



Interface connector conforming to InfiniBand Standard

CONNECTOR

DG1 Series

MB-0097-2

July 2006

RoHS Compliant


This product is a high-speed signal connector for balance transmission compliant to high-speed serial signal transmission of servers, routers, switches, external storage and more.

Features

- Connector conforming to IBTA (InfiniBand Trade Association) Copper Cable Standard 4x, 12x.
- Receptacle with wide nozzle area for automatic mounting.
- One-touch clip used for panel installation to receptacle (compatible with panel thickness 1.0mm and 0.8mm).
- Shield cover for EMI prevention available for 12x receptacle.
- 2-step lock spring (lanyard) used for secure locking and release of mated plug and receptacle.
- Collaborative development of cable harness with GORE from U.S.A. proceeds. A plug connector will be provided with cable harness. Please contact us for further information.

Applications

Servers, Storages, Routers, Switches and Others

General Specifications

- | | |
|--|--|
| <ul style="list-style-type: none"> ■ No. of contacts <ul style="list-style-type: none"> <4x>: signal 8 pair 25 pos. <12x>: signal 24 pair 73 pos. ■ Contact resistance: Initial 80m ohm max. (20m ohm max. after test) ■ Dielectric withstanding voltage: DC500V (per minute) ■ Operating temperature: -25 to +70 Deg. C ■ Insertion/ Withdrawal force: <ul style="list-style-type: none"> Insertion force <4x>/ 56N max. <12x>/ 73N max. Withdrawal force <4x>/ 49N max. <12x>/ 59N max. | <ul style="list-style-type: none"> ■ Rated Current: 0.5A ■ Insulation resistance: 1000M ohm min. ■ Life time: 250 times ■ Impedance: 100 ohm +/-10%(peak) ■ Crosstalk: Near-end 4% max. |
|--|--|

■ DG1 Series



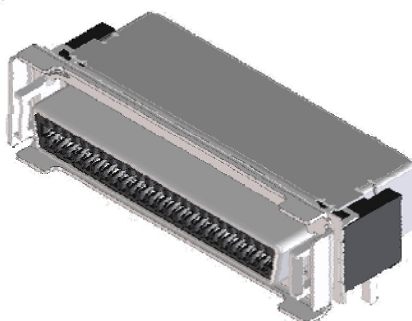
DG1R025HS*
(4x Receptacle)

Clip for panel installation attached



DG1R073HS*
(12x Receptacle)

Clip for panel installation attached



12x Receptacle
EMI countermeasure and
Clip for panel installation attached

Cable Harness (for reference)



DG1P025SL****R**
(4x Harness on both ends)



DG1P073SL****R**
(12x Harness on both ends)

Materials and Finishes

■ Receptacle (DG1R025HS*, DG1R073HS*)

| Components | Materials/Finishes |
|----------------|--|
| Insulator | Glass filled LCP/ Color: Black(UL94V-0) |
| Shell | Steel/ Nickel plating |
| Signal contact | Copper alloy/ Contact area: Au plating over Ni (0.76um min.) |
| Ground contact | |
| | Terminal area: (S) Sn plating |
| Lock plate | Steel/ Tin plating |
| Gasket | Stainless steel |

