

# EVAFLEX® 5-HD

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



- ✓ ZenShield® fully-shielded with multi-point grounds to prevent EMI leakage
- ✓ Designed for high-speed transmission (10 + Gbps USB® 3.1 Gen2)
- ✓ Operator friendly auto-locking design, ideal for hand or robotic assembly

Pin counts:

Range	Up to 40
Available	24

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

Part number	20952
Board pitch (mm)	0.5
Height (mm)	2.00 +/- 0.20
Width formula (mm)	5.2+(0.5*P)
Depth(mm)	8.43 +/- 0.30
Wiping length(mm)	1.00
FFC/FPC insertion depth (mm)	4.30
FFC/FPC type	Shielded /Non-shielded FFC/FPC
FFC/FPC thickness(mm)	0.3 +/- 0.03 Contact 0.5 +/- 0.03 Ground
Contact point	Top
Compatibility (Footprint pattern)	Original
Supportable standard (Reference only)	USB 3.1 Gen2 (10+ Gbps)
Operating condition	233 to 358 (-40°C to 85°C) 85%RH max.

## ZenShield® fully-shielded with multi-point grounds to prevent EMI leakage

EVAFLEX 5-HD 24P "Bottom View"

○ Soldered contacts  
○ Mechanical contacts

○ FFC ground layer to metal shell  
○ Shell to PCB

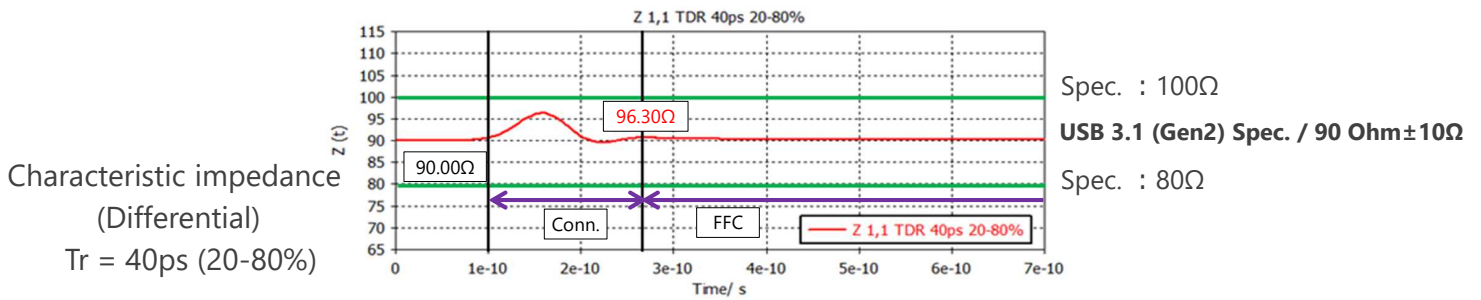
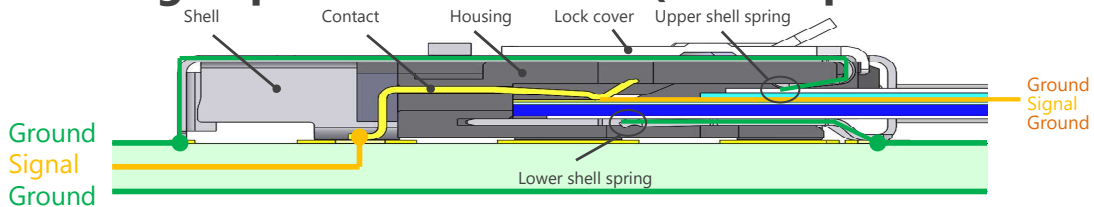
Wi-Fi® Antenna 5 GHz

NO Signal interference

Signal interference

USB 3.1 connection (10 Gbps ⇒ 5 GHz equivalent)

## Designed for high-speed transmission (10+ Gbps USB® 3.1 Gen2)



## Operator friendly auto-locking design, ideal for hand or robotic assembly

Mating process < One action >

<Position 1> FFC insert <Position 2> FFC mating (One action auto lock)

