

ISH[®] (Horizontal Type-Hybrid)

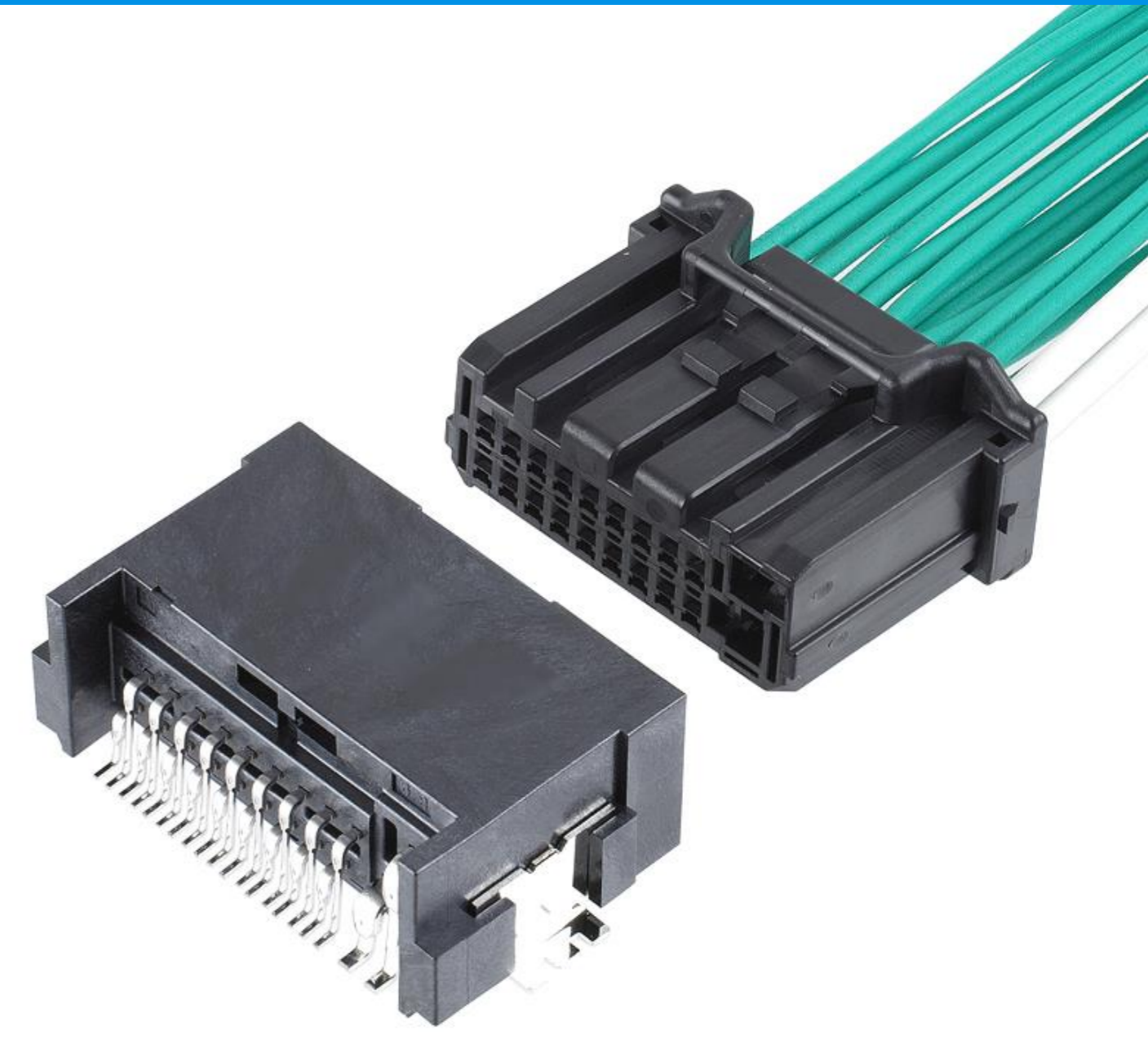
High heat and vibration resistant connector with hybrid (signal + power) terminals

Product Specifications:		Signal	Power
Pitch (mm max.)		2.0	
Contact Size (mm)		0.5 × 0.4 (020)	1.5 × 0.64 (060)
Mated Height (mm max.)		13.60	
Width formula (mm)		13.0+1.0*pin	
Operating Temperature		-40 - 125°C	
Vibration Resistance		10G	
Current Rating		4.5A per pin	7.0A per pin
Voltage Rating		100V	
Withstand Voltage		AC 1000V/minute	
Plating		Sn	
Housing		Male:glass-filled LCP, Female:PBT	
Pin counts	Range	Up to 40	
	Available	20, 28	

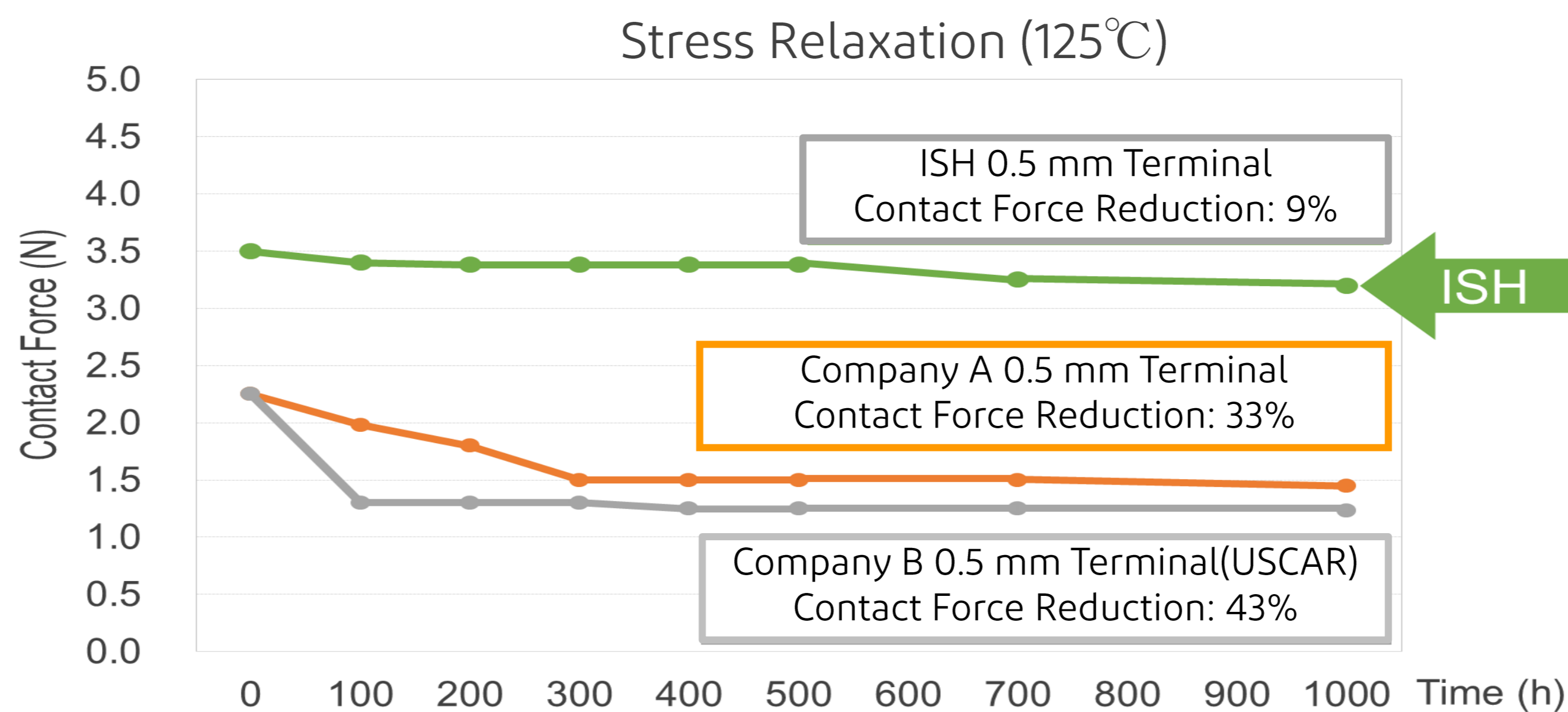
Applicable Cable Size:

Signal: AWG#22,#20
 *Insulation Diameter 1.6 mm max.
 Power: AWG#20
 *Insulation Diameter 1.9 mm max.

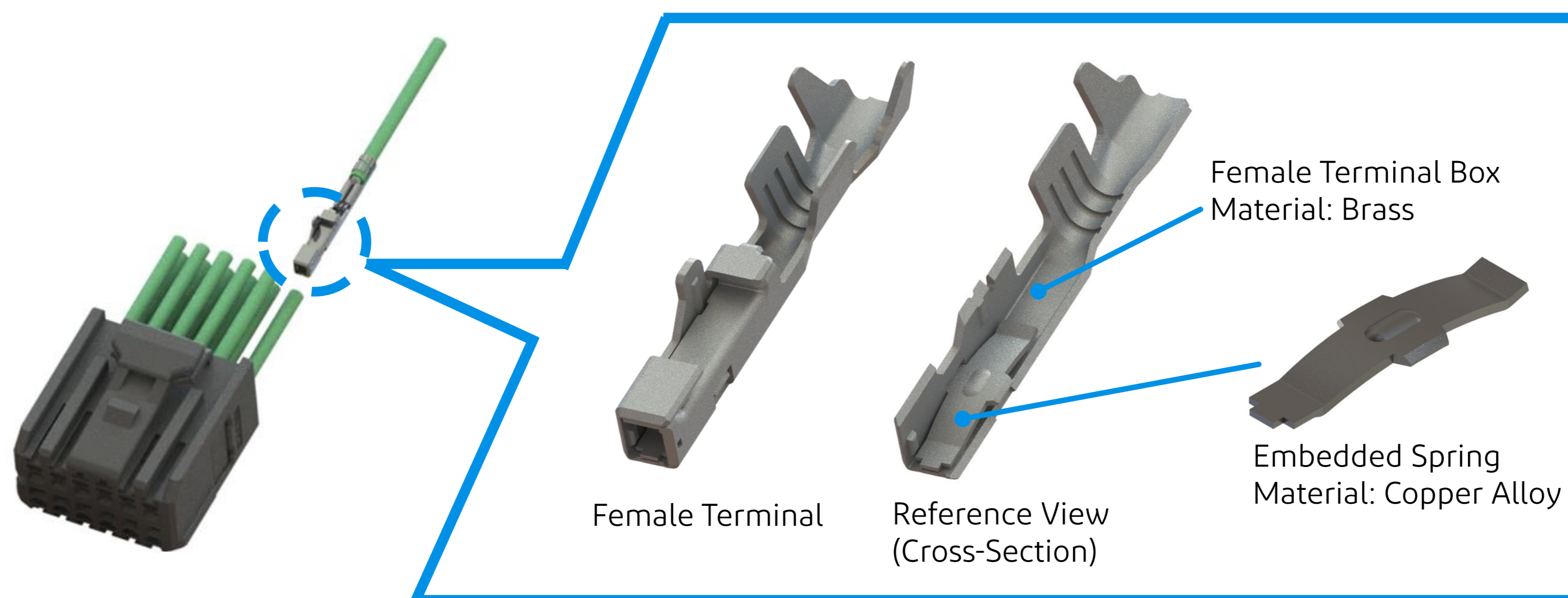
*Please inquire for pin counts not listed or outside of the pin count range.



► High heat and strong vibration resistance for high-reliability applications



► Unique embedded spring terminals for long-term stable electrical connection



► USCAR-2 compliant options available, designed for automotive and industrial grade applications

For Automotive



- Headlamp & other automotive lamps
- Inverter & DC/DC converter
- Battery control module
- Front/Rear view camera control module
- Instrument cluster

For Non-Automotive



- Offroad vehicles (ATV/UTVs, QUADS, Tricycles)
- Trucks and construction machineries (Excavators, Loaders)
- Factory automation equipment

For applications that require compliance with USCAR-2
 Please visit [our website](#) for USCAR-2 compliant part numbers.

