

# ISH<sup>®</sup> (Horizontal Type-Hybrid)

耐高温・耐振動性に優れたパワー端子付水平嵌合SMTコネクタ

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.)		13.6	
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:

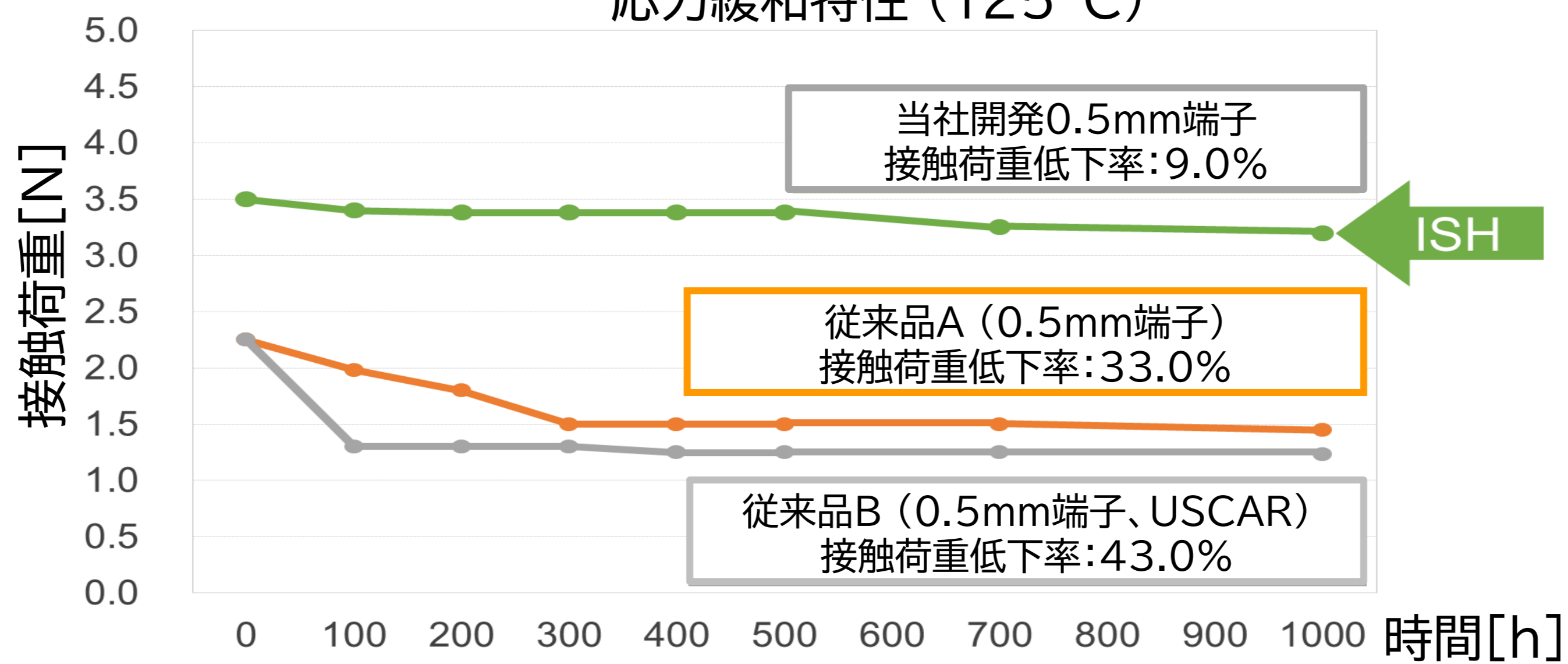
Signal: AWG#22,#20  
 \*Insulation Diameter 1.6 mm max.  
 Power: AWG#20  
 \*Insulation Diameter 1.9 mm max.



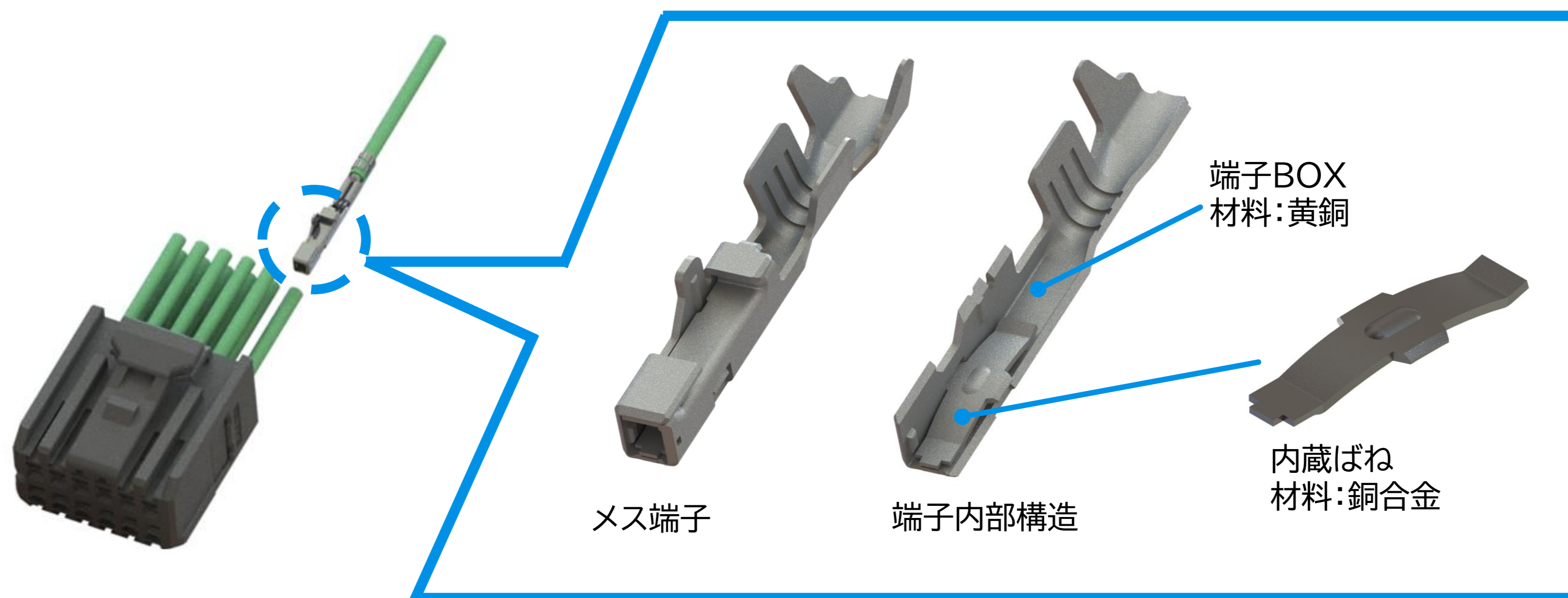
\*記載のない極数の対応状況についてはお問い合わせください。

## ▶ 高い接触信頼性を求める機器に最適な優れた耐高温性・耐振動性

応力緩和特性 (125°C)



## ▶ 独自のバネ構造端子による高い長期接触信頼性



## ▶ 各種車載スパックに適合、高温・振動環境の産業用途等に最適



- ヘッドライト
- インバータ & DC/DC コンバータ
- バッテリーコントロールモジュール
- リアカメラモジュール
- 車載インフォテインメント
- ロボット部品
- 工場自動化装置