SECT.X-X Lock structure

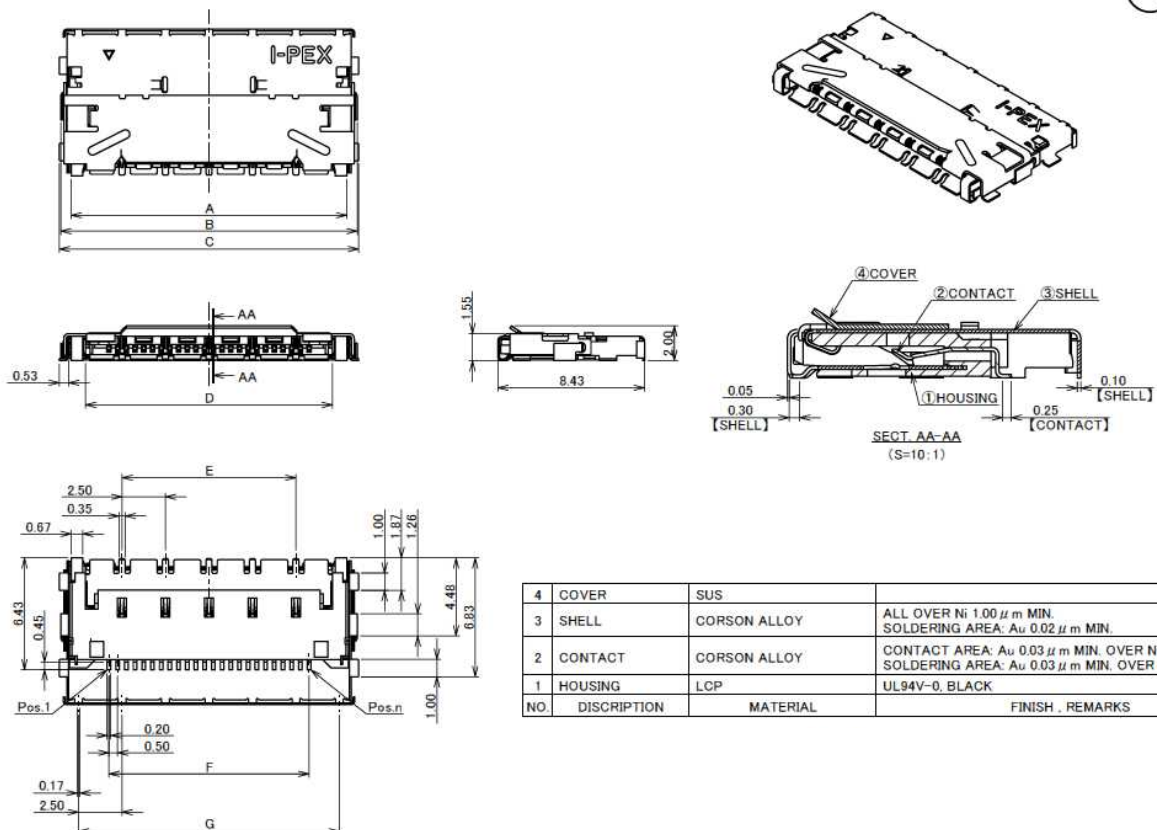
The notched parts of the FFC are bent into the lock part when inserted

# EVAFLEX® 5-HD

## Component Parts Detail

### Connector Assembly :

Recommended P/N	20952-0**E-02							
PART NO.	Pos.	A	B	C	D	E	F	G
20952-024E-02	24	19.84	17.04	17.20	14.20	10.00	11.50	15.00

