

CAT5E VOICE GRADE CABLE

RISER RATED (CMR) / 25 PAIR

24 AWG 50 CONDUCTOR (UTP)

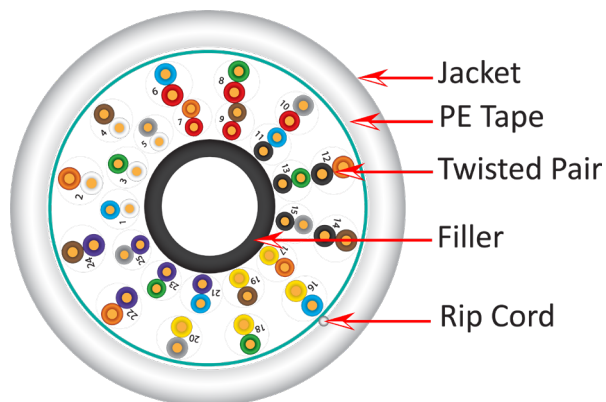


DESCRIPTION

CAT5E Multi-Pair, 350 MHz, CMR Rated, Unshielded (UTP) 25 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



052-SERIES (25 PAIR)

Part Number:	Description:
054-452/WH	CAT5E Multi-Pair 25-Pair, 24 AWG, 1000 ft, White
054-453/GY	CAT5E Multi-Pair 25-Pair, 24 AWG, 1000 ft, Gray
054-454/BL	CAT5E Multi-Pair 25-Pair, 24 AWG, 1000 ft, Blue

TRANSMISSION PERFORMANCE

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

CONSTRUCTION

Pairs:	25
Conductors:	50
Filler:	Polyvinyl Chloride (PVC)
Rip Cord:	Nylon
Screen:	Unscreened (UTP)
Assembly Diameter:	0.41 in. (10.4 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 ±0.01 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:	0.50 in. (12.50 ±0.3 mm)
Average Thickness:	0.04 in. (1.00 mm)
Min. Point Thickness:	0.035 in. (0.9 mm)
Rip Cord:	Nylon
Marking:	VERTICAL 4001453 cETLus VERIFIED CMR UTP 25PR 24 AWG CAT5E 350 MHz ANSI/TIA-568.2-D RoHS V1379PXXXX XXXXFT

WEIGHT

054-452/WH	133 lb (60 kg)
054-453/GY	146 lb (66 kg)
054-454/BL	133 lb (60 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 50 CONDUCTOR (UTP)

CABLE CORE

Total Mylar Spiral:

≥125%

Color Coding (1 x 25 Twisted Pairs):

Pair 1: Blue/White	Pair 6: Red/Blue	Pair 11: Black/Blue	Pair 16: Yellow/Blue	Pair 21: Violet/Blue
Pair 2: White/Orange	Pair 7: Red/Orange	Pair 12: Black/Orange	Pair 17: Yellow/Orange	Pair 22: Violet/Orange
Pair 3: White/Green	Pair 8: Red/Green	Pair 13: Black/Green	Pair 18: Yellow/Green	Pair 23: Violet/Green
Pair 4: White/Brown	Pair 9: Red/Brown	Pair 14: Black/Brown	Pair 19: Yellow/Brown	Pair 24: Violet/Brown
Pair 5: White/Gray	Pair 10: Red/Gray	Pair 15: Black/Gray	Pair 20: Yellow/Gray	Pair 25: Violet/Gray

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	NEXT (Min dB)
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
155	18.8	28.1	35.5
200	18.0	32.4	33.8
240	17.4	36.0	32.6
300	16.8	41.0	31.2
350	16.3	44.9	30.1

Frequency (MHz)	PSNEXT Min (dB)	ELFEXT Min (dB/100m)	PSELFEXT in (dB/100m)
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
155	33.5	20.0	17.0
200	31.8	17.7	14.7
240	30.6	16.2	13.2
300	29.2	14.2	11.2
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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