

# CABLINE®-CAP

고속전송대응 (64Gbps/lane PAM4)、  
0.4mm Pitch、수평결합 타입 세선동축 Cable Assembly

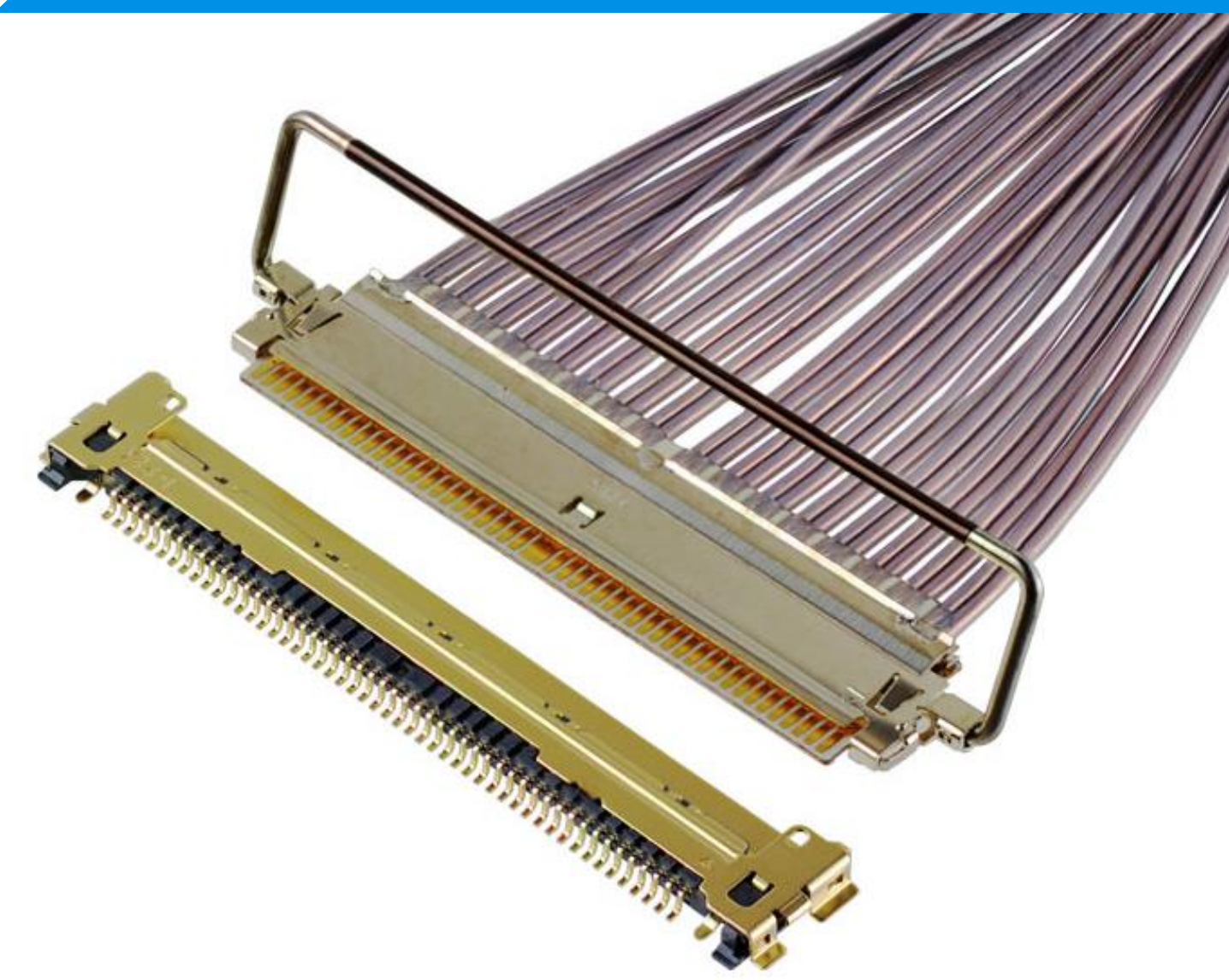
## Product Specifications:

Mating type		Horizontal
Board Pitch (mm)		0.4
Wiping Length (mm)		0.54
Mated size (mm)	Height	1.35 Max
	Width	Formula: 5.75mm + (0.4mm* # of pins)
	Depth	6.86
Pin Counts	Range	Up to 60
	Available	50 (16 differential pair Max)

## Applicable Cable Size:

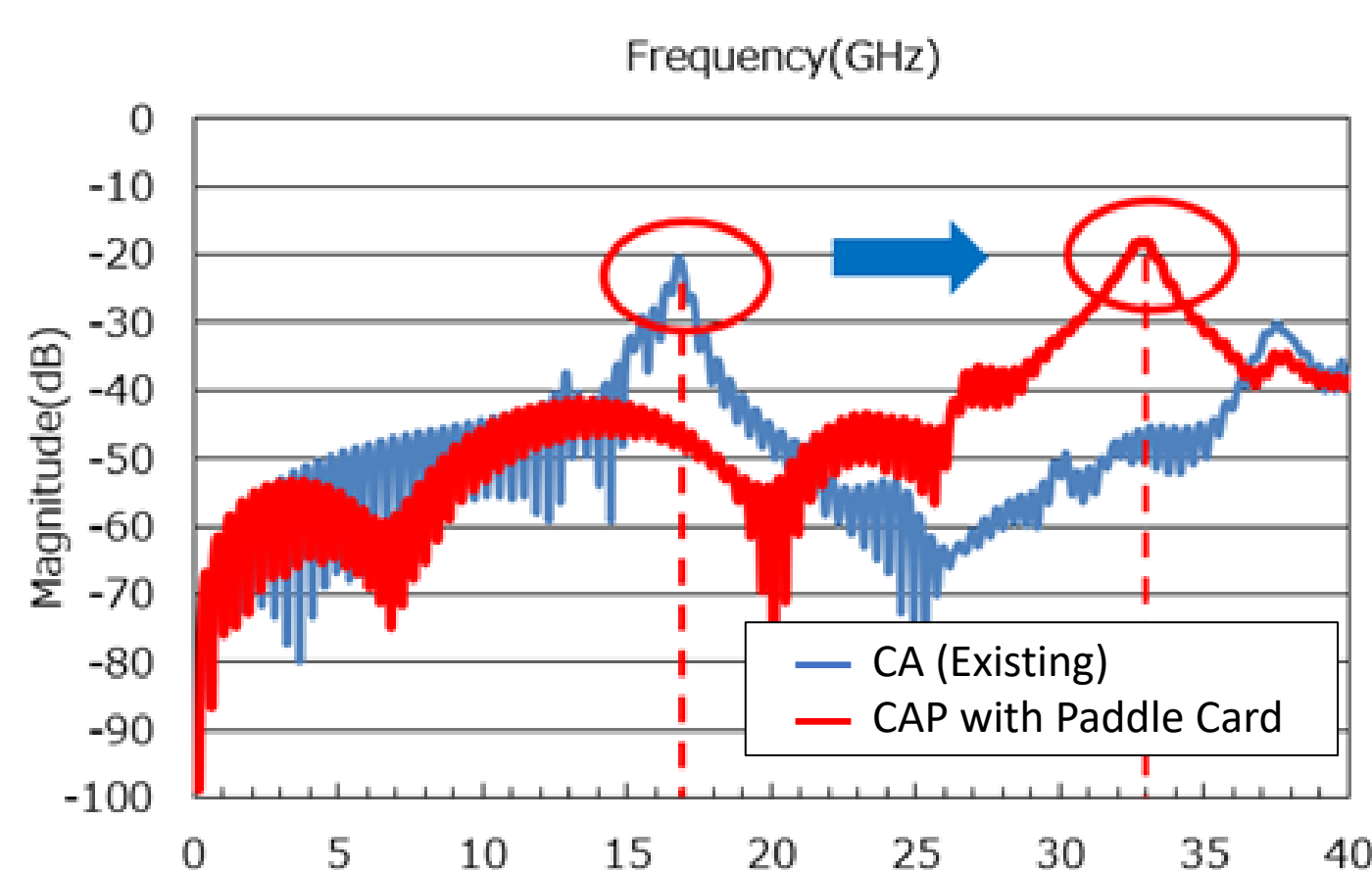
Maximum O.D. (mm)	0.47
Micro-Coaxial For Signal (AWG)	Diff 90 ohm: #38

\*제품명 CABLINE®-CAP는, 하네스 제품 명칭입니다. Receptacle은 CABLINE®-CA Receptacle ( 20525-#50E-02 ) 입니다.  
\* Plug는 하네스 제품으로 제공됩니다. 케이블 길이는 원하시는 길이대로 커스터마이징이 가능합니다.  
\*기재가 없는 PIN수 대응에 대해서는 문의해 주십시오.

