NEW

Interface connector conforming to InfiniBand Standard

DG1 Series

CONNECTOR

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 thickness1.0mm 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

■No. of contacts
        <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:
        Insertion force   <4x>/ 56N max.
                           <12x>/ 73N max.
        Withdrawal force <4x>/ 49N max.
                           <12x>/ 59N max.

■Rated Current: 0.5A

■Insulation resistance: 1000M ohm min.

■Life time: 250 times

■Impedance:100 ohm +/-10%(peak)

■Crosstalk: Near-end 4% max.

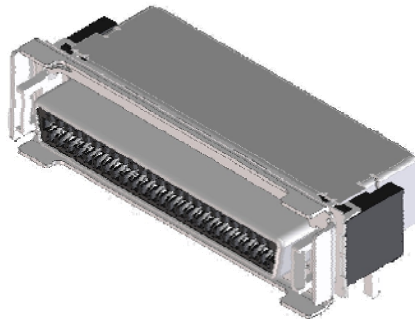■ **DG1 Series**

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

DG1 R *** H S *

Series

Receptacle

No. Of contacts
025: 25 pos.(4x)
073: 73 pos. (12x)

Contact type
(SMT angle)

Plating
S: Contact area/ 0.76um Au plating,
Lead area/ Sn plating

*Refer to Note 1 below
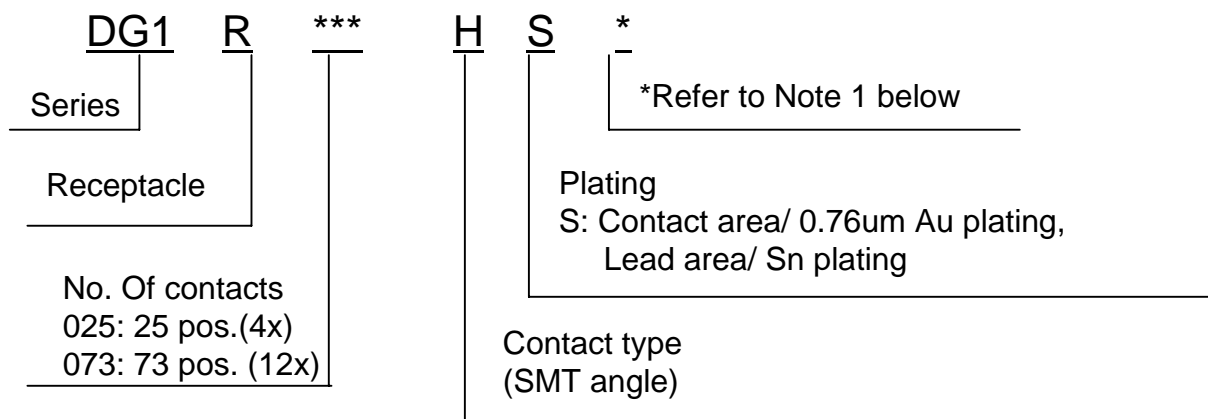
*Note 1

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

Plug　025: 4x
　　　073: 12x

Connection
S: Soldering

RoHS Compliant

Cable length(cm): 0100:100cm
　　　　　　　　　0300:300cm
　　　　　　　　　0500:500cm
　　　　　　　　　1000:1000cm