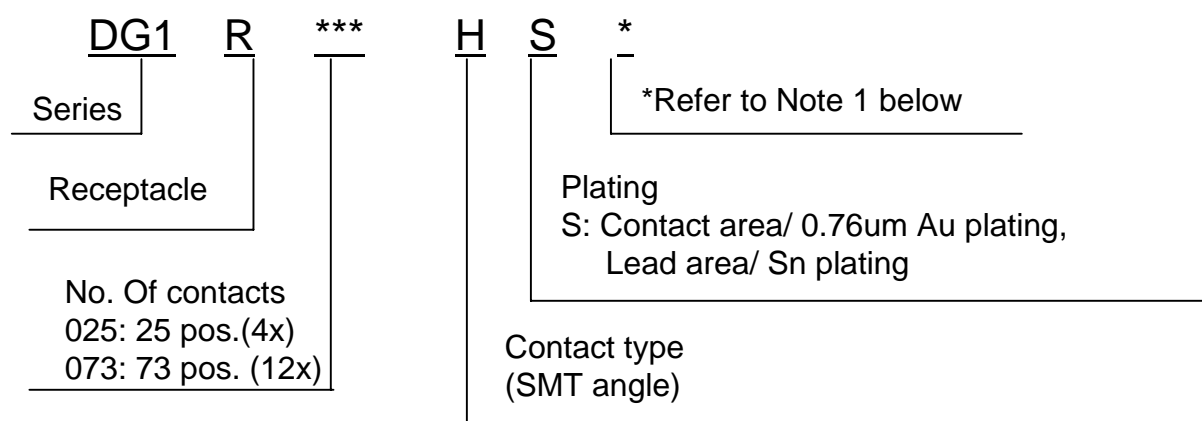
Using Cable Harness

■ Plug (DG1P025****, DG1P073****)

| Components | Materials/Finishes |
|----------------|---|
| Backshell | Zinc/ Nickel plating |
| Lock spring | Stainless steel |
| Lanyard | Polycarbonate(UL94V-0) |
| Screw | Steel/ Nickel plating |
| Insulator | Glass filled LCP/ Color: Black(UL94V-0) |
| Signal contact | Copper alloy/ Au plating over nickel (0.76um min.) |
| Ground contact | Copper alloy/ Au plating over nickel (0.76um min.) |
| Paddle card | FR-4 |
| Cable clamp | Copper alloy/ Nickel plating |
| Ring | Copper alloy/ Nickel plating |

Ordering Information

-Angle receptacle



*Note 1

| Products | Mold boss | Metal boss height: Xdimension(mm) |
|------------|---------------|--------------------------------------|
| DG1R***HS1 | No | 2.325 |
| DG1R***HS2 | No | 3.125 |
| DG1R***HS3 | No | 4.8 |
| DG1R***HS4 | Location post | 2.325 |
| DG1R***HS5 | Location post | 3.125 |
| DG1R***HS6 | Location post | 4.8 |
| DG1R***HS7 | Crush pin | 2.325 |
| DG1R***HS8 | Crush pin | 3.125 |
| DG1R***HS9 | Crush pin | 4.8 |