Component Parts Details

ISH® (Horizontal Type-Hybrid) MALE (20P):

PART NO.	KEY CODING
V0123-020E-01	KEY CODING - A
V0123-020E-11	KEY CODING - B

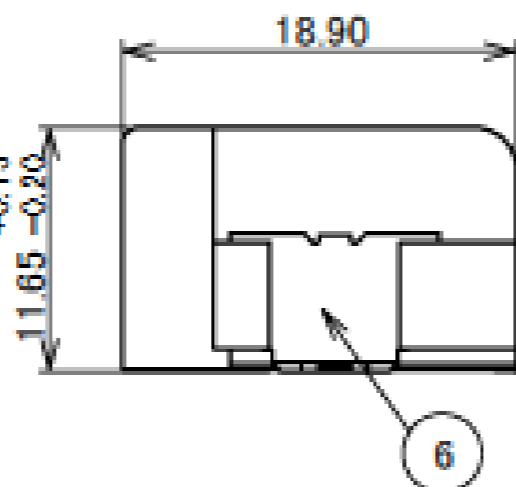
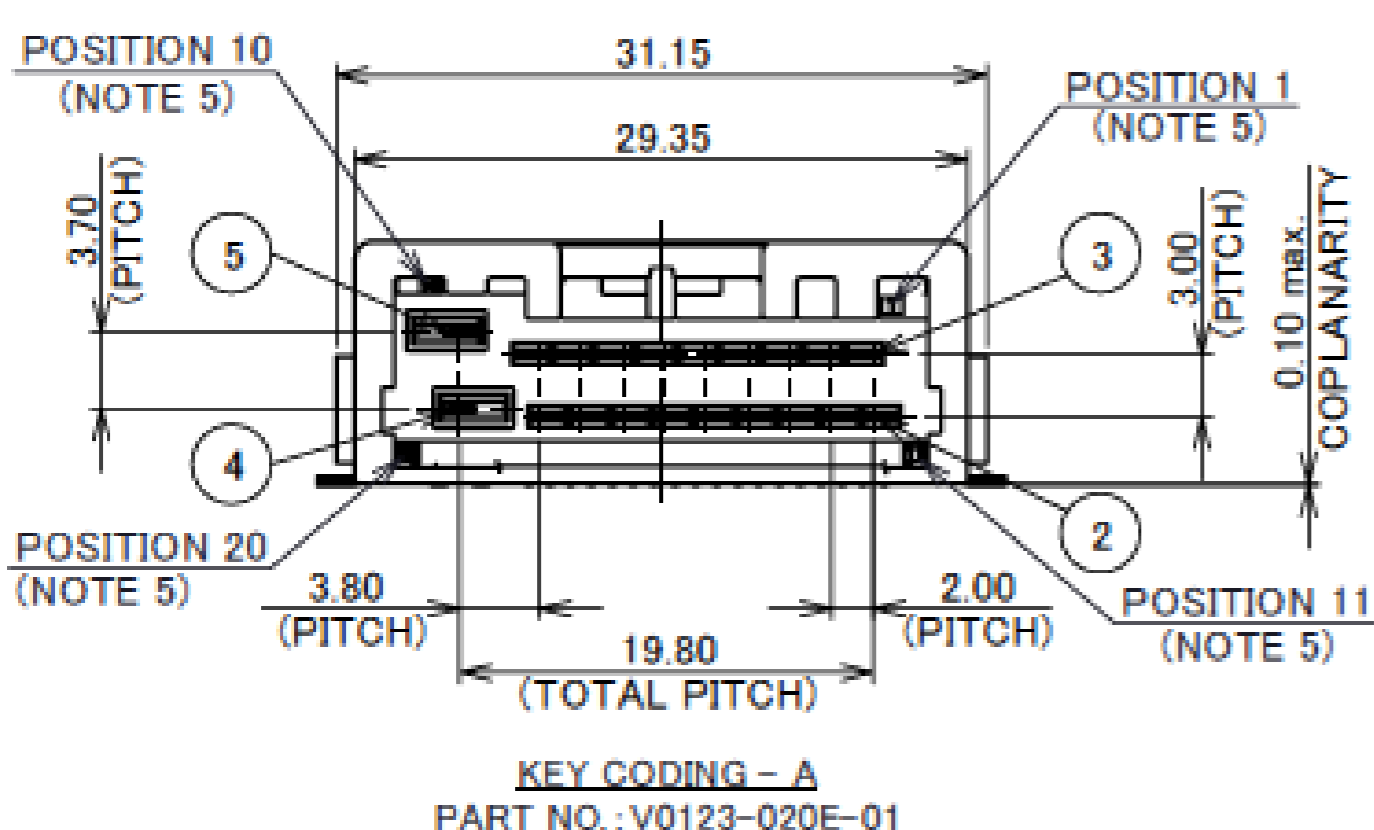