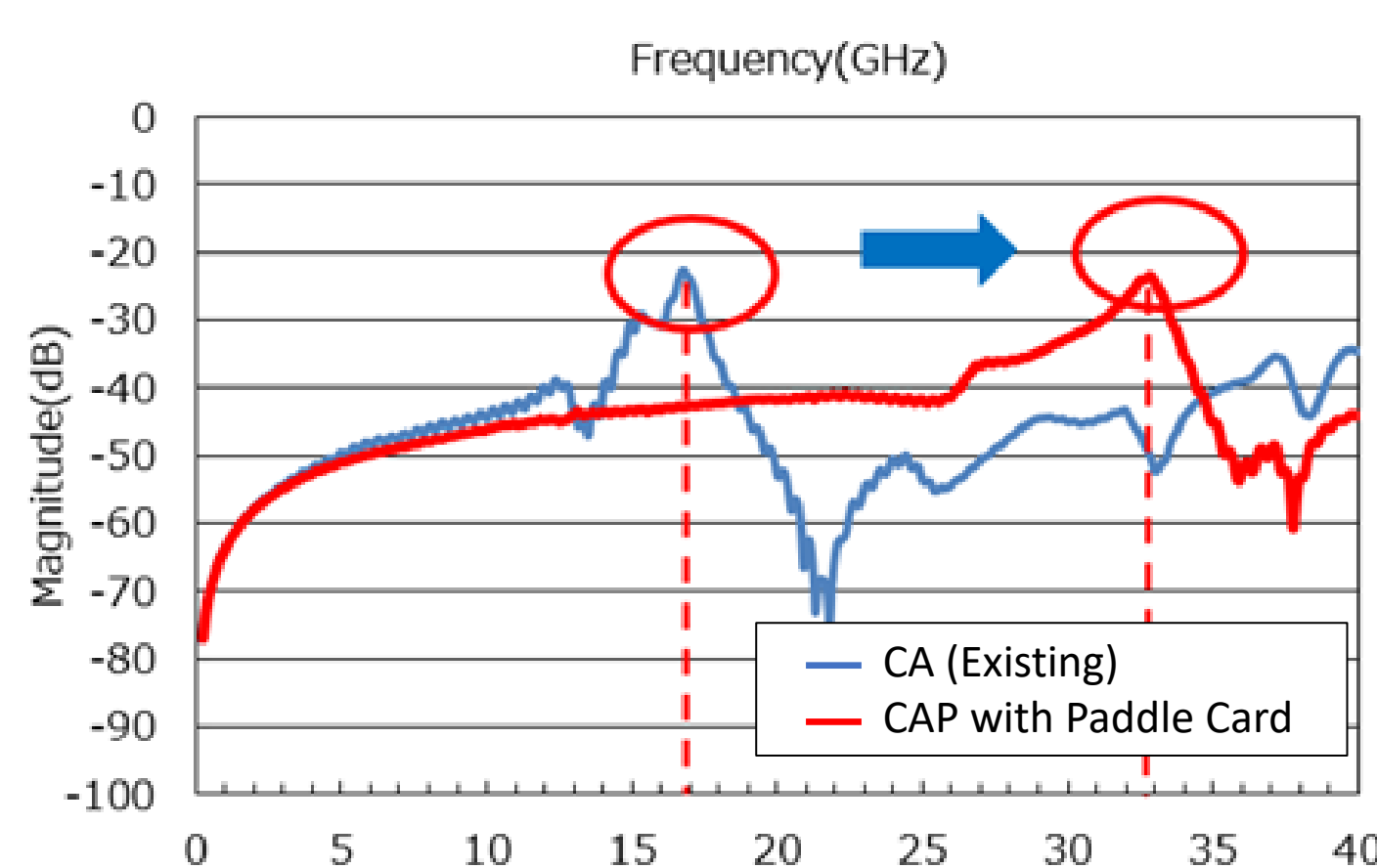


## ▶ 패들카드 기술을 구사하는 고속전송 64Gbps/lane PAM4

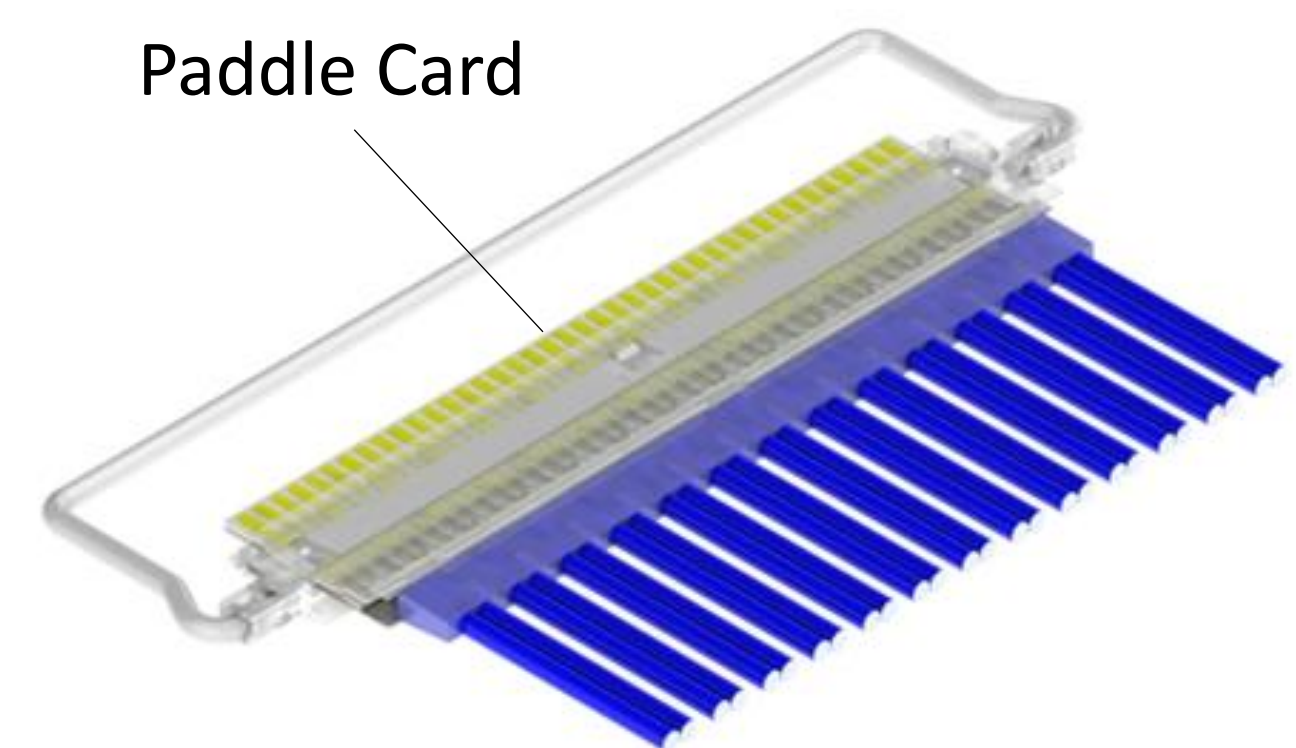
케이블 플러그 부에 패들카드를 채용하는 것으로, 신호품질을 향상시켜  
기존 CABLINE 시리즈에서 한층 더 고속전송을 실현



