-FT6) --- ETL VERIFIED  
TO TIA-568.2-D CAT 6A mmyy<sup>1</sup> RoHS  
COMPLIANT XXXXT

Note 1: mmyy is date code.

#### CROSS-SECTION



#### ELECTRICAL CHARACTERISTICS

DC Resistance Ohms/100 m (328 ft) @ 20°C	9.38
DC Resistance Unbalanced Individual Pair %	5.00
Delay Skew (Max) ns/100 m	45
Nom. Velocity of Propagation % Speed of Light	68
Characteristic Impedance Frequency (f):	Ohms 100 ± 15

#### PHYSICAL CHARACTERISTICS

Nominal Cable Diameter (mm)	8.0
Nominal Cable Weight (kg/1000 ft)	21.15
Minimum Bend Radius	≥ 4 times O.D.
Maximum Pulling Force	≤ 110 N
Temperature Rating (°C)	
Storage & shipping:	-20°C to 75°C
Installation:	0 to +60
Operation:	-20 to +60

### Transmission Performance (at 20°C)

Frequency (MHz)	IL (Max.)	NEXT (Min.)	PS. NEXT (Min.)	ACR (Min.)	PS. ACR (Min.)	ACRF (Min.)	PS. ACRF (Min.)	RL (Min.)	Propagation Delay (Max.)
	dB/100m	dB/100m	dB/100m	dB/100m	dB/100m	dB/100m	dB/100m	dB/100m	ns/100m
1	2.08	74.30	72.30	72.22	70.22	67.80	64.80	20.00	570.00
4	3.80	65.27	63.27	61.47	59.47	55.76	52.76	23.01	552.00
8	5.31	60.75	58.75	55.44	53.44	49.74	46.74	24.52	546.73
10	5.93	59.30	57.30	53.37	51.37	47.80	44.80	25.00	545.38
16	7.49	56.24	54.24	48.75	46.75	43.72	40.72	25.00	543.00
20	8.38	54.78	52.78	46.41	44.41	41.78	38.78	25.00	542.05
25	9.38	53.33	51.33	43.95	41.95	39.84	36.84	24.32	541.20
31.25	10.50	51.88	49.88	41.37	39.37	37.90	34.90	23.64	540.44
62.5	14.99	47.36	45.36	32.37	30.37	31.88	28.88	21.54	538.55
100	19.14	44.30	42.30	25.17	23.17	27.80	24.80	20.11	537.60
150	23.68	41.66	39.66	17.98	15.98	24.28	21.28	18.87	536.94
200	27.58	39.78	37.78	12.21	10.21	21.78	18.78	18.00	536.55
250	31.07	38.33	36.33	7.26	5.26	19.84	16.84	17.32	536.28
300	34.27	37.14	35.14	2.88	0.88	18.26	15.26	16.77	536.08
350	37.25	36.14	34.14	N.A.	N.A.	16.92	13.92	16.30	535.92
400	40.05	35.27	33.27	N.A.	N.A.	15.76	12.76	15.89	535.80
450	42.71	34.50	32.50	N.A.	N.A.	14.74	11.74	15.53	535.70
500	45.26	33.82	31.82	N.A.	N.A.	13.82	10.82	15.21	535.61
550	47.70	33.19	31.19	N.A.	N.A.	12.99	9.99	14.92	535.54
600	50.05	32.63	30.63	N.A.	N.A.	12.24	9.24	14.66	535.47
650	52.33	32.11	30.11	N.A.	N.A.	11.54	8.54	14.42	535.41

Values above 500MHz are for information only.