

# Cat6 Riser Unshielded

23AWG • 4 Twisted Pairs • CMR  
U/UTP • 550MHz • Solid Copper

## Lengths Available

- 500ft
- 1000ft



## Key Features

- Bandwidth tested up to 550 MHz
- Suitable for 1 Gigabit and 5 Gigabit Ethernet up to 328 ft
- In compliance with ANSI/TIA 568.2-D
- RoHS-3 Compliant
- Easily identified color striped pairs
- Supports Power over Ethernet: PoE/PoE+/PoE++ (IEEE 802.3af/at/bt) 4PPoE up to 90W
- Sequential footage markings every 2ft

## Technical Data

Insulation	PE
Average Thickness (mm)	0.21
Min Point Thickness (mm)	0.193
<b>Conductor Insulation Dia. (±0.02mm)</b>	<b>0.96</b>
Twisted Pair Dia. (±0.02mm)	1.92
Ripcord	Nylon
Spline	Present
Polyethylene Tape	Not Present
Shielding	U/UTP

Conductor	Solid Bare Copper
Size	23AWG
Conductor Dia. (±0.05mm)	0.54

### Color of Pairs

Pair 1	Blue- White/Blue
Pair 2	Orange- White/Orange
Pair 3	Green- White/Green
Pair 4	Brown- White/Brown

### Cable Jacket

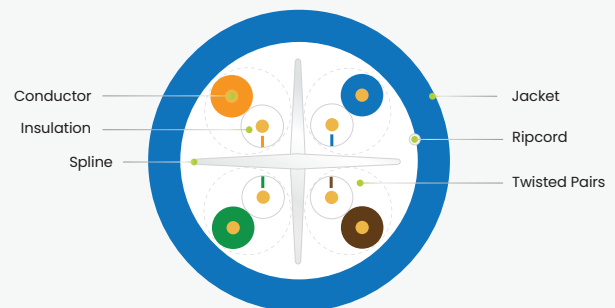
	PVC
Average Thickness (mm)	0.60
Min. Point Thickness (mm)	0.55
<b>Outer Diameter (±0.2mm)</b>	<b>5.90</b>

### Standards Reference

UL-444 /  
cETLus

ANSI/TIA  
568-2.D

ISO/IEC  
11801



## Print Legend

Cat6 CMR U/UTP 75°C 4PR 23AWG

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## Electrical Characteristics

PoE Certification	PoE/PoE+/PoE++ 4PPoE
Maximum PoE Wattage	90W
PoE Application Compatibility	802.3af/at/bt Type 4
TIA 568-2.D Cat6 Permanent Link +PoE	CERTIFIED
Maximum Application Speed @ 295ft	5GBASE-T
Nominal Velocity of Propagation (NVP)	68.2
Maximum Operating Voltage	300V
1.0 - 550MHz Impedance ( $\Omega$ )	100 $\pm$ 15
Maximum Operating Frequency	550MHz
1.0 - 550MHz Delay Skew (ns/100m)	$\leq$ 45
Pair-to-Ground Capacitance Unbalance (pF/km)	$\leq$ 3300
Max. Conductor DC Resistance 20°C ( $\Omega$ /km)	72.2



## Mechanical & Environmental Operating Parameters

Test Object	Jacket	Aging Condition ( $^{\circ}\text{C} \times \text{hrs}$ )	100 x 168
Test Material	PVC	After Tensile Strength (Mpa)	$\geq$ 85% of unaged
Before- Tensile Strength (Mpa)	$\geq$ 13.8	Aging Condition - Elongation (%)	$\geq$ 50% of unaged
Aging- Elongation (%)	$\geq$ 100	Cold Bend ( $-20 \pm 2^{\circ}\text{C} \times 4\text{hrs}$ )	No Crack
Min. Bend Radius	2.5cm/1.0in	Operating & Storage Temp.	$-40^{\circ}\text{C}$ to $75^{\circ}\text{C}$   $-40^{\circ}\text{F}$ to $167^{\circ}\text{F}$
Max. Installation Tension	110N/25lb-ft	Installation Temp.	$-20^{\circ}\text{C}$ to $75^{\circ}\text{C}$   $-4^{\circ}\text{F}$ to $167^{\circ}\text{F}$

