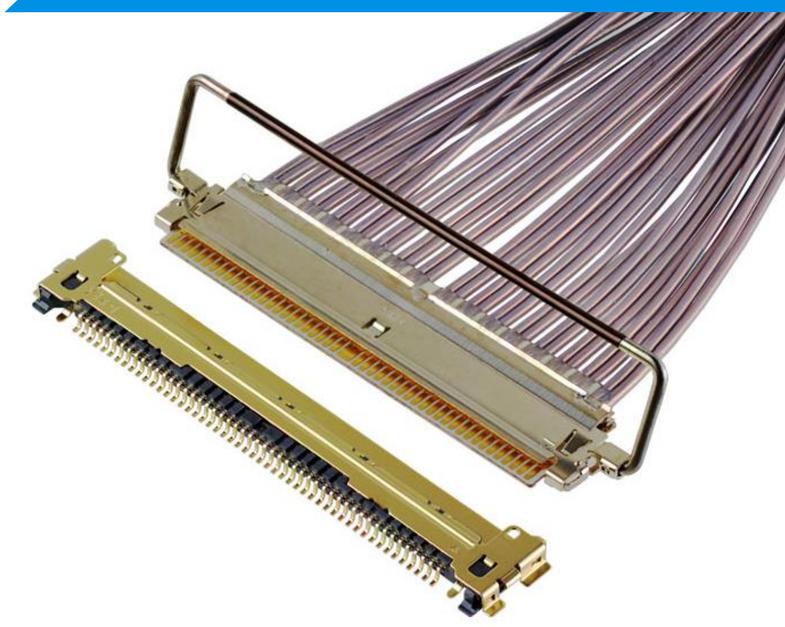
CABLINE®-CAP

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	1.15 ±0.2
	Width	Formula: 5.75mm + (0.4mm* # of pins)
	Depth	6.86
Pin Counts	Range	Up to 60
	Available	50 (16 differential pair Max)

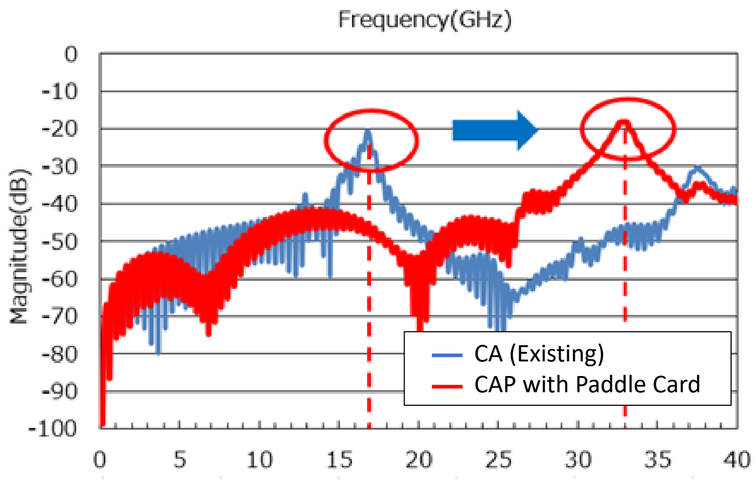
Applicable Cable Size:

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

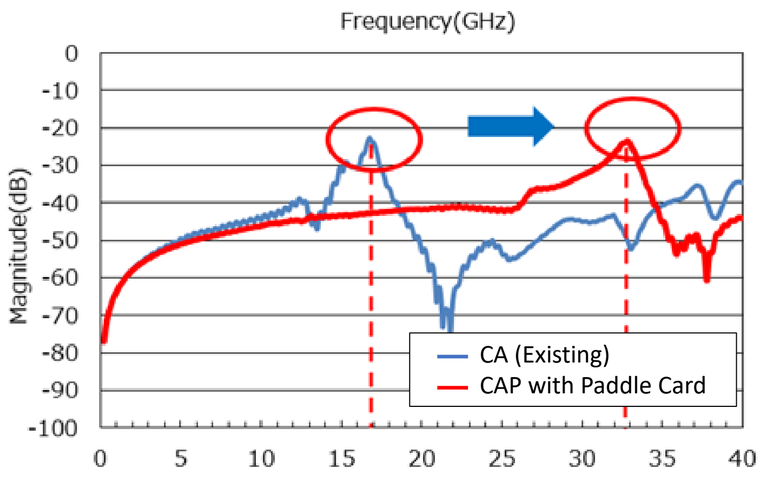
*제품명 CABLINE®-CAP는, 하네스 제품 명칭입니다. Receptacle은 CABLINE®-CA Receptacle（20525-#50E-02）입니다.
* Plug는 하네스 제품으로 제공됩니다.케이블 길이는 원하시는 길이대로 커스터마이징이 가능합니다.
*기재가 없는 PIN수 대응에 대해서는 문의해 주십시오.

