JAE

USB Type-C® Cable Assembly
DX07 Series Harness

CONNECTOR
MB-0324-6
Jun.2023

RoHS Compliant

USB 3.2 Gen 1 & Gen 2
C to C   Harness

USB 3.2 Gen 1 & Gen 2 C to C
Harness with Screw Lock

USB 3.2 Gen 2
C to Standard-A
Harness

Overview

The DX07 Series connectors are compatible with the next-generation USB specification "USB Type-C®" and are expected to become popular as a standard interface for various devices.
Note) USB Type-C®, USB-C® are trademarks of USB Implementers Forum.

Applicable Markets

Smartphones, tablets, notebook PCs, TV, monitor, gaming devices, external storage mediums, digital cameras, and other small portable devices and industrial equipment

Features

- Compatible with Universal Serial Bus Type-C Specification Release 2.0
- Compatible with USB Power Delivery 3.0
- Compatible with SuperSpeed USB 10Gbps communication (USB 3.2 Gen2)
- Supports 100W (5A/20V) maximum power supply.
  (Compatible with USB Power Delivery Standard Power Range)
- Reversible plug structure with no need to worry about the plug orientation.
- Superior EMI / EMC characteristics.
- Lock structure with superior durability.
- Realizes downsizing of hood.
- Available with a screw lock for securely fixing to the device housing. (The screw lock attachment dimensions conform to the screw lock USB Type-C standard.)

Remarks: Large selection of connector variations are available in DX07 Series
Please refer to the chart below for brochures of other variations.

Brochure Number	Brochure Name
MB-0297-*	DX07 SMT Contact Receptacle
MB-0333-*	DX07 Waterproof Receptacle
MB-0335-*	DX07 Hybrid Contact Receptacle
MB-0336-*	DX07 Vertical Receptacle
MB-0350-*	DX07 16-position Receptacle
MB-0362-*	DX07 USB4 Gen3 Compatible Receptacle
MB-0301-*	DX07 Plug Series
MB-0332-*	DX07 Vertical Plug

Note: The asterisk (*) stands for revision number.

General Specifications

Connector Type	USB Type-C Plug on Both Ends			
Part Number	DX07518S10N 18747	DX07518S20K 18747	DX07518B10N 19114	DX07518B20K 19114
Length	1m	2m	1m	2m
Rated Current	5 A max.	3 A max.	5 A max.	3 A max.
Applicable Standards	USB 3.2 Gen 2	USB 3.2 Gen 1	USB 3.2 Gen 2	USB 3.2 Gen 1
	USB Power Delivery Rev 3.0			
Material / Color (hood, bushing, and cable jacket)	PVC / Black		TPE / Black	
USB Certification	Certified			Now Planned
TID	5,200,000,570	3,200,000,113	5,210,000,570	-
No. of Contacts for Plug	24 pos.			
Rated Voltage	AC 20 V r.m.s.			
Contact Resistance	Initial 40 mΩ max.			
Dielectric Withstanding Voltage	AC 40 V r.m.s. (for 1 minute)			
Insulation Resistance	Initial 10 MΩ min.			
Operating Temperature Range	+10ºC to +40ºC		-20ºC to +50ºC	
Mating Durability	10,000 times			

Connector Type	DX07 Cable Harness with Screw Lock	
Part Number	DX07550B10N19510	DX07550B20K19510
Length	1m	2m
Rated Current	5 A max.	5 A max.
Applicable Standards	USB 3.2 Gen 2	USB 3.2 Gen 1
	USB PD Revision 3.0	
Material / Color (hood, bushing, and cable jacket)	TPE / Black	
USB Certification	Certified	Under Planning
TID	1667	—
No. of Contacts for Plug	24 pos.	
Rated Voltage	AC 20 V r.m.s.	
Contact Resistance	Initial 40 mΩ or less	
Dielectric Withstanding Voltage	AC 40 V r.m.s. (for 1 minute)	
Insulation Resistance	Initial 10 MΩ min.	
Operating Temperature Range	-20ºC to +50ºC	
Mating Durability	10,000 times	

