PRODUCT CATALOG

HIROSE ELECTRIC CO.,LTD.

# ER8 Series

# PCIe Gen.4 High Speed Transmission (16+Gbps), 0.8mm Pitch, Board-to-Board Connectors

FunctionMAX™

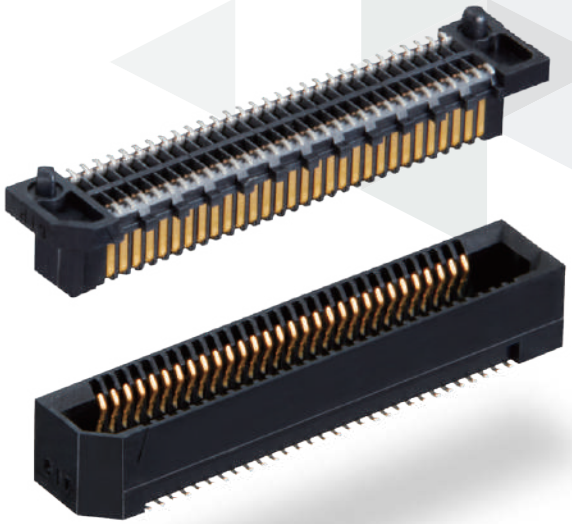
High Speed

High Speed

Wide Variation

P= 0.8 mm

P= 0.8mm



May.1.2023 Copyright 2023 HIROSE ELECTRIC CO., LTD. All Rights Reserved.

Product Page
https://www.hirose.com/en/product/series/ER8

Sep. 2022

# Features

1. Pitch : 0.8mm

2. Variations :
Right Angle / Parallel /
Coplanar

3. Stacking Height :
7/9/10/12mm

4. Number of Positions :
10/20/30/40/50/60
70/80/100/120/140pos.

5. Large Guide for Easy Mating

Self-alignment Range:±1.6mm

6. Unique Contact Design for
Smooth Mating

7. Samtec "Edge Rate®"
Licensed Second Source

May.1.2023 Copyright 2023 HIROSE ELECTRIC CO., LTD. All Rights Reserved.

# High Speed Transmission Characteristics

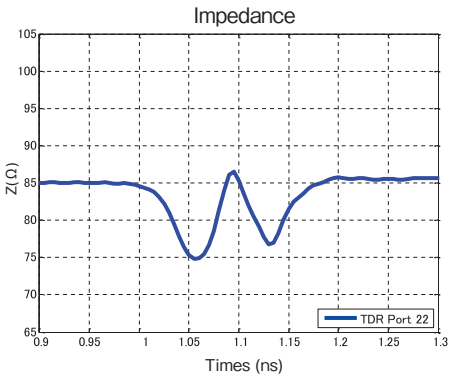
## ● Differential Insertion Loss

Supports PCIe Gen.4 with sufficient margin.

## ● Differential Impedance

85Ω (Tr=35ps, 20%-80%)




# Product Specification

| | | | |
|---|---|---|---|
| Rated Current (Note 1) | 0.5A (Signal) | Operating Temperature (Note 2) | -55 to +125℃ |
| Rated Voltage | 100V AC | Storage Temperature (Note 3) | -10 to +60℃ |

| Item | Specifications | Conditions |
|---|---|---|
| Contact Resistance | 50mΩ Max. | 100mA |
| Insulation Resistance | 1000MΩ Min. | 100V DC |
| Withstanding Voltage | No flashover or insulation breakdown | 300V AC for 1 min. |
| Mating Durability | Contact resistance change : 15mΩ Max.<br>No flash over or insulation breakdown.<br>No damage, cracks or part dislocation. | 100 times |
| Vibration Resistance | No electrical discontinuity of 1 μs Min. | Frequency : 20 to 500Hz,<br>Power spectral density : $0.02G^2/Hz$<br>3 times in each of the 3 directions |
| Shock Resistance | No electrical discontinuity of 1 μs Min. | $980m/s^2$, Duration of pulse 6ms,<br>90 minutes each of 3-axis direction |
| Temperature Cycles | Contact resistance change : 15mΩ Max.<br>Insulation resistance : 1000MΩ Min.<br>No flashover or insulation breakdown<br>No damage, cracks or part dislocation. | 25℃ , 90-95% RH : 120 min.<br>↑ ↓ 120 min.<br>65℃ , 90-95% RH : 120 min.<br>12 times |

Note 1 : Current rating per 1 contact is used.
Note 2 : Includes temperature rise due to current flow.
Note 3 : The term "storage" refers to products stored for long period of time prior to mounting and use.
Note 4 : Information contained in this catalog represents general requirements for this Series. Contact us for the drawings and specifications for a specific part number shown.

May.1.2023 Copyright 2023 HIROSE ELECTRIC CO., LTD. All Rights Reserved.

# Materials / Finish

## ● Straight Receptacle / Header

| Component | Material | Color / Finish | Remarks |
|---|---|---|---|
| Insulation | LCP | Black | UL94V-0 |
| Signal Contact | Copper Alloy | Contact Area : Gold Plating<br>Mounting Area : Tin Plating | – |

## ● Right Angle Receptacle / Header

| Component | Material | Color / Finish | Remarks |
|---|---|---|---|
| Insulation | LCP | Black | UL94V-0 |
| Signal Contact | Copper Alloy | Contact Area : Gold Plating<br>Mounting Area : Tin Plating | – |
| Retention Peg | Copper Alloy | Mounting Area : Tin Plating | – |
| Retention Pin | Copper Alloy | Mounting Area : Tin Plating | – |

# Product Number Structure

Refer to the chart below when determining the product specifications from the product number.
Please select from the product numbers listed in this catalog when placing orders.

## ■ Straight Header
## ■ Straight Receptacle

**ER8 # - ### # - 0.8 SV - #H (##)**
❶ ❷ ❸ ❹ ❺ ❻ ❼ ❽

## ■ Right Angle Header
## ■ Right Angle Receptacle

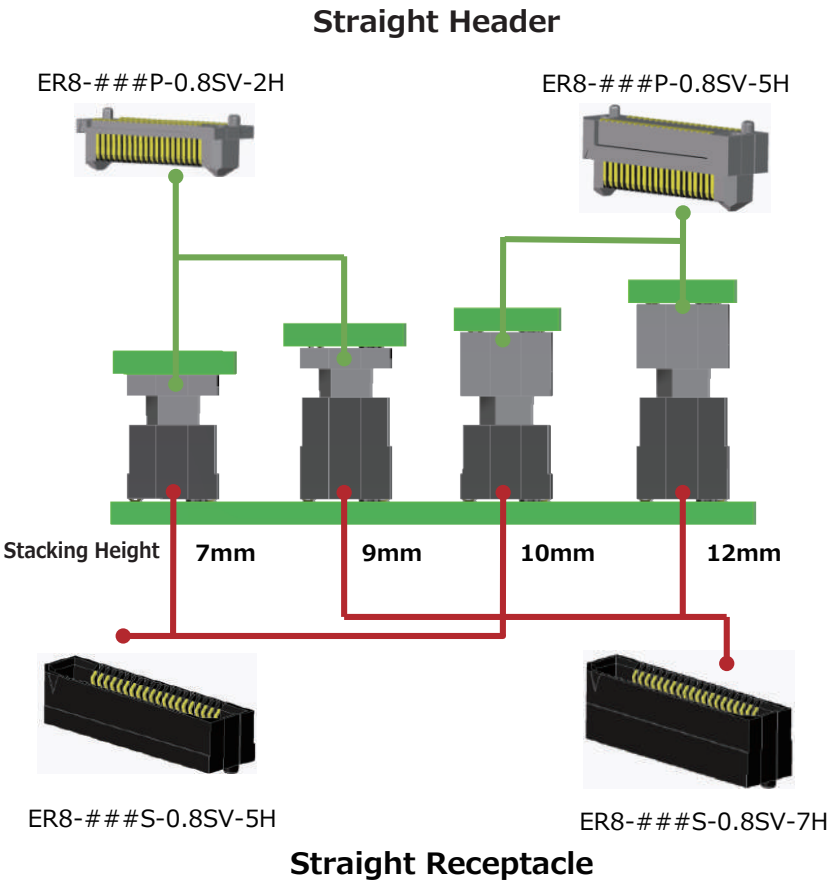
**ER8 # - ### # - 0.8 SH (##)**
❶ ❷ ❸ ❹ ❺ ❻ ❽

| | | | |
|---|---|---|---|
| ❶ Series Name | ER8 | ❺ Contact Pitch | 0.8mm |
| ❷ Specification | Blank : Standard Product<br>L : With Latch (140pos. only) | ❻ Contact Type | SV : Straight Type<br>SH : Right Angle Type |
| ❸ No. of Pos. | 10-140 | ❼ Height | 2, 5 : Header<br>5, 7 : Receptacle |
| ❹ Connector Type | S : Receptacle<br>P : Header | ❽ Plating Specification | Blank : Contact Area Gold (0.76μm) +Ni (2.54μm)<br>(10) : Contact Area Gold (0.25μm) +Ni (1.25μm) |

May.1.2023 Copyright 2023 HIROSE ELECTRIC CO., LTD. All Rights Reserved.

