



USB
3.0

USB 3.0 is the next major revision to the Universal Serial Bus standard. This new revision promises higher data transfer rates (up to 4.8Gbps) with increased maximum bus power and is backwards compatible to USB 2.0.

PART NUMBER REFERENCE



Select Connector Type: End "1"

- Type A, Friction Fit = 1
- Type A, w/Thumbscrews = 1B
- Straight MICRO-B Exit with Thumbscrews = 2
- MICRO-B R/A **UP** w/Recessed Screws = 3
- MICRO-B R/A **DOWN** w/Recessed Screws = 4
- MICRO-B Exit Right w/Recessed Screws = 5
- MICRO-B Exit Left w/Recessed Screws = 6
- Type A with Thumbscrews = 7
- Type B with Thumbscrews = 8
- Type B Friction Fit = 9
- Type A Receptacle Friction Fit = 10
- Type A Receptacle w/Threaded Inserts = 11
- Type B /w/Threaded Inserts = 12

Select Cable Type:

- Static (*Up to 5m) = 1
- Robotic (*Up to 5m) = 2
- Extended Distance (*Up to 7m) = 3
- Chain Flex (*Up to 5m) = 4

Select Connector Type: End "2"

- Type A, Friction Fit = 1
- Type A, w/Thumbscrews = 1B
- Straight MICRO-B Exit with Thumbscrews = 2
- MICRO-B R/A **UP** w/Recessed Screws = 3
- MICRO-B R/A **DOWN** w/Recessed Screws = 4
- MICRO-B Exit Right w/Recessed Screws = 5
- MICRO-B Exit Left w/Recessed Screws = 6
- Type A with Thumbscrews = 7
- Type B with Thumbscrews = 8
- Type B Friction Fit = 9
- Type A Receptacle Friction Fit = 10
- Type A Receptacle w/Threaded Inserts = 11
- Type B /w/Threaded Inserts = 12

*Length in Meters:

Temp: 9-29-20

CONNECTOR TYPE OPTIONS:

Additional Dimensional Information:

For additional information regarding the physical dimensions of our connector profiles, please visit our Web-Site: www.ComponentsExpress.com or ask one of our sales associates and we will be happy to assist.



