



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

■ DG1 Series



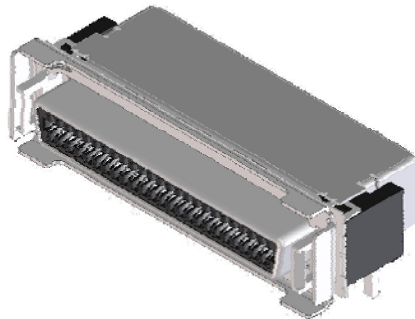
**DG1R025HS\***  
**(4x Receptacle)**

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)**



**DG1P025S\*\*L\*\*\*\*R**  
**(4x Harness on both ends)**



**DG1P073S\*\*L\*\*\*\*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

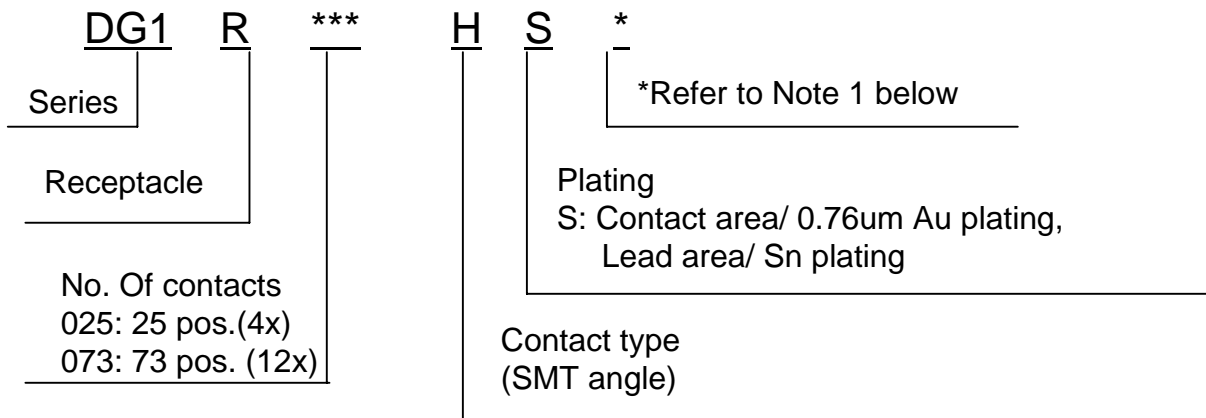
Using Cable Harness

■ 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

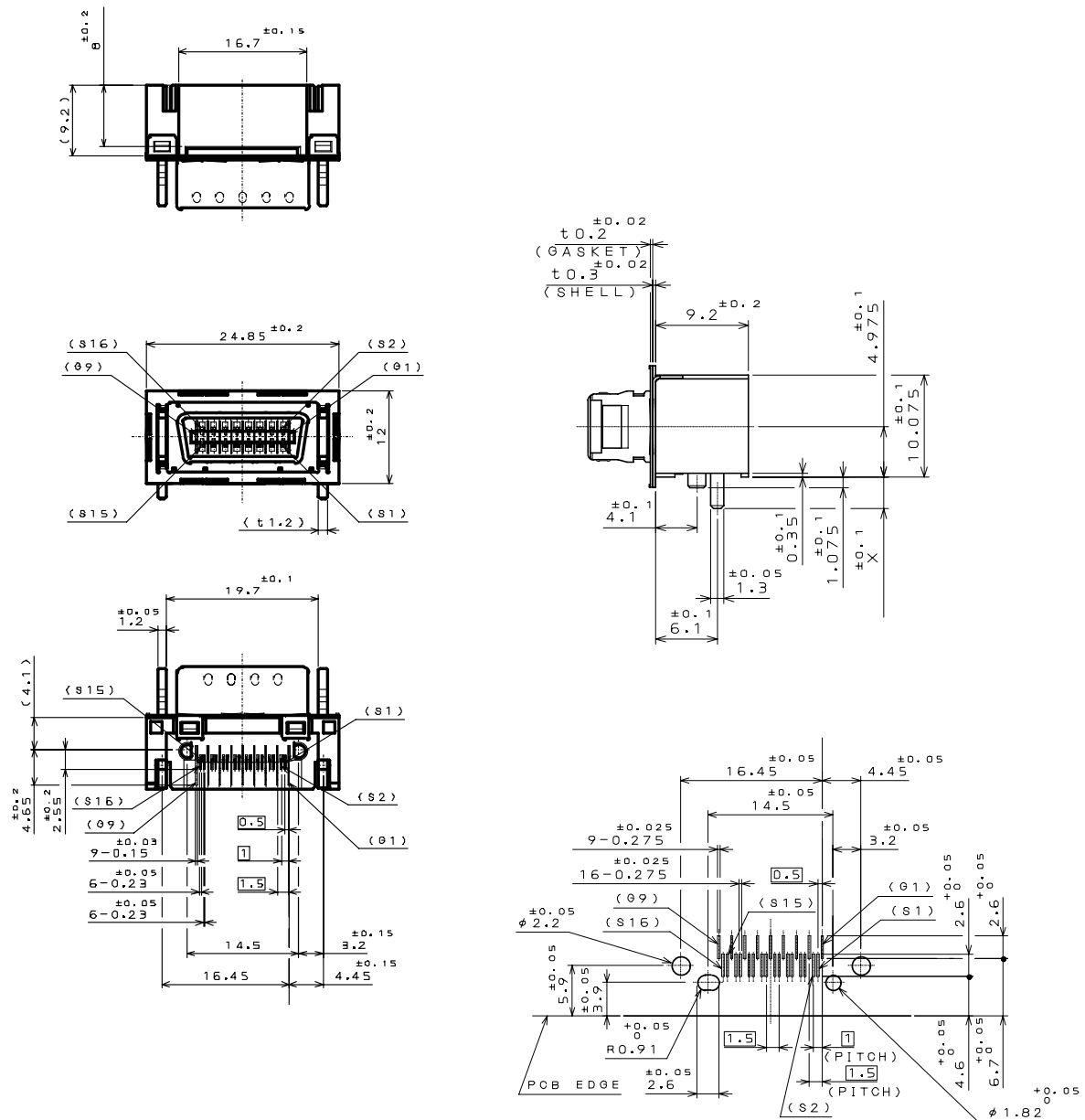
-Cable Harness

