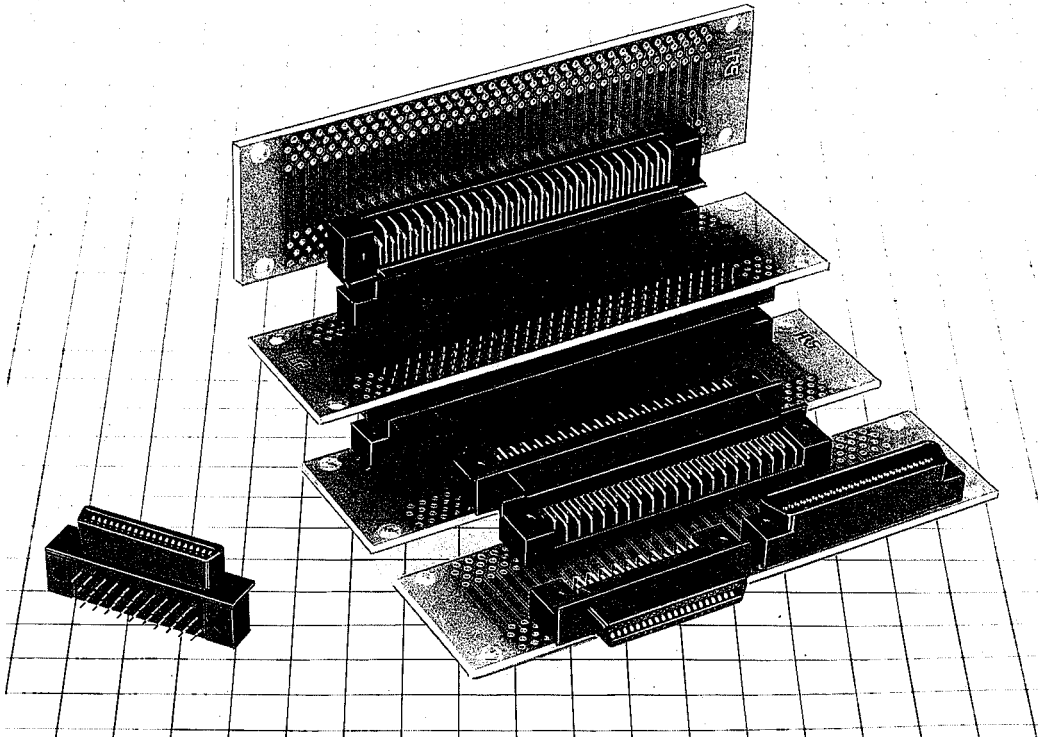


# HIF7 1.27 mm (.050") MINIATURE CONNECTORS

## Scope

The HIF7 is a newly developed connector, featuring low insertion force and a 1.27 mm pitch PCB pattern to meet the ever increasing market needs.



## Features

1. The connector has a "D" shaped mating section, which is ideal to prevent incorrect insertion.
2. The HIF7 has Low Insertion Force (LIF) due to Hirose's unique flexible spring contact design.
3. Long effective mating length ensures stability and sufficient contact wipe.
4. Versions with PCB lock tabs are also available.
5. The availability of many variations ensures you that you can have exactly what you need.

## Application

Peripherals, office automation equipment. Mass memory storage devices, etc.

## Material and Finish

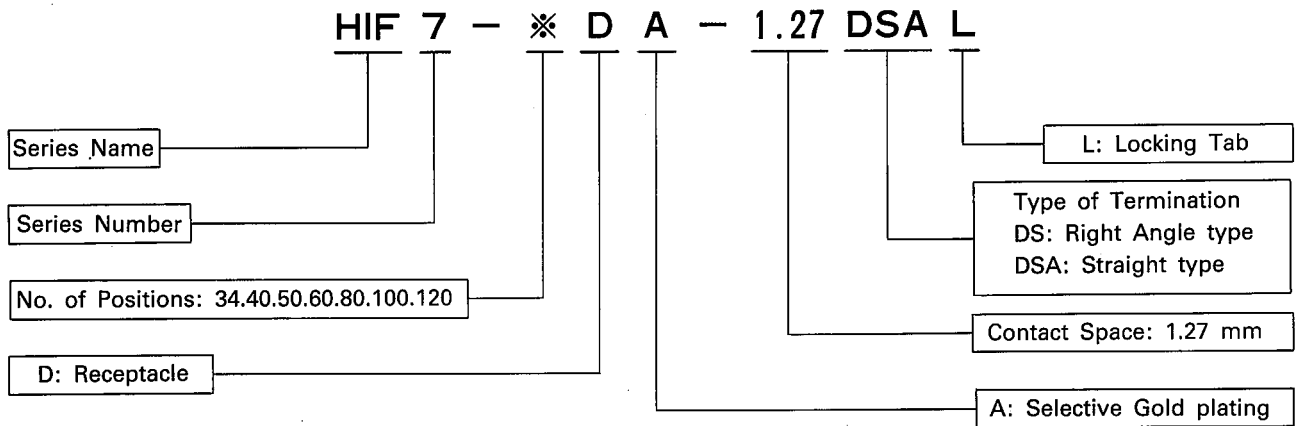
Item	Material	Finish
Insulator	PBT resin	Black
Receptacle contact	Phosphor bronze	Selective gold plating
Header contact	Brass	Selective gold plating

## Electrical Performance

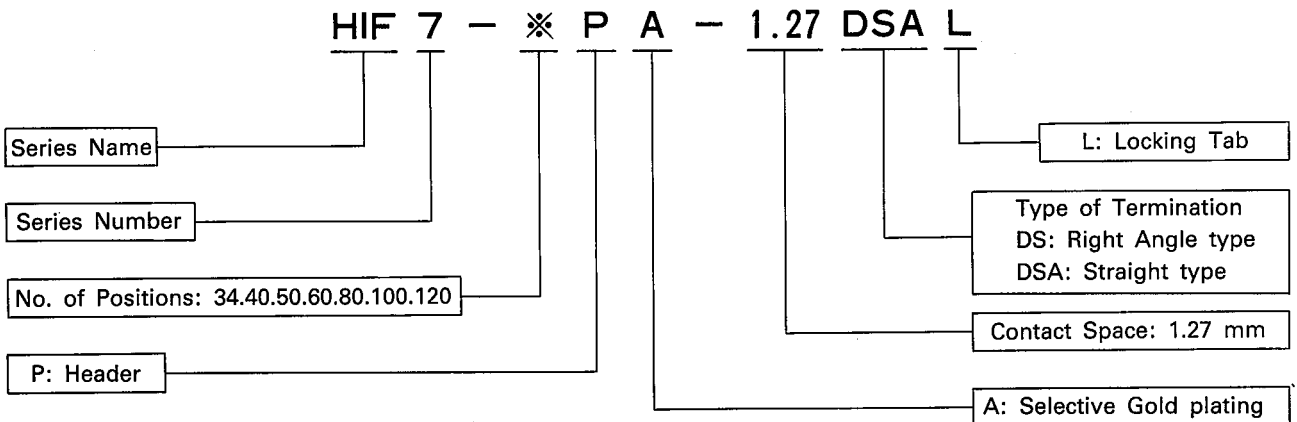
Item	Specification
Current Rating	0.5A
Voltage Rating	125VAC
Insulation resistance	1,000M $\Omega$ or more @250VDC
Withstanding voltage	300VAC
Contact resistance	40m $\Omega$ or less at DC100mA