-Cable Harness

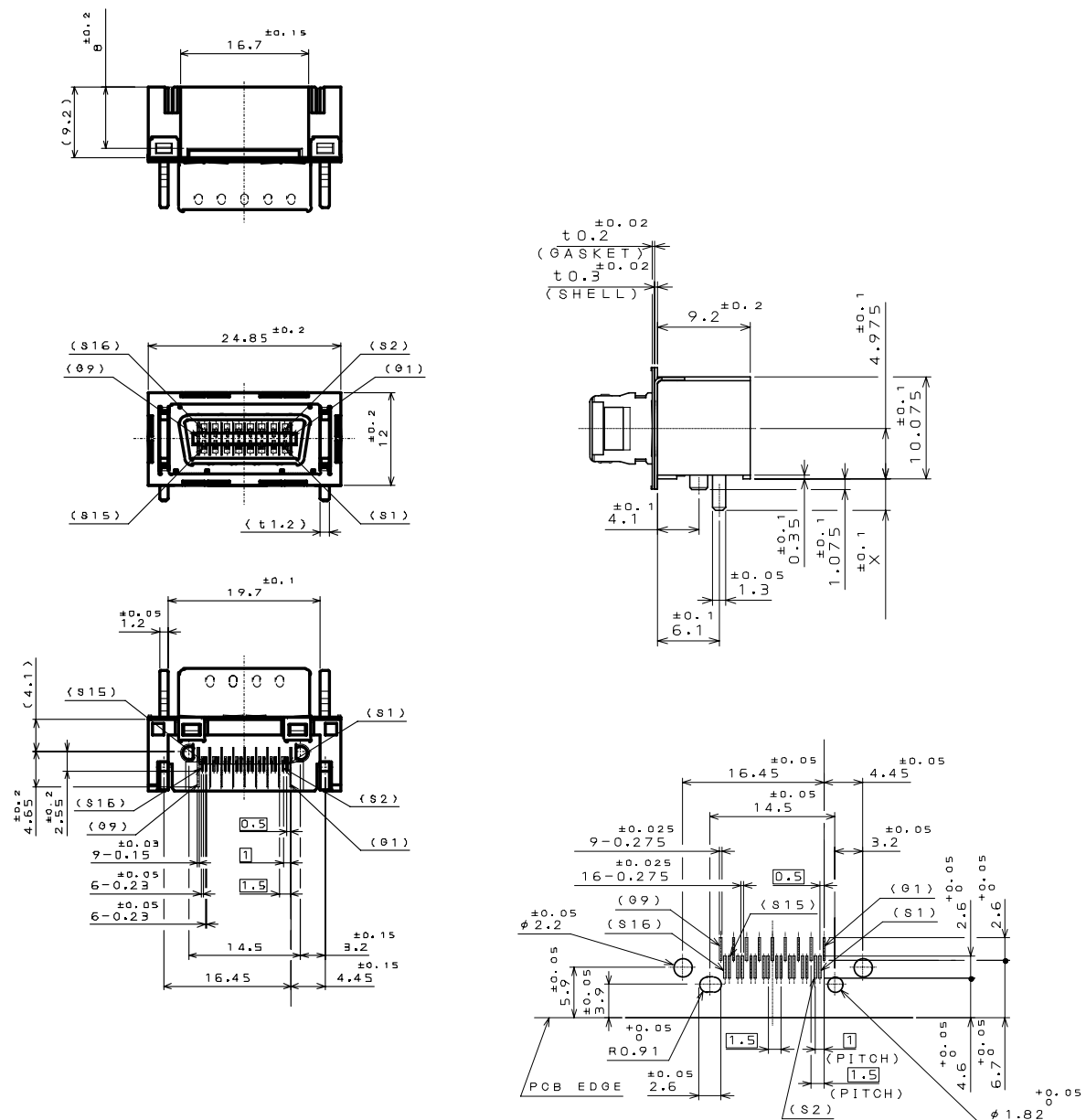
| DG1 | P *** | S | ** | L **** | R |
|------------|---------------------|---|----|--|---|
| Series | | | | | RoHS Compliant |
| Plug | 025: 4x 073: 12x | | | | Cable length(cm): 0100:100cm 0300:300cm 0500:500cm 1000:1000cm |
| Connection | S: Soldering | | | Cable size: 24: AWG#24 26: AWG#26 28: AWG#28 | |

Dimensions and Design

■ Receptacle

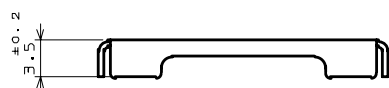
<4x>

-DG1R025HS**

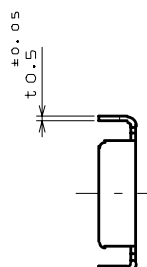
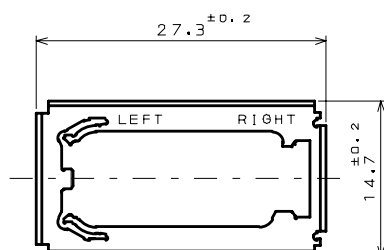


APPLICABLE P.C.B. DIMENSION(REF.)

-D029-50198 (Clip for panel installation)