1
Type A
Friction Fit



1B
Type A
W/Thumbscrew



2
Type A
W/Thumbscrews



3
Micro B, Straight
W/Thumbscrews



4
Micro B, R/A Up
W/Recessed Screws



5
Micro B, R/A Down
W/Recessed Screws



6
Micro B, Exit Right
W/Recessed Screws



7
Micro B, Exit Left
W/Recessed Screws



8
Type B
W/Thumbscrews



9
Type B
Friction Fit



10
Type A Receptacle
Friction Fit



11
Type A Receptacle
w/Threaded Inserts



12
Type B Receptacle
w/Threaded Inserts

USB 3.0 & USB 3.1 Type #: 1

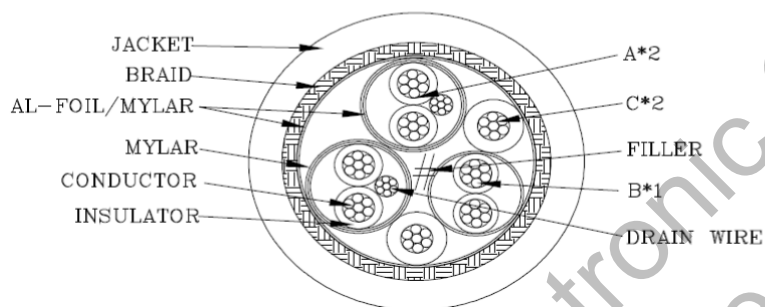
SPEC No.:	(7/0.127TA*1PR+EAM)*2+(7/0.127TA*1PR+A)+7/0.16TA*2C+AB 85% USB 3.0						
Customer		Customer NO.		8 Code:	0	Sample NO.:	Y161015007
UL File NO.	E101344	UL Style:	UL 2725	Date:	10/21/16	Spec NO.:	0
CSA File NO.		CSA Style:		Edition:	Original edition	Operation NO.:	
Structure		Structure A		Structure B		Structure C	
Conductors	Structure AWG	AWG	28# (7/36)	28# (7/36)	28# (7/36)	26# (7/34)	
	Material	--	Tinned Copper	Tinned Copper	Tinned Copper	Tinned Copper	
	O.D.	mm	0.38 Ref	0.38 Ref	0.38 Ref	0.471 Ref	
Insulation	Material	--	FOAM-SKIN-PE	FOAM-PE	FOAM-PE	SR-PVC	
	Diameter	mm	0.89±0.07	0.84±0.05	0.84±0.05	1±0.07	
	Average Thickness	mm	0.255	0.230	0.230	0.265	
	Color	--	AS Color Code	AS Color Code	AS Color Code	AS Color Code	
Twist	Direction	--	Left (Z)	Left (Z)	Left (Z)	--	
	Diameter	mm	1.78 Ref	1.4 Ref	1.4 Ref	--	
Drain wire	Structure AWG	AWG	28# (7/36)				
	Material	--	Tinned Copper				
Shielding 1	Material	--	AL-foil/mylar	AL-foil/mylar	AL-foil/mylar	--	
	Conductive Side	--	Inside	Inside	Inside	--	
	Overlap Rate	%	25 MIN	25 Ref	25 Ref	--	
Separator 2	Material	--	Hot-melt-Mylar	--	--	--	
	Conductive Side	--	--	--	--	--	
	Overlap Rate	%	25 MIN	--	--	--	
Layer	Direction	--	Left (Z)				
	Pitch	mm	75 Ref				
	Diameter	mm	3.9 Ref				
Shielding 3	Material	--	--	AL-foil/mylar	AL-foil/mylar	--	
	Conductive Side	--	--	Outside	Outside	--	
	Overlap Rate	%	--	25 MIN	25 MIN	--	
Shielding 4	Shield	--	Braid				
	Material	--	Tinned Copper				
	Coverage Rate	%	85 MIN				
Jacket	Material	--	PVC				
	Diameter	mm	5.5 ± 0.19				
	Min Thickness	mm	0.50				
	Extrusion	--	Semi substantiate				
	Externals	--	Plane				
	Color	--	Z001 (BLACK)				

USB 3.0 & USB 3.1 Type #: 1

SPEC No.:	(7/0.127TA*1PR+EAM)*2+(7/0.127TA*1PR+A)+7/0.16TA*2C+AB 85% USB 3.0						
Customer		Customer NO.		8 Code:	0	Sample NO.:	Y161015007
UL File NO.	E101344	UL Style:	UL 2725	Date:	10/21/16	Spec NO.:	0
CSA File NO.		CSA Style:		Edition:	Original edition	Operation NO.:	


COMPONENTS EXPRESS, INC.

10330 Argonne Woods Drive, Ste100
Woodridge, IL 60517

Y161015007 (E0894)
Rev. A, 10/26/2016, 8/12/19

COLOR CODE

1. YELLOW*BLUE
2. ORANGE*VIOLET
3. WHITE*GREEN
4. BLACK (P570)
5. RED (P572)



Pg. 2/3

MINIMUM BEND RADIUS: 10X O.D.

USB 3.0 & USB 3.1 Type #: 1

SPEC No.:	(7/0.127TA*1PR+EAM)*2+(7/0.127TA*1PR+A)+7/0.16TA*2C+AB 85% USB 3.0						
Customer		Customer NO.		8 Code:	0	Sample NO.:	Y161015007
UL File NO.	E101344	UL Style:	UL 2725	Date:	10/21/16	Spec NO.:	0
CSA File NO.		CSA Style:		Edition:	Original edition	Operation NO.	