## Ordering Information

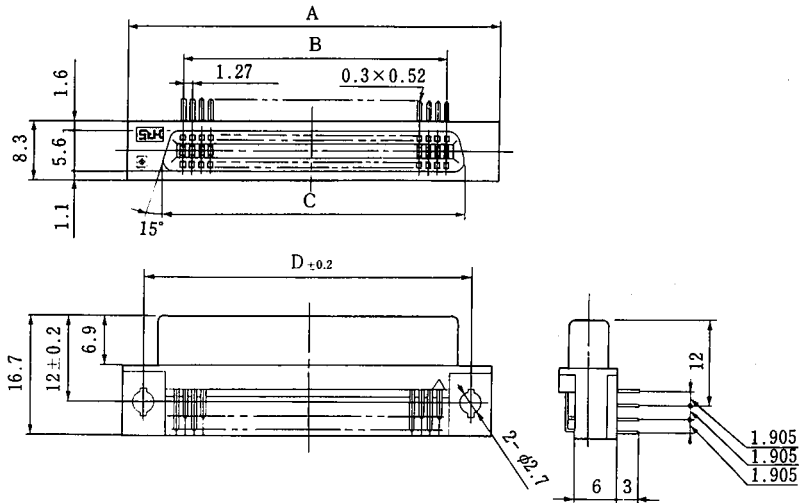
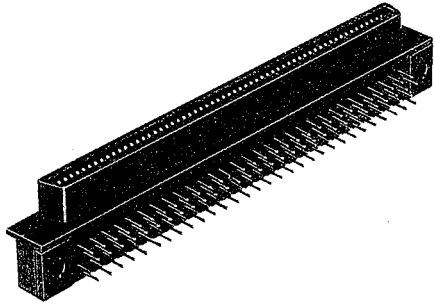
### Receptacle



### Header

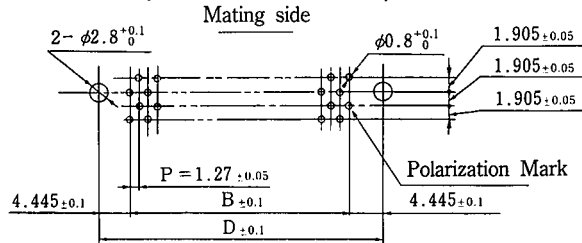


# Receptacle Right Angle Type

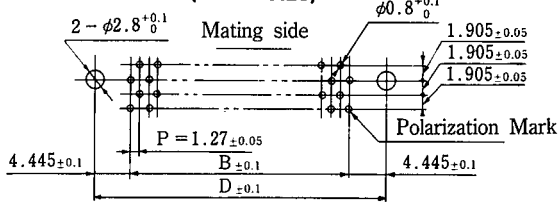


## PCB Layout

(40.60.80.100.120 Size)



(34.50 Size)

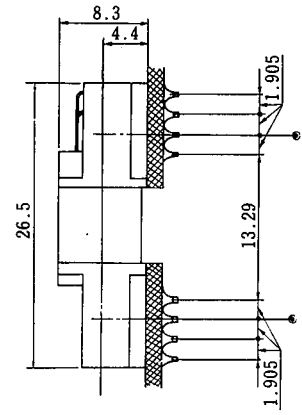
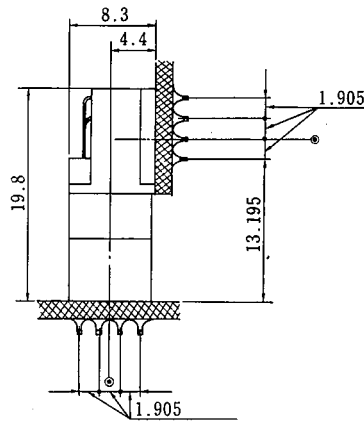


## Application Chart

◎ Center line for mounting eyes

HIF7-※DA-1.27DS(L)

HIF7-※DA-1.27DS(L)



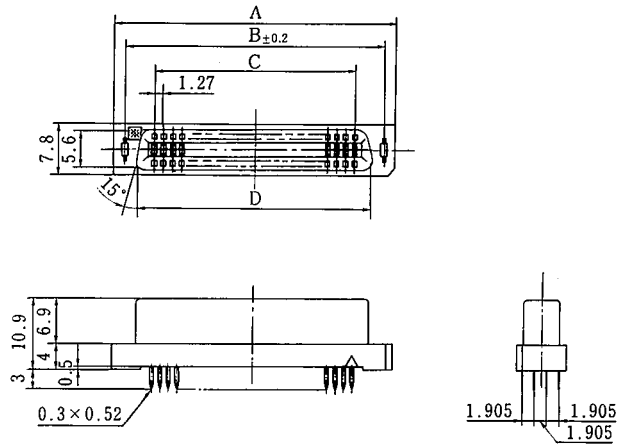
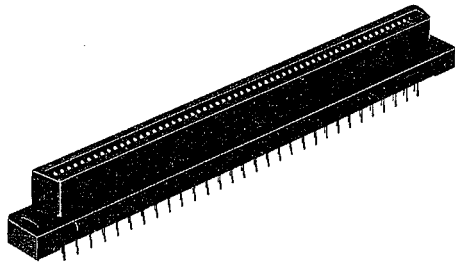
HIF7-※PA-1.27DSA(L)

HIF-※PA-1.27DS(L)

Unit: mm

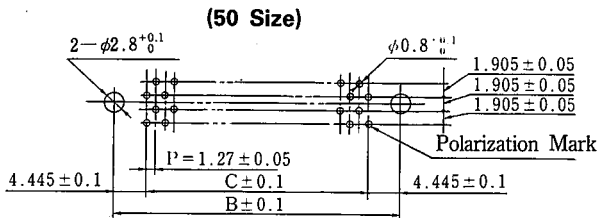
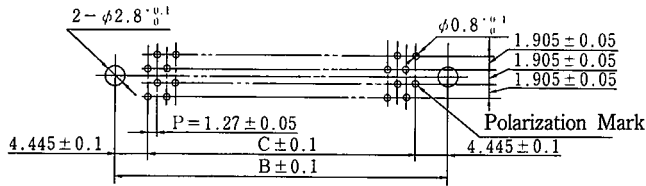
HRS No.	Part No.	No. of Pin	A	B	C	D
670-0007-0	HIF7-34DA-1.27DS	34	35.21	20.32	25.29	29.21
670-0057-8	HIF7-34DA-1.27DSL					
670-0001-3	HIF7-40DA-1.27DS	40	39.02	24.13	29.1	33.02
670-0051-1	HIF7-40DA-1.27DSL					
670-0002-6	HIF7-50DA-1.27DS	50	45.37	30.48	35.45	39.37
670-0052-4	HIF7-50DA-1.27DSL					
670-0003-9	HIF7-60DA-1.27DS	60	51.72	36.83	41.8	45.72
670-0053-7	HIF7-60DA-1.27DSL					
670-0004-1	HIF7-80DA-1.27DS	80	64.42	49.53	54.5	58.42
670-0054-0	HIF7-80DA-1.27DSL					
670-0005-4	HIF7-100DA-1.27DS	100	77.12	62.23	67.2	71.12
670-0055-2	HIF7-100DA-1.27DSL					
670-0006-7	HIF7-120DA-1.27DS	120	89.82	74.93	79.9	83.82
670-0056-0	HIF7-120DA-1.27DSL					

# Receptacle Straight Type



## PCB Layout

(40.60.80.100.120 Size)



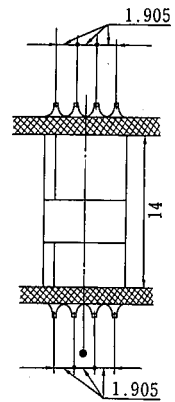
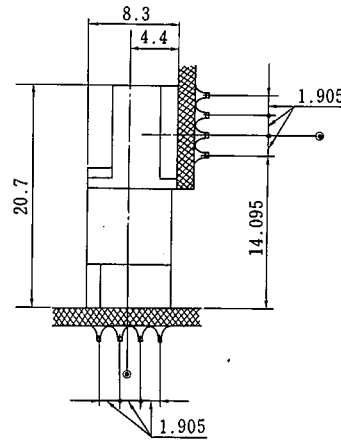
When the product with Locking Tab is not used,  $\phi 2.8$  PCB Hole is not required.