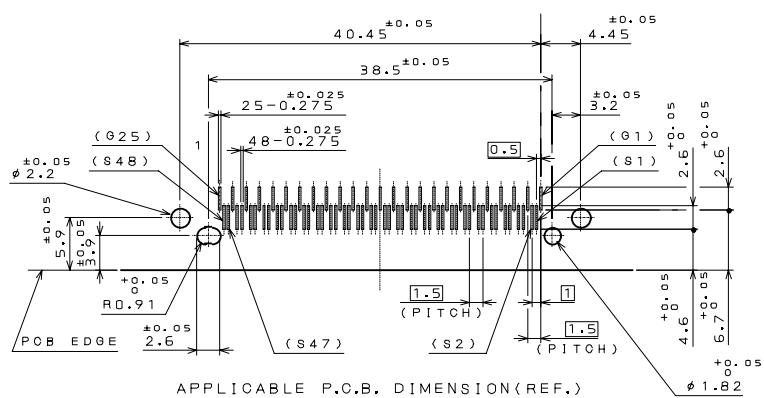
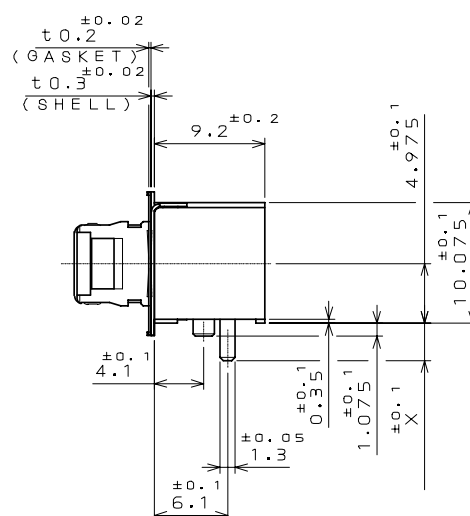
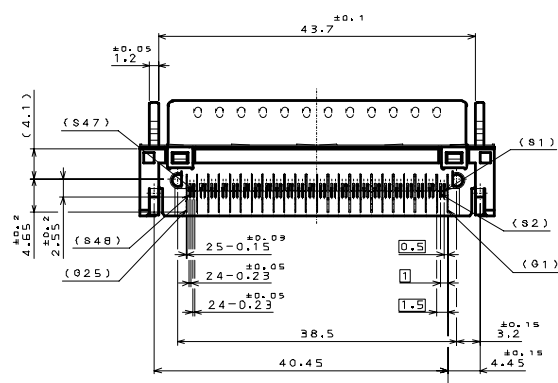
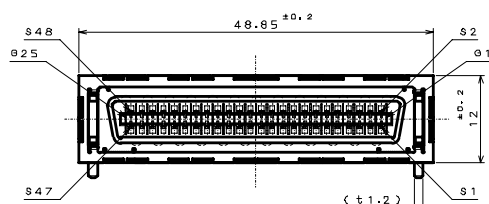
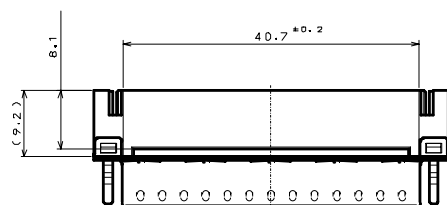


Compliant with 1.0mm-thick panel
InfiniBand Standard

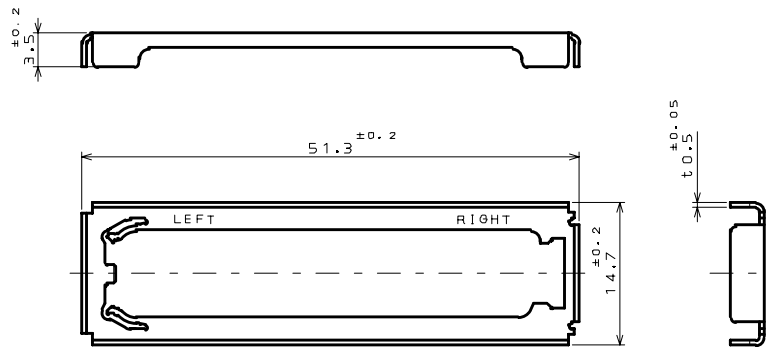


<12x>

-DG1R073HS**

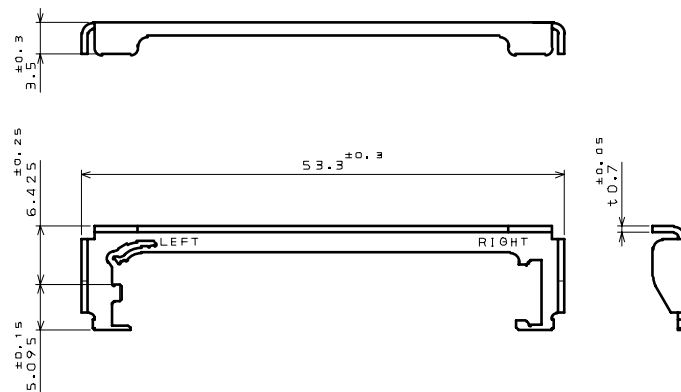


-D029-50197 (Clip for panel installation)