# 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

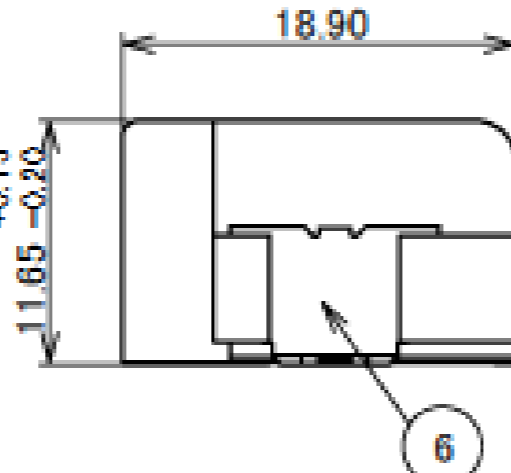
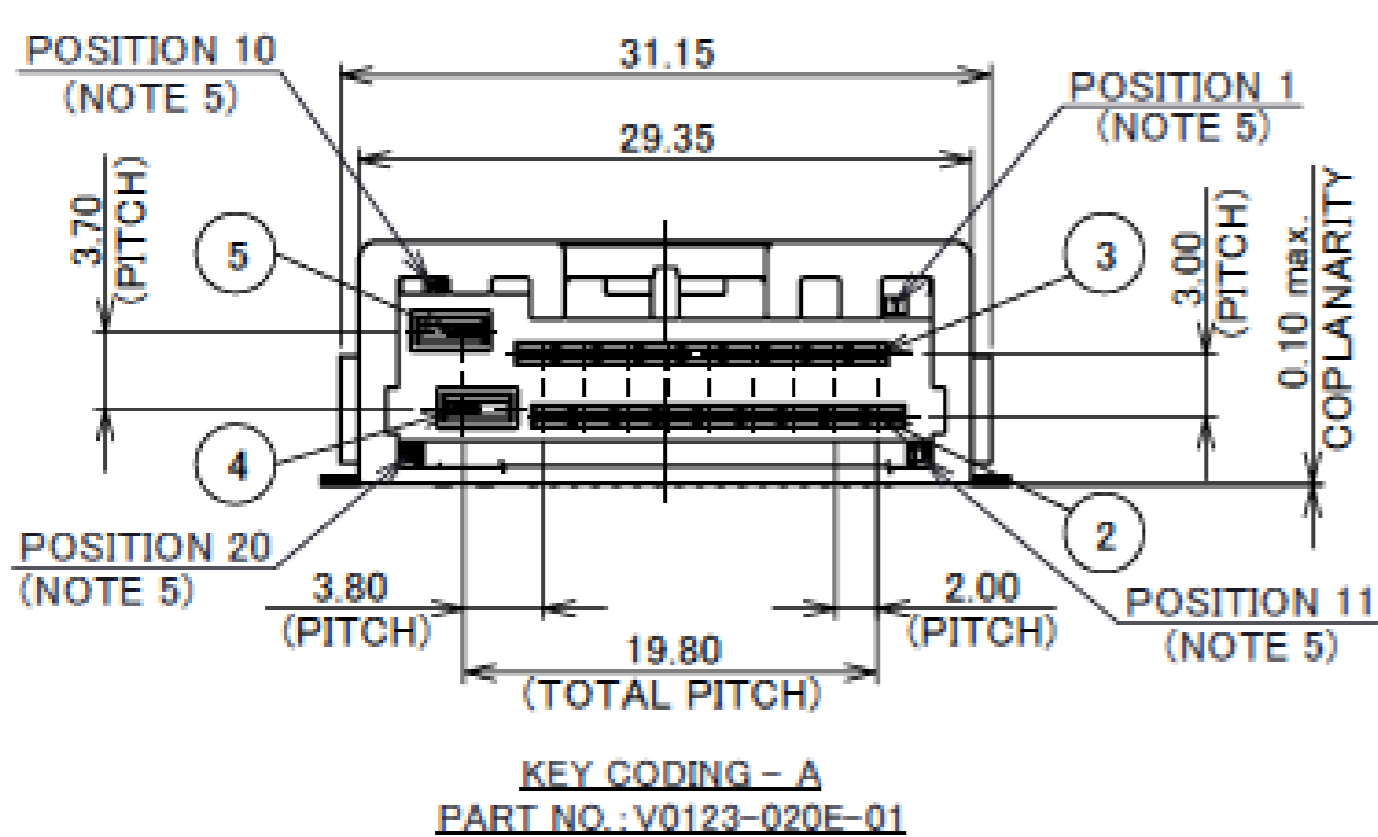
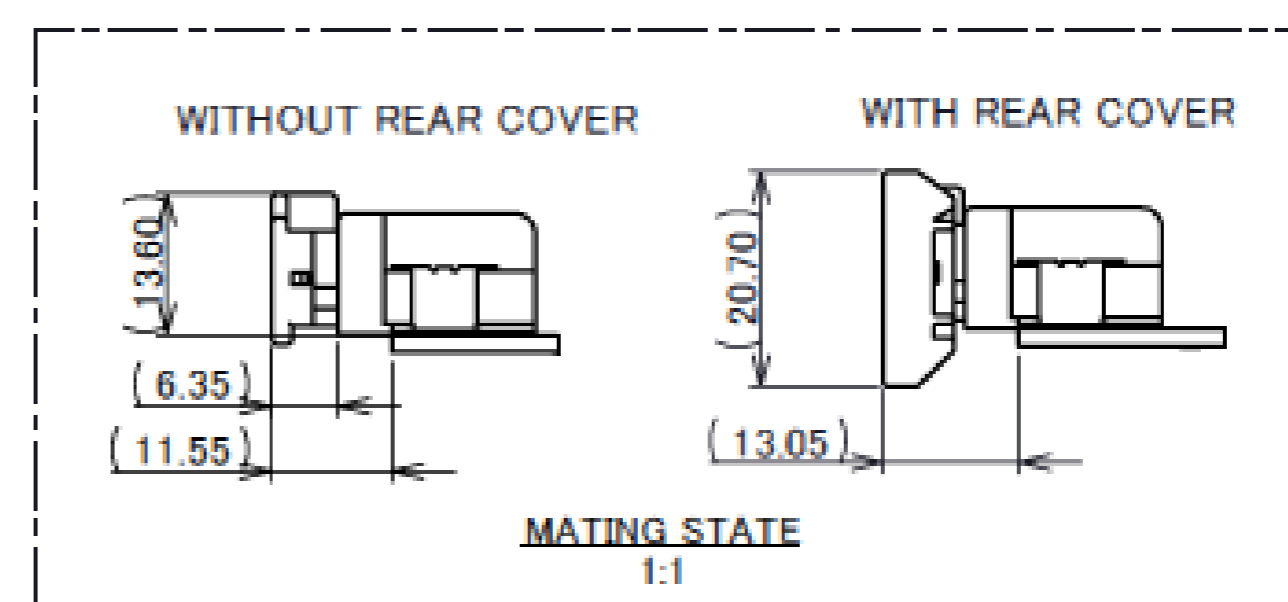
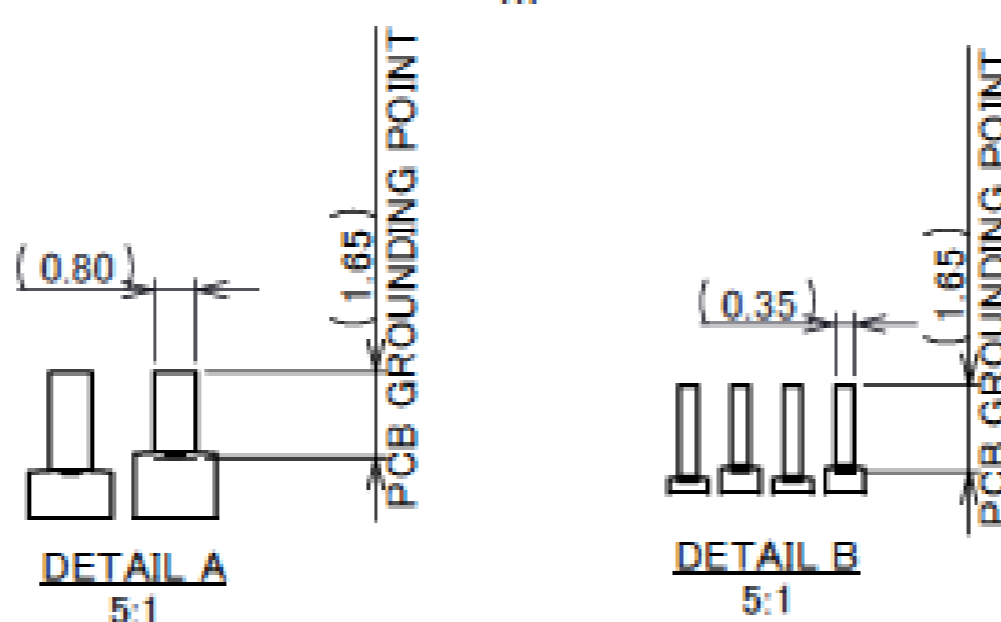
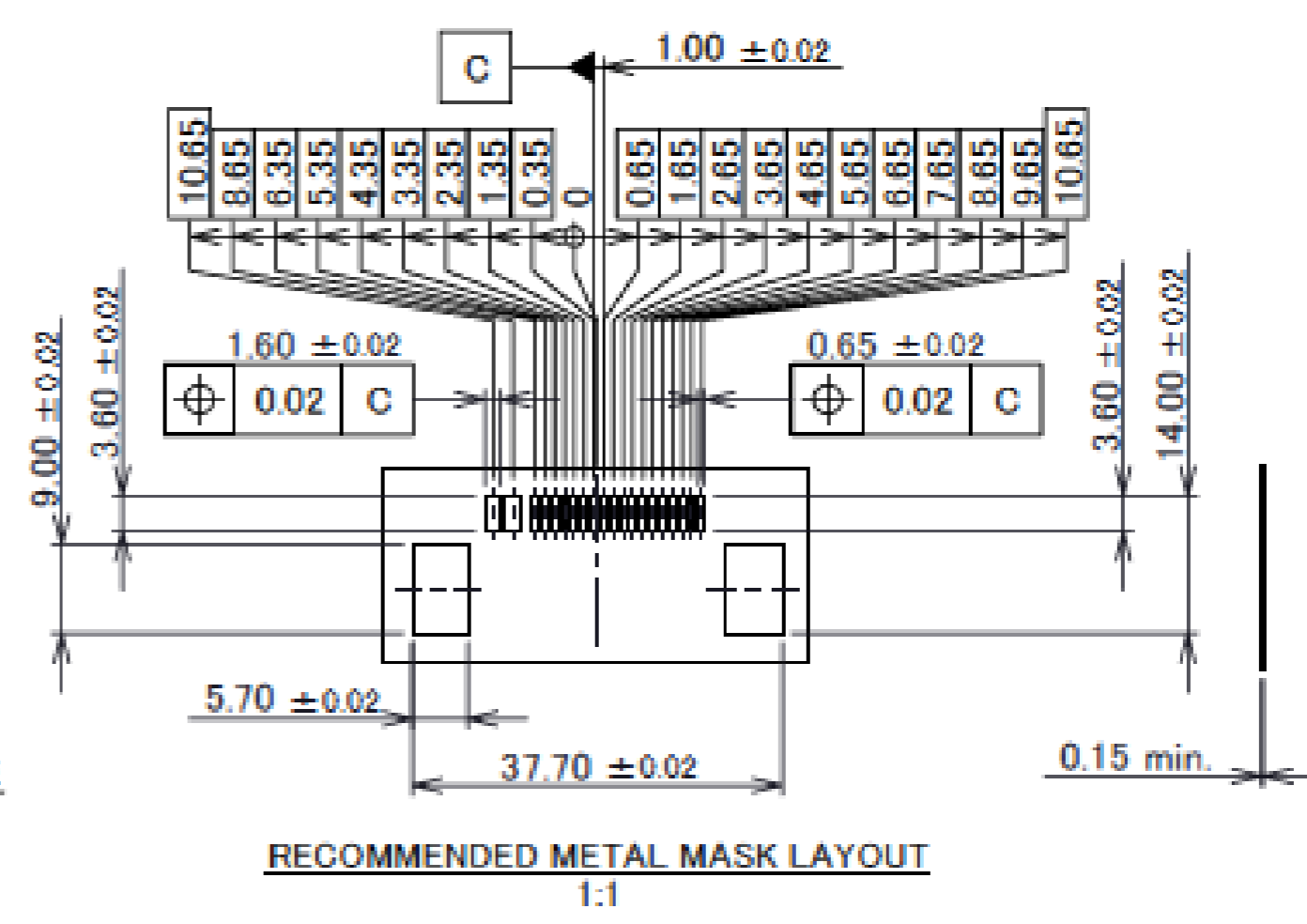
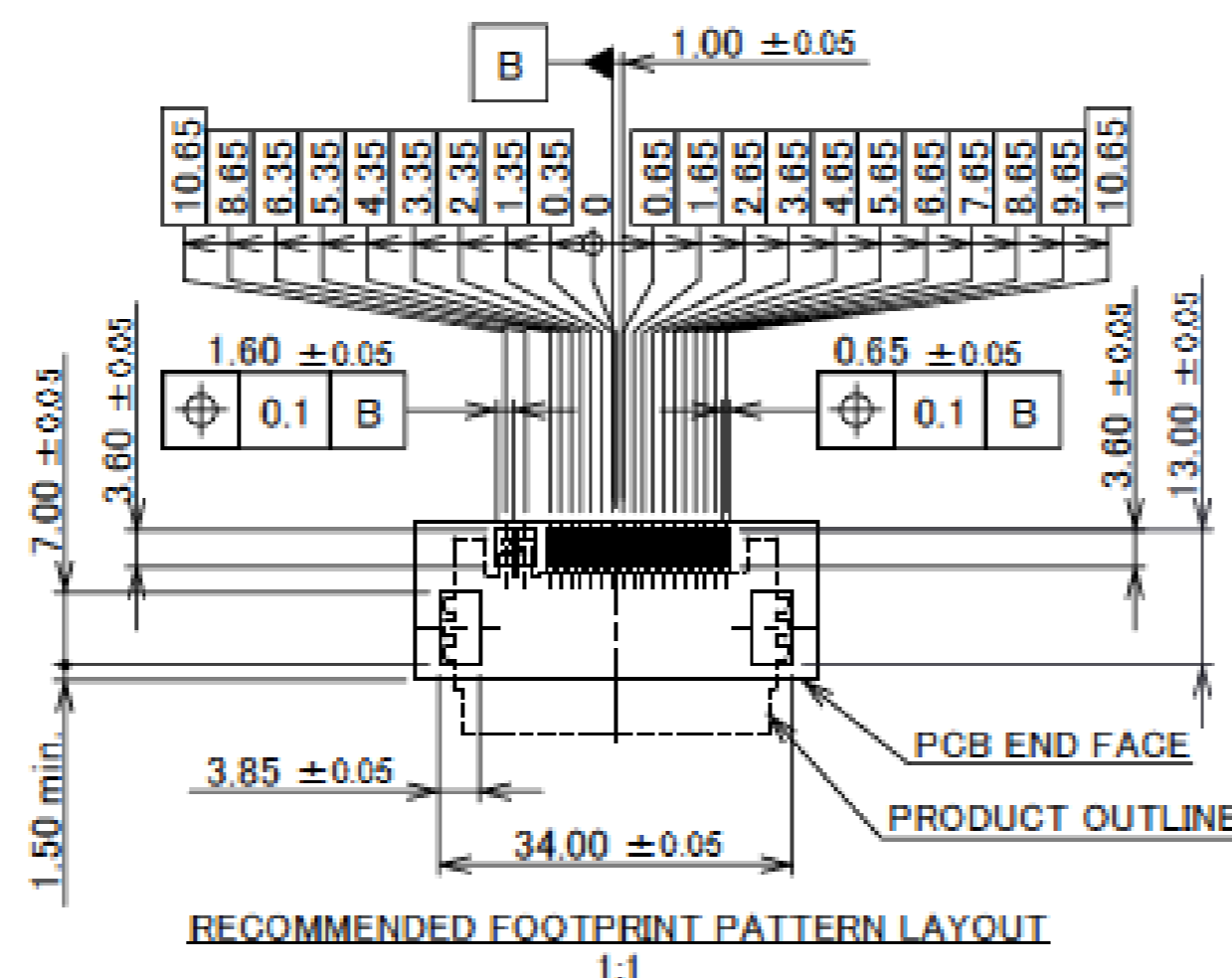
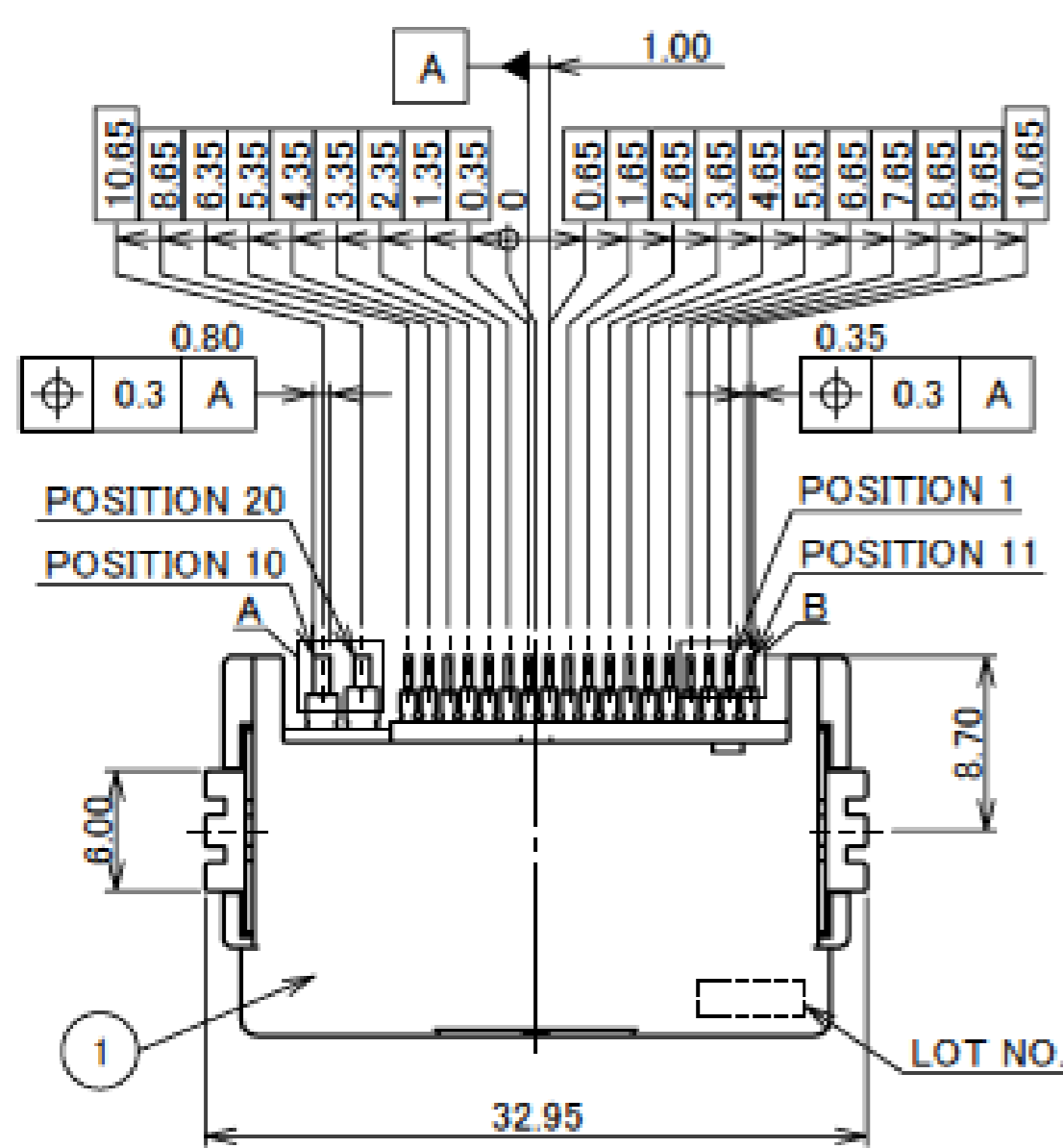
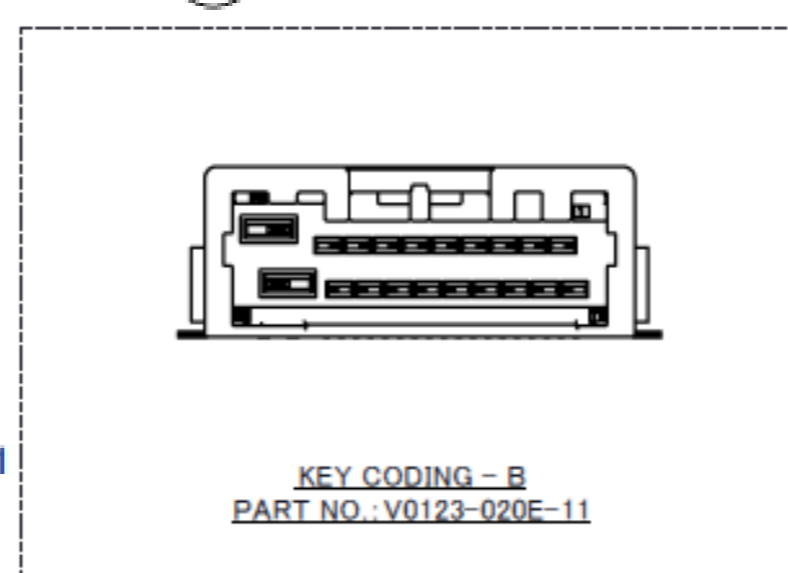


