

# EVAFLEX® 5-SE-GHT

One-handed auto-locking feature, high temperature (125°C), high-speed, horizontal mate, 0.5 mm pitch shielded FFC/FPC connector



- ✓ One-handed operational auto-lock design, ideal for hand or robotic assembly
- ✓ Designed for high-speed transmission with grounding contacts (4+ Gbps V-By-One® HS)
- ✓ Scalable EVAFLEX® family : Auto-lock connector with many other options available

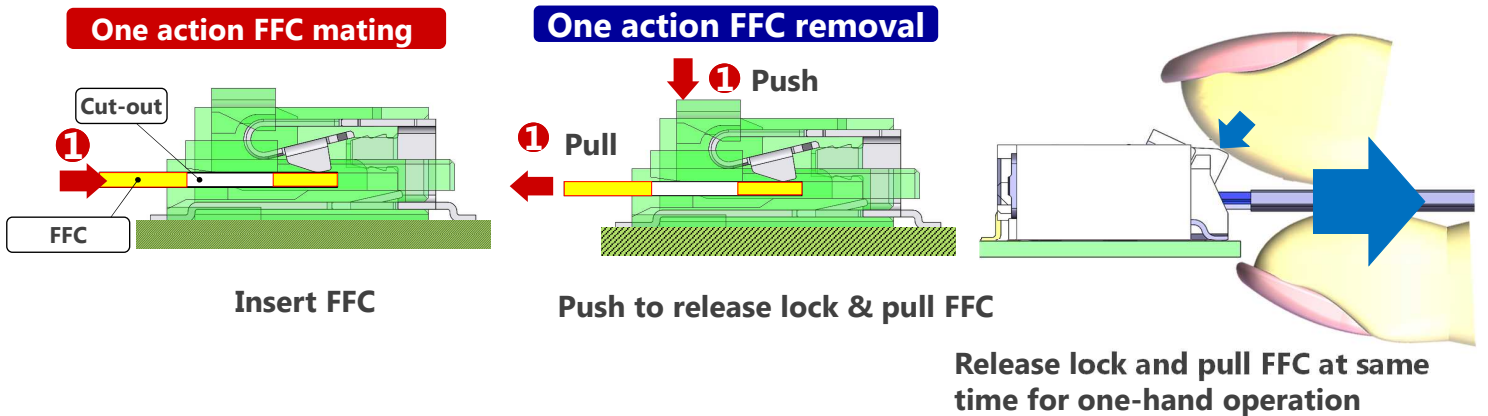
Pin counts:

Range	Up to 60
Available	30, 50

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

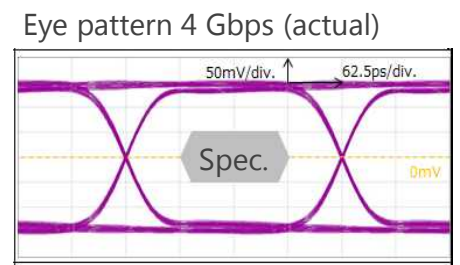
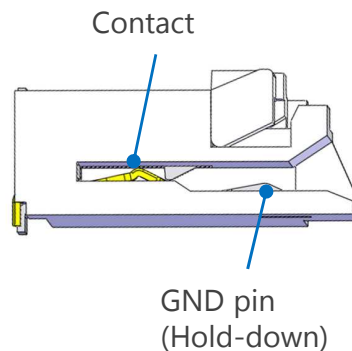
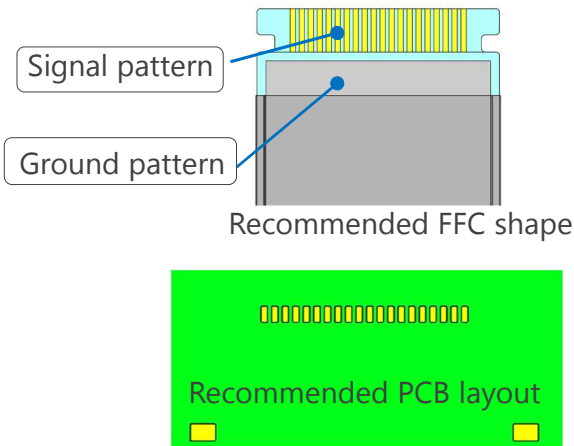
Part number	20899
Board pitch (mm)	0.5
Height (mm)	3.65 +/- 0.1
Width formula (mm)	8.0+(0.5*P)
Depth(mm)	7.0
Wiping length(mm)	1.2
FFC/FPC insertion depth (mm)	5.35
FFC/FPC type	Shielded /Non-shielded FFC/FPC
FFC/FPC thickness(mm)	0.3 +/- 0.03
Contact point	Bottom
Compatibility (Footprint pattern)	Original
Supportable standard (Reference only)	V-by-One (4+ Gbps)
Operating condition	233 to 398 (-40°C to 125°C) 85%RH max.