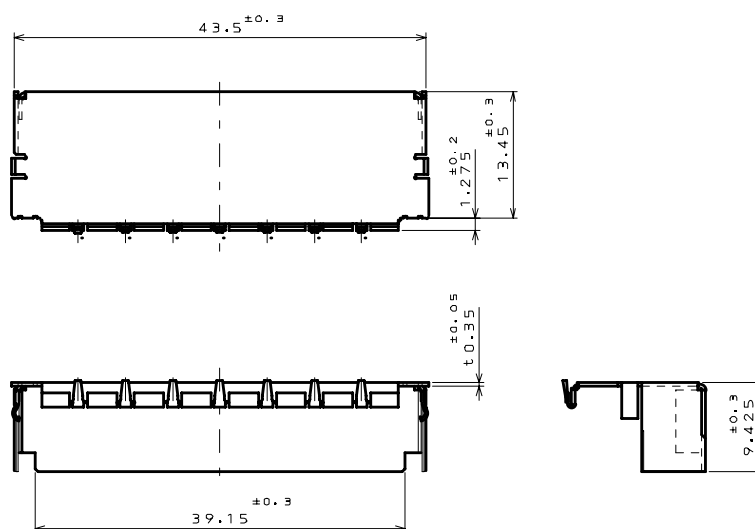
Compliant with 1.0mm-thick panel
InfiniBand Standard

-D029-50199 (Clip for PCI panel installation)



Compliant with 0.8mm-thick panel
PCI Standard

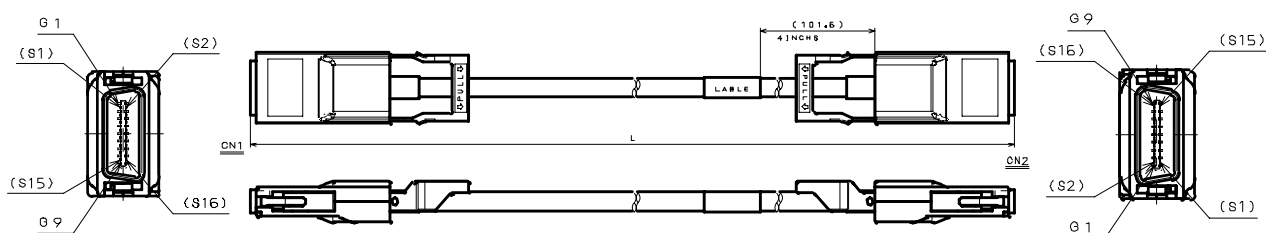
-D283-50016R (Shield cover for EMI)



EMI shield compliant only with
12x, at present.