General Specifications

Connector Type	USB Type-C Plug to USB3.1 Standard-A Plug Cable Harness
Part Number	DX07C19S10L26338
Length	1m
Rated Current	3 A max.
Applicable Standards	USB 3.2 Gen 2
Material / Color (hood, bushing, and cable jacket)	PVC / Black
No. of Contacts for Plug	USB Type-C side: 24 pos. USB3.1 Standard-A side: 9 pos.
Rated Voltage	AC 20 V r.m.s.
Contact Resistance	USB Type-C side: Initial 40 mΩ max. USB 3.1 Standard-A side: Initial 50 mΩ max.
Dielectric Withstanding Voltage	AC 40 V r.m.s. (for 1 minute)
Insulation Resistance	Initial 10 MΩ min.
Operating Temperature Range	+10ºC to +40ºC
Mating Durability	USB Type-C side: 10,000 times (Based on USB Type-C Standard) USB3.1 Standard-A side: 1,500 times (Based on USB3.1 Standard)

Materials and Finishes

Connector Type	USB Type-C Plug on Both Ends DX07 Cable Harness with Screw Lock	USB Type-C Plug to USB3.1 Standard-A Plug Cable Harness
Part Number	DX07518S10N18747, DX07518S20K18747 DX07518B10N19114, DX07518B20K19114 DX07550B10N19510, DX07550B20K19510	DX07C19S10L26338
Plug	DX07P024AJ5	DX07P024AA7
Paddle Guard	Multi-layer glass-epoxy board	
Back Shell	Stainless steel	
Locator	Glass-reinforced nylon	N/A
Accessory Parts	Heat resistant tape, adhesive, and others	
Inner Mold	PA	PP and PA or PE
Outer Mold	PVC Black or TPE Black	PVC Black
Cable Jacket	PVC Black or TPE Black	PVC Black
Screw	Stainless steel	N/A

Note: Please refer to the Product Drawings for further details.

Ordering Information

DX07 5 18 S 10 N ***

Series
DX07: USB Type C

5: Plug

18: USB 3.2 C to C
19: USB 3.2 C to A
50: USB 3.2 C to C with screw lock

S: PVC Black / B: TPE Black

10: 1000mm / 20: 2000mm

N: Gen2 5A / K: Gen1 3A
L: Gen2 3A

Last 5 digits of the Drawing Number

Technical Documents

Harness Type	Part Number	Drawing No.	Specifications
USB Type-C To USB Type-C	DX07518S10N18747	SJ118747	JACS-40186
	DX07518S20K18747		
	DX07518B10N19114	SJ119114	
	DX07518B20K19114		
USB Type-C to USB Type-C (with screw lock)	DX07550B10N19510	SJ119510	
	DX07550B20K19510		
USB Type-C to USB 3.1 Standard-A	DX07C19S10L26338	SJ126338	JACS-40255

Product Drawing (Type-C to Type-C)

Unit: mm

NOTE 4

12.35

6.55   24   8

(φ5.0)

L
(TABLE 1)