Near End Cross Talk



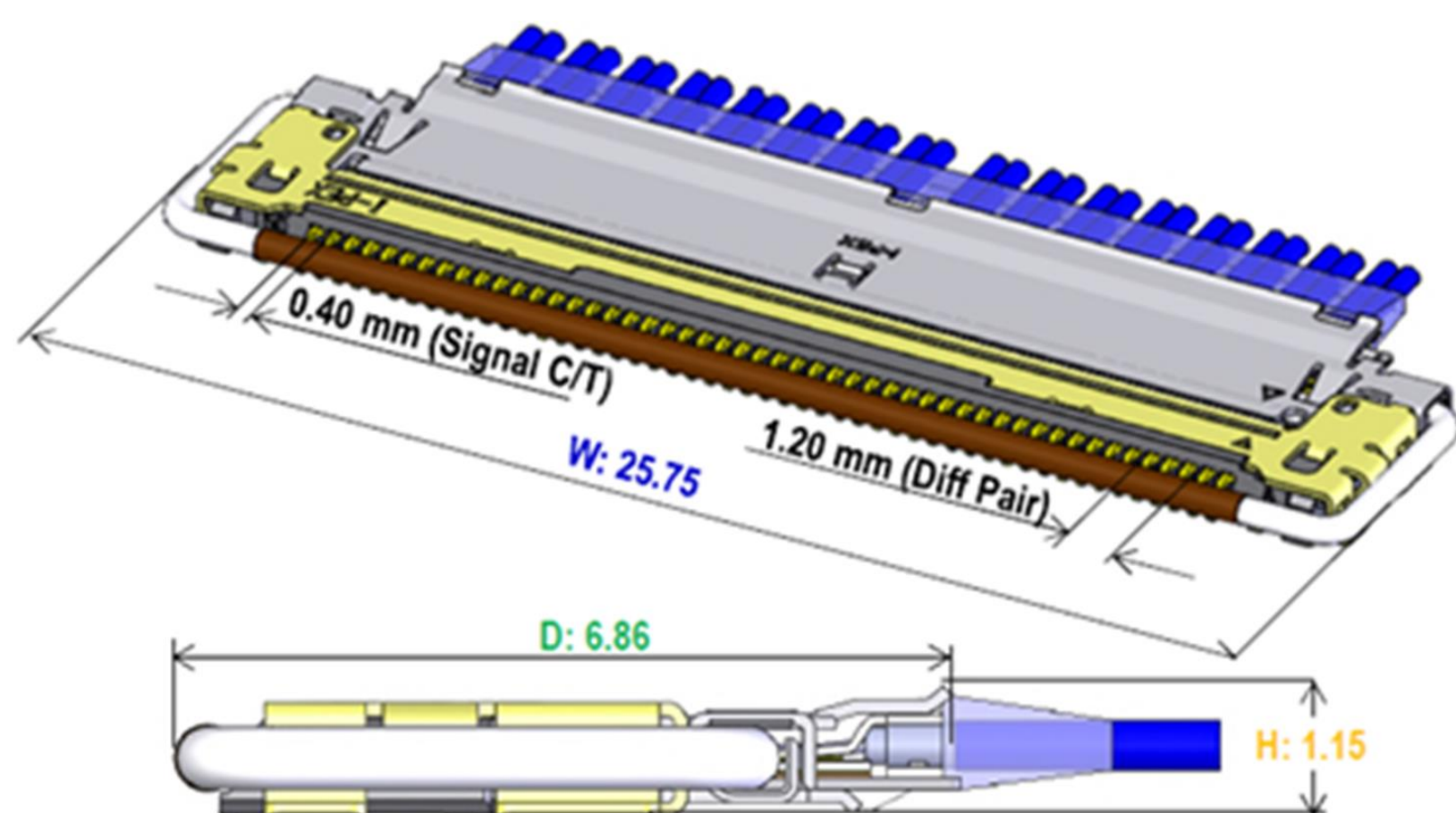
Far End Cross Talk



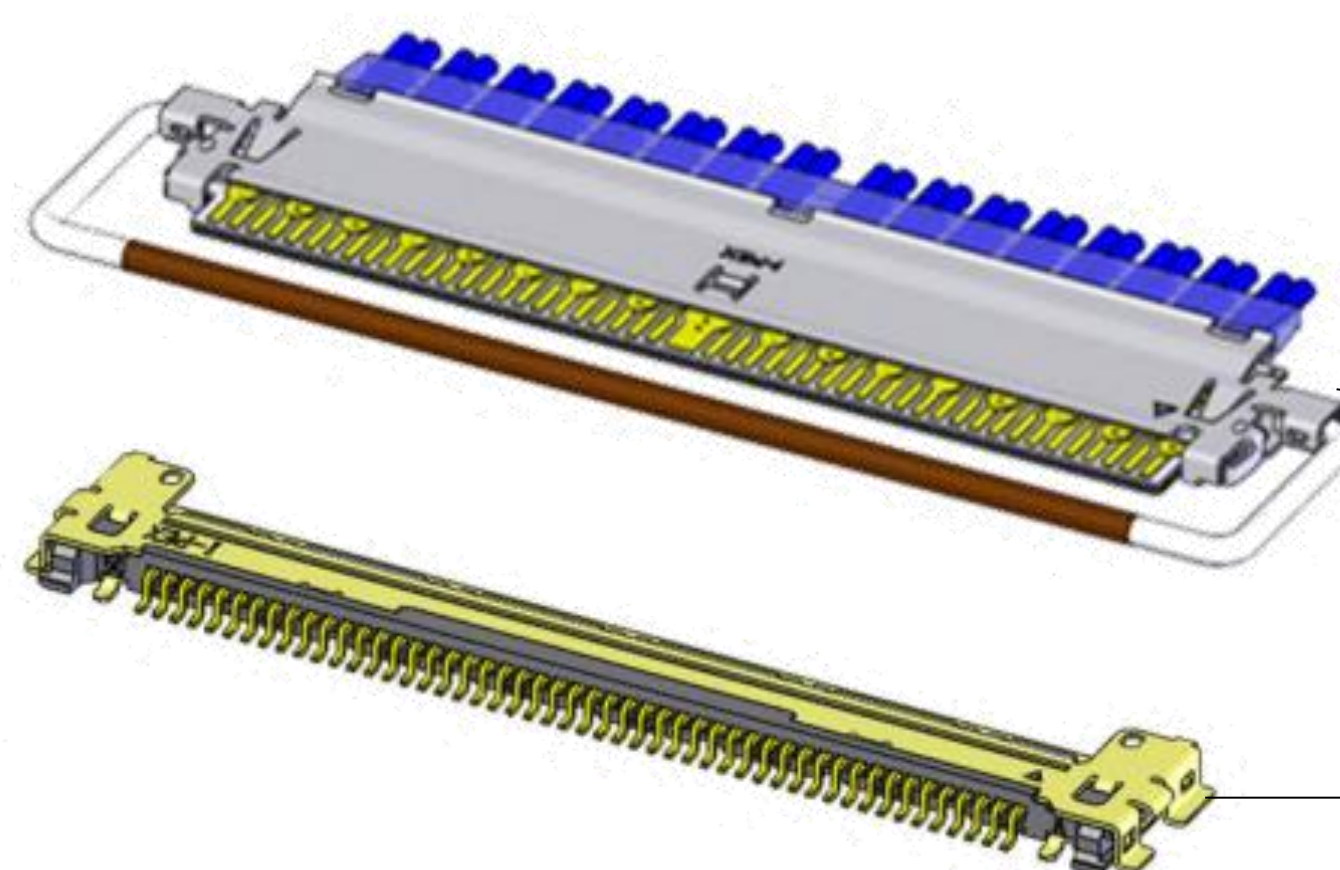
패들 카드 기술 홈페이지

<https://www.i-pex.com/library/white-papers/paddle-card-technology>

## ▶ 낮은 높이에서 공간 제약이 있는 Application에 최적인 높이 H=1.15mm



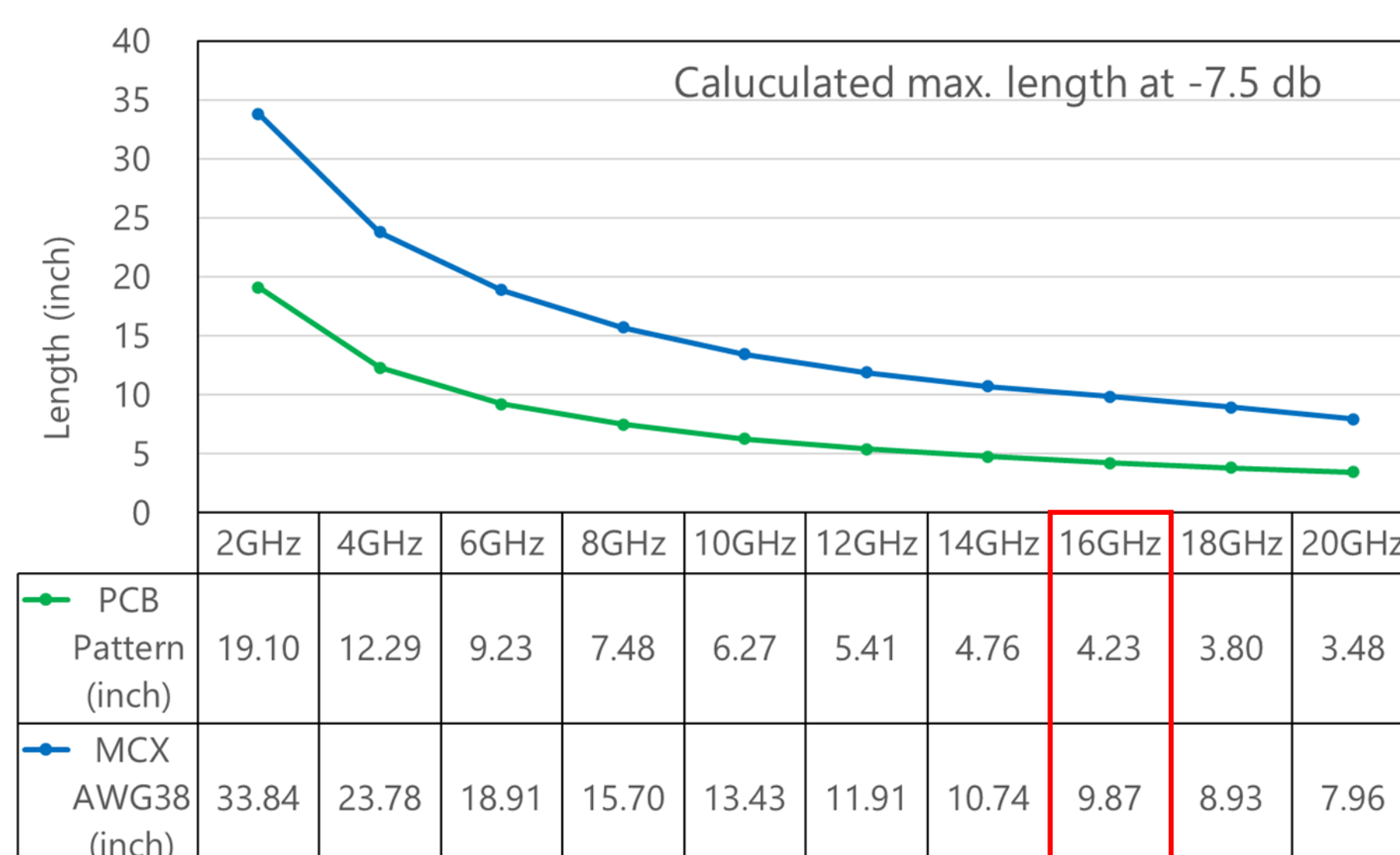
Mating condition



Un-Mating condition

## ▶ 세선 동축케이블을 사용한 LEAPWIRE Jumper solution



케이블 점퍼 하네스는 기판전송보다 유리합니다. 낮은 손실의PCB (Dk3.7) 와 CABLINE-CAP®하네스의  
전송 거리 비교입니다. 세선 동축 케이블은 낮은 손실의 PCB (Dk3.7) 와 비교하여 16GHz 대에서 약2.3배 전송이 가능합니다.





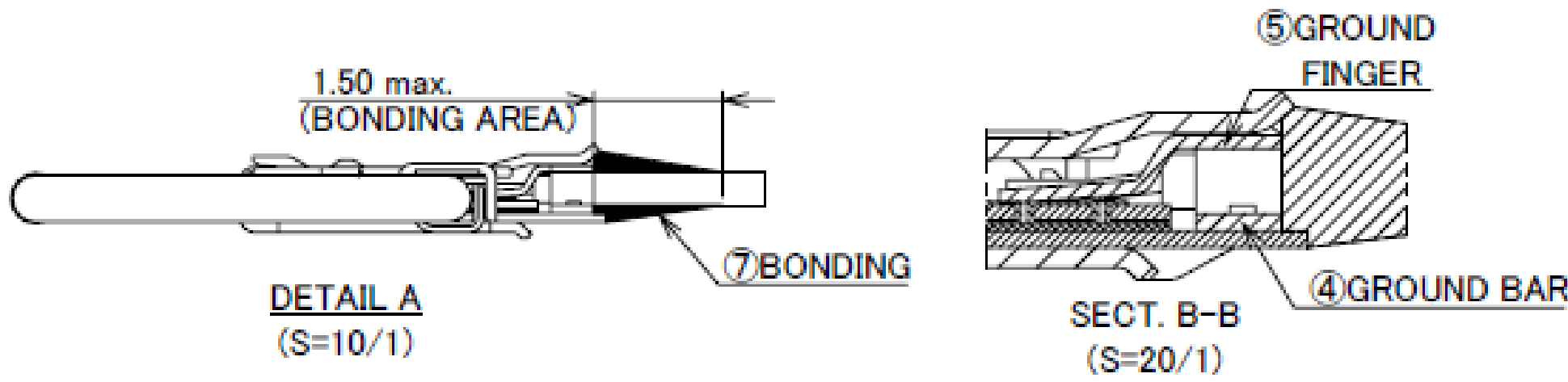
# Component Parts Details

## Component Parts

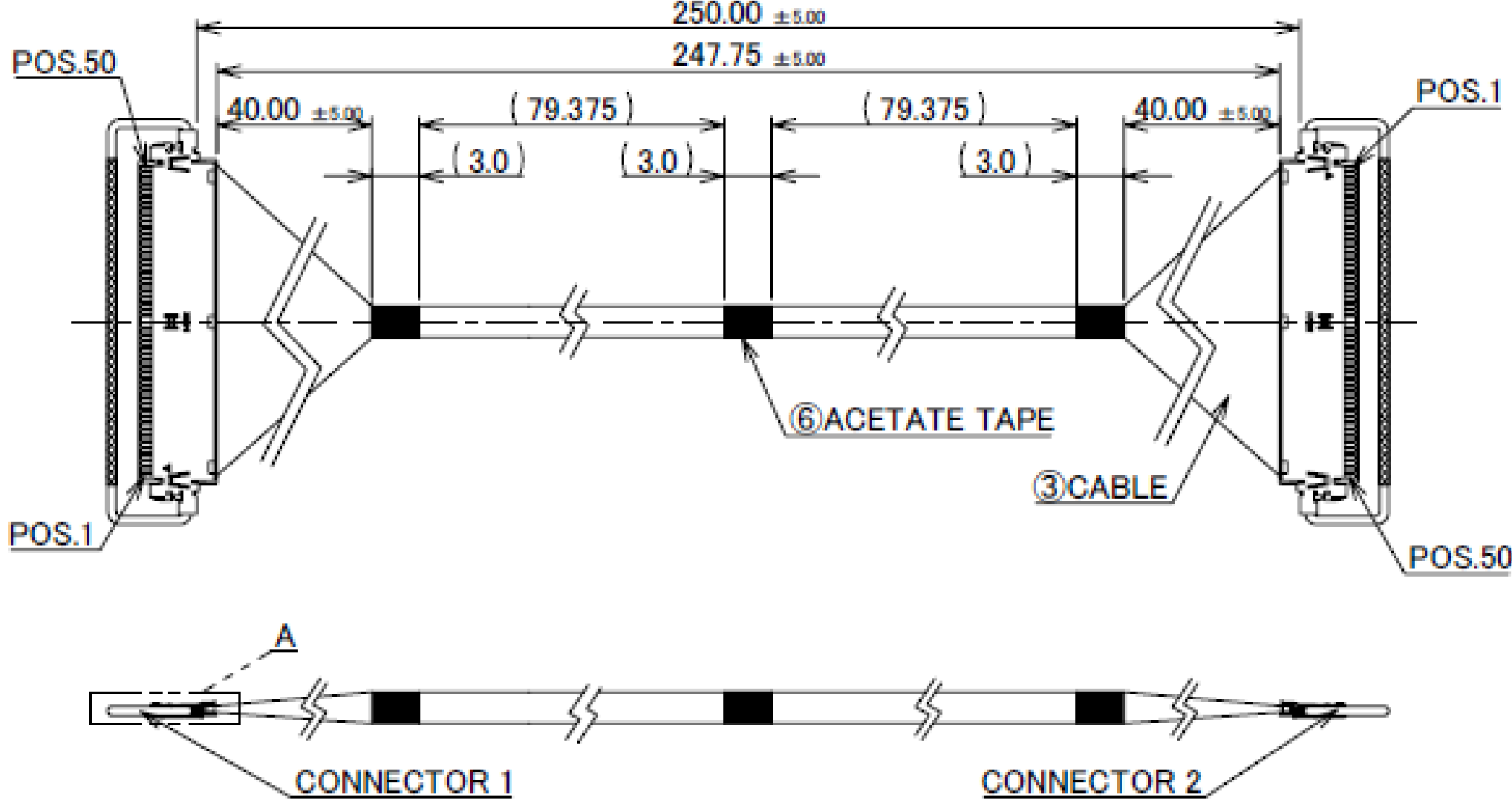
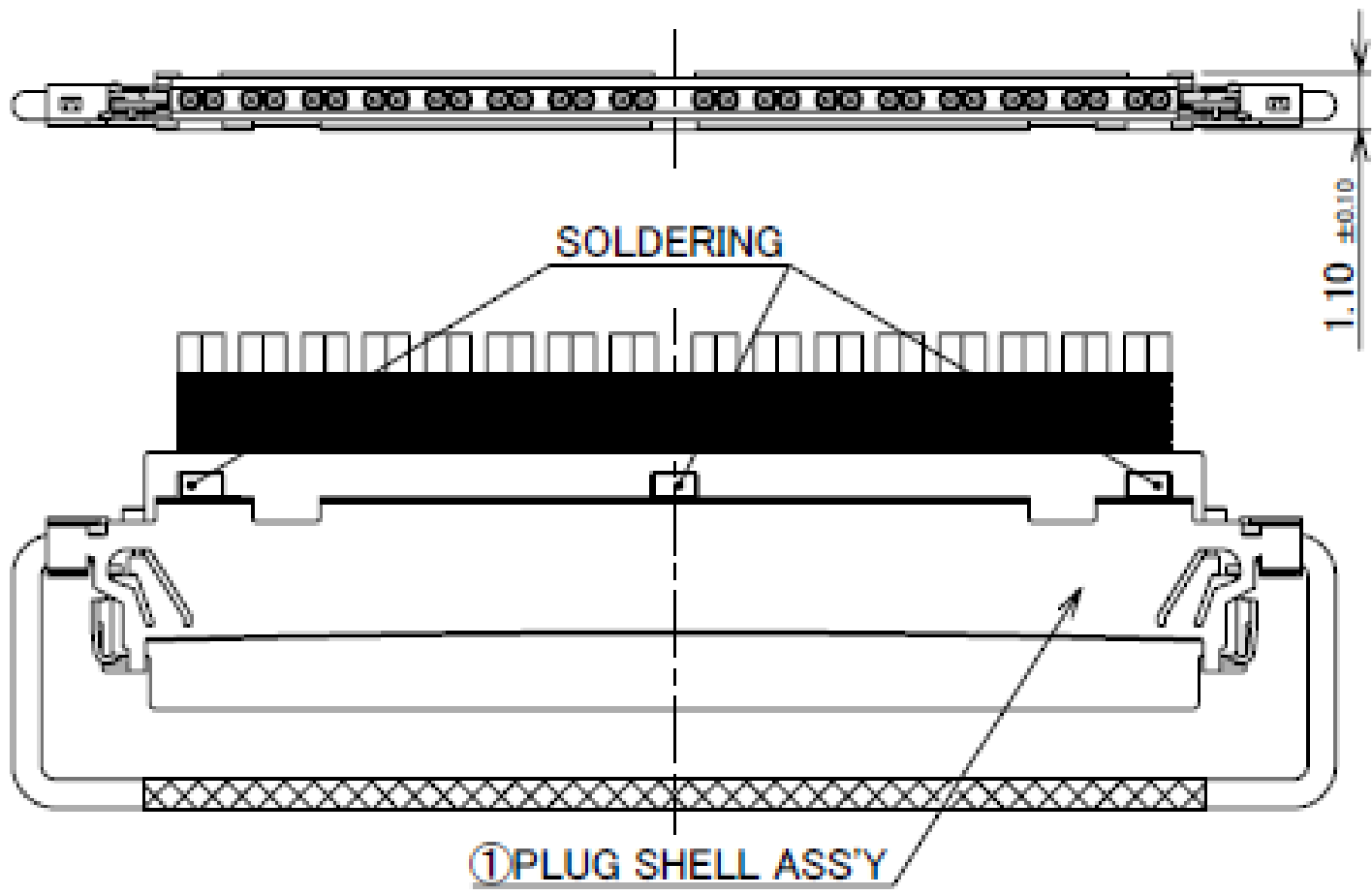
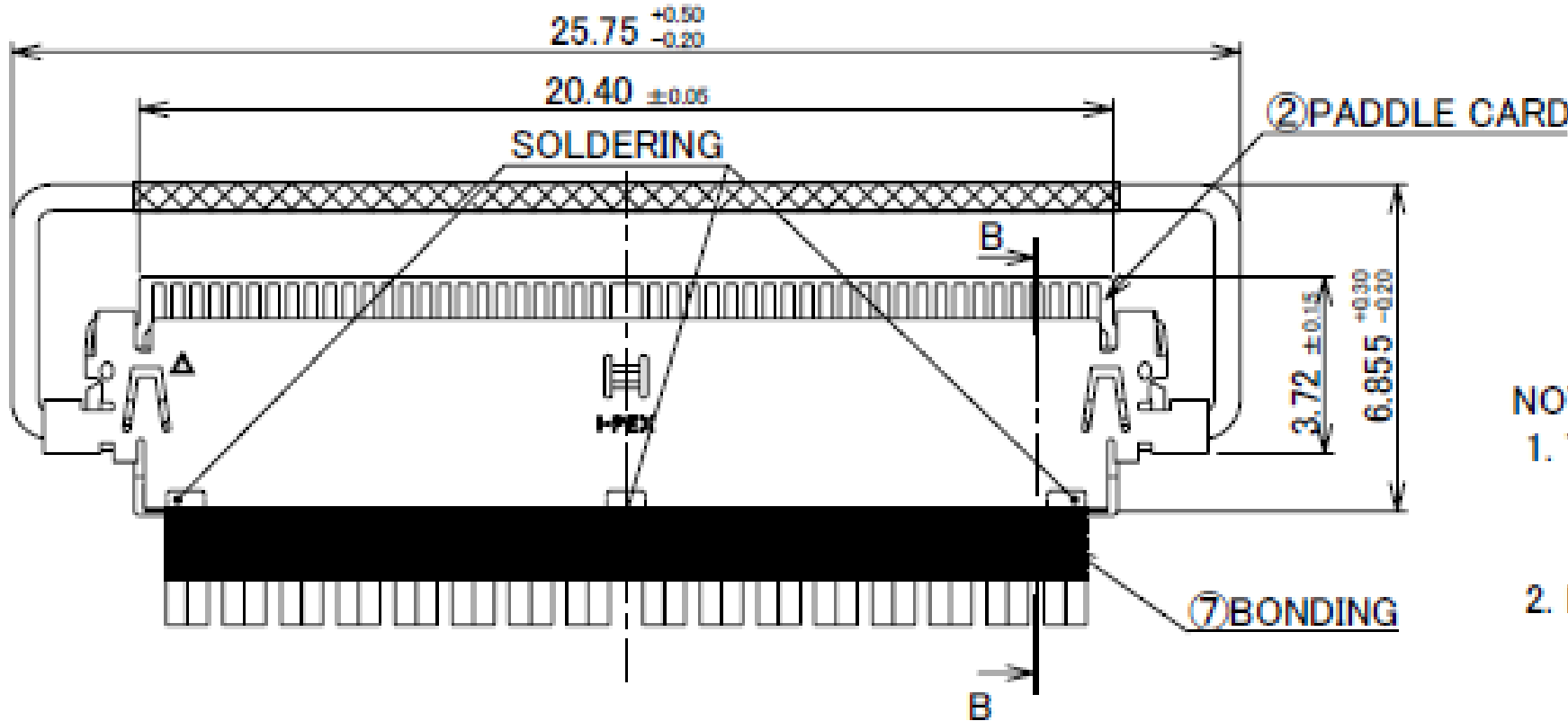
Connector parts	
	