패들카드 기술을 구사하는 고속전송 64Gbps/lane PAM4

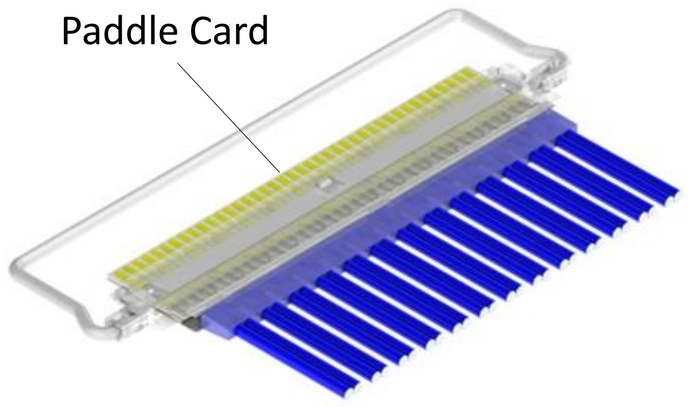
케이블 플러그 부에 패들카드를 채용하는 것으로, 신호품질을 향상시켜
기존 CABLINE 시리즈에서 한층 더 고속전송을 실현



Near End Cross Talk

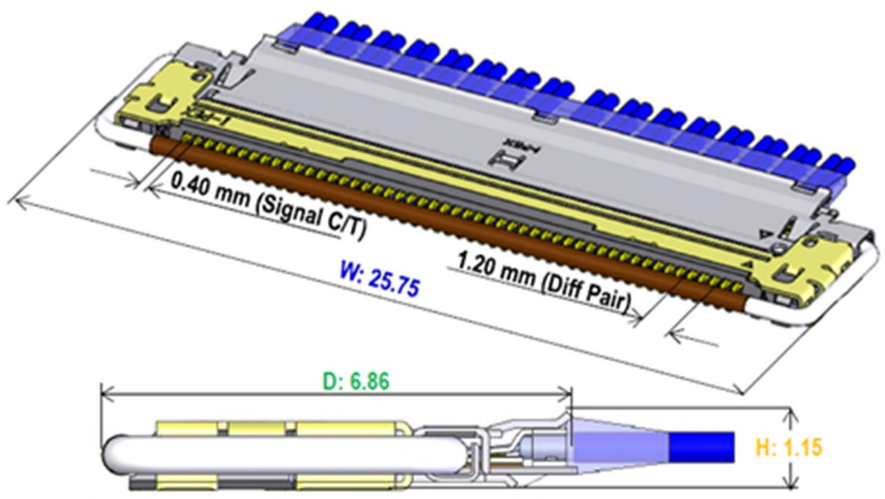


Far End Cross Talk

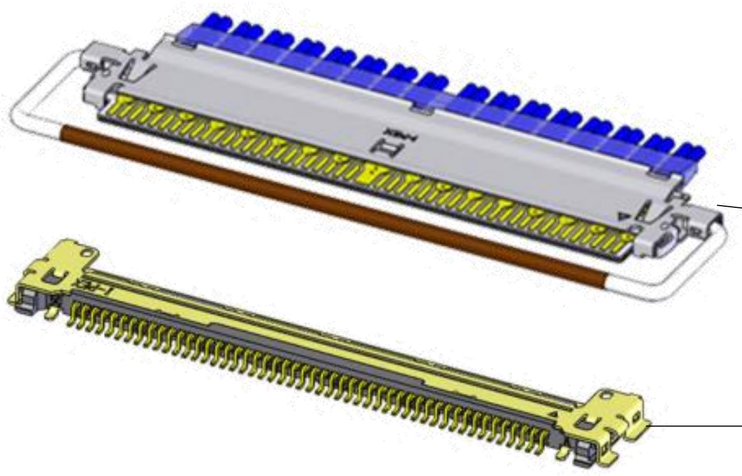


패들 카드 기술 홈페이지
https://www.i-pex.com/library/white-papers/paddle-card-technology

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



Mating condition



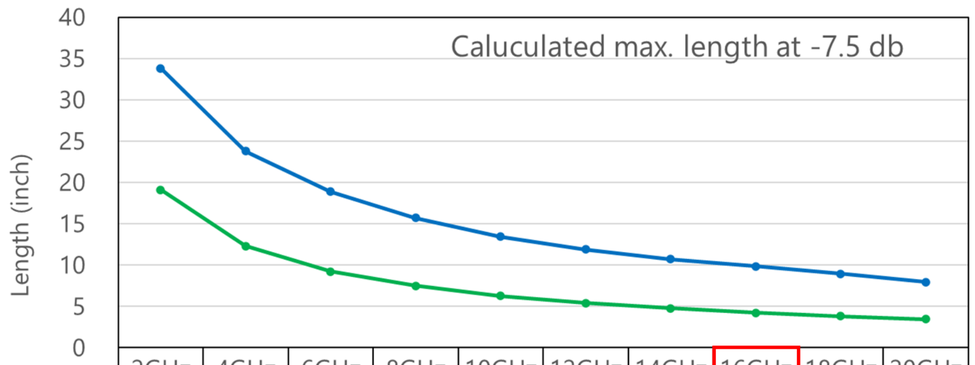
Plug:
CABLINE®-CAP harness

Receptacle :
CABLINE®-CAのReceptacle
（20525-#50E-02）에 결합

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.



	2GHz	4GHz	6GHz	8GHz	10GHz	12GHz	14GHz	16GHz	18GHz	20GHz
PCB Pattern (inch)	19.10	12.29	9.23	7.48	6.27	5.41	4.76	4.23	3.80	3.48
MCX AWG38 (inch)	33.84	23.78	18.91	15.70	13.43	11.91	10.74	9.87	8.93	7.96