6.5

B1   A12   A1   B12

B12   A1   A12   B1

DETAIL A   DETAIL B
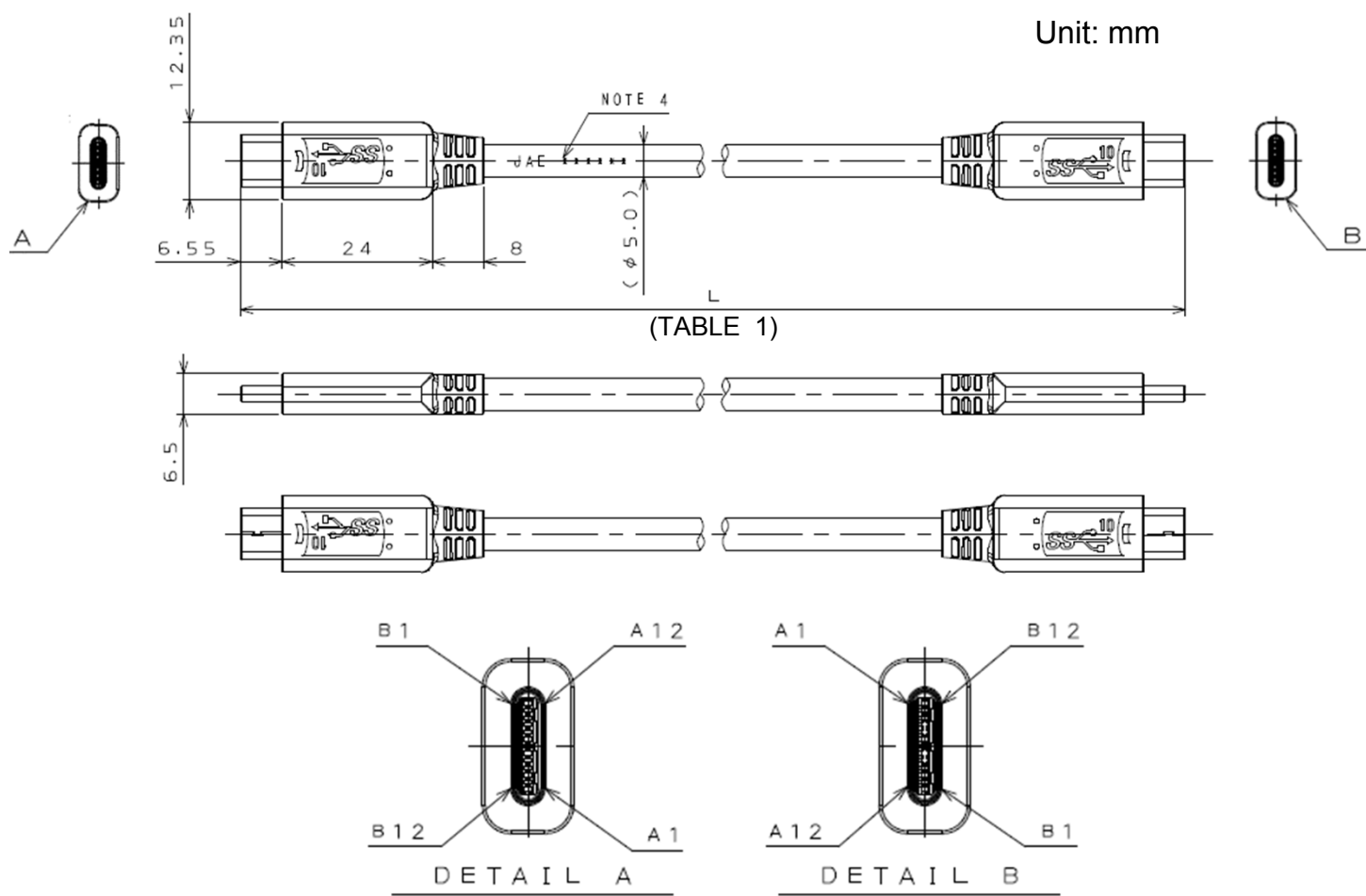
Product Drawing (Type-C to Type-C(with screw lock))

Unit: mm

(TABLE 1)