PLUG Harness	RECEPTACLE

Plug Harness Assembly

I-PEX PART NO.	HARNESS LENGTH
81863-100B-01	250



CONNECTOR 1&2  
(S=5/1)

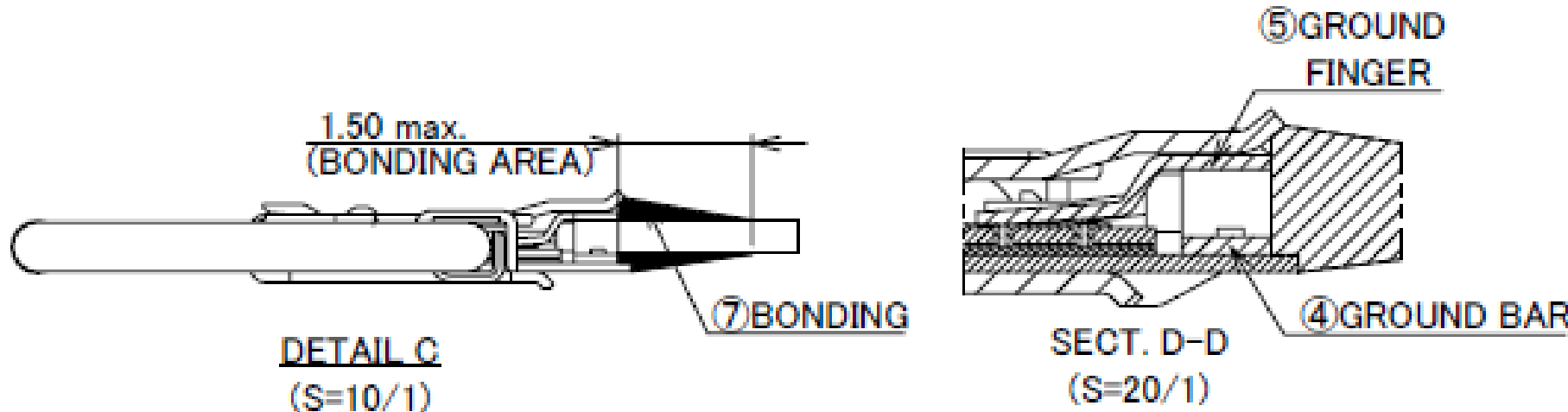


- NOTE.
1. TO HANDLE THIS CONNECTOR :  
YOU MUST READ AND FOLLOW THE INSTRUCTION MANUAL BELOW.  
I-PEX INSTRUCTION MANUAL No.HIM-23013.
  2. ELECTRIC CHARACTERISTICS  
WITHSTANDING VOLTAGE: AC 250V LEAKAGE CURRENT 2.0mA MAX.  
INSULATION RESISTANCE: 50MΩ MIN. DC 100V
  3. THE OPERATING TEMPERATURE OF THE HARNESS: 80°C MAX.
  4. MINIMUM HARNESS LENGTH: 85mm