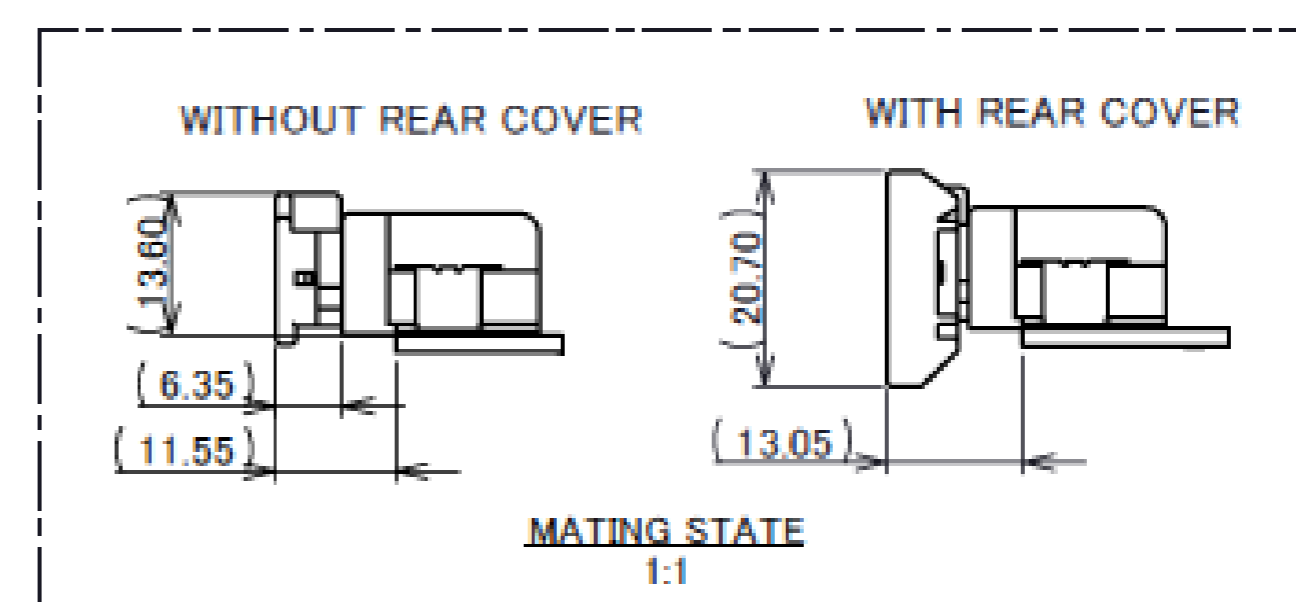
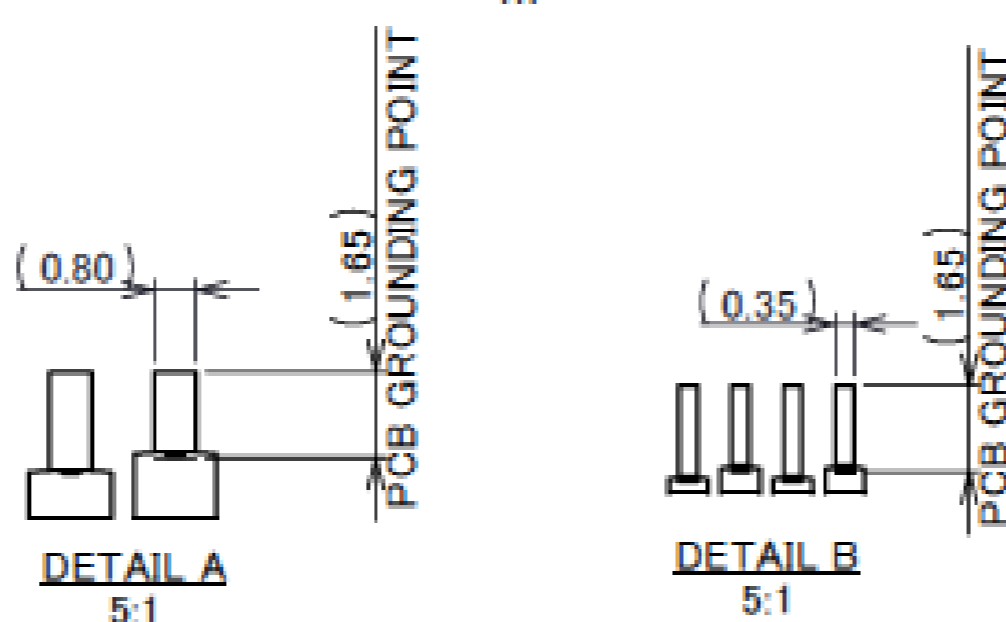
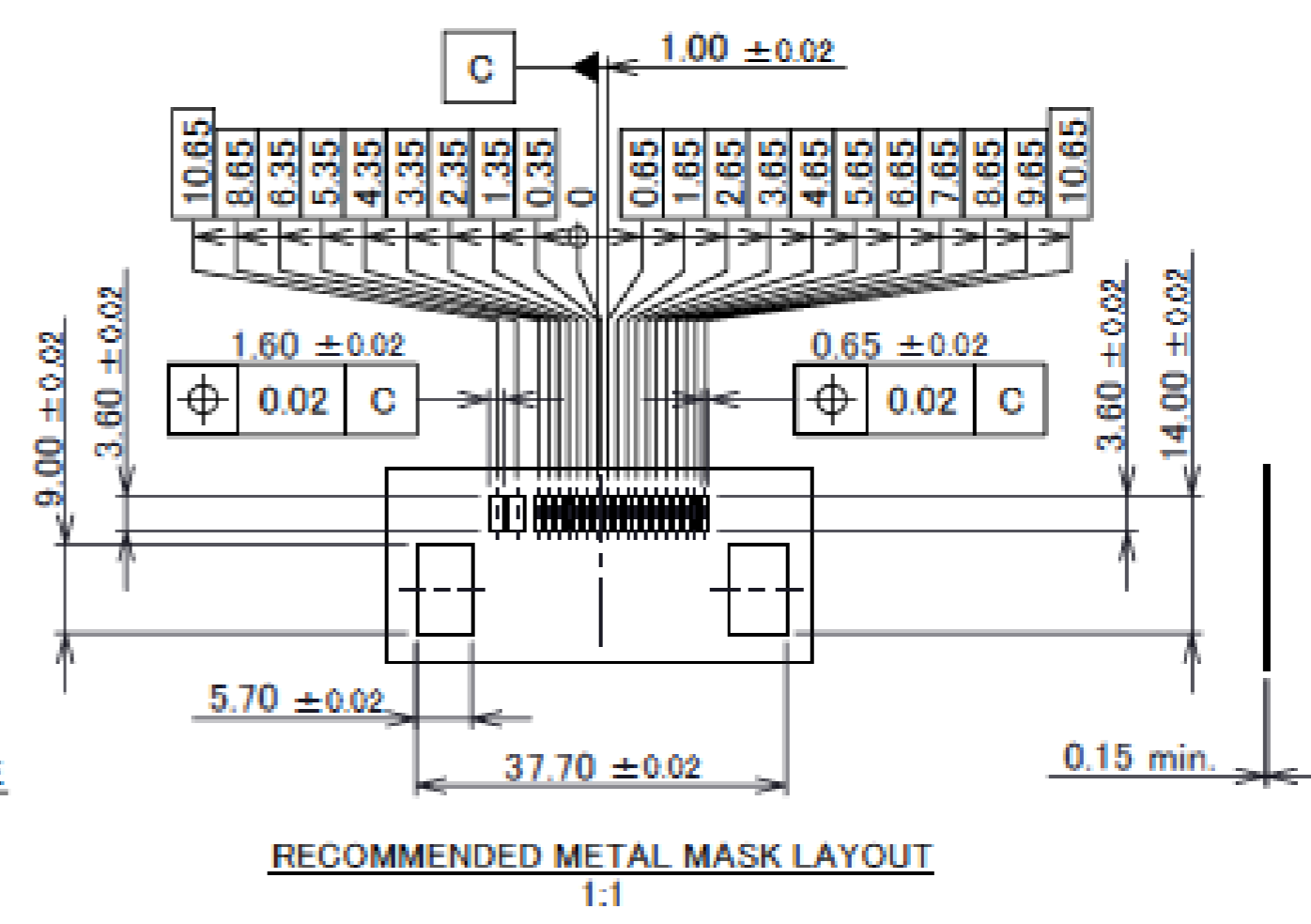
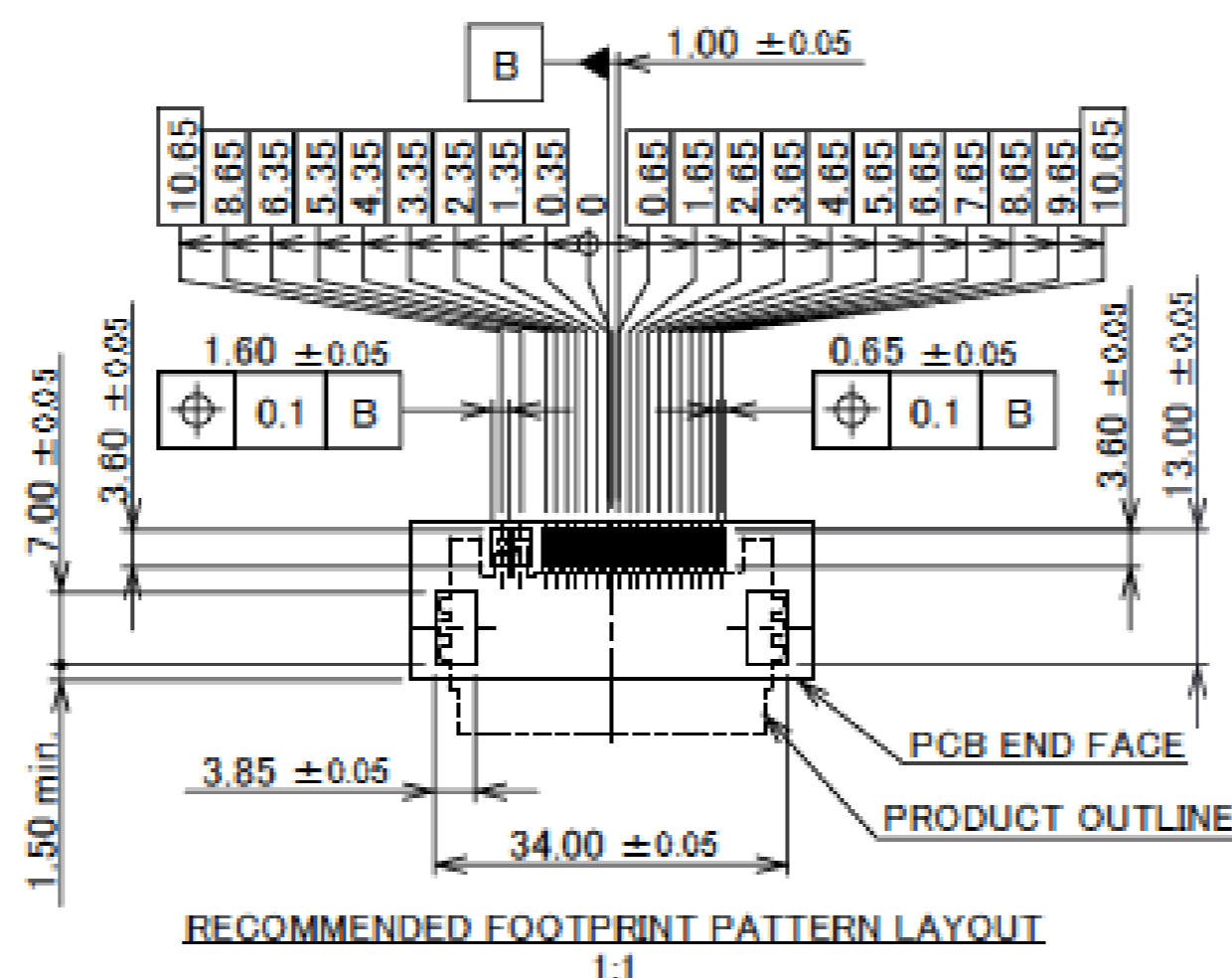
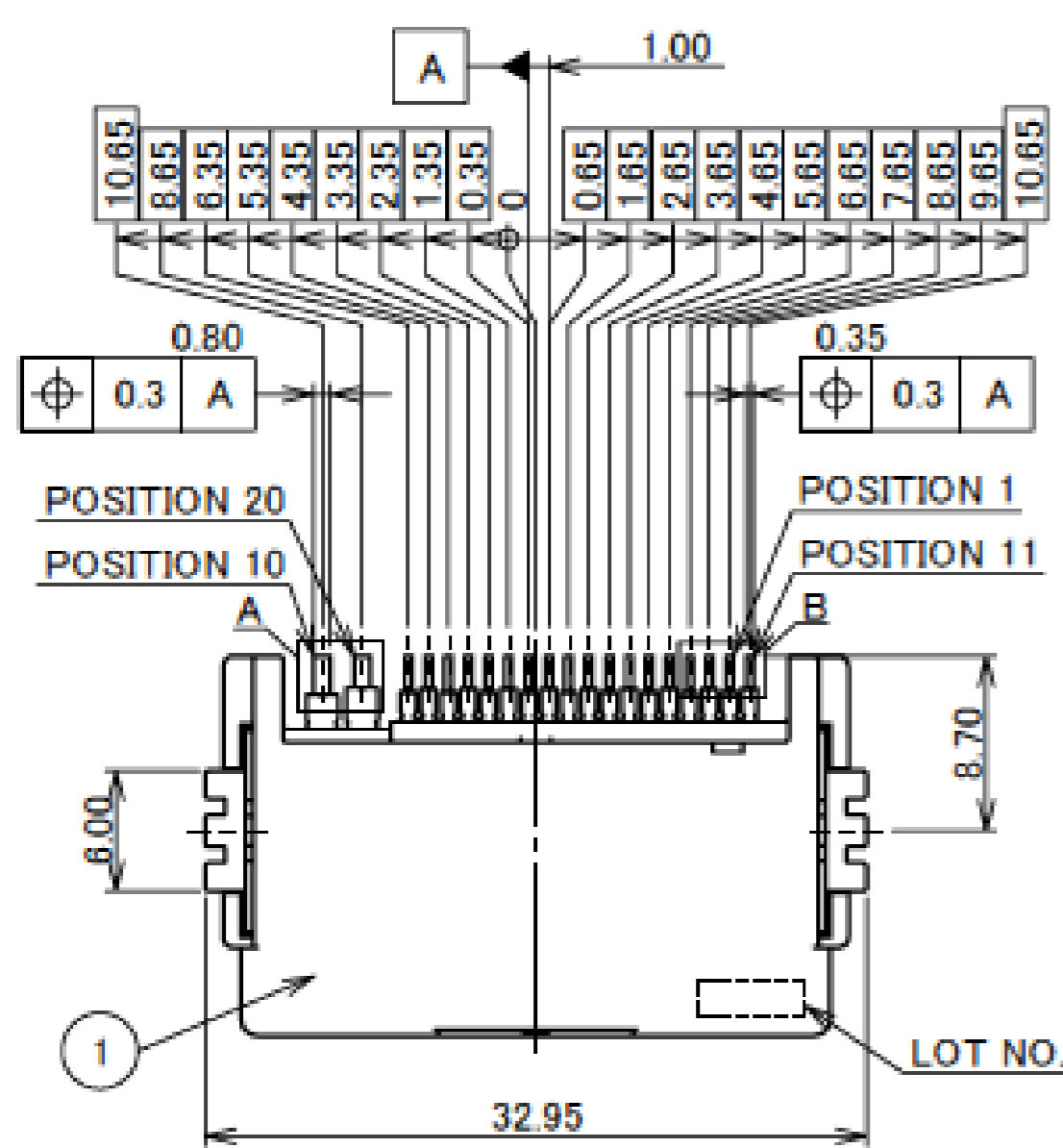
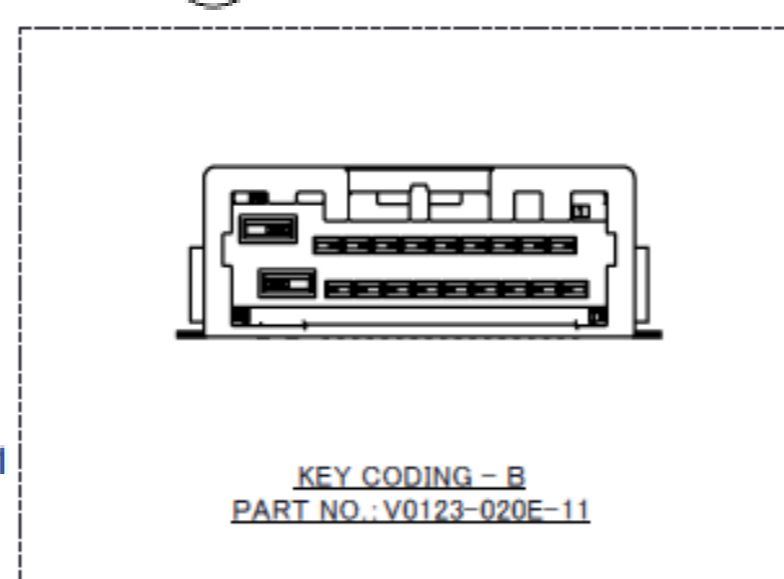