## Application Chart

⊙ Center line for mounting eyes

HIF7-※PA-1.27DS(L)

HIF7-※PA-1.27DSA(L)



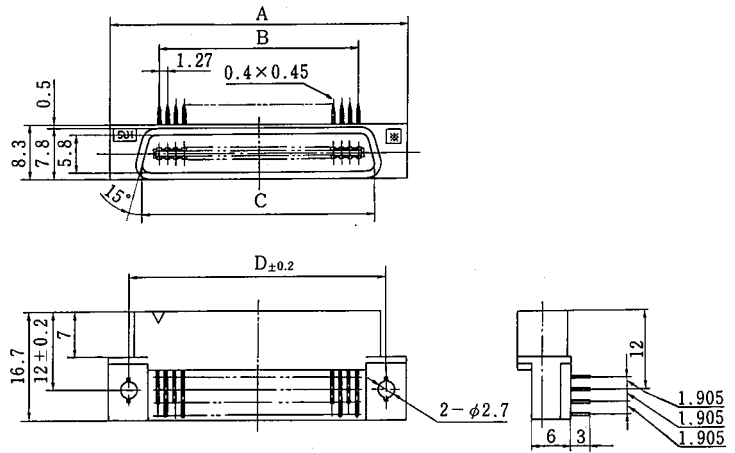
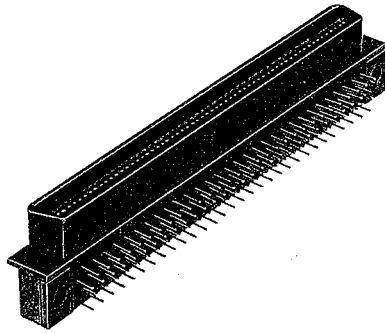
HIF7-※DA-1.27DSA(L)

HIF7-※DA-1.27DSA(L)

Unit: mm

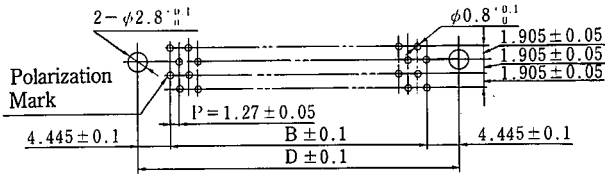
HRS No.	Part No.	No. of Pin	A	B	C	D
670-0101-8	HIF7-40DA-1.27DSA	40	36.45	33.02	24.13	29.1
670-0151-6	HIF7-40DA-1.27DSAL					
670-0102-0	HIF7-50DA-1.27DSA	50	42.8	39.37	30.48	35.45
670-0152-9	HIF7-50DA-1.27DSAL					
670-0103-3	HIF7-60DA-1.27DSA	60	49.15	45.72	36.83	41.8
670-0153-1	HIF7-60DA-1.27DSAL					
670-0108-7	HIF7-68DA-1.27DSA	68	54.23	50.8	41.91	46.88
670-0158-5	HIF7-68DA-1.27DSAL					
670-0104-6	HIF7-80DA-1.27DSA	80	61.85	58.42	49.53	54.5
670-0154-4	HIF7-80DA-1.27DSAL					
670-0105-9	HIF7-100DA-1.27DSA	100	74.55	71.12	62.23	67.2
670-0155-7	HIF7-100DA-1.27DSAL					
670-0106-1	HIF7-120DA-1.27DSA	120	87.25	83.82	74.93	79.9
670-0156-5	HIF7-120DA-1.27DSAL					

# Header Right Angle Type

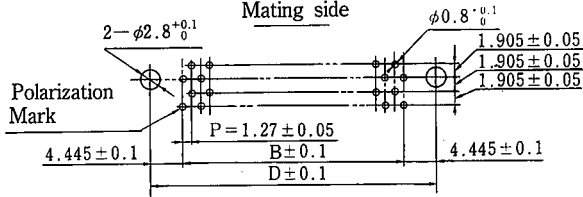


## PCB Layout

(40.60.80.100.120 Size)  
Mating side



(34.50 Size)  
Mating side

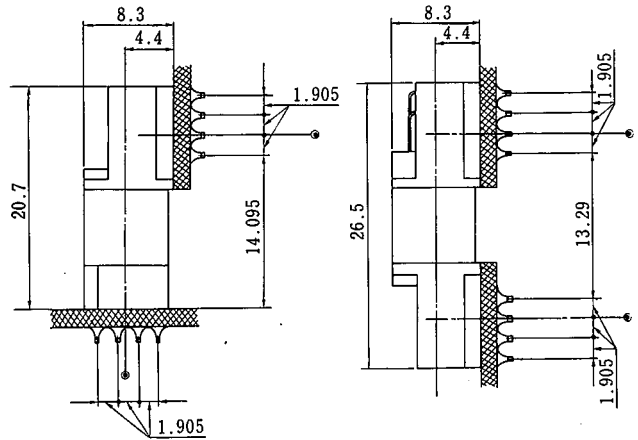


## Application Chart

⊙ Center line for mounting eyes

HIF7-※PA-1.27DS(L)

HIF7-※DA-1.27DS(L)



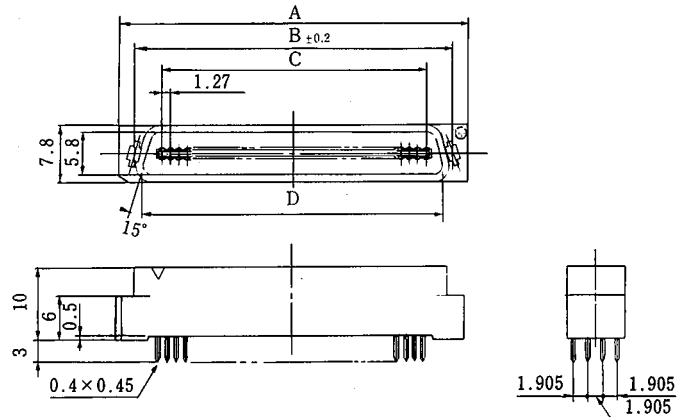
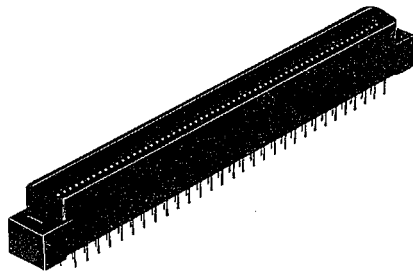
HIF7-※DA-1.27DSA(L)

HIF7-※PA-1.27DS(L)

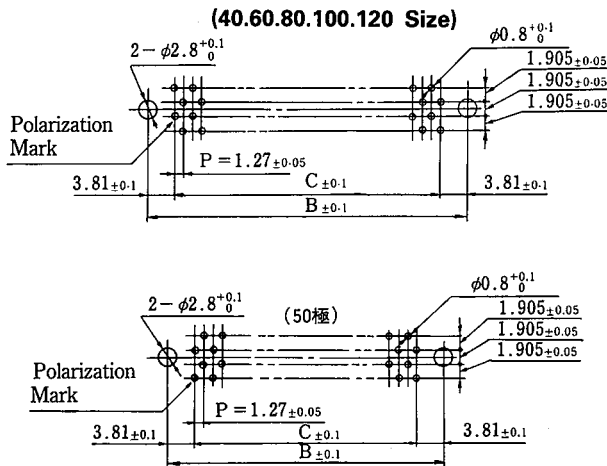
Unit: mm

HRS No.	Part No.	No. of Pin	A	B	C	D
670-0207-9	HIF7-34PA-1.27DS	34	35.21	20.32	25.45	29.21
670-0257-7	HIF7-34PA-1.27DSL					
670-0201-2	HIF7-40PA-1.27DS	40	39.02	24.13	29.26	33.02
670-0251-0	HIF7-40PA-1.27DSL					
670-0202-5	HIF7-50PA-1.27DS	50	45.37	30.48	35.61	39.37
670-0252-3	HIF7-50PA-1.27DSL					
670-0203-8	HIF7-60PA-1.27DS	60	51.72	36.83	41.96	45.72
670-0253-6	HIF7-60PA-1.27DSL					
670-0204-0	HIF7-80PA-1.27DS	80	64.42	49.53	54.66	58.42
670-0254-9	HIF7-80PA-1.27DSL					
670-0205-3	HIF7-100PA-1.27DS	100	77.12	62.23	67.36	71.12
670-0255-1	HIF7-100PA-1.27DSL					
670-0206-6	HIF7-120PA-1.27DS	120	89.82	74.93	80.06	83.82
670-0256-4	HIF7-120PA-1.27DSL					

# Header Straight Type



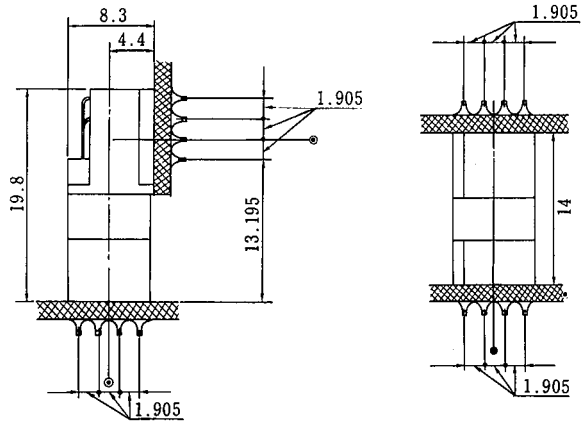
## PCB Layout



## Application Chart

HIF7-※DA-1.27DS(L)

◎ Center line for mounting eyes  
HIF7-※PA-1.27DSA(L)



HIF7-※PA-1.27DSA(L)

HIF7-※DA-1.27DSA(L)

When the product with Locking Tab is not used,  $\phi 2.8$  PCB Hole is not required.

