

# CAT 7A 4-PAIR 23AWG SCREENED SOLID COPPER CABLE

QUANTUM SERIES

## Description

RFI Cat7A S/FTP consist of 4 pairs of 23AWG solid bare copper conductors insulated with Foam PE insulation. Each pair is precisely twisted and surrounded by a aluminium foil to minimize and protect crosstalk between the pairs. Wrapped in an overall flexible yet mechanically strong braid screen. The braid also provide better grounding. The cable is covered with polyvinyl Chloride (PVC) outer jacket. Options are available for PE & LSZH jacket.

## Application

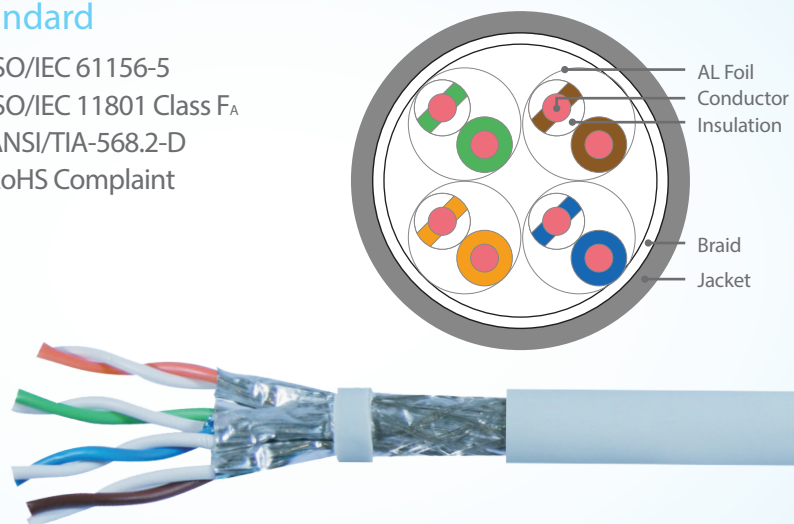
- 10G Base-T (IEEE 802.3bt)
- 10/100/1000 Base-T

## Feature

- 23AWG solid copper conductor
- FOAM PE insulation
- Braid around four pair
- Aluminium foil around each pair
- PVC/PE/LSZH jacket
- Tested up to 1000 Mhz

## Standard

- ISO/IEC 61156-5
- ISO/IEC 11801 Class F<sub>A</sub>
- ANSI/TIA-568.2-D
- RoHS Complaint



## Transmission Characteristics

Freq (MHz)	Return Loss (dB/100m)	Insertion Loss (dB/100m)	NEXT (dB/100m)	C.I. (ohm/100m)	PS-NEXT (dB/100m)	ACRF (dB/100m)	PS-ACRF (dB/100m)	Delay (ns/100m)
4.0	23.0	3.7	78.0	100±15	75.0	78.0	75.0	552
8.0	24.5	5.2	78.0	100±15	75.0	77.2	74.2	547
10.0	24.5	5.8	78.0	100±15	75.0	75.3	72.3	545
16.0	25.0	7.3	78.0	100±15	75.0	71.2	68.2	543
20.0	25.0	8.2	78.0	100±15	75.0	69.3	66.3	542
31.2	23.6	10.3	78.0	100±15	75.0	65.4	62.4	540
62.5	21.5	14.6	75.5	100±15	75.0	59.4	56.4	539
100.0	20.1	18.5	72.4	100±15	72.4	55.3	52.3	538
200.0	18.0	26.5	67.9	100±22	67.9	49.3	46.3	537
250.0	17.3	29.7	66.4	100±22	66.4	47.3	44.3	536
300.0	17.3	32.7	65.2	100±25	65.2	45.8	42.8	536
500.0	17.3	42.8	61.9	100±25	61.9	41.3	38.3	536
600.0	17.3	47.1	60.7	100±25	61.7	39.7	36.7	535
800.0	16.1	54.9	58.9	100±25	58.9	37.2	34.2	535
1000.0	15.1	61.9	57.4	100±25	57.4	35.3	32.3	535

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## Compliance

High Frequency Performance	Category	Category 7, Class F <sub>A</sub>
	Standard Compliance	IEC61156-5, ANSI/TIA 568.2-D, ISO/IEC11801
Environmental Compliance	RoHS	
LSZH Standards	IEC60332-1, IEC60332-3 (Flame) IEC60754-1, IEC60754-2 (Acid gas) IEC61034-2C (Smoke)	

## Cable Characteristics

Conductor	Material	Bare Copper	
	Structure	23 AWG, 0.57 ± 0.005mm	
Insulation	Material	Foam PE	
	Structure	1.48mm ± 0.03mm, Skin-Foam-Skin	
Foil Screen	Material	Aluminium / PET	
	Thickness	50/12µm	
Braid	Material	Tinned copper	
	Structure	0.1mm x 4 x16, Min. 30% coverage	
Jacket	Material	PVC or PE or LSZH	
	Thickness	0.55 mm	
	OD	8.3 ± 0.5mm	
Pulling Tension	Max. 100N		
Bending Radius (without load)	Min. 8 x Cable Diameter		
Temperature Range	Installation Temperature	0 to 50°C	
	Storage Temperature	-20 to 60°C (Under static conditions)	
	Operation Temperature	-20 to 60°C (Under static conditions)	
Conductor Resistance @ 20°C	≤7.32 Ohms/100m	Resistance Unbalance @ 20°C	≤2%
Dielectric Strength	2.5kV d.c./1.7kV a.c. for 2 secs		
Mutual Capacitance	5.6 nF/100m @ 1kHz	Insulation Resistance Unbalance @ 20°C, Test Voltage 100V-500V DC	Min. 5000 Mohms/km
Transfer Impedance (Max.)	N/A		
Coupling Attenuation (<1GHz)	Min. 35dB at 1GHz, type II	Max. Capacitance Unbalance (Pair to Ground @ 20°C)	160 pF/100m @ 1kHz
Mean Characteristic Impedance	100 Ohms ± 5 Ohms @ 100MHz		
Pulling Tension	45 nsec/100m @ 100MHz	Nominal Velocity Propagation	80%

All performance based on 100 meters at 20°C

## Ordering information

Part No.	Description
RFI-7AS3574-2yx	Cat 7A 4 Pair S/FTP 23AWG Screened solid cable, CM, PVC, 500M/ Drum
RFI-7AS1574-2yx	Cat 7A 4 Pair S/FTP 23AWG Screened solid cable, LSZH, 500M/ Drum
RFI-7AS2574-2yx	Cat 7A 4 Pair S/FTP 23AWG Screened solid cable, PE, 500M/ Drum
RFI-7AS3574-4yx	Cat 7A 4 Pair S/FTP 23AWG Screened solid cable, CM,PVC, 305M/ Drum
RFI-7AS1574-4yx	Cat 7A 4 Pair S/FTP 23AWG Screened solid cable, LSZH, 305M/ Drum
RFI-7AS2574-4yx	Cat 7A 4 Pair S/FTP 23AWG Screened solid cable, PE, 305M/ Drum

\* y = 0 - blue, 1 - orange, 2 - aqua, 3 - sky blue, 4 - grey, 5 - white, 6 - red, 7 - black, 8 - yellow, 9 - purple

\* x = A, D, K, N