RoHS-Compliant Small Form Factor Pluggable Press-Fit Cage, 2.19 mm Pin Length

PL-KP2-00-000-16

Key Features

- **Compatible with all MSA-compliant SFP transceivers and PCB layouts for single and double sided applications**
- **Enhanced EMI performance at datarates above 4Gbps**
- **RoHS-compliant and lead-free**

Applications

- Switch and hub devices
- Mass storage systems interconnect
- Host adapter cards
- Enterprise switch interconnects

The unique lead-free and RoHS-Compliant, pluggable, press-fit cage represents one of JDSU's complementary products to the Small Form Factor Pluggable (SFP) transceivers. Its patented design enables enhanced EMI performance using improved shielding between the cage and bezel. Optimized for use with all transceiver products complying with the SFP multisource agreement (MSA), the cage design allows for low-cost implementation using standard manufacturing processes. Its hardened spring-tempered material, plus excellent material memory characteristics, further provide for consistent transceiver mate/de-mate performance that provides for port flexibility over the life of the system.

Highlights

- Industry's most robust and sturdy cage design optimized for all SFP applications, including Fibre Channel, Gigabit Ethernet, and SONET
- Enhanced EMI performance due to improved mechanical shielding
- Supports all industry SFP transceivers, using MSA-compliant board layouts and hole sizes for single and double sided applications
- Extensive compatibility testing with industry-wide MSA-based modules for interoperability in multiple vendor implementation
- Backward compatible design offers superior mechanical stability, simplifying implementation to customer PCBs
- Tested for common applications and standard industry processes to allow seamless integration into manufacturing without additional equipment or requirements
- Excellent material memory characteristics provide for high cage retention to PCB, reducing field failures due to cage pull up

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Features

- RoHS-compliant and lead-free
- Superior EMI performance at 4Gbps
- Press-fit attachment
- Proven SFP MSA compliant transceiver cage
- Supports MSA compliant board layout and hole sizes
- Tested for insertion force and retention
- PCI compatible version available
- Supports multiple system configurations
- Belly-to-belly or dual sided boards
- Robust manufacturing process
- Sturdy construction
- Hardened spring tempered alloy
- Simple assembly
- Utilizes common manufacturing equipment and processes
- 360 degree EMI contact fingers
- Low emission design
- FCC Class B compliant
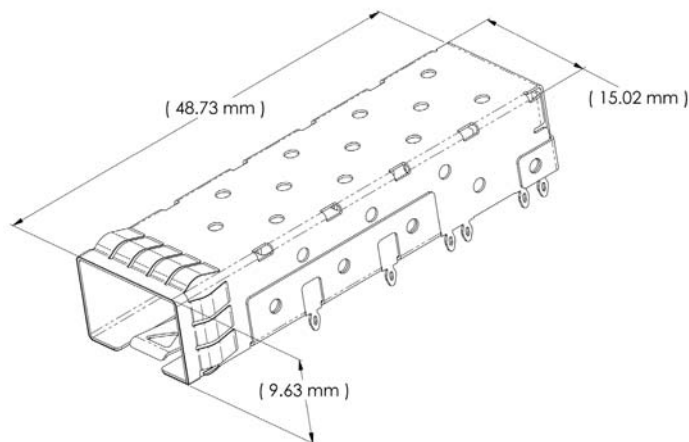
The PL-KP2-00-000-16 press-fit cage accommodates all MSA-compliant SFP transceivers, and is ideally suited for application on printed circuit board (PCB) with a minimum thickness of 0.089 inches for belly-to-belly applications. The excellent material memory characteristics provide high cage retention to the PCB, resulting in fewer field failures.