Unit: mm

HRS No.	Part No.	No. of Pin	A	B	C	D
670-0301-7	HIF7-40PA-1.27DSA	40	36.45	31.75	24.13	29.26
670-0351-5	HIF7-40PA-1.27DSAL					
670-0302-0	HIF7-50PA-1.27DSA	50	42.8	38.1	30.48	35.61
670-0352-8	HIF7-50PA-1.27DSAL					
670-0303-2	HIF7-60PA-1.27DSA	60	49.15	44.45	36.83	41.96
670-0353-0	HIF7-60PA-1.27DSAL					
670-0308-6	HIF7-60PA-1.27DSA	68	54.23	49.53	41.91	47.04
670-0358-4	HIF7-68PA-1.27DSAL					
670-0304-5	HIF7-80PA-1.27DSA	80	61.85	57.15	49.53	54.66
670-0354-3	HIF7-80PA-1.27DSAL					
670-0305-8	HIF7-100PA-1.27DSA	100	74.55	69.85	62.23	67.36
670-0355-6	HIF7-100PA-1.27DSAL					
670-0306-0	HIF7-120PA-1.27DSA	120	87.25	82.55	74.93	80.06
670-0356-9	HIF7-120PA-1.27DSAL					



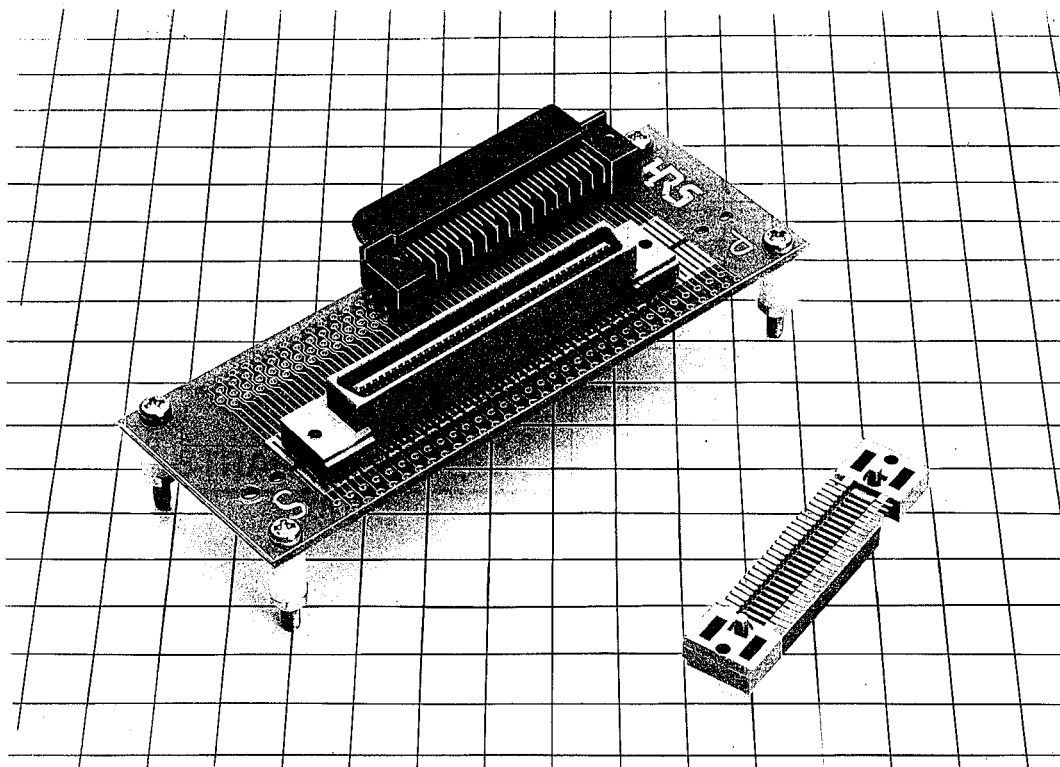
## HIF7 Series

# SMT 1.27mm (0.050) CENTER LINE LIF CONNECTOR

### ■ INTRODUCTION

The HIF7 series is a high density, low insertion force, multiposition connector designed to meet the needs of the continued miniaturization in the electronic industry. We offer this series in 40, 50, 80 and 100 positions. The

vertical mount plug and receptacle SMT series is interchangeable with our vertical and right angle standard thru hole series.



### ■ FEATURES

1. "D" shape design insures proper alignment during mating.
2. L.I.F. (Low Insertion Force) is accomplished using HIROSE's uniquely designed spring structure incorporated in our "ribbon" contact.
3. To help insure better performance our contact has a larger mating area and increased wiping action for a more reliable interconnect system.
4. Molded guide pins assist in assuring proper contact alignment on the PCB.
5. Chamfered entry is used to align connectors during mating.

### ■ APPLICATION

For various equipment of Computer peripherals or OA devices.

## ■ MATERIAL

Item	Specification
Insulator	PPS resin (UL94V-O)
Receptacle contact	Phosphor Bronze, selective Gold plating
Header contact	Brass, selective Gold plating

## ■ ELECTRICAL

Item	Specification
Current rating	0.5A
Voltage rating	125VAC
Insulation resistance	More than 1,000 mega-ohms min. at 250VDC
Contact resistance	Less than 40 mm-ohms at 0.1A DC
Withstanding voltage	300VAC

## ■ TEMPERATURE RATING

245 to 260 degrees centigrade for more than 10 seconds. Rated for V.P.S., I.R., and Heat-blow soldering.

## ■ ORDERING FORMAT

### ● RECEPTACLE

**HIF 7 — ※ RD — 1.27 SV**

Series Name

Series No.

No. of Positions  
SV : 40, 50, 80, 100  
SH : 100

RD : Receptacle

Type of Termination :  
SV : Vertical mount to PCB  
SH : "Card Extender" edge mount to PCB

Contact space : 1.27mm

### ● HEADER

**HIF 7 — ※ PD — 1.27 SV**

Series Name

Series No.

No. of Positions  
40, 50, 80, 100

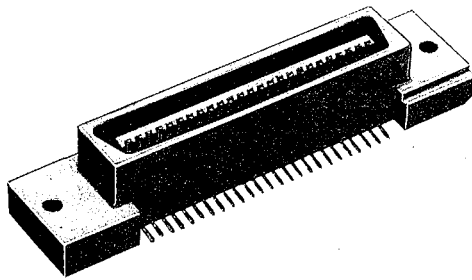
PD : Pin Header

Type of Termination  
SV : Vertical mount to PCB

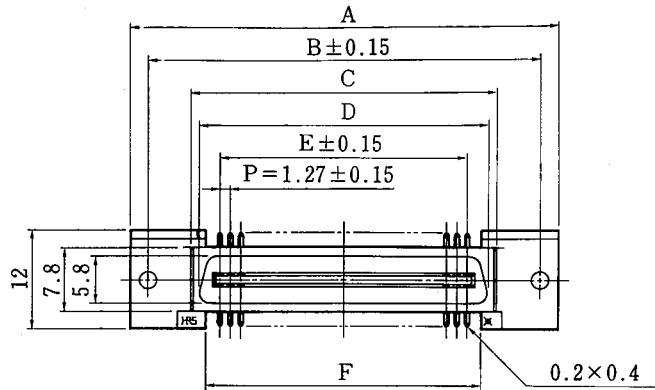
Contact space : 1.27mm



## ■ HEADER - STRAIGHT TYPE

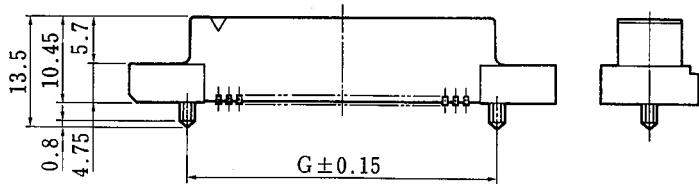
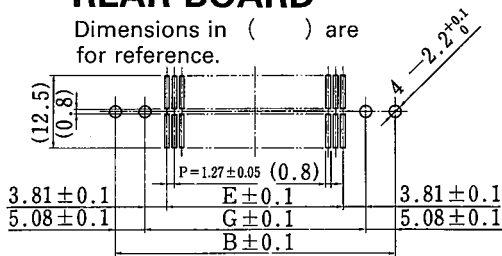