Series	DG1	P ***	S	**	L ****	R	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

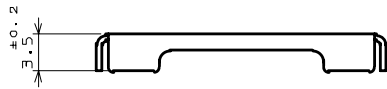
■ Receptacle

<4x>  
-DG1R025HS\*\*

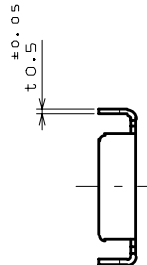
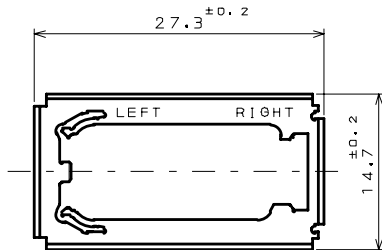


APPLICABLE P.C.B. DIMENSION(REF.)

-D029-50198 (Clip for panel installation)

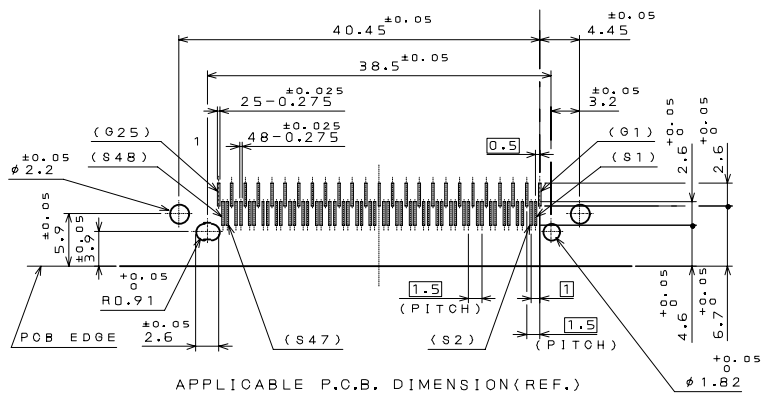
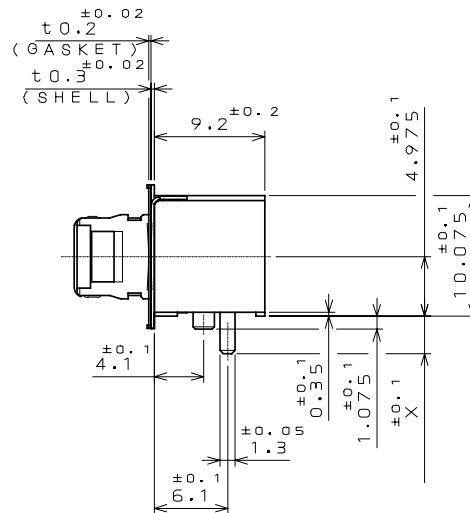
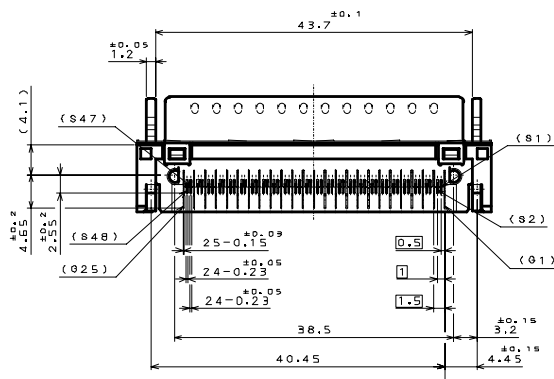
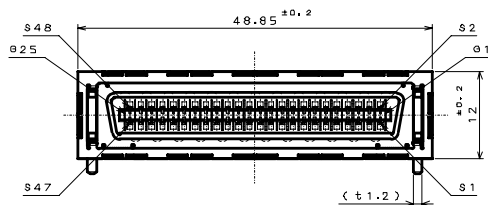
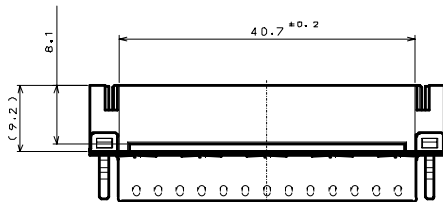