## Function Chart

### ● Parallel Connection (10 to 120pos.)



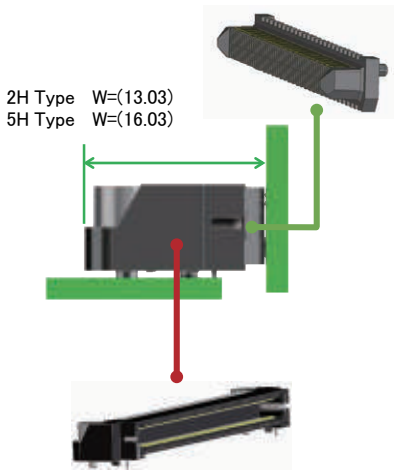

May.1.2023 Copyright 2023 HIROSE ELECTRIC CO., LTD. All Rights Reserved.

## ● Right Angle Connection

### (120pos. only)

Straight Header

ER8-120P-0.8SV-2H
ER8-120P-0.8SV-5H

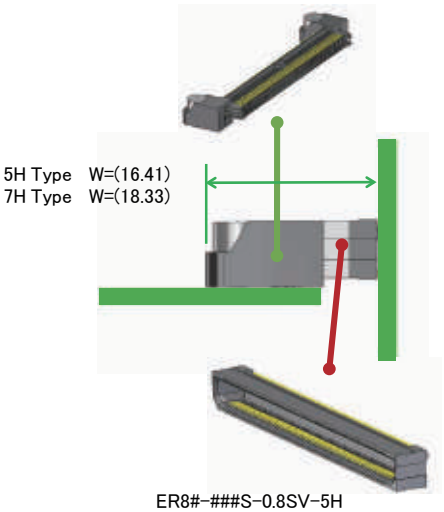



ER8-120S-0.8SH
Right Angle Recectaple

### (120, 140pos. )

Right Angle Header

ER8#-###P-0.8SH

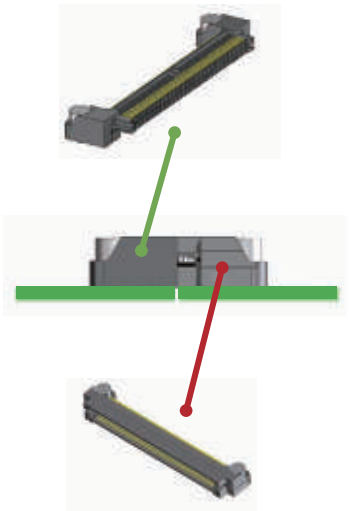



ER8#-###S-0.8SV-5H
ER8-120S-0.8SV-77H
Straight Receptacle

## ● Coplanar Connection (120pos. only)

Right Angle Header

ER8-120P-0.8SH



ER8-120S-0.8SH
Right Angle Recectaple

## ● Stacking Height Variation

| No. of Pos. / Stacking Height | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 100 | 120 |
|---|---|---|---|---|---|---|---|---|---|---|
| 7mm | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| 9mm | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| 10mm | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| 12mm | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |

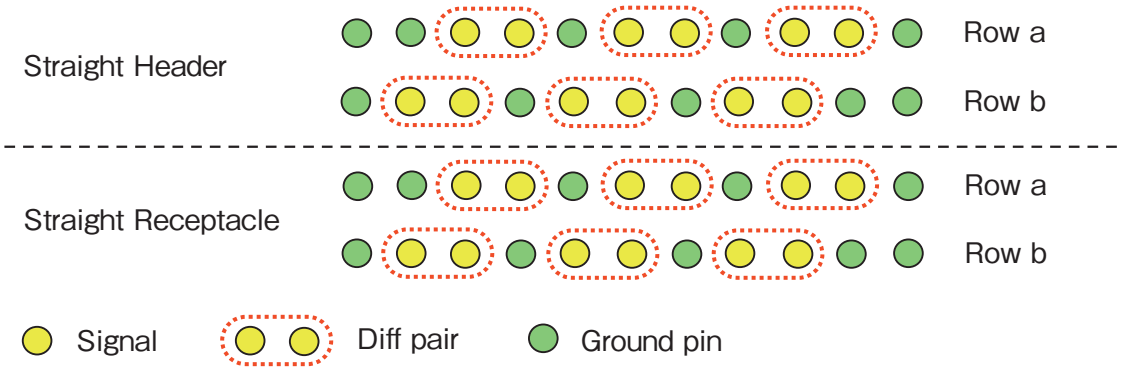
○ =Available

May.1.2023 Copyright 2023 HIROSE ELECTRIC CO., LTD. All Rights Reserved.

# Signal Integrity

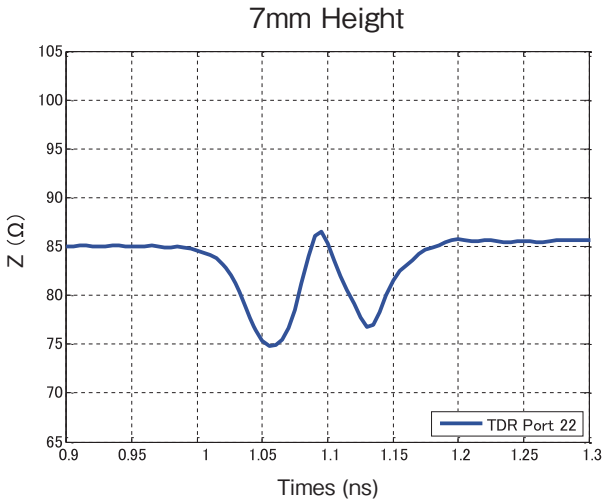
## ● Pin Assignment

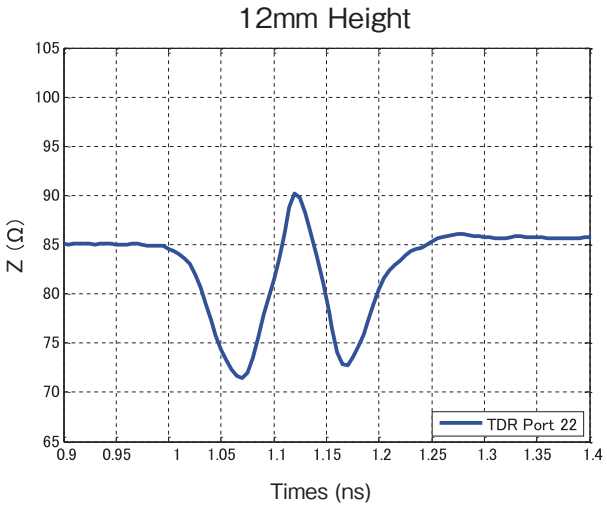
To match 85Ω differential impedance and to reduce crosstalk, a staggered GSSG pin assignment is recommended for ER8.
*Analysis results only.




