

# EVAFLEX<sup>®</sup> 5

Auto-locking, high-speed, horizontal mate, 0.5 mm pitch shielded FFC/FPC connector



**Product Specifications:**

Board Pitch (mm)	0.5	
Wiping Length (mm)	1.75	
Size (mm)	Height	4.75 +/- 0.15
	Width	Formula: 12.35 + (0.5*?p)
	Depth	5.95 +/- 0.20
Pin counts	Range	21 – 51
	Available	41, 51

**Applicable FPC/FFC:**

FPC/FFC Type	Shielded FFC
FPC/FFC Contact Point	Lower
FPC/FFC Thickness (mm)	0.33 +/- 0.03

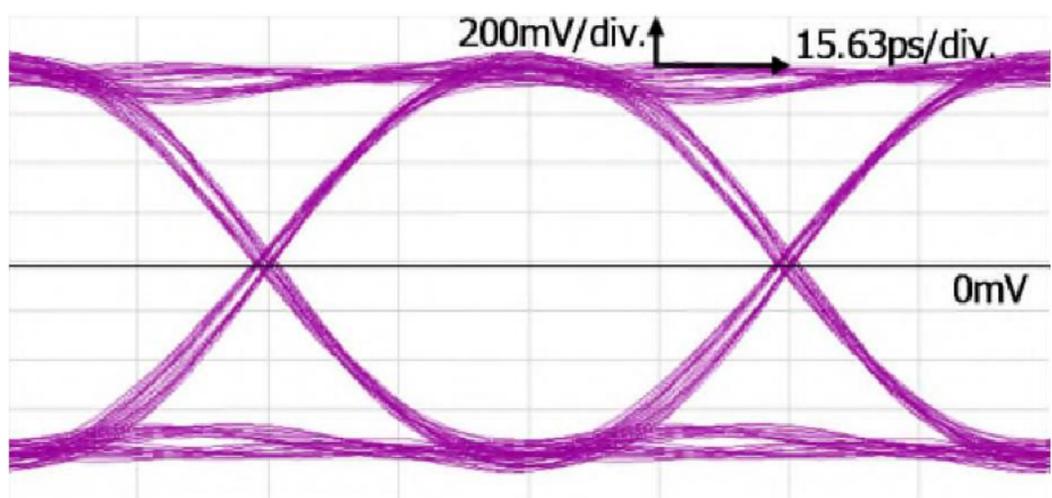
**Applicable Standards (Reference Only):**

eDP HBR2 (5.4 Gbps) V-By-One US (16 Gbps)
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\* Please inquire for pin counts not listed or outside of the pin count range.

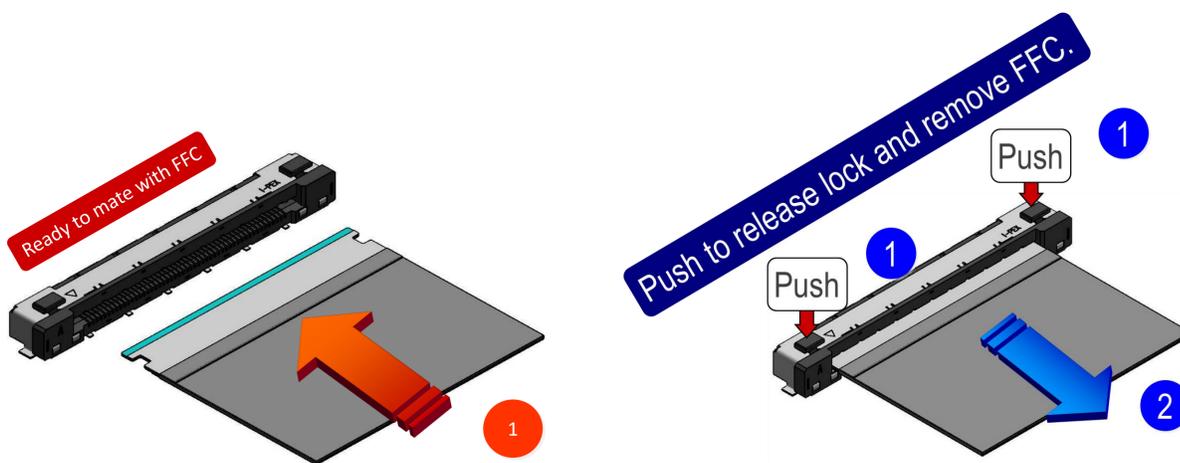
▶ **Designed for high-speed transmission ( 16+ Gbps V-By-One<sup>®</sup> US )**

Eye pattern (Differential)  
 Bit rate : 16 Gbps  
 Rise time : 24 ps (10% - 90%)  
 Input Voltage : 800 mVp-p



\*Please contact I-PEX connectors for more test details.