## Tested Compatible Accessories

### Product

Cat6 Punch Down Keystone Jack   Unshielded
Cat6 Toolless Keystone Jack   Unshielded
Cat6/6A Pass Through RJ45 Connectors   Unshielded
Cat6/6A Standard RJ45 Connectors   Unshielded
Large Cut-to-Fit RJ45 Strain Relief Boot   5.5 - 7mm
Cat6A Field Term Plug   Unshielded

### Part Number

6EPD90CMPT
6ETL90CMPT
MDPTRJ45
LGRJ45
LGCTF
6AFT





**Cable ID: 6ECMR MPTL UTP PD KSJ TO PASS-THROUGH RJ45**

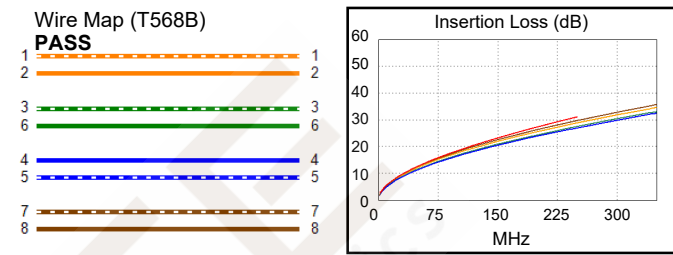
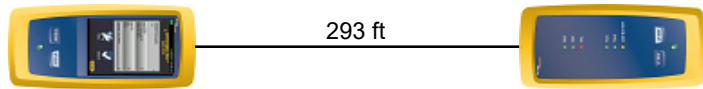
**Test Summary: PASS**

Test Limit: TIA Cat 6 MPTL (+PoE)  
Limits Version: V7.5  
Date / Time: 03/03/2020 01:49:57 PM  
Operator: DON S  
**Headroom 7.2 dB (NEXT 3,6-7,8)**  
Cable Type: \*trueCABLE Cat6 U/UTP\*  
NVP: 68.2%

Main: Versiv  
S/N: 1917273  
Software Version: V6.5 Build 5  
Calibration Date: 11/08/2019  
Adapter: DSX-8000 (DSX-PLA804)  
S/N: 4523168

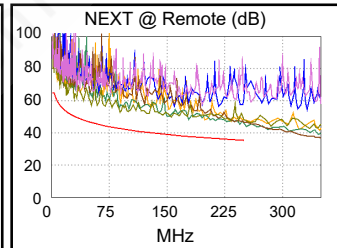
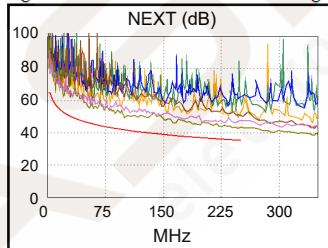
Remote: Versiv  
S/N: 1924100  
Software Version: V6.5 Build 5  
Calibration Date: 11/08/2019  
Adapter: DSX-8000R (DSX-PC6)  
S/N: 4716104

Length (ft), Limit 295	[Pair 4,5]	293
Prop. Delay (ns), Limit 498	[Pair 7,8]	461
Delay Skew (ns), Limit 44	[Pair 7,8]	24
Resistance (ohms)	[Pair 7,8]	14.21
Resist. Unbal. (ohms)	[Pair 4,5]	0.036
Resist. P2P Unbal. (ohms)	[Pair 4,5-7,8]	0.144
Insertion Loss Margin (dB)	[Pair 7,8]	1.4
Frequency (MHz)	[Pair 7,8]	250.0
Limit (dB)	[Pair 7,8]	31.1