## ● Impedance

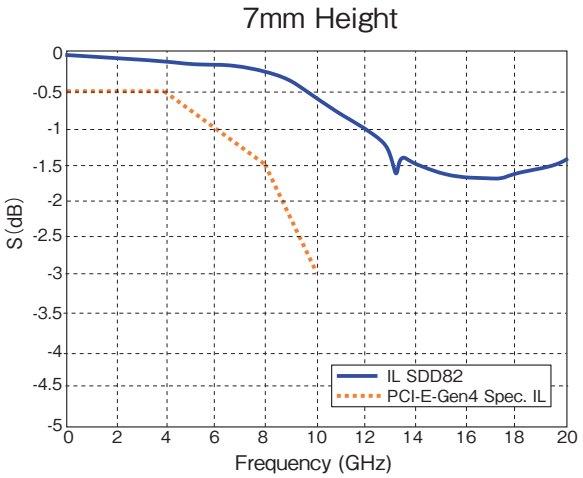
The differential impedance is 85Ω at 35ps rise time (20% to 80%)

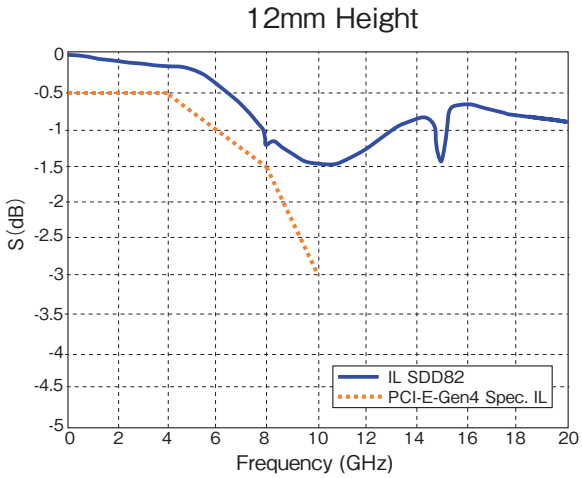


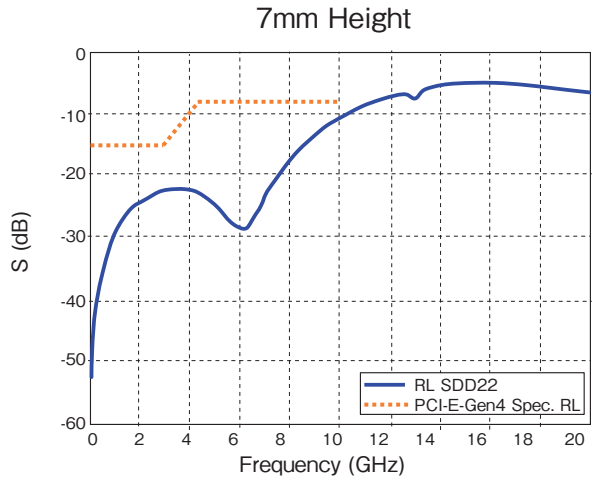

May.1.2023 Copyright 2023 HIROSE ELECTRIC CO., LTD. All Rights Reserved.

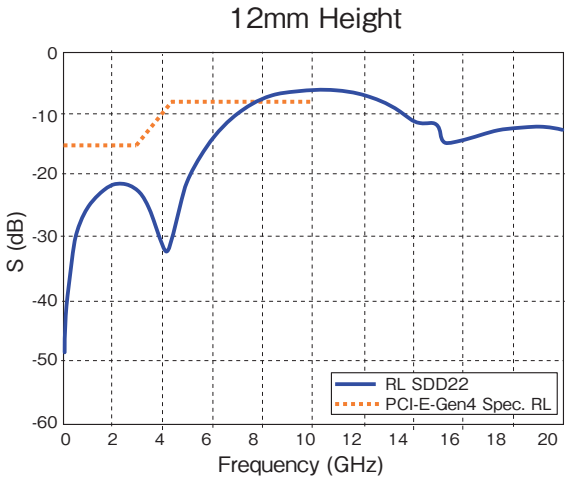
## Insertion Loss



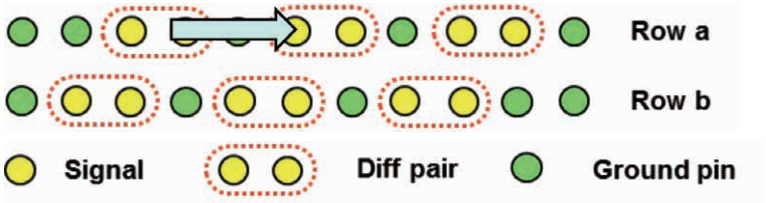

## Return Loss




## Crosstalk

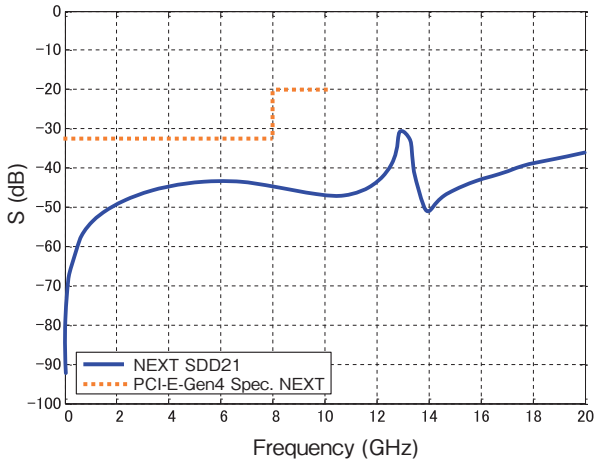
The below diagram shows the NEXT and FEXT in the same row with the highest influence.



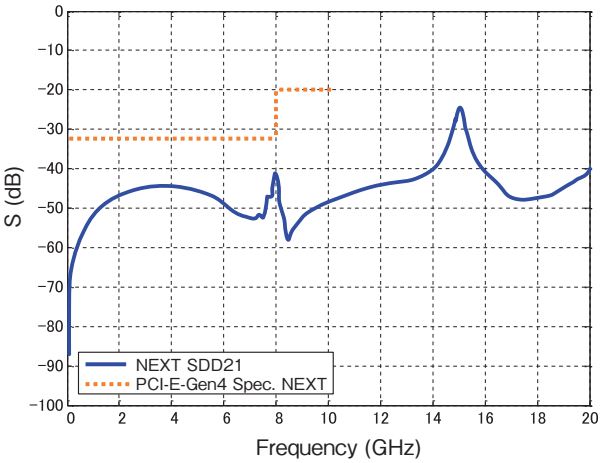

May.1.2023 Copyright 2023 HIROSE ELECTRIC CO., LTD. All Rights Reserved.