TABLE 1. COUNTERPARTS FOR MATING

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				

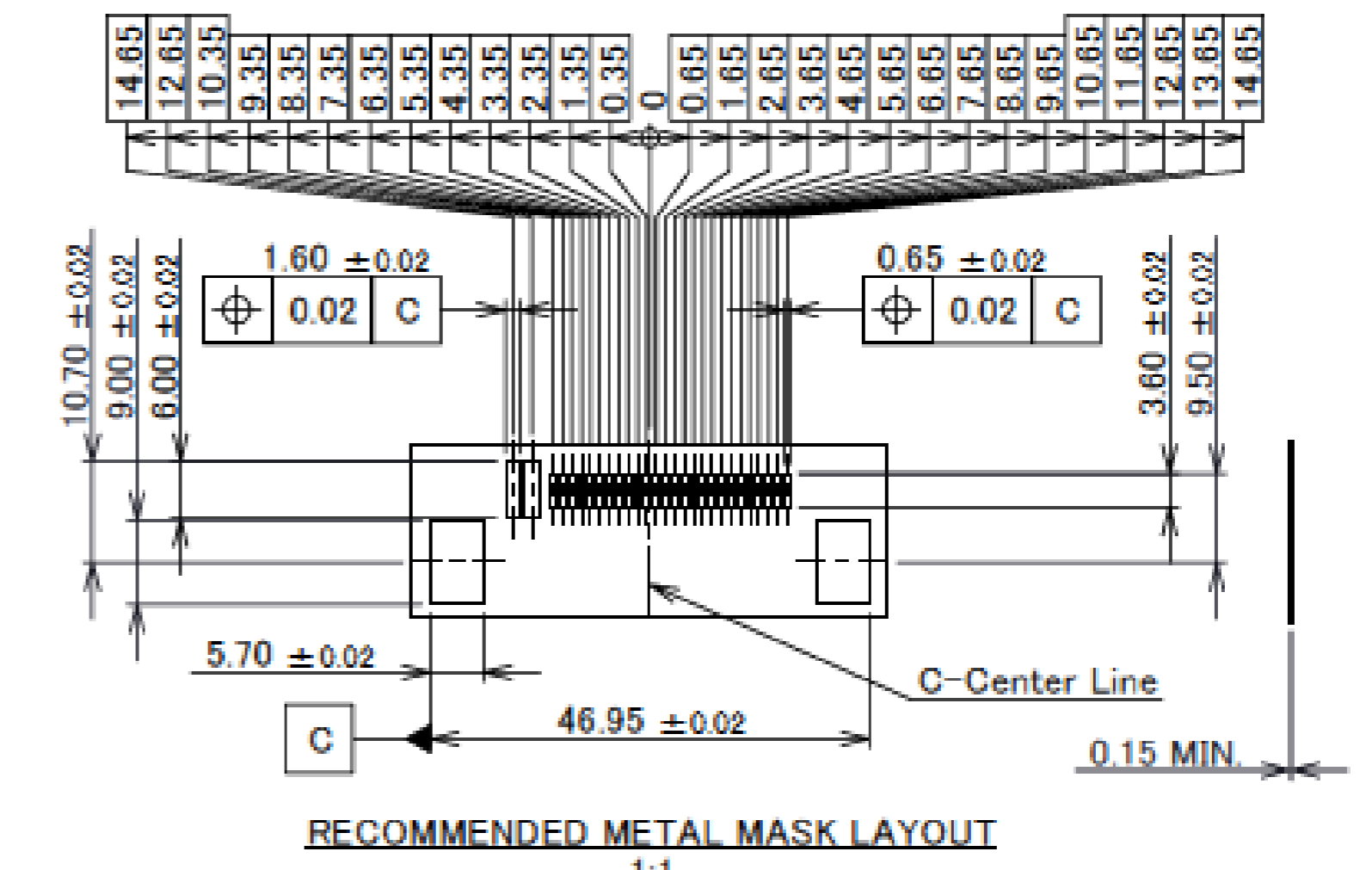
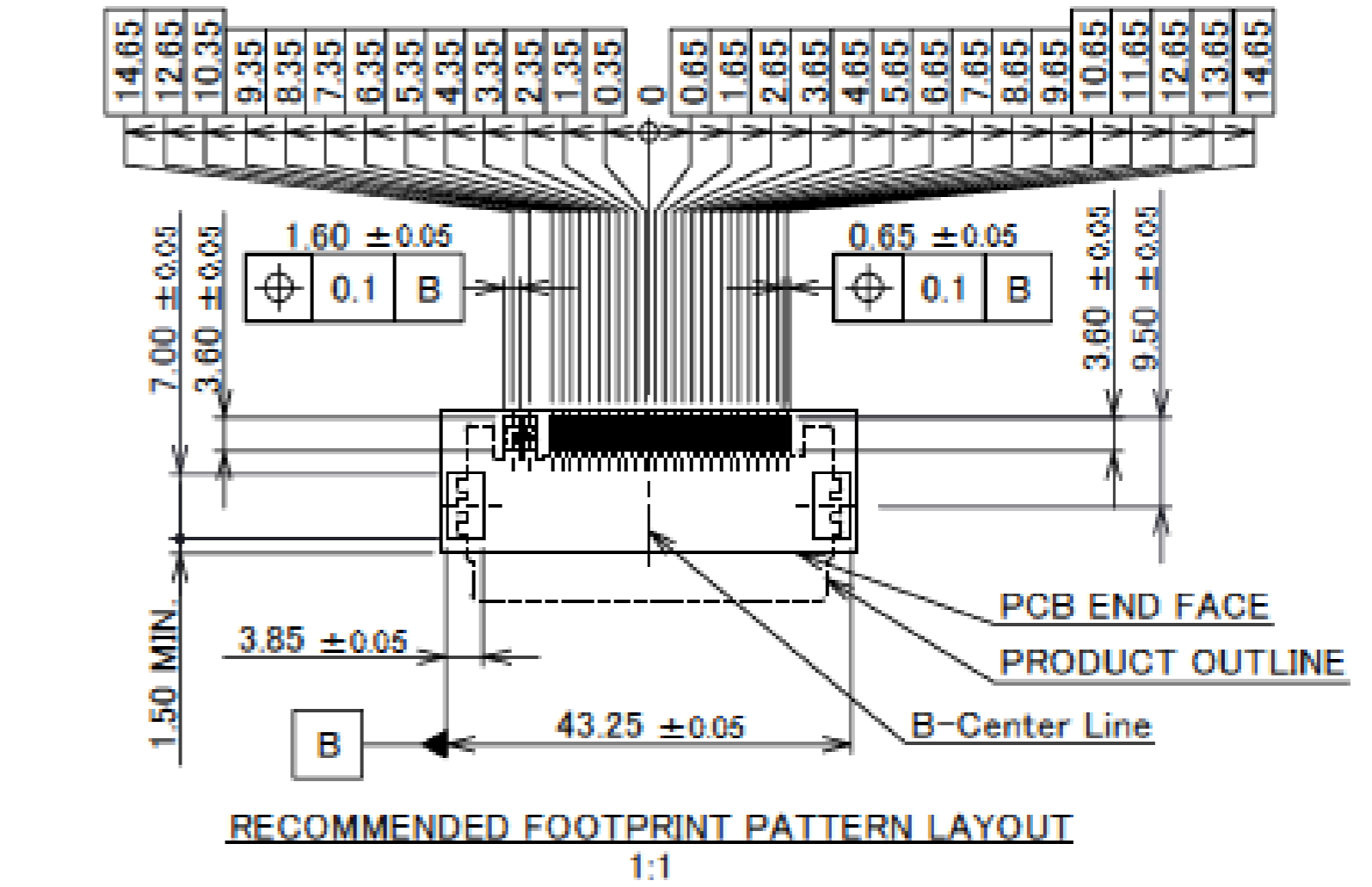
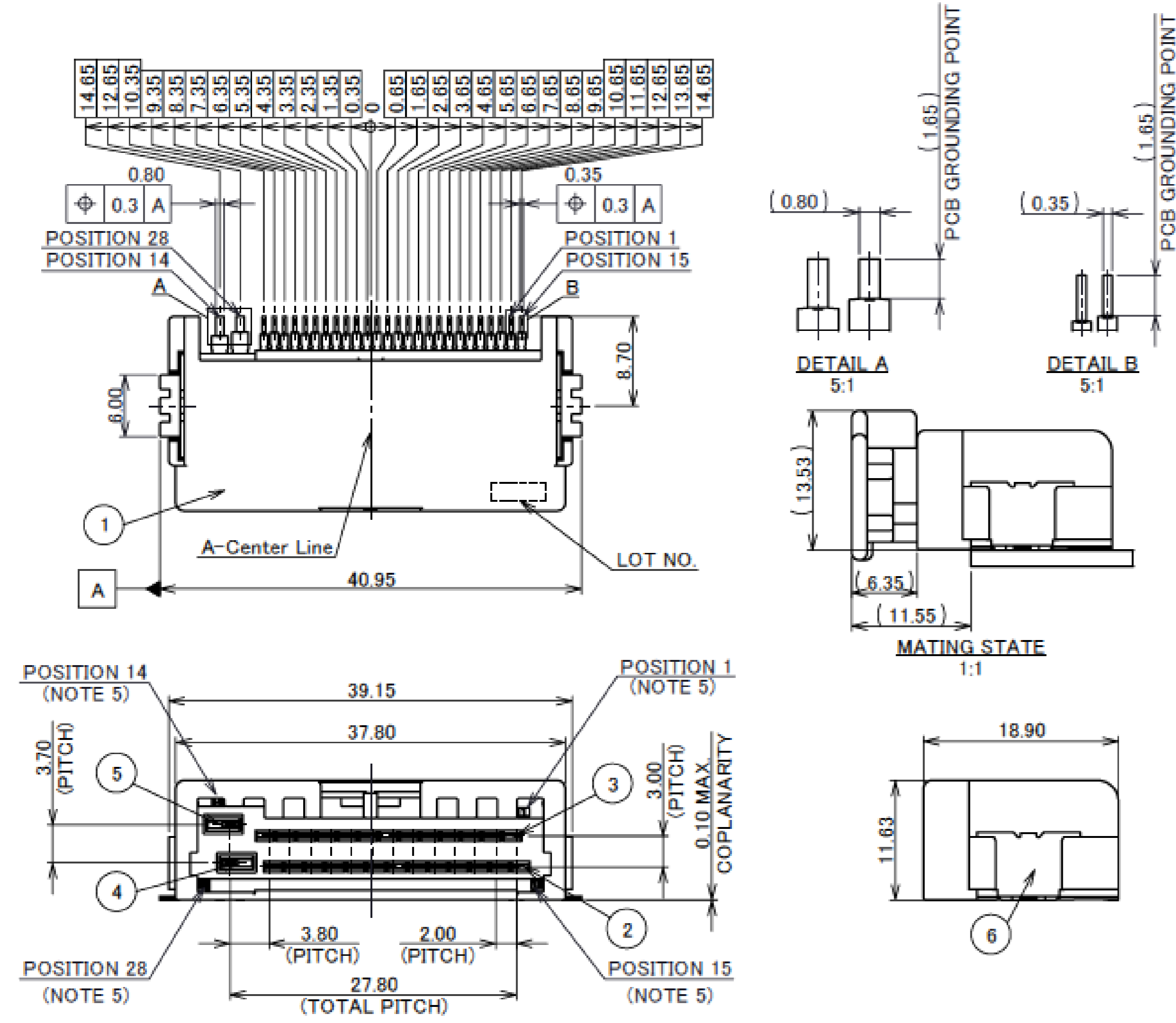
NO.	DESCRIPTION	MATERIAL	FINISH/COLOR/REMARKS
6	HOLD DOWN	BRASS	Sn REFLOW
5	1.5mm MALE TERMINAL-2	BRASS	Sn REFLOW
4	1.5mm MALE TERMINAL-1	BRASS	Sn REFLOW
3	0.5mm MALE TERMINAL-2	BRASS	Sn REFLOW
2	0.5mm MALE TERMINAL-1	BRASS	Sn REFLOW
1	MALE HOUSING	GLASS-FILLED LCP	BLACK OR NATURAL /UL94V-0