TABLE 1. COUNTERPARTS FOR MATING

MALE CONNECTOR			FEMALE CONNECTOR		FEMALE TERMINAL		REAR COVER	
KEY CODING	PART NO.	COLOR	PART NO.	COLOR	PART NO.	FINISH	PART NO.	FINISH
KEY CODING-A	V0123-020E-01	BLACK	V0124-020B-01	BLACK	VT009-02 & VT011-02	Sn REFLOW	V0124-84020-01	BLACK
KEY CODING-B	V0123-020E-11	NATURAL	V0124-020B-11	NATURAL				

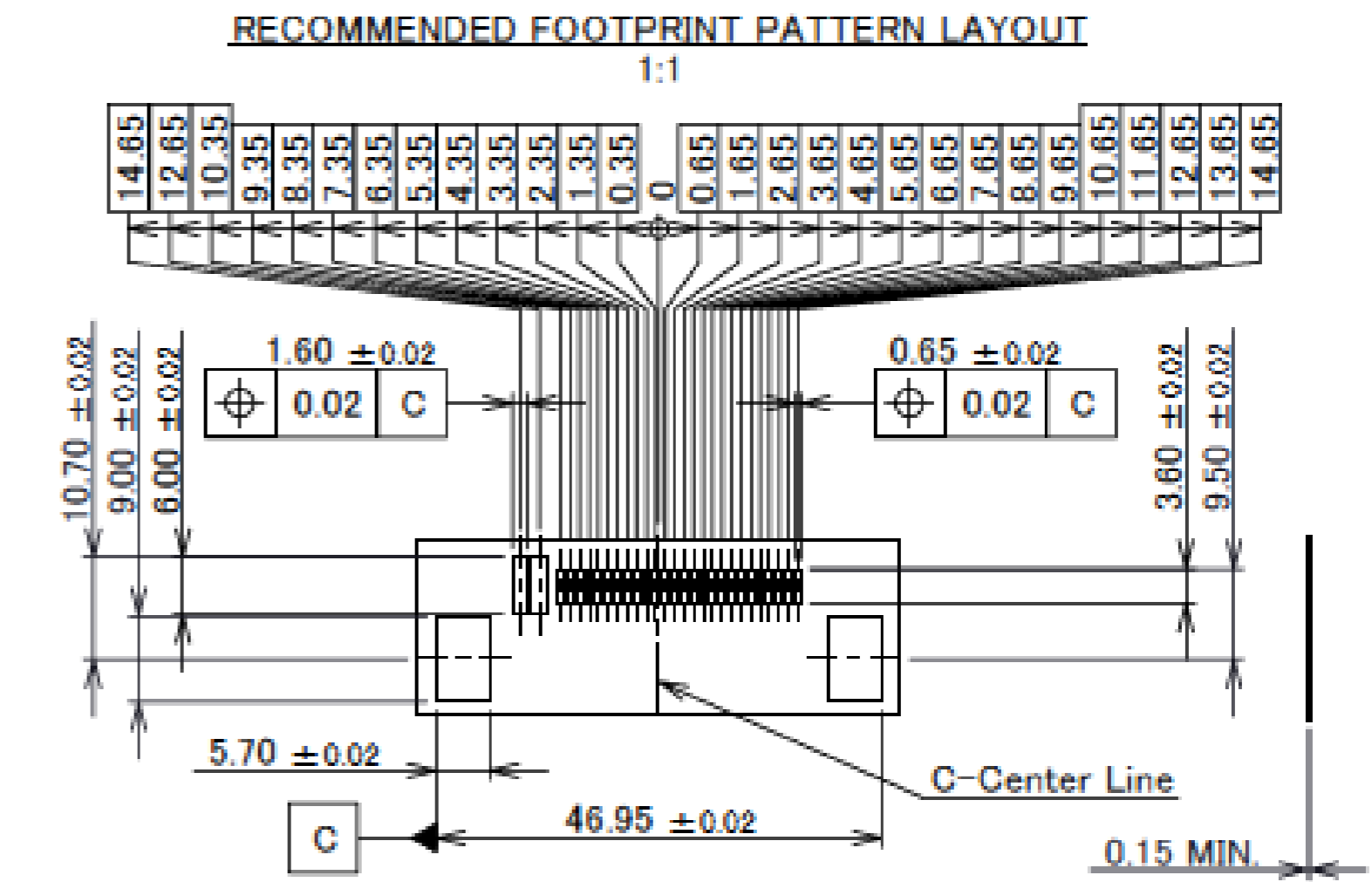
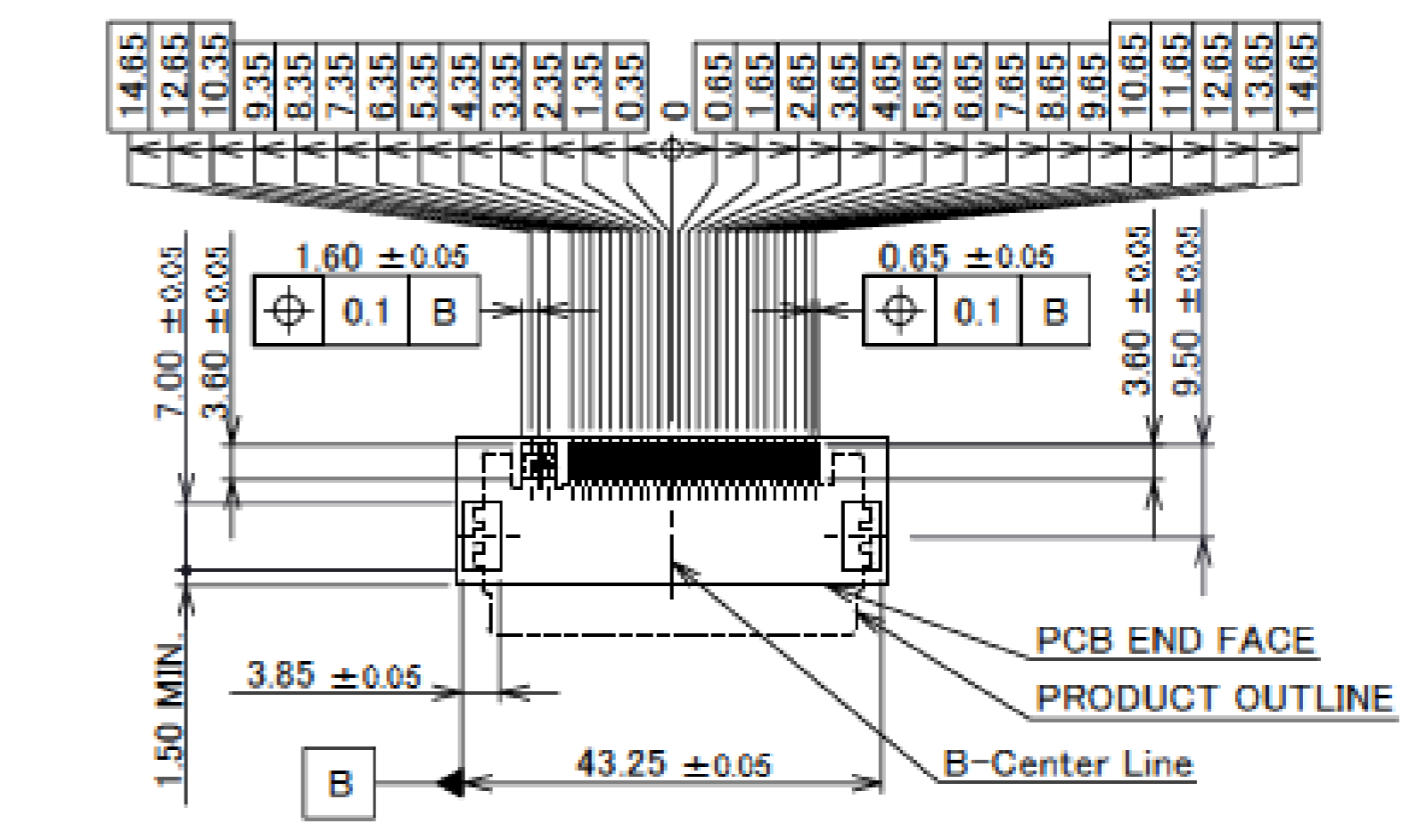
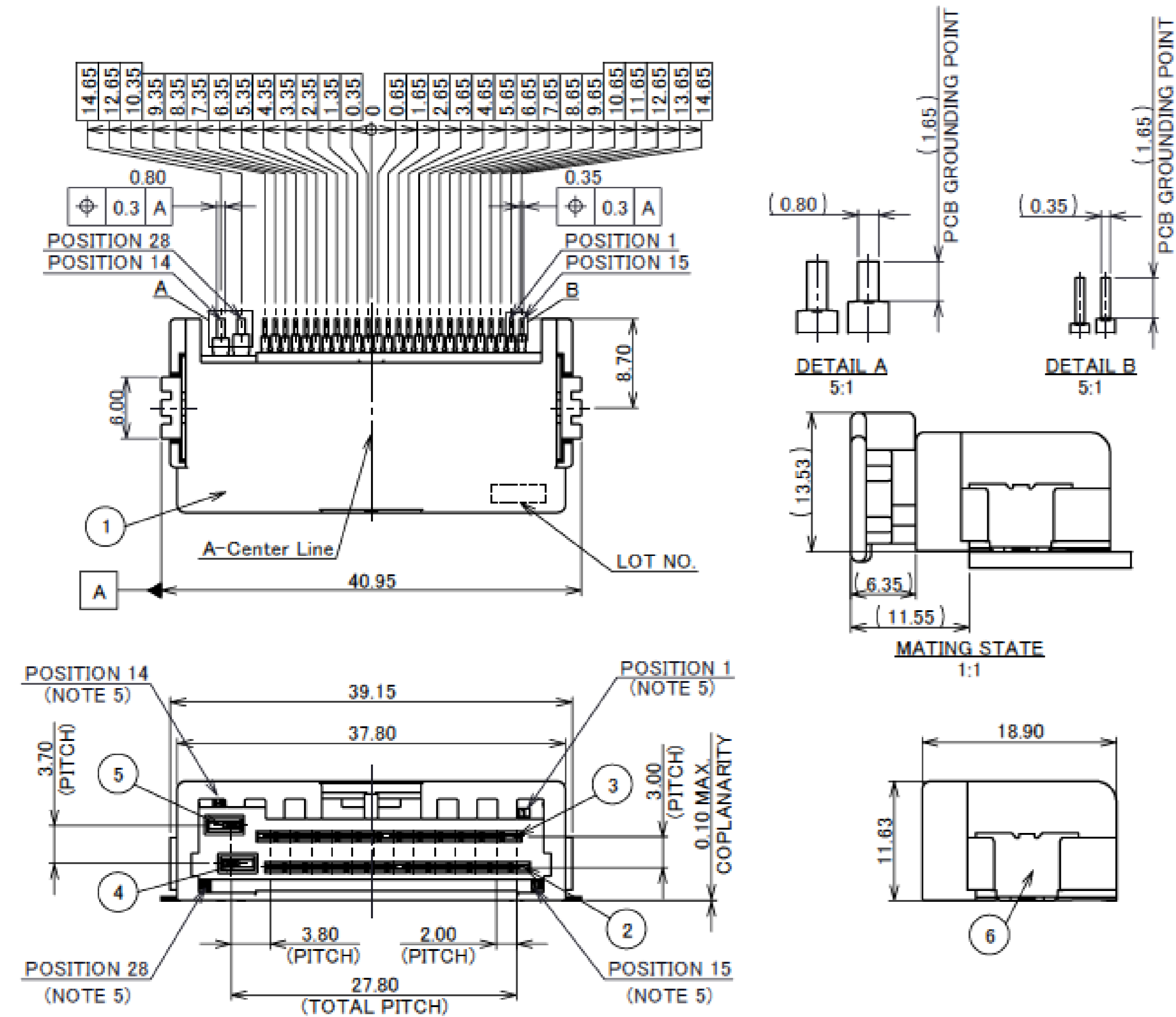
NO.	DESCRIPTION	MATERIAL	FINISH/COLOR/REMARKS
6	HOLD DOWN	BRASS	Sn REFLOW
5	1.5mm MALE TERMINAL-2	BRASS	Sn REFLOW
4	1.5mm MALE TERMINAL-1	BRASS	Sn REFLOW
3	0.5mm MALE TERMINAL-2	BRASS	Sn REFLOW
2	0.5mm MALE TERMINAL-1	BRASS	Sn REFLOW
1	MALE HOUSING	GLASS-FILLED LCP	BLACK OR NATURAL /UL94V-0

- NOTES
1. APPLICABLE PART NO. ARE SHOWN IN TABLE 1.
 2. COMPLY WITH ELV/ROHS
 3. HANDLE OF PRODUCT IN COMPLIANCE WITH HANDLING MANUAL [HDM-0021]
 4. USE METAL MASK WHICH HAS A THICKNESS OF 0.15mm MIN. WHEN THE MALE CONNECTOR IS MOUNTED ON THE PCB.
 5. POSITION NUMBERS ARE INDICATED.



ISH® (Horizontal Type-Hybrid) MALE (28P):

MALE CONNECTOR			FEMALE CONNECTOR		FEMALE TERMINAL	
KEY CODING	PART NO.	COLOR	PART NO.	COLOR	PART NO.	FINISH
-	V0123-023E-01	BLACK	V0124-023E-01	BLACK	VT009-02 & VT011-02	Sn REFLOW



NO.	DESCRIPTION	MATERIAL	FINISH/COLOR/REMARKS
6	HOLD DOWN	BRASS	Sn REFLOW
5	1.5mm MALE TERMINAL-2	BRASS	Sn REFLOW
4	1.5mm MALE TERMINAL-1	BRASS	Sn REFLOW
3	0.5mm MALE TERMINAL-2	BRASS	Sn REFLOW
2	0.5mm MALE TERMINAL-1	BRASS	Sn REFLOW
1	MALE HOUSING	GLASS-FILLED LCP	BLACK OR NATURAL /UL94V-0

- NOTES**
1. APPLICABLE PART NO. ARE SHOWN IN TABLE 1.
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ISH® (Horizontal Type-Hybrid) FEMALE (20P):

PART NO.	KEY CODING
V0124-020B-01	KEY CODING - A
V0124-020B-11	KEY CODING - B

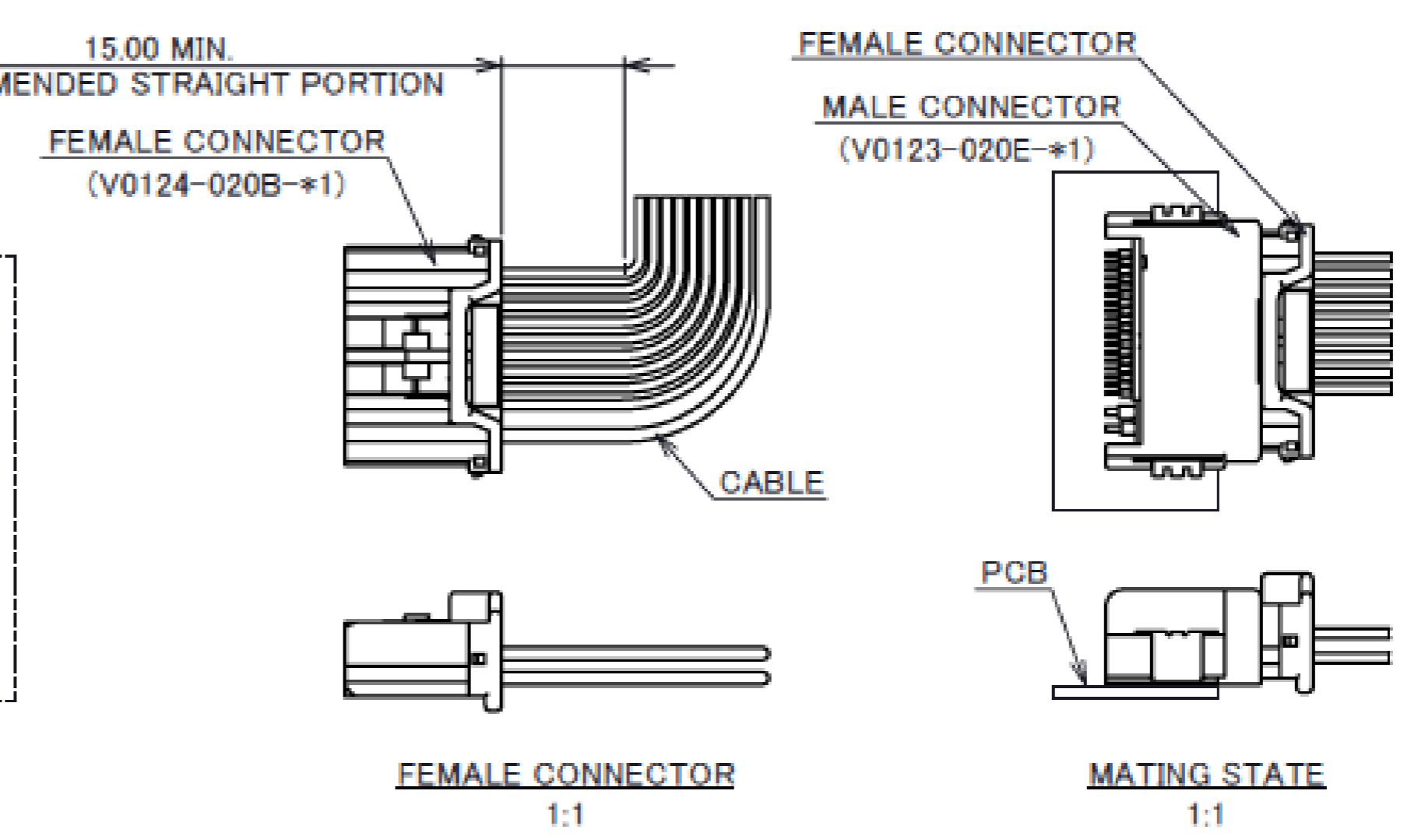
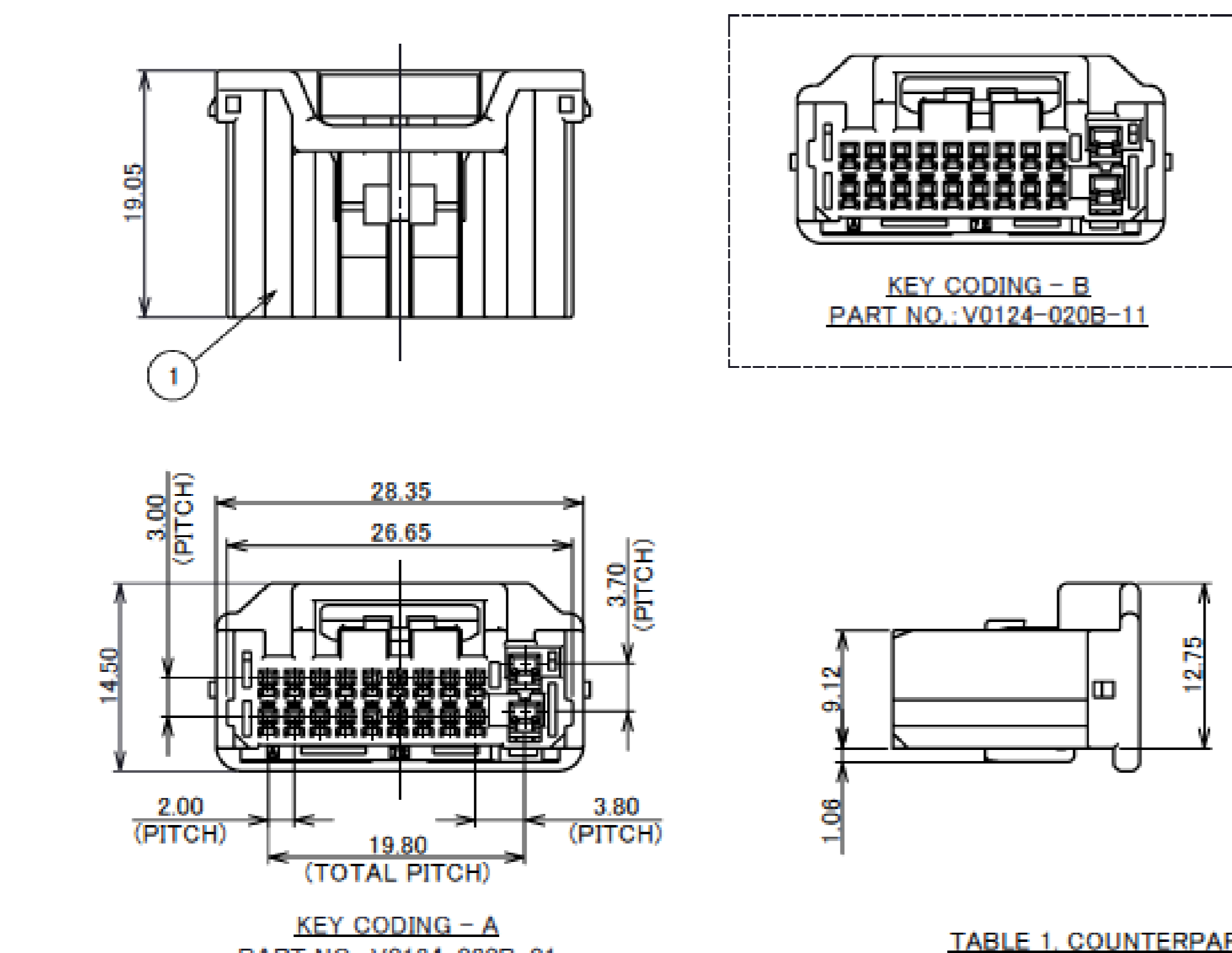