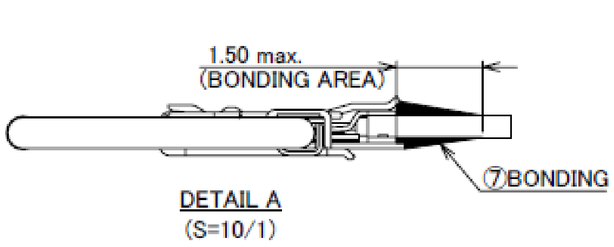
Component Parts Details

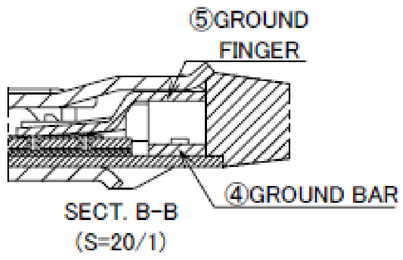
Component Parts

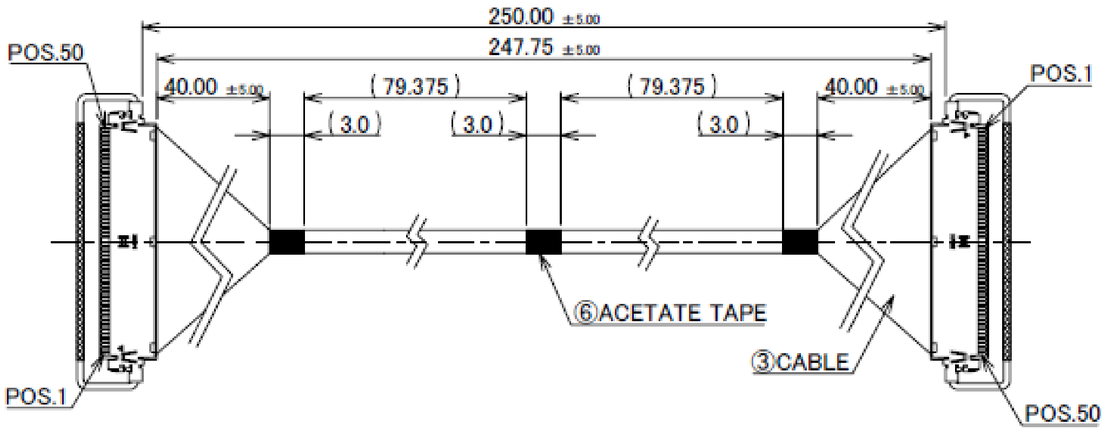
Connector parts	
	
PLUG Harness	RECEPTACLE