- 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
-	V0123-0238-01	BLACK	V0124-0238-01	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.
  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.

Rev.0

# ISH® (Horizontal Type-Hybrid) FEMALE (20P):

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

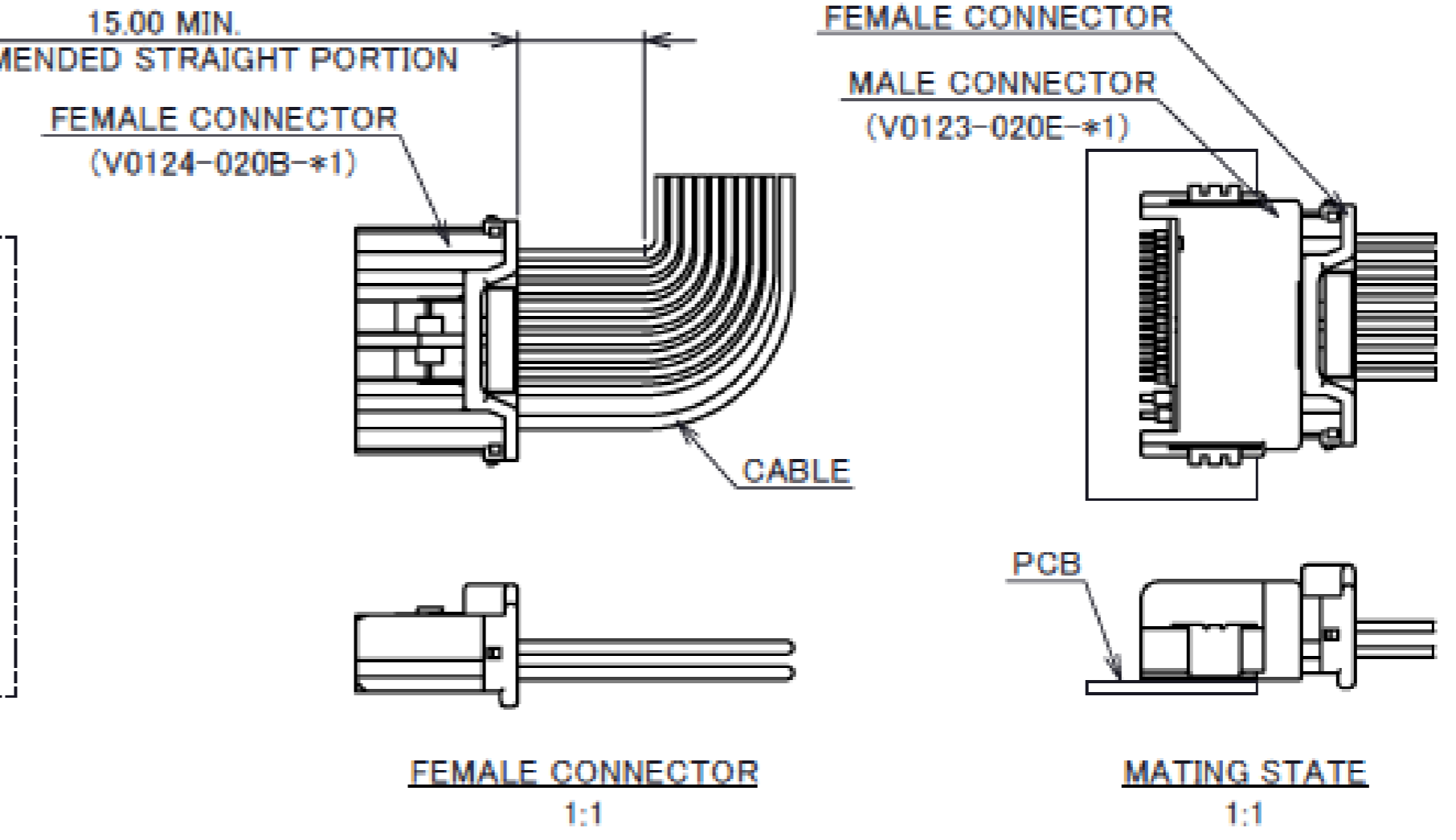
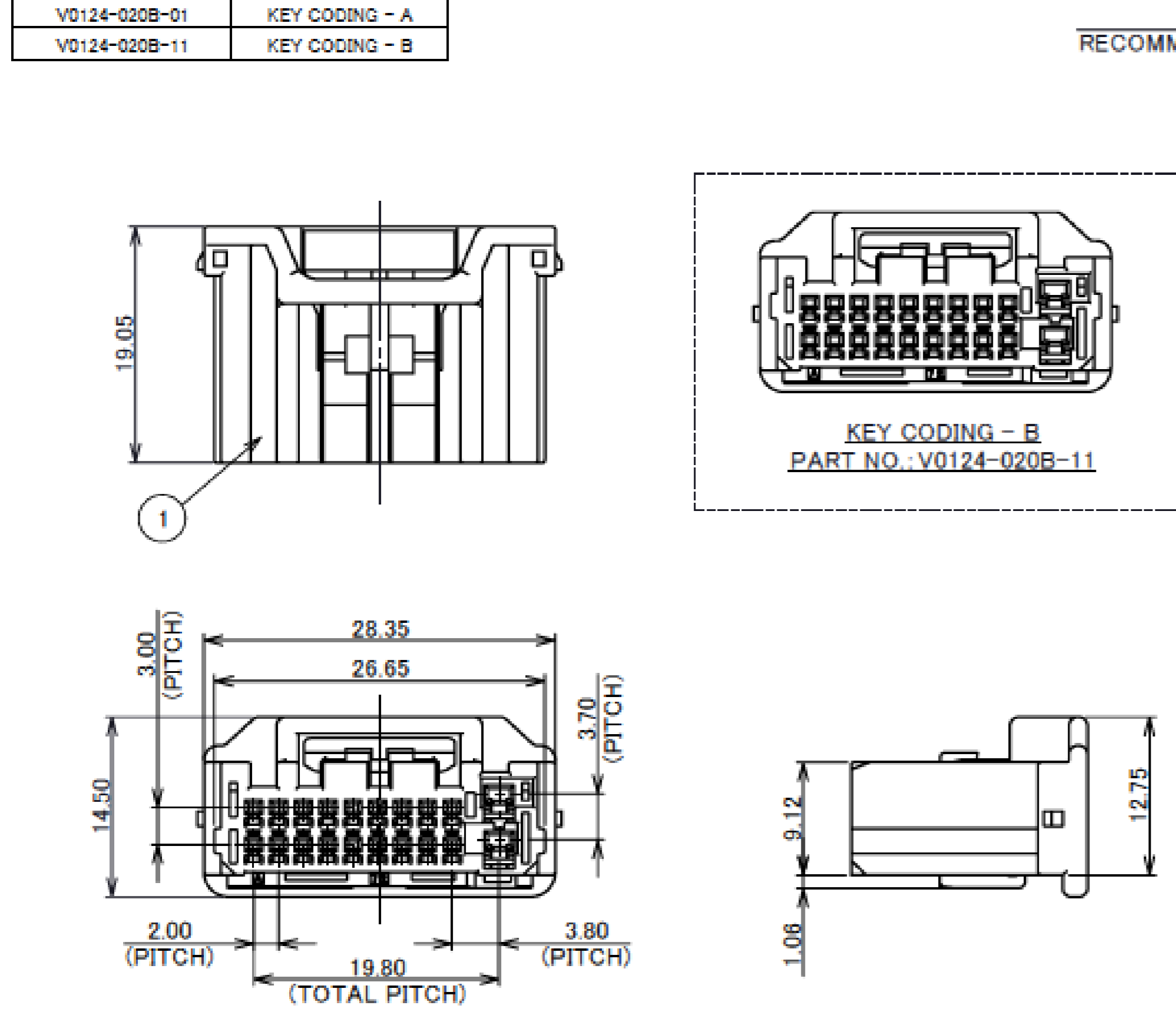