TABLE 1. COUNTERPARTS FOR MATING

FEMALE CONNECTOR			MALE CONNECTOR		FEMALE TERMINAL		REAR COVER	
KEY CODING	PART NO.	COLOR	PART NO.	COLOR	PART NO.	FINISH	PART NO.	COLOR
KEY CODING - A	V0124-020B-01	BLACK	V0123-020E-01	BLACK	VT009-02 & VT011-02	Sn REFLOW	V0124-94020-01	BLACK
KEY CODING - B	V0124-020B-11	NATURAL	V0123-020E-11	NATURAL				

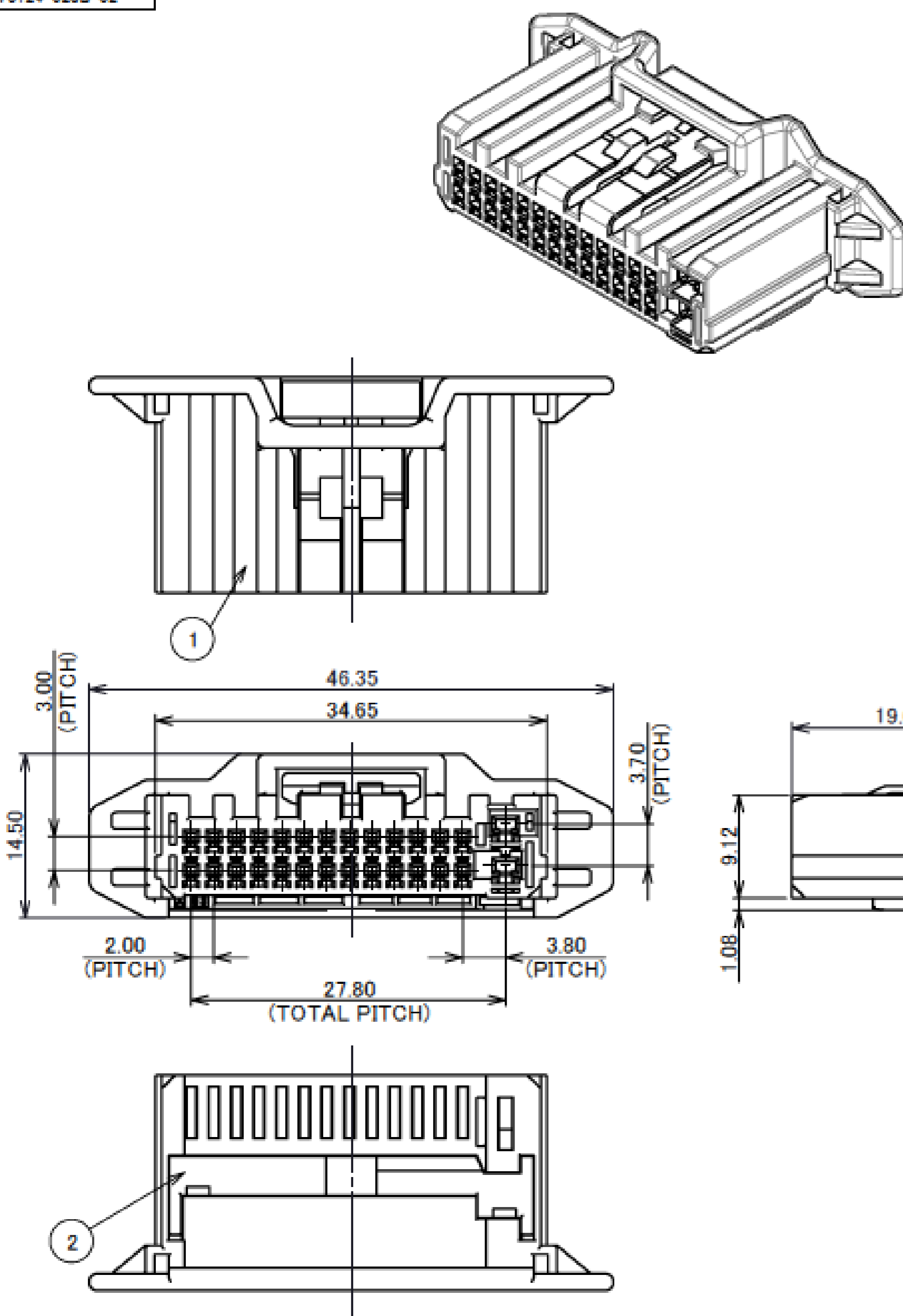
NO.	DESCRIPTION	QTY.	MATERIAL	FINISH/COLOR	REMARKS
2	RETAINER	1	PBT	BLACK	-
1	FEMALE HOUSING	1	PBT	KEY CODING - A: BLACK KEY CODING - B: NATURAL	-

- NOTE**
1. APPLICABLE MALE CONNECTOR PARTS NO. ARE SHOWN IN TABLE 1.
 2. COMPLY WITH ELV/RoHS
 3. HANDLE OF PRODUCT IN COMPLIANCE WITH HANDLING MANUAL [HDM-0021]
 4. POSITION NUMBERS ARE INDICATED.

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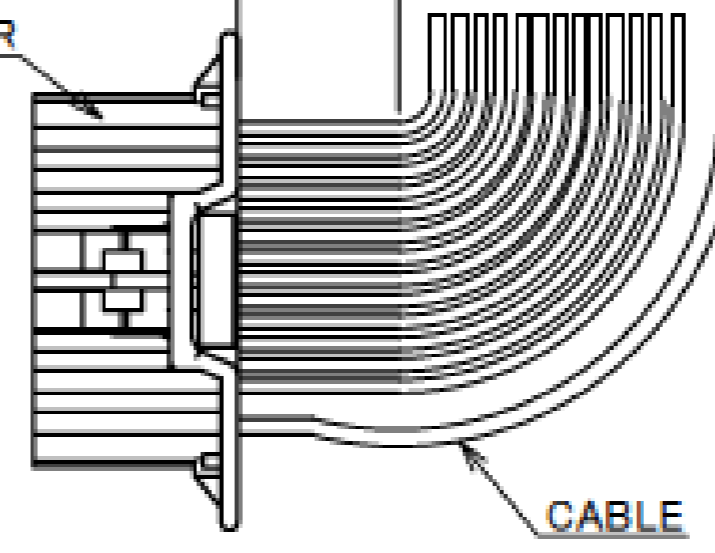
ISH® (Horizontal Type-Hybrid) FEMALE (28P):

PART NO.
V0124-028B-02



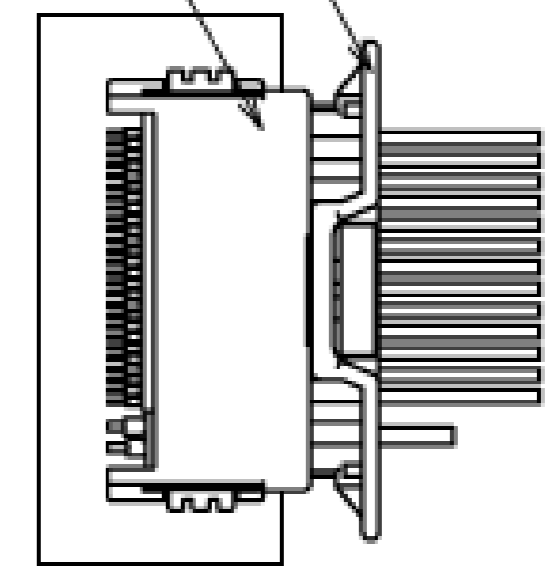
15.00 MIN.
RECOMMENDED STRAIGHT PORTION

FEMALE CONNECTOR
(V0124-028B-02)

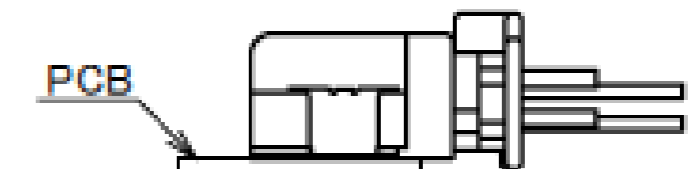


FEMALE CONNECTOR

MALE CONNECTOR
(V0123-028E-01)



FEMALE CONNECTOR
1:1



MATING STATE
1:1

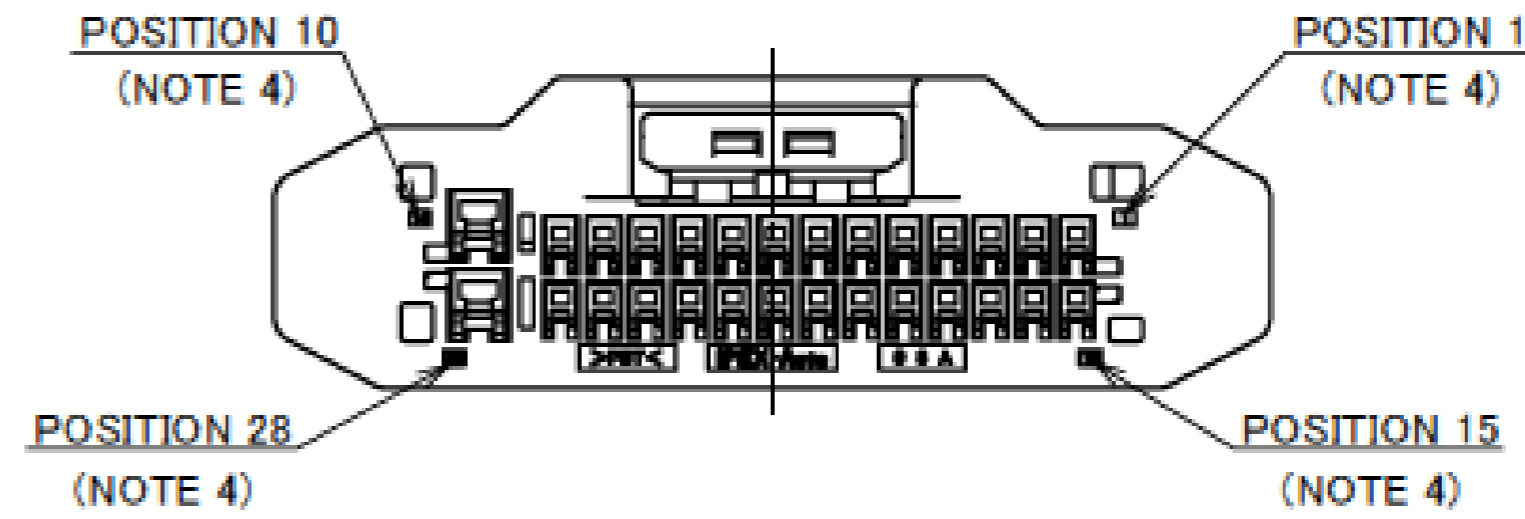


TABLE 1. COUNTERPARTS FOR MATING

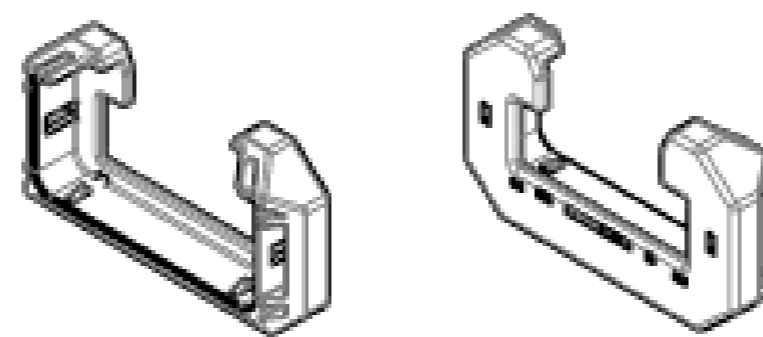
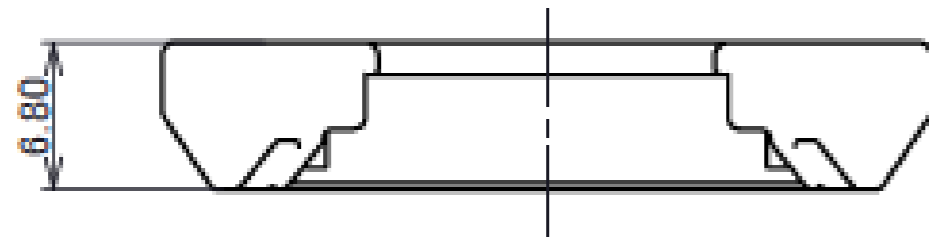
FEMALE CONNECTOR		MALE CONNECTOR		FEMALE TERMINAL	
PART NO.	COLOR	PART NO.	COLOR	PART NO.	FINISH
V0124-028B-02	BLACK	V0123-028E-01	BLACK	VT009-02 & VT011-02	Sn REFLOW
2	RETAINER	1	PBT	BLACK	-
1	FEMALE HOUSING	1	PBT	BLACK	-
NO.	DESCRIPTION	QTY.	MATERIAL	FINISH/COLOR	REMARKS

- NOTE
- 1.APPLICABLE MALE CONNECTOR PARTS NO. ARE SHOWN IN TABLE 1.
 - 2.COMPLY WITH ELV/RoHS
 - 3.HANDLE OF PRODUCT IN COMPLIANCE WITH HANDLING MANUAL [HDM-0021]
 - 4.POSITION NUMBERS ARE INDICATED.

