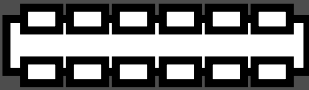


0.8 mm Pitch



Connectors

HDRA series

0.8 mm Pitch Connectors

Outline

HDRA series connectors have been developed based on the HDR series products for high speed signal interfaces such as SCSI-III, VHDCI and PCI.

Features

- Conforms to the United States ANSI/SFF8441 standards
- Provided with high performance EMI/ESD-shielded structure
- Mounted with locks or screws
- Low profile
- Sequence structure

Principal Applications

Server, Router, Notebook type personal computers and their peripheral equipment, and mobile equipment

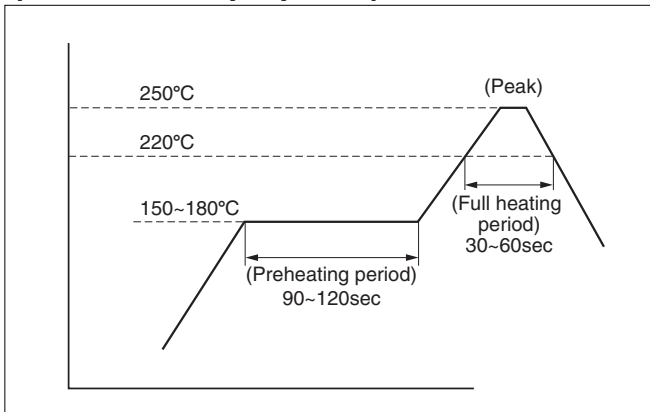
Electrical Characteristics

Rated voltage	30V AC (r.m.s.)
Rated current	0.3 A
Insulation resistance	Over 500 megohms at 100V DC
Dielectric withstanding voltage	250V AC (r.m.s.)
Contact resistance	70 milliohms or less (for combination of MA or MA1 and LFDT) 100 milliohms or less (for combination with MA1 and W1LFDT)

Document Disclaimer

- When placing orders with us, minimum order quantities are set for every product.
- Be sure to contact us before starting preliminary design of PCBs using our connectors.
- The specifications and information shown in the catalog are subject to change without notice.

Reflow temperature profile (for reference purposes)

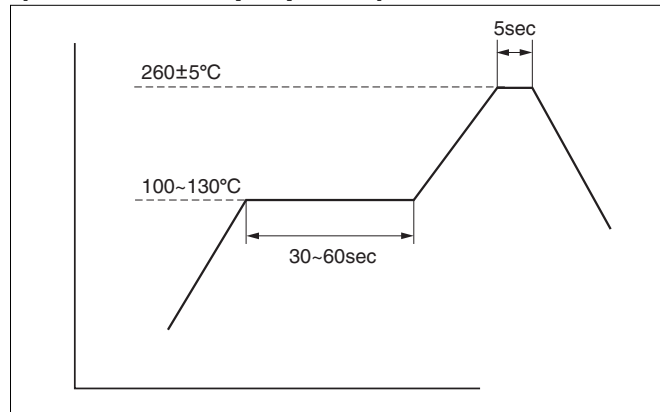


The reflow temperature profile shown in this drawing is for reference purposes. This profile depends on requirements such as reflow equipment, soldering paste, and PCB size. Thus, this profile may not meet with your specific situation. Please evaluate your PCB-mounting soldering and set your own reflow temperature profile.

●Applicable products

HDRA series SMT type for PCB

Flow temperature profile (for reference purposes)



The flow temperature profile as shown above is for reference purposes. This profile depends on requirements such as the PCB size. Thus, this profile may not meet with your specific situation. Please evaluate your PCB-mounting soldering and set your own flow temperature profile.

●Applicable products

HDRA series through hole type for PCB

IDC type male connector for cable
HDRA-E36MA+

For cable

IDC

RoHS

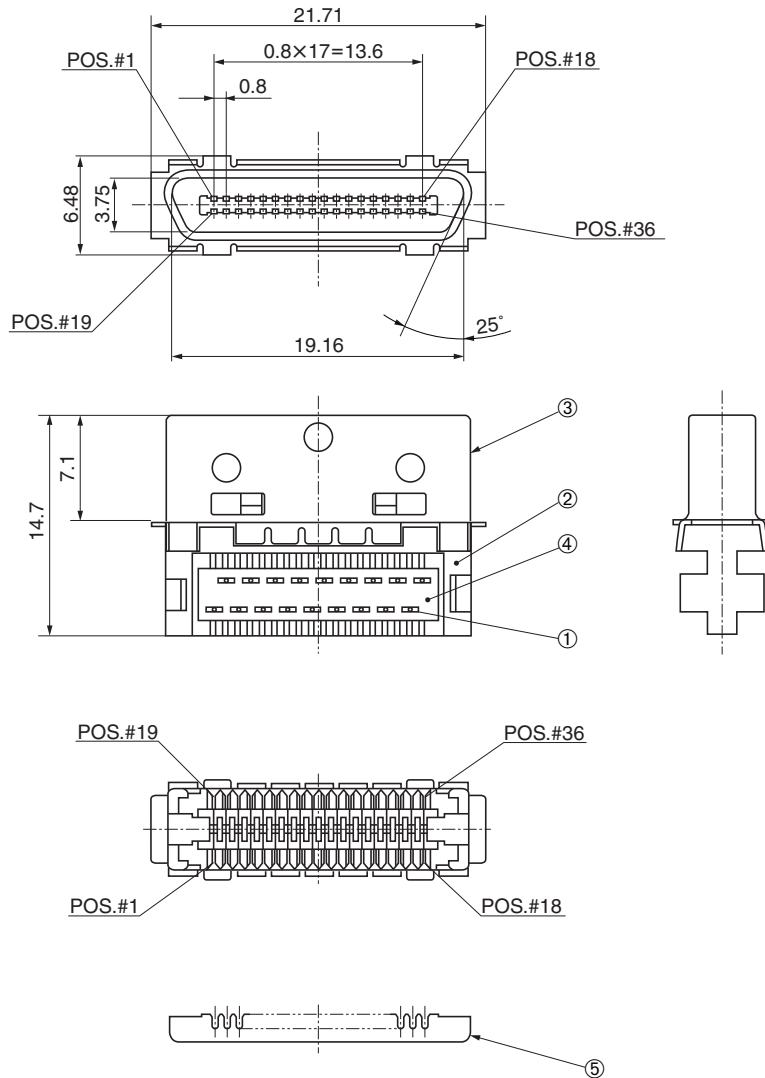
ANSI/SFF8441



● Configuration of product Part No.

HDRA- E 36 MA+

- ① Series name
- ② No. of contacts: 36
- ③ Type of contact
M: IDC type, male
- ④ Compatible cable
A: AWG#30(7/0.1), dia. 0.58 mm



● Components

①	Contacts
②	Insulator
③	Shell
④	Spacer
⑤	Cable housing

Mating connector: HDRA series right-angle through hole type or straddle SMT type female connector