Section 1   Functional Description

The press Fit Cage is designed in compliance with the Small Form Factor Pluggable (SFP) Transceiver Multisource Agreement (MSA). See Figure 1. PL-KP2-00-000-16 may be used with both the single-sided PCB layout and the double-sided PCB layout and double-sided offset PCB layout.
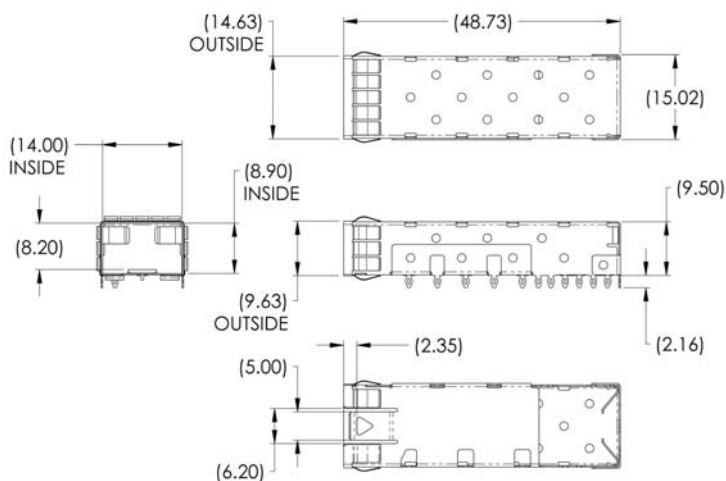

DIMENSIONS IN MILLIMETERS

Figure 1   Standard press-fit cage mechanical drawing (PL-KP2-00-000-16)

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The double-sided PCB layout allows for one cage on the topside of the card and one on the bottom side that is directly under the topside cage (called belly-to-belly) (See Figure 2 and Figure 3). The pins are staggered to avoid interference upon installation. The PCB must be a minimum of 0.089" thick for Belly-to-Belly Applications.
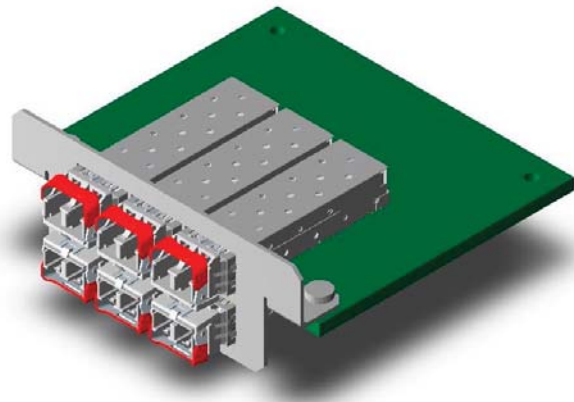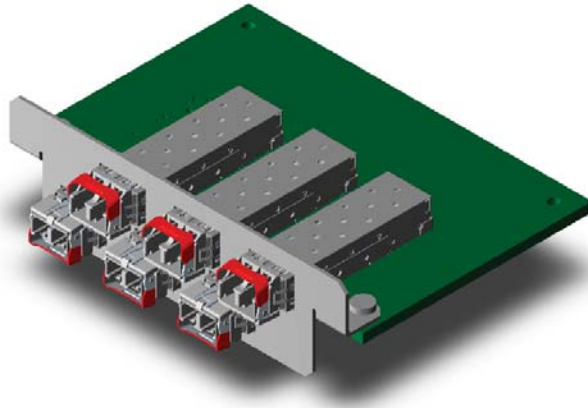

Figure 2   Belly-to-belly mounting

Figure 3   Belly-to-belly front view

The double-sided offset PCB layout allows for cages on both sides of the PCB, but staggered to allow more room for finger access between the units (offset belly-to-belly) (See Figure 4 and Figure 5). The pins are staggered to avoid intereference upon installation. The PCB must be a minimum of 0.089" thick for Offset Belly to Belly applications.

Figure 4   Offset belly-to-belly mounting
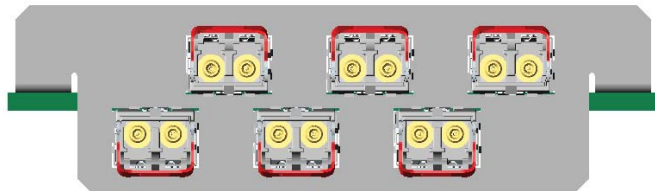
Figure 5   Offset belly-to-belly front view

Section 2   Installation Guide

For best installation, a solid piece of stainless steel or similar metal should be placed flat across the top surface of the cage. The fixture should not flatten the EMI springs at the front of the cage.