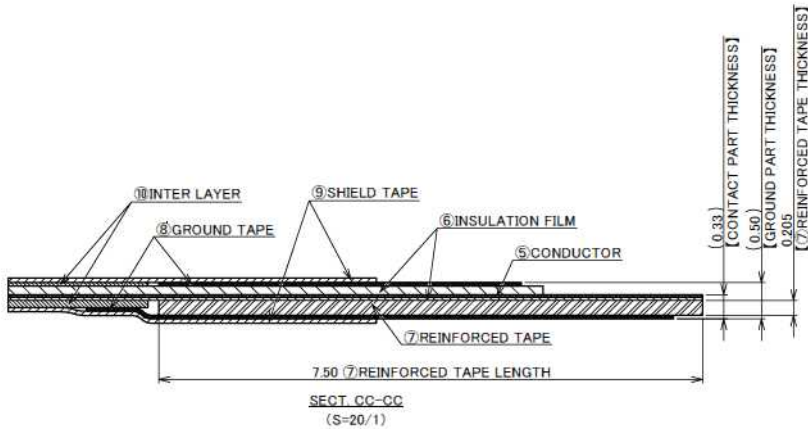
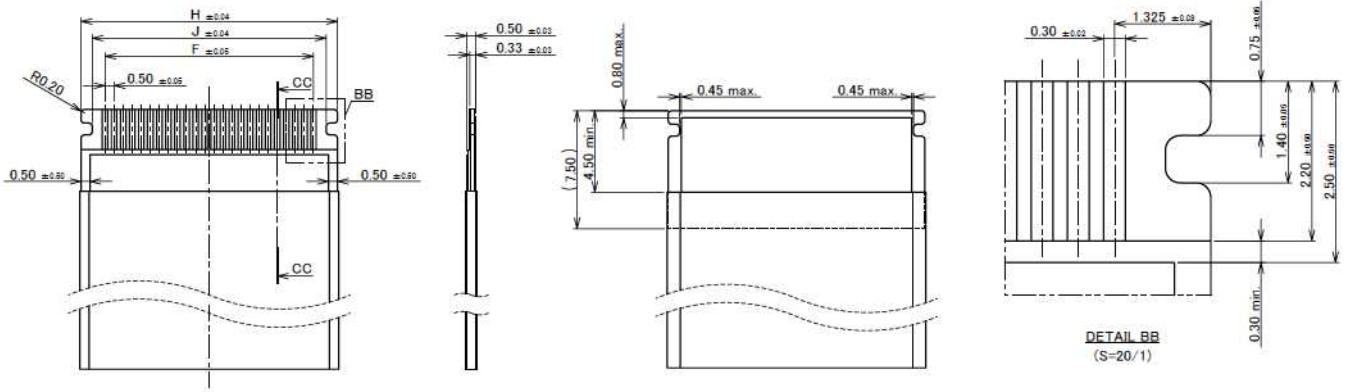


NO.	DISCRIPTION	MATERIAL	FINISH . REMARKS
4	COVER	SUS	
3	SHELL	CORSON ALLOY	ALL OVER Ni 1.00 μm MIN. SOLDERING AREA: Au 0.02 μm MIN.
2	CONTACT	CORSON ALLOY	CONTACT AREA: Au 0.03 μm MIN. OVER Ni 1.00 μm MIN. SOLDERING AREA: Au 0.03 μm MIN. OVER Ni 1.00 μm MIN.
1	HOUSING	LCP	UL94V-0. BLACK

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# Connector Assembly :

PART NO.	Pos.	F	H	J
20952-024E-02	24	11.50	14.15	12.90



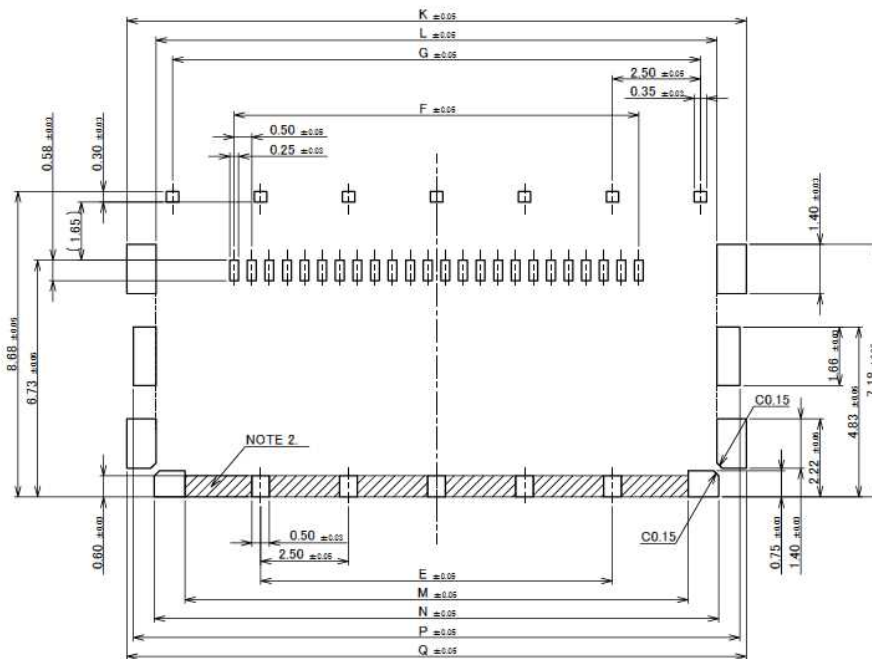
NOTES.  
1. DIFFERENTIAL IMPEDANCE :  $90 \pm 10 \Omega$

