

ABA Industry, Inc.

Specification for Approval

Product Part Number

- TFR2204ZXX

Product Description

- S/FTP, 22AWG solid bare copper, CAT 8, CMR
- Each pair twist with metal foil screen
- With braid wire

Product Features

- High performance of transmission.
- High quality of safety property.
- Sweep frequency up to 2000 MHz.

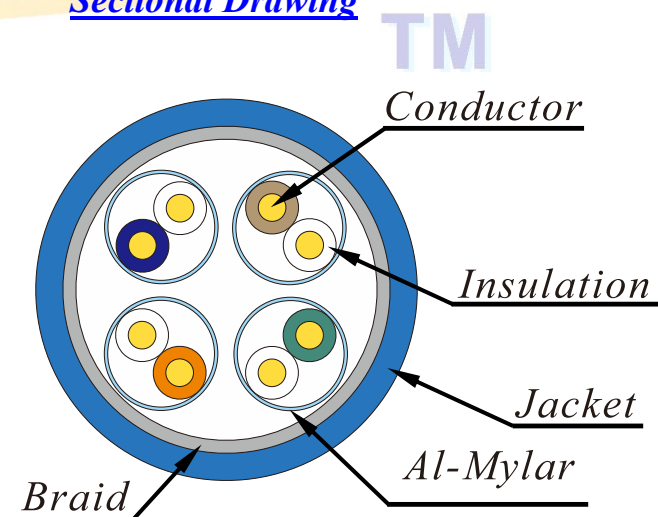
Application

- Transmission of digital and analogue for data, video, voice and audio applications.
- Metal shielded and braided providing good protection from EMI noise.
- Beyond IEEE Std 802.3bq-2016 25G/40GBASE-T and legacy speeds.
- Top-of-Rack (ToR), End-of-Row (EoR), Middle-of-Row (MoR) and for data center cabling.
- CDDI / ATM / Token Ring
- IEEE 802.3af (PoE) / IEEE 802.3at (PoE+)

Applicable Standard

- Electrical Transmission
 - IEC 61156-9 Category 8.2
 - ISO/IEC 11801-1
 - ANSI/TIA-568.2-D
- Flame Test
 - UL 1666 (CMR)
- Material and Construction
 - UL 444
 - CSA 22.2 NO.214
- EU Directive 2011/65/EU (RoHS2)
- EU Directive 2006/95/EC (LVD)

Sectional Drawing



All Material According To SS-00259

Establish Date	2014.03.01	Edition	1.6	Revised Date	2022.12.02
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Material and Construction

Conductor	Material	22AWG solid bare copper	
Insulation	Material	Foam Polyolefin (PO)	
	Color code & diameter	Blue & white	1.58± 0.03 mm
		Orange & white	1.58± 0.03 mm
		Green & white	1.58± 0.03 mm
		Brown & white	1.58± 0.03 mm
Twisted	Description	Left hand direction	
Pair shield	Material	Al Mylar tape	
	Description	100 % coverage and aluminum side facing out	
Assembly	Description	Left hand direction	
Braid	Material	Tinned copper	
	Description	> 40 % coverage	
Jacket	Material	Low smoke flame retardant polyvinyl chloride (LSFRPVC)	
	Diameter	8.6 ± 0.3 mm	
	Thickness	0.50 ± 0.05 mm	
	Color	Per customer's request	
Marking	ELITE 40GS CAT 8---E142890 S/FTP 22AWG 4PR 75C C(UL)US CMR---FT4 ETL VERIFIED IEC 61156-9 & TIA-568.2-D mmyy XXXXFT Note 1: mmyy is date code.		

Usage & Environmental Condition

Temperature range	Storage & shipping	-20°C to 75°C
	Installation	0°C to 60°C
	Operation	-20°C to 75°C
Minimum bending radius		≥ 8 times of overall diameter
Maximum pulling tension		≤ 110 N

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Physical & Electrical Characteristics (at 20°C)

Voltage rating	300V
Spark test	2.5 KV DC
AC leakage current through overall jacket	$\leq 10\text{mA}$ (1.5KV AC)
Cable cold bend	-20°C for 4 hr
Conductor DC resistance	$\leq 2.1 \ \Omega/30\text{m}$
Resistance unbalance (Within a pair)	$\leq 2\%$
Dielectric strength	1.7 KV ac for 2 s
Insulation resistance	$\geq 5000 \text{ M}\Omega \cdot \text{km}$
Mutual capacitance	not specified
Capacitance unbalance pair-to-ground	$\leq 36 \text{ pF}/30\text{m}$
Nominal Velocity of Propagation	73%

Transmission Performance (at 20°C)

