



NEX1 Technologies Co., Ltd

SPECIFICATION FOR APPROVAL

DOCUMENT : TUP2304X03

STYLE : 75°C 300V
COMMUNICATION CABLE

SIZE: UTP 23AWG X4P (SOLID)
1000X CAT 6E CMP

RECOGNIZED: UL、CSA、ETL、3P



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STYLE	75°C 300V COMMUNICATION CABLE	DOCUMENT NO : TUP2304X03
SIZE	UTP 23AWG×4P	ESTABLISHED DATE : Aug/14/2006
STANDARD : UL444 & ISO/IEC 11801 & TIA/EIA-568-B.2.1 CAT 6 : 2002/95/EC(RoHS)		
APPLICATION : ULTRA HIGH PERFORMANCE LAN CABLE ARE SUITABLE FOR PERFECT AUDIO DATA AND VIDEO OF TRANSFER FOR HORIZONTAL NETWORK		
CONSTRUCTION :		
CONDUCTOR	SIZE	23AWG × 4P
	CONSTRUCTION	SOLID BARE COPPER
	COND. DIAM.	1/0.580±0.030 mm
INSULATION	AVG. THICK.	0.210 mm
	MIN. THICK.	0.200 mm
	DIAMETER	1.00 ± 0.020 mm
	MATERIAL	FEP
	COLOR CODES	1.BLUE × WHITE/BLUE STRIPE 2.ORANGE × WHITE/ORANGE STRIPE 3.GREEN × WHITE/GREEN STRIPE 4.BROWN × WHITE/BROWN STRIPE
SHIELDED	PAIR STRANDED	2 CORES STRANDED
	FILLER(SPLINE)	FRPE SEPARATOR
	ASSEMBLY STRANDED	4 PAIR STRANDED
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JACKETED	AVG. THICK.	0.38 mm
	MIN. THICK.	0.35 mm
	DIAMETER	6.00 ± 0.20 mm
	MATERIAL	LOW SMOKING PVC
	COLOR	GRAY OR OTHER COLOR



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ELECTRICAL & PHYSICAL PROPERTIES :			
ITEM		23AWG × 4P	
RATING TEMP VOLTAGE		75°C 300V	
CONDUCTOR RESISTANCE		93.8 OHM/Km/20°C MAX.	
MUTUAL CAPACITANCE		56 pF/M MAX.	
DIELECTRIC STRENGTH		AC 1.5 KV/2 SEC.	
SPARK TEST		2.5 KV	
INSULATION	UNAGED	TENSILE STRENGTH	2500 PSI MIN. (1.76 Kg/m m ²)
		ELONGATION	200% MIN.
	AGED	TENSILE STRENGTH	UNAGED MIN. 75%(232°C×168HRS)
		ELONGATION	UNAGED MIN. 75%(232°C×168HRS)
JACKETED	UNAGED	TENSILE STRENGTH	2000 PSI MIN.(1.41 Kg/m m ²)
		ELONGATION	100% MIN.
	AGED	TENSILE STRENGTH	UNAGED MIN. 85%(100°C×240HRS)
		ELONGATION	UNAGED MIN. 50%(100°C×240HRS)
INSULATION SHRINKBACK		150m/m, 121°C±1°C×1HR ≤ 9.5m/m	
COLD BEND TEST		-20°C×4HRS NO.CRACK	
FLAME RETARDANT TEST		CMP	
AC LEAKAGE CURRENT THROUGH OVERALL JACKET		AC 1500V ≤ 10 mA	
DC RESISTANCE UNBALANCE		5% MAX.	
PAIR-TO-GROUND CAPACITANCE UNBALANCE		3300 pF/Km MAX.	
CHARACTERISTIC IMPEDANCE		1 ~ 600 MHz 100±15 OHMS	
STRUCTURAL RETURN LOSS		600 MHz 8.2dB MIN.	
PROPAGATION DELAY		600 MHz 535nS/100m MAX.	
DELAY SKEW		1 ~ 600 MHz 25nS/100m MAX.	

MARKING :

1000X CAT 6E GIGASYSTEM TESTED TO 600MHz---E142890 UTP 4PR
23AWG 75°C CMP (UL) c(UL)---ETL & 3P VERIFIED TO TIA/EIA-568-B.2-1
ISO/IEC 11801 MMYR RoHS COMPLIANT XXXXFT

NEX1

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Electrical performance

ITEM(d B)	ATT	NEXT	ACR	PS. NEXT	PS. ACR	ELFEXT	PS. ELFEXT	R.L.
Frequency (MHz)	MAX. (dB/100m)	MIN. (dB)	MIN. (dB)	MIN. (dB)	MIN. (dB)	MIN. (dB)/100m)	MIN. (dB/100m)	MIN. (d B)
1	2.0	76.3	74.3	74.3	72.3	67.8	64.8	20.0
4	3.8	67.3	63.5	65.3	61.5	55.7	52.7	23.0
8	5.3	62.8	57.5	60.8	55.5	49.7	46.7	24.5
10	6.0	61.3	55.3	59.3	53.3	47.8	44.8	25.0
16	7.6	58.3	50.7	56.3	48.7	43.7	40.7	25.0
20	8.5	56.8	48.3	54.8	46.3	41.7	38.7	25.0
25	9.5	55.3	45.8	53.3	43.8	39.8	36.8	24.3
31.25	10.7	53.9	43.2	51.9	41.2	37.9	34.9	23.6
62.5	15.4	49.4	34.0	47.4	32.0	31.8	28.8	21.5
100	19.8	46.3	26.5	44.3	24.5	27.8	24.8	20.1
155	25.1	43.5	18.4	41.5	16.4	23.9	20.9	18.8
200	29.0	41.8	12.8	39.8	10.8	21.7	18.7	18.0
250	32.8	40.3	7.5	38.3	5.5	19.8	16.8	17.3
300	36.4	39.2	2.8	37.2	0.8	18.2	15.2	16.8
400	43.0	37.3	NA	35.3	NA	15.7	12.7	15.9
550	51.8	35.2	NA	33.2	NA	12.9	9.9	14.9
600	54.5	34.6	NA	32.6	NA	12.2	9.2	14.7