▶ **Operator friendly auto-lock design, ideal for hand or robotic assembly**



One action mating with auto lock mechanism to improve productivity

▶ **Scalable EVAFLEX<sup>®</sup> family : Auto-lock connector with many other options available**

Full EMI shield and smaller size

	EVAFLEX <sup>®</sup> 5-HD
Height (mm)	2.00 +/- 02
Reference Performance	USB 3.1 Gen2 (10+ Gbps)
Special Feature	360-degree fully-shielded with multi-point grounds to prevent EMI leakage



Smaller size and durable to high temp (105°C)

	EVAFLEX <sup>®</sup> 5-VS
Height (mm)	1.90 +/- 01
Depth (mm)	4.95
Reference Performance	PCIe Gen 3 (8+ Gbps)
Operation Temperature	~ 105°C



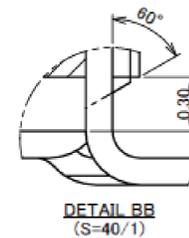
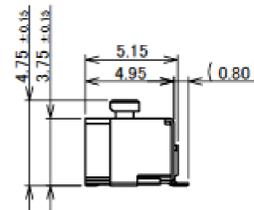
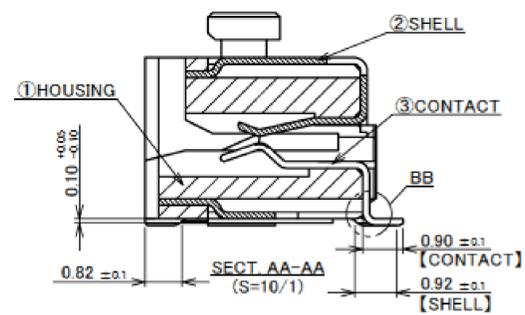
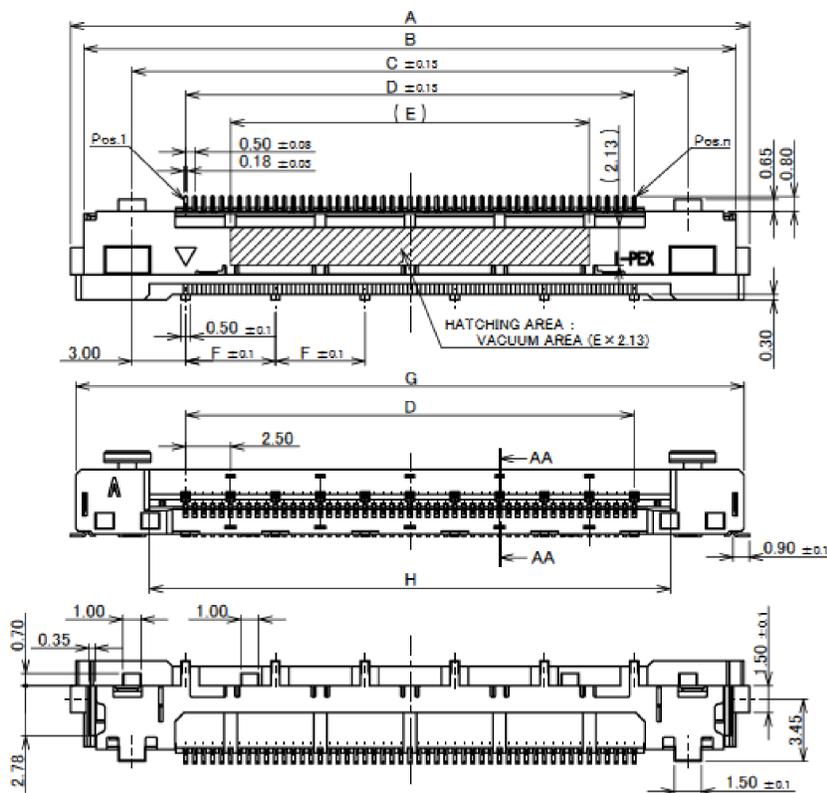
# Component Parts Details