## ● Near-end Crosstalk (NEXT)

7mm Height

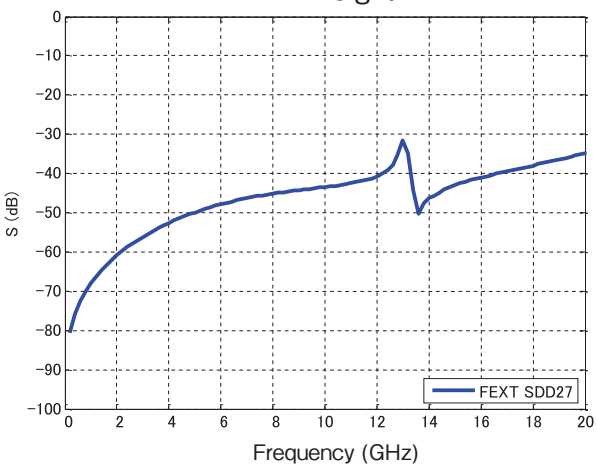



12mm Height

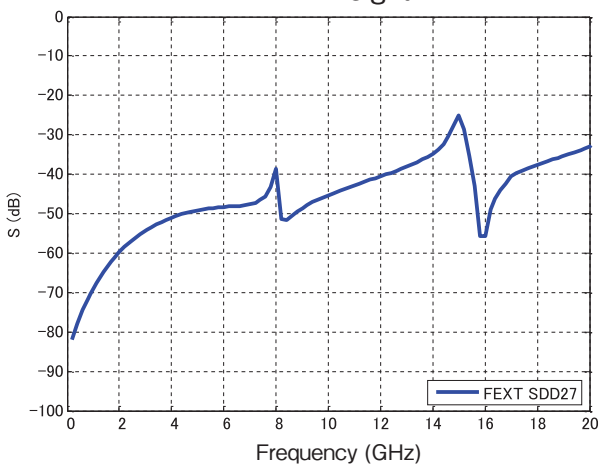



## ● Far-end Crosstalk (FEXT)

7mm Height



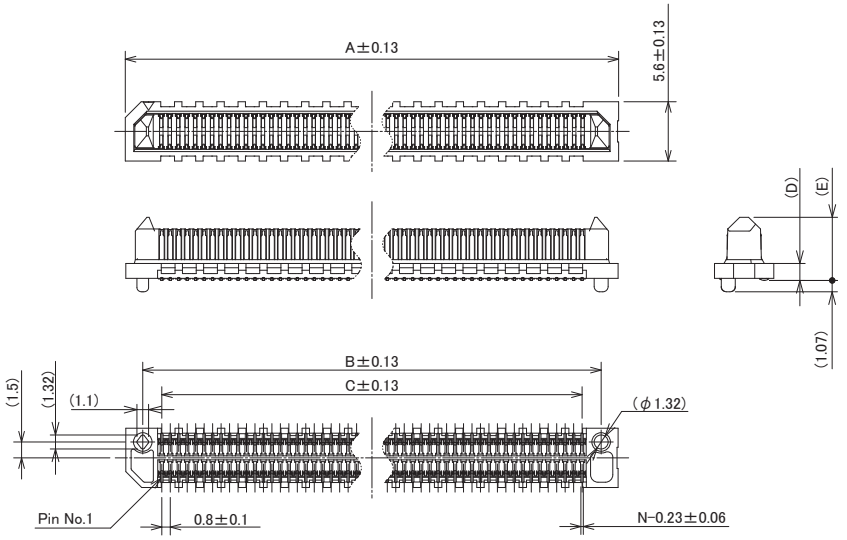

12mm Height




May.1.2023 Copyright 2023 HIROSE ELECTRIC CO., LTD. All Rights Reserved.

# Straight Header





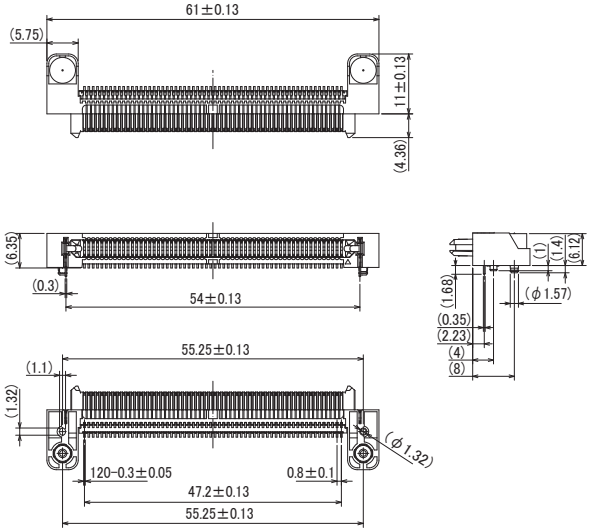

Unit : mm

| Part No. | HRS No. | No. of Pos. | A | B | C | D | E | Purchase Unit |
|---|---|---|---|---|---|---|---|---|
| ER8-10P-0.8SV-2H(##) | CL0625-0008-8-## | 10 | 10 | 6.8 | 3.2 | 1.605 | 5.965 | 450pcs per reel |
| ER8-20P-0.8SV-2H(##) | CL0625-0011-0-## | 20 | 14 | 10.8 | 7.2 | 1.605 | 5.965 | 475pcs per reel |
| ER8-30P-0.8SV-2H(##) | CL0625-0012-0-## | 30 | 18 | 14.8 | 11.2 | 1.605 | 5.965 | |
| ER8-40P-0.8SV-2H(##) | CL0625-0013-0-## | 40 | 22 | 18.8 | 15.2 | 1.605 | 5.965 | 350pcs per reel |
| ER8-50P-0.8SV-2H(##) | CL0625-0009-0-## | 50 | 26 | 22.8 | 19.2 | 1.605 | 5.965 | |
| ER8-60P-0.8SV-2H(##) | CL0625-0017-0-## | 60 | 30 | 26.8 | 23.2 | 1.605 | 5.965 | |
| ER8-70P-0.8SV-2H(##) | CL0625-0021-0-## | 70 | 34 | 30.8 | 27.2 | 1.605 | 5.965 | |
| ER8-80P-0.8SV-2H(##) | CL0625-0022-0-## | 80 | 38 | 34.8 | 31.2 | 1.605 | 5.965 | |
| ER8-100P-0.8SV-2H(##) | CL0625-0023-0-## | 100 | 46 | 42.8 | 39.2 | 1.605 | 5.965 | |
| ER8-120P-0.8SV-2H(##) | CL0625-0003-4-## | 120 | 54 | 50.8 | 47.2 | 1.605 | 5.965 | 375pcs per reel |
| ER8-10P-0.8SV-5H(##) | CL0625-0024-0-## | 10 | 10 | 6.8 | 3.2 | 4.605 | 8.905 | 325pcs per reel |
| ER8-20P-0.8SV-5H(##) | CL0625-0025-0-## | 20 | 14 | 10.8 | 7.2 | 4.605 | 8.905 | |
| ER8-30P-0.8SV-5H(##) | CL0625-0026-0-## | 30 | 18 | 14.8 | 11.2 | 4.605 | 8.905 | |
| ER8-40P-0.8SV-5H(##) | CL0625-0020-0-## | 40 | 22 | 18.8 | 15.2 | 4.605 | 8.905 | 250pcs per reel |
| ER8-50P-0.8SV-5H(##) | CL0625-0027-0-## | 50 | 26 | 22.8 | 19.2 | 4.605 | 8.905 | |
| ER8-60P-0.8SV-5H(##) | CL0625-0019-0-## | 60 | 30 | 26.8 | 23.2 | 4.605 | 8.905 | |
| ER8-70P-0.8SV-5H(##) | CL0625-0028-0-## | 70 | 34 | 30.8 | 27.2 | 4.605 | 8.905 | |
| ER8-80P-0.8SV-5H(##) | CL0625-0029-0-## | 80 | 38 | 34.8 | 31.2 | 4.605 | 8.905 | |
| ER8-100P-0.8SV-5H(##) | CL0625-0030-0-## | 100 | 46 | 42.8 | 39.2 | 4.605 | 8.905 | |
| ER8-120P-0.8SV-5H(##) | CL0625-0031-0-## | 120 | 54 | 50.8 | 47.2 | 4.605 | 8.905 | |

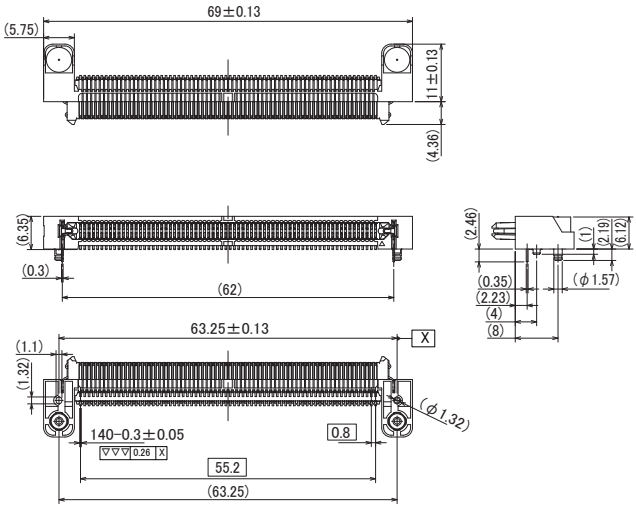
May.1.2023 Copyright 2023 HIROSE ELECTRIC CO., LTD. All Rights Reserved.

