

Cat6 Gel Filled Direct Burial Unshielded

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

Lengths Available

- 500ft
- 1000ft

Jacket Colors



Key Features

- Gel Filled Flooded Core
- Suitable for 1 Gigabit and 5 Gigabit Ethernet up to 328 ft
- In compliance with ANSI/TIA 568.2-D
- CMX jacket can withstand sunlight, dirt, snow, and moisture
- Supports Power over Ethernet: PoE/PoE+/PoE++ (IEEE 802.3af/at/bt) 4PPoE up to 90W
- cETLus Certified, RoHS-3 Compliant

Technical Data

Insulation	PE
Average Thickness (mm)	0.22
Min Point Thickness (mm)	0.2
Conductor Insulation Dia. (±0.02mm)	1.01
Twisted Pair Dia. (±0.02mm)	2.02
Ripcord	Nylon
Spline	PE
Polyethylene Tape	Not Present
Shielding	U/UTP
Water Resistance	Jacket & Gel Filling**

Conductor	Solid Bare Copper
Size	23AWG
Conductor Dia. (±0.05mm)	0.57

Standards Reference

UL-444 /
cETLus

ANSI/TIA
568-2.D

ISO/IEC
11801

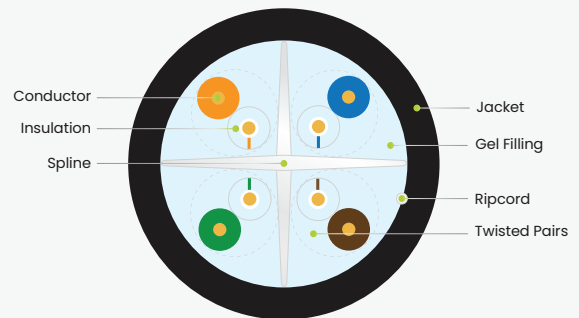
Color of Pairs

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

Cable Jacket

Cable Jacket	LLDPE
Average Thickness (mm)	0.60
Min. Point Thickness (mm)	0.55

Outer Diameter (±0.2mm) 6.20



** Gel Filling is non-toxic and non-flammable. SDS sheet available upon request.

Print Legend

CAT6 CMX U/UTP DIRECT BURIAL GEL UV 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)	62.8
Maximum Operating Voltage	300V
1.0 - 550MHz Impedance (Ω)	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 (Ω /km)	72.2



Mechanical & Environmental Operating Parameters

Test Object	Jacket	Aging Condition ($^{\circ}$ C x hrs)	100 x 168
Test Material	LLDPE	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 ($-20 \pm 2^{\circ}$ C x 4hrs)	No Crack
Min. Bend Radius	3.0cm/1.25in	Operating & Storage Temp.	-40° C to 75° C -40° F to 167° F
Max. Installation Tension	110N/25lb-ft	Installation Temp.	-20° C to 75° C -4° F to 167° F

Tested Compatible Accessories

Product

Part Number

Cat6 Punch Down Keystone Jack Unshielded	6EPD90CMPT
Cat6 Toolless Keystone Jack Unshielded	6ETL90CMPT
Cat6/6A Pass Through RJ45 Connectors Unshielded	MDPTRJ45
Cat6/6A Standard RJ45 Connectors Unshielded	LGRJ45
Large Cut-to-Fit RJ45 Strain Relief Boot 5.5 - 7mm	LGCTF
Cat6A Field Term Plug Unshielded	6AFT



Cable ID: 6ECMXGEL UTP TLESS KSJ > UTP PT RJ45

Test Limit: TIA Cat 6 MPTL (+PoE)

Limits Version: V7.5

Date / Time: 04/06/2021 01:12:27 PM

Operator: DON S

Headroom 3.5 dB (NEXT 1,2-3,6)

Cable Type: Cat 6 U/UTP

NVP: 62.8%

Main: Versiv

S/N: 1924100

Software Version: V6.5 Build 5

Calibration Date: 11/14/2020

Adapter: DSX-8000 (DSX-PLA804)

S/N: 4523169

Remote: Versiv

S/N: 1917273

Software Version: V6.5 Build 5

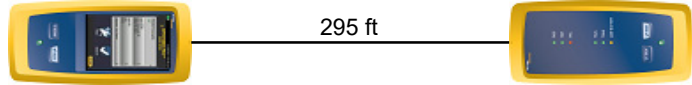
Calibration Date: 11/14/2020

Adapter: DSX-8000R (DSX-PC6)