CL670-0502-9  
HIF7-50PD-1.27SV



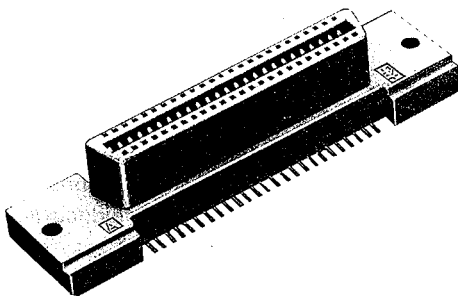
### ◆ DIMENSIONS OF REAR BOARD

Dimensions in ( ) are for reference.



HRS No.	Name	No. of positions	A	B	C	D	E	F	G
670-0501-6	HIF7-40PD-1.27SV	40	46.15	41.91	31.26	29.26	24.13	27.65	31.75
670-0502-9	HIF7-50PD-1.27SV	50	52.50	48.26	37.61	35.61	30.48	34.00	38.10
670-0504-4	HIF7-80PD-1.27SV	80	71.55	67.31	56.66	54.66	49.53	53.05	57.15
670-0505-7	HIF7-100PD-1.27SV	100	84.25	80.01	69.36	67.36	62.23	65.75	69.85

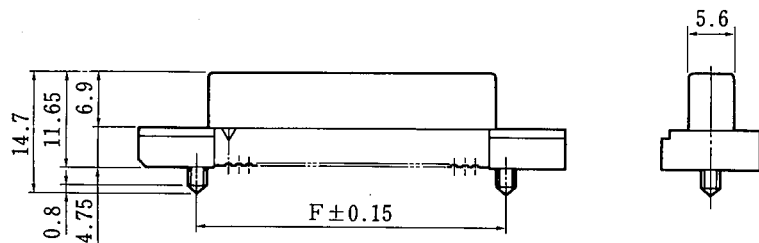
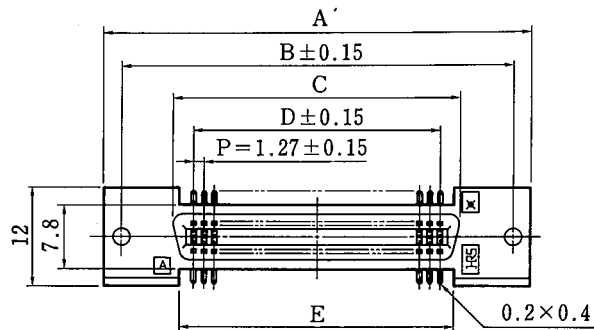
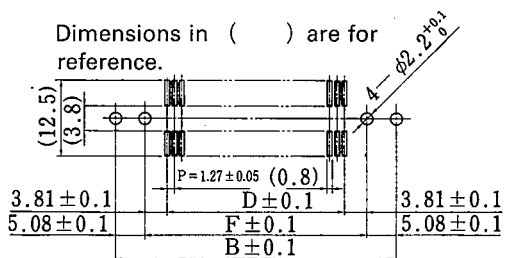
## ■ RECEPTABLE - STRAIGHT TYPE



CL670-0402-4  
HIF7-50RD-1.27SV

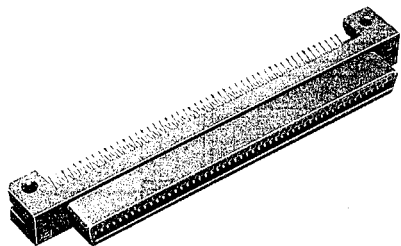
### ◆ DIMENSIONS OF REAR BOARD

Dimensions in ( ) are for reference.

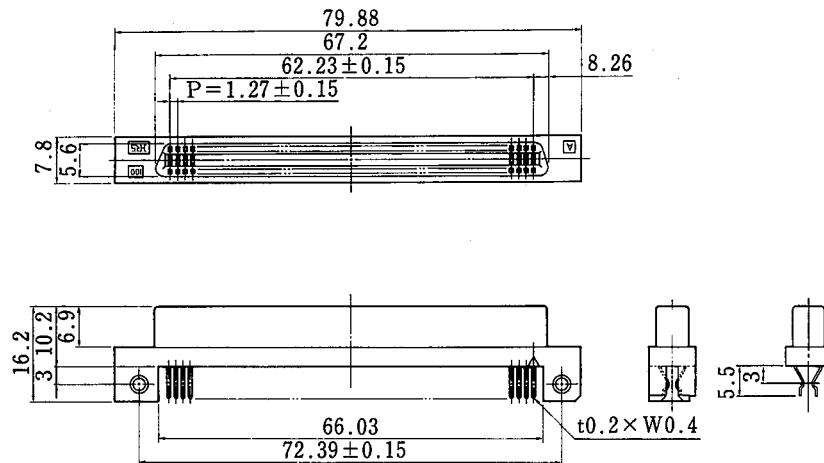


HRS No.	Name	No. of positions	A	B	C	D	E	F
670-0401-1	HIF7-40RD-1.27SV	40	46.15	41.91	29.10	24.13	27.65	31.75
670-0402-4	HIF7-50RD-1.27SV	50	52.50	48.26	35.45	30.48	34.00	38.10
670-0404-0	HIF7-80RD-1.27SV	80	71.55	67.31	54.50	49.53	53.05	57.15
670-0405-2	HIF7-100RD-1.27SV	100	84.25	80.01	67.20	62.23	65.75	69.85

## RECEPTACLE - CLIP-IN TO PCB TYPE

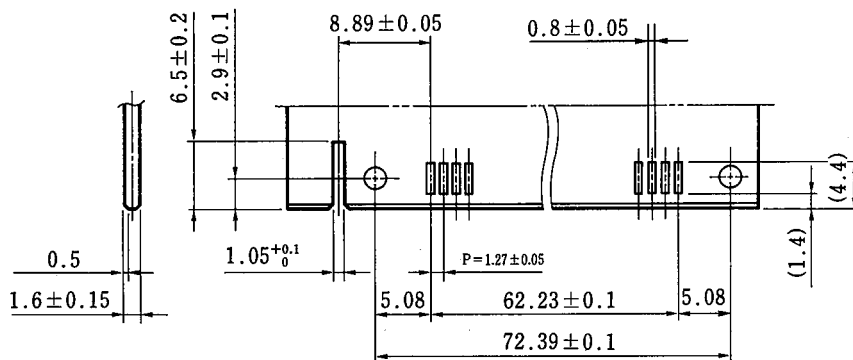


CL670-0505-7  
HIF7-IOORD-1.27SH



## DIMENSIONAL SPEC OF PCB

Dimensions in ( ) are for reference.