TABLE 1. COUNTERPARTS FOR MATING

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				

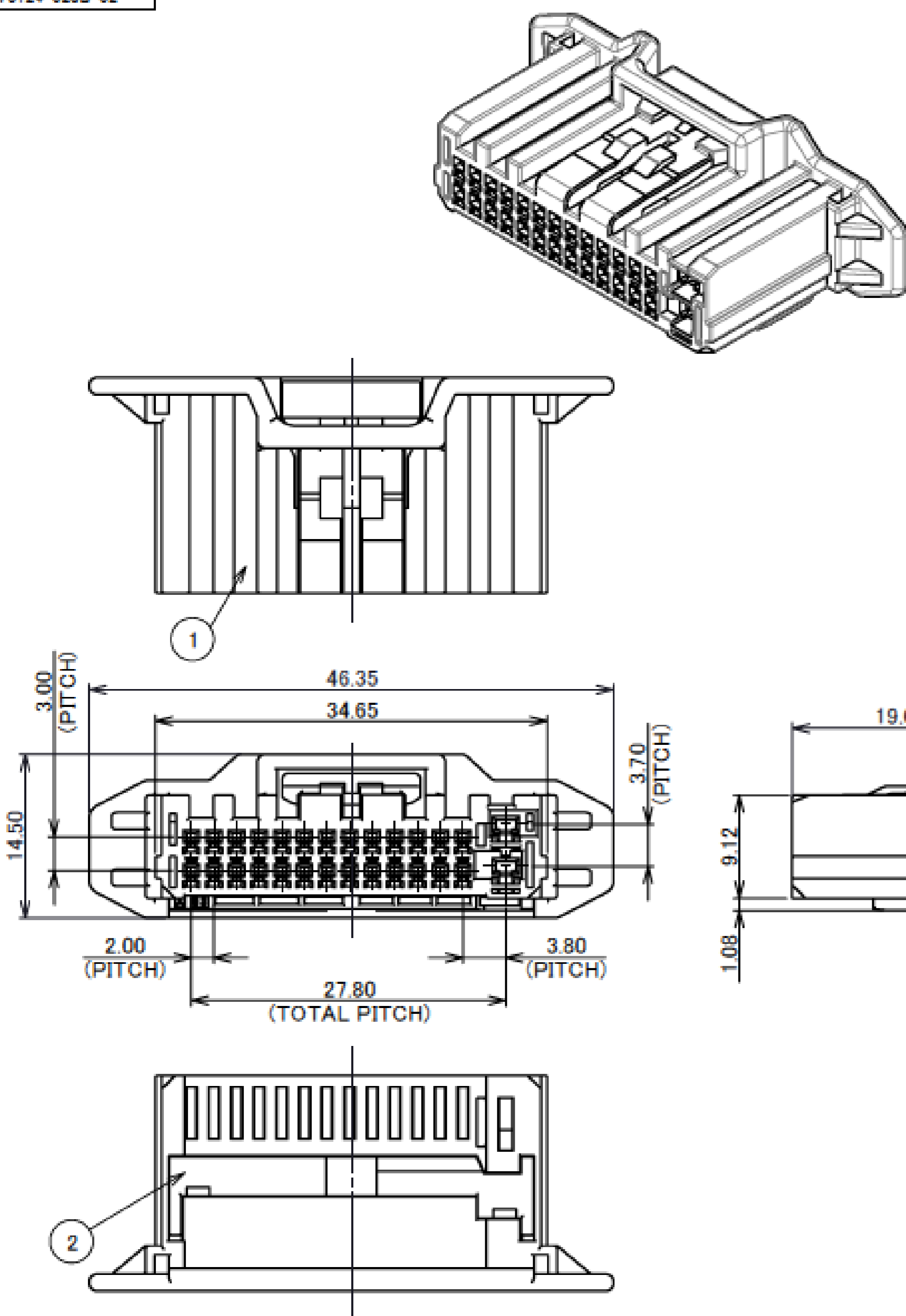
NO.	DESCRIPTION	QTY.	MATERIAL	FINISH/COLOR	REMARKS
2	RETAINER	1	PBT	BLACK	-
1	FEMALE HOUSING	1	PBT	KEY CODING - A: BLACK KEY CODING - B: NATURAL	-

- 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.

Rev.0

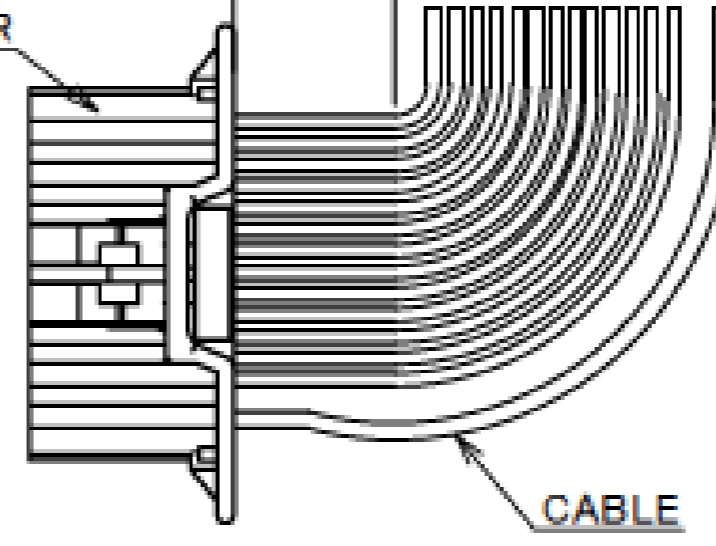
# ISH® (Horizontal Type-Hybrid) FEMALE (28P):

PART NO.
V0124-028B-02



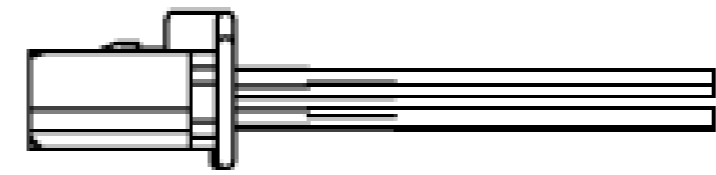
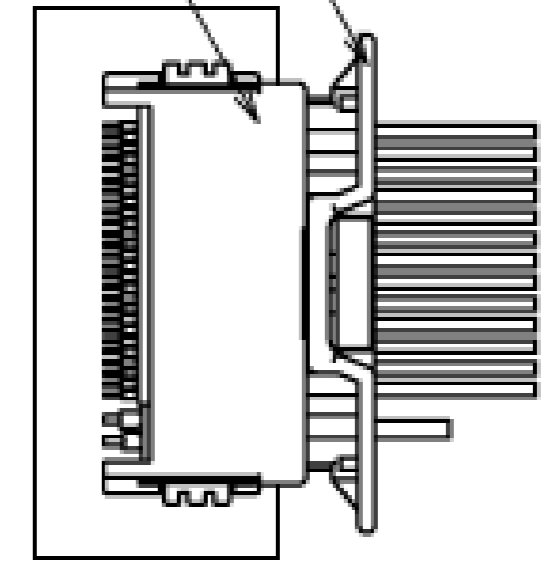
15.00 MIN.  
RECOMMENDED STRAIGHT PORTION

FEMALE CONNECTOR  
(V0124-028B-02)

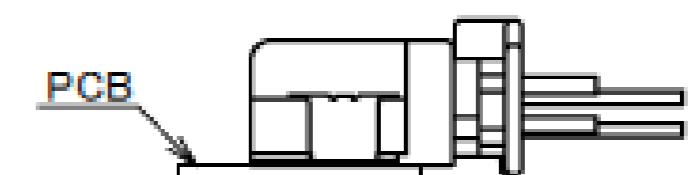


FEMALE CONNECTOR

MALE CONNECTOR  
(V0123-028E-01)



FEMALE CONNECTOR  
1:1



MATING STATE  
1:1

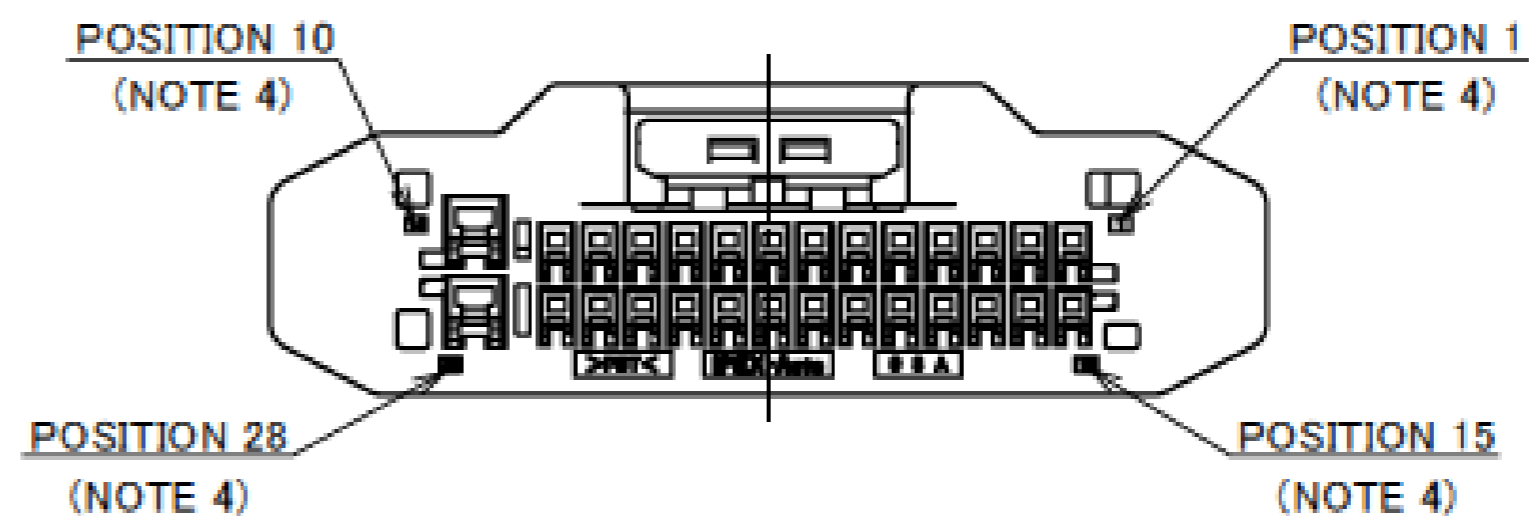


TABLE 1. COUNTERPARTS FOR MATING

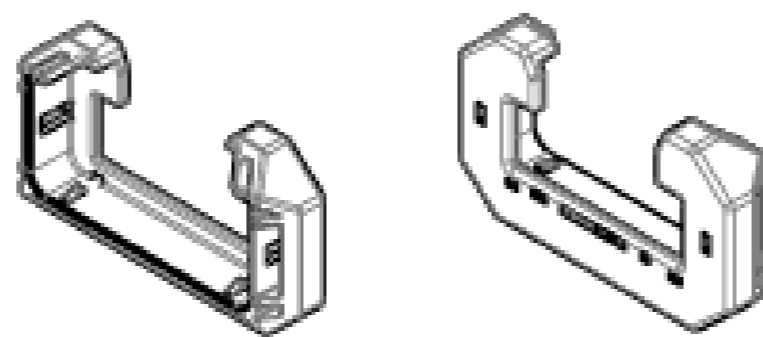
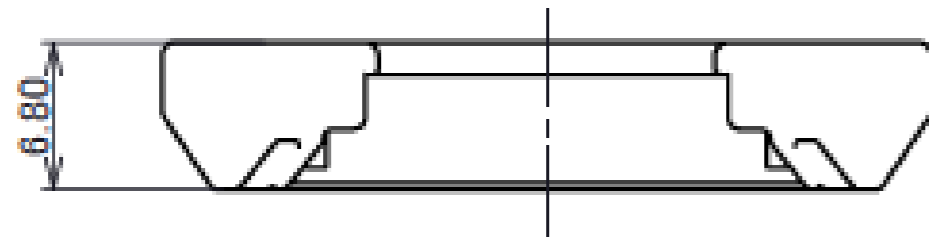
FEMALE CONNECTOR		MALE CONNECTOR		FEMALE TERMINAL	
PART NO.	COLOR	PART NO.	COLOR	PART NO.	FINISH
V0124-028B-02	BLACK	V0123-028E-01	BLACK	VT009-02 & VT011-02	Sn REFLOW
2	RETAINER	1	PBT	BLACK	-
1	FEMALE HOUSING	1	PBT	BLACK	-
NO.	DESCRIPTION	QTY.	MATERIAL	FINISH/COLOR	REMARKS

- 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.