# Right Angle Header






ER8-120P-0.8SH(##)



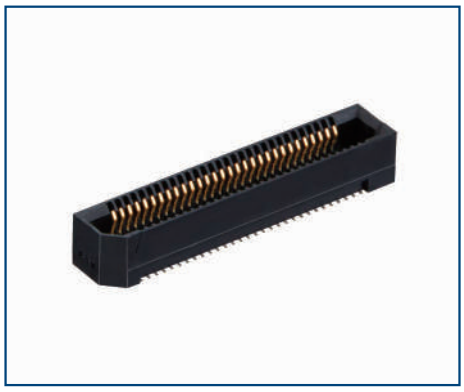

ER8L-140P-0.8SH(##)

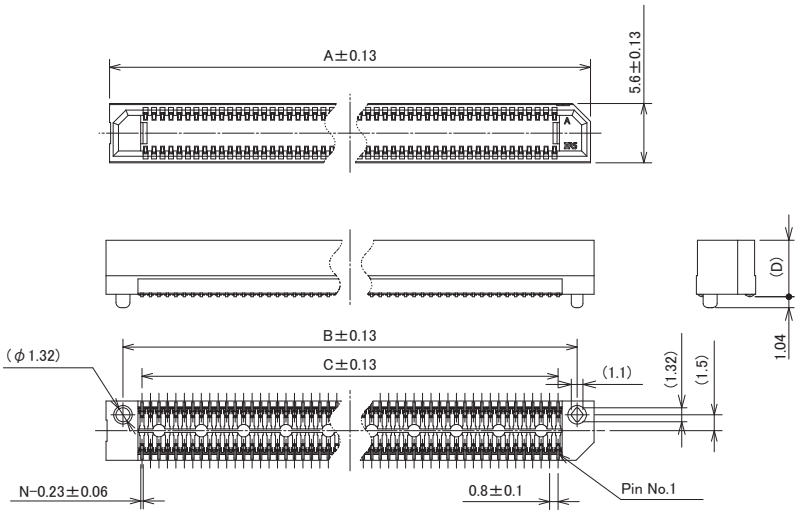
Unit : mm

| Part No. | HRS No. | No. of Pos. | Purchase Unit |
|---|---|---|---|
| ER8-120P-0.8SH(##) | CL0625-0047-0-## | 120 | 200pcs per reel |
| ER8L-140P-0.8SH(##) | CL0625-1002-0-## | 140 | |

May.1.2023 Copyright 2023 HIROSE ELECTRIC CO., LTD. All Rights Reserved.

# Straight Receptacle

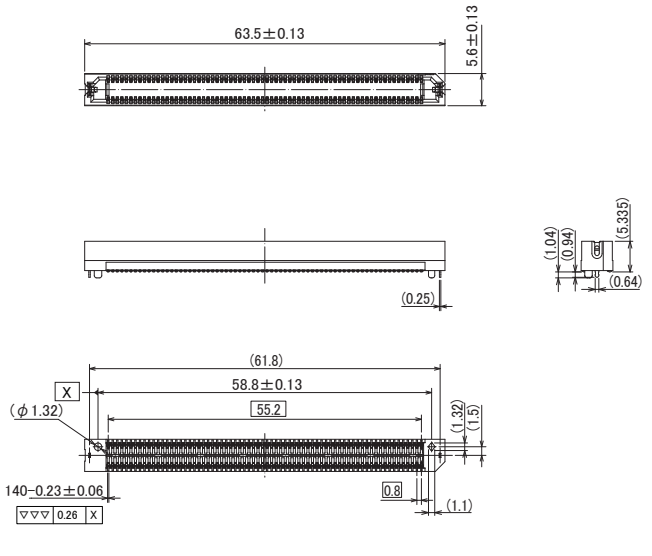





Unit : mm

| Part No. | HRS No. | No. of Pos. | A | B | C | D | Purchase Unit |
|---|---|---|---|---|---|---|---|
| ER8-10S-0.8SV-5H(##) | CL0625-0007-5-## | 10 | 10 | 6.8 | 3.2 | 5.335 | 475pcs per reel |
| ER8-20S-0.8SV-5H(##) | CL0625-0014-0-## | 20 | 14 | 10.8 | 7.2 | 5.335 | 500pcs per reel |
| ER8-30S-0.8SV-5H(##) | CL0625-0015-0-## | 30 | 18 | 14.8 | 11.2 | 5.335 | 475pcs per reel |
| ER8-40S-0.8SV-5H(##) | CL0625-0016-0-## | 40 | 22 | 18.8 | 15.2 | 5.335 | 375pcs per reel |
| ER8-50S-0.8SV-5H(##) | CL0625-0010-0-## | 50 | 26 | 22.8 | 19.2 | 5.335 | |
| ER8-60S-0.8SV-5H(##) | CL0625-0018-0-## | 60 | 30 | 26.8 | 23.2 | 5.335 | |
| ER8-70S-0.8SV-5H(##) | CL0625-0032-0-## | 70 | 34 | 30.8 | 27.2 | 5.335 | |
| ER8-80S-0.8SV-5H(##) | CL0625-0033-0-## | 80 | 38 | 34.8 | 31.2 | 5.335 | |
| ER8-100S-0.8SV-5H(##) | CL0625-0034-0-## | 100 | 46 | 42.8 | 39.2 | 5.335 | |
| ER8-120S-0.8SV-5H(##) | CL0625-0035-0-## | 120 | 54 | 50.8 | 47.2 | 5.335 | |
| ER8-10S-0.8SV-7H(##) | CL0625-0036-0-## | 10 | 10 | 6.8 | 3.2 | 7.25 | 400pcs per reel |
| ER8-20S-0.8SV-7H(##) | CL0625-0037-0-## | 20 | 14 | 10.8 | 7.2 | 7.25 | 375pcs per reel |
| ER8-30S-0.8SV-7H(##) | CL0625-0038-0-## | 30 | 18 | 14.8 | 11.2 | 7.25 | 400pcs per reel |
| ER8-40S-0.8SV-7H(##) | CL0625-0039-0-## | 40 | 22 | 18.8 | 15.2 | 7.25 | 300pcs per reel |
| ER8-50S-0.8SV-7H(##) | CL0625-0040-0-## | 50 | 26 | 22.8 | 19.2 | 7.25 | |
| ER8-60S-0.8SV-7H(##) | CL0625-0041-0-## | 60 | 30 | 26.8 | 23.2 | 7.25 | |
| ER8-70S-0.8SV-7H(##) | CL0625-0042-0-## | 70 | 34 | 30.8 | 27.2 | 7.25 | |
| ER8-80S-0.8SV-7H(##) | CL0625-0043-0-## | 80 | 38 | 34.8 | 31.2 | 7.25 | |
| ER8-100S-0.8SV-7H(##) | CL0625-0044-0-## | 100 | 46 | 42.8 | 39.2 | 7.25 | |
| ER8-120S-0.8SV-7H(##) | CL0625-0045-0-## | 120 | 54 | 50.8 | 47.2 | 7.25 | |

May.1.2023 Copyright 2023 HIROSE ELECTRIC CO., LTD. All Rights Reserved.



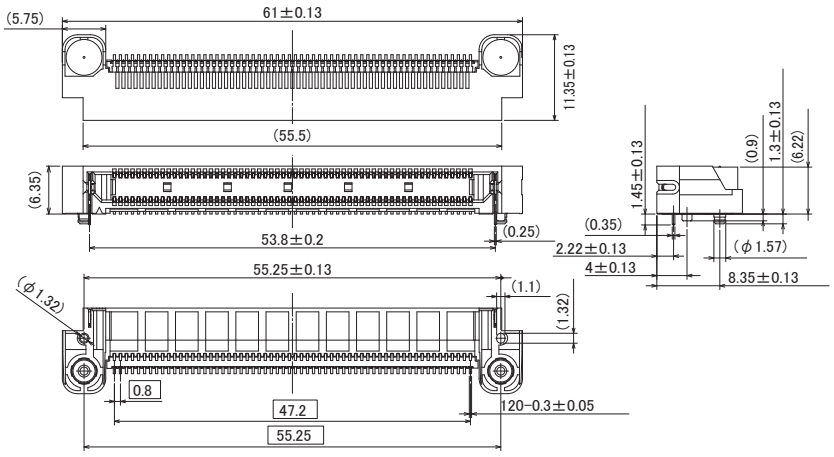

Unit : mm

| Part No. | HRS No. | No. of Pos. | Purchase Unit |
|---|---|---|---|
| ER8L-140S-0.8SV-5H(##) | CL0625-0046-0-## | 140 | 375pcs per reel |

May.1.2023 Copyright 2023 HIROSE ELECTRIC CO., LTD. All Rights Reserved.

