

CAT5E VOICE GRADE CABLE

RISER RATED (CMR) / 50 PAIR

24 AWG 100 CONDUCTOR (UTP)

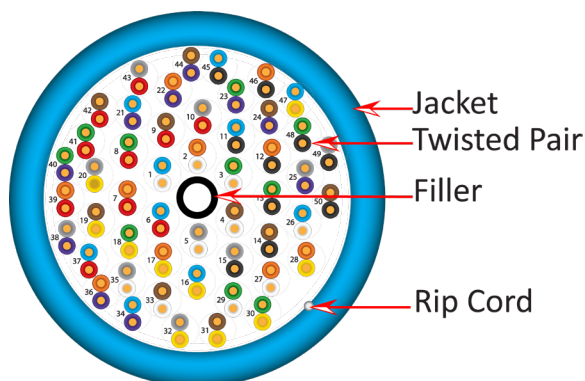


DESCRIPTION

CAT5E Multi-Pair, 350 MHz, CMR Rated, Unshielded (UTP) 50 Twisted Pairs, 24 AWG Solid Bare Copper Conductors.

FEATURES

- Supports 10/100/1000BASE-T applications
- Suitable for high speed voice/data applications
- 350 MHz bandwidth supporting wide range of applications
- 24 AWG Solid Copper Conductors
- Easily identifiable pair insulation colors
- Meets or exceeds ANSI/TIA-568.2-D and ISO/IEC 11801 specifications
- CAN/CSA-C22.2 No. 214, RoHS compliant
- Riser Rated (CMR)
- ETL listed



054-SERIES (50 PAIR)

Part Number:	Description:
054-455/BL	CAT5E Multi-Pair 50 Pair, 24 AWG, 1000 ft, Blue
054-456/WH	CAT5E Multi-Pair 50 Pair, 24 AWG, 1000 ft, White

TRANSMISSION PERFORMANCE

Meets or exceeds ANSI/TIA-568.2-D and ISO/IEC 11801 specifications

CONSTRUCTION

Pairs:	50
Conductors:	100
Filler:	Polyvinyl Chloride (PVC)
Rip Cord:	Nylon
Screen:	Unscreened (UTP)
Assembly Diameter:	0.54 in. (13.8 mm)

CONDUCTORS

Material:	Solid Bare Annealed Copper
Size:	24 AWG
Diameter:	0.02 in. (0.5 ±0.005 mm)

INSULATION

Material:	Polyethylene (PE)
Diameter:	0.036 in. (0.91 mm)
Average Thickness:	0.008 in. (0.205 mm)
Min. Point Thickness:	0.007 in. (0.185 mm)

TWISTED PAIR

Diameter:	0.072 in. (1.82 ±0.01 mm)
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JACKET

Material:	Polyvinyl Chloride (PVC)
Outer Diameter:	0.6 in. (15.8 ±0.30 mm)
Average Thickness:	0.04 in. (1.00 mm)
Min. Point Thickness:	0.035 in. (0.9 mm)
Marking:	VERTICAL 4001453 cETLus VERIFIED CMR UTP 50PR 24 AWG CAT5E 350 MHz ANSI/TIA-568.2-D RoHS XXXXFT

WEIGHT

054-455/BL	220 lb (99.8 kg)
054-456/WH	220 lb (99.8 kg)

VERTICAL CABLE
951.696.7772 California
800.749.2447 Florida
845.391.8318 New York
713.322.7242 Texas



verticalcable.com

Rev. 09/2025

Subject to change without notice.

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24 AWG 100 CONDUCTOR (UTP)

CABLE CORE

Total Mylar Spiral:

≥125%

Color Coding (4 x 25 Twisted Pairs):

Pair 1: Blue/White	Pair 11: Black/Blue	Pair 21: Violet/Blue	Pair 31: Blue-Red/Gray	Pair 41: Blue-Yellow/Blue
Pair 2: White/Orange	Pair 12: Black/Orange	Pair 22: Violet/Orange	Pair 31: Blue-Red/Gray	Pair 42: Orange-Yellow/Blue
Pair 3: White/Green	Pair 13: Black/Green	Pair 23: Violet/Green	Pair 33: Green-Red/Gray	Pair 43: Green-Yellow/Blue
Pair 4: White/Brown	Pair 14: Black/Brown	Pair 24: Violet/Brown	Pair 34: Brown-Red/Gray	Pair 44: Brown-Yellow/Blue
Pair 5: White/Gray	Pair 15: Black/Gray	Pair 25: Violet/Gray	Pair 34: Brown-Red/Gray	Pair 45: Gray-Yellow/Blue
Pair 6: Red/Blue	Pair 16: Yellow/Blue	Pair 26: Blue-White/Brown	Pair 36: Blue-Black/Orange	Pair 46: Blue-Violet/Green
Pair 7: Red/Orange	Pair 17: Yellow/Orange	Pair 27: Orange-White/Brown	Pair 37: Orange-Black/Orange	Pair 47: Orange-Violet/Green
Pair 8: Red/Green	Pair 18: Yellow/Green	Pair 28: Green-White/Brown	Pair 38: Green-Black/Orange	Pair 48: Green-Violet/Green
Pair 9: Red/Brown	Pair 19: Yellow/Brown	Pair 28: Green-White/Brown	Pair 38: Green-Black/Orange	Pair 49: Brown-Violet/Green
Pair 10: Red/Gray	Pair 20: Yellow/Gray	Pair 30: Gray-White/Brown	Pair 40: Gray-Black/Orange	Pair 50: Gray-Violet/Green

ELECTRICAL

Voltage Rating:

30 V RMS

Impedance (1-100 MHz):

100 ±15 Ω

Delay Skew (1-100 MHz):

≤45 ns/100m

Pair-to-Ground Capacitance Unbalance:

≤330 pF/100m

Max Conductor DC Resistance @ 20°C:

93.8 Ω/km

DC Resistance Unbalance:

≤5%

Frequency (MHz)	Return loss (Min dB)	Attenuation Max (dB/100m)	NEXT Min (dB/100m)
1	20.0	2.0	68.3
4	23.0	4.1	59.3
8	24.5	5.8	54.8
10	25.0	6.5	53.3
16	25.0	8.2	50.3
20	25.0	9.3	48.8
25	24.3	10.4	47.3
31.25	23.6	11.7	45.9
62.5	21.5	17.0	41.4
100	20.1	22.0	38.3
200	18.0	32.4	33.8
350	16.3	44.9	30.1

Frequency (MHz)	PSNEXT Min (dB)	ELFEXT Min (dB/100m)	PSELFEXT (Min dB)
1	66.3	63.8	60.8
4	57.3	51.7	48.7
8	52.8	45.7	42.7
10	51.3	43.8	40.8
16	48.3	39.7	36.7
20	46.8	37.8	34.8
25	45.3	35.8	32.8
31.25	43.9	33.9	30.9
62.5	39.4	27.8	24.8
100	36.3	24.0	21.0
200	31.8	17.7	14.7
350	28.1	12.9	9.9

* Values above 100MHz are information only

MECHANICAL

Test Object:

Jacket

Test Material

PVC

Tensile Strength (Before Aging) (Mpa):

≥13.8

Elongation (Before Aging) (%):

≥100

Aging Condition (°C × hrs)

100×168

Tensile Strength (After Aging) (Mpa):

≥85% of unaged

Elongation (After Aging) (%):

≥50% of unaged

Cold Bend (-20±2°C × 4hrs):

No Crack

ENVIRONMENTAL

Operating Temperature Rating:

-40 °F to +167 °F (-40 °C to +75 °C)

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