## Connector Assembly

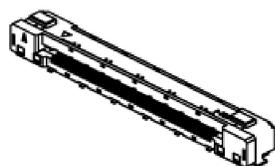
Recommended P/N		20818-0**E							
PART NO.	Pos.	A	B	C	D	E	F	G	H
20818-041E	41P	32.85	31.35	26.00	20.00	15.00	4.00	32.25	24.06
20818-051E	51P	37.85	36.35	31.00	25.00	20.00	5.00	37.25	29.06



Halogen Free RoHS Compliant

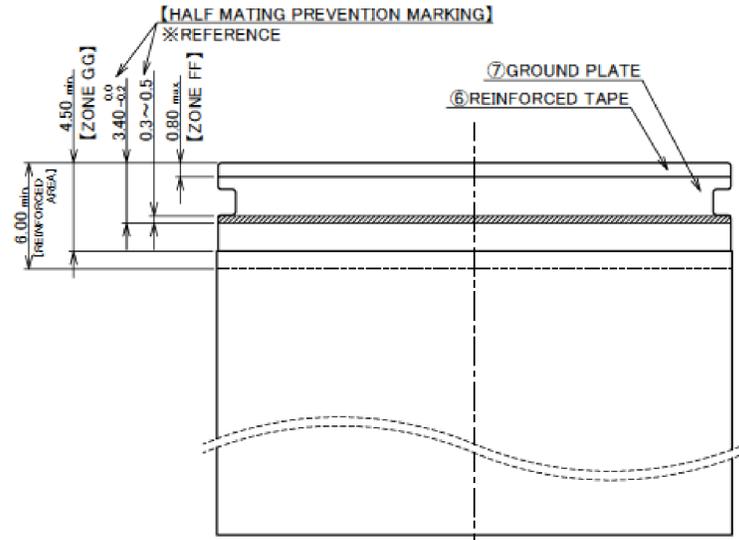
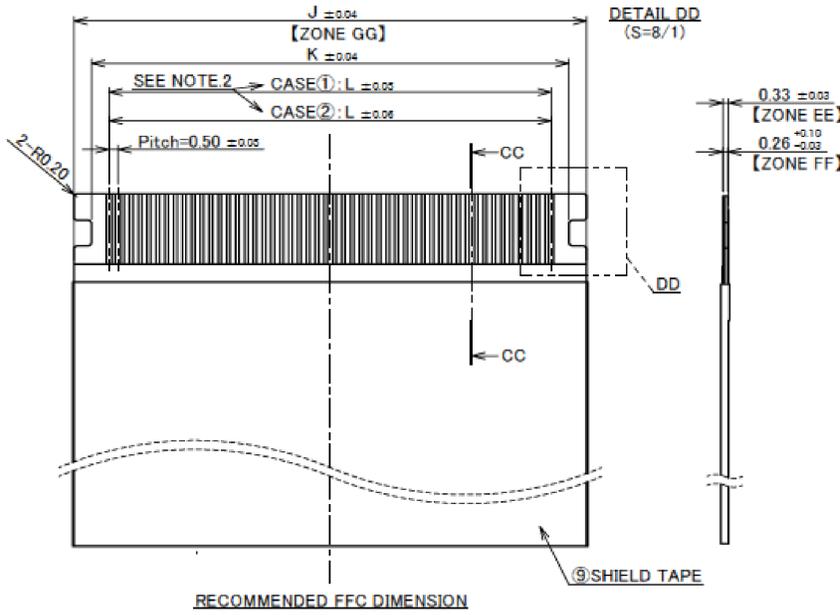
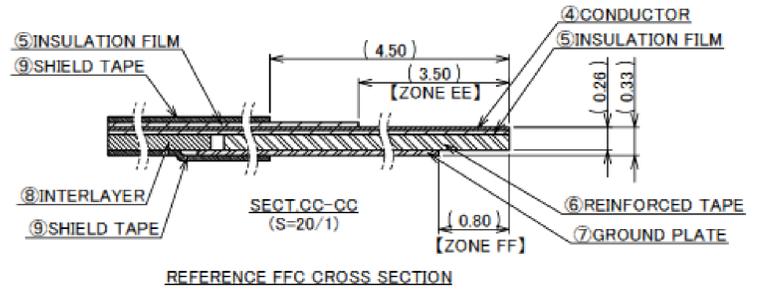
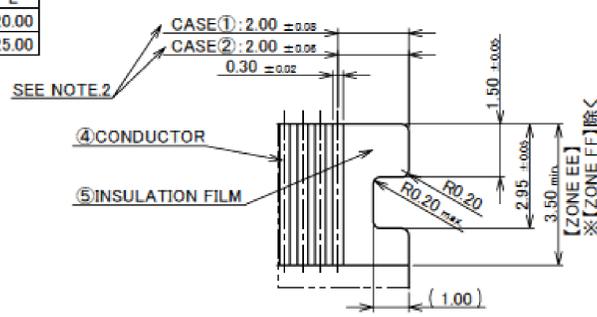