Care should be taken not to twist or tilt the cage during the installation process. Excessive force will result in damage to the unit. A press machine similar to the MEP-6T/12T manufactured by Automated Services Group, West Palm Beach, FL would be fine for cage installation.

Cage removal is very easy. Simply insert a flat metal bar or similar object into the cage assembly and lift it up off the PCB. Actual insertion and removal force may vary depending on plating material and finished hole size. Cages should not be re-installed once they are removed from a board.
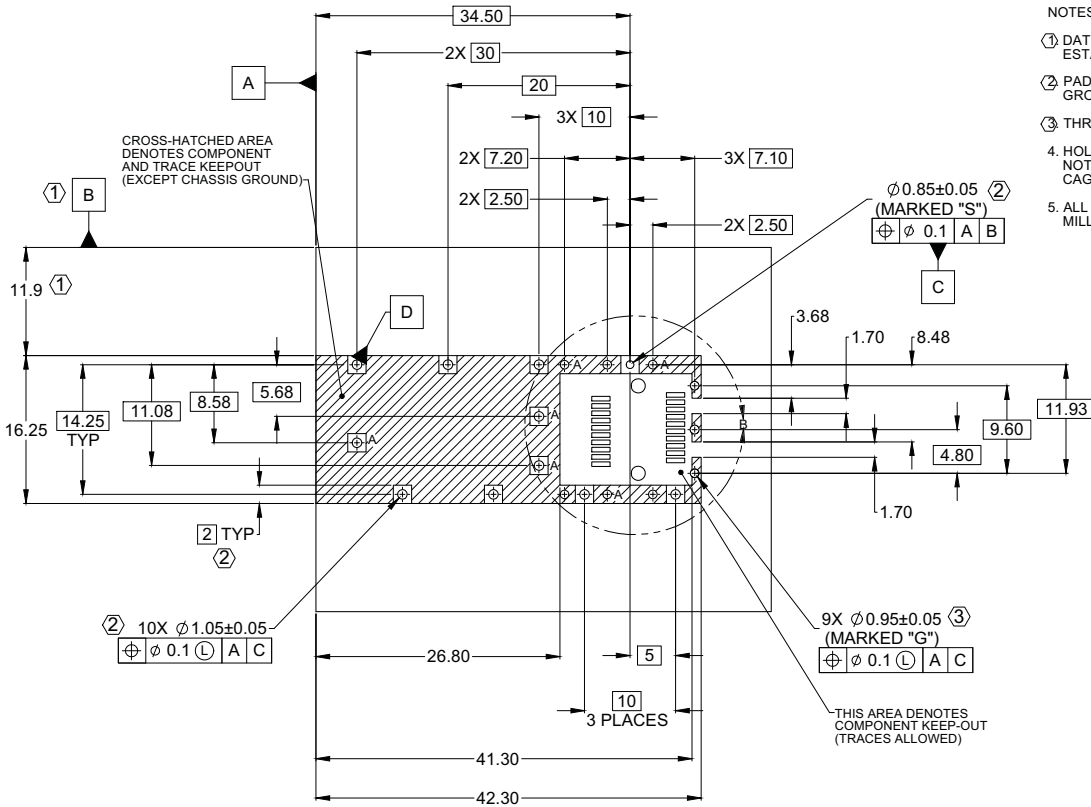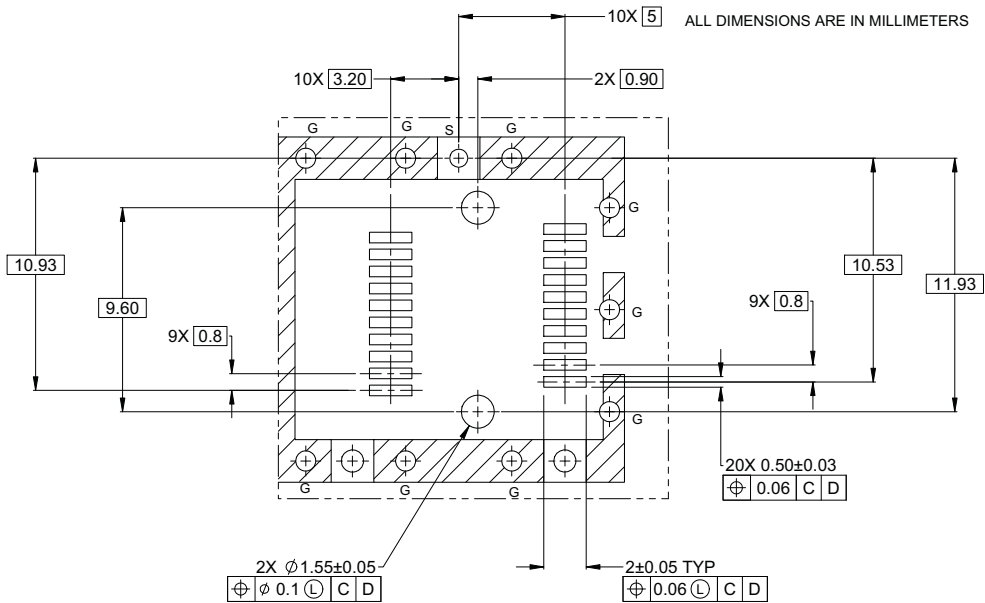
Section 3   Recommended OEM PCB Layouts