NO	DISCRIPTION	MATERIAL	FINISH, REMARKS
10	INTER LAYER	ARBITRARY	
9	SHIELD TAPE	METALLIC FILM	
8	GROUND TAPE	METALLIC FILM	POLISH or HALF POLISH Sn PLATING
7	REINFORCED TAPE	ARBITRARY	
6	INSULATION FILM	ARBITRARY	
5	CONDUCTOR	COPPER ALLOY	CONTACT AREA : $A_v 0.05 \mu m$ MIN. OVER Ni $0.5 \mu m$ MIN.

Rev.3

# Connector Assembly :

PART NO.	Pos.	E	F	G	K	L	M	N	P	Q
20952-024E-02	24	10.00	11.50	15.00	17.60	15.94	14.30	16.04	17.24	17.60

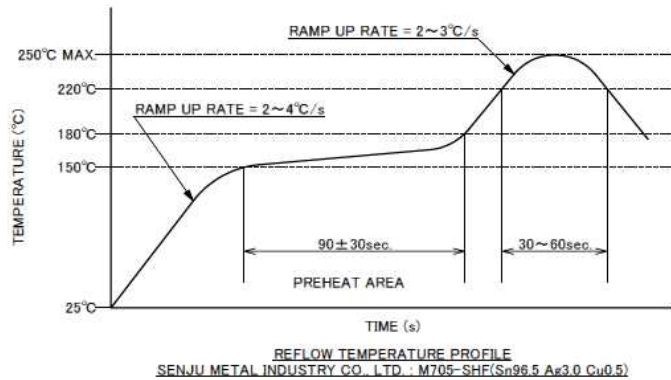
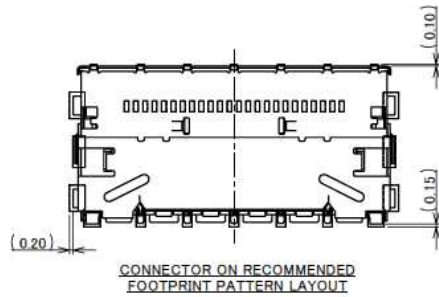


RECOMMENDED PCB & METALMASK LAYOUT  
THICKNESS  $t=0.12$

NOTES.  
2. HATCHING AREA:  
SOLDER RESIST SHALL BE COATED IN CASE OF RUNNING TRACES  
ON THIS FOOTPRINT PATTERN PROHIBITION AREA.

Rev.3

## Connector Assembly :



Rev.3

## Connector Assembly :

ITEMS	SPECIFICATION
RATING VOLTAGE	50V AC/DC (PER CONTACT)
RATING AMPERAGE (FOR SIGNAL CONTACT)	0.30A AC/DC
OPERATING TEMPERATURE	233~358K (-40°C~+85°C)
OPERATING HUMIDITY	85% RH. MAX. (NON-CONDENSING)
CONTACT RESISTANCE (FOR SIGNAL CONTACT)	INITIAL : 60mohm MAX. / AFTER TEST : <math>\triangleleft</math>140mohm MAX.
INSULATION RESISTANCE	INITIAL : 500Mohm MIN. / AFTER TEST : 500Mohm MIN.
DIELECTRIC WITHSTANDING VOLTAGE	AC 250V 1min
DURABILITY	30 CYCLES
MATING FORCE (INITIAL / AFTER TEST)	24P : 22.00 N MAX.
UNMATING FORCE (INITIAL / AFTER TEST)	24P : 2.30 N MIN.
FFC/FPC RETENTION FORCE (INITIAL / AFTER TEST)	24P : 8.50 N MIN.
COPLANARITY	0.10 MAX.
PRODUCT SPECIFICATION	PRS-2645
TEST REPORT	TR-20006
PACKING STANDARD	PST-19012
INSTRUCTION MANUAL	HIM-19004
APPEARANCE CRITERIA No.	QLS-A***

Rev.3



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