



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



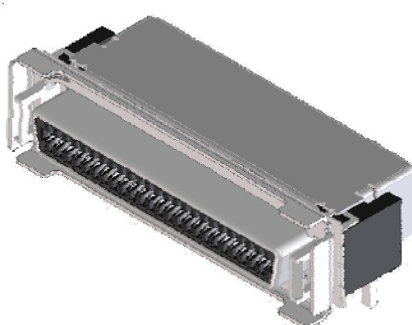
DG1R025HS*
(4x Receptacle)

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

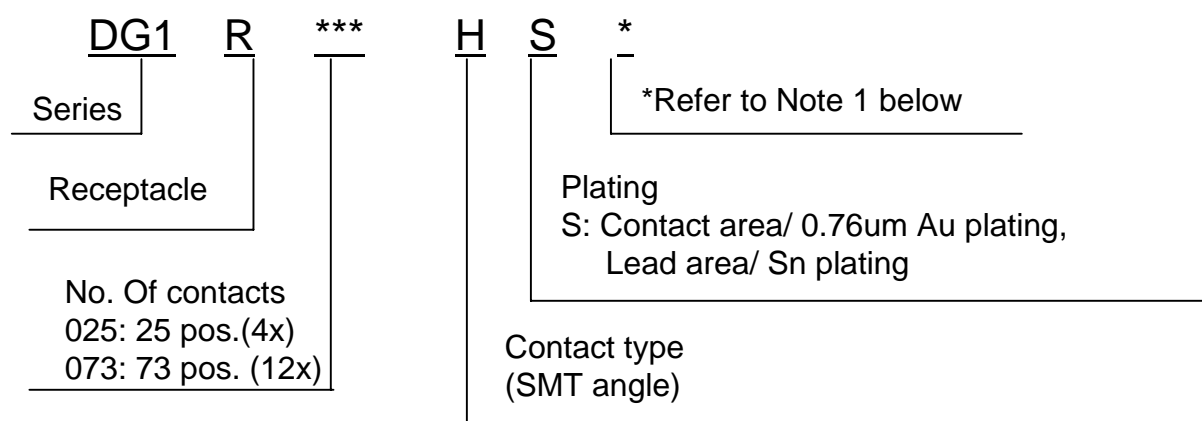
Using Cable Harness

■ 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

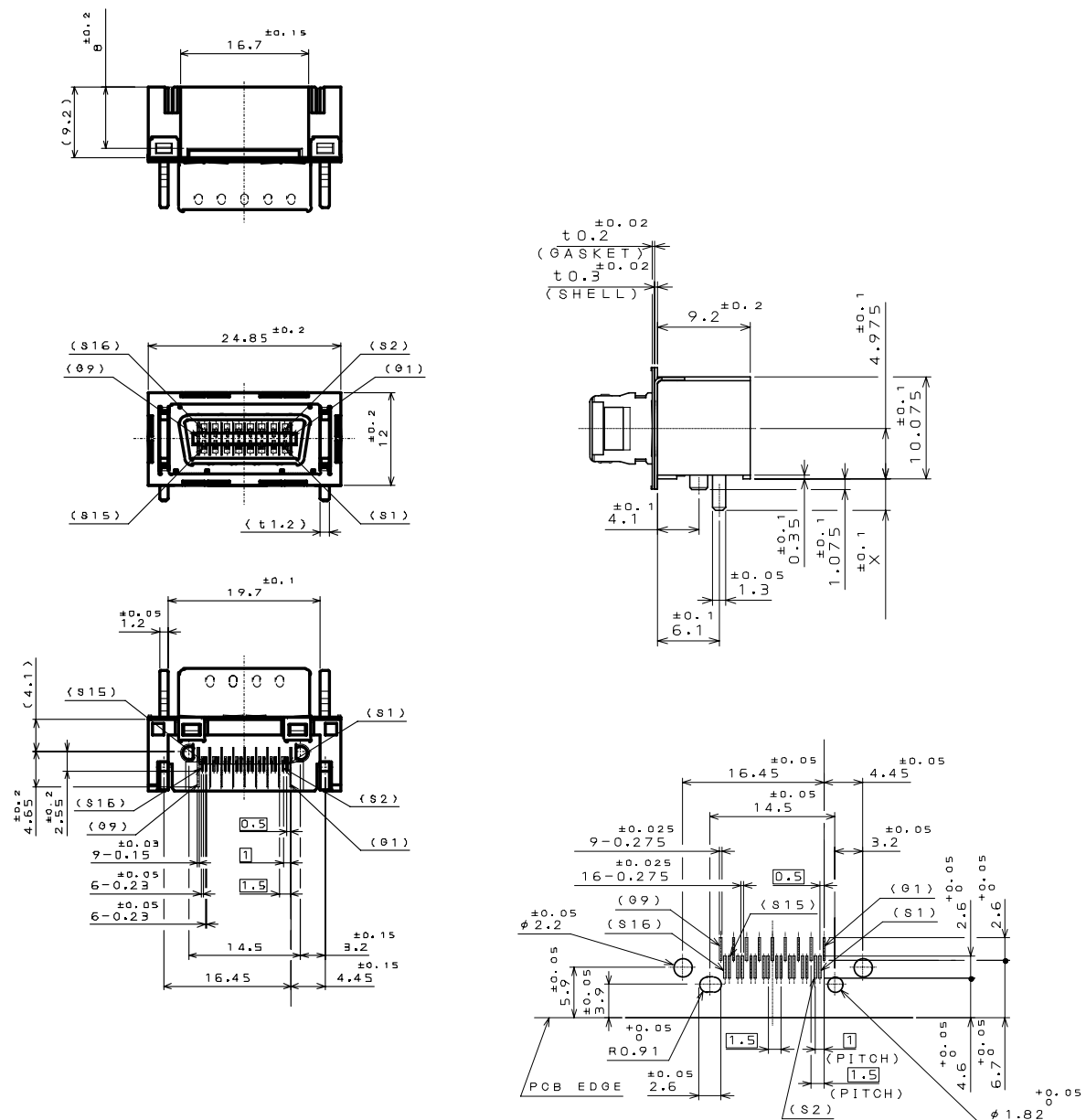
DG1	P ***	S	**	L ****	R
Series					RoHS Compliant
Plug	025: 4x 073: 12x				Cable length(cm): 0100:100cm 0300:300cm 0500:500cm 1000:1000cm
Connection	S: Soldering			Cable size: 24: AWG#24 26: AWG#26 28: AWG#28	