## Right Angle Receptacle

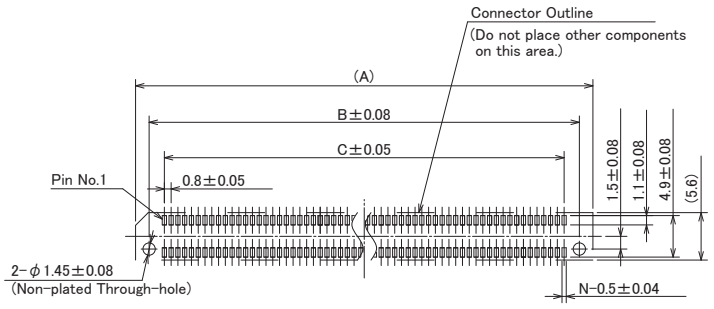





| Part No. | HRS No. | No. of Pos. | Purchase Unit |
|---|---|---|---|
| ER8-120S-0.8SH(##) | CL0625-1001-4-## | 120 | 200pcs per reel |

## Recommended PCB Mouting Pattern (Metal Mask Thickness : t=0.15mm)

### ● Straight Header




Unit : mm

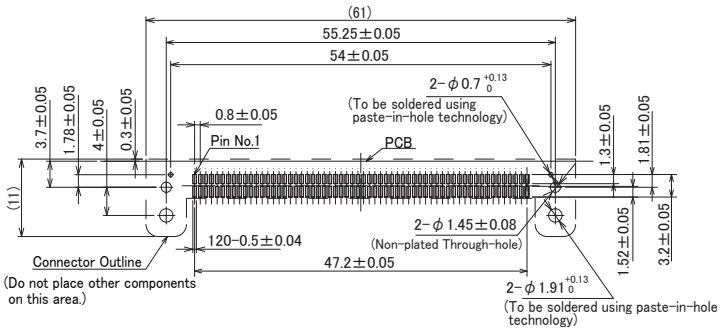
| No. of Pos. | A | B | C |
|---|---|---|---|
| 10 | 10 | 6.8 | 3.2 |
| 20 | 14 | 10.8 | 7.2 |
| 30 | 18 | 14.8 | 11.2 |
| 40 | 22 | 18.8 | 15.2 |
| 50 | 26 | 22.8 | 19.2 |
| 60 | 30 | 26.8 | 23.2 |
| 70 | 34 | 30.8 | 27.2 |
| 80 | 38 | 34.8 | 31.2 |
| 100 | 46 | 42.8 | 39.2 |
| 120 | 54 | 50.8 | 47.2 |

May.1.2023 Copyright 2023 HIROSE ELECTRIC CO., LTD. All Rights Reserved.

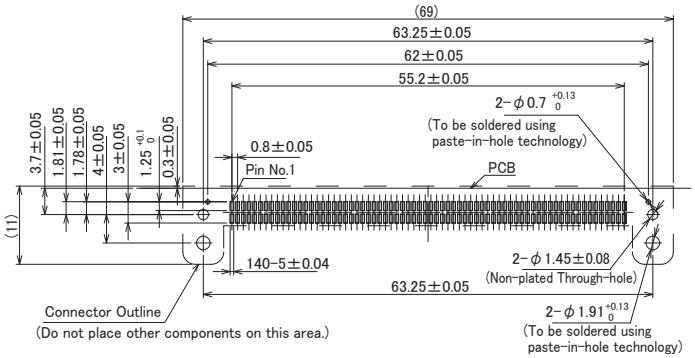
May.1.2023 Copyright 2023 HIROSE ELECTRIC CO., LTD. All Rights Reserved.

## ● Right Angle Header

### 120pos.

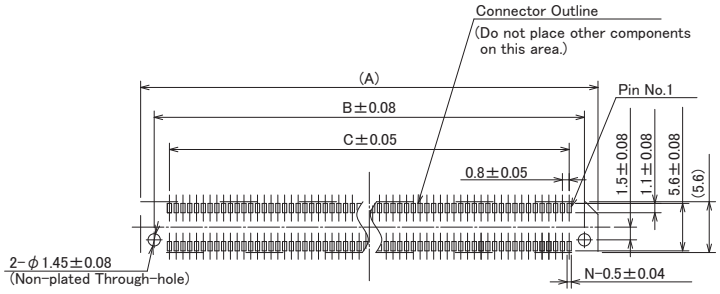



### 140pos.

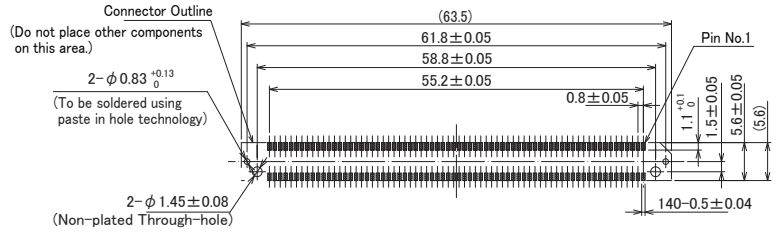



## ● Straight Receptacle

### 10-120pos.



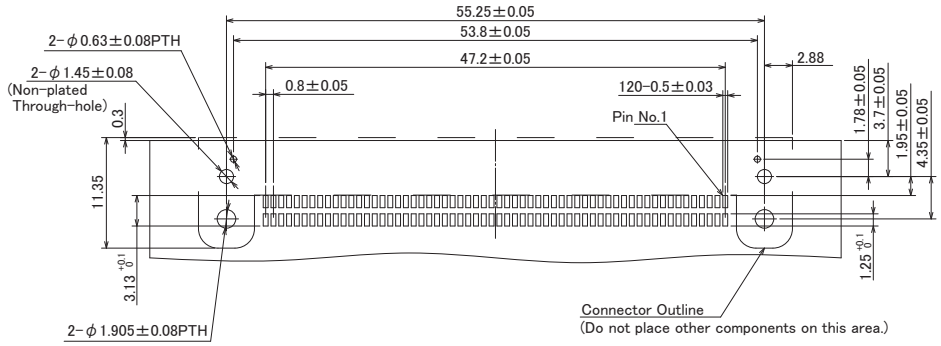

### 140pos.



Unit : mm

| No. of Pos. | A | B | C |
|---|---|---|---|
| 10 | 10 | 6.8 | 3.2 |
| 20 | 14 | 10.8 | 7.2 |
| 30 | 18 | 14.8 | 11.2 |
| 40 | 22 | 18.8 | 15.2 |
| 50 | 26 | 22.8 | 19.2 |
| 60 | 30 | 26.8 | 23.2 |
| 70 | 34 | 30.8 | 27.2 |
| 80 | 38 | 34.8 | 31.2 |
| 100 | 46 | 42.8 | 39.2 |
| 120 | 54 | 50.8 | 47.2 |
| 140 | 63.5 | 58.8 | 55.2 |

## ● Right Angle Receptacle

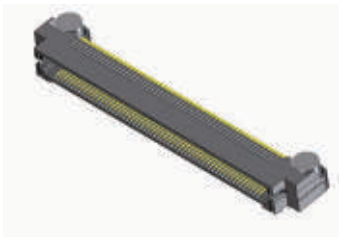



May.1.2023 Copyright 2023 HIROSE ELECTRIC CO., LTD. All Rights Reserved.

# Connection Variations

### Right Angle Receptacle

ER8-120S-0.8SH(##)
120pos. only



### Right Angle Header

ER8#-###P-0.8SH(##)
120, 140pos.

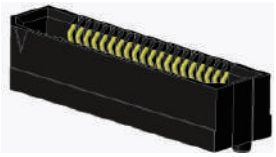


Coplanar Connection

Right Angle Connection

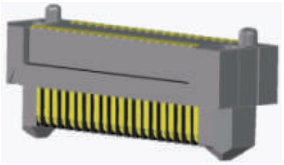
### Straight Receptacle

ER8#-###S-0.8SV-#H(##)
10 to 140pos.



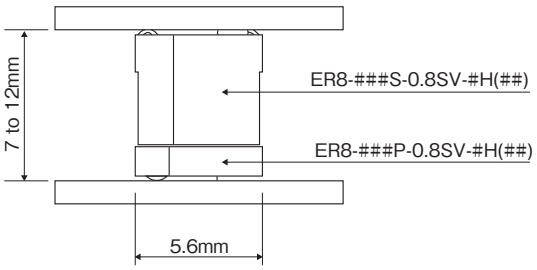
### Straight Header

ER8-###P-0.8SV-#H(##)
10 to 120pos.