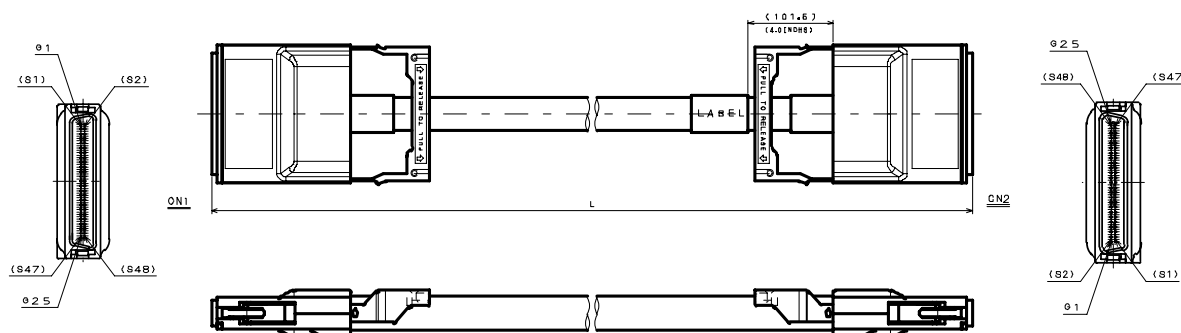
■ Cable Assembly

• 4x Harness



| Applicable Cable | L Dimensions | Part Number |
|------------------|--------------|------------------|
| AWG#24 | 1m | DG1P025S24L0100R |
| | 3m | DG1P025S24L0300R |
| | 5m | DG1P025S24L0500R |
| | 10m | DG1P025S24L1000R |
| AWG#26 | 1m | DG1P025S26L0100R |
| | 3m | DG1P025S26L0300R |
| | 5m | DG1P025S26L0500R |
| | 10m | DG1P025S26L1000R |
| AWG#28 | 1m | DG1P025S28L0100R |
| | 3m | DG1P025S28L0300R |
| | 5m | DG1P025S28L0500R |
| | 10m | DG1P025S28L1000R |

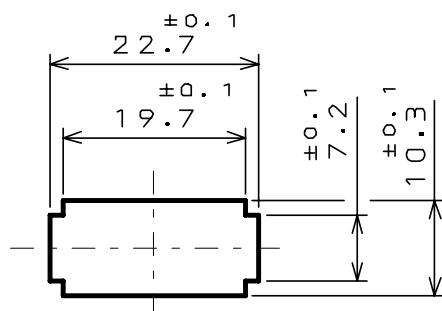
• 12x Harness



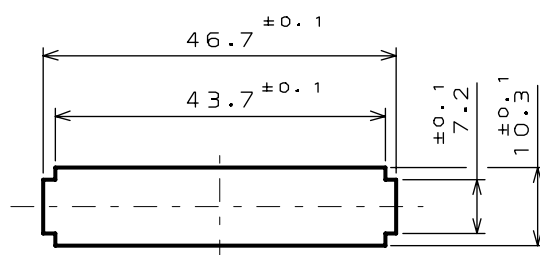
| Applicable Cable | L Dimensions | Part Number |
|------------------|--------------|------------------|
| AWG#26 | 1m | DG1P073S26L0100R |
| | 3m | DG1P073S26L0300R |
| | 5m | DG1P073S26L0500R |
| | 10m | DG1P073S26L1000R |
| AWG#28 | 1m | DG1P073S28L0100R |
| | 3m | DG1P073S28L0300R |
| | 5m | DG1P073S28L0500R |
| | 10m | DG1P073S28L1000R |

Applicable dimension for receptacle panel

• 4x Receptacle



• 12x Receptacle



Technical Information

| | Part Number | SJ Drawing | Specifications | Note |
|-----------------------------|------------------|--|----------------|-------------------------------|
| Receptacle | DG1R025HS* | SJ103013 | JACS-3284 | 4x Receptacle master drawing |
| | DG1R073HS* | SJ103011 | JACS-3284 | 12x Receptacle master drawing |
| Clip for Panel Installation | D029-50198 | SJ037707 | JACS-3284 | 4x Receptacle clip |
| | D029-50197 | SJ037655 | JACS-3284 | 12x Receptacle clip |
| | D029-50199 | SJ038604 | JACS-3284 | 12x Receptacle clip (C type) |
| | D283-50016R | SJ106161 | JACS-3284 | 12x Shield cover |
| Cable Harness | DG1P025S**L****R | Please contact us for further information. | | |
| | DG1P073S**L****R | | | |

Notice: Products shown in this leaflet are made for the applications listed below. However, if the above-mentioned products are to be used in aerospace devices, marine cable-connection devices, atomic power control systems, medical equipment for life-support systems, or any other specific application requiring extremely high reliability, please contact JAE for further information.

Recommended applications: Computers, Office machines, Measuring devices, Telecommunication devices (Terminals, Mobile devices), AV devices, Household applications, FA devices, etc.

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