For use with housings: HDRA series upright housing, HDRA-E36LPTH

IDC type male connector for cable
HDRA-E68MA+

For cable

IDC

RoHS

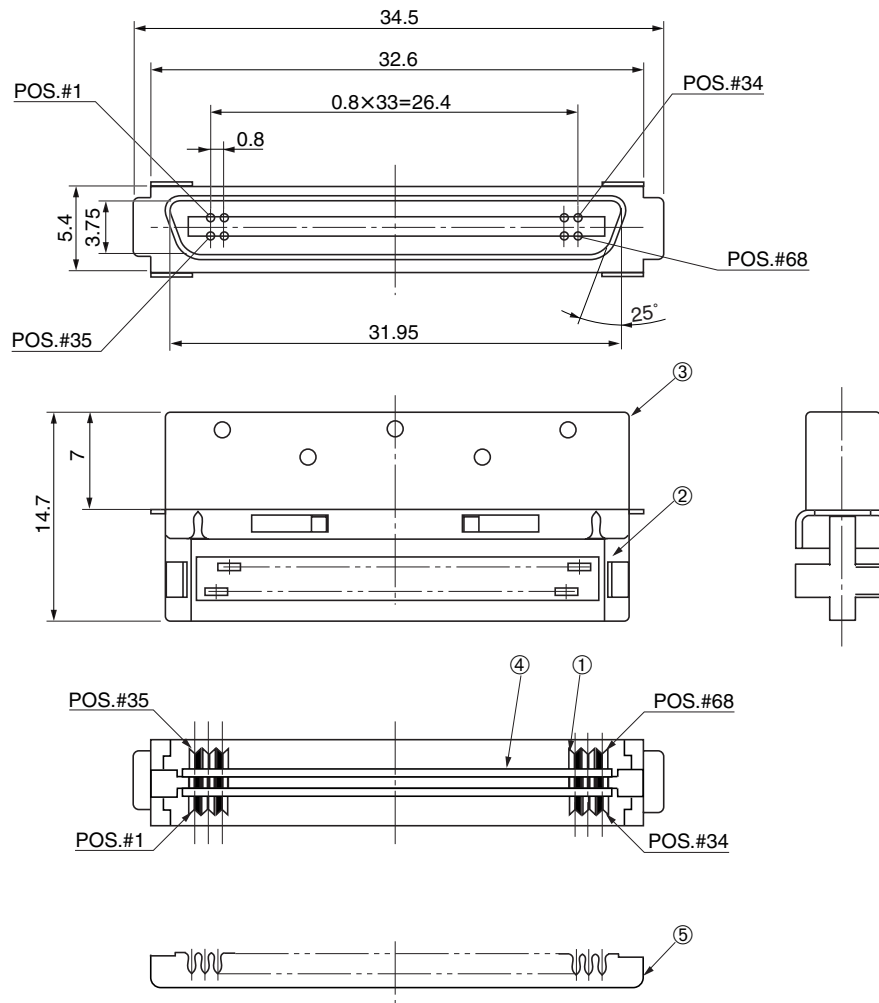
ANSI/SFF8441



● Configuration of product Part No.

HDRA- E 68 MA+

- ① Series name
 ② No. of contacts: 68
 ③ Type of contact
 M: IDC type, male
 ④ Compatible cable
 A: AWG#30 (7/0.1), dia. 0.58 mm



● Components

①	Contacts
②	Insulator
③	Shell
④	Spacer
⑤	Cable housing

Mating connector: HDRA series right-angle through hole type or straddle SMT type female connector

For use with housings: HDRA series upright housing, HDRA-E68LGKPA

IDC type male connector for cable
HDRA-E68M()1+

For cable

IDC

ANSI/SFF8441

RoHS

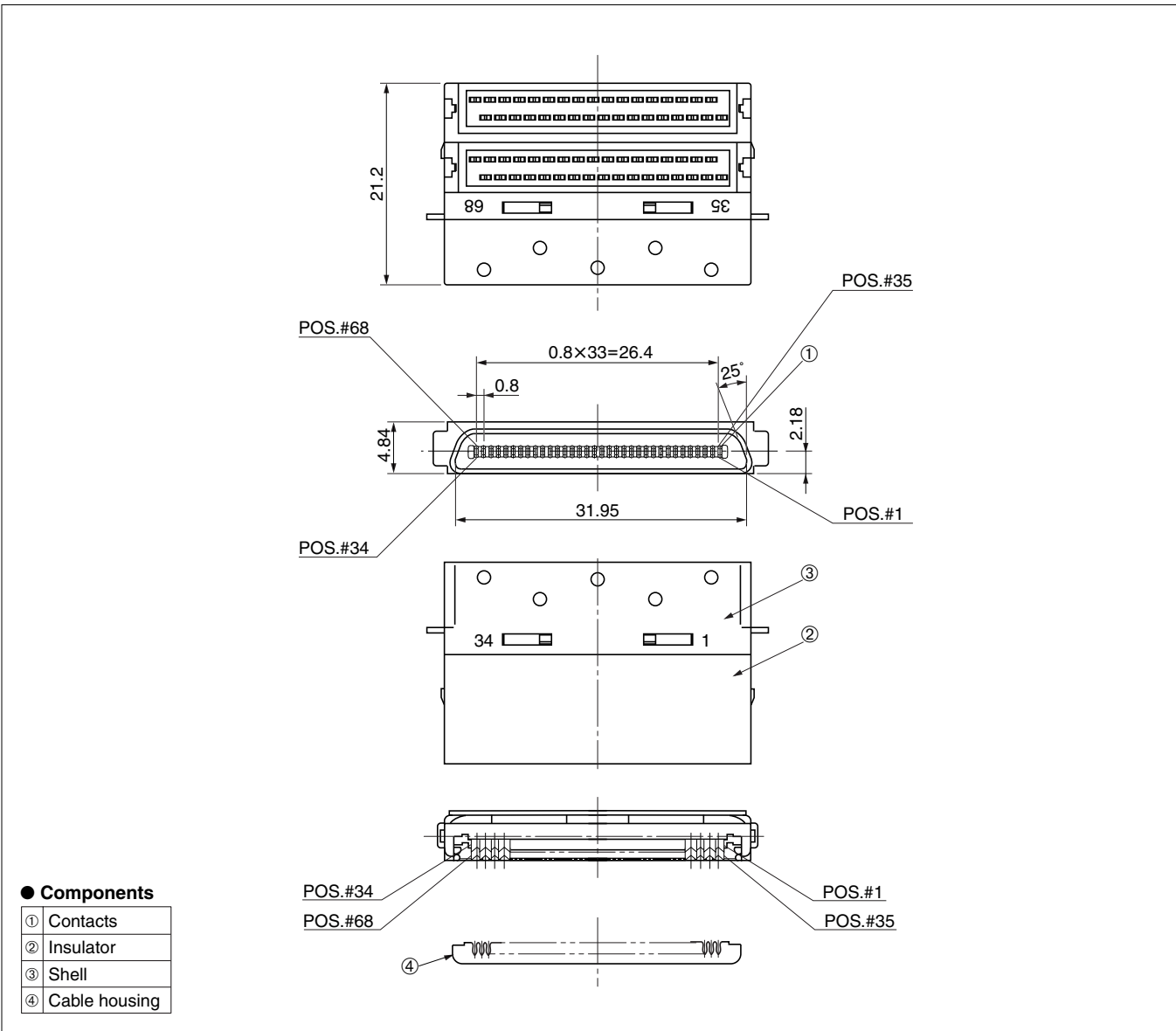


● Configuration of product Part No.

HDRA- E 68 M () 1+

① ② ③ ④ ⑤

- ① Series name
- ② No. of contacts: 68
- ③ Type of contact
M: IDC type, male
- ④ Compatible cable
Blank: AWG#30 (1/0.254), dia. 0.58 mm
A : AWG#30 (7/0.1), dia. 0.58 mm
C : AWG#34 (7/0.064), dia. 0.44 mm
- ⑤ IDC method
1: One side IDC



● Components

①	Contacts
②	Insulator
③	Shell
④	Cable housing

Mating connector: HDRA series right-angle through hole type or straddle SMT type female connector

For use with housings: HDRA series vertical housing, HDRA-E68LGKP ()

Required tool: Termination tool: FHAT-0027, IDC tool: FLPT-0021A, Hand presser: RPS-K4 (Refer to page Tool-10)