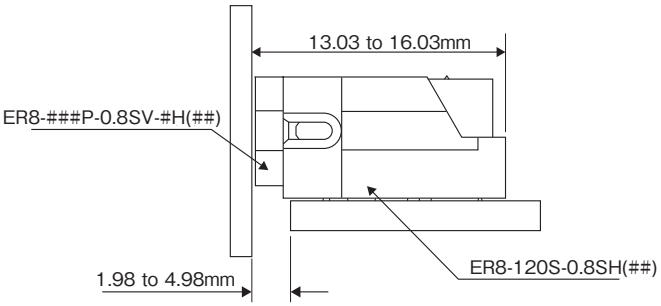


Parallel Connection

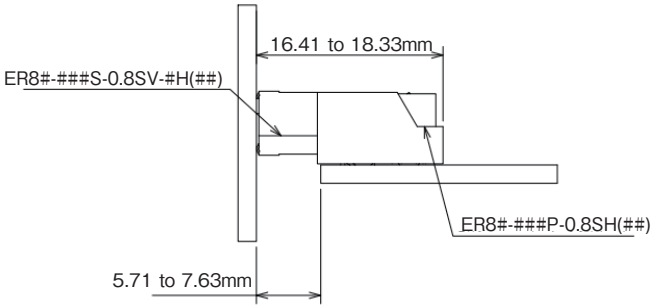
Parallel Connection Type



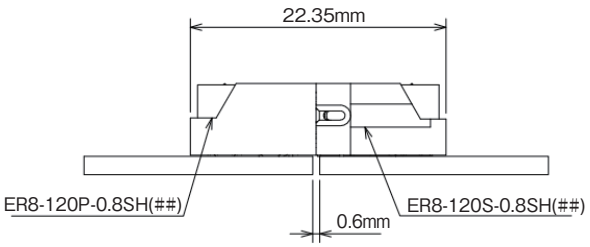

Right Angle Connection Type
(Straight Header + Right Angle Receptacle)




Right Angle Connection Type
(Right Angle Header + Straight Receptacle)




Coplanar Connection Type




May.1.2023 Copyright 2023 HIROSE ELECTRIC CO., LTD. All Rights Reserved.

# Edge Rate (Samtec) Part No. Compatibility List

## ● Straight Header

| Part No. | HRS No. | Samtec Part No. |
|---|---|---|
| ER8-10P-0.8SV-2H | CL0625-0008-8-00 | ERM8-005-02.0-S-DV-K-TR |
| ER8-20P-0.8SV-2H | CL0625-0011-0-00 | ERM8-010-02.0-S-DV-K-TR |
| ER8-30P-0.8SV-2H | CL0625-0012-0-00 | – |
| ER8-40P-0.8SV-2H | CL0625-0013-0-00 | ERM8-020-02.0-S-DV-K-TR |
| ER8-50P-0.8SV-2H | CL0625-0009-0-00 | ERM8-025-02.0-S-DV-K-TR |
| ER8-60P-0.8SV-2H | CL0625-0017-0-00 | ERM8-030-02.0-S-DV-K-TR |
| ER8-70P-0.8SV-2H | CL0625-0021-0-00 | ERM8-035-02.0-S-DV-K-TR |
| ER8-80P-0.8SV-2H | CL0625-0022-0-00 | ERM8-040-02.0-S-DV-K-TR |
| ER8-100P-0.8SV-2H | CL0625-0023-0-00 | ERM8-050-02.0-S-DV-K-TR |
| ER8-120P-0.8SV-2H | CL0625-0003-4-00 | ERM8-060-02.0-S-DV-K-TR |
| ER8-10P-0.8SV-5H | CL0625-0024-0-00 | ERM8-005-05.0-S-DV-K-TR |
| ER8-20P-0.8SV-5H | CL0625-0025-0-00 | ERM8-010-05.0-S-DV-K-TR |
| ER8-30P-0.8SV-5H | CL0625-0026-0-00 | – |
| ER8-40P-0.8SV-5H | CL0625-0020-0-00 | ERM8-020-05.0-S-DV-K-TR |
| ER8-50P-0.8SV-5H | CL0625-0027-0-00 | ERM8-025-05.0-S-DV-K-TR |
| ER8-60P-0.8SV-5H | CL0625-0019-0-00 | ERM8-030-05.0-S-DV-K-TR |
| ER8-70P-0.8SV-5H | CL0625-0028-0-00 | ERM8-035-05.0-S-DV-K-TR |
| ER8-80P-0.8SV-5H | CL0625-0029-0-00 | ERM8-040-05.0-S-DV-K-TR |
| ER8-100P-0.8SV-5H | CL0625-0030-0-00 | ERM8-050-05.0-S-DV-K-TR |
| ER8-120P-0.8SV-5H | CL0625-0031-0-00 | ERM8-060-05.0-S-DV-K-TR |

## ● Right Angle Header

| Part No. | HRS No. | Samtec Part No. |
|---|---|---|
| ER8-120P-0.8SH | CL0625-0047-0-00 | ERM8-060-01-S-D-RA-K-TR |
| ER8L-140P-0.8SH | CL0625-1002-0-00 | ERM8-070-01-S-D-RA-L-K-TR |

May.1.2023 Copyright 2023 HIROSE ELECTRIC CO., LTD. All Rights Reserved.

## ● Straight Receptacle

| Part No. | HRS No. | Samtec Part No. |
|---|---|---|
| ER8-10S-0.8SV-5H | CL0625-0007-5-00 | ERF8-005-05.0-S-DV-K-TR |
| ER8-20S-0.8SV-5H | CL0625-0014-0-00 | ERF8-010-05.0-S-DV-K-TR |
| ER8-30S-0.8SV-5H | CL0625-0015-0-00 | – |
| ER8-40S-0.8SV-5H | CL0625-0016-0-00 | ERF8-020-05.0-S-DV-K-TR |
| ER8-50S-0.8SV-5H | CL0625-0010-0-00 | ERF8-025-05.0-S-DV-K-TR |
| ER8-60S-0.8SV-5H | CL0625-0018-0-00 | ERF8-030-05.0-S-DV-K-TR |
| ER8-70S-0.8SV-5H | CL0625-0032-0-00 | ERF8-035-05.0-S-DV-K-TR |
| ER8-80S-0.8SV-5H | CL0625-0033-0-00 | ERF8-040-05.0-S-DV-K-TR |
| ER8-100S-0.8SV-5H | CL0625-0034-0-00 | ERF8-050-05.0-S-DV-K-TR |
| ER8-120S-0.8SV-5H | CL0625-0035-0-00 | ERF8-060-05.0-S-DV-K-TR |
| ER8L-140S-0.8SV-5H | CL0625-0046-0-00 | ERF8-070-05.0-S-DV-L-K-TR |
| ER8-10S-0.8SV-7H | CL0625-0036-0-00 | ERF8-005-07.0-S-DV-K-TR |
| ER8-20S-0.8SV-7H | CL0625-0037-0-00 | ERF8-010-07.0-S-DV-K-TR |
| ER8-30S-0.8SV-7H | CL0625-0038-0-00 | – |
| ER8-40S-0.8SV-7H | CL0625-0039-0-00 | ERF8-020-07.0-S-DV-K-TR |
| ER8-50S-0.8SV-7H | CL0625-0040-0-00 | ERF8-025-07.0-S-DV-K-TR |
| ER8-60S-0.8SV-7H | CL0625-0041-0-00 | ERF8-030-07.0-S-DV-K-TR |
| ER8-70S-0.8SV-7H | CL0625-0042-0-00 | ERF8-035-07.0-S-DV-K-TR |
| ER8-80S-0.8SV-7H | CL0625-0043-0-00 | ERF8-040-07.0-S-DV-K-TR |
| ER8-100S-0.8SV-7H | CL0625-0044-0-00 | ERF8-050-07.0-S-DV-K-TR |
| ER8-120S-0.8SV-7H | CL0625-0045-0-00 | ERF8-060-07.0-S-DV-K-TR |