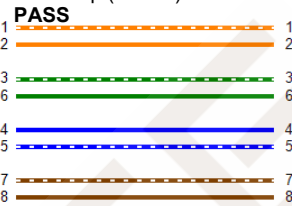
S/N: 4716104

Test Summary: PASS

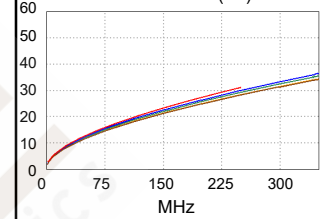
Length (ft), Limit 295	[Pair 7,8]	295
Prop. Delay (ns), Limit 498	[Pair 4,5]	493
Delay Skew (ns), Limit 44	[Pair 4,5]	16
Resistance (ohms)	[Pair 4,5]	13.05
Resist. Unbal. (ohms)	[Pair 4,5]	0.067
Resist. P2P Unbal. (ohms)	[Pair 1,2-4,5]	0.106
Insertion Loss Margin (dB)	[Pair 4,5]	1.2
Frequency (MHz)	[Pair 4,5]	250.0
Limit (dB)	[Pair 4,5]	31.1



Wire Map (T568B)

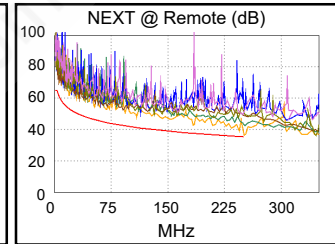
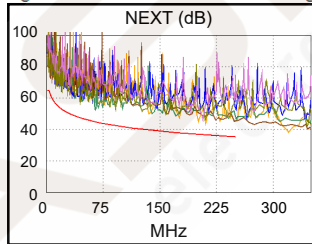


Insertion Loss (dB)

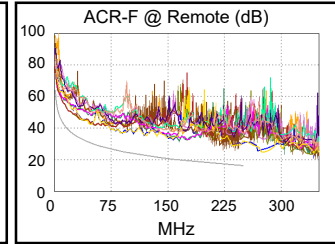
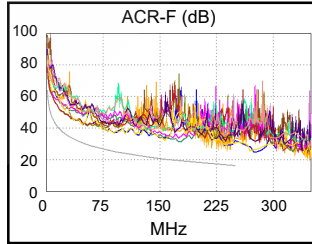


Worst Case Margin Worst Case Value

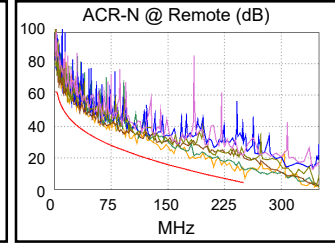
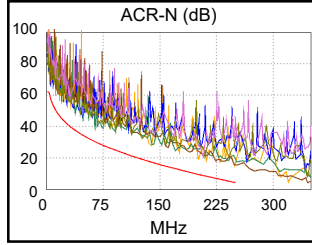
PASS	MAIN	SR	MAIN	SR
Worst Pair	1,2-3,6	1,2-3,6	1,2-3,6	1,2-3,6
NEXT (dB)	6.4	3.5	6.4	3.5
Freq. (MHz)	250.0	244.5	250.0	244.5
Limit (dB)	35.3	35.5	35.3	35.5
Worst Pair	3,6	3,6	3,6	1,2
PS NEXT (dB)	7.0	5.3	7.0	5.4
Freq. (MHz)	250.0	211.0	250.0	244.5
Limit (dB)	32.7	33.9	32.7	32.9



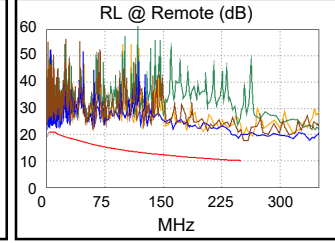
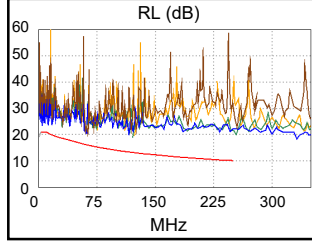
PASS	MAIN	SR	MAIN	SR
Worst Pair	1,2-3,6	3,6-1,2	1,2-3,6	1,2-7,8
ACR-F (dB)	10.1	10.9	10.1	11.3
Freq. (MHz)	221.0	221.0	221.0	236.5
Limit (dB)	17.3	17.3	17.3	16.7
Worst Pair	4,5	1,2	1,2	1,2
PS ACR-F (dB)	12.6	12.0	12.9	12.0
Freq. (MHz)	3.5	239.0	236.5	239.0
Limit (dB)	50.3	13.6	13.7	13.6



N/A	MAIN	SR	MAIN	SR
Worst Pair	1,2-4,5	1,2-3,6	1,2-3,6	1,2-3,6
ACR-N (dB)	7.7	5.3	8.2	5.3
Freq. (MHz)	65.0	244.5	250.0	244.5
Limit (dB)	30.2	4.8	4.2	4.8
Worst Pair	3,6	3,6	3,6	3,6
PS ACR-N (dB)	8.8	6.9	8.8	7.2
Freq. (MHz)	250.0	211.0	250.0	244.5
Limit (dB)	1.6	5.7	1.6	2.2



PASS	MAIN	SR	MAIN	SR
Worst Pair	4,5	4,5	4,5	4,5
RL (dB)	3.7	3.0	3.7	8.2
Freq. (MHz)	61.5	4.5	61.5	245.0
Limit (dB)	16.1	21.0	16.1	10.1



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