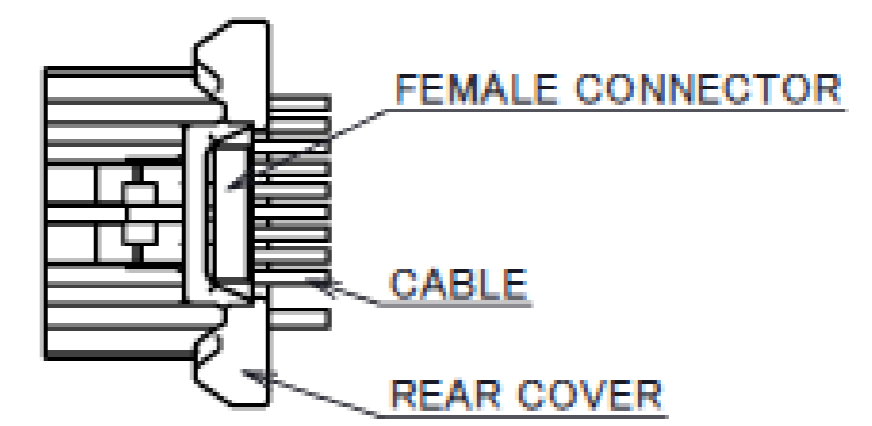
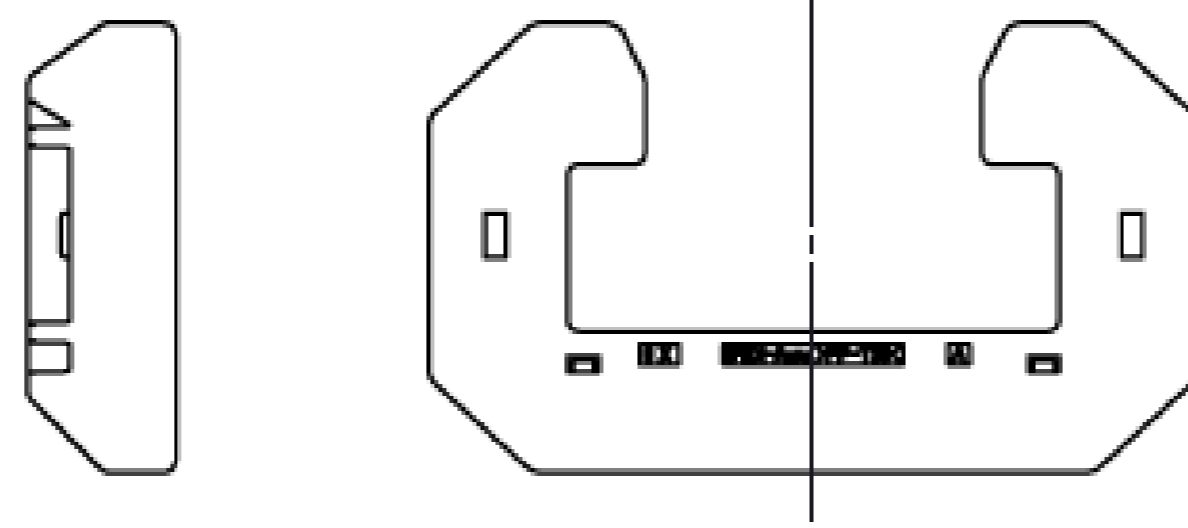
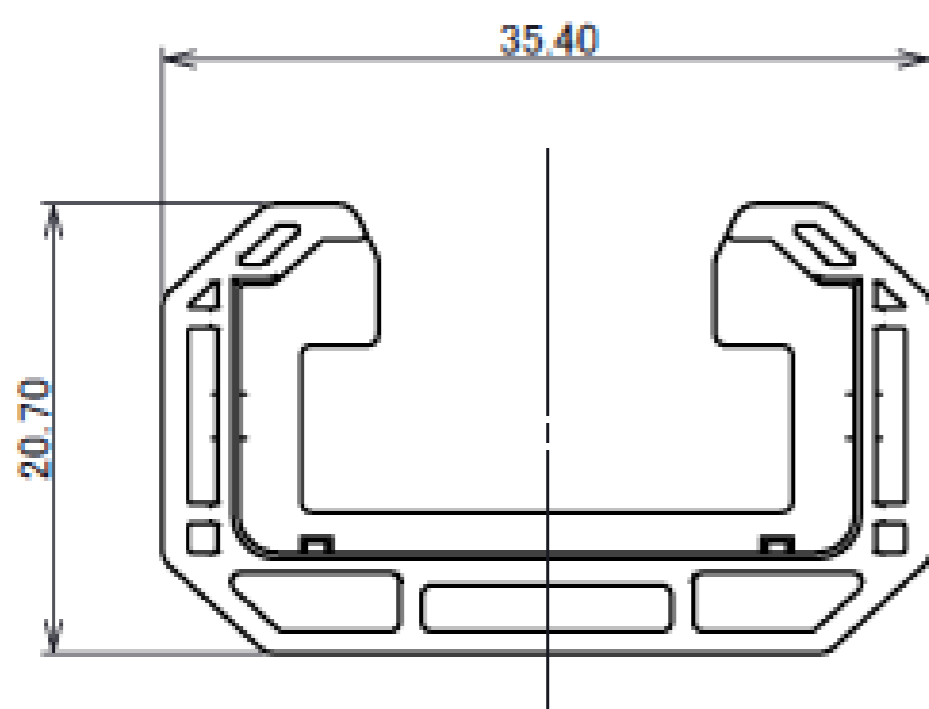
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ISH® (Horizontal Type-Hybrid) REAR COVER (20P):

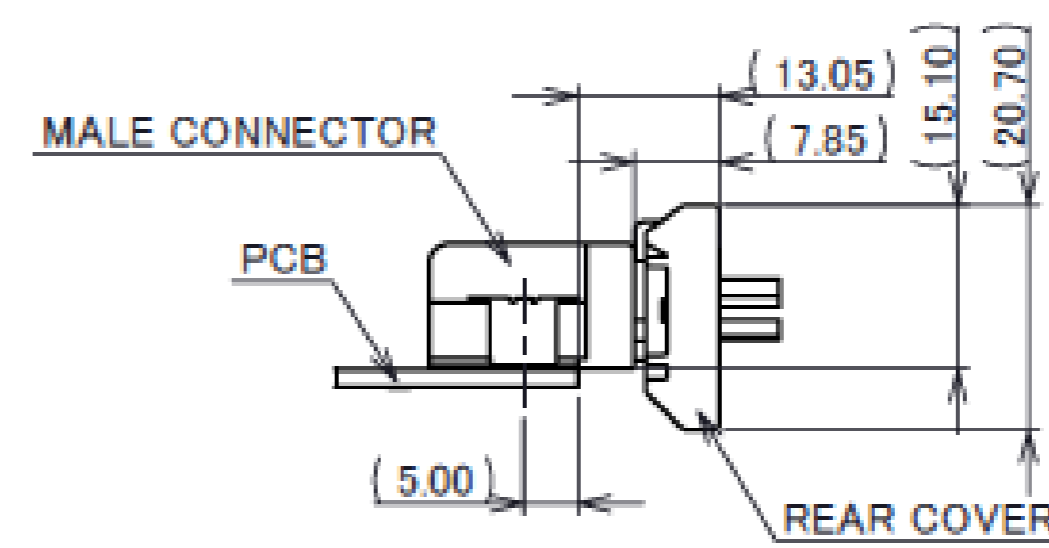
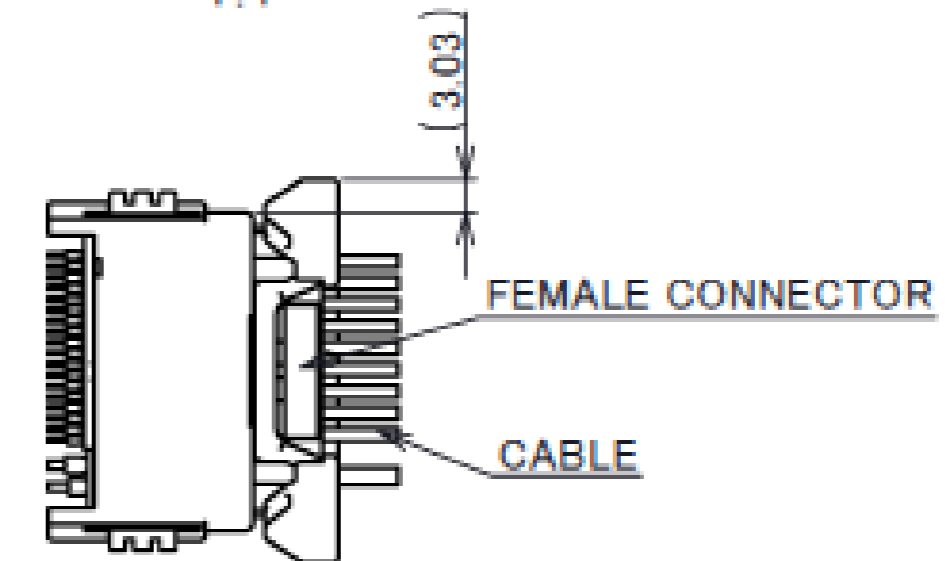
PART NO.
V0124-84020-01