Compliant with 1.0mm-thick panel  
InfiniBand Standard

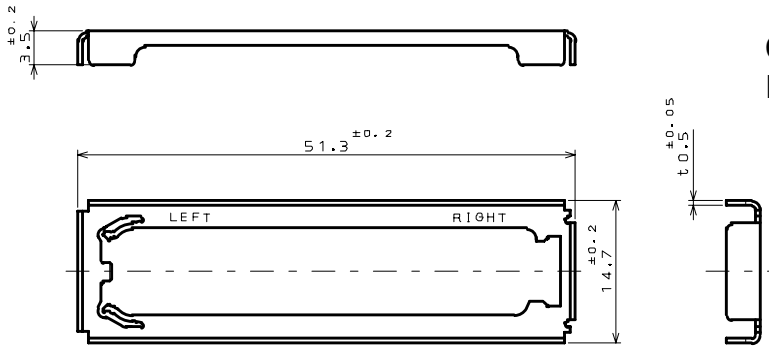


<12x>

-DG1R073HS\*\*

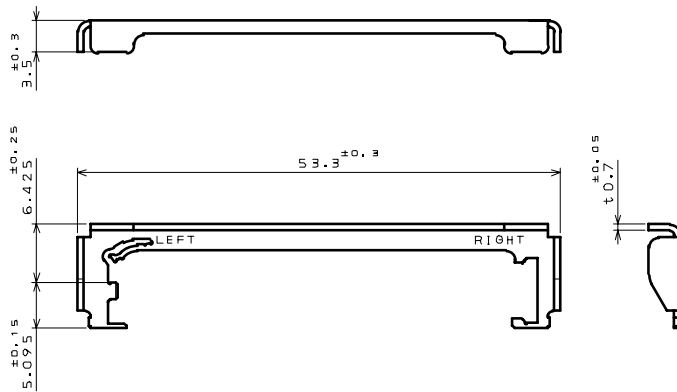


-D029-50197 (Clip for panel installation )



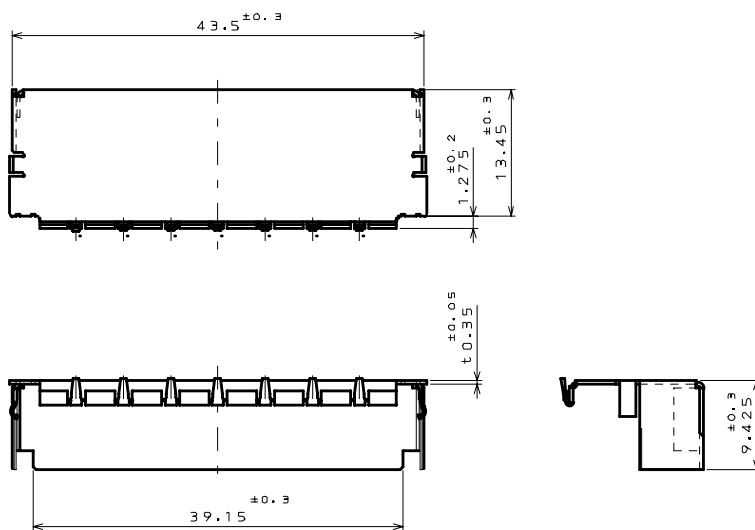
Compliant with 1.0mm-thick panel  
InfiniBand Standard

