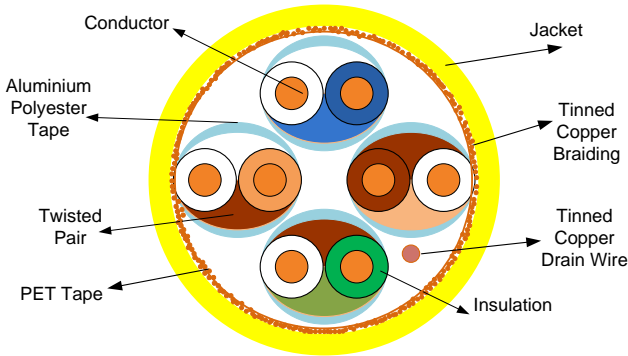


TECHNICAL SPECIFICATION



Applications:

- Horizontal Network and voice in structured Cabling System, including IEEE802.3an:10G Base-T Gigabit Ethernet,
- 2.4/1.2Gb/s ATM
- Digital Video
- Broadband & baseband analogue video

Part Number	Item Number
V641142	Category 6A

Conductor	
Composition (No./M)	1/0.56 ± 0.01 mm
Material	Solid bare Copper
Outside Diameter (mm)	-
AWG (Solid)	23
Center Cross Filler	
Material	-
Wrapping and overall Screen	
Aluminium Polyester Tape	Thickness(mm) 0.023
Jacket/Sheath 1	
Material	LSZH-FR
Overall Diameter (mm)	8.05 ± 0.3
Thickness diameter (mm)	
Color	Violet

Insulation	
Material	Foam PE
Thickness(Min)	0.365
Nominal Diameter (mm)	1.34 ± 0.05
Drain wire	
Material	Tinned Copper
Diameter (mm)	0.495 ± 0.008
Braiding	
Material	Tinned Copper
Construction	16 / 4 / 0.10
Picks/Inches	4
Percentage	32 %
Color Code	
Pair 1	Blue/White –blue
Pair 2	Orange/White-orange
Pair 3	Green/White-green
Pair 4	Brown/White-brown

Technical Data - Electrical			
Conductor resistance ($\Omega/100m$ @ 20°C)	Max.	9.50	
DC resistance unbalance (%)	Max.	4	
Pair to ground capacitance unbalanced (pF/100m)	Max.	1600	
Delay skew (ns/100m)	Max.	45	$4 \leq f \leq 500MHz$
Insertion Loss (dB/100m)	Max.	$1.82\sqrt{f} + 0.0091f + 0.25/\sqrt{f}$	$4 \leq f \leq 500MHz$
Pair to Pair NEXT (dB/100m)	Min.	$75.3 - 15 * \log(f)$	$4 \leq f \leq 500MHz$
Power Sum pr-pr NEXT(dB/100m)	Min.	$72.3 - 15 * \log(f)$	$4 \leq f \leq 500MHz$
		Values greater than 75dB shall be converted to 75dB	
ELFEXT(dB/100m)	Min.	$68 - 20 * \log(f)$	$4 \leq f \leq 500MHz$
		Values greater than 75dB shall be converted to 75dB	
PowerSum ELFEXT (dB/100m)	Min.	$65 - 20 * \log(f)$	$4 \leq f \leq 500MHz$
		Values greater than 75dB shall be converted to 75dB	
Return Loss(dB)	Min.	$20 * 5 * \log(f)$	$1 \leq f \leq 10MHz$
		25	$10 \leq f \leq 20MHz$
		$25 - 7 * \log(f/20)$	$20 \leq f < 250MHz$
		17.3	$250 < f \leq 500MHz$
Propagation Delay (ns/100m)	Max.	$534 + 36 / \sqrt{f}$	$4 \leq f \leq 500MHz$
Input Impedance		$100 \pm 15\%$	$1 \leq f \leq 250MHz$
		$100 \pm 22\%$	$250 \leq f \leq 500MHz$

Electrical Performance								
Frequency	Ins. Loss	Pair to Pair		Power sum		Delay Skew	RL	Po. Delay
(MHz)	(dB/100m)	NEXT	ELFEXT	NEXT	ELFEXT	(ns/100m)	(dB)	(ns/100)
		(dB/100m)		(dB/100m)				
		Max.	Min.	Min.	Min.			
1	-	-	-	-	-	-	20.00	570.00
4	3.80	66.30	56.00	63.30	53.00	45.00	23.00	552.00
10	5.90	60.30	48.00	57.30	45.00	45.00	25.00	545.40
16	7.50	57.20	43.90	54.20	40.90	45.00	25.00	543.00
20	8.40	55.80	42.00	52.80	39.00	45.00	25.00	542.00
31.25	10.50	52.90	38.10	49.90	35.10	45.00	24.30	540.40
62.5	15.00	48.40	32.10	45.40	29.10	45.00	23.60	538.60
100	19.10	45.30	28.00	42.30	25.00	45.00	21.50	537.60
200	27.60	40.80	22.00	37.80	19.00	45.00	18.00	536.50
250	31.10	39.30	20.00	36.30	17.00	45.00	17.30	536.30
300	34.30	38.10	18.50	35.10	15.50	45.00	17.30	536.10
400	40.10	36.30	16.00	33.30	13.00	45.00	17.30	535.80
500	45.30	34.80	14.00	31.80	11.00	45.00	17.30	535.60

Note 1 : All tests include 401 points swept frequency measurements.

Note 2 : All electrical characteristics are given at 20° C

Technical Data - Physical		
Flame retardant test	IEC 60332(Level C)	
Cold bend test	- 20 ± 2°C X 4hrs, no crack	
Dielectric strength	AC 1.7 KV for 2 S	
Insulation	Before Aging	After Aging
Min. tension strength (psi)	1300	75% before aging (100°CX48hr)
Min. elongation(%)	300	75% before aging (100°CX48hr)
Jacket	Before Aging	After Aging
Min. tension strength (psi)	1300	85% before aging (100°CX168hrs)
Min. elongation(%)	100	50% before aging (100°CX168hrs)
Min. bending radius (mm)	65	
Max. pulling tension (N)	25	
Installation temperature	-10°C to +60°C	
Operating temperature	-10°C to +60°C	

Packing
500/ 1000 meter on a wooden drum with standard Velocity export protector PE