Dimensions and Design

■ Receptacle

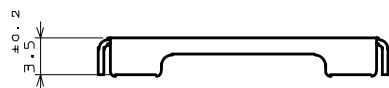
<4x>

-DG1R025HS**

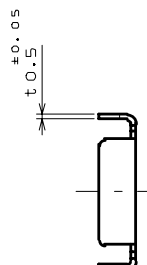
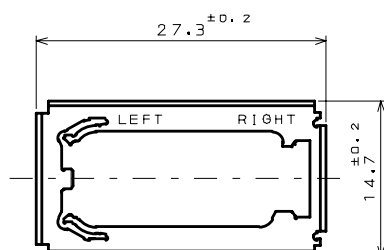


APPLICABLE P.C.B. DIMENSION(REF.)

-D029-50198 (Clip for panel installation)

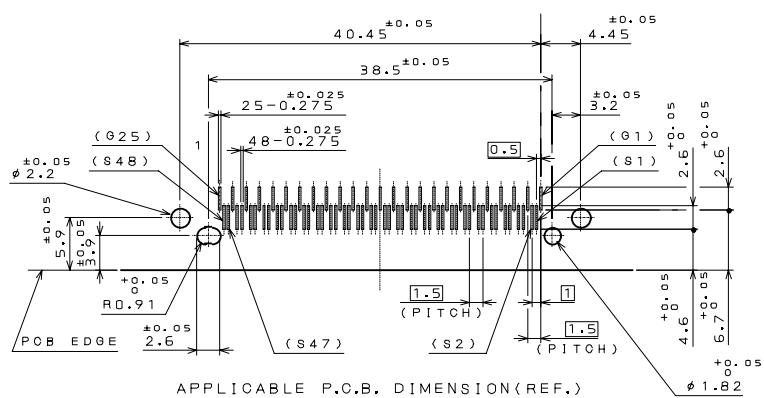
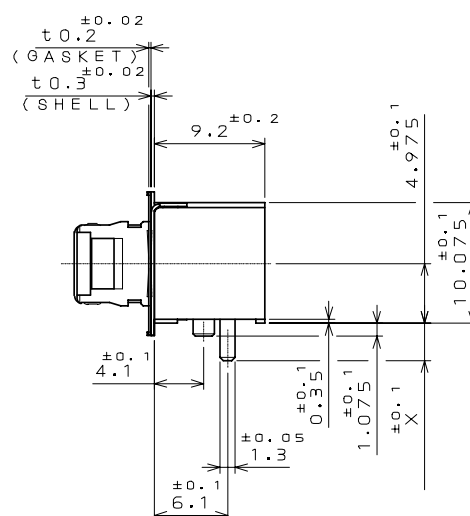
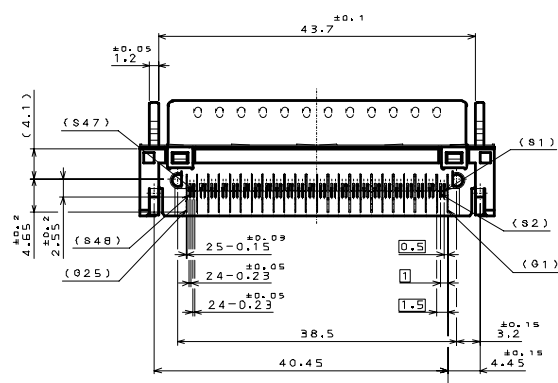