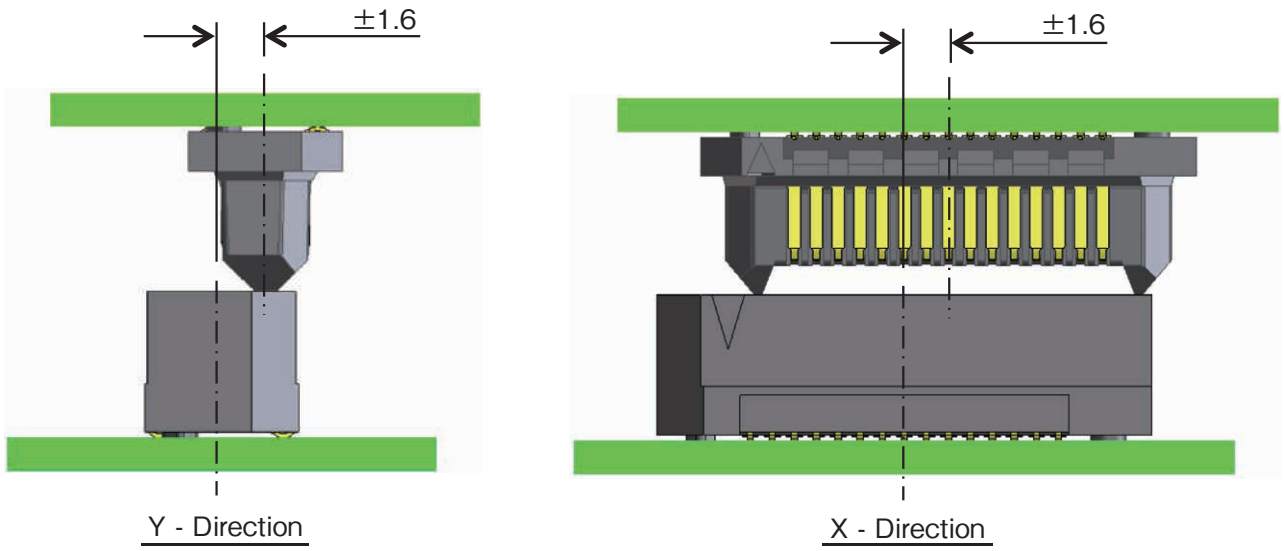
## ● Right Angle Receptacle

| Part No. | HRS No. | Samtec Part No. |
|---|---|---|
| ER8-120S-0.8SH | CL0625-1001-4-00 | ERF8-060-01-L-D-RA-TR |

May.1.2023 Copyright 2023 HIROSE ELECTRIC CO., LTD. All Rights Reserved.

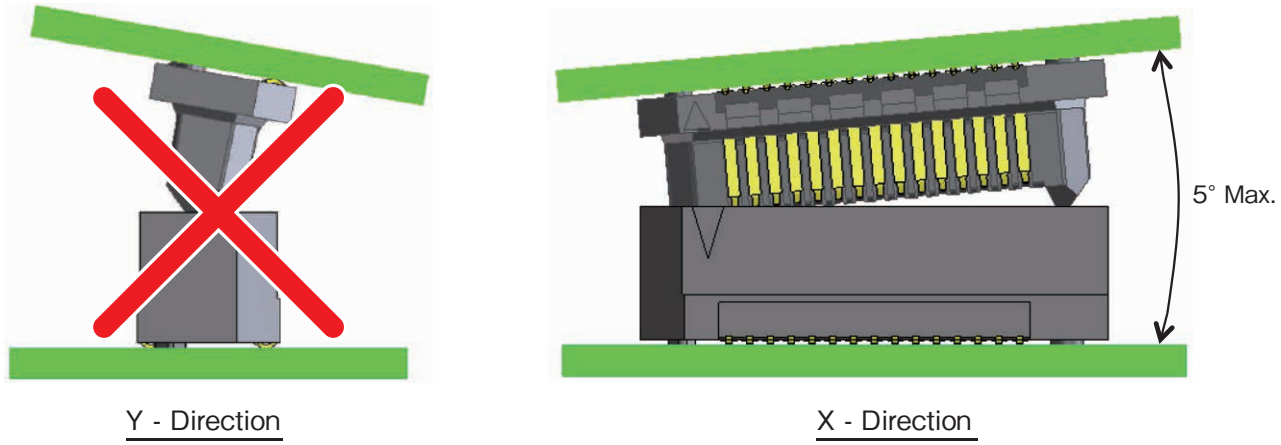
# Mating Operation

## ● Mating Self-Alignment Tolerance (Note)




## ● Mating Angle Tolerance (Note)

A mating angle of 5° is allowed in the longitudinal (X) direction.
Mating at an angle in the lateral (Y) direction is not recommended.




Note : The above mating conditions show the allowed values for the mating self-alignment and mating angles separately.
The self alignment tolerance and angle tolerance are not satisfied at the same time.

# Recommended Spacer Height

Spacers are required to support PWB's and protect the SMT solder joints.

Unit : mm

| Stacking Height | Recomended Spacer Height |
|---|---|
| 7 | 7.15 ± 0.05 |
| 9 | 9.15 ± 0.05 |
| 10 | 10.15 ± 0.05 |
| 12 | 12.15 ± 0.05 |

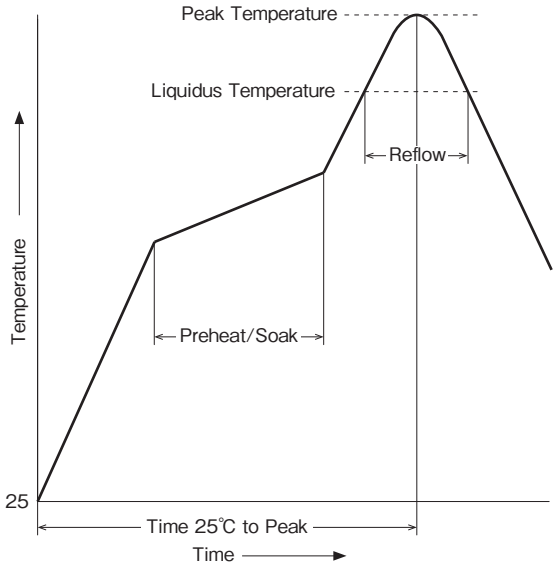
May.1.2023 Copyright 2023 HIROSE ELECTRIC CO., LTD. All Rights Reserved.

## Mounting Temperature Profile (Reference)

● Pb-Free Assembly

| Preheat / Soak (150 to 200℃) | Max. Ramp Up Rate | Reflow Time (217℃ Min.) | Peak Temperature | Peak Temperature Time | Cooling Rate | Time Between Normal Temperature and Peak |
|---|---|---|---|---|---|---|
| 60 - 120 sec. | 3℃ Max./s | 40 - 150 sec. | 260℃ | 30 sec. Max. | 6℃ Max./s | 8 min Min. |

## Recommended Temperature Profile




Temperature profile may change depending on the solder paste types, manufacturers, PCB size, and other soldering materials. Please fully check the mounting conditions before use.

## Cleaning Conditions

● Cleaning with Organic Solvent

| Solvent | Cleaning at Normal Temperature | Heated Cleaning |
|---|---|---|
| IPA (Isopropyl Alcohol) | Yes | Yes |
| HCFC (Hydrochlorofluorocarbon) | Yes | Yes |

● Cleaning with Water

When water-type cleaning agents (terpene, alkaline saponification agents) are used, select cleaning agents based on the 'table of influence' on metals and resins issued by the cleaning agent manufacturer.
Caution : Do not leave the connector with any water content left on it.

● Cleaning Precautions

If flux or cleaning agent remains on the connector during part cleaning with organic solvent and water-based agents, it may cause deterioration of electrical performance. Confirm cleaning is performed properly.

May.1.2023 Copyright 2023 HIROSE ELECTRIC CO., LTD. All Rights Reserved.

May.1.2023 Copyright 2023 HIROSE ELECTRIC CO., LTD. All Rights Reserved.

## While Taking into Consideration

Specifications mentioned in this catalog are reference values.
When considering to order or use this product, please confirm the Drawing and Product Specifications sheets.
Use an appropriate cable when using the connector in combination with cables.
If considering usage of a non- specified cable, please contact your sales representative.
If assembly process is done by jigs & tools which are not identified by Hirose, assurance will not be given.
If considering usage for below mentioned applications, please contact your sales representative.
In cases where the application will demand a high level of reliability, such as automotive, medical instruments, public infrastructure, aerospace/ defense etc. Hirose must review before assurance of reliability can be given.

HIROSE ELECTRIC CO.,LTD. 2-6-3,Nakagawa Chuoh,Tsuzuki-Ku,Yokohama-Shi 224-8540,JAPAN
https://www.hirose.com

※The contents of this catalog are current as of date of 9/2022. Contents are subject to change without notice for the purpose of improvements.