DETAIL C   DETAIL D
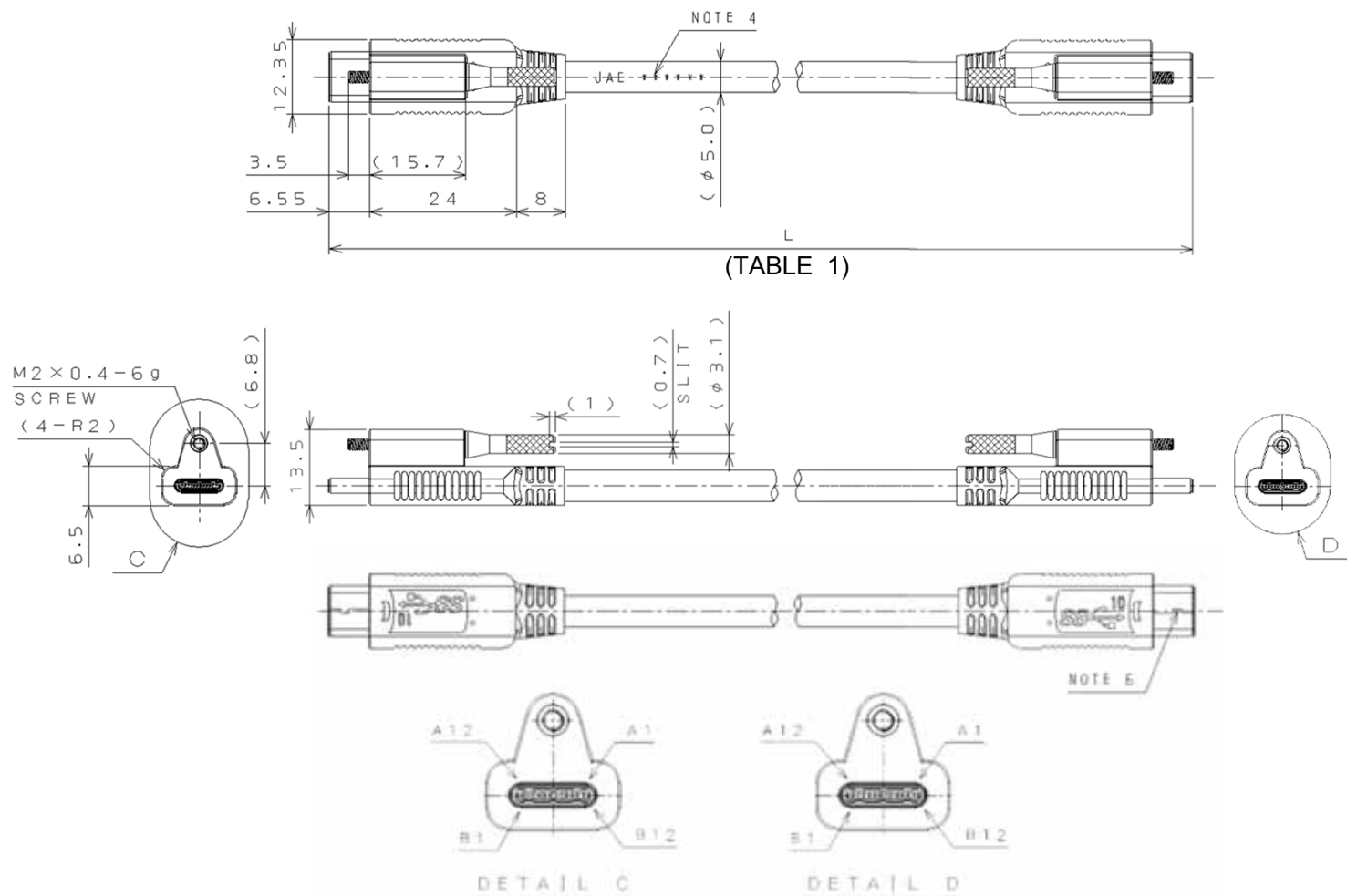
NOTE1. CIRCUIT SCHEMATIC OF PADDLE CARD IS SHOWN IN TABLE2.
2. THIS CABLE ASSEMBLY IS FOR "USB3.2 TYPE-C TO TYPE-C" SPEC
   and "USB Type-C Locking Connector" SPEC.
3. USB VERSION AND USB LOGO VERSION ARE SHOWN IN TABLE1.
4. LOT NUMBER IS MARKED BETWEEN EACH OUTER MOLD.
5. 100% OPEN,SHORT & MIS-WIRE TEST.
6. DIRECTION OF SHELL JOINT IS OPTIONAL.
7. RECOMMENDED SCREW TIGHTENING TORQUE:0.2 0.25N m.
     APPLY TO THE CABLE WITH SCREW LOCK

