



# PRODUCT SPECIFICATION

## VLP Latch 240 Ckt Vertical Pressfit DDR2 Dimm

### 1.0 SCOPE

This Product Specification covers the 1.00 mm centerline gold plated DDR2 Dimm connector with vertical compliant termination to mate with 1.27 +/- 0.10 thick memory modules.

### 2.0 PRODUCT DESCRIPTION

#### 2.1 PRODUCT NAME AND SERIES NUMBER (S)

Part Number  
78065

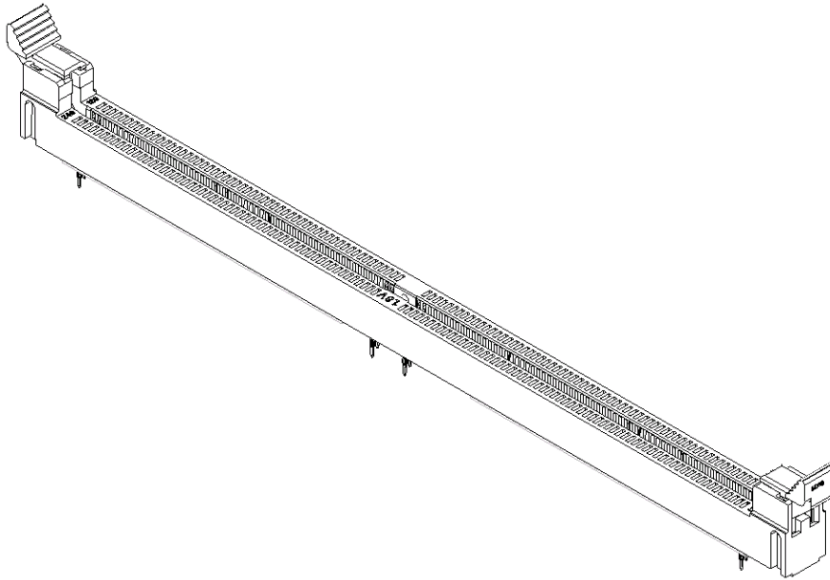
Product Descriptions  
VLP Latch 1mm Pitch 240 Ckt Vertical Press fit DDR 2 DIMM

#### 2.2 DIMENSIONS, MATERIALS, PLATINGS AND MARKINGS

See the appropriate Sales Drawings for information on dimensions, materials, plating and markings, recommended module outlines and footprint Specifications.

#### 2.3 SAFETY AGENCY APPROVALS

UL File : TBA  
CSA File : TBA



TENTATIVE RELEASE: THIS SPECIFICATION IS BASED ON DESIGN OBJECTIVES AND IS STRICTLY TENTATIVE. PRELIMINARY TEST DATA MAY EXIST, BUT THIS SPECIFICATION IS SUBJECTED TO CHANGE BASED ON THE RESULTS OF ADDITIONAL TESTING AND EVALUATION

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DOCUMENT NUMBER: <b>PS-78065-001</b>	CREATED / REVISED BY: <b>VENKAT 2006/07/12</b>	CHECKED BY: <b>LENI 2006/07/12</b>	APPROVED BY: <b>GG LEE 2006/07/12</b>



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## 3.0 APPLICABLE DOCUMENTS AND SPECIFICATIONS

The following documents are part of this specification between the requirements of this specified herewith. In the event of conflict between the requirements of this specification and the product drawings, the product drawings shall take precedence. In the event of conflict between the requirements of this specification and reference documents, this specification shall take precedence.

## 4.0 RATINGS

### 4.1 VOLTAGE

30 Volts AC (RMS) / DC

### 4.2 CURRENT

0.5 Amps/ pin

### 4.3 FIELD LIFE AND TEMPERATURE

Field Life: 3 years

Field Temperature: 60°C

### 4.4 OPERATING TEMPERATURE

-55°C ~ +85°C

## 5.0 PERFORMANCE

### 5.1 ELECTRICAL REQUIREMENTS

ITEM	DESCRIPTION	TEST CONDITION	REQUIREMENT
1	<b>Contact Resistance (Low Level)</b>	Mate connectors: apply a maximum voltage of 20 mV and a current of 100 mA. EIA-364-23	30 milliohms Max Initial $\Delta R$ : 20 milliohms Max.
2	<b>Insulation Resistance</b>	Unmate & unmount connectors: apply a voltage of 500 VDC between adjacent terminals and between terminals to ground. EIA-364-21	1000 Megohms MINIMUM
3	<b>Dielectric Withstanding Voltage</b>	Apply 500 VAC for 1 minute between adjacent terminals of an unmated connector. EIA-364-20	No breakdown