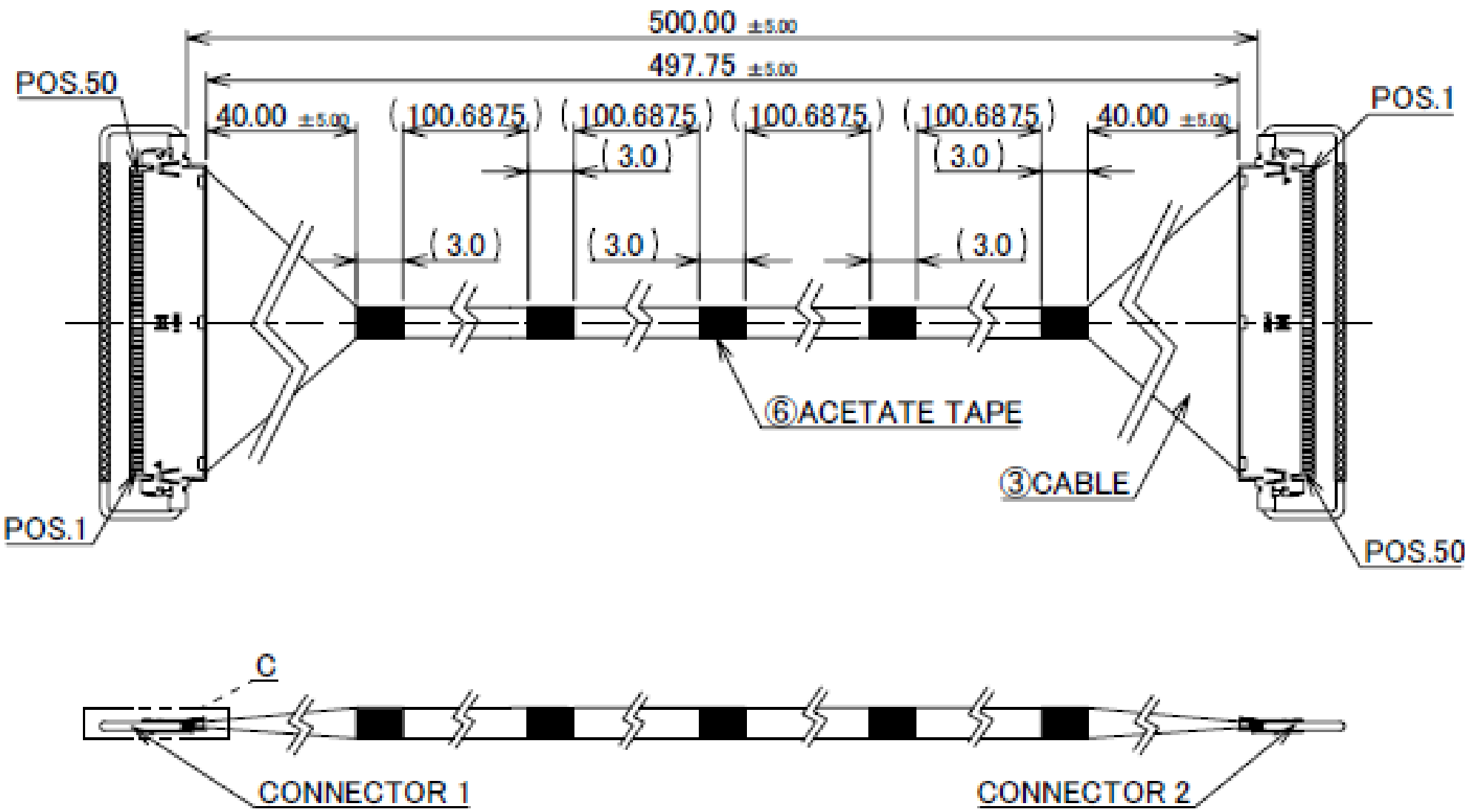
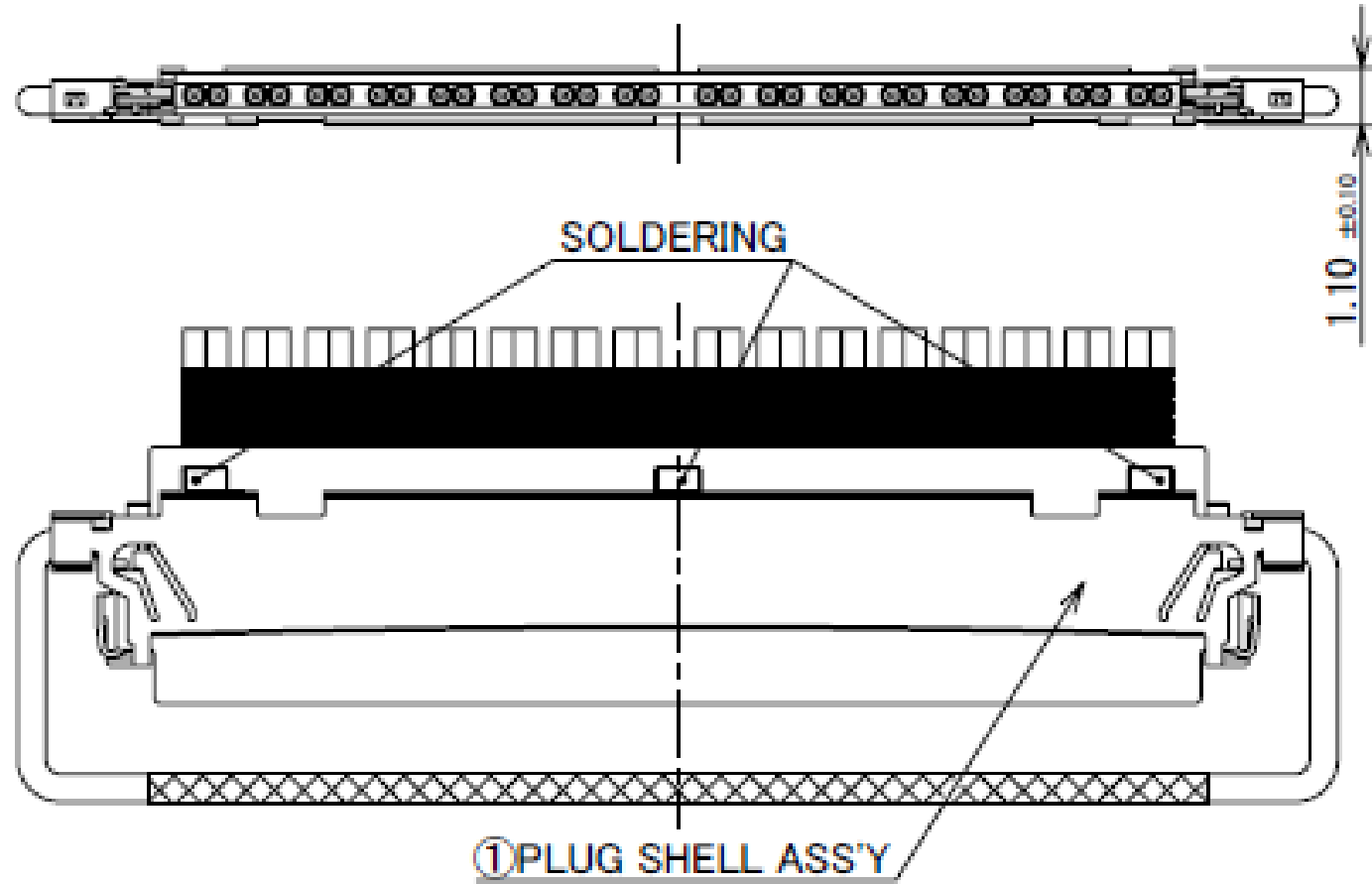
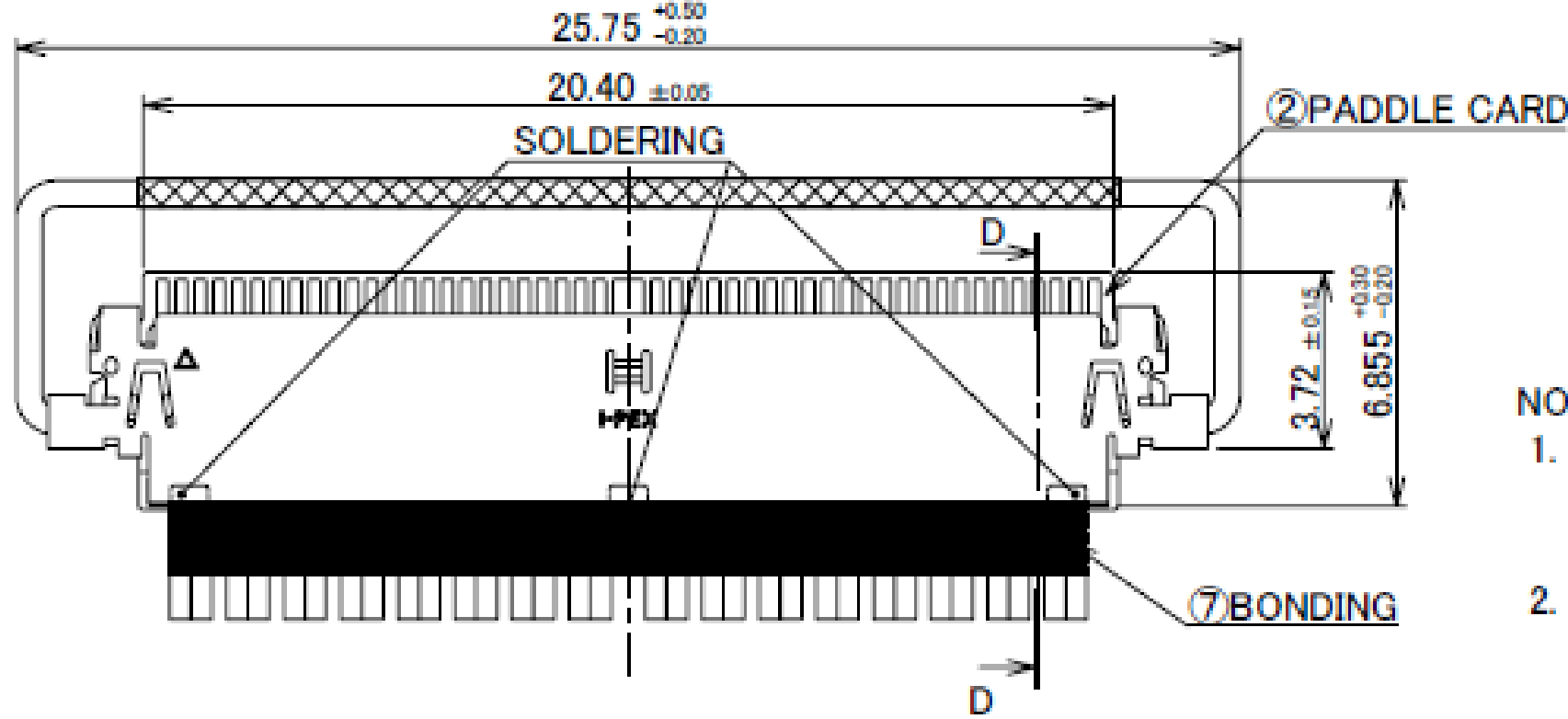
7	BONDING	-	-	UV GLUE
6	ACETATE TAPE	-	3	BLACK
5	GROUND-FINGER	-	2	-
4	GROUND-BAR	-	2	-
3	CABLE	-	32	MICRO-COAXIAL CABLE AWG #38, 45 OHM, BLUE
2	PADDLE CARD	3660-0501	2	CONNECTOR 1&2
1	PLUG SHELL ASS'Y	20993-050T-01	2	CABLINE®-CAP PLUG SHELL ASS'Y P/N: 20993-050T-01 CONNECTOR TO BE MATED: 20525-050E-02
NO.	DESCRIPTION	PARTS NO.	QTY	REMARKS

Rev.1

I-PEX PART NO.	HARNESS LENGTH
81863-100B-02	500



CONNECTOR 1&2  
(S=5/1)



- NOTE.
1. TO HANDLE THIS CONNECTOR :  
YOU MUST READ AND FOLLOW THE INSTRUCTION MANUAL BELOW.  
I-PEX INSTRUCTION MANUAL No.HIM-23013.
  2. ELECTRIC CHARACTERISTICS  
WITHSTANDING VOLTAGE: AC 250V LEAKAGE CURRENT 2.0mA MAX.  
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7	BONDING	-	-	UV GLUE
6	ACETATE TAPE	-	5	BLACK
5	GROUND-FINGER	-	2	-
4	GROUND-BAR	-	2	-
3	CABLE	-	32	MICRO-COAXIAL CABLE AWG #38, 45 OHM, BLUE
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NO.	DESCRIPTION	PARTS NO.	QTY	REMARKS

Rev.1

# Plug Harness Assembly

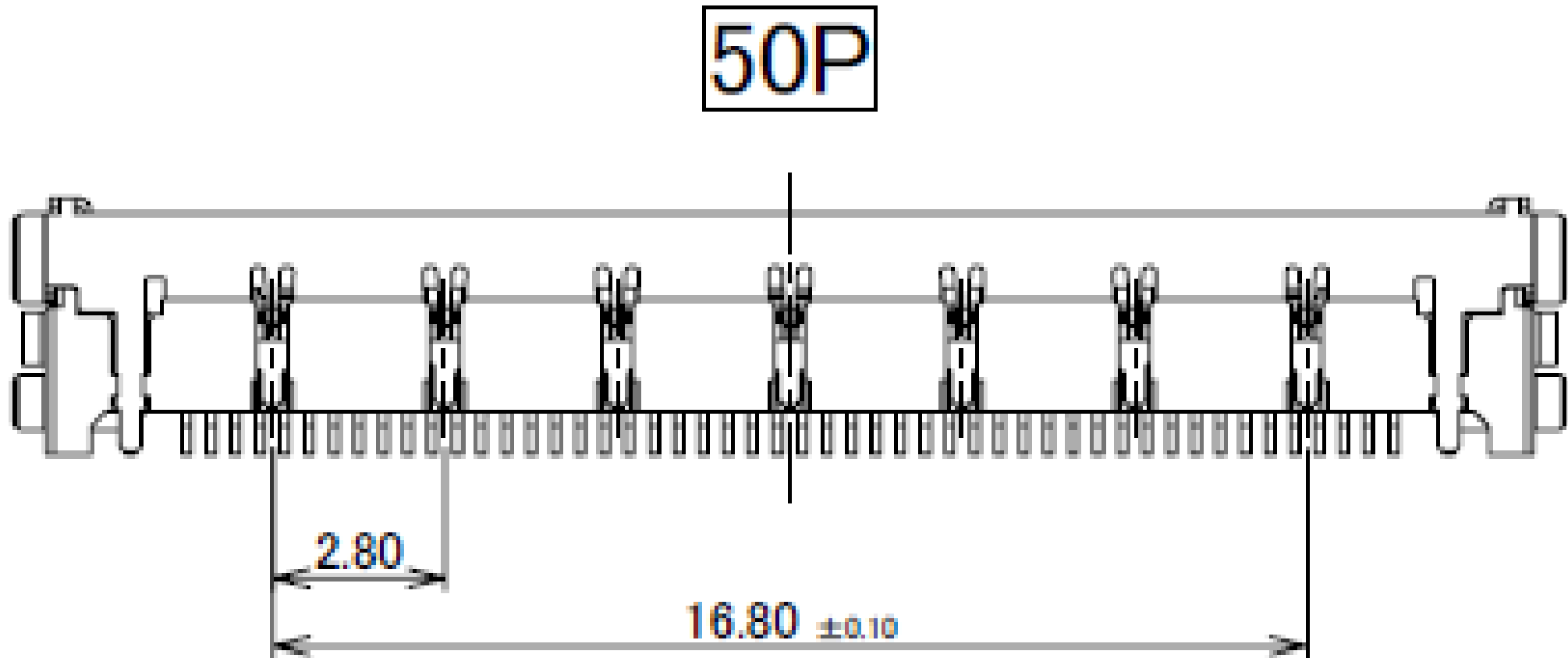
ITEMS	SPECIFICATION
APPLICABLE CABLE	Micro Coaxial: AWG#38 Diff 90ohm
RATING AMPERAGE (FOR CONTACT)	0.4A AC/DC (AWG#38)
RATING VOLTAGE	100V AC (PER CONTACT PIN)
OPERATING TEMPERATURE	233~358K (-40℃~85℃)
OPERATING HUMIDITY	85℃ MAX. (NON-CONDENDING)
CONTACT RESISTANCE	INITIAL: 270mohm MAX.(AWG#38) / AFTER TEST: Δ40mohm MAX.
GROUND SHELL RESISTANCE	INITIAL : 50mohm MAX. / AFTER TEST : Δ40mohm MAX.
INSULATION RESISTANCE	INITIAL: 1000Mohm MIN. / AFTER TEST: 500Mohm MIN.
DIELECTRIC WITHSTANDING VOLTAGE	AC250V 1min
DURABILITY	30CYCLES
MATING FORCE (INITIAL / AFTER 30 CYCLES)	50P: 18.9N MAX.
UNMATING FORCE (INITIAL / AFTER 30 CYCLES)	50P: 2.5N MIN.
CABLE RETENTION FORCE	50P: 24.5N MIN.
PRODUCT SPECIFICATION	PRS-2832
TEST REPORT	TR-23020
INSTRUCTION MANUAL	HIM-23013