NOTES:

1. DATUM AND BASIC DIMENSIONS ESTABLISHED BY CUSTOMER.

2. PADS AND VIAS ARE CHASSIS GROUND 11 PLACES

3. THRU HOLES, PLATING OPTIONAL

4. HOLES DENOTED WITH 'A' ARE NOT REQUIRED WITH PICOLIGHT CAGES (6 PLACES)

5. ALL DIMENSIONS ARE IN MILLIMETERS

Figure 6   Single sided board layout

Figure 7   Single sided detail layout

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CROSS-HATCHED AREA DENOTES COMPONENT AND TRACE KEEPOUT (EXCEPT CHASSIS GROUND)

THIS AREA DENOTES COMPONENT KEEP-OUT (TRACES ALLOWED)

Figure 8   Double sided board layout

ALL DIMENSIONS ARE IN MILLIMETERS

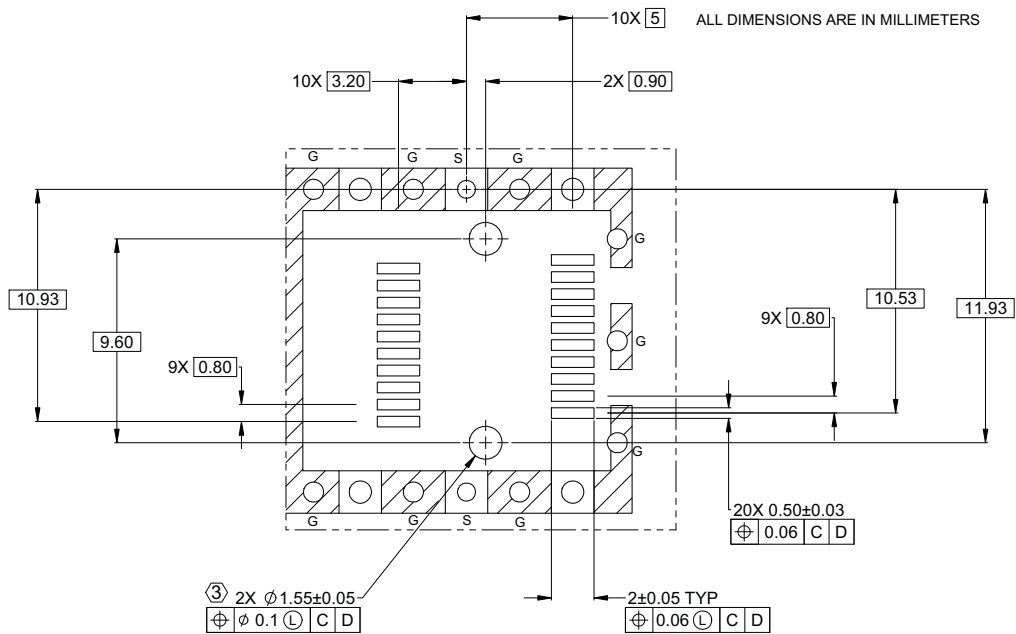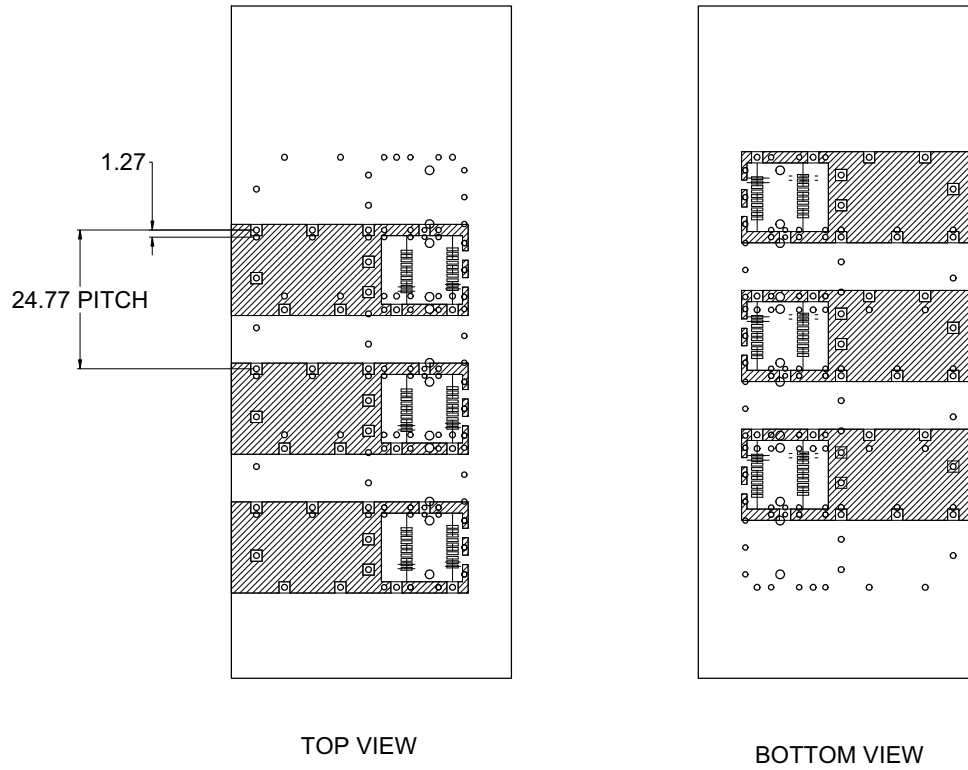**Figure 9   Double sided detail layout**

1.27

24.77 PITCH

TOP VIEW

BOTTOM VIEW

DIMENSIONS ARE IN MILLIMETERS

Figure 10   Double sided offset layout

Section 4   Package and Handling Instructions

The PL-KP2-00-000-16 cages are packaged in card board boxes. Each box has 10 layers of 35 cages in plastic trays. There are 350 cages per box.

Flammability

The PL-KP2-00-000-16 press-fit cage is made from Alloy 77000 sheet metal with a tin-plated BeCu EMI collar welded on.

RoHS Compliance

Compliant per the Directive 2002/95/EC of the European Parliament and of the Council of 27 January 2003 on the restriction of the use of certain hazardous substances in electrical and electronic equipment.

Ordering Information

For more information on this or other products and their availability, please contact your local JDSU account manager or JDSU directly at 1-800-498-JDSU (5378) in North America and +800-5378-JDSU worldwide, or via e-mail at customer.service@jdsu.com.

Sample: PL-KP2-00-000-16

Part Number	Description
PL-KP2-00-000-16	Press-Fit Cage for 0.089" PCB