IDC type male connector for cable
HDRA-E100M()1+

For cable

IDC

ANSI/SFF8441

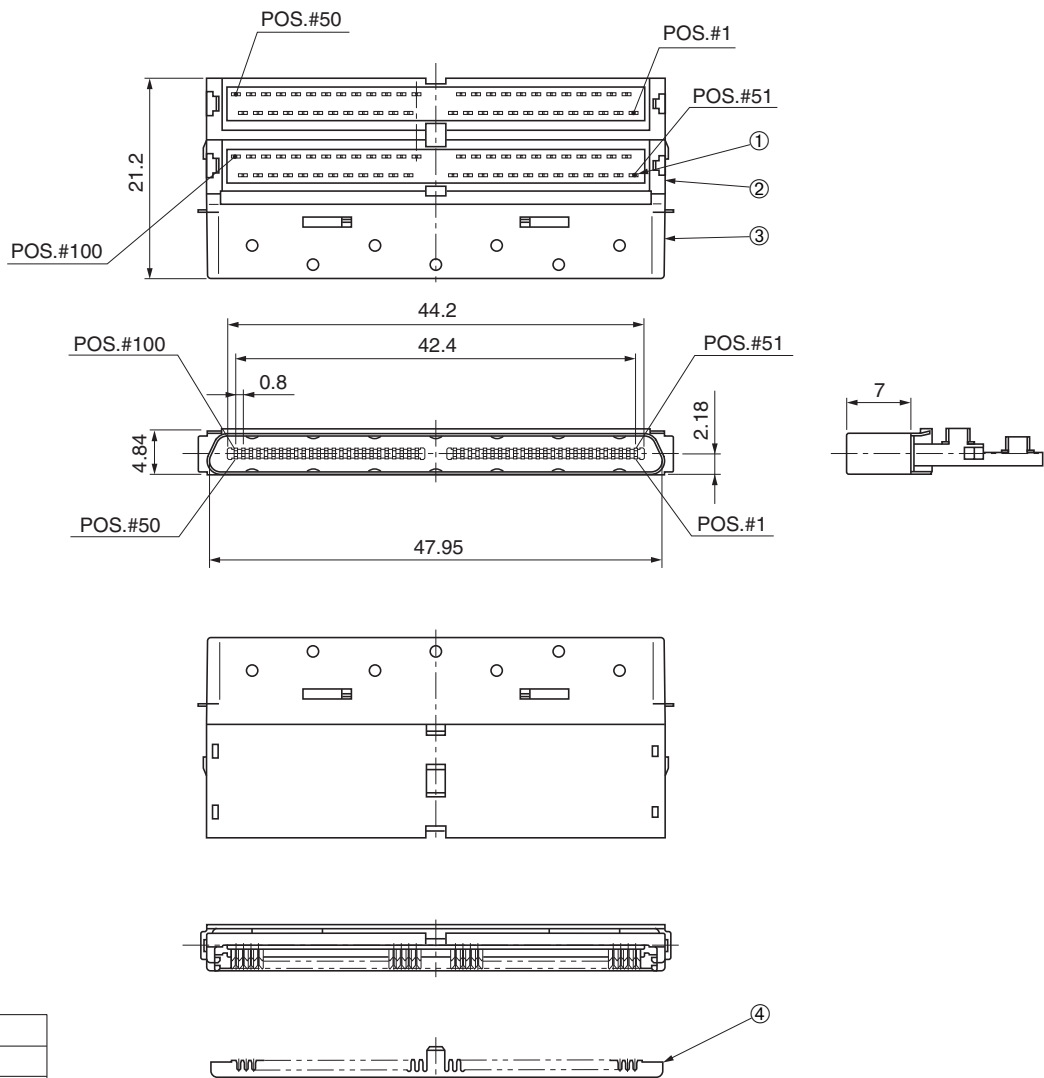
RoHS



● Configuration of product Part No.

HDRA- E 100 M () 1+

- ① Series name
- ② No. of contacts: 100
- ③ Type of contact
M: IDC type, male
- ④ Compatible cable
Blank: AWG#30 (1/0.254), dia. 0.58 mm
A : AWG#30 (7/0.1), dia. 0.58 mm



● Components

①	Contacts
②	Insulator
③	Shell
④	Cable housing

Mating connector: HDRA series right-angle through hole type female connector

For use with housings: HDRA series vertical housing, HDRA-E100LPA, HDRA-E100LPW()

Required tool: Termination tool: FHAT-0038A, IDC tool: FLPT-0021A, Hand presser: RPS-K4 (Refer to page Tool-10)

Straight DIP type female connector for PCBs
HDRA-EC68FDT-()+

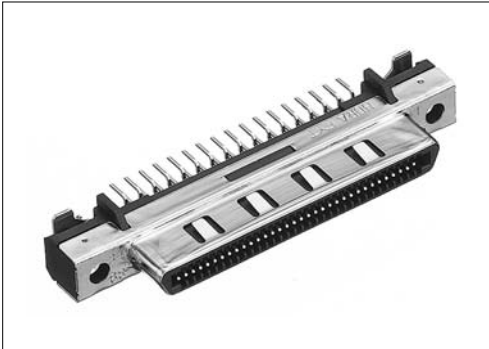
0.8 mm pitch connector

For PCBs

Straight DIP

EMI-filtered countermeasures

RoHS

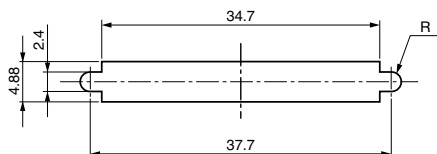
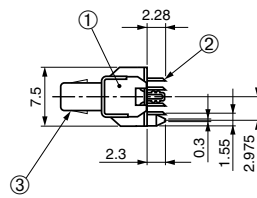
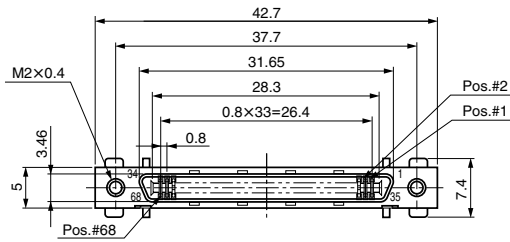
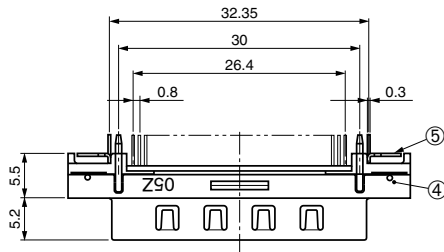


● Configuration of product Part No.

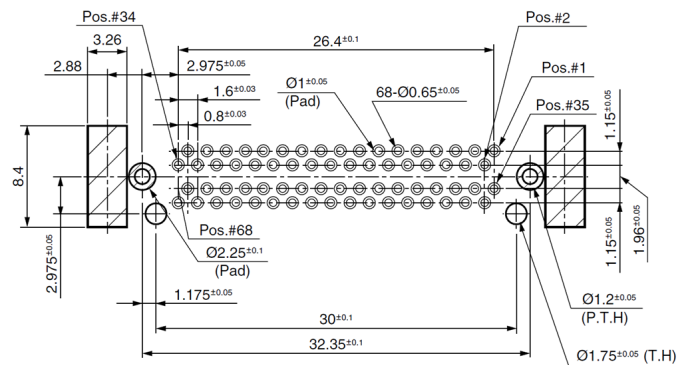
HDRA- EC 68 FD T- ()+

① ② ③ ④ ⑤

- ① Series name
- ② No. of contacts: 68
- ③ Form of contact
FD: Straight, DIP type, female
- ④ With ground lock pin
- ⑤ Lock screw
SLD: Provided
Blank: None



Recommended panel cut-out dimensions



Recommended PCB layout

● Components

①	Insulator
②	Contact
③	Shell
④	Sqr.nut
⑤	Hold down

Mating connector: HDRA series male connectors

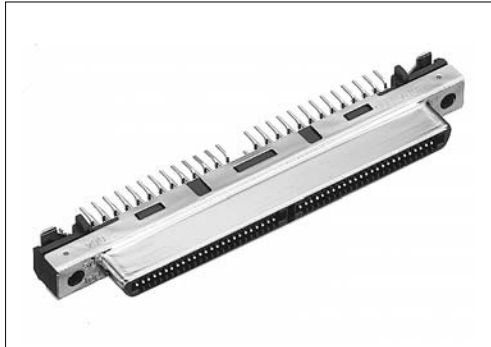
Straight DIP type female connector for PCBs
 HDRA-EC100FDT-()+