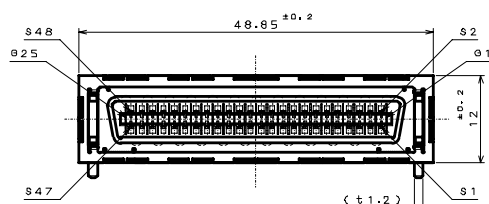
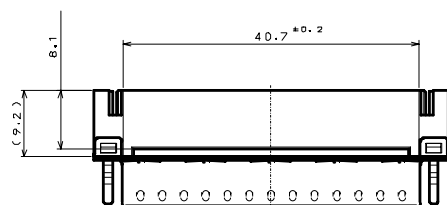


Compliant with 1.0mm-thick panel
InfiniBand Standard

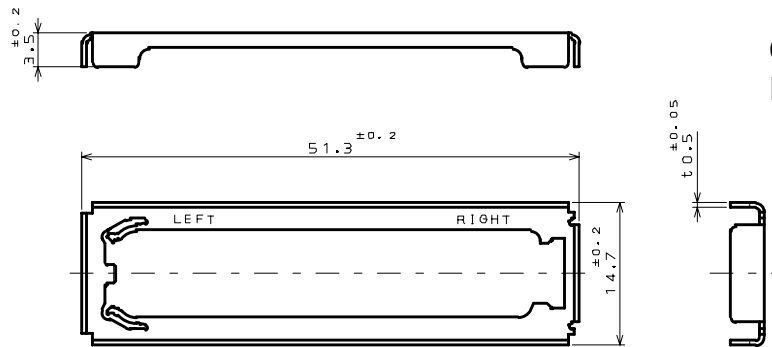


<12x>

-DG1R073HS**

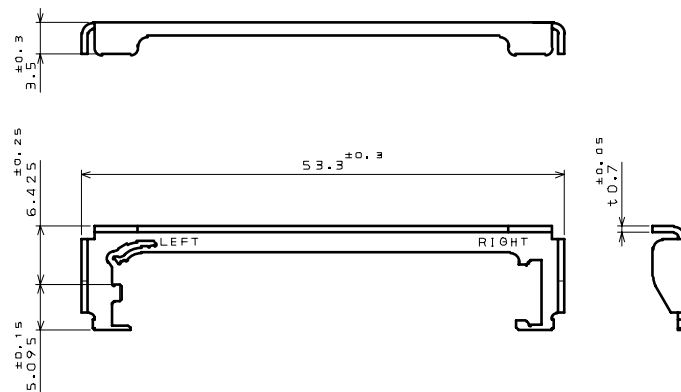


-D029-50197 (Clip for panel installation)



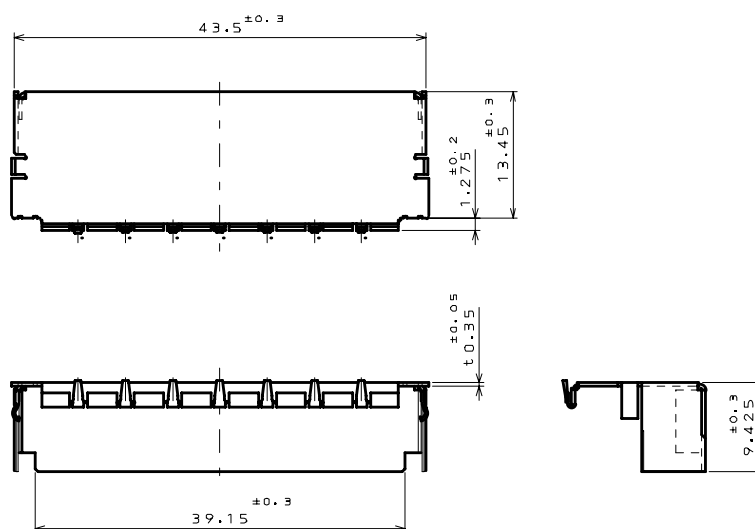
Compliant with 1.0mm-thick panel
InfiniBand Standard