Electric Characters

- 1.Voltage rating :30V
- 2.Temperature rating : 80°C
- 3.Spark test: AC- 500V / 0.15 sec MIN.
4. Dielectric strength : AC- 750V/1sec MIN.
- 5.Insulation resistance :FOAM-SKIN-PE, FOAM-PE: DC- 500V 100 MΩ/KM MIN. at 20°C
SR-PVC:DC-500V 10MΩ/KM MIN. at 20°C
- 6.Conductor resistance : 28AWG-244 Ω/KM MAX. at 25°C
26AWG-153 Ω/KM MAX. at 25°C

Transmission Characters

- 1.Differential impedance: $90 \pm 7 \Omega$ (1PR+EAM)*2
- 2.Attenuation : (1PR+EAM)*2

Frequency (MHz)	100	625	1250	2500	5000	7500
Insertion Loss (MAX) dB/cable	-1.5	-3.1	-5	-7.5	-16.25	-25

- 3.Intra-pair skew:15PS/M
 - 4.Differential to Common Mode Conversion: -20 dB@(2.0m)
 - 5.Conductor resistance unbalance : 5%(1PR:GREEN*WHITE)
 - 6.Attenuation:(1PR:GREEN*WHITE)
- | | | | | | | | | | | | |
|--------------------------|-------|-------|------|-------|-------|-------|-------|-------|------|-------|-------|
| Frequency(MHz) | 0.512 | 0.772 | 1.00 | 4.00 | 8.00 | 12.0 | 24.0 | 48.0 | 96.0 | 200.0 | 400.0 |
| Attenuation(MAX)dB/cable | 0.130 | 0.150 | 0.20 | 0.390 | 0.570 | 0.760 | 0.950 | 1.350 | 1.90 | 3.20 | 5.80 |
- 7.Impedance(1PR:GREEN*WHITE): $90 \Omega \pm 15\%$ @ TDR (differential)
 - 8.Propagation Delay(1PR:GREEN*WHITE): 5.2ns/M MAX
 - 9.Propagation Delay skew(1PR:GREEN*WHITE): 100PS MAX

Physical Characters

- 1.Flame test of cable:
 - 1.1 VW-1
- 2.Tensile strength test (before aging) :
 - 2.1 Sheath : > 1.05kg/mm²
 - 2.2 Insulation : > 1.12kg/mm²
- 3.Tensile strength test (after aging):
 - 3.1 Sheath: > 70%
 - 3.2 Insulation: > 70%
- 4.Elongation(before aging):
 - 4.1 Sheath : > 100%
 - 4.2 Insulation : > 100%
5. Elongation(after aging):
 - 5.1 Sheath : > 65%
 - 5.2 Insulation : > 70%
- 6.Requirements for green environment protection: Accord with RoHS

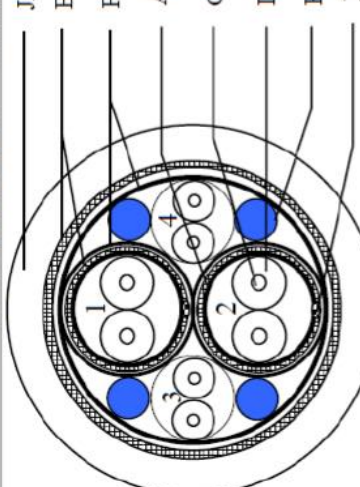


COMPONENTS EXPRESS, INC.
10330 Argonne Woods Drive, Ste100
Woodridge, IL 60517

Y161015007 (E0894)