## One-handed operational auto-lock design, ideal for hand or robotic assembly



## Designed for high-speed transmission with grounding contacts (4+ Gbps V-By-One® HS)

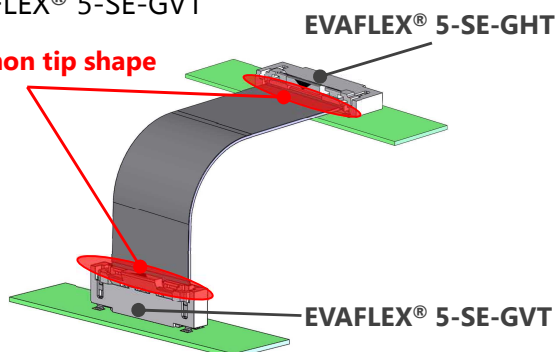
Extended hold down with GND pin for GND connection  
Target speed : up to 4+ Gbps (V-By-One® HS)



## Scalable EVAFLEX® family : Auto-lock connector with many other options available

Vertical mate type using same FFC : EVAFLEX® 5-SE-GVT

FFC common tip shape



Higher speed and smaller size: EVAFLEX® 5-VS Type CH

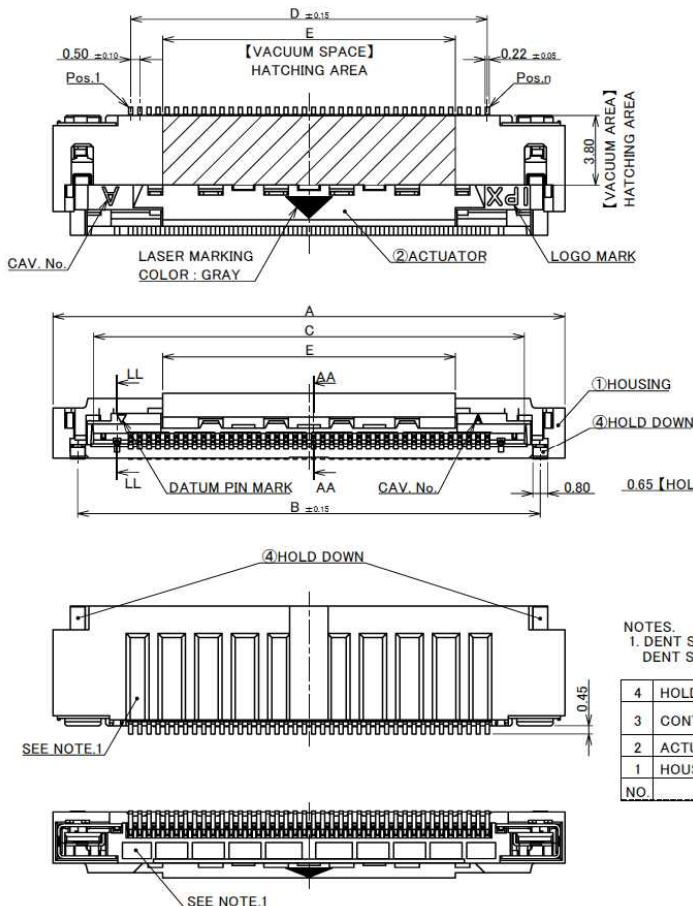
	EVAFLEX® 5-SE-GVT	EVAFLEX® 5-VS
Height (mm)	6.60 +/- 0.1	1.90 +/- 0.1
Operation Temperature	~ 125°C	~ 105°C
Reference Performance	V-by-one HS 1.4 (4+ Gbps)	PCIe Gen 3 (8+ Gbps)



# EVAFLEX® 5-SE-GHT

## Component Parts Detail

### Connector Assembly :



Recommended P/N		20899-0**E-01				
PART No.		A	B	C	D	E
◆20899-020E-01		18.00	15.30	13.56	9.50	6.00
◆20899-030E-01		23.00	20.30	18.56	14.50	11.00
◆20899-040E-01		28.00	25.30	23.56	19.50	16.00
◆20899-050E-01		33.00	30.30	28.56	24.50	21.00
◆20899-060E-01		38.00	35.30	33.56	29.50	26.00

◆ MARK MEANS NOT AVAILABLE.