LOT No.
6T 7 9 07
         DAY
         MONTH(Oct.:0, Nov.:X, Dec.:Y)
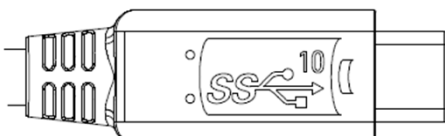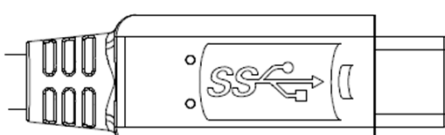   YEAR
   PRODUCTION AREA

TABLE 1

Part Number	L	USB Version	USB Logo
DX07518S10N18747	1000	USB 3.2 Gen 2	
DX07518B10N19114			
DX07550B10N19510			
DX07518S20K18747	2000	USB 3.2 Gen 1	
DX07518B20K19114			
DX07550B20K19510			

TABLE 2 (NOTE1)

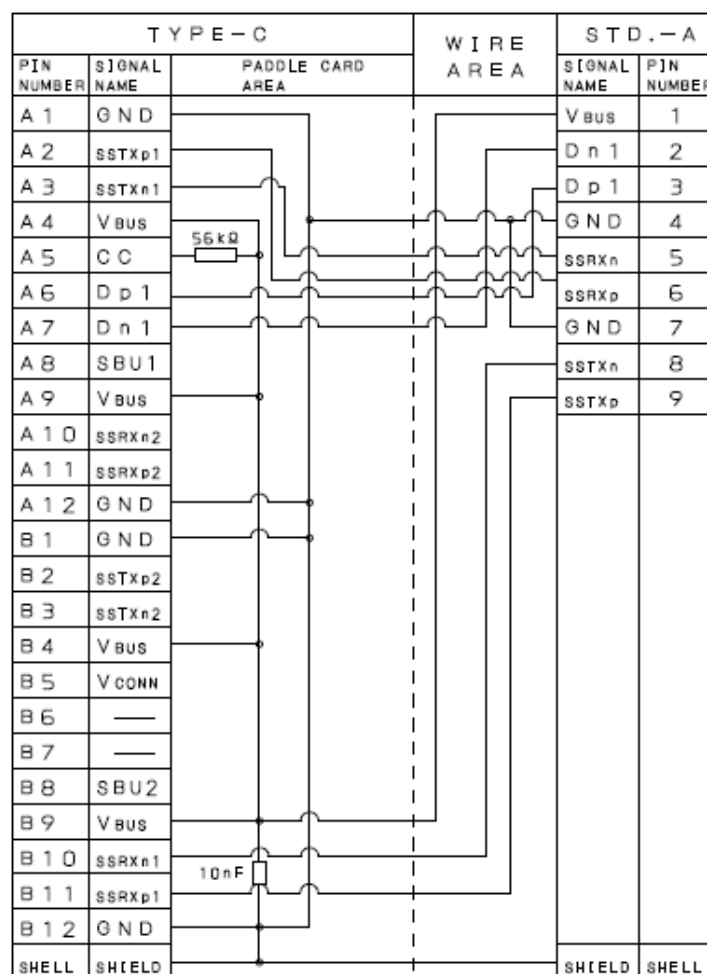| PIN NUMBER	SIGNAL NAME	PADDLE CARD AREA	WIRE AREA	PADDLE CARD AREA	SIGNAL NAME	PIN NUMBER
		E−MARKER				
A1	GND				GND	A1
A2	SSTXp1				SSTXp1	A2
A3	SSTXn1				SSTXn1	A3
A4	VBUS	10nF			VBUS	A4
A5	CC				CC	A5
A6	Dp1				Dp1	A6
A7	Dn1				Dn1	A7
A8	SBU1	10nF			SBU1	A8
A9	VBUS				VBUS	A9
A10	SSRXn2				SSRXn2	A10
A11	SSRXp2				SSRXp2	A11
A12	GND				GND	A12
B1	GND				GND	B1
B2	SSTXp2				SSTXp2	B2
B3	SSTXn2			10nF	SSTXn2	B3
B4	VBUS				VBUS	B4
B5	VCONN				VCONN	B5
B6	—				—	B6
B7	—				—	B7
B8	SBU2			10nF	SBU2	B8
B9	VBUS				VBUS	B9
B10	SSRXn1				SSRXn1	B10
B11	SSRXp1				SSRXp1	B11
B12	GND				GND	B12
SHELL	SHIELD				SHIELD	SHELL

