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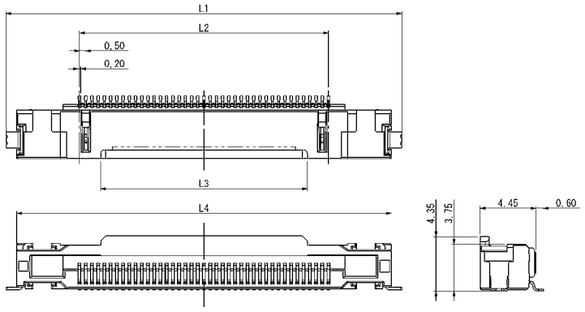
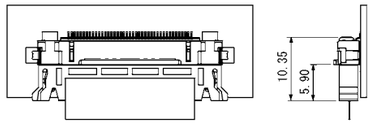
90° Outline Dimensions HF507S-**-01 and HF507S-**-03



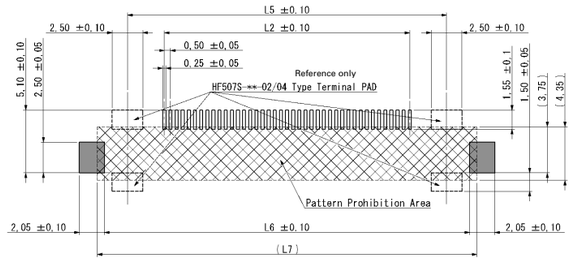
n	L1	L2	L3	L4	L5	L6	L7
21	21,80	10,00	6,60	20,10	16,00	19,75	20,95
31	26,80	15,00	11,60	25,10	21,00	24,75	25,95
41	31,80	20,00	16,60	30,10	26,00	29,75	30,95
51	36,80	25,00	21,60	35,10	31,00	34,75	35,95

4	Reinforcement terminal	2	PB t0.20	Ni-Sn PI
3	Lock metal	2	SUS t0.20	—
2	Contact	n	PB t0.15	Ni-Au PI
1	Insulator	1	LCP(GF)	Black
ITEM No.	DESCRIPTION	QNT.	MATERIAL	CONTENT

Mounted Condition (ref.)



PCB Layout

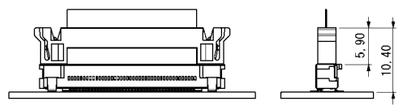


180° Outline Dimensions HF507S-**-02 and HF507S-**-04

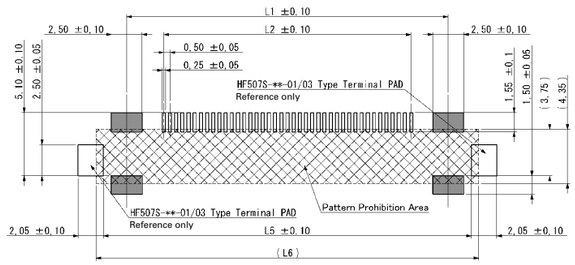
n	L1	L2	L3	L4	L5	L6
21	16,00	10,00	6,60	20,10	19,75	20,95
31	21,00	15,00	11,60	25,10	24,75	25,95
41	26,00	20,00	16,60	30,10	29,75	30,95
51	31,00	25,00	21,60	35,10	34,75	35,95

4	Reinforcement terminal	2	PB t0.20	Ni-Sn PI
3	Lock metal	4	SUS t0.20	—
2	Contact	n	PB t0.15	Ni-Au PI
1	Insulator	1	LCP(GF)	Black
ITEM No.	DESCRIPTION	QNT.	MATERIAL	CONTENT

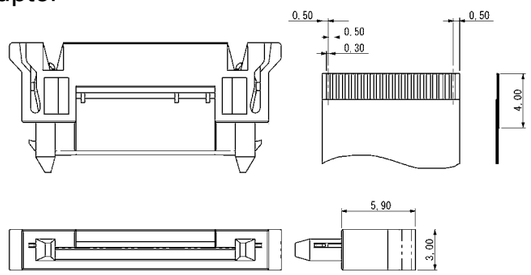
Mounted Condition (ref.)



PCB Layout



Adapter



YFLEX® is a registered trademark of Yamaichi Electronics Co., Ltd.

Specifications in this document are reference values for representative products of each series. Since product improvement entails changes to electrical, material and mechanical properties, the purchasing party is strongly encouraged to inquire about the latest specifications before placing a purchase order.

Info: Minimum order quauntity is 1,000 pcs.
Custom specific designs of YFLEX entail tooling costs.

Version Feb 2008

YAMAICHI ELECTRONICS

High Speed Connector and Cable System

HF507/ YFLEX - YFB Series

WWW.YAMAICHI.EU

2008

HF507 / YFB Series

High Speed Connector and Cable System

The current market situation needs and is ready for a high speed performance connector and cable which supports high speed “Gbps” for digital consumers, car electronics, telecom network equipments etc. Especially products to support LVDS, HDMI and other high speed interface specifications.

The combination of HF507 series and YFLEX cable will provide the best performance for impedance matching.