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## 5.2 MECHANICAL REQUIREMENTS

ITEM	DESCRIPTION	TEST CONDITION	REQUIREMENT
4	<b>Module Insertion Force (w/ Latches)</b>	Insert a PCB at a rate of $25 \pm 6$ mm ( $1 \pm \frac{1}{4}$ inch) per minute. Latches shall be included in the test. See Sales drawing for PCB/ Module details.	15.9kgf (35lbs) max.
5	<b>Terminal Retention Force</b>	Axial pullout force on the terminal in the housing at a rate of $25 \pm 6$ mm ( $1 \pm \frac{1}{4}$ inch) per minute. EIA 364-29	Contact: 0.30kgf Min.
6	<b>Durability (Preconditioning)</b>	Mate and unmated connectors up to 5 cycles at a maximum rate of 10 cycles per minute prior to Environmental Tests.	Contact Resistance: $\Delta R$ : 20 milliohms Max.
7	<b>Durability</b>	Mate and unmated connectors up to 25 cycles at a maximum rate of 10 cycles per minute prior to Environmental Tests.	Contact Resistance: $\Delta R$ : 20 milliohms Max.
8	<b>Vibration</b>	EIA-364-28, Test Condition VII Power Spectral Density: $0.02g^2/Hz$ Overall rms: 3.10g Min Duration: 15 mins in each X, Y, Z axis	Contact Resistance: $\Delta R$ : 20 milliohms Max.
9	<b>Shock (Mechanical)</b>	Mate connectors and shock at 30 g's with $\frac{1}{2}$ sine wave (11 milliseconds) shocks in the $\pm X$ , $\pm Y$ , $\pm Z$ axis (18 shocks total). Module card height 30mm, weighted $35 \pm 5g$ . EIA-364-27	Contact Resistance: $\Delta R$ : 20 milliohms Max.
10	<b>Module Ripout Force</b>	Pull up from the center of the module with the latches closed at a rate of $25 \pm 6$ mm/ min. ( $1 \pm \frac{1}{4}$ inch).	9.1kgf (20lbs) min. retention force of the module in connector with no damage
11	<b>Reseating</b>	Manually mate and unmate the connector with module card for 3 cycles.	No damage.
12	<b>Compliant pin insertion force to PCB (single)</b>	Insert compliant pin into applicable PCB hole with min. hole size 0.51mm at a rate of $25 \pm 6$ mm per minute.	4.5kgf (10lbs) max. per pin.
13	<b>Compliant pin retention force (single)</b>	Pull compliant pin axially from PCB with max. hole size 0.64mm at a rate of $25 \pm 6$ mm per minute.	0.50kgf (1.1lbs) min. per pin.

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## 5.2 MECHANICAL REQUIREMENTS (CON'T)

ITEM	DESCRIPTION	TEST CONDITION	REQUIREMENT
14	Latch Overstress Force	Apply an actuation force on the latch at a rate of 25 ± 6mm/min (1 ± ¼inch) in the fully open position.	3.5kgf (7.7lbs) min. force held for 10 sec. With no damage.
15	Latch Actuation Force	Apply an actuation force on the latch at a rate of 25 ± 6 mm/min (1 ± ¼ inch) with recommended test module inserted into connector.	The force fully actuate the latch open shall be 4.5kgf (10lbs) max. per latch.