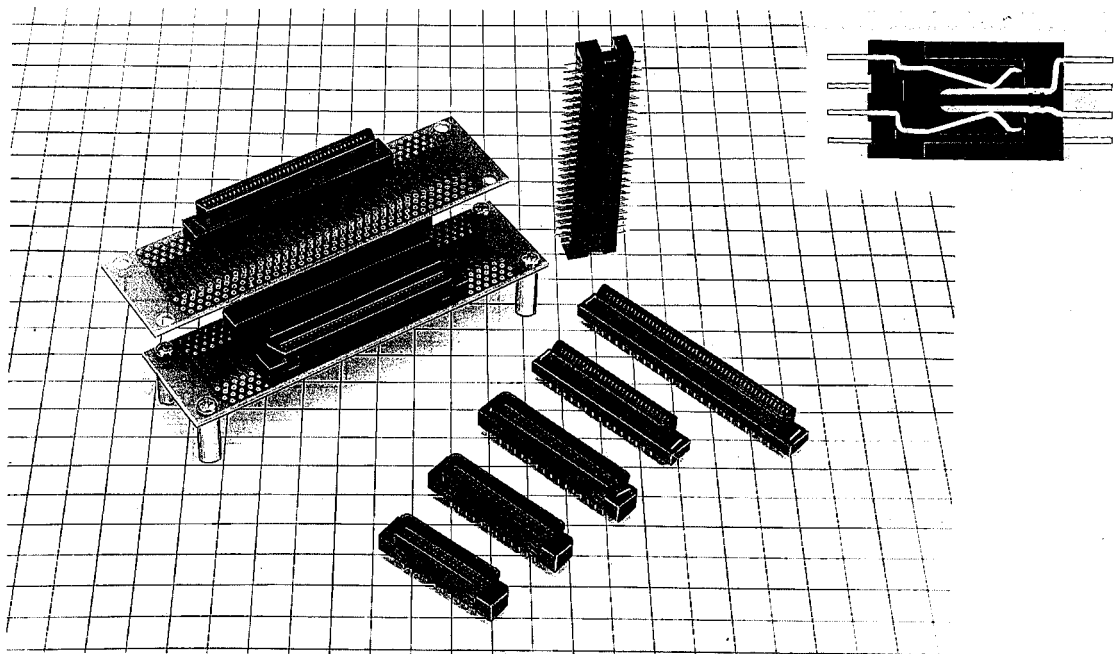
# HIF7C Series

## Completely Prevents Solder and Flux Wicking (Patent Pending)

### Introduction

The HIF7C series connectors that completely prevent Solder and Flux wicking have been added to the reputable connec-

tors HIF7 series for PCB-TO-PCB connection. 40, 50, 60, 68, 80, 100 and 120 positions are available.



### Features

1. Unique manufacturing methods completely prevent Solder and Flux wicking.
2. Compatible with both the washing and non-washing processes for substrates.
3. All connectors are polarized to prevent mis-insertion.
4. L.I.F. (Low Insertion Force) is accomplished using HIROSE's uniquely designed spring structure incorporated in our "ribbon" contact.
5. Long effective mating length ensures highly stable.
6. The availability of many variations ensures you that you can have exactly what you need.

### Application

For various equipment of Computer peripherals, OA devices or FA devices.

## Material and Finish

Item	Material	Finish
Insulator	PBT resin	Black
Receptacle Contact	Phosphor Bronze	Selective Gold plating
Header Contact	Brass	Selective Gold plating

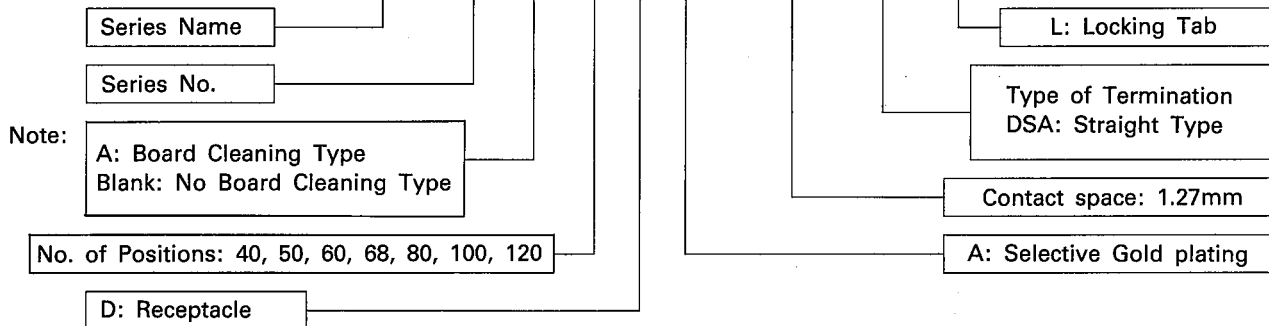
## Electrical Performance

Item	Specification
Current rating	0.5A
Voltage rating	125VAC
Insulation resistance	More than 1,000 mega-ohms min. at 250VDC
Contact resistance	Less than 40 mm-ohms at 0.1A DC
Withstanding voltage	300VAC

## Ordering Format

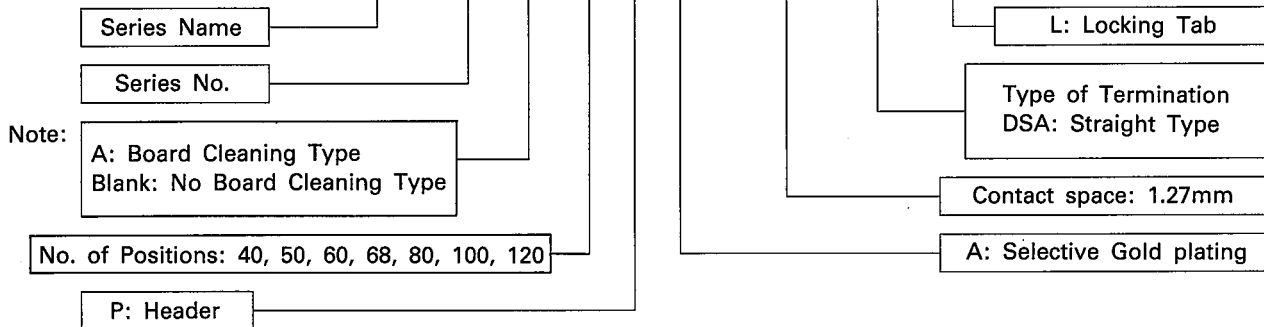
### ● Receptacle

H I F 7 C A - \* D A - 1.27 D S A L



### ● Header

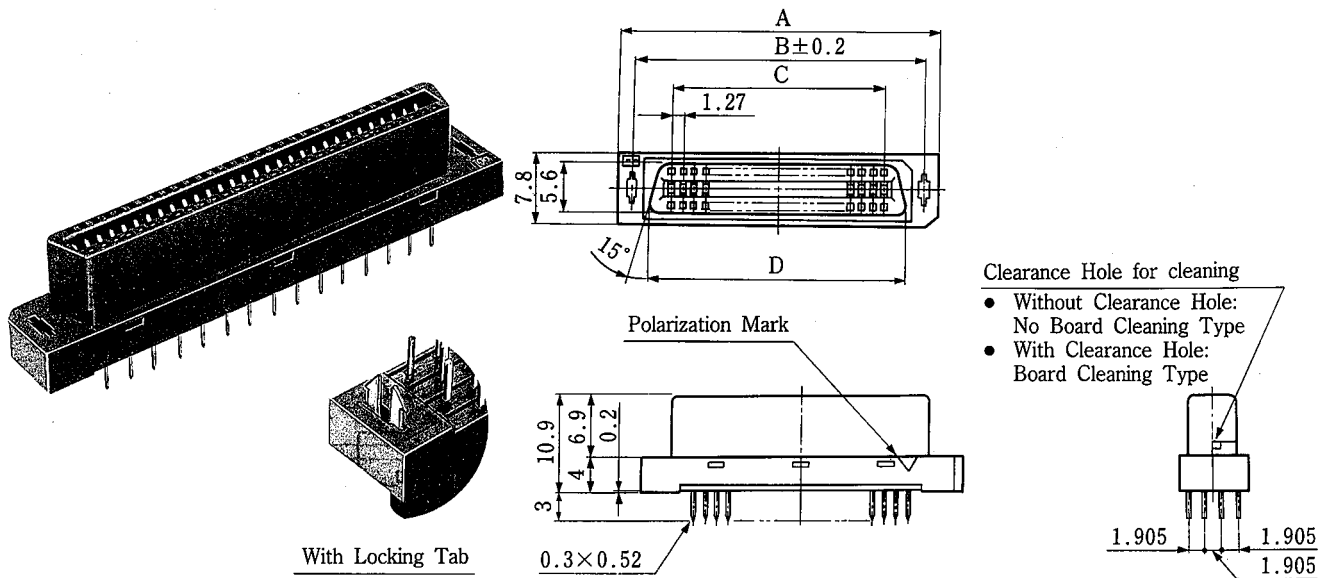
H I F 7 C A - \* P A - 1.27 D S A L



Note: Board Cleaning: Connector and Board to be soaked in cleaning bath.