For PCBs

Straight DIP

RoHS

EMI-filtered countermeasures

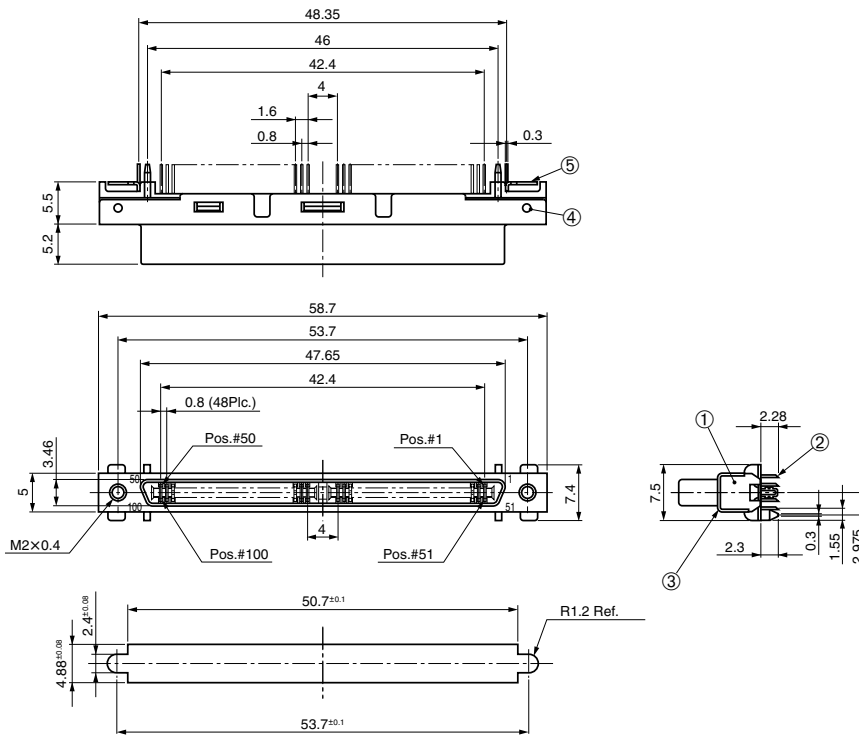


● Configuration of product Part No.

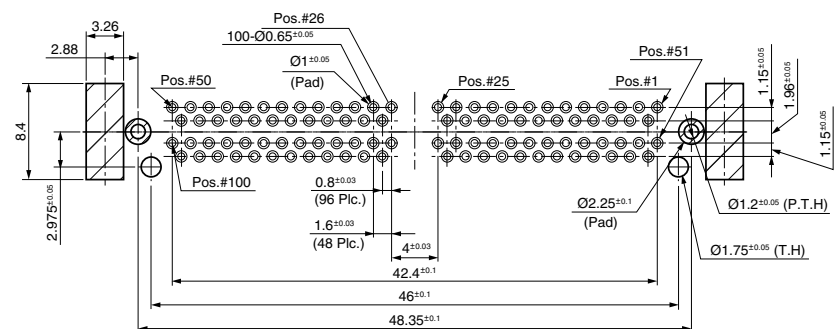
HDRA- EC 100 FD T- ()+

① ② ③ ④ ⑤

- ① Series name
- ② No. of contacts: 100
- ③ Form of contact
FD: Straight, DIP type, female
- ④ With ground lock pin
- ⑤ Lock screw
SLD: Provided
Blank: None



Recommended panel cut-out dimensions



Recommended PCB layout

● Components

①	Insulator
②	Contact
③	Shell
④	Sqr.nut
⑤	Hold down

Mating connector: HDRA series, male connector

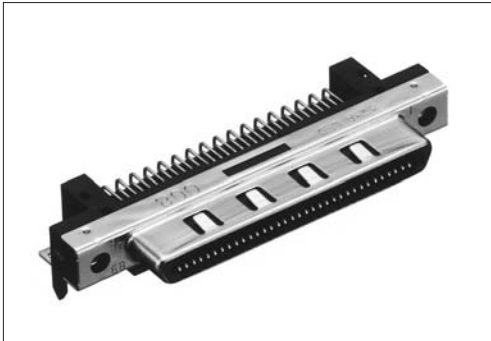
Right-angle through hole type female connector for PCB
 HDRA-EC68LFD T ()-()+

For PCB

Right-angle Through hole

RoHS

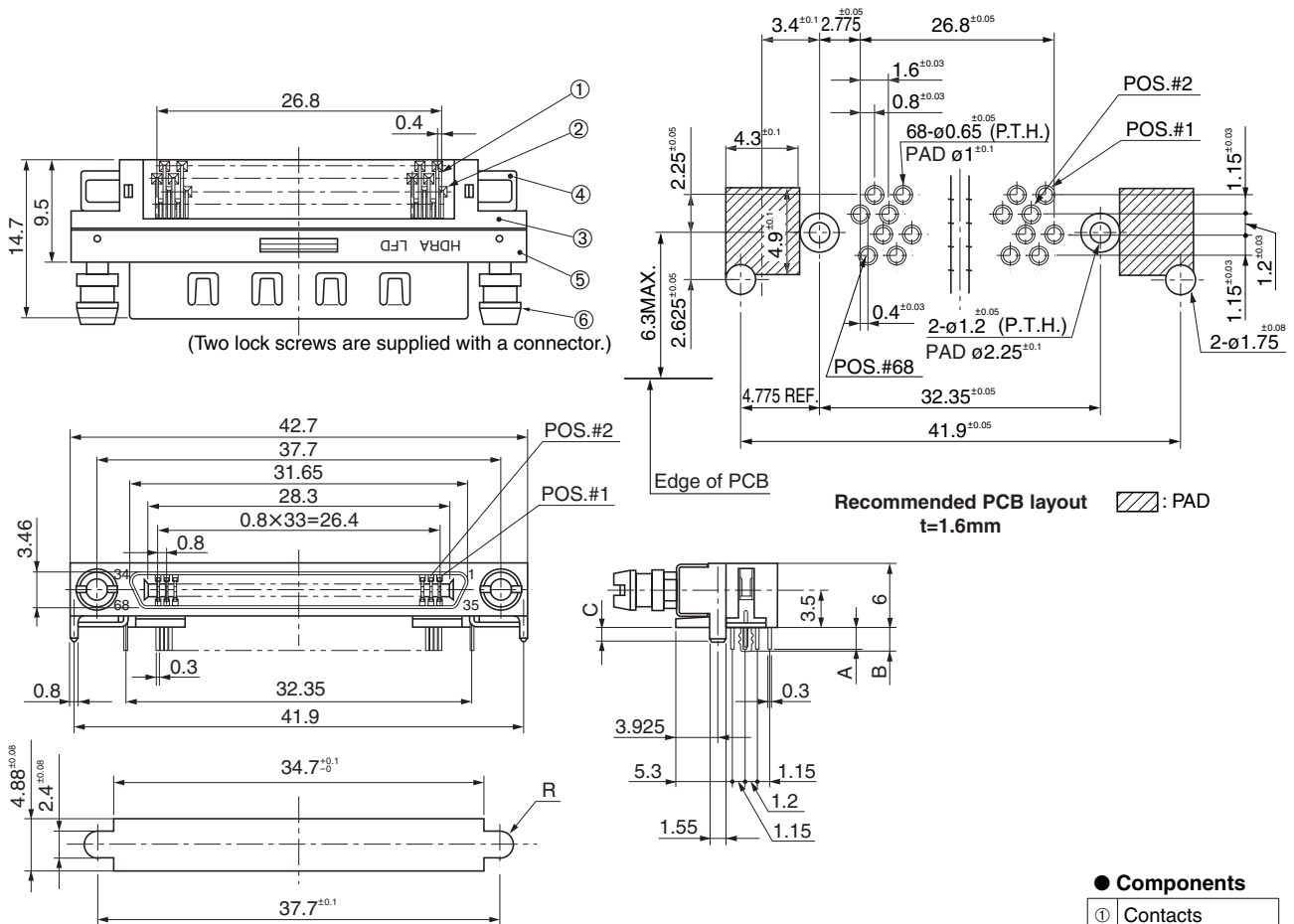
ANSI/SFF8441



● Configuration of product Part No.

HDRA- EC 68 LFD T ()-()+

- | | |
|--|---|
| ① Series name | S : A-2.08 mm contacts |
| ② No. of contacts: 68 | B-2.28 mm board lock pins |
| ③ Type of contact | C-2.3 mm location peg |
| LFD: Right-angle through hole type, female | 2 : A-2.08 mm contacts |
| ④ With board lock pin | B-2.28 mm board lock pins |
| ⑤ Length of contact, board lock pins or location peg | C-1.4 mm location peg |
| Blank: A-2.08 mm contacts | ⑥ Lock screws |
| : B-2.28 mm board lock pins | Blank : None |
| : C-3.7 mm location peg | SL : provided (Thickness of panel: 1.12 mm) |



Recommended panel cut-out dimensions

● Components

①	Contacts
②	Brackets
③	Insulator
④	Hold downs
⑤	Shell
⑥	Lock screws

Select the connector according to panel thickness.
 For the application without panel, use washers or special lock screw (P/N: HDRA-E68LFD-7C).