Rev.1

# Receptacle Assembly

PART NO.
20525-050E-02

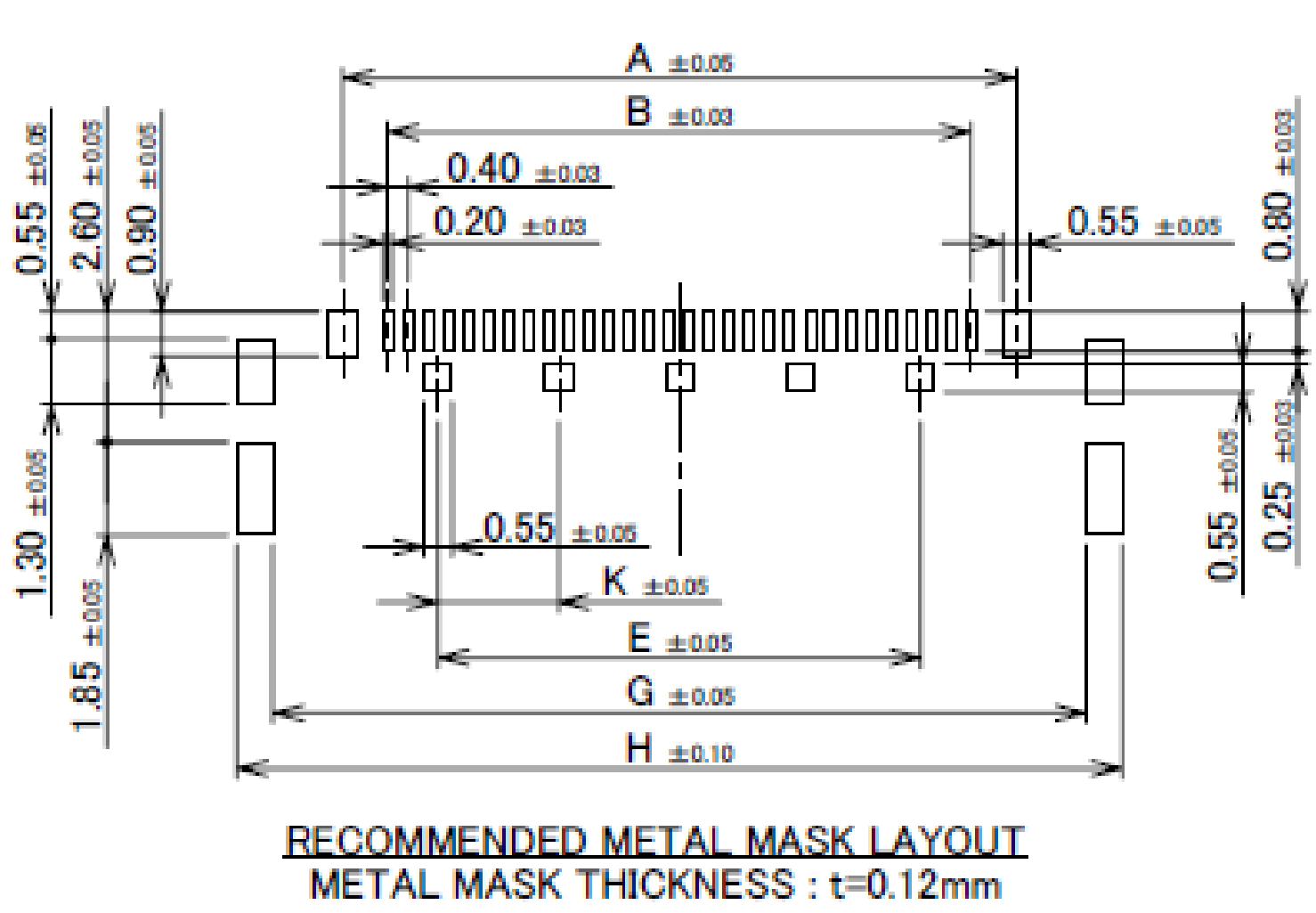
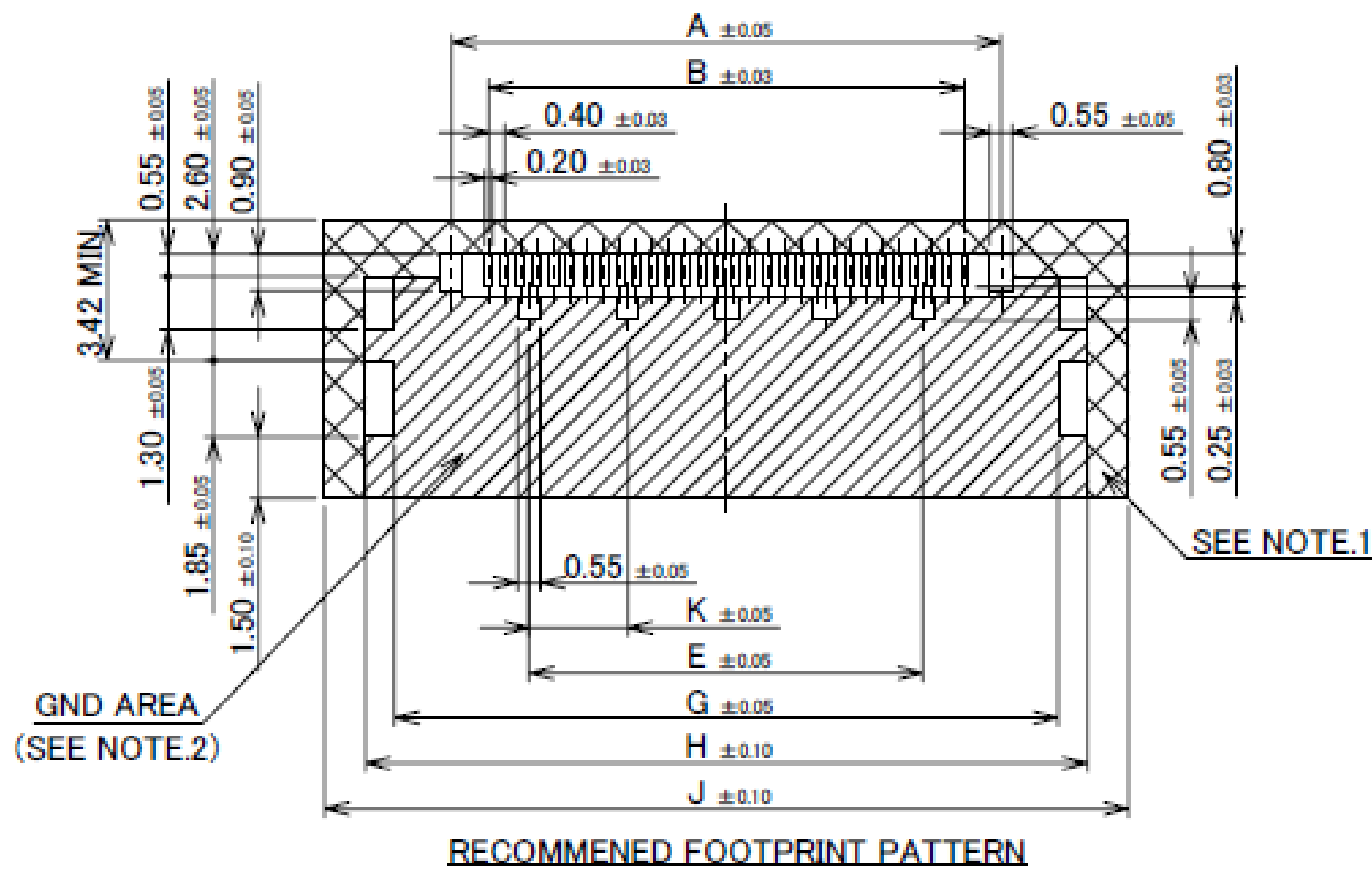
BOTTOM VIEW