-D029-50199 (Clip for PCI panel installation)



Compliant with 0.8mm-thick panel
PCI Standard

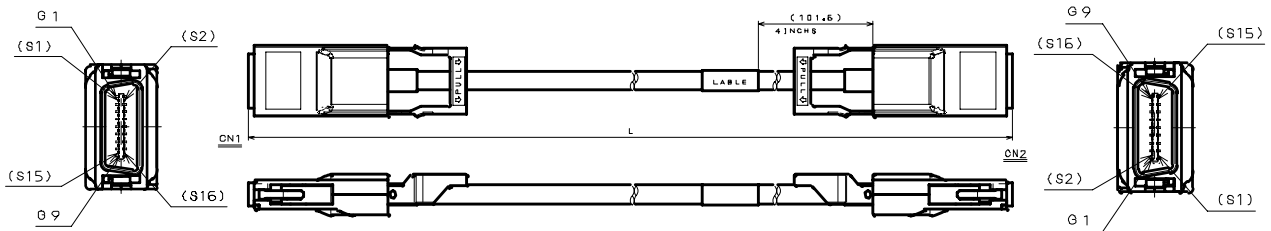
-D283-50016R (Shield cover for EMI)



EMI shield compliant only with
12x, at present.

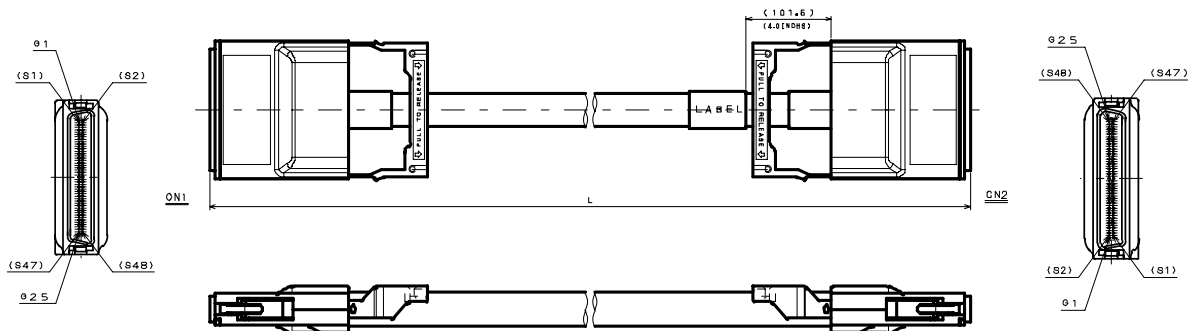
■ Cable Assembly

• 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

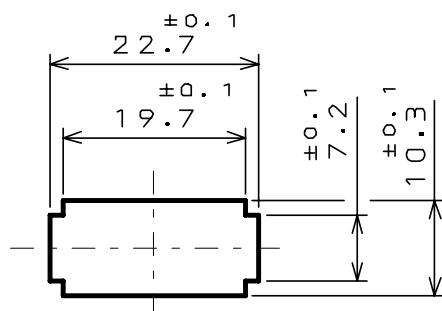
• 12x Harness



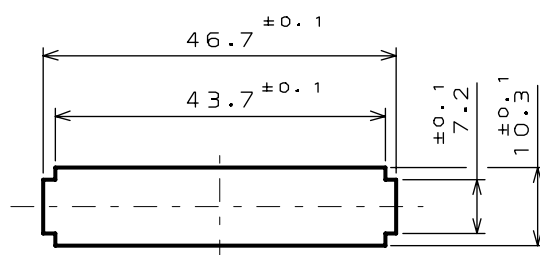
Applicable Cable	L Dimensions	Part Number
AWG#26	1m	DG1P073S26L0100R
	3m	DG1P073S26L0300R
	5m	DG1P073S26L0500R
	10m	DG1P073S26L1000R
AWG#28	1m	DG1P073S28L0100R
	3m	DG1P073S28L0300R
	5m	DG1P073S28L0500R
	10m	DG1P073S28L1000R

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			

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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.