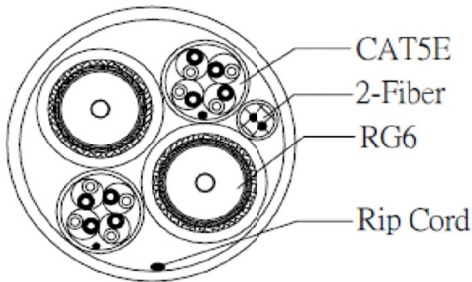


(2) CAT5E 350MHz UTP + (2) RG-6 Quad + (2) Fiber Composite Cable

Cable Detail



Approval



Applicable Standards

- Combination: Multi-media Cables for Smart Home
SCTE IPS-SP-001, TIA-568-C.2

Description

- Two 4 Pair Cat5E UTP Cable:
Complies to TIA 568-C.2
24 AWG Solid Bare Copper Conductor / PE Insulation
- Two RG6 Quad Shield Coaxial Cable:
Complies to SCTE ISP-IP-001
18 AWG Copper Clad Steel (CCS)
Al foil / 60% Al-Mg alloy Braid Shield +
Al foil / 40% Al-Mg alloy Braid Shield
- One 2-Fiber Interconnect Cable
FDDI-Grade Fiber 62.5/125 UM

Physical Characteristics

CAT5E UTP LAN CABLE	For details, please see Attachment 1
RG6 Quad Shield Coaxial Cable	For details, please see Attachment 2
Fiber Interconnect Cables	For details, please see Attachment 3
Nominal Weight	110 lbs.

Electrical Characteristics

CAT5E UTP LAN CABLE	For details, please see Attachment 1
RG6 Quad Shield Coaxial Cable	For details, please see Attachment 2
Fiber Interconnect Cables	For details, please see Attachment 3

Mechanical Characteristics

Test Object		Jacket
Test Material		PVC
Before	Tensile Strength (Mpa)	≥ 1.034
Aging	Elongation (%)	≥ 200
Aging Condition ($^{\circ}\text{C} \times \text{hrs}$)		$113.0 \pm 1.0 \times 168$
After	Tensile Strength (Mpa)	$\geq 85\%$ of unaged
Aging	elongation (%)	$\geq 50\%$ of unaged
Cold Bend ($-20 \pm 2^{\circ}\text{C} \times 4\text{hrs}$)		No crack
Average Thickness		0.0334 (inch)
Min. Point Thickness		0.0299 (inch)
Outer Diameter		0.6889 (inch)
Rip Cord		Yes

Cable Marking

2 X CAT5E 350 MHZ + 2 X RG6 QUAD 18AWG + 62.5 UM
MULTIMODE FIBER VERIFIED TO FT4 CMR C(ETL)US 4003289
CATV SWEPT TO 3.0GHZ ****FT

Part Numbers	Jacket Color	Package
H25E26Q2FYL2-500	Yellow (CAT5E : Blue & Grey / RG6 QUAD : White & Black / Fiber : Orange)	500ft / Reel

(2) CAT5E 350MHz UTP + (2) RG-6 Quad + (2) Fiber Attachment 1

Cable Detail		
Description		
24 AWG Cat5E CMR, High-Performance Data Cable		
Applicable Standards		
<ul style="list-style-type: none"> • ETL Listed Type CMR • C(ETL) listed CMG FT4 • ETL Verified to TIA - 568-C.2, and ISO/IEC 11801 • RoHS Compliant • ATM 155 Mbps • Ethernet 10BASE-T, 100BASE-TX, 100BASE-VG, 100BASE-T4 • 1000 Mbps 1000BASE-T Gigabit Ethernet™ (IEEE 802.3) • 16 Mbps Token Ring™ (IEEE 802.5) 		
Physical Characteristics		
Conductor Material	Solid Annealed Bare Copper	
Number of Conductor Pairs	4	
Size	24 AWG	
Stranding	Solid	
Insulation Material	Polyethylene	
Overall Diameter	0.035 in. ± 0.0002 in	
Average Thickness	0.0081 in	
Jacket Material	Flame Retardant PVC	
Average Wall Thickness	0.023 in.	
Nominal Outer Diameter	0.200 in. ± 0.008 in.	
Nominal Weight	20 lbs.	
Shield Material	Unshielded	
Ripcord	Yes	
Mechanical Characteristics		
Temperature Rating	Installation	0°C to + 60°C
	Operating	-20°C to + 75°C
Tensile Strength	Before	≥ 13.8 Mpa
	Aging	≥ 100%
Aging Condition		100°C x 240 hours
	After	≥ 85% of unaged
	Aging	≥ 50% of unaged
Insulation Colors		
Pair 1	White / Blue	Blue
Pair 2	White / Orange	Orange
Pair 3	White / Green	Green
Pair 4	White / Brown	Brown
Part Numbers	Jacket Color	Package
5E04URXX4	Black, Blue, Green, Grey, Orange, Pink, Purple, Red, White, Yellow	1000FT / Reel