NOTES:  
 1. DENT SHAPE SHOWN ON DRAWING IS JUST FOR REFERENCE.  
 DENT SHAPE AND QUANTITY MIGHT CHANGE FROM DIFFERENT PIN COUNT AND DIFFERENT TOOLING.

NO.	DISCRPTION	MATERIAL	FINISH, REMARKS
4	HOLD DOWN	CORSON ALLOY	SOLDERING AREA : Au 0.03μm MIN. OVER Ni 1.00μm MIN.
3	CONTACT	CORSON ALLOY	CONTACT AREA AND SOLDERING AREA : Au 0.03μm MIN. OVER Ni 1.00μm MIN.
2	ACTUATOR	LCP	UL94V-0, BEIGE
1	HOUSING	LCP	UL94V-0, BEIGE

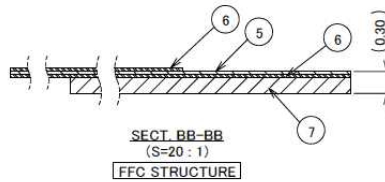
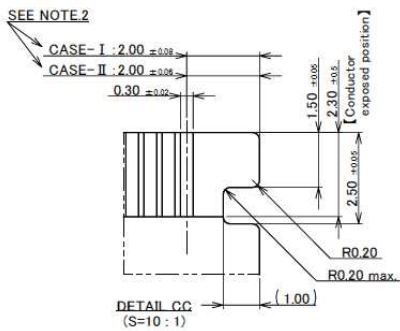
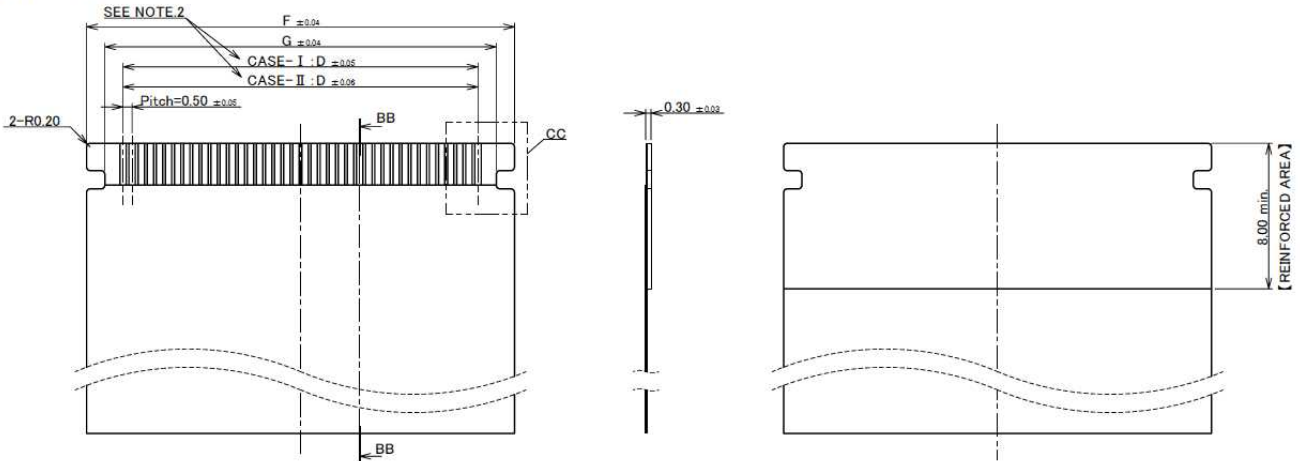
Rev.2

# Connector Assembly :

PART No.	D	F	G
◆20899-020E-01	9.50	13.50	11.50
◆20899-030E-01	14.50	18.50	16.50
◆20899-040E-01	19.50	23.50	21.50
20899-050E-01	24.50	28.50	26.50
◆20899-060E-01	29.50	33.50	31.50

◆MARK MEANS NOT AVAILABLE.

## RECOMMENDED FFC LAYOUT [NON SHIELDED TYPE]



### NOTES.

2. MANUFACTURE CASE-I or II

NO.	COMPONENTS	MATERIAL	FINISH
7	REINFORCED TAPE	ARBITRARY	
6	INSULATION FILM	ARBITRARY	
5	CONDUCTOR	COPPER ALLOY	CONTACT AREA : Au 0.05 $\mu$ m MIN. OVER Ni 0.5 $\mu$ m MIN.