Features of HF507 (Receptacle)

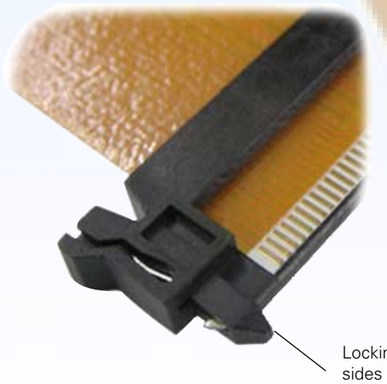
- Gbps data transmission level
- 0.5mm pitch
- Pin count: 21, 31, 41, 51 pins
- Mount type: 90° and 180°
- Auto vacuum mounting capability
- Differential impedance: 100Ω
- Suitable for LVDS, HDMI, DVI, PCI express and S-ATA data transmission
- RoHS compliant

Features of HF507 (Adapter and Cable)

- Pin count: 21, 31, 41, 51 pins
- Easy operation by side-locking mechanism
- Side-locking mechanism prevents cable angular insertion and guarantees secure locking
- Integrated YFLEX technology
- RoHS compliant

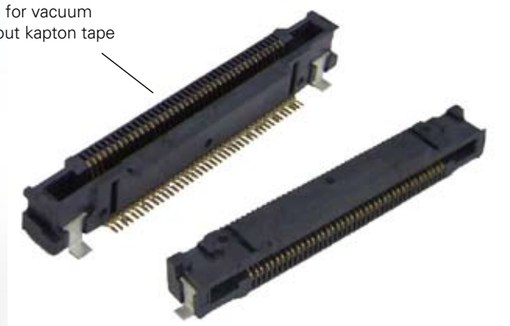
Connector Specification

- Pin count: 21, 31, 41, 51 pins
- 0.5mm pitch
- Current rating: 0.3A
- Insulation resistance: 100MΩ min.
- Contact resistance: 100mΩ max.
- Operating temp.: -20°C to +85°C
- Insertion/extraction: 30 times



Locking mechanism on both sides provides easy operation and prevents cable angular insertion and guarantees secure locking

Insulator shape for vacuum mounting without kapton tape



Product Line-up

o = in mass production
x = in planning

Receptacle						
Pin No.	Metal-shell	Mounting	21 pin	31 pin	41 pin	51 pin
HF507S-**-01	no	90°	o	o	o	o
HF507S-**-02	no	180°	o	o	o	o
HF507S-**-03	yes	90°	o	o	o	o
HF507S-**-04	yes	180°	x	x	o	o

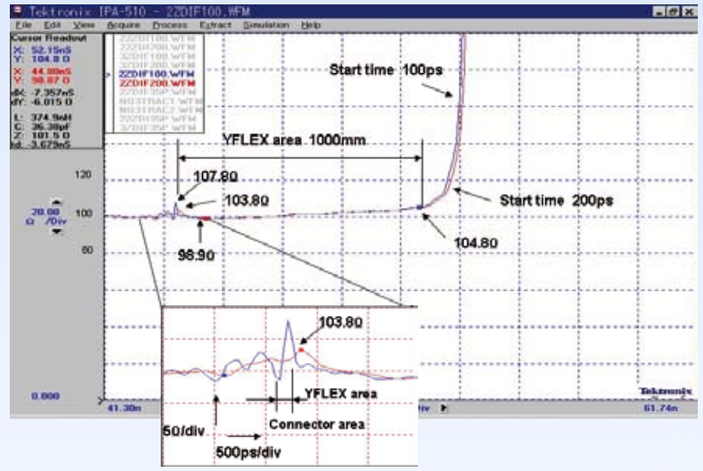
For mating cable assembly please contact Yamaichi

HF507 Series, Measurement of Differential Impedance

Measurement Method
- TDR measurement
- Measurement condition: Rise time is 100ps and 200ps

Test Sample
- YFLEX cable connector: HF507S-21-02
- Cable: YFLEX (single layer) length 1,000mm

Measurement Equipment
- Digital sampling oscilloscope from Tektronix
- 11801B/TDR module Tektronix SD-24

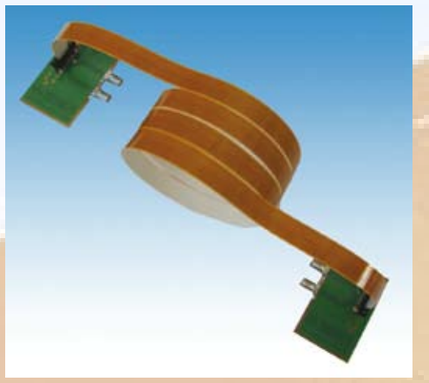


Measuring Result

Differential Impedance (Zdiff) satisfies 100Ω ±10Ω in connector part and YFLEX part

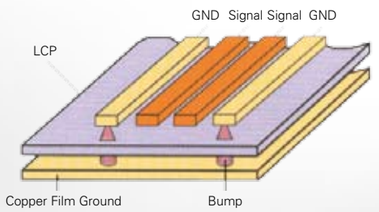
Even the lenght of YFLEX is 1,000mm it satisfies impedance Zdiff = 100Ω ±10Ω by design of low conductor resistance

It has a stable wave pattern characteristic in compliance rise time (Tr: 10% - 90%) 200ps of HDMI test condition



YFLEX Cable

The Differential Coplaner Waveguide with GND structure and the fine-etching manufacturing technique guarantees stable impedance matching and reduces EMI.
Interconnects are done by special bump technology



LCP material Characteristics

- Low moisture absorbing characteristics for dimensional stability
- The low dielectric constant and the low hygroscopicity of LCP enables the high-speed transmission and the low insertion loss