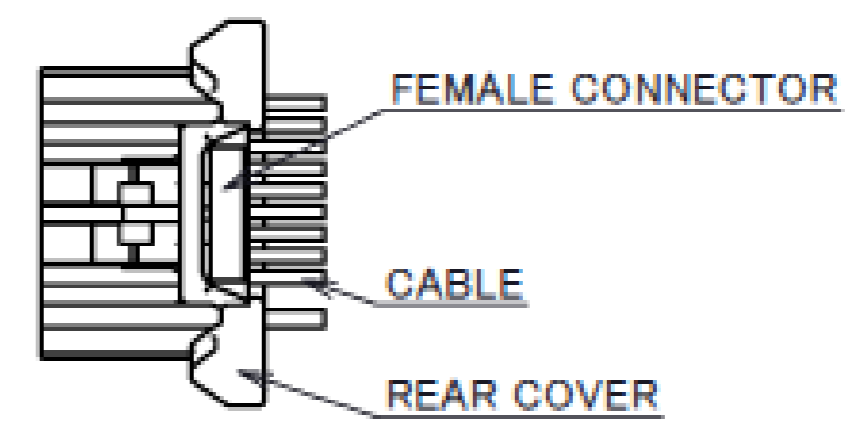
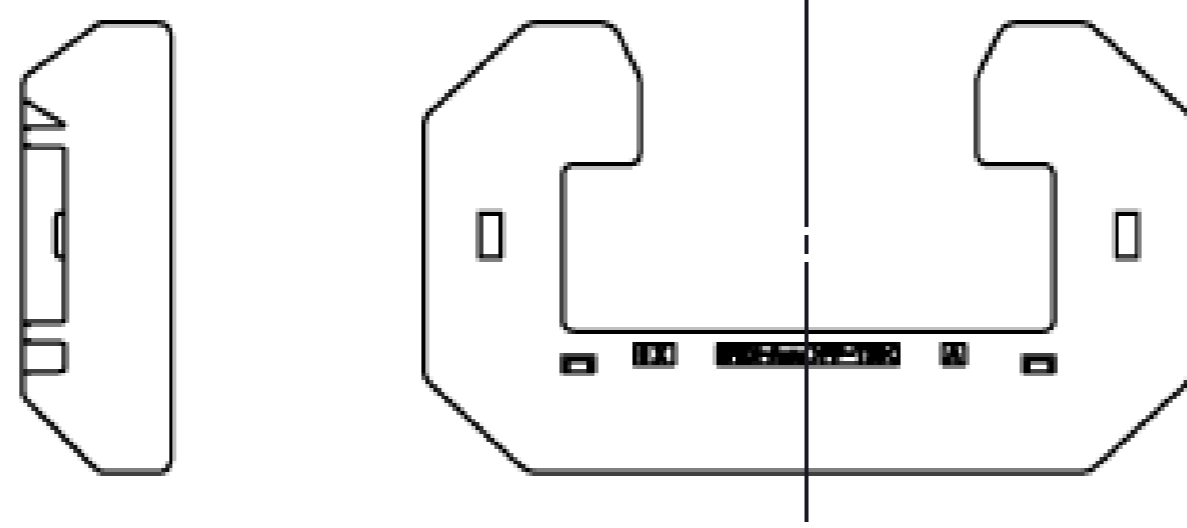
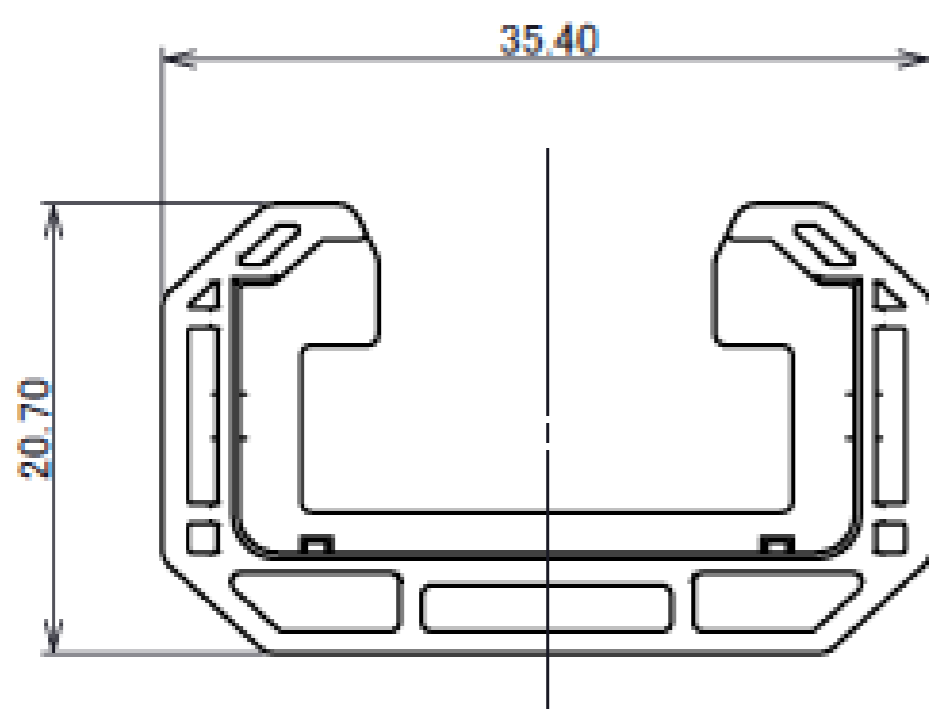
Rev.0

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

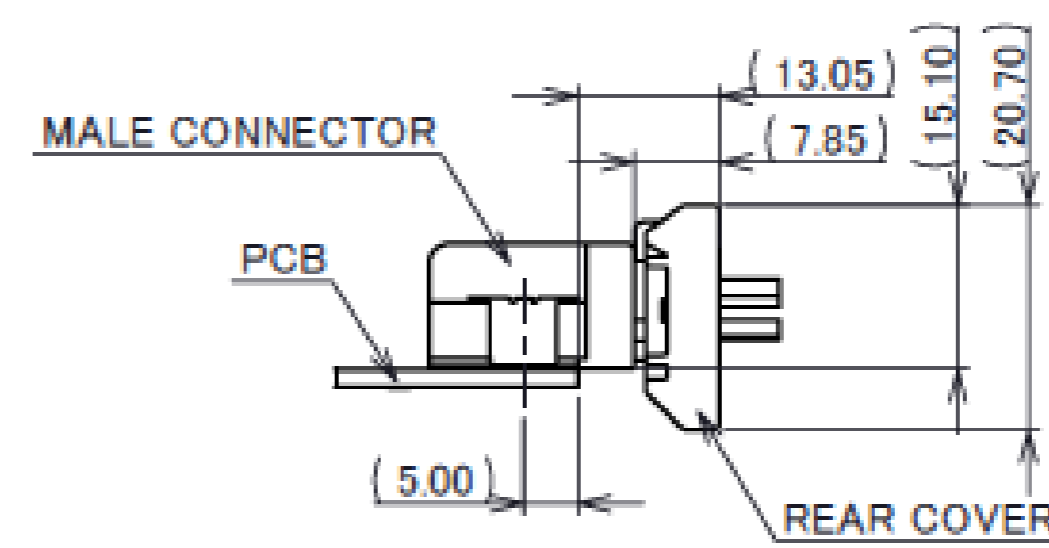
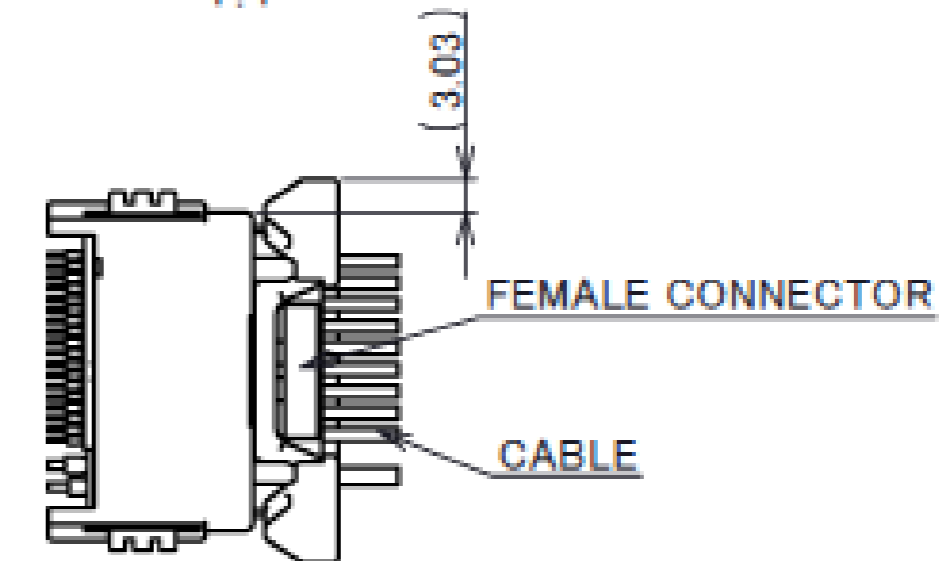
PART NO.
V0124-84020-01