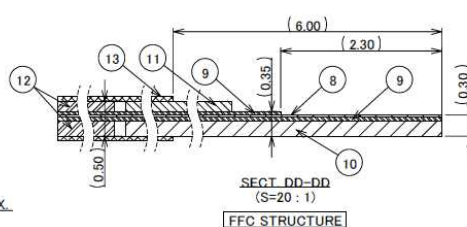
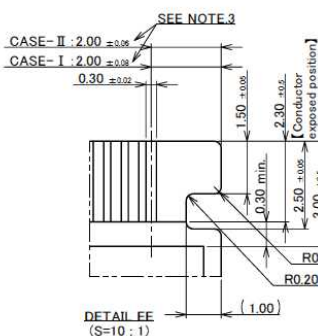
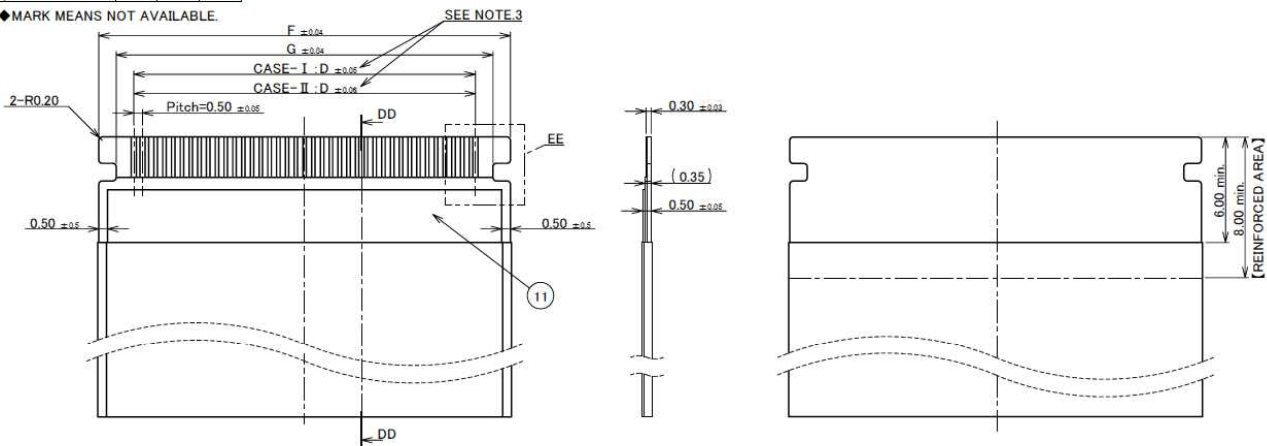
Rev.2

# Connector Assembly :

PART No.	D	F	G
◆20899-020E-01	9.50	13.50	11.50
◆20899-030E-01	14.50	18.50	16.50
◆20899-040E-01	19.50	23.50	21.50
20899-050E-01	24.50	28.50	26.50
◆20899-060E-01	29.50	33.50	31.50

◆MARK MEANS NOT AVAILABLE.

## RECOMMENDED FFC LAYOUT [SHIELDED TYPE]



### NOTES.

3. MANUFACTURE CASE- I or II  
4. DIFFERENTIAL IMPEDANCE : 100  $\pm$  10  $\Omega$

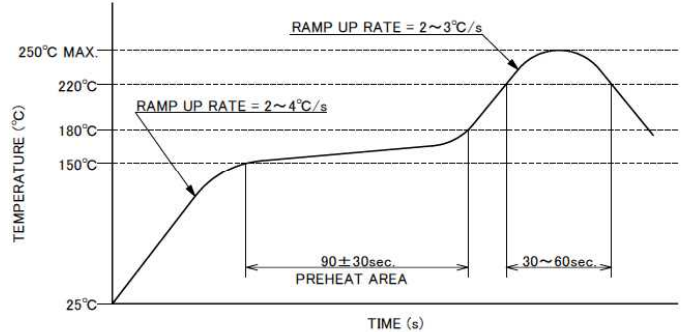
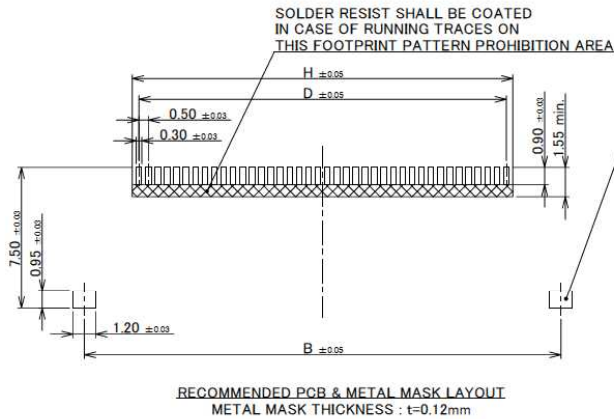
NO.	COMPONENTS	MATERIAL	FINISH
13	SHIELD TAPE	METALLIC FILM	
12	INTERLAYER	ARBITRARY	
11	GROUND PLATE	METALLIC FILM	POLISH or HALF POLISH Sn PLATING
10	REINFORCED TAPE	ARBITRARY	
9	INSULATION FILM	ARBITRARY	
8	CONDUCTOR	COPPER ALLOY	CONTACT AREA : Au 0.05 $\mu$ m MIN. OVER Ni 0.5 $\mu$ m MIN.