Mating connector: HDRA series IDC type male cable connector, or straddle SMT type male connector

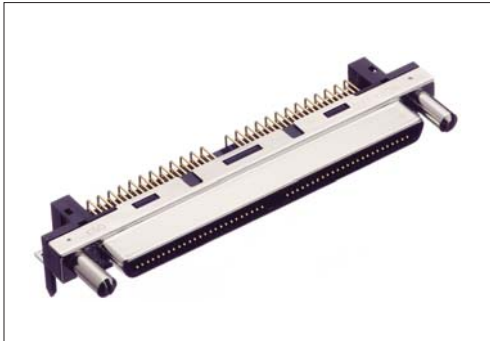
Right-angle through hole type female connector for PCB HDRA-EC100LFD T ()-()+

For PCB

Right-angle Through hole

RoHS

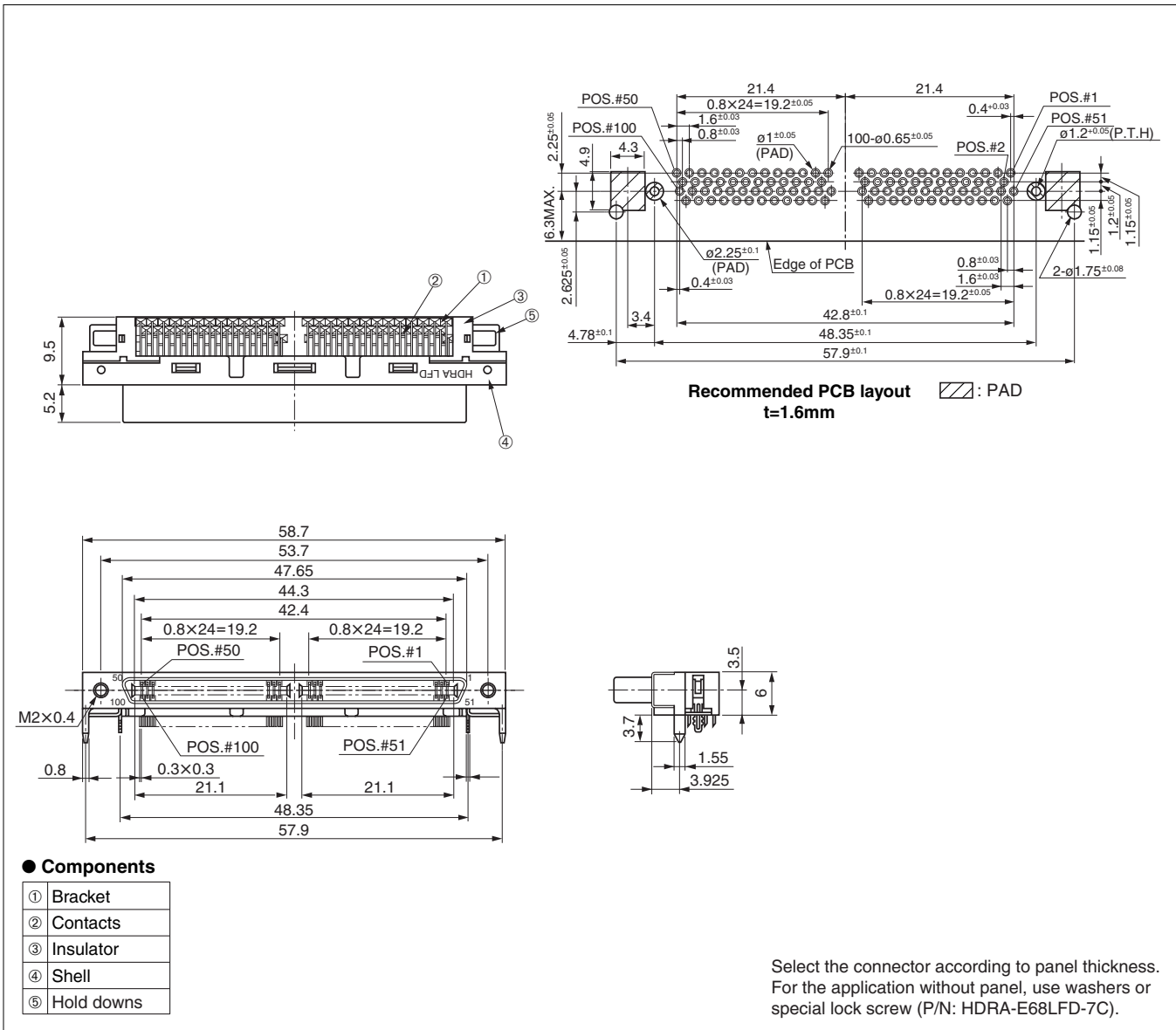
EMI shielded



● Configuration of product Part No.

HDRA- EC 100 LFD T ()-()+

- | | |
|--|----------------------------|
| ① Series name | ⑥ Lock screw |
| ② No. of contacts: 100 | Blank: None |
| ③ Type of contact | SL : Provided |
| LFD: Right-angle through hole type, female | (Panel thickness: 1.12 mm) |
| ④ With ground contact | GP : Guide pin |
| ⑤ Through hole length | |
| Blank: 2.08 mm | |
| 1 : 3.4 mm (under planning) | |



● Components

①	Bracket
②	Contacts
③	Insulator
④	Shell
⑤	Hold downs

Select the connector according to panel thickness.
For the application without panel, use washers or special lock screw (P/N: HDRA-E68LFD-7C).

Mating connector: HDRA series male connector

Right-angle through hole type female connector for PCB
 HDRA-EA36LFD T-()+

For PCB

Right-angle Through hole

RoHS

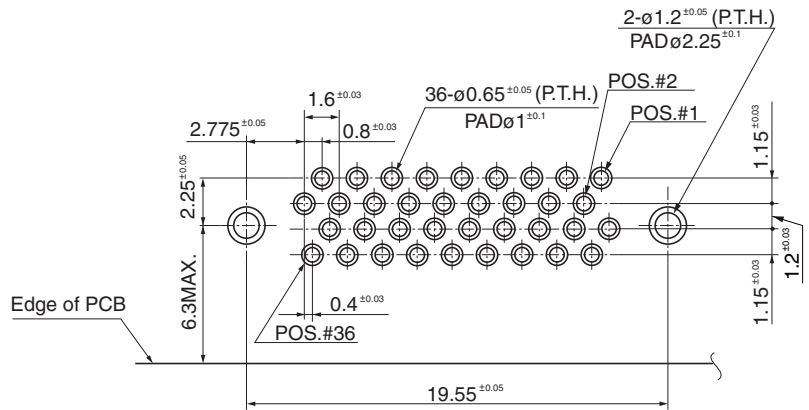
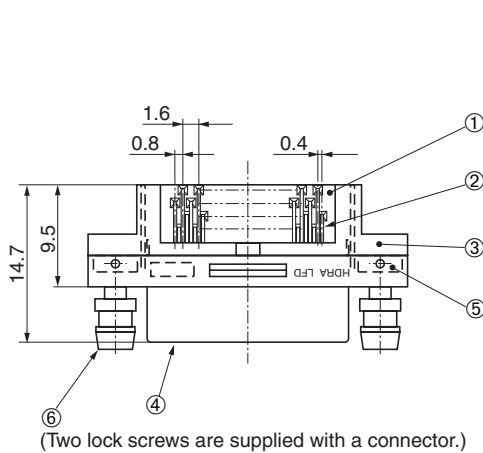
ANSI/SFF8441



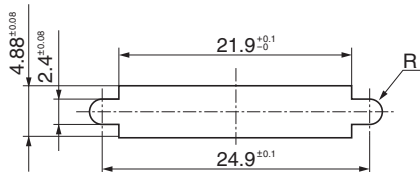
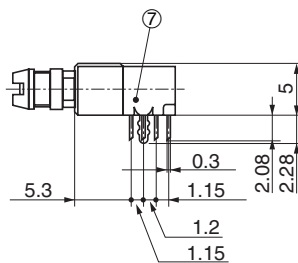
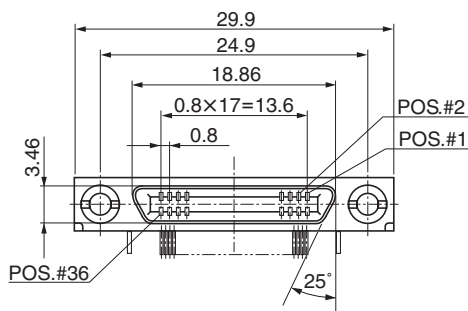
● Configuration of product Part No.