Product Drawing (Type-C to Standard-A)

Unit: mm
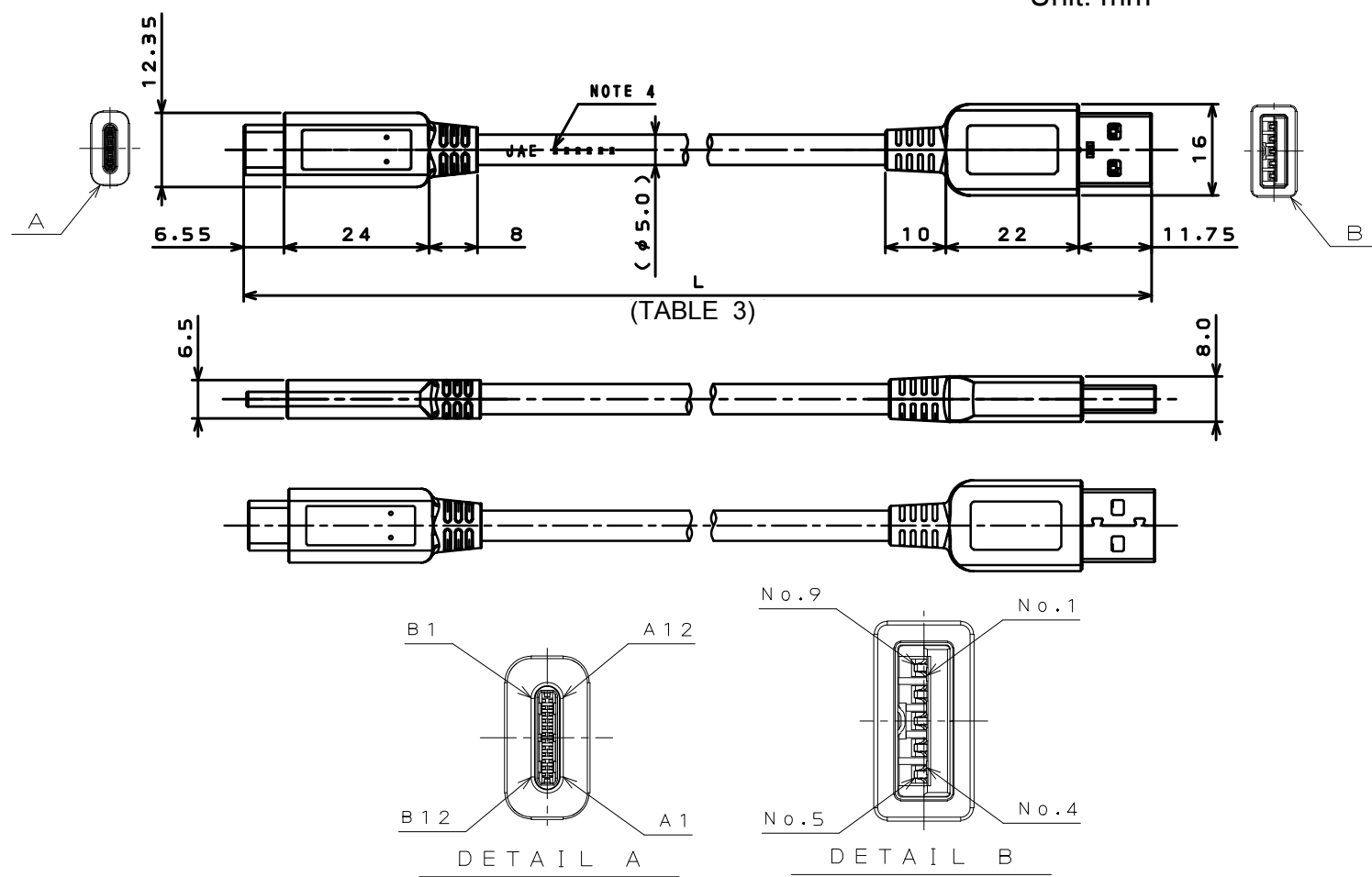
NOTE1. CIRCUIT SCHEMATIC OF PADDLE CARD IS SHOWN IN TABLE4.
2. THIS CABLE ASSEMBLY IS FOR "USB3.1 TYPE-C TO STANDARD-A" SPEC.
3. USB VERSION AND USB LOGO VERSION ARE SHOWN IN TABLE3.
4. LOT NUMBER IS MARKED BETWEEN EACH OUTER MOLD.
5. 100% OPEN,SHORT & MIS-WIRE TEST.