ISOMETRIC VIEW  
1:1



REAR COVER ASSEMBLY  
1:1



MATING STATE  
1:1

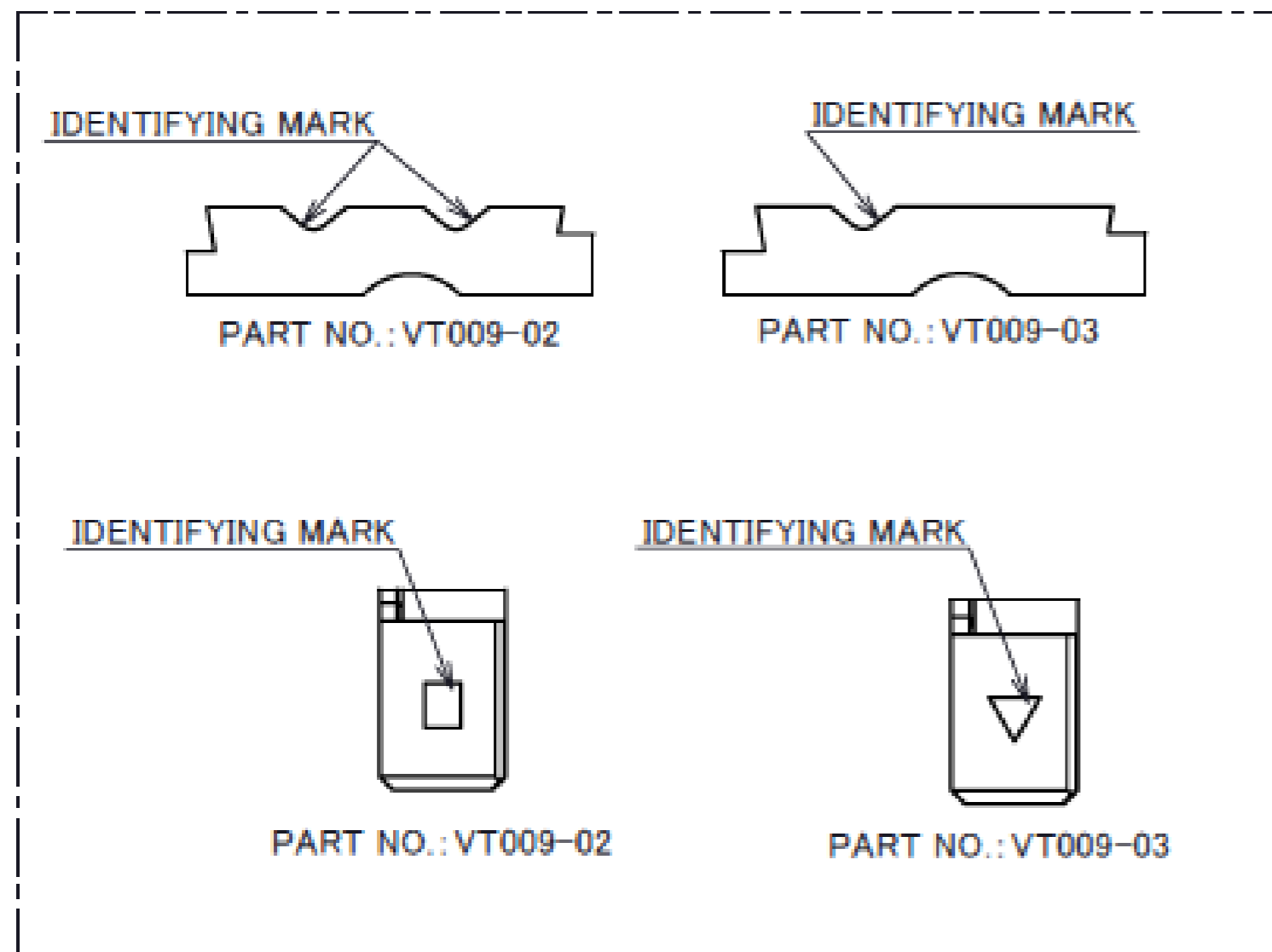
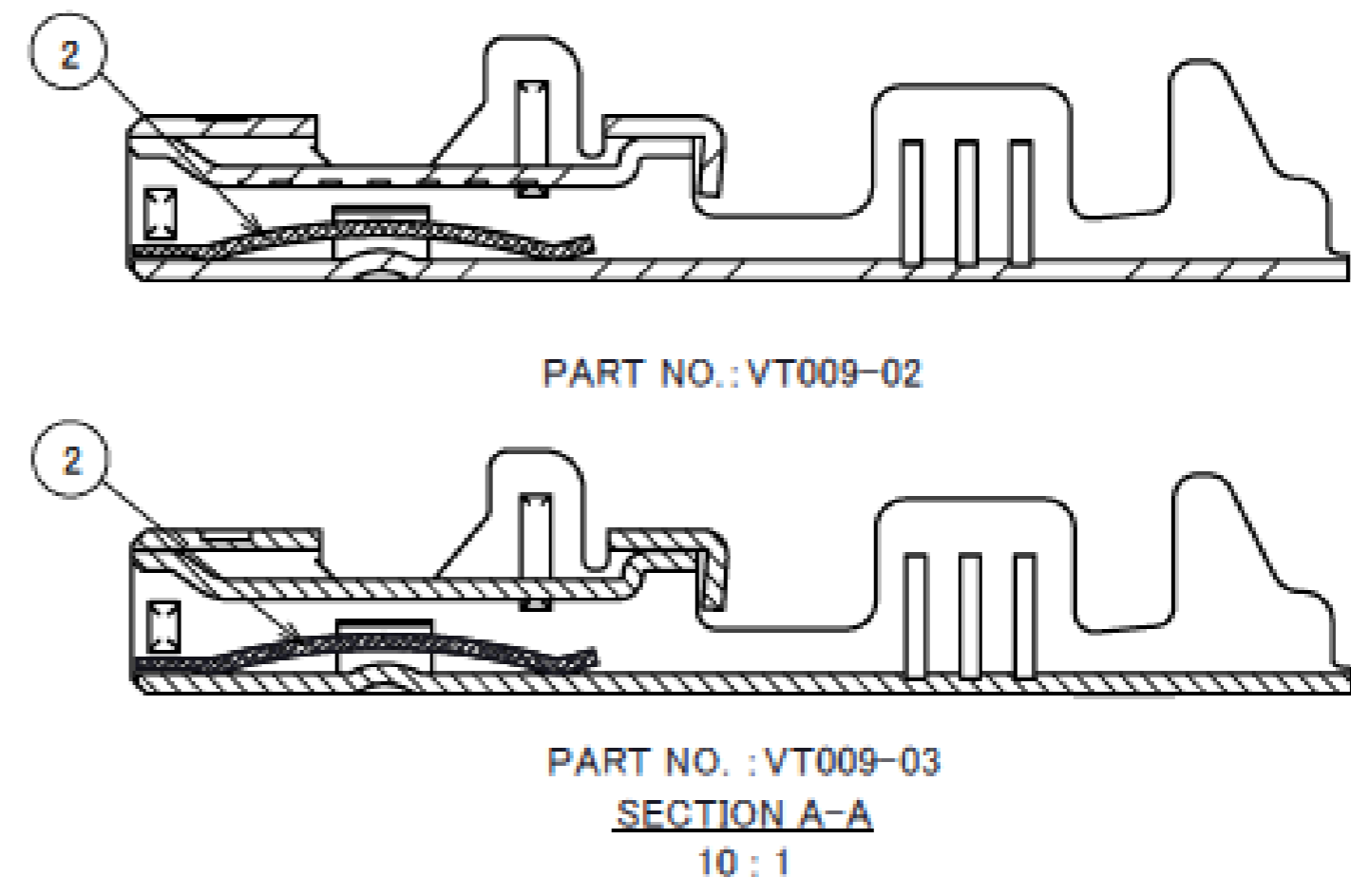
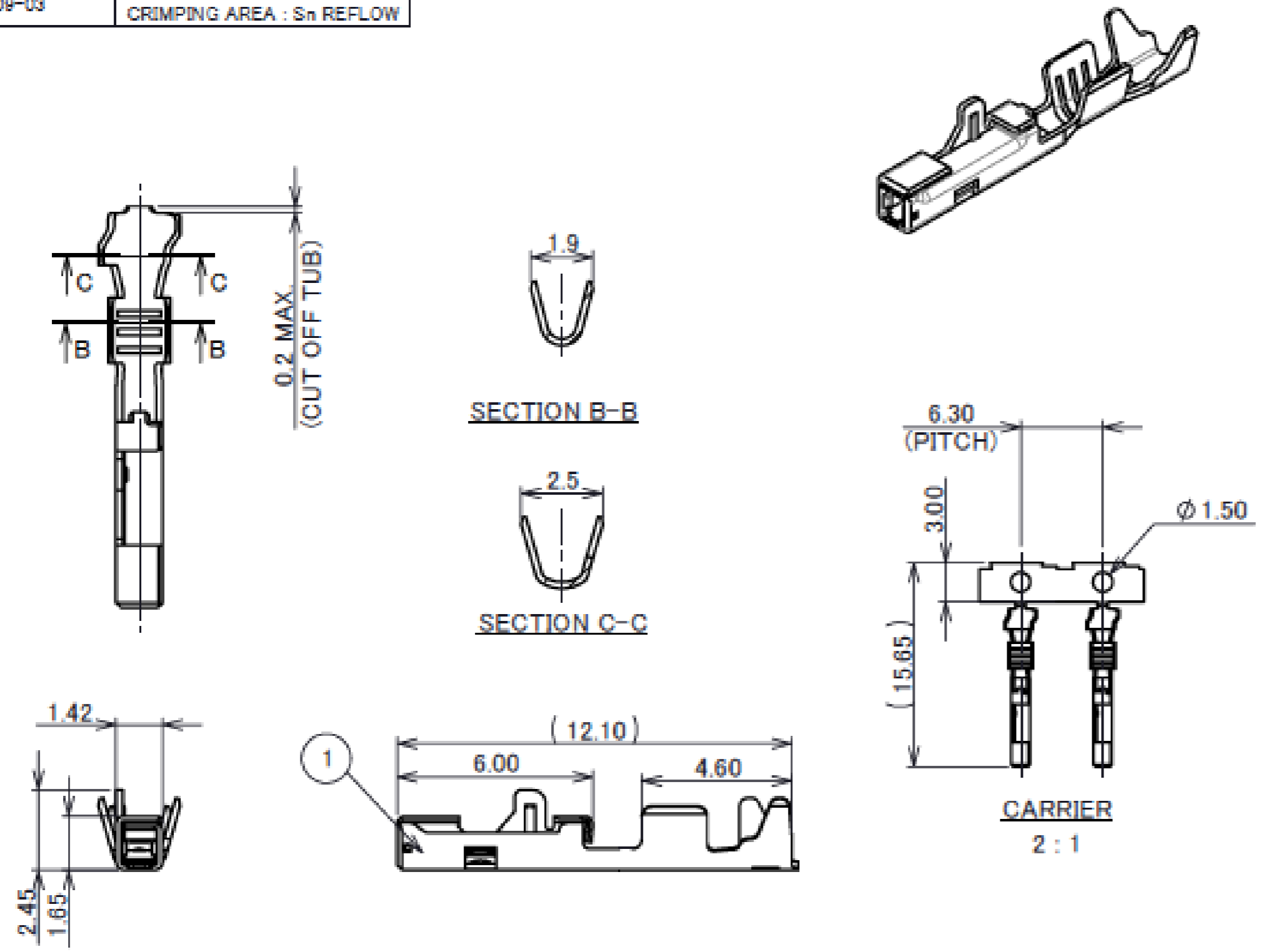
REAR COVER		BLACK	
NO.	DESCRIPTION	MATERIAL	FINISH/COLOR/REMARKS
1	REAR COVER	PP-T30	BLACK

- 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.

Rev.0

# 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



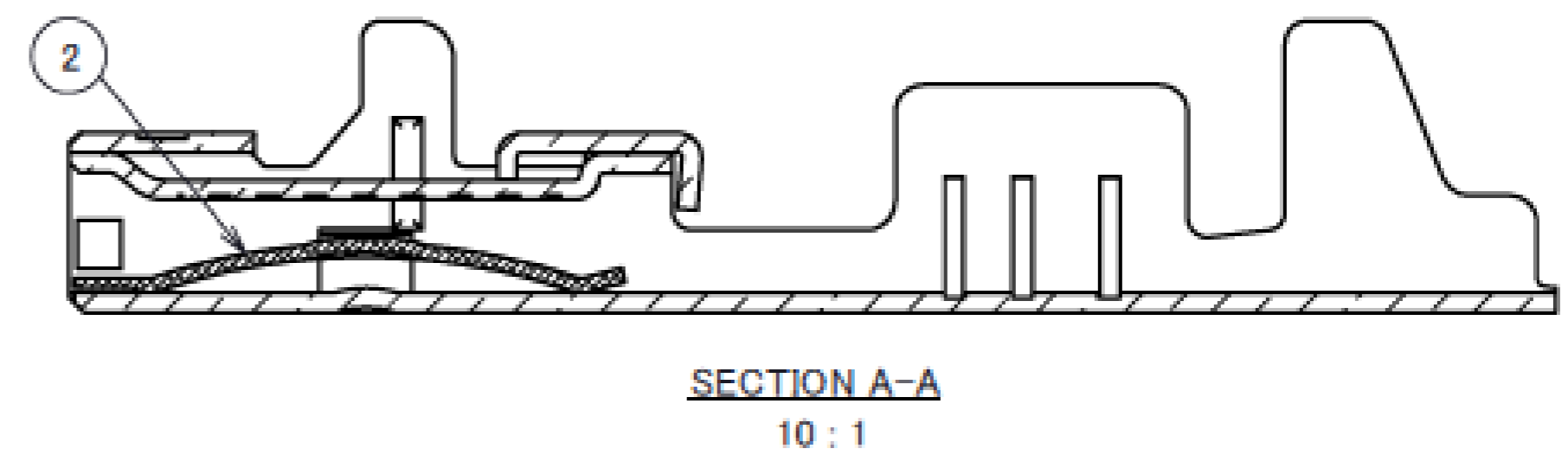
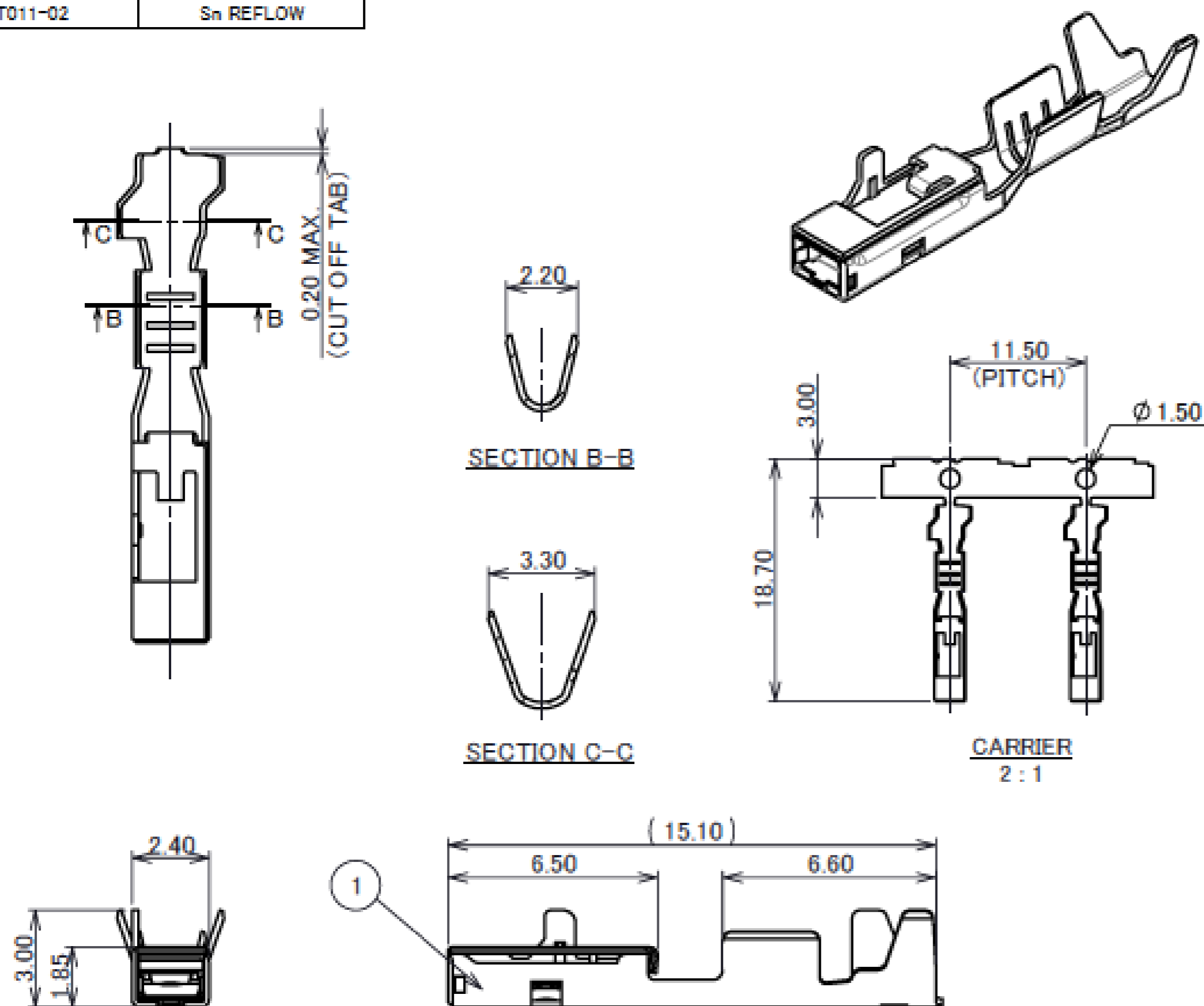
NOTE  
 1. APPLICABLE FEMALE HOUSING: ISH CONNECTOR SERIES  
 2. APPLICABLE CABLE SIZE: 0.3mm<sup>2</sup> / 0.5mm<sup>2</sup> (FINISHED  $\phi$  1.60mm MAX.)  
 3. COMPLY WITH ELV/RoHS.  
 4. TERMINAL CRIMP SPECIFICATION MUST BE COMPLIANT WITH HANDLING MANUAL [HDM-0020].