Electrical Characteristics

Max. Conductor DC Resistance @ 20°C	9.65 Ω / 100 Meters
Maximum DC Resistance Unbalanced @ 20°C	5%
Max. Pair-to-Pair Ground Capacitance Unbalance	330 pF / 100 Meters
Characteristic Impedance (1 ~ 350 MHz)	100 ± 15 Ω
Mutual Capacitance	5.6 nF / 100 Meters
Max. Delay Skew	40 nS / 100 Meters

Electrical Performance

Frequency (MHz)	Attenuation (dB/100m)		Return loss (dB)		NEXT (dB)		PS-NEXT (dB)	
	Max.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.
0.772	1.8	1.5	23.0	33.0	72.0	81.1	70.0	78.7
1	2.0	1.8	23.0	38.6	70.3	79.4	68.3	76.9
4	4.1	3.6	23.0	39.8	61.2	69.9	59.3	67.4
8	5.8	5.1	24.5	38.2	56.8	61.9	54.8	59.4
10	6.5	5.8	25.0	38.0	55.3	62.4	53.5	59.9
16	8.2	7.4	25.0	37.4	52.3	57.8	50.3	55.2
20	9.3	8.2	25.0	36.8	50.8	56.4	48.8	53.8
25	10.4	9.3	24.3	35.2	49.3	56.3	47.3	53.6
31.25	11.7	10.5	23.6	33.3	47.9	53.8	45.9	51.1
62.5	17.0	14.9	21.5	32.2	43.4	49.8	41.4	47.4
100	22.0	19.2	20.1	31.3	40.3	47.5	38.3	45.0
155	28.1	24.2	18.8	29.8	37.4	45.1	35.4	42.6
200	32.4	27.3	18.0	28.5	35.7	43.3	33.7	40.2
250	38.9	30.9	17.5	27.3	34.8	41.4	32.5	39.0
300	41.0	34.1	16.8	25.6	33.1	40.2	31.1	37.7
350	44.9	37.8	16.3	23.2	32.1	39.0	30.1	36.5
Frequency (MHz)	ELFEXT (dB/100m)		PS-ELFEXT (dB)		ACR Typ (dB)		PS-ACR Typ (dB)	
	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.
0.772	66.0	73.3	63.0	72.7	70.2	79.2	68.2	77.0
1	63.8	71.3	60.8	70.6	68.2	77.6	66.3	75.0
4	51.7	59.4	48.7	58.7	57.2	66.3	55.2	63.5
8	45.7	53.2	42.7	51.1	51.0	59.8	49.0	56.9
10	43.8	50.5	40.8	49.7	48.8	56.6	47.0	53.7
16	39.7	47.0	36.7	45.1	43.0	53.0	42.1	47.4
20	37.7	45.0	34.7	43.6	41.5	50.5	39.5	45.0
25	35.8	43.3	32.8	42.0	38.9	47.0	36.9	43.7
31.25	33.9	41.3	30.9	40.5	36.5	43.3	34.2	40.0
62.5	27.8	35.8	24.8	34.5	26.4	35.0	24.4	31.2
100	23.8	31.3	20.8	30.3	18.3	26.2	16.3	24.2
155	19.9	27.5	16.9	26.9	10.0	20.9	7.3	15.9
200	17.7	24.7	14.7	24.5	5.0	16.0	2.0	10.0
250	17.1	22.2	14.0	22.5	0.0	10.6	-	4.0
300	16.7	20.5	13.5	20.7	-	6.1	-	-1.3
350	16.0	19.4	12.8	19.6	-	1.2	-	-6.4

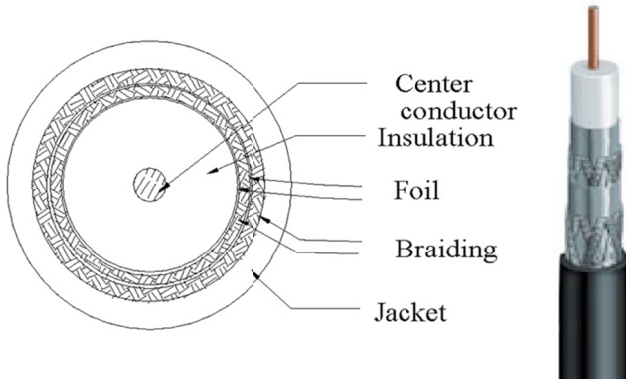
* Values above 100MHz are information only.