LOT No.
6V 7 9 07
DAY
MONTH(Oct.:0, Nov.:X, Dec.:Y)
YEAR
PRODUCTION AREA

TABLE 3

Part Number	L	USB Version
DX07C19S10L26338	1000	USB 3.2 Gen 2

TABLE 4 (NOTE1)

TYPE-C		PADDLE CARD AREA	WIRE AREA	STD.-A	
PIN NUMBER	SIGNAL NAME			SIGNAL NAME	PIN NUMBER
A1	GND			VBUS	1
A2	SSTXp1			Dn1	2
A3	SSTXn1			Dp1	3
A4	VBUS	56kΩ		GND	4
A5	CC			SSRXn	5
A6	Dp1			SSRXp	6
A7	Dn1			GND	7
A8	SBU1			SSTXn	8
A9	VBUS			SSTXp	9
A10	SSRXn2				
A11	SSRXp2				
A12	GND				
B1	GND				
B2	SSTXp2				
B3	SSTXn2				
B4	VBUS				
B5	VCONN				
B6	——				
B7	——				
B8	SBU2				
B9	VBUS				
B10	SSRXn1	10nF			
B11	SSRXp1				
B12	GND				
SHELL	SHIELD			SHIELD	SHELL

Notice:

1. The values specified in this brochure are only for reference. The products and their specifications are subject to change without notice. Contact our sales staff for further information before considering or ordering any of our products.
For purchase, a product specification must be agreed upon.

2. Users are requested to provide protection circuits and redundancy circuits to ensure safety of the equipment, and sufficiently review the suitability of JAE's products to the equipment.

3. The products presented in this brochure are designed for the uses recommended below.
We strongly suggest you contact our sales staff when considering use of any of the products in any other way than the recommended applications or for a specific use that requires an extremely high reliability.

(1) Applications that require consultation:
(i) Please contact us if you are considering use involving a quality assurance program that you specify or that is peculiar to the industry, such as:
Automotive electrical components, train control, telecommunications devices (mainline), traffic light control, electric power, combustion control, fire prevention or security systems, disaster prevention equipment, etc.
(ii) We may separately give you our support with a quality assurance program that
you specify, when you think of a use such as :
Aviation or space equipment, submarine repeaters, nuclear power control systems, medical equipment for life support, etc.

(2) Recommended applications include:
Computers, office appliances, telecommunications devices (terminals, mobile units), measuring equipment, audiovisual equipment, home electric appliances, factory automation equipment, etc.

Japan Aviation Electronics Industry, Limited

* The specifications in this brochure are subject to change without notice. Please contact JAE for information.