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
NO.	DESCRIPTION	MATERIAL	FINISH/COLOR/REMARKS

Rev.0

# 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: 0.5mm<sup>2</sup> (FINISHED  $\phi$  1.93mm MAX.)  
 3. COMPLY WITH ELV/RoHS.  
 4. TERMINAL CRIMP SPECIFICATION MUST BE COMPLIANT WITH HANDLING MANUAL [HDM-0021].

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

Rev.0



# Custom Products Available

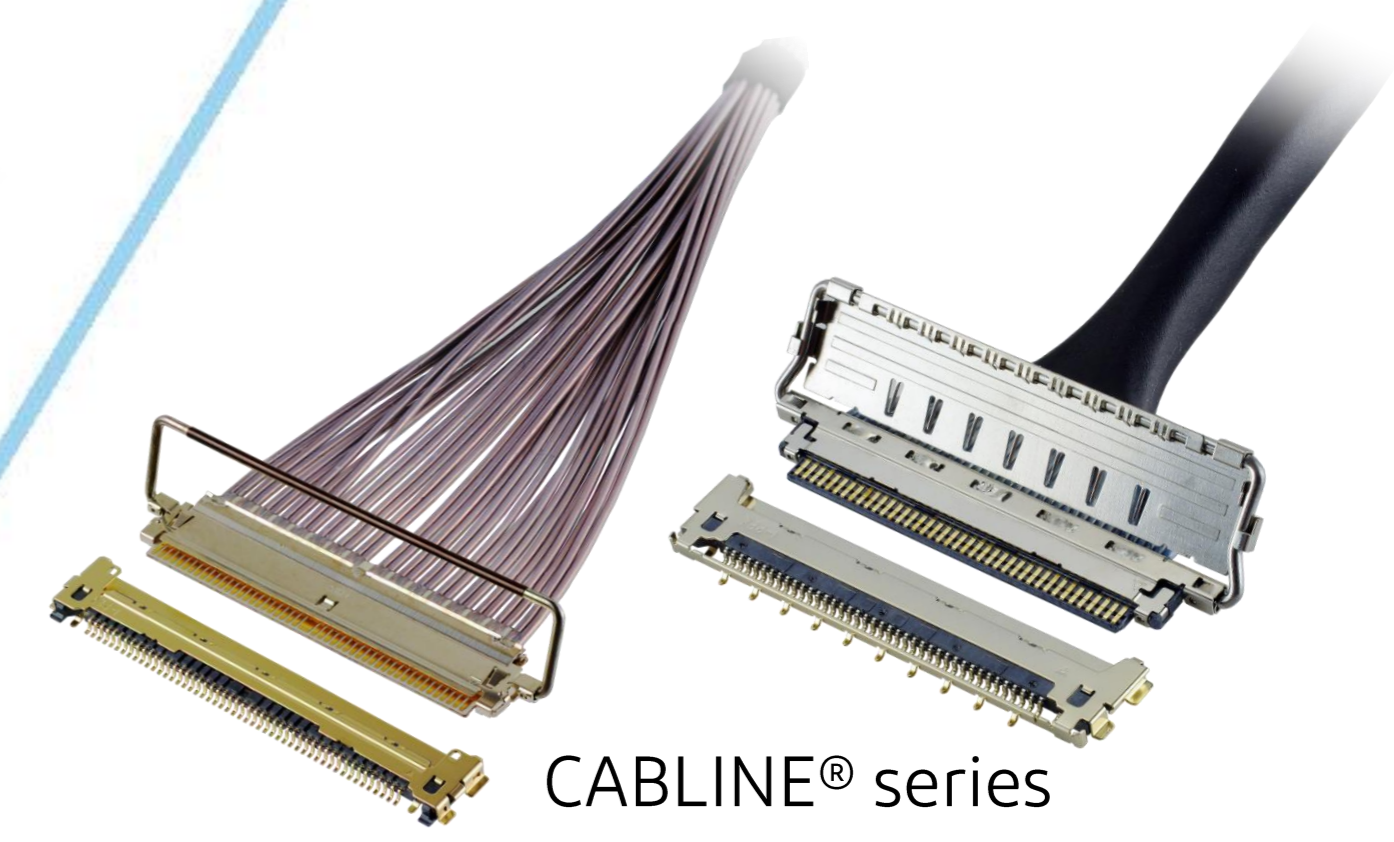
## RF Connector

MHF® series



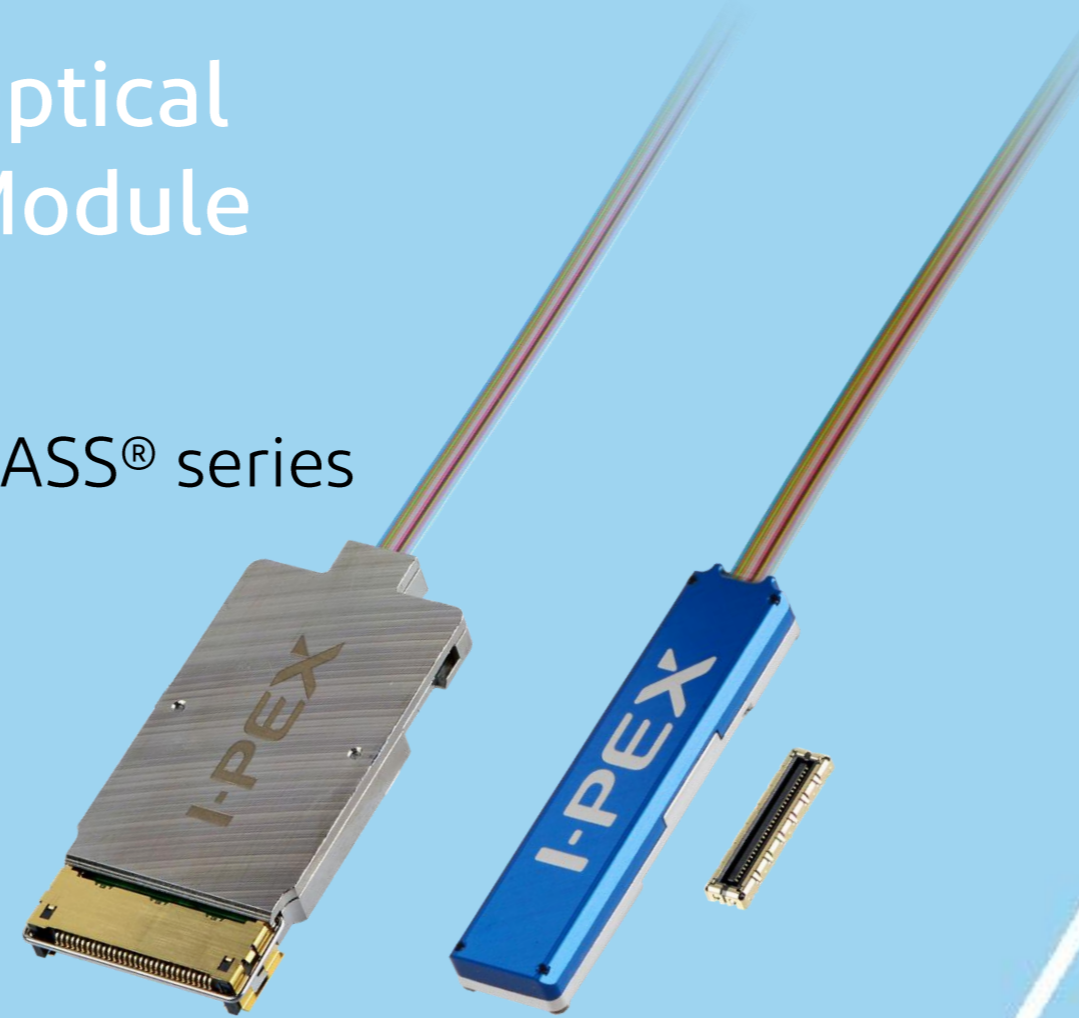
## Micro-coaxial/Twinax/Discrete Wire Connector

CABLIN® series

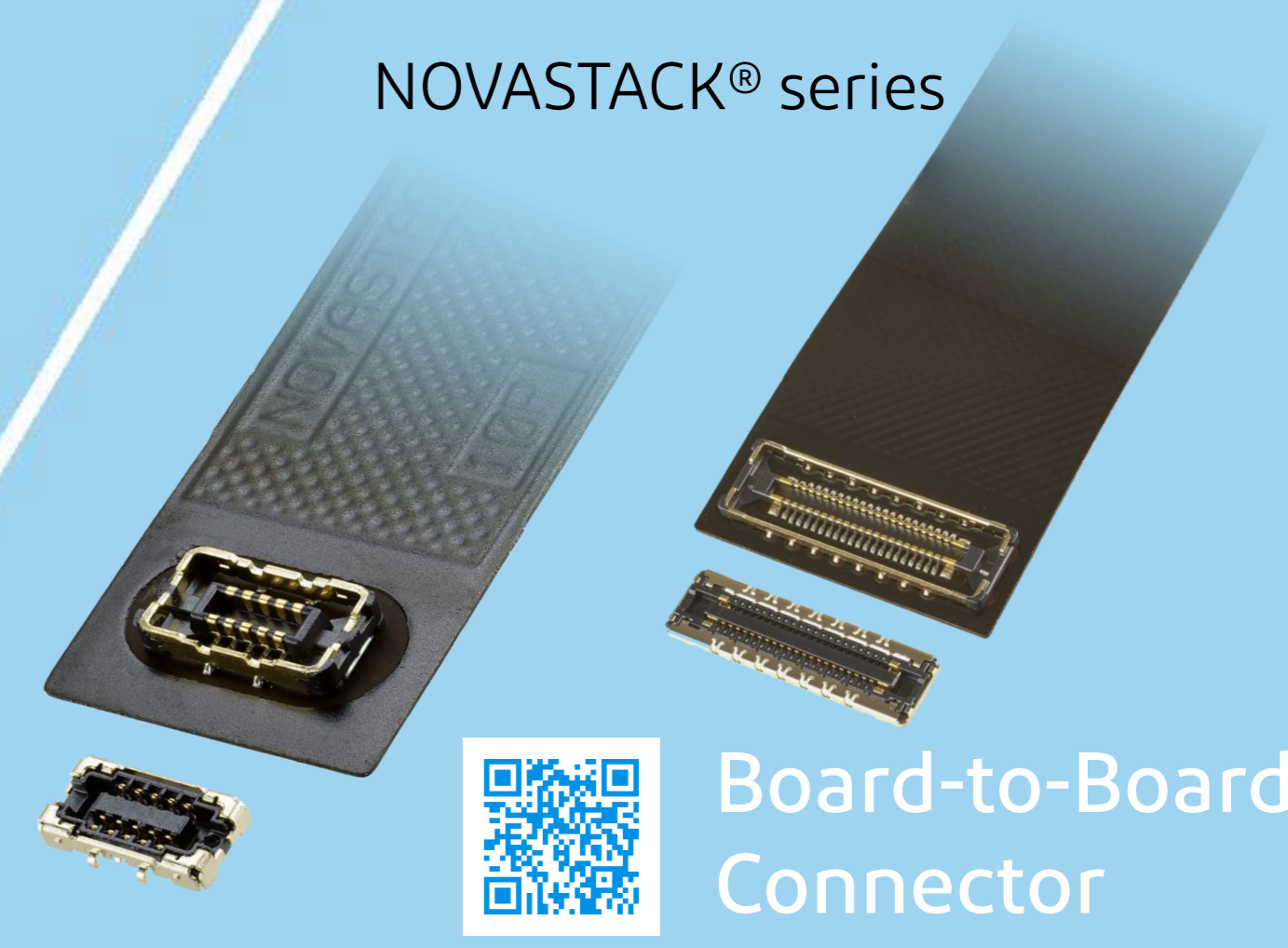


## Optical Module

LIGHTPASS® series



NOVASTACK® series



## Board-to-Board Connector



## Power Connector/Terminal

AP series

ISH® series



MINIFLEX® series

EVAFLEX® series



## FPC FFC Connector



## Inquiry



MINIDOCK® series



## I/O Connector

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