-D029-50199 (Clip for PCI panel installation)



Compliant with 0.8mm-thick panel  
PCI Standard

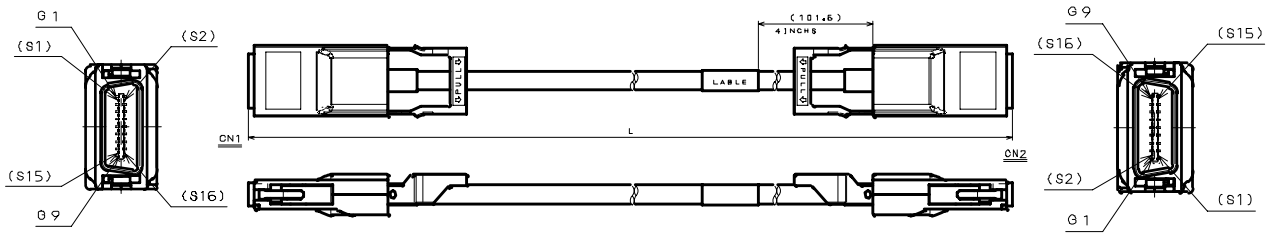
-D283-50016R (Shield cover for EMI)



EMI shield compliant only with  
12x, at present.

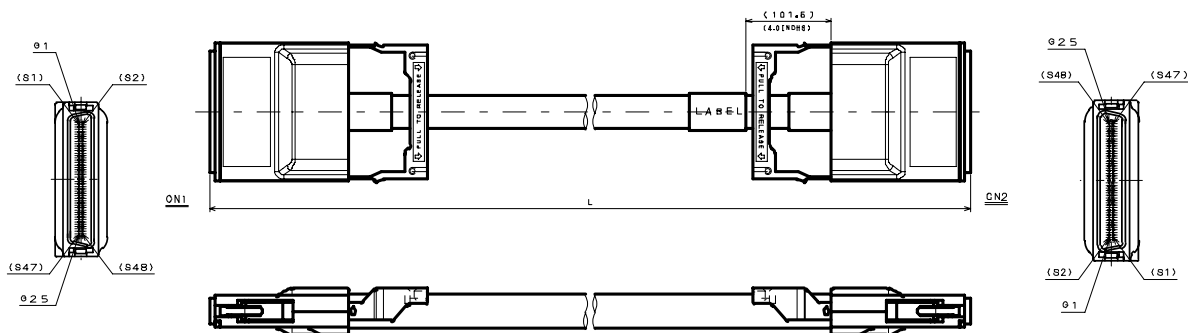
## ■ Cable Assembly

- 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

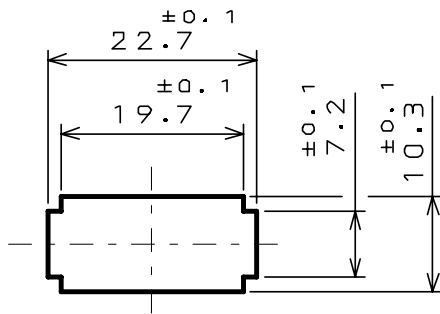
- 12x Harness



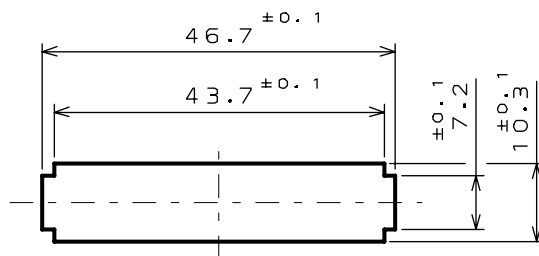
Applicable Cable	L Dimensions	Part Number
AWG#26	1m	DG1P073S26L0100R
	3m	DG1P073S26L0300R
	5m	DG1P073S26L0500R
	10m	DG1P073S26L1000R
AWG#28	1m	DG1P073S28L0100R
	3m	DG1P073S28L0300R
	5m	DG1P073S28L0500R
	10m	DG1P073S28L1000R

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.

**Japan Aviation Electronics Industry, Limited**

Product Marketing Division  
 Aobadai Building, 3-1-19, Aobadai, Meguro-ku, Tokyo 153-8539  
 Phone: +81-3-3780-2787 FAX: +81-3-3780-2946

\* The specifications in this brochure are subject to change without notice. Please contact JAE for information.  
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