Rev.2

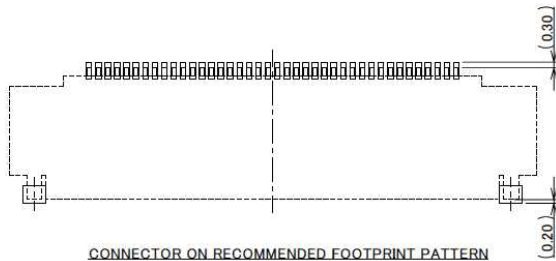
# Connector Assembly :

PART No.	B	D	H
◆20899-020E-01	15.30	9.50	10.20
◆20899-030E-01	20.30	14.50	15.20
◆20899-040E-01	25.30	19.50	20.20
◆20899-050E-01	30.30	24.50	25.20
◆20899-060E-01	35.30	29.50	30.20

◆MARK MEANS NOT AVAILABLE.



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



Rev.2

# Connector Assembly :

ITEMS	SPECIFICATION
RATING VOLTAGE	50V AC/DC (PER CONTACT)
RATING AMPERAGE	0.35A AC/DC (PER CONTACT) AVAILABLE FOR ALL CONTACTS 0.5A AC/DC (PER CONTACT) AVAILABLE UP TO 15 CONTACTS
OPERATING TEMPERATURE	233~398K(-40°C~+125°C)
OPERATING HUMIDITY	85% MAX.(NON-CONDENSING)
CONTACT RESISTANCE	INITIAL : 60mohm MAX. / AFTER TEST : <math>\sphericalangle</math>140mohm MAX.
INSULATION RESISTANCE	500Mohm MIN.
DIELECTRIC WITHSTANDING VOLTAGE	AC250V 1min
DURABILITY	50TH CYCLES
FPC/FFC MATING FORCE (INITIAL / 50TH CYCLES)	20P : 15.00 N MAX. 30P : 22.00 N MAX. 40P : 29.00 N MAX. 50P : 36.00 N MAX. 60P : 43.00 N MAX.
FPC/FFC UNMATING FORCE (INITIAL / 50TH CYCLES)	20P : 2.00 N MIN. 30P : 2.70 N MIN. 40P : 3.40 N MIN. 50P : 4.10 N MIN. 60P : 4.80 N MIN.
FPC/FFC RETENTION FORCE (INITIAL / AFTER TEST)	20P : 11.00 N MIN. 30P : 11.70 N MIN. 40P : 12.40 N MIN. 50P : 13.10 N MIN. 60P : 13.80 N MIN.
COPLANARITY	0.10 MAX.
PRODUCT SPECIFICATION	PRS-2470
TEST REPORT	TR-18020
PACKING STANDARD	PST-19019
INSTRUCTION MANUAL	HIM-18018
APPEARANCE CRITERIA No.	QLS-A***

Rev.2



Copyright © I-PEX Inc. 2020. All rights reserved.

I-PEX, MHF, CABLINE, NOVASTACK, EVAFLEX, MINIFLEX, ISH, IARPB, IASLP, ESTORQ, i-Fit and ISFIT are registered trademarks of I-PEX Inc. Please note that the contents in the catalog might be changed without prior notification. I-PEX Inc. assumes no responsibility for any inaccuracies or obligation to update Information on these documents. Please be sure to read and understand the latest "Precautions for Use" and "Instruction Manual" before you use our products. We shall not be responsible for any defects, damages or troubles in case you use our products without following the precautions for use. Please feel free to contact our sales representatives when you use our products for any applications that require very high reliability and safety, or that relate to human life (ex. nuclear power control, aerospace, transportation, medical equipment, safety equipment etc.).

Contact your sales representative for more detailed information. [ [i-pex.com](http://i-pex.com) ]