NO.	DISCRIPTION	MATERIAL	FINISH , REMARKS
3	CONTACT	PHOSPHOR BRONZE	Au 0.03 μ mMIN. OVER Ni 1.00 μ mMIN.
2	SHELL	PHOSPHOR BRONZE	Sn 1.00 μ mMIN. OVER Ni 1.00 μ mMIN.
1	HOUSING	LCP	UL94V-0, BLACK



# Connector Assembly

PART NO.	Pos.	J	K	L
20818-041E	41P	24.00	22.00	20.00
20818-051E	51P	29.00	27.00	25.00

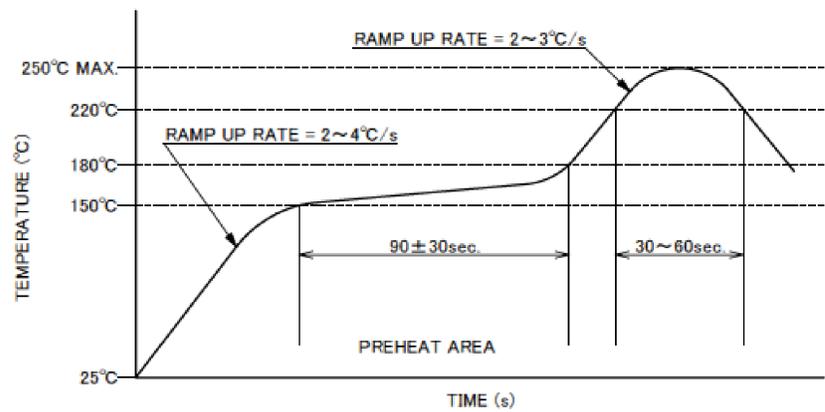
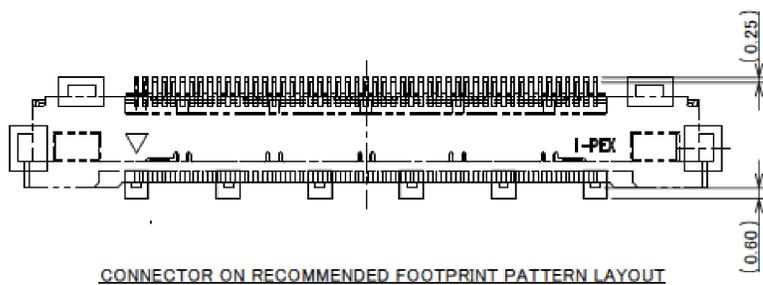
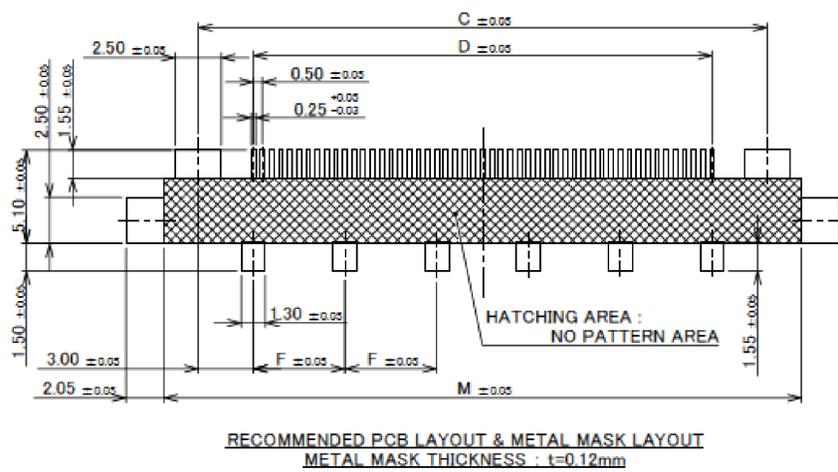


- NOTES
1. DIFFERENTIAL IMPEDANCE :  $100 \pm 10 \Omega$
  2. MANUFACTURE CASE① or CASE②
  3. SELECT A MATERIAL WITH A SOFTENING TEMPERATURE OF 85°C OR HIGHER FOR THE PATTERN ADHESIVE PART OF FFC.