ISOMETRIC VIEW
1:1



REAR COVER ASSEMBLY
1:1



MATING STATE
1:1

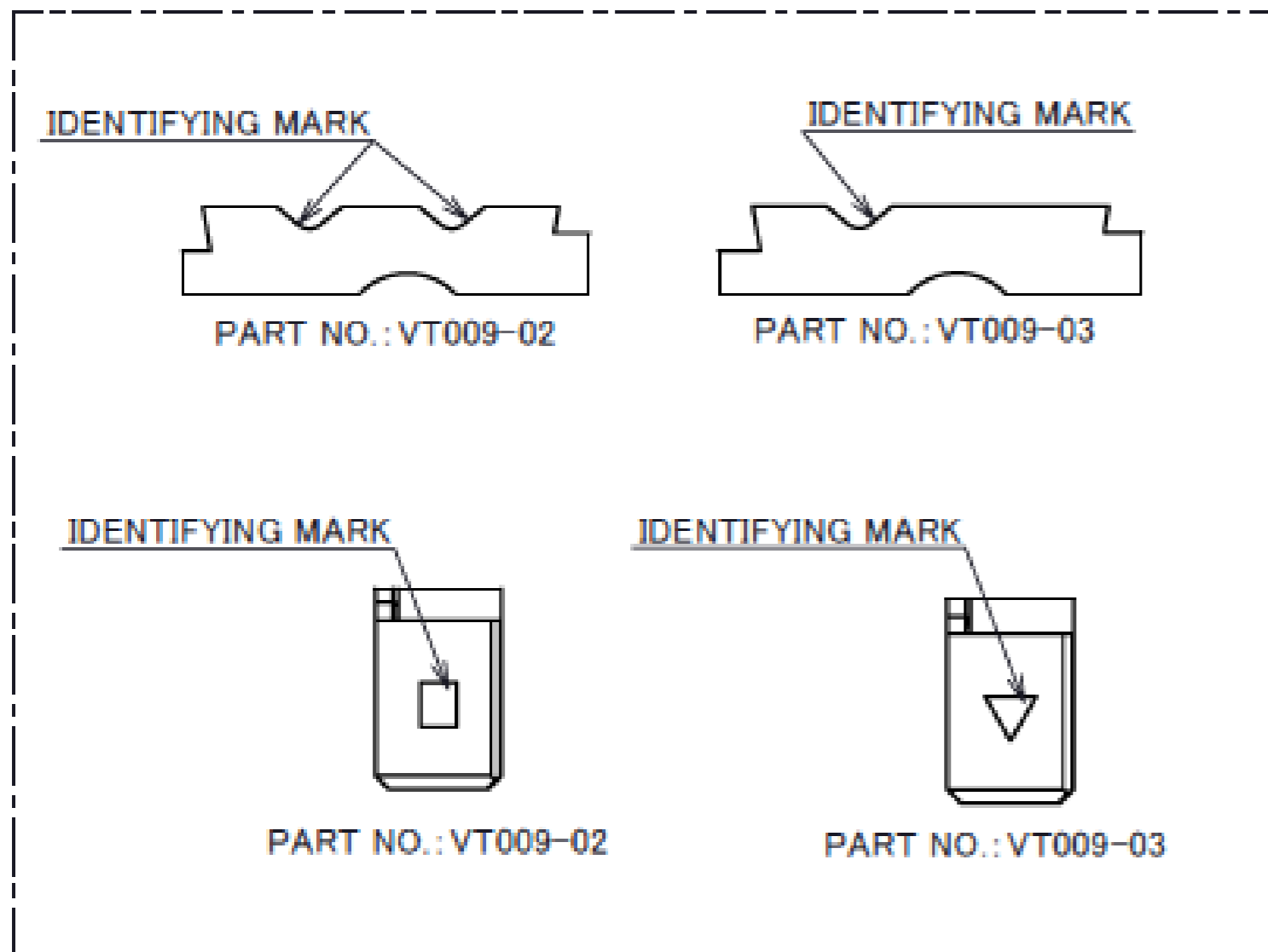
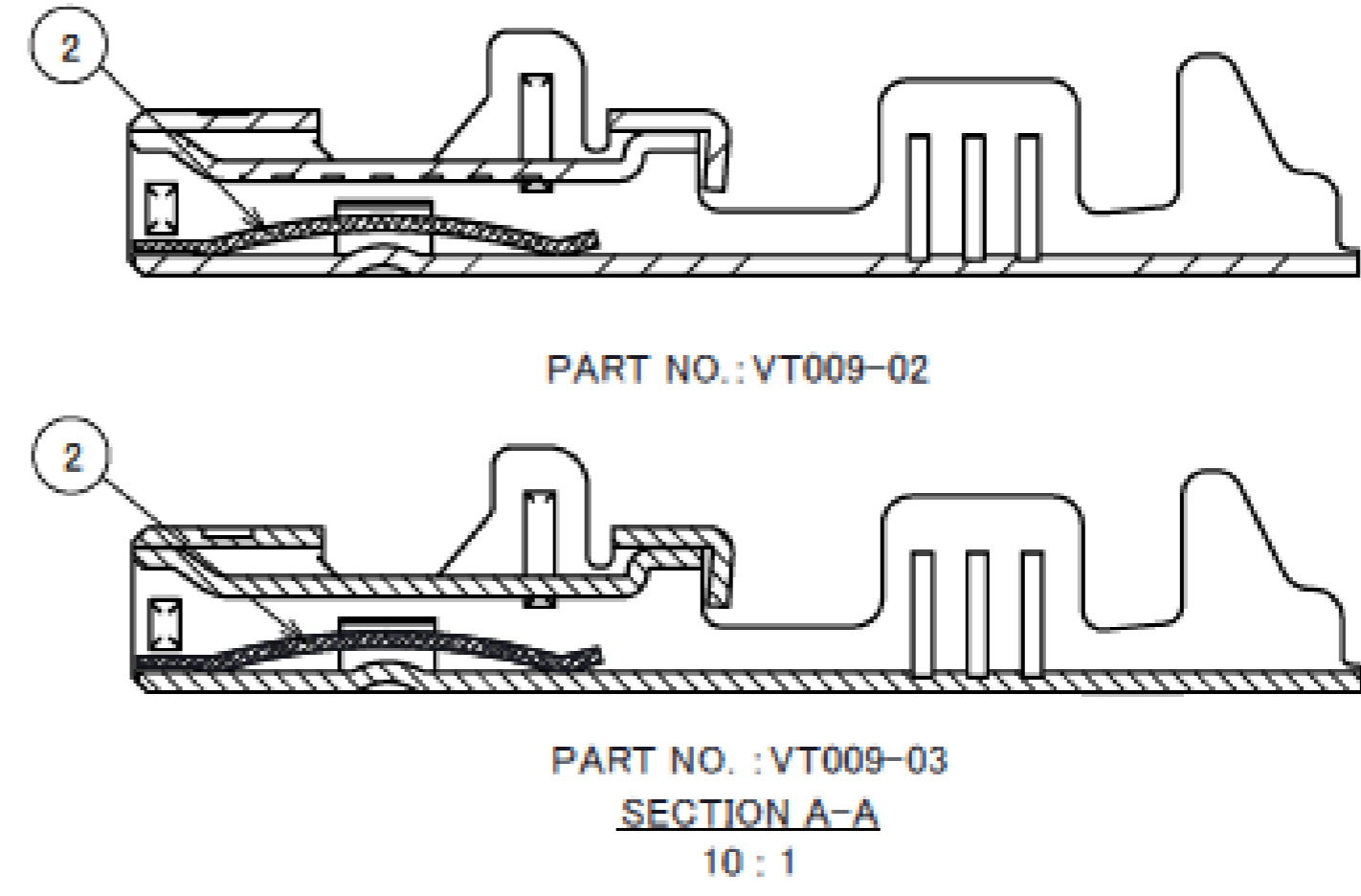
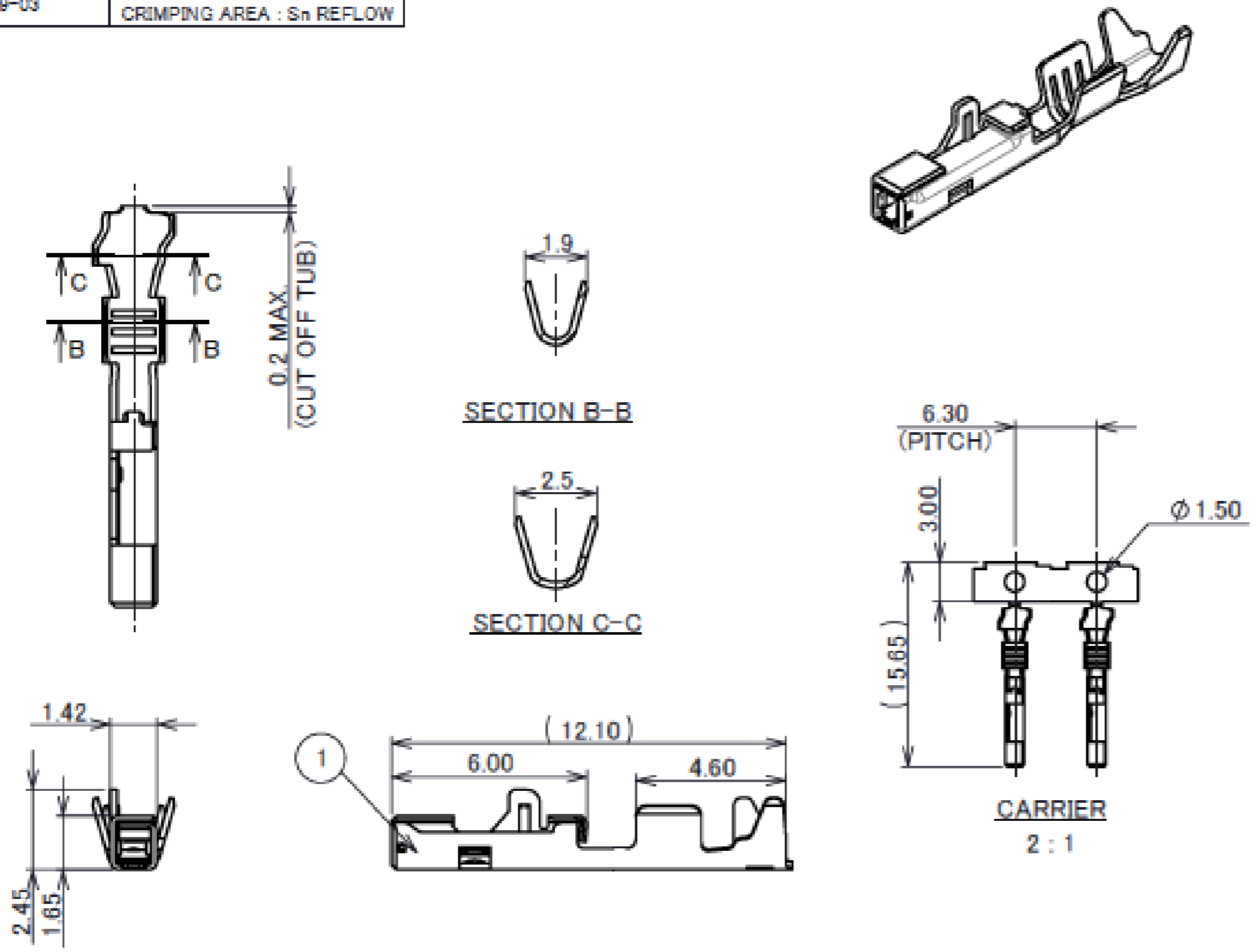
1	REAR COVER	PP-T30	BLACK
NO.	DESCRIPTION	MATERIAL	FINISH/COLOR/REMARKS

- NOTES
- 1.APPLICABLE PART NO.:
-FEMALE HOUSING...V0124-020B-01(KEY CODING - A)
...V0124-020B-02(KEY CODING - B)
 - 2.COMPLY WITH ELV/RoHS
 - 3.INSERTION FORCE TO FEMALE HOUSING:55N MAX.
RETENTION FORCE TO FEMALE HOUSING:30N MIN.

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ISH® (Horizontal Type-Hybrid) TERMINAL (Size 0.5 mm):

PART NO.	PLATING
VT009-02	Sn REFLOW
VT009-03	CONTACT AREA : Au PLATING CRIMPING AREA : Sn REFLOW



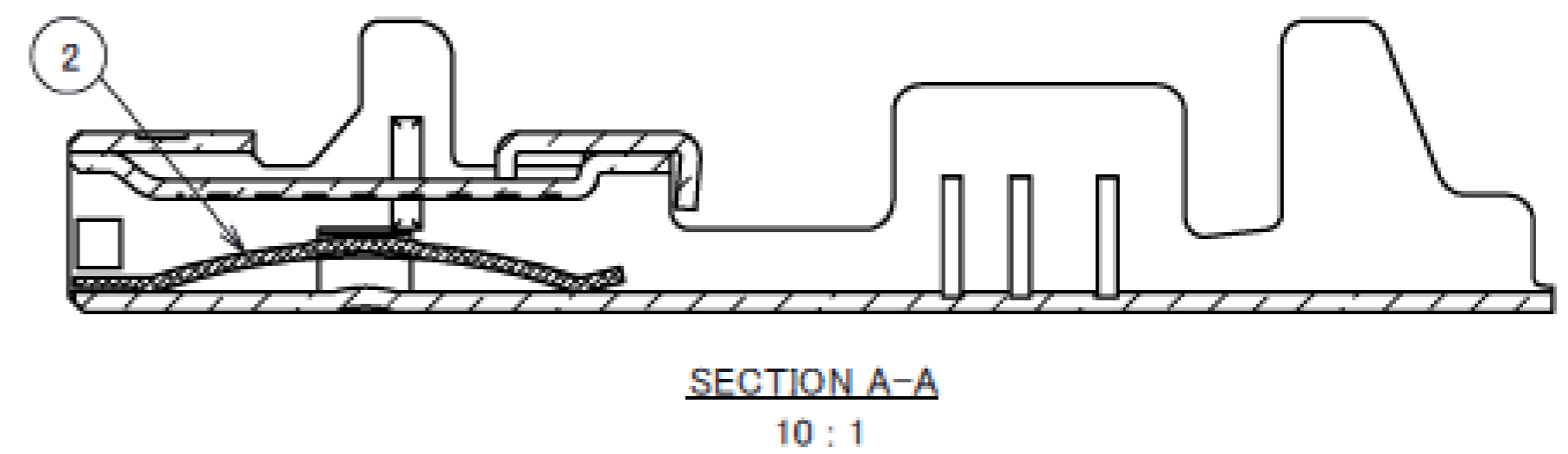
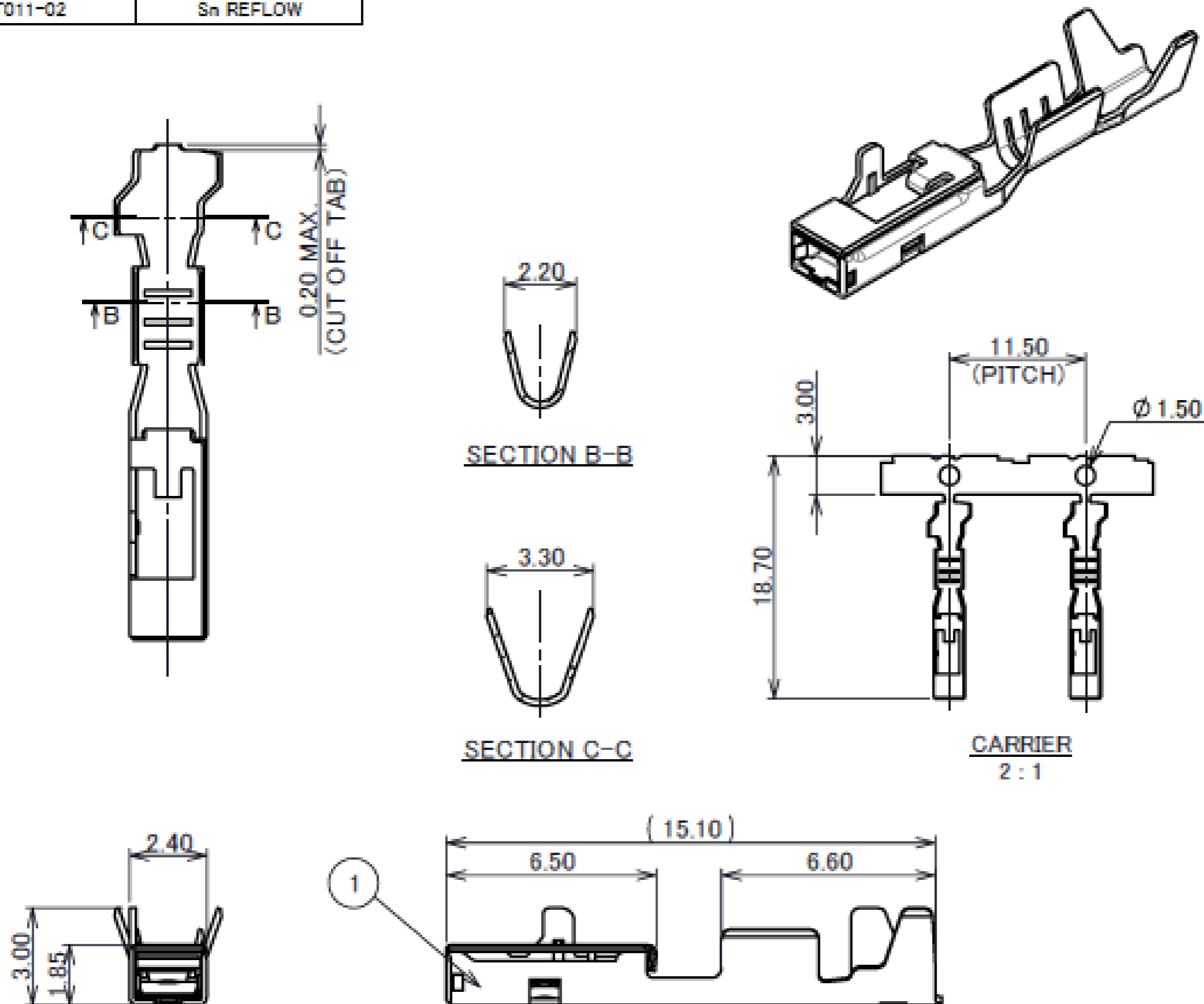
NOTE
 1. APPLICABLE FEMALE HOUSING: ISH CONNECTOR SERIES
 2. APPLICABLE CABLE SIZE: 0.3mm² / 0.5mm² (FINISHED ϕ 1.60mm MAX.)
 3. COMPLY WITH ELV/RoHS.
 4. TERMINAL CRIMP SPECIFICATION MUST BE COMPLIANT WITH HANDLING MANUAL [HDM-0020].