Plug Harness Assembly

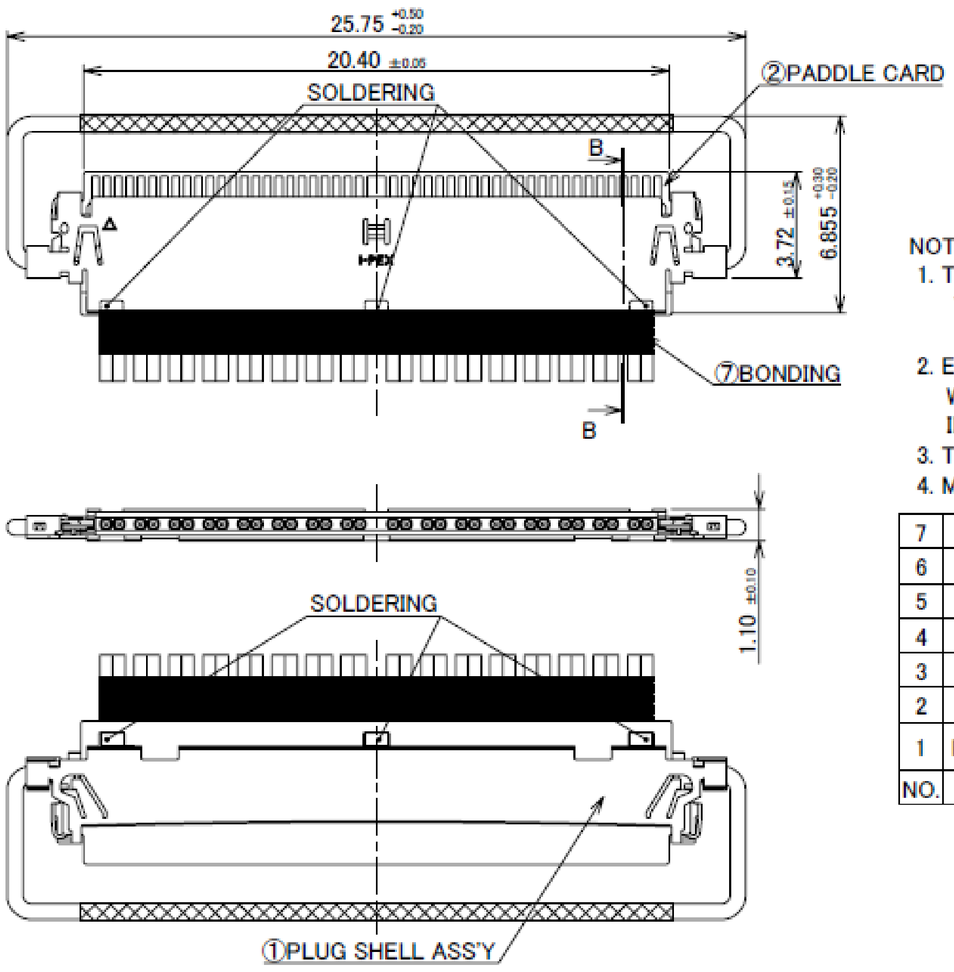
I-PEX PART NO.	HARNESS LENGTH
81863-100B-01	250

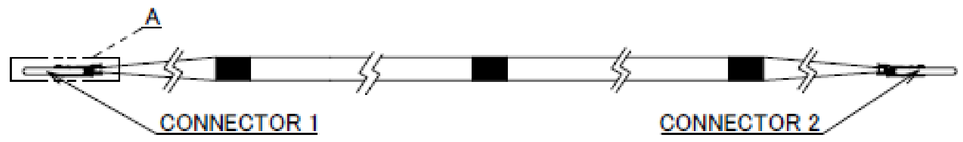






CONNECTOR 1&2
(S=5/1)