Rev.32

Receptacle Assembly

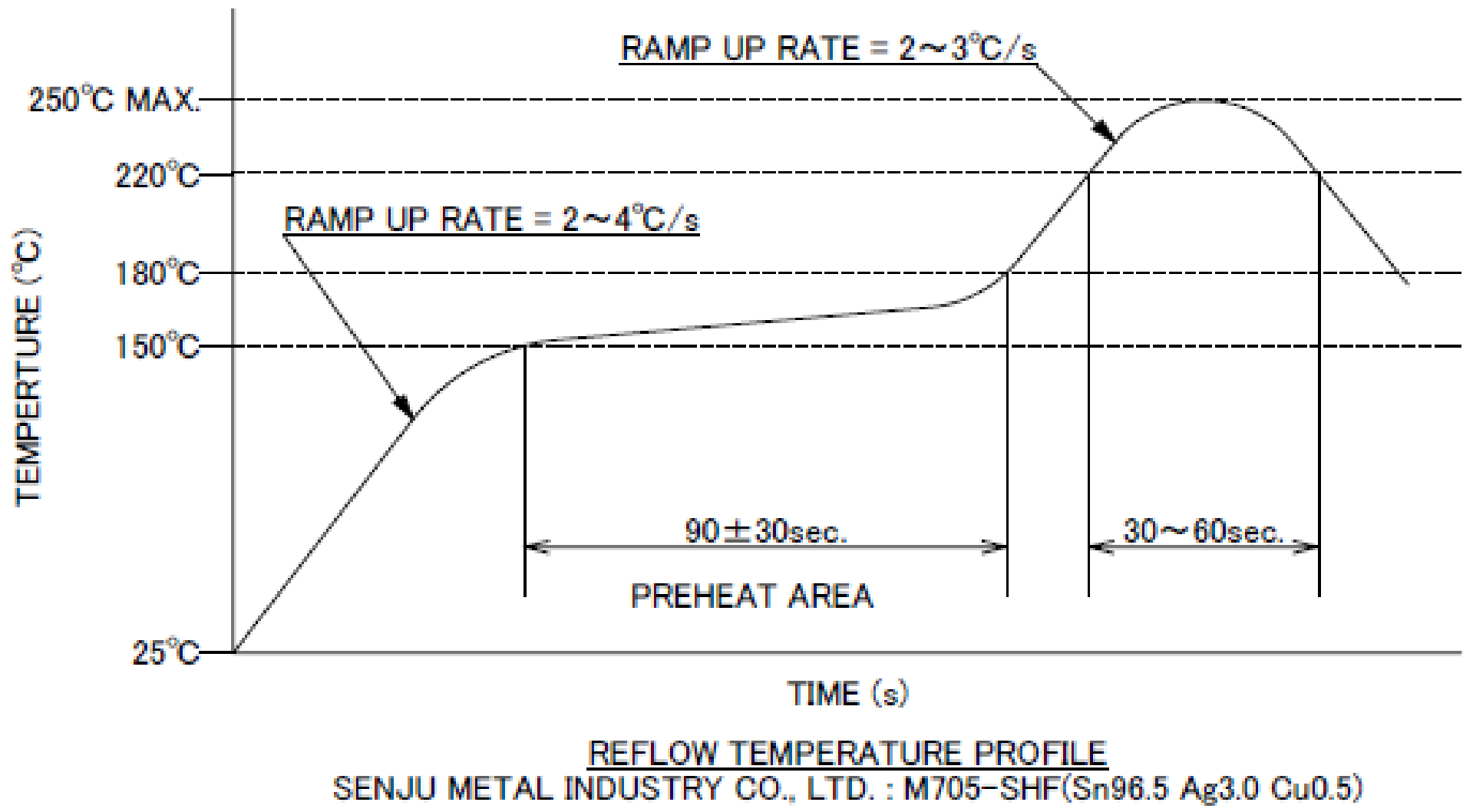
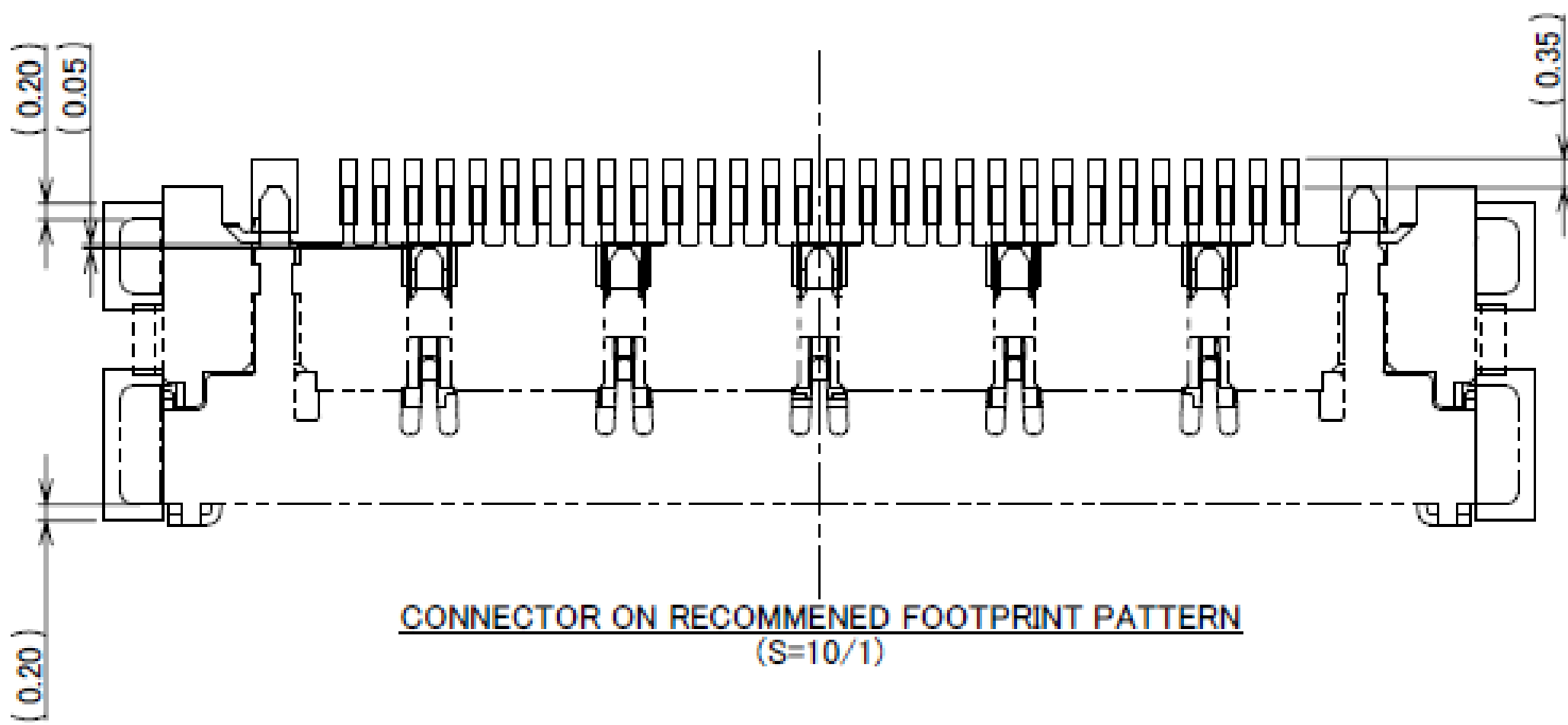
PART NO.	POS.	A	B	E	G	H	J	K
20525-050E-02	50	21.40	19.60	16.80	24.18	25.60	27.60	2.80



NOTES.  
1. IN CASE OF PLUG WITH PULL BAR(20633-#\*\*T-01S), DO NOT MOUNT ANOTHER COMPONENT IN THIS AREA.  
2. SOLDER RESIST MUST BE APPLIED TO THIS AREA.

Rev.32

Receptacle Assembly



Rev.32



Receptacle Assembly

FOR CABLINE-CA PLUG CABLE ASSEMBLY (DWG NO. 20633)

ITEMS	SPECIFICATION
APPLICABLE CABLE	MICRO-COAXIAL CABLE : AWG# 44 , 42 , 40 , 38 , 36 DISCRETE WIRE : AWG# 36 , 34 TWINAX CABLE : AWG# 40 , 42
RATING VOLTAGE	100V AC (PER CONTACT PIN) ※THIS IS THE RATED VOLTAGE OF THE CONNECTOR. PLEASE NOTE THAT THE RATED VOLTAGE MAY VARY IN THE HARNESS DEPENDING ON THE CABLES USED.
RATING AMPERAGE (FOR CONTACT)	0.1A AC/DC [AWG#44] PER CONTACT PIN/UP TO 60 CONTACTS 0.24A AC/DC [AWG#42] PER CONTACT PIN/UP TO 50 CONTACTS 0.3A AC/DC [AWG#40] PER CONTACT PIN/UP TO 40 CONTACTS 0.5A AC/DC [AWG#38] PER CONTACT PIN/UP TO 14 CONTACTS 0.8A AC/DC [AWG#36] PER CONTACT PIN/UP TO 6 CONTACTS 1.0A AC/DC [AWG#34] PER CONTACT PIN/UP TO 4 CONTACTS ※TESTING BY A REAL MACHINE IS RECOMMENDED BECAUSE TEMPERATURE RISE MAY AFFECTED BY ACTUAL SITUATION.
OPERATING TEMPERATURE	233~358K (-40℃~85℃)
OPERATING HUMIDITY	85% MAX.
CONTACT RESISTANCE	INITIAL : 180mohm MAX. (AWG#34) / AFTER TEST : ≦140mohm MAX. 275mohm MAX. (AWG#36) 360mohm MAX. (AWG#38) 600mohm MAX. (AWG#40) 700mohm MAX. (AWG#42) 1080mohm MAX. (AWG#44)
GROUND SHELL RESISTANCE	INITIAL : 50mohm MAX. / AFTER TEST : ≦140mohm MAX.
INSULATION RESISTANCE	INITIAL : 1000Mohm MIN. / AFTER TEST : 500Mohm MIN.
DIELECTRIC WITHSTANDING VOLTAGE	AC250V 1min
DURABILITY	30 CYCLES
MATING FORCE (INITIAL / AFTER 30 CYCLES)	10P : 7.80N MAX.      40P : 19.40N MAX. 12P : 8.20N MAX.      50P : 24.25N MAX. 20P : 9.70N MAX.      60P : 29.10N MAX. 30P : 14.55N MAX.
UNMATING FORCE (INITIAL / AFTER 30 CYCLES)	10P : 1.00N MIN.      40P : 4.00N MIN. 12P : 1.20N MIN.      50P : 5.00N MIN. 20P : 2.00N MIN.      60P : 6.00N MIN. 30P : 3.00N MIN.
CABLE RETENTION FORCE	10P : 4.90N MIN.      40P : 19.60N MIN. 12P : 5.88N MIN.      50P : 24.50N MIN. 20P : 9.80N MIN.      60P : 29.40N MIN. 30P : 14.70N MIN.
COPLANARITY	0.10 MAX.
PRODUCT SPECIFICATION	PRS-1968
TEST REPORT	TR-14122 (20525-0**E-0#) / TR-16023 (20525-2**E-0#)
PACKING STANDARD	300-824
INSTRUCTION MANUAL	HIM-09008
APPEARANCE CRITERIA No.	QLS-A***