HDRA- EA 36 LFD T-()+

- ① Series name
- ② No. of contacts: 36
- ③ Type of contact
LFD: Right-angle through hole type, female
- ④ Provided with board lock mechanism
- ⑤ Lock screw
Blank: None
SL : Provided (Thickness of panel: 1.12 mm)



Recommended PCB layout
 t=1.6mm



Recommended panel cut-out dimensions

● Components

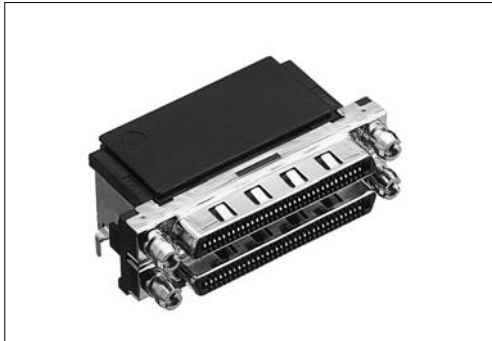
①	Bracket
②	Contacts
③	Insulator
④	Shell
⑤	Square nuts
⑥	Lock screw
⑦	Board lock pin

Select the connector according to panel thickness.
 For the application without panel, use washers or special lock screw (P/N: HDRA-E68LFD-7C).

Mating connector: HDRA series IDC type male cable connector

Note● Jack screw is not available at present.

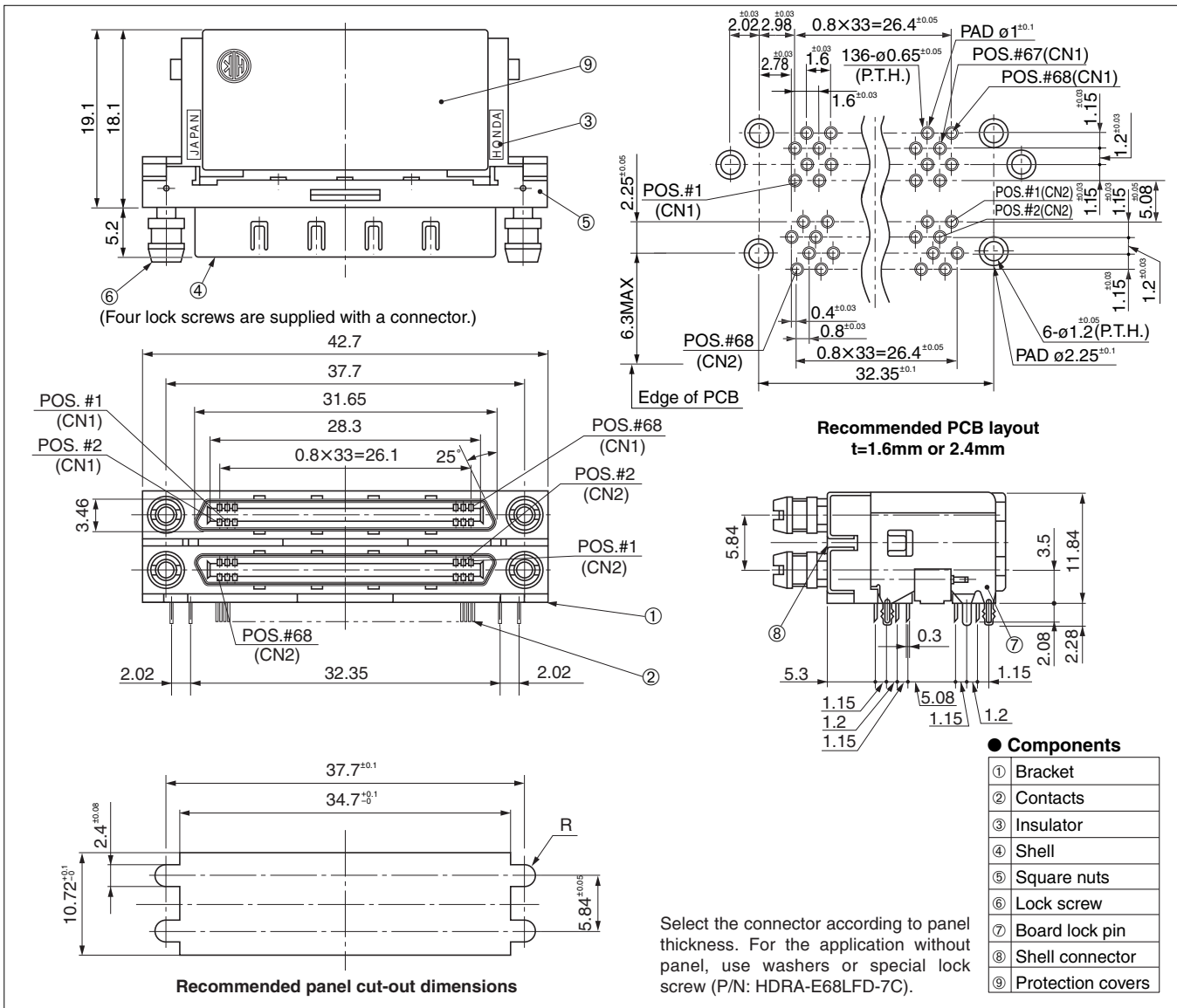
Right-angle through hole type female connector for PCB HDRA-E68W()LFD T1 E C(-)+



● Configuration of product Part No.

HDRA- E 68 W () LFD T1 E C (-) +

- | | |
|--|---|
| ① Series name | ⑥ Earth lock pin (provided with board lock mechanism) |
| ② No. of contacts: 136 (68×2) | ⑦ Provided with shell connection reinforcement |
| ③ No. of stacks: 2 | ⑧ Provided with protection cover for contacts and bends |
| ④ Length of contact, through hole
1: 2.08 (PCB: 1.6 mm thick)
2: 3.4 (PCB: 2.4 mm thick) | ⑨ Lock screw |
| ⑤ Type of contact
LFD: Right-angle through hole type, female | Blank: None |
| | SL : Provided (Thickness of panel: 1.12 mm) |



● Components

①	Bracket
②	Contacts
③	Insulator
④	Shell
⑤	Square nuts
⑥	Lock screw
⑦	Board lock pin
⑧	Shell connector
⑨	Protection covers

Mating connector: HDRA series IDC type male cable connector, or straddle SMT type male connector