Cable Marking

CATEGORY 5E 350MHZ 24AWG 4 PR UTP XXXXXX CMR FT4 C(ETL)US
ETL LISTED & VERIFIED TO TIA-568-C.2 ****FT

(2) CAT5E 350MHz UTP + (2) RG-6 Quad + (2) Fiber Attachment 2

Cable Detail



Approval



Applicable Standards

- RG-6/U QUAD CMR CATV 75 Ω Coaxial Cable
- Reference Standard
SCTE IPS-SP-001 / UL 1655, UL 13, UL 444, RoHS

Physical Characteristics

Conductor	Solid	Copper Clad Steel
AWG		18
Diameter	(inches)	0.040
Insulation Material		Foam PE
Nominal Thickness	(inches)	0.073
Insulation Diameter	(inches)	0.186
First Braid Shield		Aluminum
Coverage Area	(%)	60
Second Braid Shield		Aluminum
Coverage Area	(%)	40
Jacket Material		FR-PVC
Nominal Thickness	(inches)	0.0255
Cable Diameter	(inches)	0.2968
Nominal Weight	500 ft.	18 lbs.
	1000 ft.	35 lbs.

Electrical Characteristics

Temperature Rating	-20 to 60 (°C)
Impedance	75 (± 3.0 Ohms)
Capacitance	15.5 (pF/ft.)
Conductor DCR@20°C	28.6 (ohms/1000ft)
Velocity of Propagation	84 (%)
RoHS Compliant	Yes

Electrical Performance

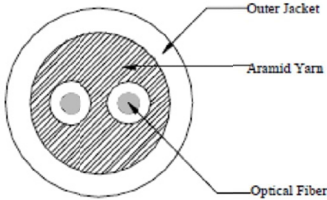

Frequency (MHz)	Attenuation (dB/100m)	Frequency (MHz)	Attenuation (dB/100m)
10	2.90	1000	22.00
50	5.25	1200	24.60
100	7.20	1450	27.20
200	9.84	1800	30.50
400	14.10	2200	32.80
700	19.00	2400	32.83
900	21.00	3000	37.88

Cable Marking

RG6/U QUAD SHIELD 18AWG CMR FT4 XXXXXX VERIFIED TO C(ETL)US CATV SWEPT TO 3.0 GHZ ****FT

Part Numbers	Jacket Color	Package
RG6QRBK4-500	Black	500ft / Pullbox
RG6QRBK4	Black	1000ft / Pullbox
RG6QRBK2	Black	1000ft / Reel
RG6QRWH4-500	White	500ft / Pullbox
RG6QRWH4	White	1000ft / Pullbox
RG6QRWH2	White	1000ft / Reel

(2) CAT5E 350 MHz UTP + (2) RG-6 Quad + (2) Fiber Attachment 3

Cable Detail		
		
Description		
<ul style="list-style-type: none"> PVC Tight Buffered Optical Fiber, Riser type PVC Jacket Meets NEC riser (OFNR) safety standards Intrabuilding backbones & horizontal installations in riser and general purpose environments. 		
Applicable Standards		
<ul style="list-style-type: none"> UL 1651, UL 1666, TIA/EIA-568-B.3 & BELLCORE GR-409 		
		
Physical Characteristics		
2 Cores	Ultra pure Silica Glass	
Core Diameter	62.5 ($\pm 3 \mu\text{m}$)	
Clad Diameter	125 ($\pm 2 \mu\text{m}$)	
Cladding Non-Circularity	< 2.0 (%)	
Core/Clad Concentricity Error	<= 3.0 (μm)	
Primary Coating Material	UV Curable Acrylate	
Primary Coating Dia.	245 ($\pm 5 \mu\text{m}$)	
Secondary Buffer Material	PVC	
Secondary Buffer Dia.	0.9 ($\pm 0.05 \text{mm}$)	
Strength Member	Aramid Yara	
Jacket Material	PVC	
Nom. Thickness	0.70 (mm)	
Min. Thickness	0.53 (mm)	
Cable Dia.	3.80 ($\pm 0.15 \text{mm}$)	
Mechanical Characteristics		
Low and High Temperature Cable Bend		Mandrel Size of 50mm
Max. Tensile Load	(N)	Short Term. 700
	(N)	Long Term. 450
Jacket Tensile Strength	(Mpa)	13.8
Aging Conditions	($^{\circ}\text{C}$ x Hours)	110 \pm 2 $^{\circ}\text{C}$ x 168 H
Elongation at Break	Before Aging	≥ 166
	After Aging	≥ 100
Cable Aging	($^{\circ}\text{C}$ x Hours)	85 \pm 2 $^{\circ}\text{C}$ x 168 H
Min. Bending Radium	(mm)	Short Term. 45
	(mm)	Long Term. 50
Part Numbers	Jacket Color	Package
	Orange	

Optical Characteristics

Numerical Aperture	(± 0.015)		
Wavelength	(nm)	At 850nm	At 1300nm
Max. Attenuation	(db/KM)	<= 3.5	<= 1.5
Min. Modal Band with	(MHz KM)	>= 200	>= 500

Cable Marking

OFNR DUPLEX 62.5/125 75C VERIFIED TO C(ETL)US XXXXXX
MULTIMODE OPTICAL CABLE ****FT