Cable size:　24: AWG#24
　　　　　　　26: AWG#26
　　　　　　　28: AWG#28
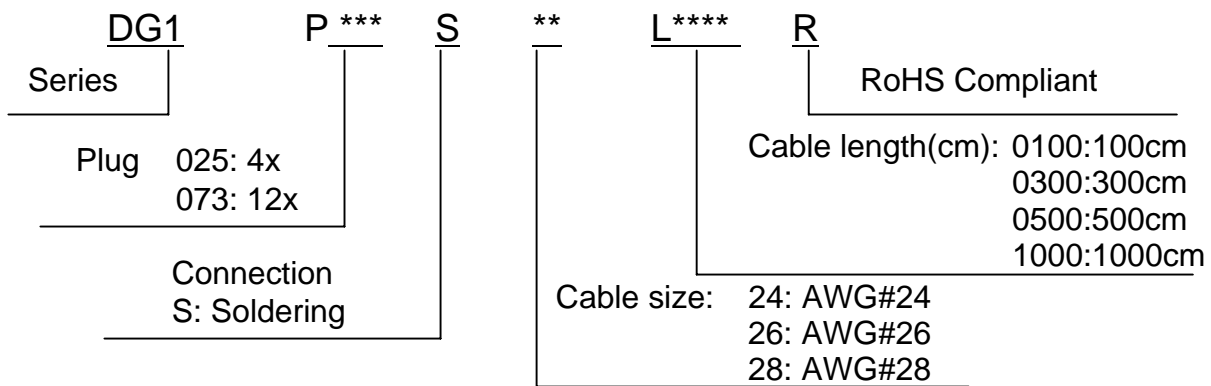
Dimensions and Design

■ **Receptacle**

<4x>
-DG1R025HS**
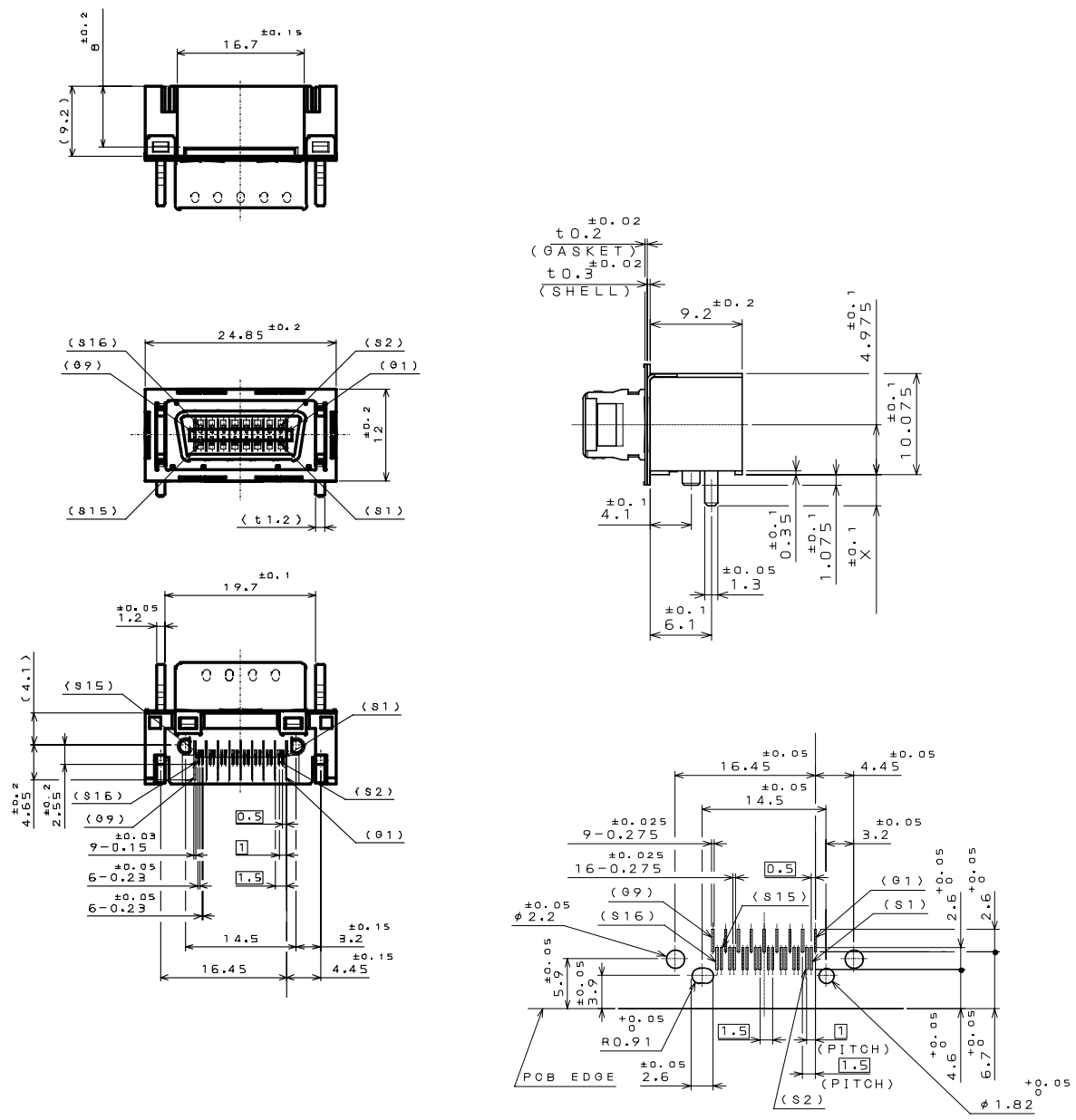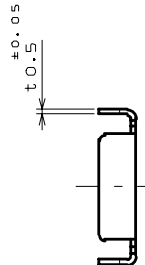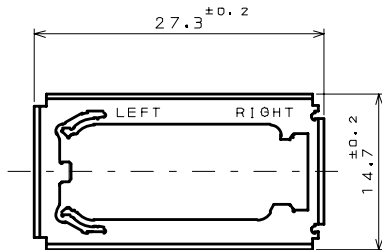