NO.	DESCRIPTION	MATERIAL	FINISH/COLOR/REMARKS
2	SPRING	COPPER ALLOY	VT009-02 PLATING : Sn REFLOW VT009-03 PLATING : Au PLATING
1	BODY	BRASS	VT009-02 PLATING : Sn REFLOW VT009-03 PLATING : Au PLATING CONTACT AREA : Au PLATING CRIMPING AREA : Sn REFLOW

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ISH® (Horizontal Type-Hybrid) TERMINAL (Size 1.5 mm):

PART NO.	PLATING
VT011-02	Sn REFLOW



NOTE
 1. APPLICABLE FEMALE HOUSING: ISH CONNECTOR SERIES
 2. APPLICABLE CABLE SIZE: 0.5mm² (FINISHED ϕ 1.93mm MAX.)
 3. COMPLY WITH ELV/RoHS.
 4. TERMINAL CRIMP SPECIFICATION MUST BE COMPLIANT WITH HANDLING MANUAL [HDM-0021].

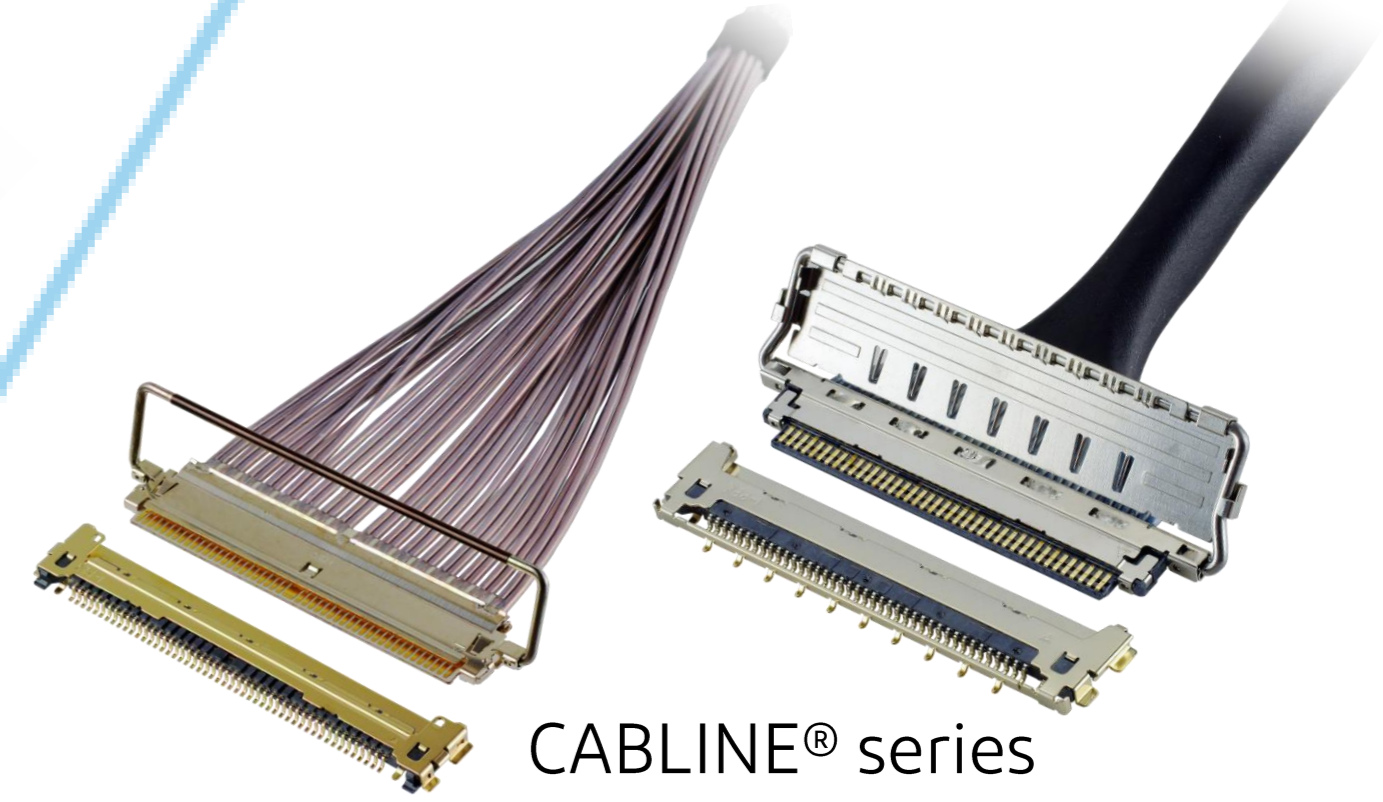
NO.	DESCRIPTION	MATERIAL	FINISH/COLOR/REMARKS
2	SPRING	COPPER ALLOY	PLATING : Sn REFLOW
1	BODY	BRASS	PLATING : Sn REFLOW

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Custom Connectors Available

RF Connectors

MHF® series



CABLINE® series

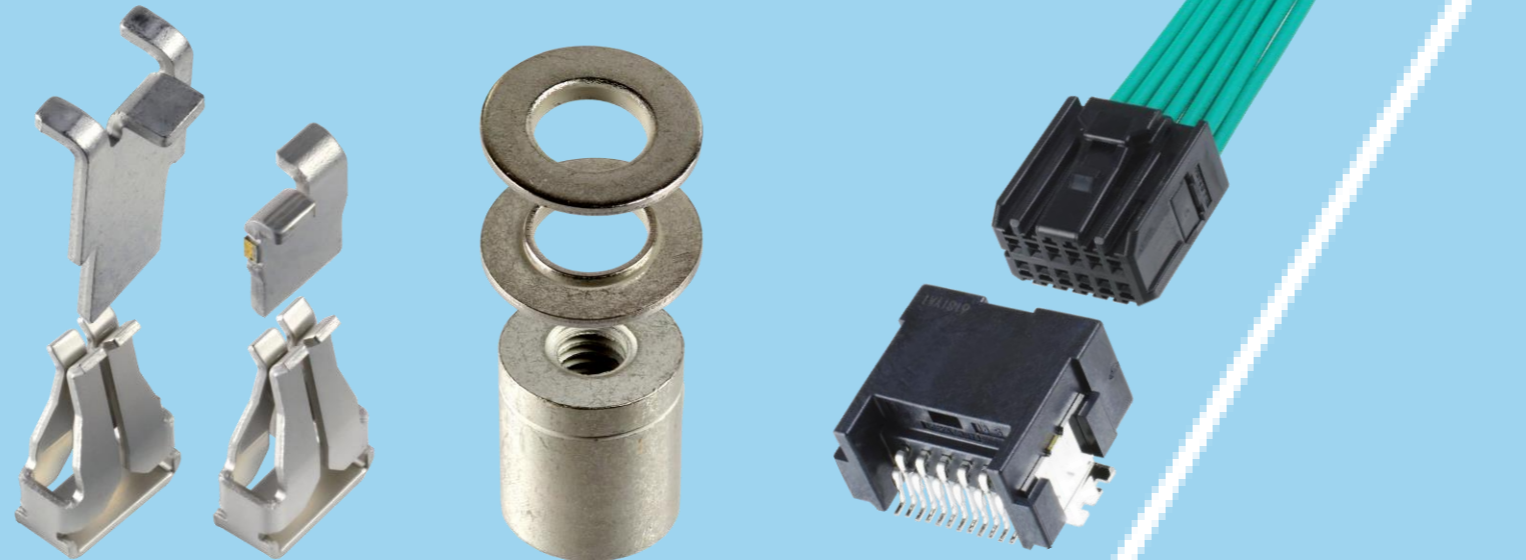
Micro-coaxial/Twinax Connectors



Wire-to-Board Connectors/Terminals

AP series

ISH® series



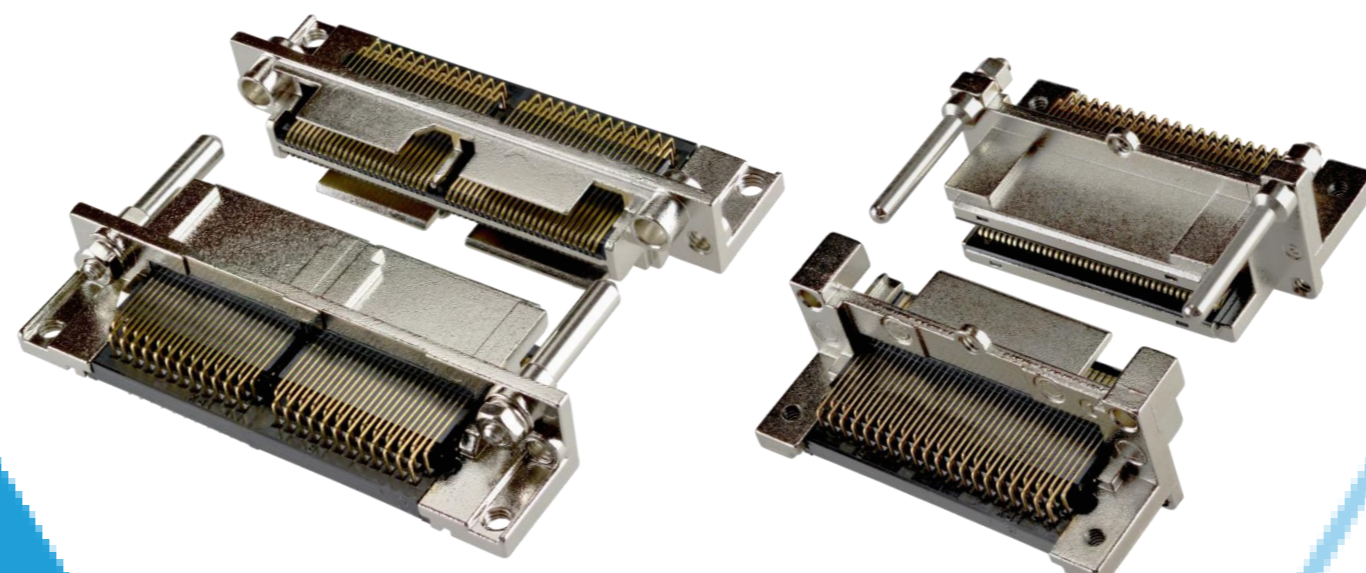
NOVASTACK® series



Board-to-Board Connectors



I/O Connectors



MINIDOCK™ series

MINIFLEX® series EVAFLEX® series



FPC/FFC Connectors



Inquiry



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