Rev. A, 10/21/2016, 8/12/19

USB 3.0 Cable Type #: 2

SPECIFICATION:		(1P*26#+ADBP)2C+1P*26#+1P*24#+FPB				CONSTRUCTION D.W.G													
ITEM		SPECIFICATION																	
		26AWG	26AWG	26AWG	24AWG														
CONDUCTOR	AWG						JACKET												
	MATERIAL	TINNED COPPER	TINNED COPPER	TINNED COPPER	TINNED COPPER		BRAID COPPER												
	COND.SIZE	19/0.10±0.008 mm	19/0.10±0.008 mm	19/0.10±0.008 mm	41/0.08±0.008 mm		Foamed PP film												
	MIN.AVG.THICK	0.23 mm	0.23 mm	0.23 mm	0.23 mm		AL FOIL												
INSULATION	MATERIAL	FM-PE+SKIN	HD-PE	HD-PE	HD-PE		CONDUCTOR												
	O . D	1.20±0.10 mm	0.90±0.05 mm	0.90±0.05 mm	0.95±0.05 mm		INSULATION												
	N.O.	1P*2	1P	1P	1P		FILLER												
Face Outside	COVERGE	100%	100%	100%	100%		DRAIN												
AL.MYLAR	OVERLAP	25% MIN	25% MIN	25% MIN	25% MIN														
DRAIN	MATERIAL	TINNED COPPER	TINNED COPPER	TINNED COPPER	TINNED COPPER														
	SIZE	19/0.08±0.008 mm	19/0.08±0.008 mm	19/0.08±0.008 mm	19/0.08±0.008 mm														
BRAID COPPER	MATERIAL	TINNED COPPER	TINNED COPPER	TINNED COPPER	TINNED COPPER														
	SIZE	16*6/0.08±0.008MM	16*6/0.08±0.008MM	16*6/0.08±0.008MM	16*6/0.08±0.008MM														
	COVERGE	90%MIN	90%MIN	90%MIN	90%MIN														
Foamed PP film	COVERGE	100%	100%	100%	100%														
	OVERLAP	25%MIN	25%MIN	25%MIN	25%MIN														
	N.O.	(1P+ADBP)2C	1P	1P	1P														
Foamed PP film	COVERGE	100%	100%	100%	100%														
	OVERLAP	25% MIN	25% MIN	25% MIN	25% MIN														
BRAID COPPER	MATERIAL	TINNED COPPER	TINNED COPPER	TINNED COPPER	TINNED COPPER														
	SIZE	16*10/0.08±0.008MM (Coverage : 85%MIN)	16*10/0.08±0.008MM (Coverage : 85%MIN)	16*10/0.08±0.008MM (Coverage : 85%MIN)	16*10/0.08±0.008MM (Coverage : 85%MIN)														
	MIN.AVG.THICK	0.76 mm	0.76 mm	0.76 mm	0.76 mm														
JACKET	MATERIAL	MIXING PVC	MIXING PVC	MIXING PVC	MIXING PVC														
	COLOUR	PURPLE	PURPLE	PURPLE	PURPLE														
	O . D	7.00 ± 0.30 mm	7.00 ± 0.30 mm	7.00 ± 0.30 mm	7.00 ± 0.30 mm														
						COLOUR CODE:													
						(1P*26#+ADBP)*2C:													
						1. YELLOW * BLUE													
						2. ORANGE * PURPLE													
						IP*26#: 1.GREEN *WHITE													
						IP*24#: 1. BLACK RED													
						MINIMUM BEND RADIUS: 10X O.D.													
						 COMPONENTS EXPRESS, INC. 10330 Argonne Woods Drive, Ste100 Woodridge, IL 60517													
						YS2018111302, 8/12/19													
						<table><tr><td>APPROVED</td><td></td><td>CUSTOMER</td><td>奕樹</td></tr><tr><td>CHECKED</td><td></td><td>REV</td><td>A / 1</td></tr><tr><td>DRAWING</td><td>CHEN</td><td>DATE</td><td>2018/11/13</td></tr></table>		APPROVED		CUSTOMER	奕樹	CHECKED		REV	A / 1	DRAWING	CHEN	DATE	2018/11/13
APPROVED		CUSTOMER	奕樹																
CHECKED		REV	A / 1																
DRAWING	CHEN	DATE	2018/11/13																