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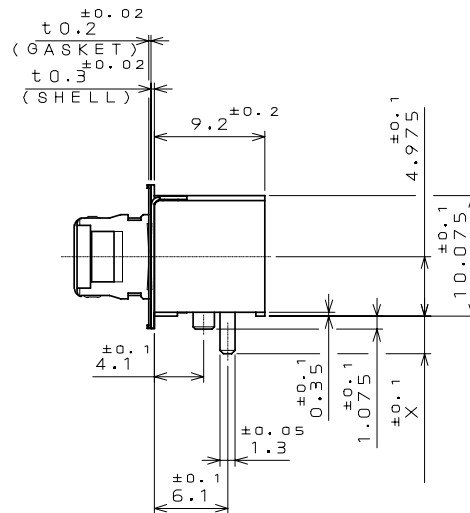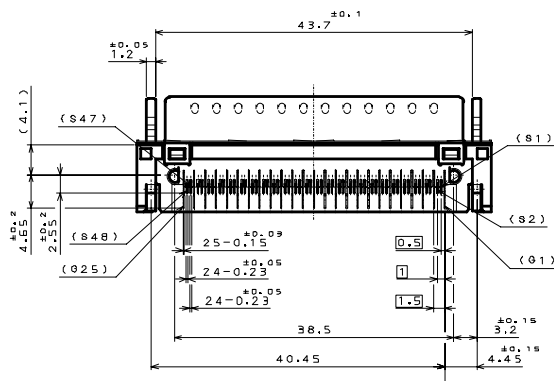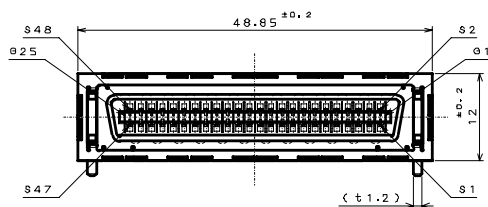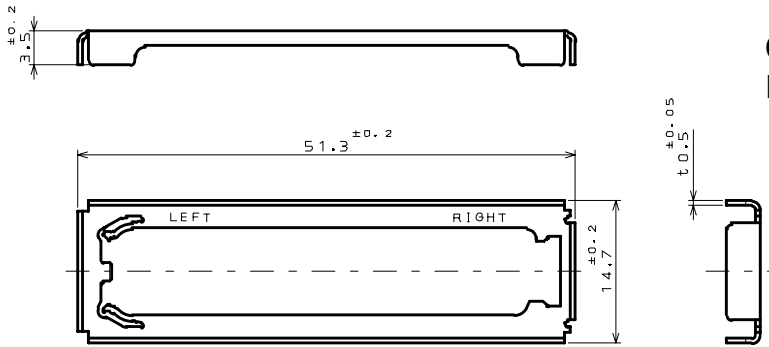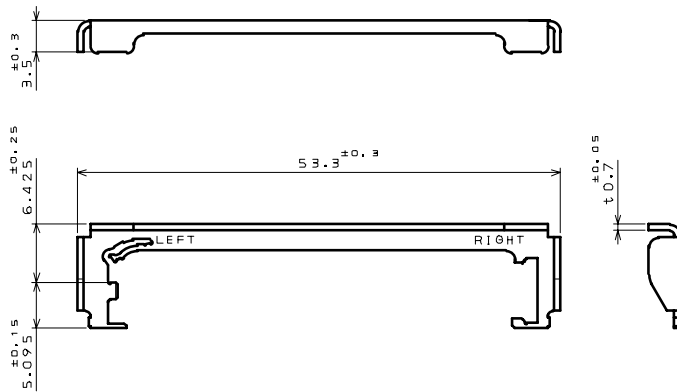
-D029-50198 (Clip for panel installation)
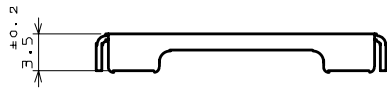
Compliant with 1.0mm-thick panel
InfiniBand Standard