Frequency (MHz)	IL Max. dB/30m	NEXT Min. dB/30m	PS.NEXT Min. dB/30m	ACRF Min. dB/30m	PS.ACRF Min. dB/30m	RL Min. dB/30m	Propagation Delay Max. ns/30m	Delay Skew Max. ns/30m	PS. ANEXT Min. dB/30m	PS. AACRF Min. dB/30m
4	1.12	78	75	78	75	23.0	165.6	7.5	80.0	80.0
8	1.57	78	75	78	75	24.5	164.0		80.0	80.0
10	1.75	78	75	78	75	25.0	163.6		80.0	80.0
16	2.20	78	75	76.5	73.5	25.0	162.9		80.0	78.1
20	2.46	78	75	74.6	71.6	25.0	162.6		80.0	76.2
25	2.75	78	75	72.6	69.6	25.0	162.4		80.0	74.2
31.25	3.08	78	75	70.7	67.7	25.0	162.1		80.0	72.3
62.5	4.37	78	75	64.7	61.7	23.6	161.6		80.0	66.3
100	5.56	75.4	72.4	60.6	57.6	22.2	161.3		80.0	62.2
200	7.94	70.9	67.9	54.6	51.6	20.1	161.0		80.0	56.2
250	8.92	69.4	66.4	52.6	49.6	19.4	160.9		80.0	54.2
300	9.81	68.2	65.2	51.1	48.1	18.9	160.8		80.0	52.7
400	11.40	66.4	63.4	48.6	45.6	18.0	160.7		78.5	50.2
500	12.83	64.9	61.9	46.6	43.6	17.3	160.7		77.0	48.2
600	14.13	63.7	60.7	45.0	42.0	16.8	160.6		75.8	46.6
1000	18.56	60.4	57.4	40.6	37.6	15.2	160.5		72.5	42.2
1500	23.17	57.8	54.8	37.1	34.1	14.0	160.5		69.9	38.7
2000	27.15	55.9	52.9	34.6	31.6	13.1	160.4		68.0	36.2

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Shipping Information

Item	Dimension	Nominal net weight
Cable	305 m	22.80 kg (50.27 lb)
Plywood reel	D440 x d270 x H320 x h290 mm	5.8 kg
Pallet	1100 x1150 x110 mm	14.1 kg

Container type	Capacity of pallet	Pallet of reel	Capacity of plywood reel
20 feet	20	15/15	300
40 feet	40	15/15	600
40 feet HQ	40	15/15	600

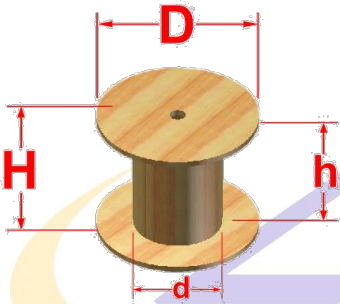
Shipping could use standard delivery form or per customer's request.

Package information above is calculated by maximum container capacity, and for reference only.

All shipments must follow your local transportation regulation for gross weight limit.

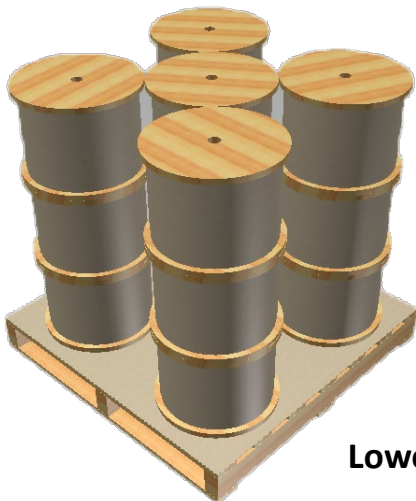
Schematic Drawing of Reel & Package

Fumigated plywood reel.

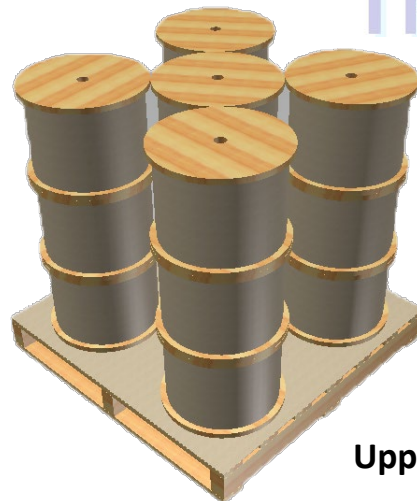


Schematic Drawing of Package

Each package of pallet delivered with plastic wrap and packing strap.



Lower Pallet



Upper Pallet

AK001 / 210×297 / 1.1

Revised Information

Edition	Revised Description	Revised Date
1.4	Revised M to FEET on printing.	2022.06.15
1.5	Add Voltage rating	2022.07.27
1.6	Revised the Temperature range, and remove the Temperature rated	2022.12.02