USB 3.0 Cable Type #: 3

SPECIFICATION:		(1P*24#+DAM)2C+1P*26#+2C*18#+F+AL+B / UL2725		CONSTRUCTION		D.W.G	
ITEM		SPECIFICATION		JACKET		BRAID COPPER	
CONDUCTOR	AWG	24AWG	26AWG	18AWG		MYLAR	
	MATERIAL	TINNED COPPER	TINNED COPPER	TINNED COPPER		FILLER	
INSULATION	COND.SIZE	7/0.20±0.008MM	7/0.16±0.008MM	43/0.16±0.008MM		CONDUCTOR	
	MIN.AVG.THICK	0.35MM	0.23MM	0.23MM		INSULATION	
DRAIN	MATERIAL	FM-PE+SKIN	HD-PE	PVC		AL MYLAR	
	O.D	1.35±0.10MM	1.00±0.10MM	1.80±0.10MM		DRAIN	
Face Inside	N.O.	IP*2	IP	2C		COLOUR CODE:	
	AWG	24AWG	26AWG	100%		1. YELLOW*BLUE	
Face Outside	MATERIAL	TINNED COPPER	TINNED COPPER	25% MIN		2. ORANGE*PURPLE	
	SIZE	7/0.20±0.008MM	7/0.16±0.008MM	/		IP*26#: GREEN *WHITE	
AL MYLAR	COVER	100%	100%	/		2C*18#: 1.BLACK 2.RED	
	OVERLAP	25% MIN	25% MIN	/		MINIMUM BEND RADIUS: 10X O.D.	
Hot-MYLAR	COVER	100%	100%	/		COMPONENTS EXPRESS, INC.	
	OVERLAP	25% MIN	25% MIN	/		10330 Argonne Woods Drive, Ste100	
Face Outside	N.O.	(IP+DAM)2C	IP	2C		Woodridge, IL 60517	
	COVER	100%	100%	/		(E1013), 8/12/19	
AL MYLAR	MATERIAL	TINNED COPPER	TINNED COPPER	25% MIN		APPROVED	
	SIZE	7/0.20±0.008MM	7/0.16±0.008MM	/		CHECKED	
DRAIN	COVER	100%	100%	/		DRAWING	
	OVERLAP	25% MIN	25% MIN	/		CUSTOMER	
BRAID	N.O.	(IP+DAM)2C	IP	2C		REV	
	COVER	100%	100%	/		DATE	
COPPER	MATERIAL	TINNED COPPER	TINNED COPPER	25% MIN		2018/5/17	
	SIZE	7/0.20±0.008MM	7/0.16±0.008MM	/			
JACKET	MIN.AVG.THICK	0.50MM	0.50MM	/			
	MATERIAL	PVC	PVC	/			
COLOUR	COLOUR	BLACK	BLACK	/			
	O.D	7.50±0.20MM	7.50±0.20MM	/			
ELECTRICAL CHARACTERISTICS		USB3.0 STP*2P		PHYSICAL PROPERTIES OF JACKET			
USB2.0 UTP	1. Rating Temperature: 80°C ; VOLTAGE: 30V	1. Differential Impedance: 90±7Ω		1. Tensile Strength: Unaged:			
	2. Conductor Resistance: at 20°C max	2. Intra-Pair Skew : 15ps /m		1500PSI min Aged: 70% min			
	24AWG: 94.2Ω/km; 18AWG: 23.2Ω/km	3. Attenuation/Insertion Loss:		2. Elongation: Unaged:			
	3. Insulation Resistance: 10MΩ/km min at 20°C dc 500V	1.5dB/1.5M@0.1GHz		100% min Aged: 65%			
	4. Propagation Delay Skew: 100ps (Full-/High-speed only)	5.0dB/1.5M@1.25GHz		3. Heat shock test:			
	5. Time Delay: 5.2ns/m(max.)	7.5dB/1.5M@2.5GHz		NO CRACKING			
	6. Impedance: 90±15%Ω	25dB/1.5M@7.5GHz		4. Cold bend test:			
	7. Attenuation(Full/High-speed only):	20dB/cable @ 0.1-7.5GHz		NO CRACKING			
	F(MHz)	Attenuation(dB)	F(MHz)	5. Deformation test: MAX 50%			
	0.064	0.08	24	6. Flame test: PASS VW-1			
	0.256	0.11	48				
	0.512	0.13	96				
	0.772	0.15	200				
	1	0.20	400				
	4	0.39	5.80				
	8	0.57					
	12	0.76					