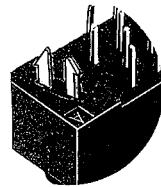
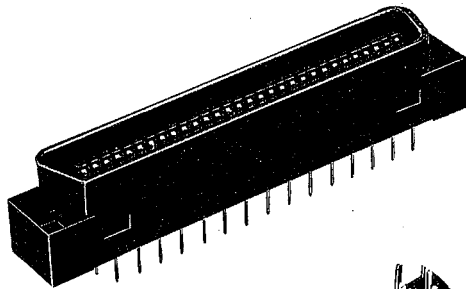
No Board Cleaning Type: No cleaning or Back-Board cleaning type.

# Receptacle Straight Type

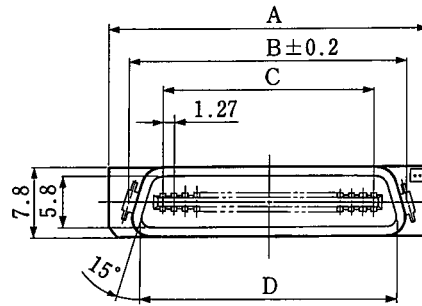


HRS No.	Ordering No.	No. of pin	A	B	C	D	Application
CL 670-1001-9	HIF 7C-40DA-1.27DSA	40	36.45	33.02	24.13	29.1	No Board Cleaning Type
CL 670-1051-7	HIF 7C-40DA-1.27DSAL						
CL 670-1002-1	HIF 7C-50DA-1.27DSA	50	42.8	39.37	30.48	35.45	
CL 670-1052-0	HIF 7C-50DA-1.27DSAL						
CL 670-1003-4	HIF 7C-60DA-1.27DSA	60	49.15	45.72	36.83	41.8	
CL 670-1053-2	HIF 7C-60DA-1.27DSAL						
CL 670-1004-7	HIF 7C-68DA-1.27DSA	68	54.23	50.8	41.91	46.88	
CL 670-1054-5	HIF 7C-68DA-1.27DSAL						
CL 670-1005-0	HIF 7C-80DA-1.27DSA	80	61.85	58.42	49.53	54.5	
CL 670-1055-8	HIF 7C-80DA-1.27DSAL						
CL 670-1006-2	HIF 7C-100DA-1.27DSA	100	74.55	71.12	62.23	67.2	
CL 670-1056-0	HIF 7C-100DA-1.27DSAL						
CL 670-1007-5	HIF 7C-120DA-1.27DSA	120	87.25	83.82	74.93	79.9	
CL 670-1057-3	HIF 7C-120DA-1.27DSAL						
CL 670-1101-3	HIF 7CA-40DA-1.27DSA	40	36.45	33.02	24.13	29.1	Board Cleaning Type
CL 670-1151-1	HIF 7CA-40DA-1.27DSAL						
CL 670-1102-6	HIF 7CA-50DA-1.27DSA	50	42.8	39.37	30.48	35.45	
CL 670-1152-4	HIF 7CA-50DA-1.27DSAL						
CL 670-1103-9	HIF 7CA-60DA-1.27DSA	60	49.15	45.72	36.83	41.8	
CL 670-1153-7	HIF 7CA-60DA-1.27DSAL						
CL 670-1104-1	HIF 7CA-68DA-1.27DSA	68	54.23	50.8	41.91	46.88	
CL 670-1154-0	HIF 7CA-68DA-1.27DSAL						
CL 670-1105-4	HIF 7CA-80DA-1.27DSA	80	61.85	58.42	49.53	54.5	
CL 670-1155-2	HIF 7CA-80DA-1.27DSAL						
CL 670-1106-7	HIF 7CA-100DA-1.27DSA	100	74.55	71.12	62.23	67.2	
CL 670-1156-5	HIF 7CA-100DA-1.27DSAL						
CL 670-1107-0	HIF 7CA-120DA-1.27DSA	120	87.25	83.82	74.93	79.9	
CL 670-1157-8	HIF 7CA-120DA-1.27DSAL						

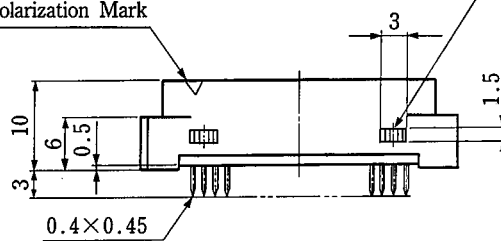
# Header Straight Type



With Locking Tab

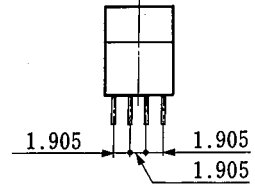


Polarization Mark



Clearance Hole for cleaning

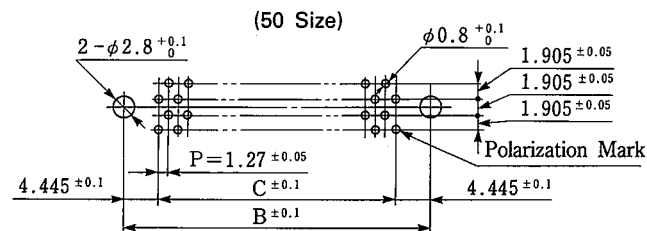
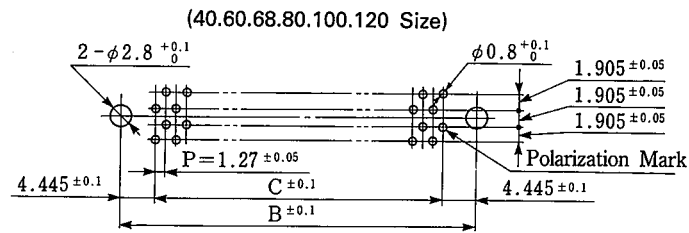
- Without Clearance Hole: No Board Cleaning Type
- With Clearance Hole: Board Cleaning Type



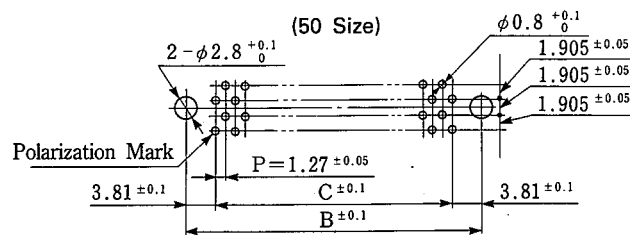
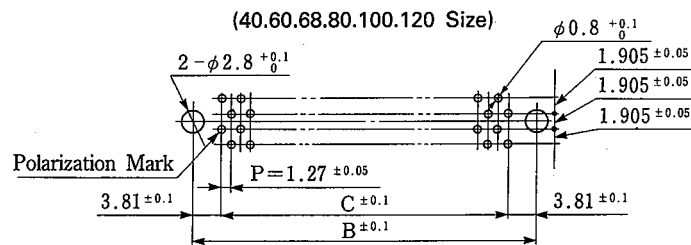
HRS No.	Ordering No.	No. of pin	A	B	C	D	Application
CL 670-1201-8	HIF 7C-40PA-1.27DSA	40	36.45	31.75	24.13	29.26	No Board Cleaning Type
CL 670-1251-6	HIF 7C-40PA-1.27DSAL						
CL 670-1202-0	HIF 7C-50PA-1.27DSA	50	42.8	38.1	30.48	35.61	
CL 670-1252-9	HIF 7C-50PA-1.27DSAL						
CL 670-1203-3	HIF 7C-60PA-1.27DSA	60	49.15	44.45	36.83	41.96	
CL 670-1253-1	HIF 7C-60PA-1.27DSAL						
CL 670-1204-6	HIF 7C-68PA-1.27DSA	68	54.23	49.53	41.91	47.04	
CL 670-1254-4	HIF 7C-68PA-1.27DSAL						
CL 670-1205-9	HIF 7C-80PA-1.27DSA	80	61.85	57.15	49.53	54.66	
CL 670-1255-7	HIF 7C-80PA-1.27DSAL						
CL 670-1206-1	HIF 7C-100PA-1.27DSA	100	74.55	69.85	62.23	67.36	
CL 670-1256-0	HIF 7C-100PA-1.27DSAL						
CL 670-1207-4	HIF 7C-120PA-1.27DSA	120	87.25	82.55	74.93	80.06	
CL 670-1257-2	HIF 7C-120PA-1.27DSAL						
CL 670-1301-2	HIF 7CA-40PA-1.27DSA	40	36.45	31.75	24.13	29.26	Board Cleaning Type
CL 670-1351-0	HIF 7CA-40PA-1.27DSAL						
CL 670-1302-5	HIF 7CA-50PA-1.27DSA	50	42.8	38.1	30.48	35.61	
CL 670-1352-3	HIF 7CA-50PA-1.27DSAL						
CL 670-1303-8	HIF 7CA-60PA-1.27DSA	60	49.15	44.45	36.83	41.96	
CL 670-1353-6	HIF 7CA-60PA-1.27DSAL						
CL 670-1304-0	HIF 7CA-68PA-1.27DSA	68	54.23	49.53	41.91	47.04	
CL 670-1354-9	HIF 7CA-68PA-1.27DSAL						
CL 670-1305-3	HIF 7CA-80PA-1.27DSA	80	61.85	57.15	49.53	54.66	
CL 670-1355-1	HIF 7CA-80PA-1.27DSAL						
CL 670-1306-6	HIF 7CA-100PA-1.27DSA	100	74.55	69.85	62.23	67.36	
CL 670-1356-4	HIF 7CA-100PA-1.27DSAL						
CL 670-1307-9	HIF 7CA-120PA-1.27DSA	120	87.25	82.55	74.93	80.06	
CL 670-1357-7	HIF 7CA-120PA-1.27DSAL						