# Custom Connectors Available

 RF  
Connectors

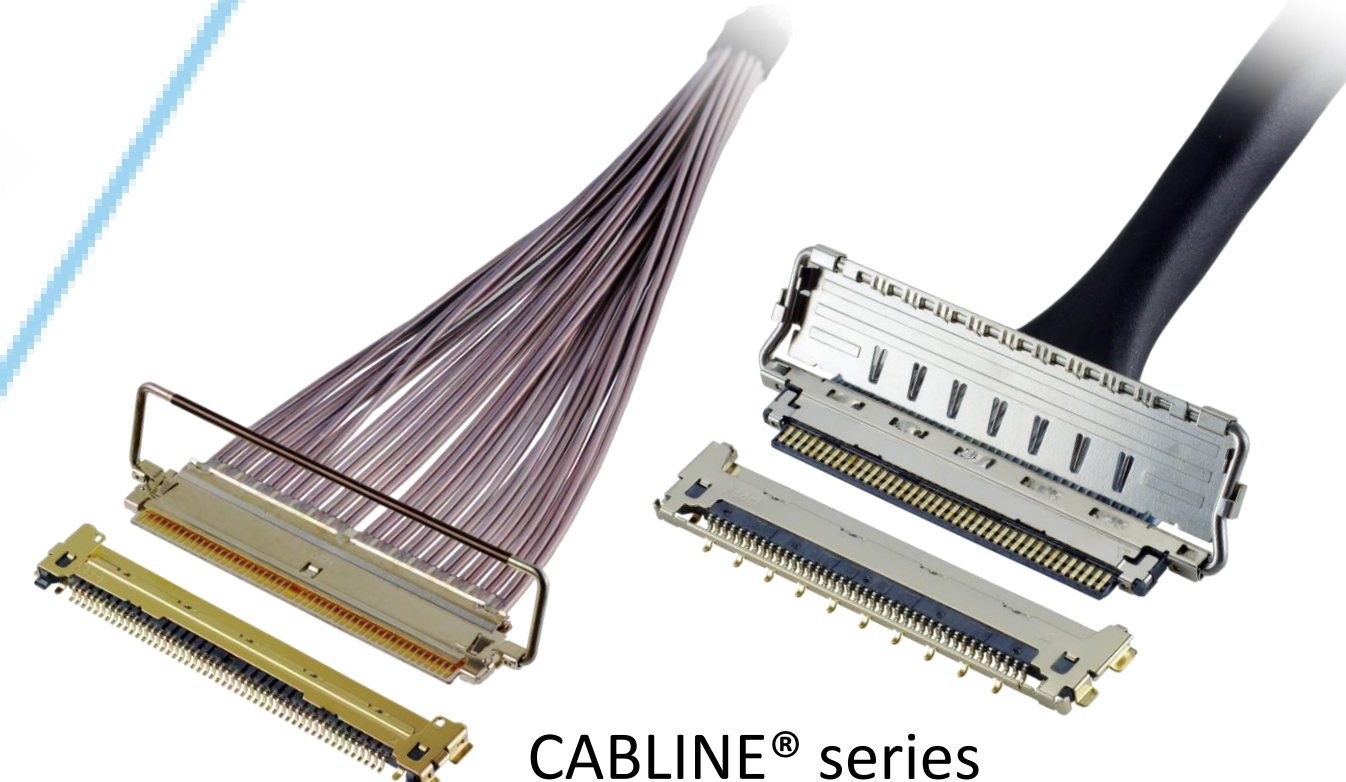
MHF® series



CABLINE® series



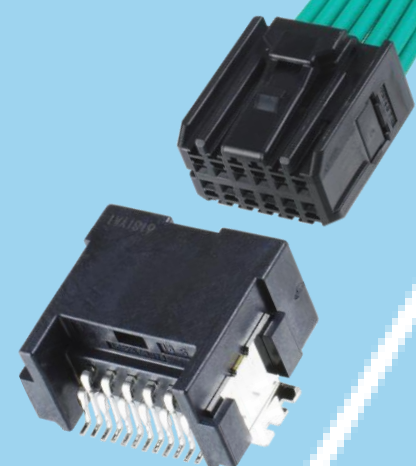
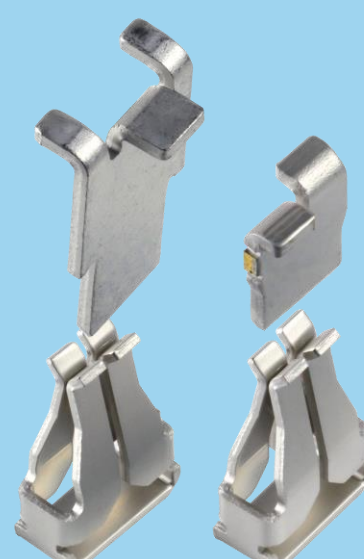
Micro-Coaxial/Twinax  
Connectors



Wire-to-Board  
Connectors/  
Terminals

AP series

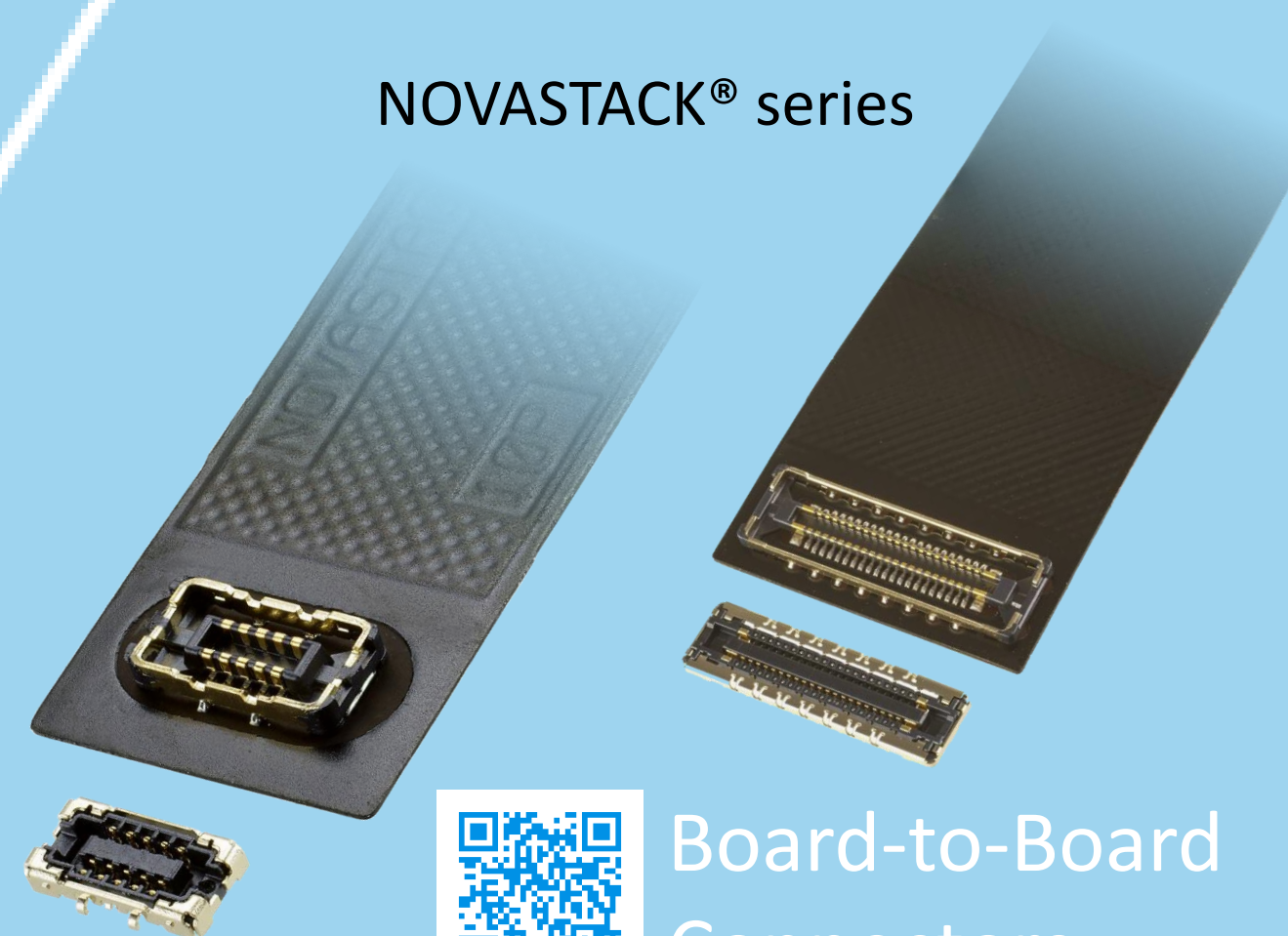
ISH® series



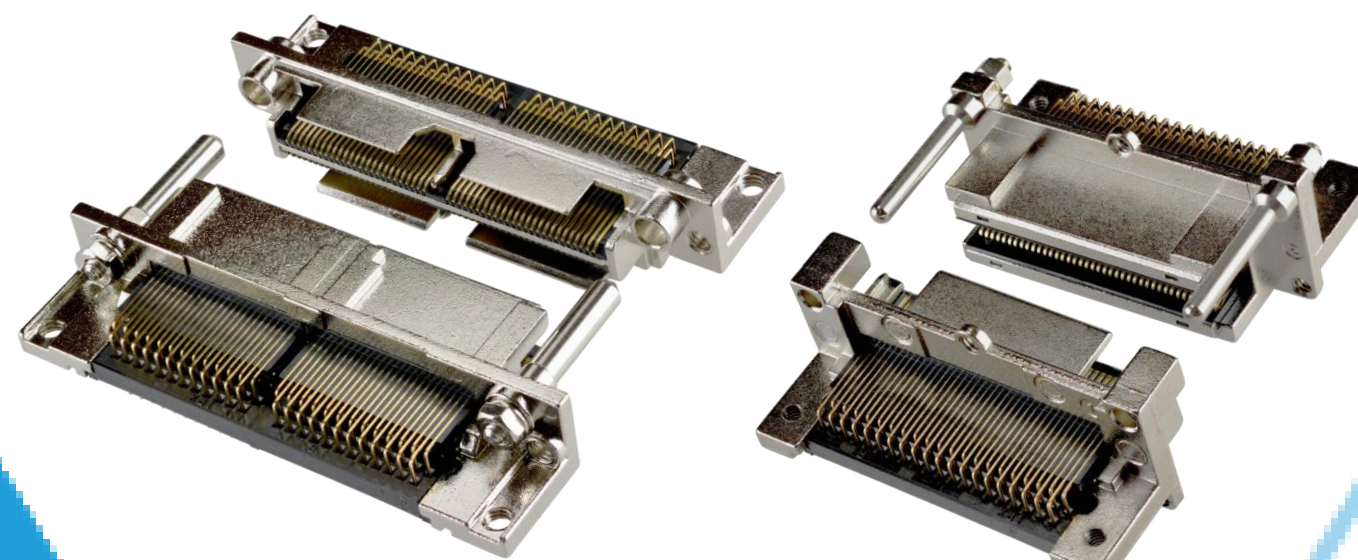
NOVASTACK® series



Board-to-Board  
Connectors



I/O  
Connectors



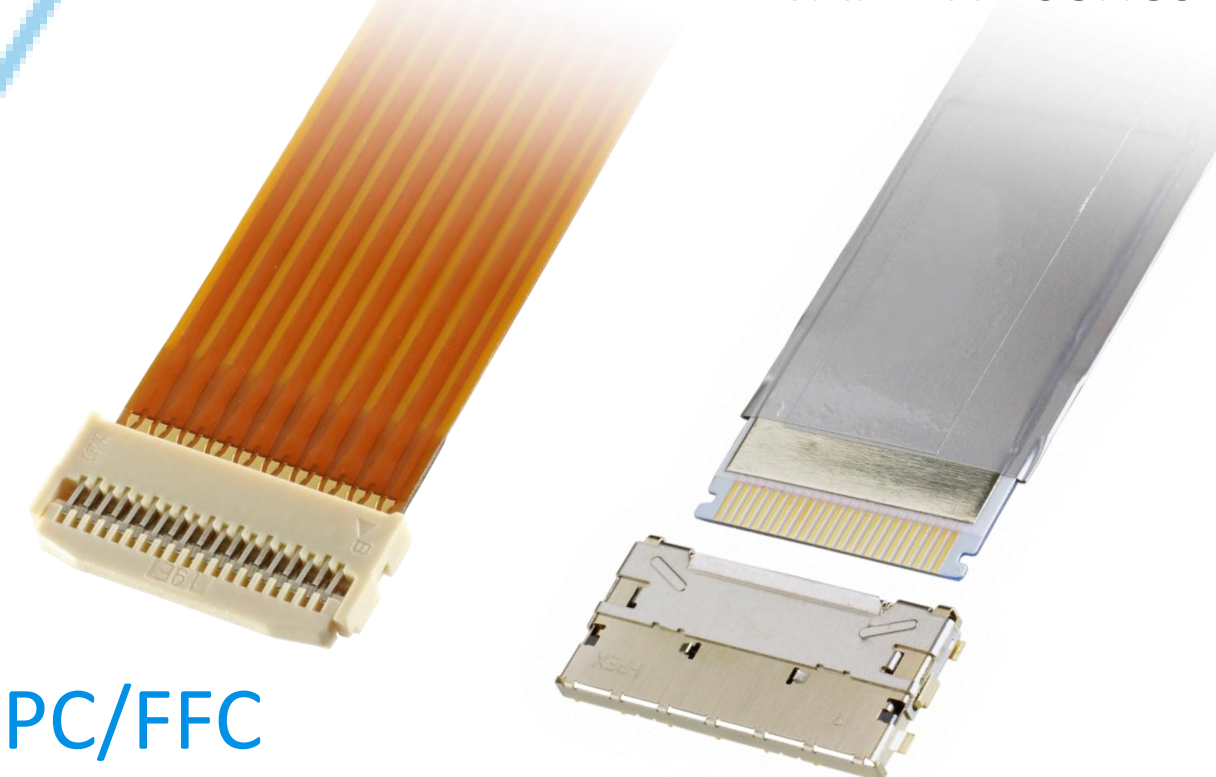
MINIDOCK™ series

MINIFLEX® series

EVAFLEX® series



FPC/FFC  
Connectors



Inquiry



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