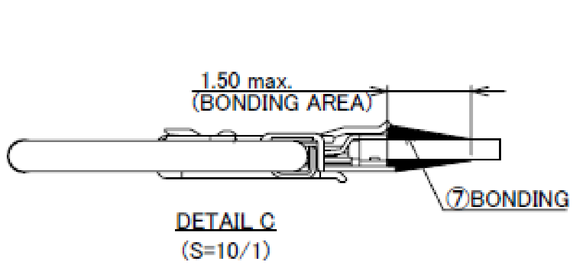


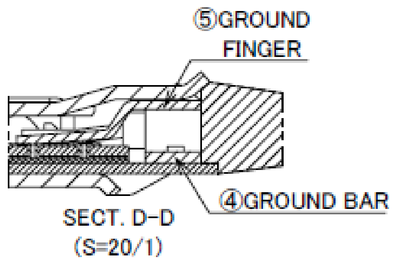
NOTE.
1. TO HANDLE THIS CONNECTOR :
   YOU MUST READ AND FOLLOW THE INSTRUCTION MANUAL BELOW.
   I-PEX INSTRUCTION MANUAL No.HIM-23013.
2. ELECTRIC CHARACTERISTICS
   WITHSTANDING VOLTAGE: AC 250V LEAKAGE CURRENT 2.0mA MAX.
   INSULATION RESISTANCE: 50MΩ MIN. DC 100V
3. THE OPERATING TEMPERATURE OF THE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

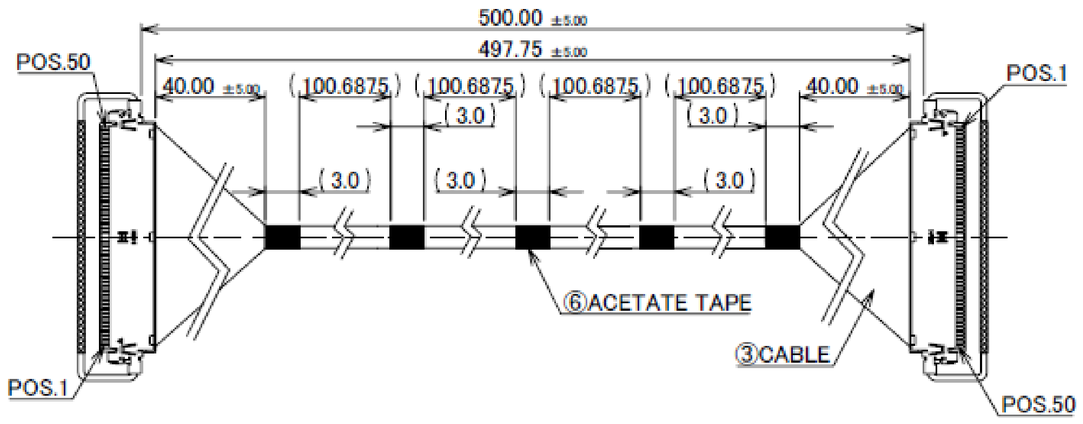
NO.	DESCRIPTION	PARTS NO.	QTY	REMARKS
7	BONDING	-	-	UV GLUE
6	ACETATE TAPE	-	3	BLACK
5	GROUND-FINGER	-	2	-
4	GROUND-BAR	-	2	-
3	CABLE	-	32	MICRO-COAXIAL CABLE AWG #38, 45 OHM, BLUE
2	PADDLE CARD	3660-0501	2	CONNECTOR 1&2 CABLINE®-CAP PLUG SHELL ASS'Y P/N: 20993-050T-01 CONNECTOR TO BE MATED: 20525-050E-02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