# PC BOARD LAYOUT

## Receptacle Straight Type



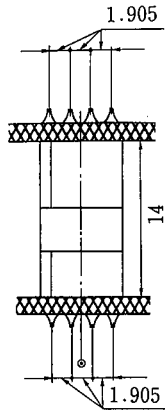
## Header Straight Type



When the product with Locking Tab is not used,  $\phi 2.8$  PCB Hole is not required.

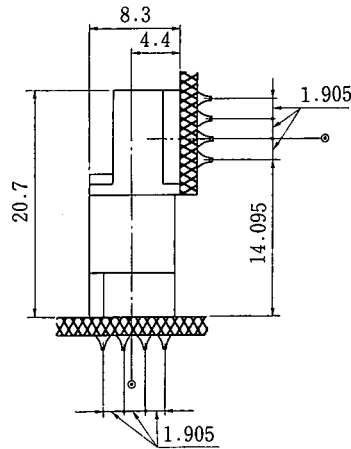
## ◆ APPLICATION CHART

HIF 7C-※PA-1.27DSA(L)  
HIF 7CA-※PA-1.27DSA(L)



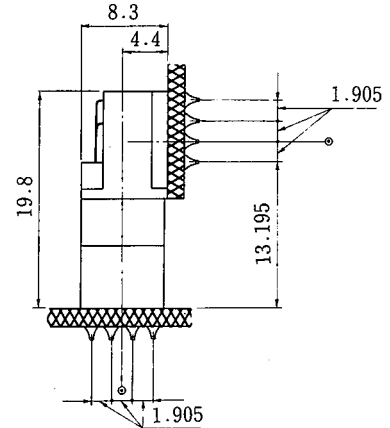
HIF 7C-※DA-1.27DSA(L)  
HIF 7CA-※DA-1.27DSA(L)

HIF 7-※PA-1.27DS(L)



HIF 7C-※DA-1.27DSA(L)  
HIF 7CA-※DA-1.27DSA(L)

⊙ Center line for mounting eyes  
HIF 7-※DA-1.27DS(L)



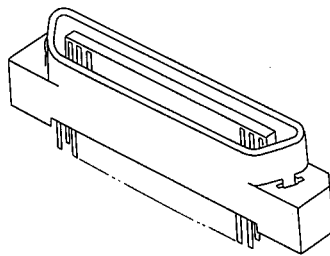
HIF 7C-※PA-1.27DSA(L)  
HIF 7CA-※PA-1.27DSA(L)

## ◆ HOW TO USE CONNECTORS

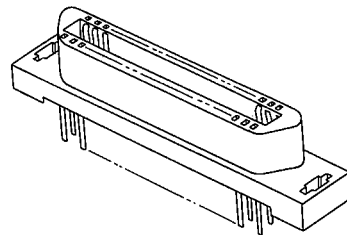
### 1. Connector selection

Although the HIF7C series are connectors that completely prevent Solder and Flux wicking (Patent Pending), please select which of the connectors, No Cleaning Board Type (HIF7C-※) or Cleaning Board Type (HIF7CA-※), depending on the solder process

- a) HIF 7C-※PA-1.27DSA(L)  
HIF 7C-※DA-1.27DSA(L)



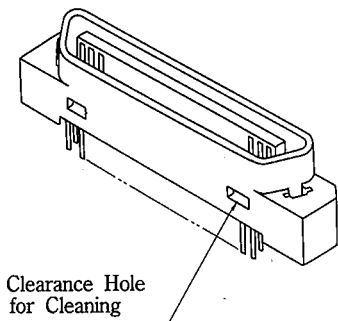
HIF 7C-※PA-1.27DSA



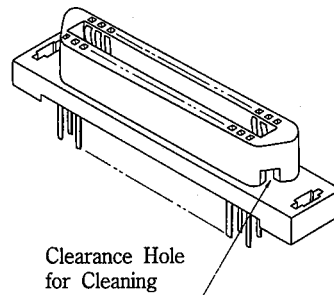
HIF 7C-※DA-1.27DSA



- b) HIF 7CA-※PA-1.27DSA(L)
- HIF 7CA-※DA-1.27DSA(L)



HIF 7CA-※PA-1.27DSA

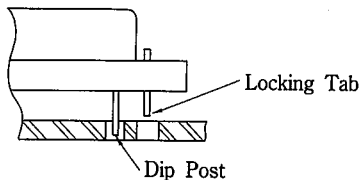


HIF 7CA-※DA-1.27DSA

Note: Although the HIF7C series has Clearance hole for cleaning, please use clean washing liquid.

### 2. Temporary PCB hold down

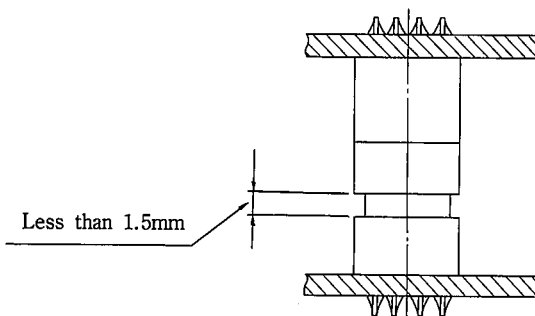
When the temporary PCB Hold down process is required for PCB mounting, please use the connectors with locking tab (HIF7C or HIF7CA-※-1.27DSA(L)). (Applicable PCB thickness  $t=1.6\pm 0.1$ )



### 3. Coupling Gap Tolerance

The GAP between a mated pair of HIF7C connectors is less than 1.5mm.

(Example) HIF 7C-※PA-1.27DSA  
HIF 7C-※DA-1.27DSA



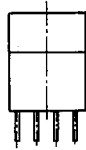
◆ **FUNCTION CHART**

**Header**

**Receptacle**

HIF 7C-※PA-1.27DSA(L)

Anti solder and Flux wicking,  
No Cleaning Board  
Straight Type



HIF 7C-※DA-1.27DSA(L)

Anti solder and Flux wicking,  
No Cleaning Board  
Straight Type



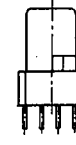
HIF 7CA-※PA-1.27DSA(L)

Anti solder and Flux wicking,  
Cleaning Board  
Straight Type



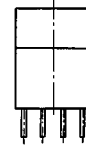
HIF 7CA-※DA-1.27DSA(L)

Anti solder and Flux wicking,  
Cleaning Board  
Straight Type



HIF 7-※PA-1.27DSA(L)

Straight Type



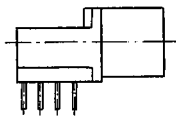
HIF 7-※DA-1.27DSA(L)

Straight Type



HIF 7-※PA-1.27DS(L)

Right Angle Type



HIF 7-※DA-1.27DS(L)

Right Angle Type