Right-angle through hole type female connector for PCB
 HDRA-E100W()LFDT1EC-()+

For PCB

Right-angle Through hole

RoHS

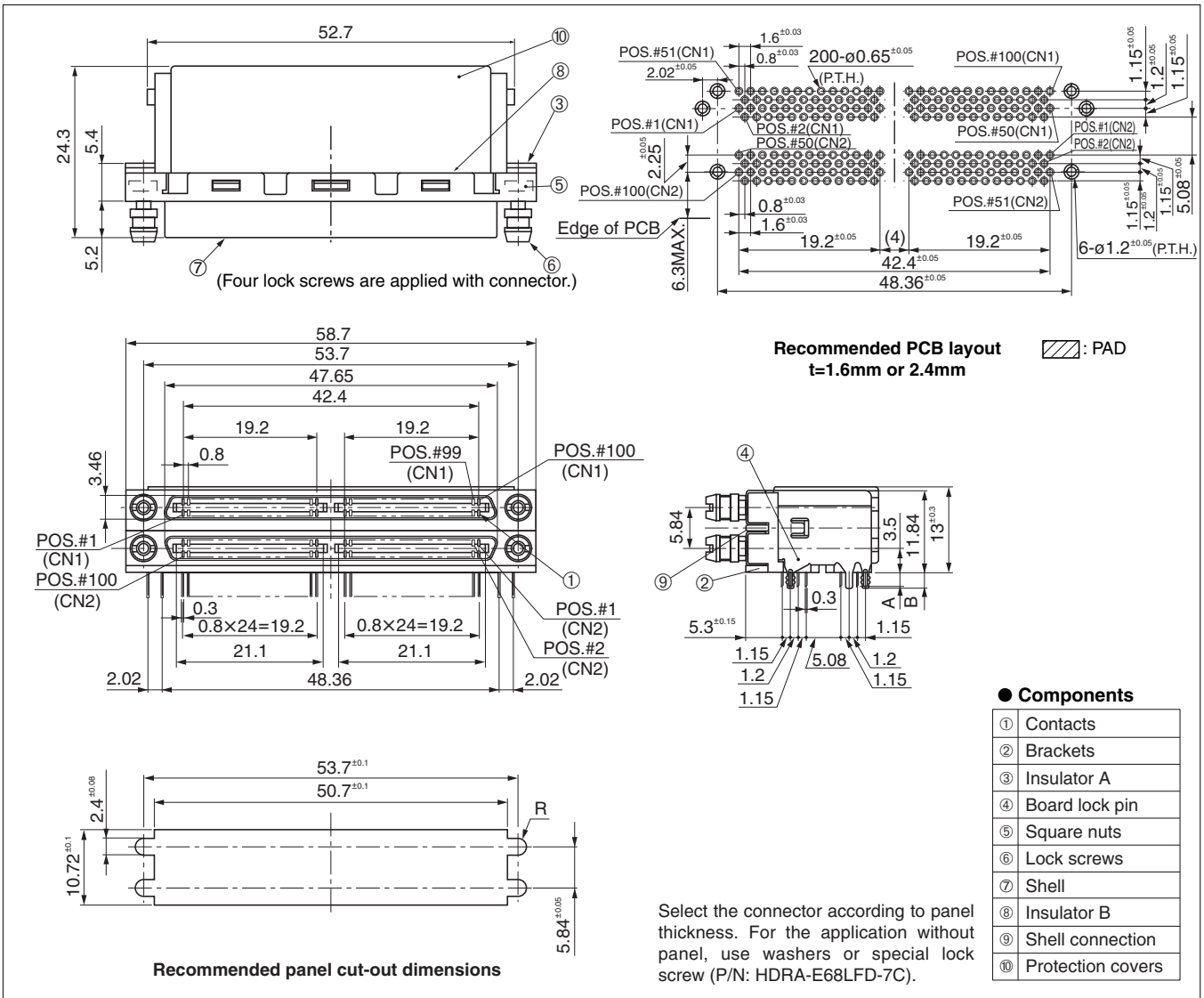
ANSI/SFF8441



● Configuration of product Part No.

HDRA- E 100 W () LFD T1 E C- ()+

- ① Series name
- ② No. of contacts: 100
- ③ W: Double stacked connector
- ④ Length of contacts or board lock pins
 1: A-2.08 mm contacts
 B-2.28 board lock pins
 2: A-3.4 mm contacts
 B-3.6 mm board lock pins
- ⑤ Type of contact
 LFD: Right-angle through hole type, female SL : provided (Thickness of panel: 1.12 mm)
- ⑥ Earth lock pin (provided with board lock mechanism)
- ⑦ Provided with shell connection reinforcement
- ⑧ Provided with protection cover for contacts and bends
- ⑨ Lock screws
- Blank: None



Mating connector: HDRA series IDC type male connector

EMI-shielded vertical plastic housing for standard cable
HDRA-E68LGKP()

Vertical housing

EMI shielded

ANSI/SFF8441

RoHS

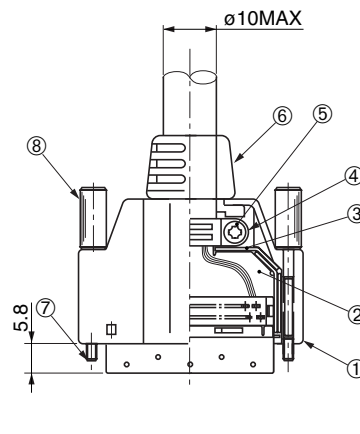
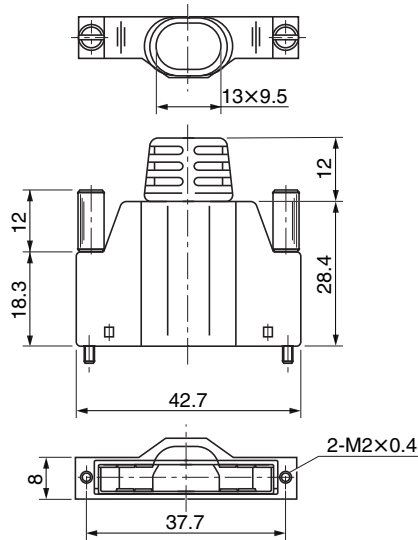


● Configuration of product Part No.

HDRA- E 68 LGKP ()

- ① Series name
 - ② No. of contacts: 68
 - ③ A: Vertical cable holding type
 C: Vertical ultrasonic welding type
 E: Vertical ultrasonic welding type
 F: Vertical ultrasonic welding type
- Outside diameter of cable is shown in the dimension table.

HDRA-E68LGKPA

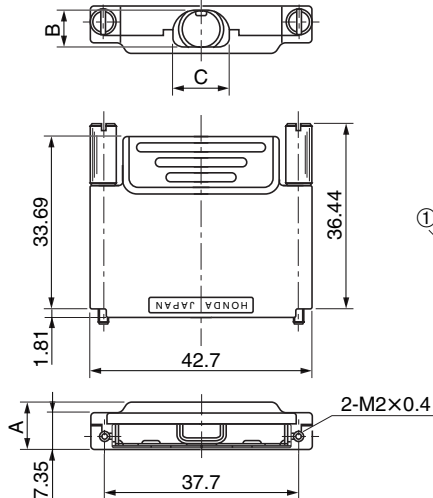


Thumb screw with plastic cap should be tightened by hand. For screw driver assembly use the product (P/N: HDRA-E68LGKPE3) with metal thumb screws attached.

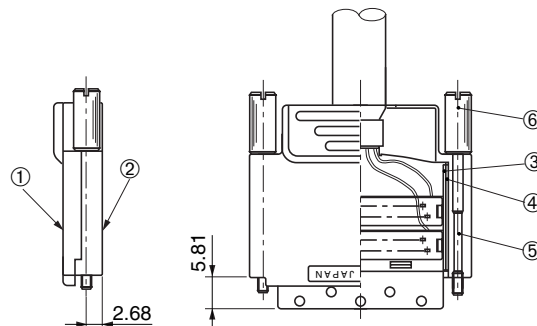
● Components

①	Cover
②	Inner shell A
③	Inner shell B
④	Cable clamp
⑤	Screw
⑥	Bushing
⑦	Thumb screw
⑧	Cap (plastic)

HDRA-E68LGKPC, LGKPE, LGKPF



The following figure shows HDRA-E68LGKPF.



● Components

①	Cover A
②	Cover B
③	Shell A
④	Shell B
⑤	Thumb screw
⑥	Cap (plastic)

Part No.	A	B	C
HDRA-E68LGKPC	11.5	9.5	10.5x9.5
HDRA-E68LGKPE	9.5	7.5	
HDRA-E68LGKPF	9	7.2	10.5

For use with connectors: HDR series IDC type cable connector: -LGKPA for MA, -LGKPC/-LGKPE for MA1, and -LGKPF for MC1

Required tools (for LGKPC, LGKPE and LGKPF): Clamp caulking tools: FLPT-0017B (Refer to page Tool-10)

Ultrasonic welder, Housing holding jig, Sonic welder

EMI-filtered vertical metallic housing
HDRA-E100LPW()