<12x>

-DG1R073HS**
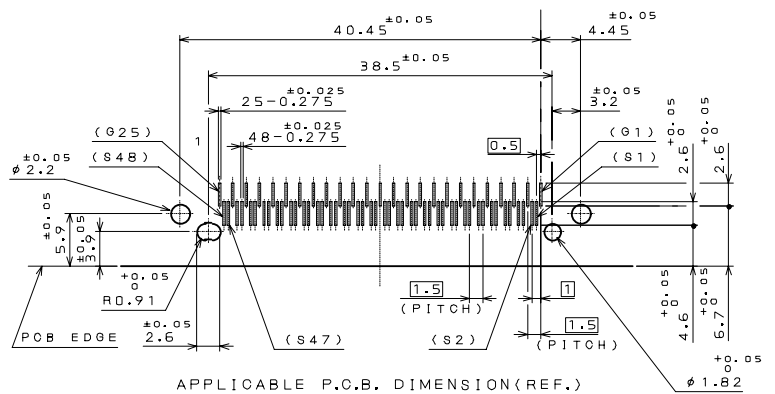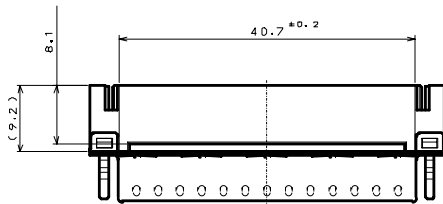
APPLICABLE P.C.B. DIMENSION(REF.)

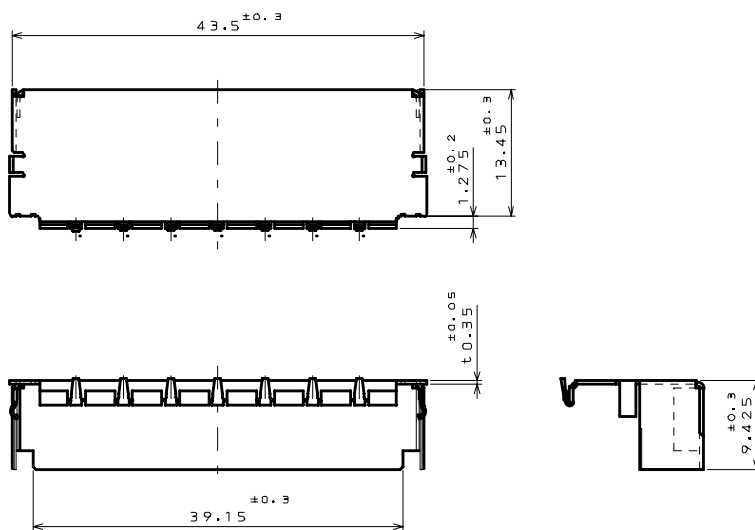-D029-50197 (Clip for panel installation)