## 5.3 ENVIRONMENTAL REQUIREMENTS

ITEM	DESCRIPTION	TEST CONDITION	REQUIREMENT										
16	Shock (Thermal)	Mate connectors; expose to 5 cycles of: <table border="1"> <thead> <tr> <th>Temperature °C</th> <th>Duration (Minutes)</th> </tr> </thead> <tbody> <tr> <td>-55 +0/-3</td> <td>30</td> </tr> <tr> <td>+25 ±10</td> <td>5 MAXIMUM</td> </tr> <tr> <td>+85 +3/-0</td> <td>30</td> </tr> <tr> <td>+25 ±10</td> <td>5 MAXIMUM</td> </tr> </tbody> </table> EIA-364-32	Temperature °C	Duration (Minutes)	-55 +0/-3	30	+25 ±10	5 MAXIMUM	+85 +3/-0	30	+25 ±10	5 MAXIMUM	Contact Resistance: ΔR : 20 milliohms Max. Appearance: No Damage
Temperature °C	Duration (Minutes)												
-55 +0/-3	30												
+25 ±10	5 MAXIMUM												
+85 +3/-0	30												
+25 ±10	5 MAXIMUM												
17	Temperature Life (Preconditioning)	Mate connectors; expose to: 24 hours at 105 ± 3°C Per EIA-364-17	Contact Resistance: ΔR : 20 milliohms Max. Appearance: No Damage										
18	Temperature Life	Mate connectors; expose to: 48 hours at 105 ± 3°C Per EIA-364-17	Contact Resistance: ΔR : 20 milliohms Max. Appearance: No Damage										
19	Temperature Rise	Mate the connectors, series 6 contacts and measure the temperature rise at the rated current of 0.5A after 4 hours.	Maximum Temperature Rise: 30 °C above ambient.										
20	Cyclic Temperature & Humidity	Cycle the connector between 25°C, with RH of 90-98% and 65°C, with RH of 80-98%. Ramp times should be 2.5hours and dwell times should be 2.5hours. Dwell times start when the temperature and humidity have stabilized within the specified levels. Expose to 10 days.  Per EIA-364-31, Method III	Contact Resistance: ΔR : 20 milliohms Max.  Appearance: No Damage										

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## 6.0 TEST SEQUENCE

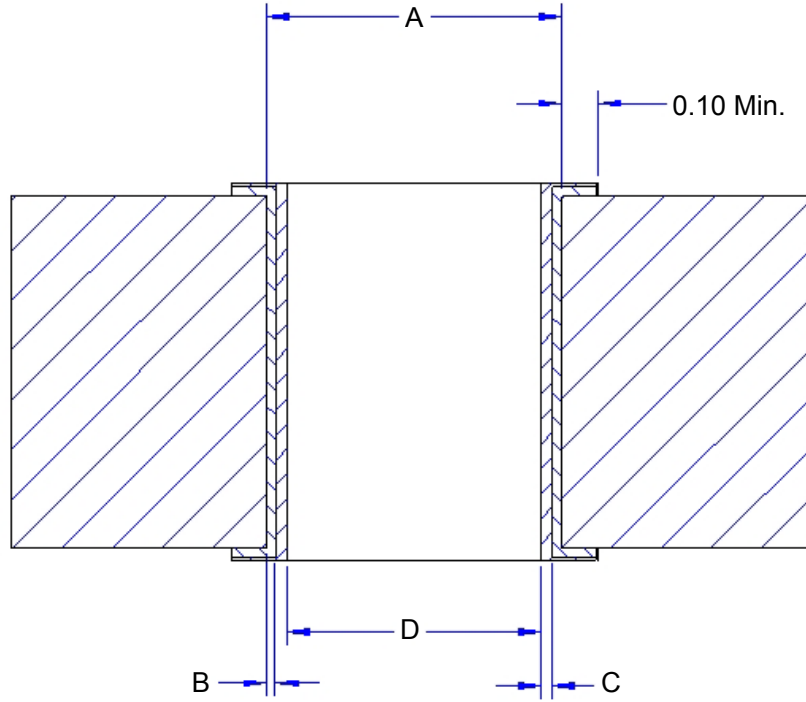
Test Description Sequence	Test Group									
	1	2	3	4	5	6	7	8	9	10
Initial Contact Resistance	1	1	1		1					
Durability (Preconditioning)	2	2	2							
Durability					2					
Insulation Resistance				1 5						
Dielectric Withstand Voltage				2 6						
Contact Resistance	4 6	4 6 8	4 6 8		3					
Temperature Life (Preconditioning)			3							
Temperature Life	3									
Thermal Shock		3		3						
Mechanical Shock			7							
Vibration			5							
Reseating	5	7								
Cyclic Temp & Humidity		5		4						
Temperature Rise						1				
Module Insertion Force							1			
Module Ripout Force							2			
Compliant pin Insertion force to PCB								1		
Compliant pin Retention force to PCB								2		
Contact Retention									1	
Latch Actuation Force										1
Latch Overstress Force										2
Sample Size per Test Group	5	5	5	5	5	5	5	5	5	5

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## 7.0 PRINTED CIRCUITS BOARD SPECIFICATIONS



A	Drilled Hole	Ø0.66mm
B	Copper	0.025mm Min.
C	Tin / Lead or Tin	0.005 ~ 0.015mm
D	Plated Thru Hole	Ø0.51 ~ 0.64mm

### PLATED THRU HOLE SPECIFICATION

## 8.0 PACKAGING

Parts shall be packed in trays and protected against damage during handling, transportation and storage.

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