Housing

Vertical

EMI filtered

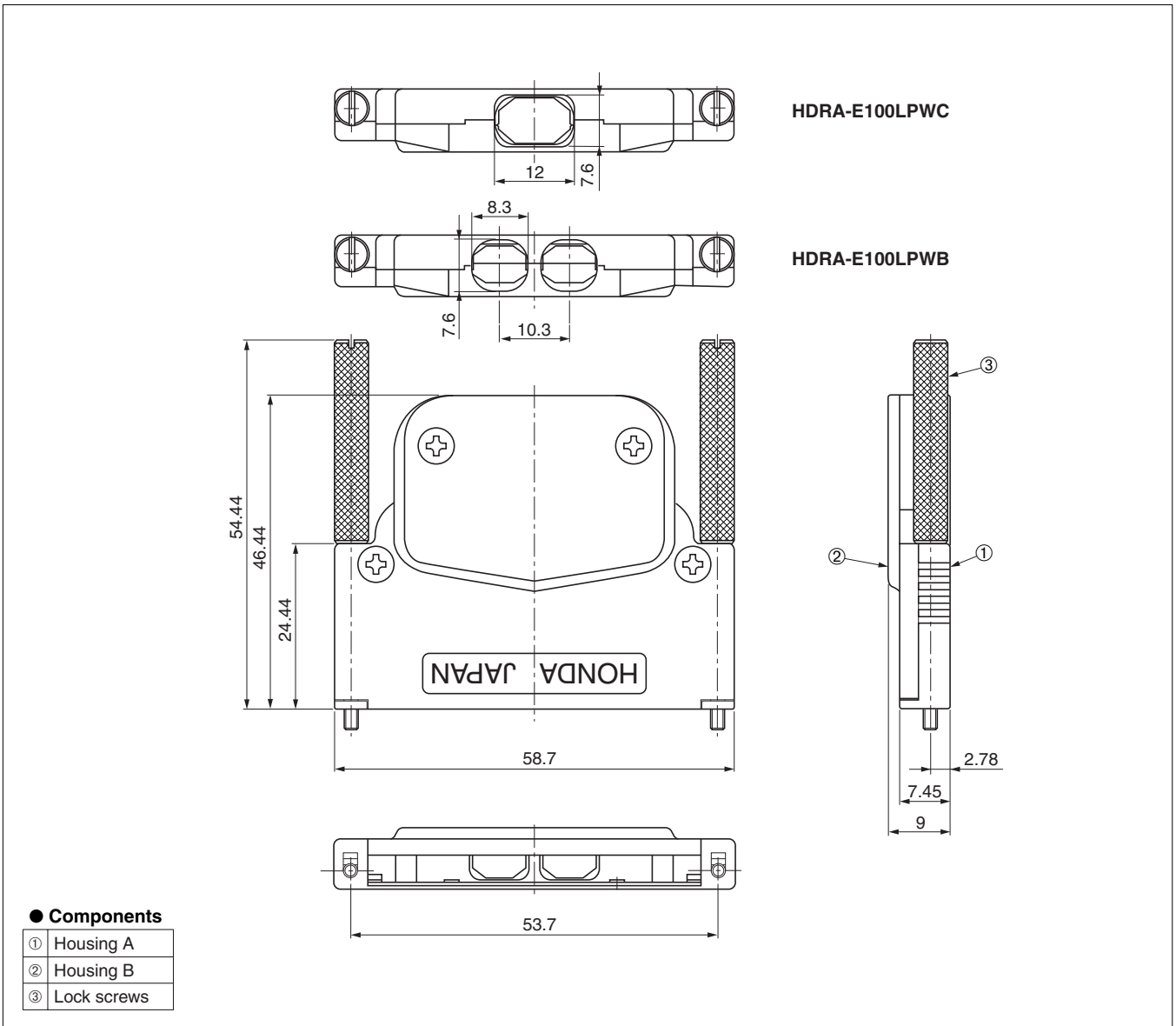
RoHS



● Configuration of product Part No.

HDRA- E 100 LP W ()

- ① Series name
- ② No. of contacts: 100
- ③ Type of housing: Vertical type
- ④ Compatible cable and form of through hole
 - B : Two holes are available for two cables. Outside diameters of cable are 6.9 mm
 - C : One hole is available for one cable. Outside diameter of cable is 9.6 mm



For use with connectors: HDRA-E100M()1+

EMI-shielded vertical plastic housing
HDRA-E36LPTH

Vertical housing

EMI shielded

ANSI/SFF8441

RoHS

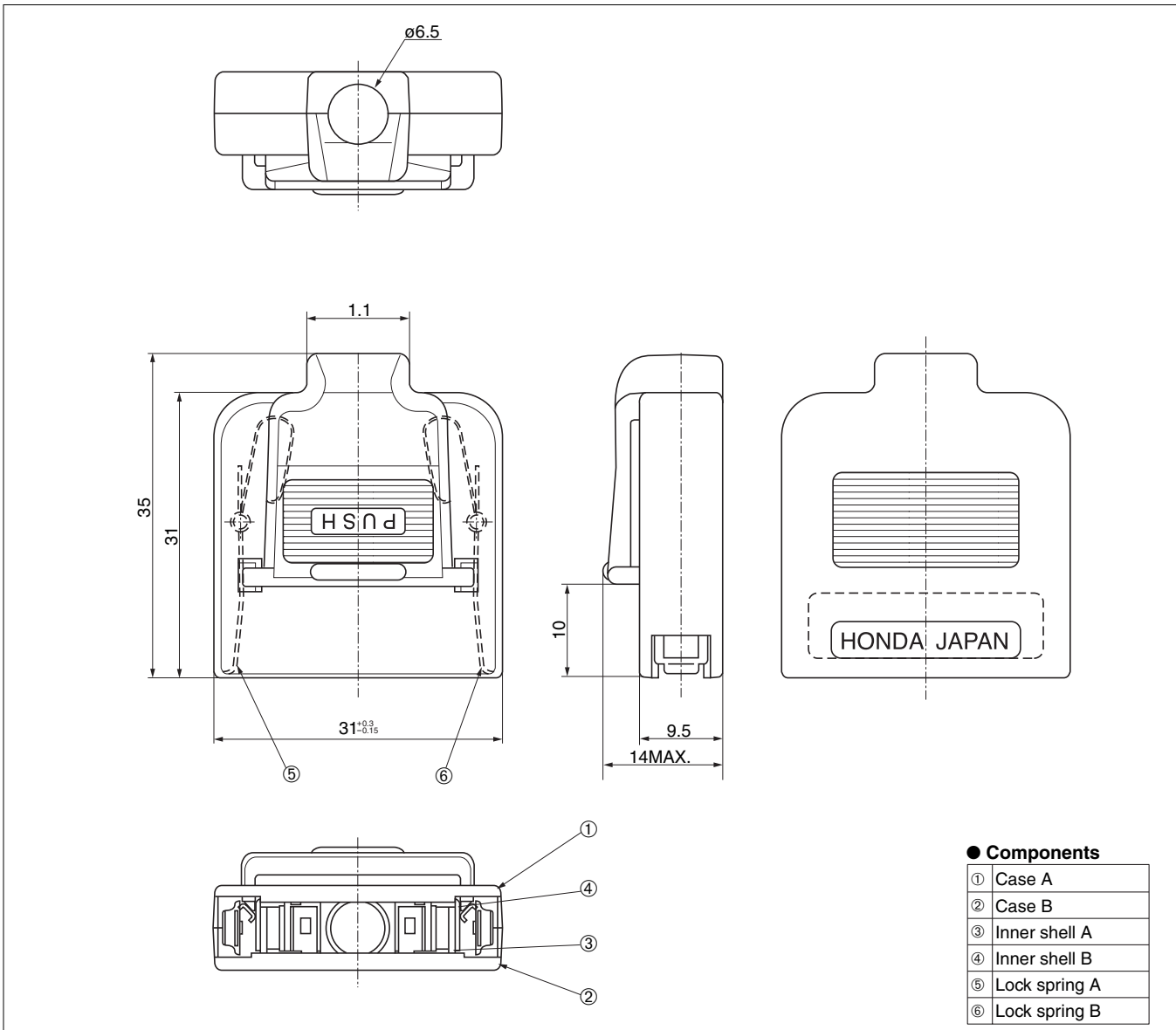


● Configuration of product Part No.

HDRA- E 36 LPTH

① ② ③

- ① Series name
- ② No. of contacts: 36
- ③ Type of housing: Vertical type



● Components

①	Case A
②	Case B
③	Inner shell A
④	Inner shell B
⑤	Lock spring A
⑥	Lock spring B

For use with connectors: HDRA-E36M(+)

Mating connectors: HDRA -EA36LFDT+ + Lock screw (HDR-E14LMY-SL-02C) panel:0.5-0.8mm thick
 -EA36FT-NS+ + Lock screw (HDR-E14LMY-SL-02C) panel:0.5-0.8mm thick

Required tools: Clamp caulking tools: FLPT-0024A (Refer to page Tool-10) Ultrasonic welder, Housing holding jig, Sonic welder