Compliant with 1.0mm-thick panel
InfiniBand Standard

-D029-50199 (Clip for PCI panel installation)
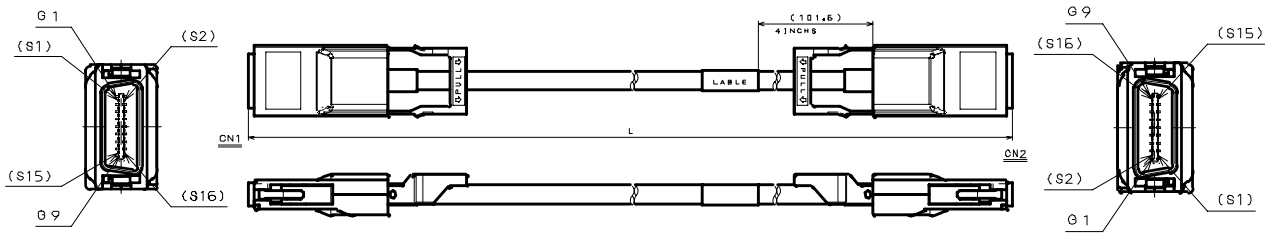
Compliant with 0.8mm-thick panel
PCI Standard

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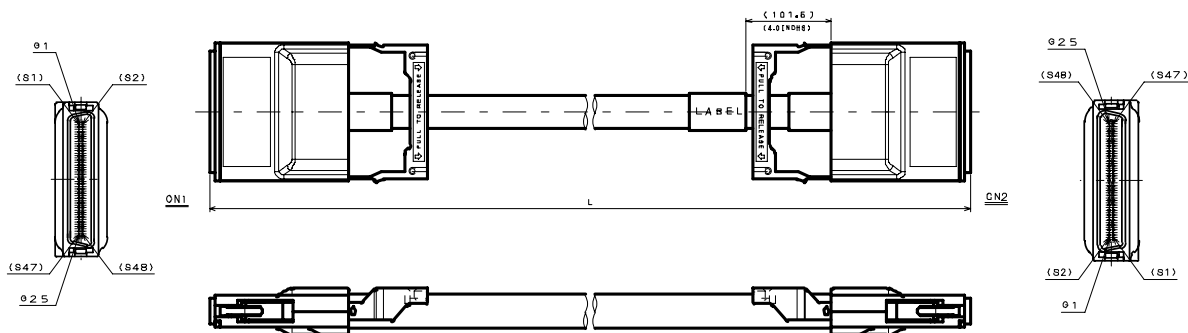
Applicable Cable	L Dimensions	Part Number
AWG#26	1m	DG1P073S26L0100R
	3m	DG1P073S26L0300R
	5m	DG1P073S26L0500R
	10m	DG1P073S26L1000R
AWG#28	1m	DG1P073S28L0100R
	3m	DG1P073S28L0300R
	5m	DG1P073S28L0500R
	10m	DG1P073S28L1000R

Applicable dimension for receptacle panel

・4x Receptacle
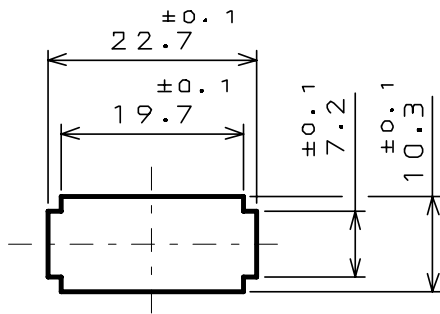
・12x Receptacle
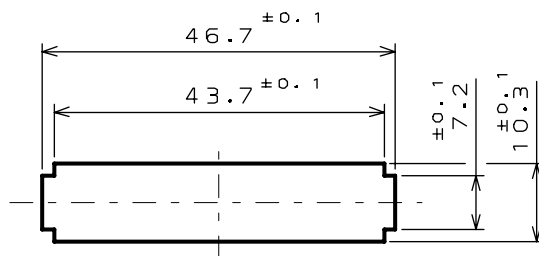
Technical Information

	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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