Rev.1

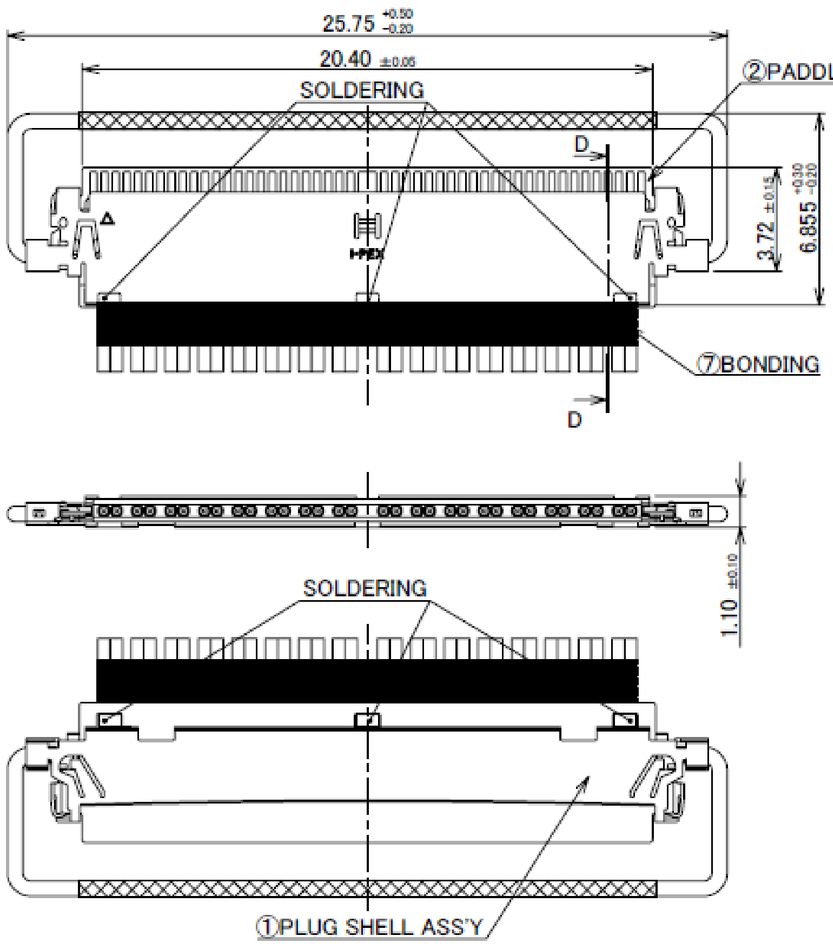
I-PEX PART NO.	HARNESS LENGTH
81863-100B-02	500

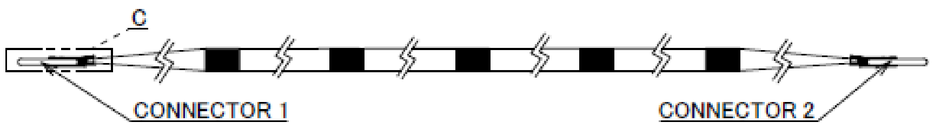






CONNECTOR 1&2
(S=5/1)





NOTE.
1. TO HANDLE THIS CONNECTOR :
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   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°CMAX.
4. MINIMUM HARNESS LENGTH: 85mm

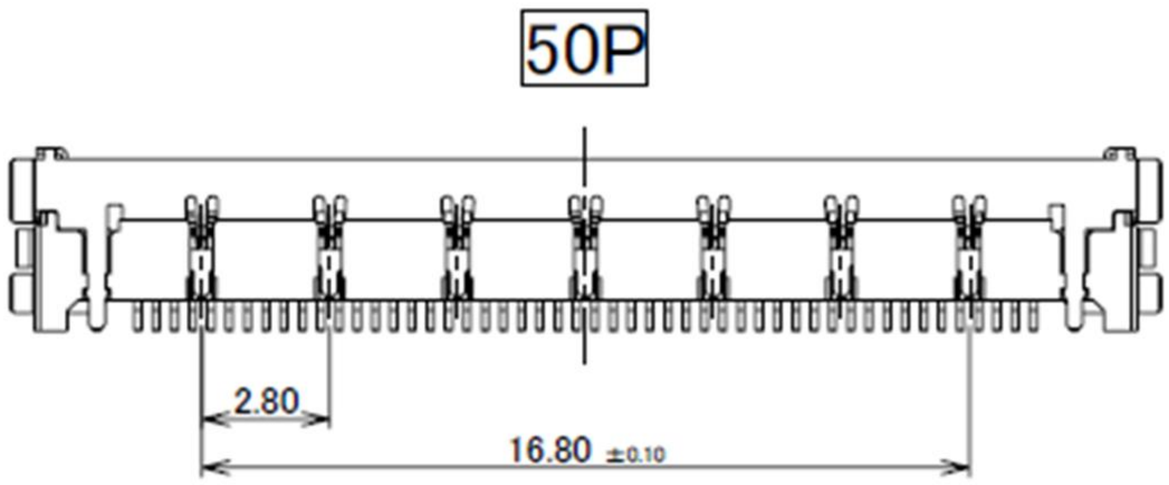
NO.	DESCRIPTION	PARTS NO.	QTY	REMARKS
7	BONDING	-	-	UV GLUE
6	ACETATE TAPE	-	5	BLACK
5	GROUND-FINGER	-	2	-
4	GROUND-BAR	-	2	-
3	CABLE	-	32	MICRO-COAXIAL CABLE AWG #38, 45 OHM, BLUE
2	PADDLE CARD	3660-0501	2	CONNECTOR 1&2 CABLINE®-CAP PLUG SHELL ASS'Y P/N: 20993-050T-01 CONNECTOR TO BE MATED: 20525-050E-02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