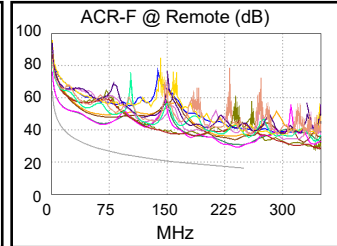
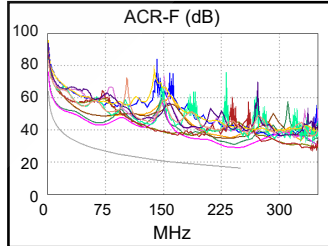


Worst Case Margin Worst Case Value

PASS	MAIN	SR	MAIN	SR
Worst Pair	3,6-7,8	1,2-4,5	3,6-7,8	1,2-4,5
<b>NEXT (dB)</b>	7.2	10.0	7.3	10.0
Freq. (MHz)	224.5	244.5	246.0	244.5
Limit (dB)	36.1	35.5	35.5	35.5



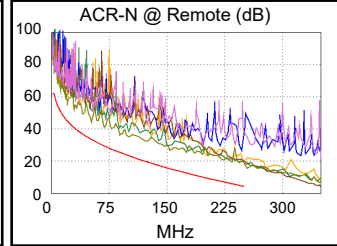
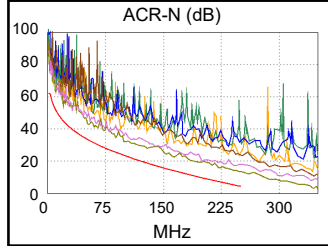
Worst Pair	7,8	3,6	7,8	3,6
<b>PS NEXT (dB)</b>	8.3	9.7	8.6	9.9
Freq. (MHz)	221.5	234.0	246.5	250.0
Limit (dB)	33.6	33.2	32.8	32.7



PASS	MAIN	SR	MAIN	SR
Worst Pair	4,5-1,2	1,2-4,5	4,5-1,2	4,5-1,2
<b>ACR-F (dB)</b>	11.6	11.8	12.5	12.7
Freq. (MHz)	4.4	4.4	246.5	242.0
Limit (dB)	51.4	51.4	16.4	16.5

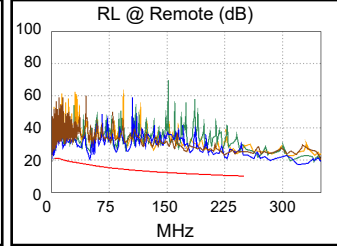
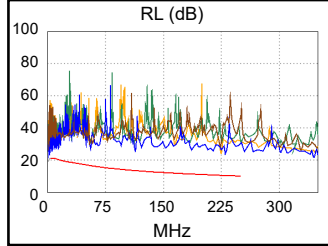
Worst Pair	1,2	4,5	1,2	1,2
<b>PS ACR-F (dB)</b>	14.1	14.0	14.5	14.4
Freq. (MHz)	3.0	3.9	246.5	241.5
Limit (dB)	51.6	49.4	13.4	13.5

N/A	MAIN	SR	MAIN	SR
Worst Pair	3,6-7,8	3,6-7,8	3,6-7,8	3,6-7,8
<b>ACR-N (dB)</b>	8.0	10.5	8.7	13.6
Freq. (MHz)	100.0	89.3	246.0	243.5
Limit (dB)	23.3	25.2	4.6	4.9



Worst Pair	7,8	7,8	7,8	3,6
<b>PS ACR-N (dB)</b>	9.2	12.3	9.9	13.5
Freq. (MHz)	99.8	10.5	246.5	250.0
Limit (dB)	20.8	49.5	2.0	1.6

PASS	MAIN	SR	MAIN	SR
Worst Pair	4,5	4,5	4,5	4,5
<b>RL (dB)</b>	6.5	3.5	13.5	3.5
Freq. (MHz)	3.9	50.0	230.5	50.0
Limit (dB)	21.0	17.0	10.4	17.0



Compliant Network Standards:  
 10BASE-T      100BASE-TX      100BASE-T4  
 1000BASE-T    2.5GBASE-T      5GBASE-T  
 ATM-25        ATM-51            ATM-155  
 100VG-AnyLan    TR-4              TR-16 Active  
 TR-16 Passive