9	SHIELD TAPE	METALIC FILM	
8	INTERLAYER	ARBITRARY	
7	GROUND PLATE	METALIC FILM	POLISH or HALF POLISH Sn PLATING
6	REINFORCED TAPE	ARBITRARY	
5	INSULATION FILM	ARBITRARY	
4	CONDUCTOR	COPPER ALLOY	CONTACT AREA: Au 0.05 $\mu$ m MIN. OVER Ni 0.5 $\mu$ m MIN.
NO.	DISCRIPTION	MATERIAL	FINISH , REMARKS

Rev.1

PART NO.	Pos.	C	D	F	M
20818-041E	41P	26.00	20.00	4.00	29.75
20818-051E	51P	31.00	25.00	5.00	34.75



REFLOW TEMPERATURE PROFILE  
SENJU METAL INDUSTRY CO., LTD. : M705-SHF(Sn98.5 Ag3.0 Cu0.5)

- NOTES
4. THIS AREA CANNOT MOUNT ANOTHER COMPONENTS.
  5. SOLDER RESIST SHALL BE APPLIED TO PREVENT SHORT CIRCUITS WHEN PLACING SIGNAL LINES ON GROUND AREA.

Rev.1

## Connector Assembly

ITEMS	SPECIFICATION
RATING VOLTAGE	200V AC/DC (PER CONTACT PIN)
RATING AMPERAGE	0.3A AC/DC (PER CONTACT PIN)
OPERATING TEMPERATURE	233~358K(-40°C~+85°C)
OPERATING HUMIDITY	85% MAX.(NON-CONDENSING)
CONTACT RESISTANCE	INITIAL : 60mohm MAX. / AFTER TEST : $\triangle$ 40mohm MAX.
INSULATION RESISTANCE	100Mohm MIN.
DIELECTRIC WITHSTANDING VOLTAGE	AC250V 1min
DURABILITY	30 CYCLES
MATING FORCE (INITIAL / 30 CYCLES)	41P : 29.2N MAX. / 51P : 30.0N MAX.
UNMATING FORCE (INITIAL / 30 CYCLES)	41P : 4.25N MIN. / 51P : 5.00N MIN.
FFC RETENTION FORCE	41P : 22N MIN./ 51P : 25N MIN.
COPLANARITY	0.10mm MAX.
PRODUCT SPECIFICATION	PRS-2671
TEST REPORT	TR-20035
PACKING STANDARD	300-980
INSTRUCTION MANUAL	HIM-12001
APPEARANCE CRITERIA No.	QLS-A***

Rev.1

# Custom Connectors Available

 RF Connector

MHF® series



 CABLINE® series  
Micro-coaxial/Twinax/  
Discrete Wire Connector



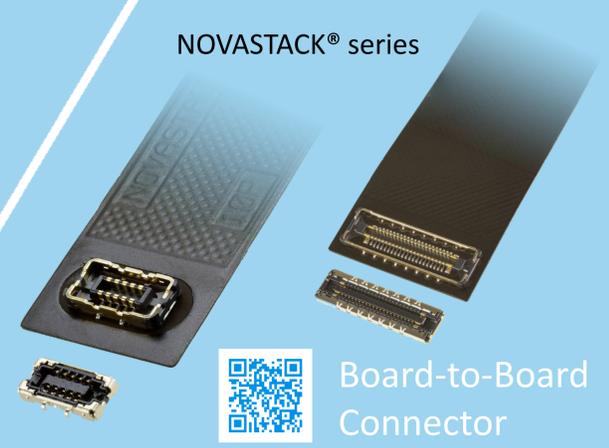
 Optical Module

LIGHTPASS® series



NOVASTACK® series

 Board-to-Board Connector



 Power Connector/  
Terminal

AP series

ISH® series



MINIFLEX® series

EVAFLEX® series

 FPC FFC Connector

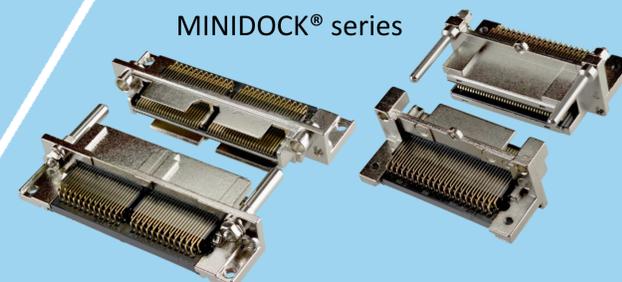


Inquiry



MINIDOCK® series

 I/O Connector



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