Rev.1

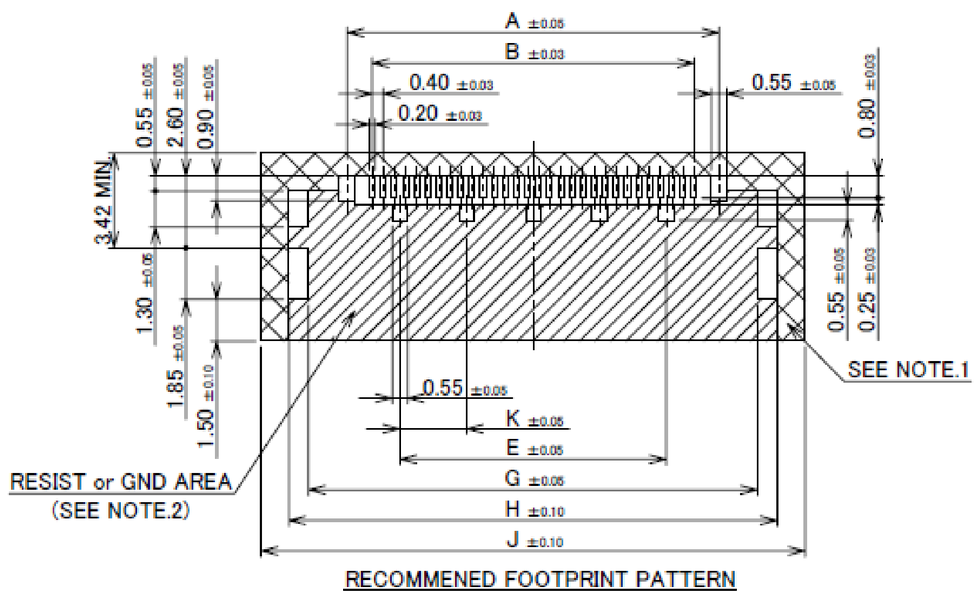
Receptacle Assembly

PART NO.
20525-050E-02

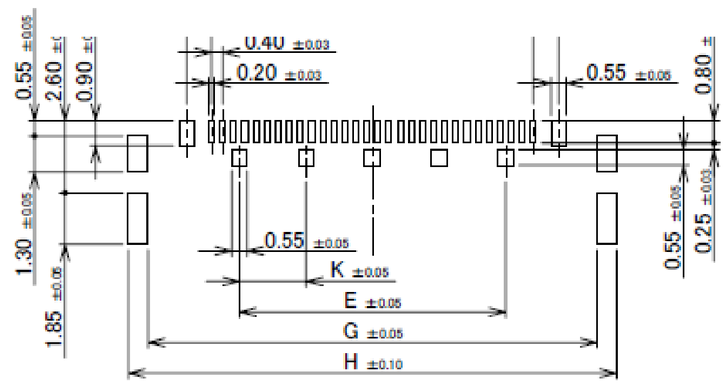
BOTTOM VIEW



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



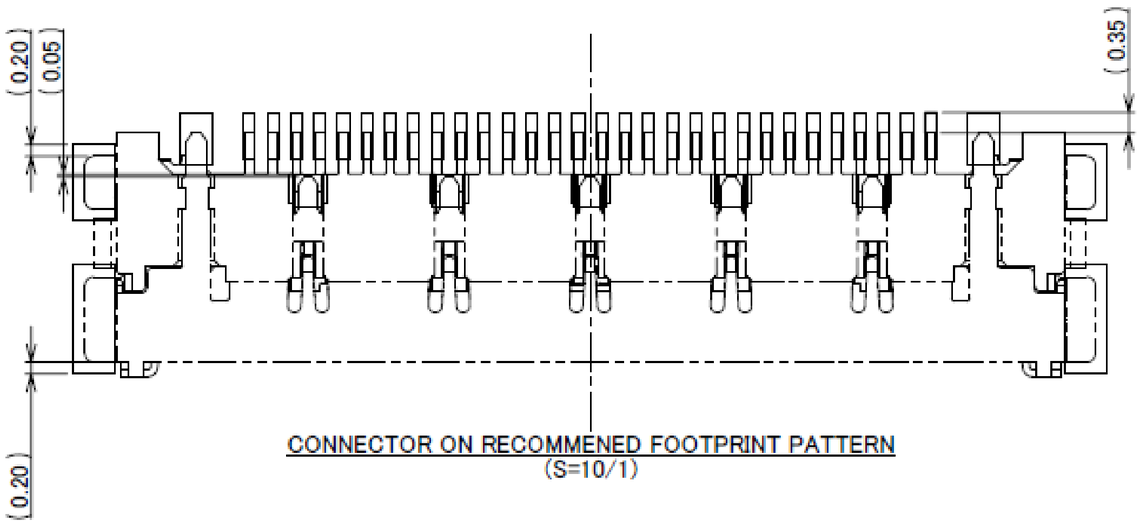
RECOMMENED FOOTPRINT PATTERN



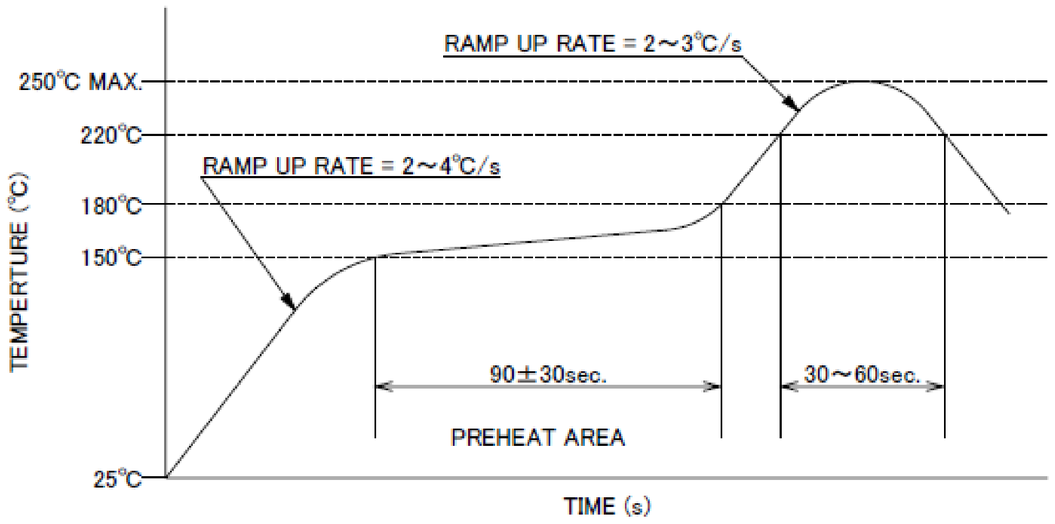
RECOMMENDED METAL MASK LAYOUT
METAL MASK THICKNESS : t=0.12mm

NOTES.
1. IN CASE OF PLUG WITH PULL BAR(20633-#**T-01S), THIS AREA CANNOT MOUNT ANOTHER COMPONENTS.
2. SOLDER RESIST SHALL BE APPLIED TO PREVENT SHORT CIRCUITS WHEN PLACING SIGNAL LINES ON GROUND AREA.

Receptacle Assembly



CONNECTOR ON RECOMMENED FOOTPRINT PATTERN
(S=10/1)



REFLOW TEMPERATURE PROFILE
SENJU METAL INDUSTRY CO., LTD. : M705-SHF(Sn96.5 Ag3.0 Cu0.5)

Rev.27

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

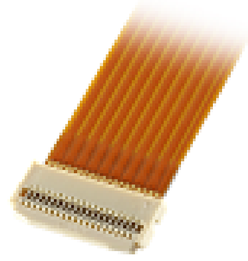
Board to Board

High-Density

Autolocking FPC/FFC

High-Density

FPC/FFC



Micro-Coaxial / Discrete Cable

High-Speed

RF

High-Frequency

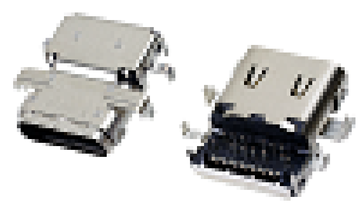
Optical Module

High-Speed

Power

High-Power

I/O (Input/Output)



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