COMPONENTS EXPRESS, INC.
10330 Argonne Woods Drive, Ste100
Woodridge, IL 60517

(E1013), 8/12/19

APPROVED	CUSTOMER	奕樹
CHECKED	REV	A / I
DRAWING	CHEN	DATE
		2018/5/17

USB 3.0 Cable Type #: 4

SPECIFICATION:		(1P*26#+ADBP)2C+1P*26#+1P*24#+FPB				CONSTRUCTION		D.W.G	
ITEM		SPECIFICATION				JACKET			
CONDUCTOR	AWG	26AWG	26AWG	26AWG	24AWG	BRAID COPPER			
	MATERIAL	TINNED COPPER	TINNED COPPER	TINNED COPPER	TINNED COPPER	Foamed PP film			
	COND.SIZE	19/0.10±0.008 mm	19/0.10±0.008 mm	19/0.10±0.008 mm	41/0.08±0.008 mm	AL FOIL			
INSULATION	MIN.AVG.THICK	0.23 mm	0.23 mm	0.23 mm	0.23 mm	CONDUCTOR			
	MATERIAL	FM-PE+SKIN	HD-PE	HD-PE	HD-PE	INSULATION			
	O . D	1.20±0.10 mm	0.90±0.05 mm	0.90±0.05 mm	0.95±0.05 mm	FILLER			
Face Outside AL.MYLAR DRAIN	N.O.	1P*2	1P	1P	1P	DRAIN			
	COVERAGE	100%	/	/	/				
	OVERLAP	25% MIN	/	/	/				
BRAID COPPER	MATERIAL	TINNED COPPER	/	/	/				
	SIZE	16*6'0.08±0.008MM	/	/	/				
	COVERAGE	90%MIN	/	/	/				
Foamed PP film	COVERAGE	100%	/	/	/				
	OVERLAP	25%MIN	/	/	/				
	N.O.	(1P+ADBP)2C	1P	1P	1P				
Foamed PP film	COVERAGE	100%	100%	100%	100%				
	OVERLAP	25% MIN	25% MIN	25% MIN	25% MIN				
	MATERIAL	TINNED COPPER	TINNED COPPER	TINNED COPPER	TINNED COPPER				
BRAID COPPER	SIZE	16*10/0.08±0.008MM (Coverage : 85%MIN)	16*10/0.08±0.008MM (Coverage : 85%MIN)	16*10/0.08±0.008MM (Coverage : 85%MIN)	16*10/0.08±0.008MM (Coverage : 85%MIN)				
	MIN.AVG.THICK	0.76 mm	0.76 mm	0.76 mm	0.76 mm				
	MATERIAL	MIXING PVC	MIXING PVC	MIXING PVC	MIXING PVC				
JACKET	COLOUR	PURPLE	PURPLE	PURPLE	PURPLE				
	O . D	7.00 ± 0.30 mm	7.00 ± 0.30 mm	7.00 ± 0.30 mm	7.00 ± 0.30 mm				
	COVERAGE	100%	100%	100%	100%				
ELECTRICAL CHARACTERISTICS		USB3.0 STP*2P				PHYSICAL PROPERTIES OF JACKET			
USB2.0 UTP		1. Rating Temperature: 80 °C ; VOLTAGE: 30V 2. Conductor Resistance: at 20 °C max 26AWG: 150Ω/km; 3. Insulation Resistance: 10MΩ/km min at 20 °C dc 500V 4. Propagation Delay Skew: 100ps (Full-/High-speed only) 5. Time Delay: 5.2ns/m(max) 6. Impedance: 90±15%Ω 7. Attenuation(Full/High-speed only):				1. Differential Impedance: 90±7Ω 2. Intra-Pair Skew : 15ps /m 3. Attenuation/Insertion Loss: 1.5dB@0.1GHz 5.0dB@1.25GHz 7.5dB@2.5GHz 25dB@7.5GHz 4. Differential to common mode: 20dB/cable @ 0.1~7.5GHz			
F(MHz)	Attenuation(dB)	F(MHz)	Attenuation(dB)						
0.064	0.08	24	0.95						
0.256	0.11	48	1.35						
0.512	0.13	96	1.90						
0.772	0.15	200	3.20						
1	0.20	400	5.80						
4	0.39								
8	0.57								
12	0.76								
MINIMUM BEND RADIUS: 10X O.D.						COMPONENTS EXPRESS, INC. 10330 Argonne Woods Drive, Ste100 Woodridge, IL 60517			
APPROVED		CUSTOMER		REV		A / 1			
CHECKED		REV		DATE		2018/11/13			
DRAWING		CHEN		DATE		2018/11/13			