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Jameco Part Number 1444527





1.0 SCOPE

This specification covers the .8mm centerline VHDCI Plug and Receptacle assemblies.

2.0 PRODUCT DESCRIPTION

2.1 PRODUCT NAME AND PART NUMBER

<u>Product Name</u>	<u>Part Number</u>
VHDCI PLUG KIT	71425 Series
RIGHT ANGLE RECEPTACLE ASSEMBLY	71430 Series
SMT RECEPTACLE ASSEMBLY	73776 Series
STACKED RECEPTACLE ASSEMBLY	74337 Series

2.2 DIMENSIONS, MATERIALS, PLATINGS AND MARKINGS

See the appropriate Sales Drawings for information on dimensions, materials, platings and markings, recommended panel mounting procedures and specifications.

3.0 APPLICABLE DOCUMENTS AND SPECIFICATIONS

- SD- 71430-003 (Right Angle Receptacle Sales Drawing)
- PK-70873-0823 (Right Angle Receptacle Packaging Specification)
- SD-73776-002 (Vertical SMT Receptacle Sales Drawing)
- PK-70873-0824 (Vertical SMT Receptacle Packaging Specification)
- MS-71425-0002 (Plug Assembly Kit)
- PK-70873-0851 (Plug packaging specification)
- EIA SP-3652, REV. O (Dated 31/07/97) (Spec. for .8mm VHDCI Connector)
- TS-71425-9999 (Test Summary for VHDCI Plug assembly)
- SD-74337-003, -011, -003 (Stacked Receptacle Sales Drawing)
- PK-74337-001 (Stacked Receptacle Packaging Drawing)

	REVISE ON PC ONLY		TITLE	PRODUCT SPECIFICATION	
	B	SEE SHEET 1		0.8mm PITCH VHDCI PLUG/RECEPTACLE ASSEMBLY	
REV.	DESCRIPTION		THIS DOCUMENT CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INC. AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION		
DOCUMENT NUMBER			DIMENSION CLASS:		FILENAME
PS-71425-9999			CRITICAL = 0    MAJOR = 0		PS71425.LWP
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ES-4000-3996 REV. A SHEET 8 95/MAR/10 EC U5-0926 DCBRD07.MWP					



PRODUCT SPECIFICATION



LANGUAGE

ENGLISH

4.0 RATINGS

- 4.1 **VOLTAGE:** 30 Volts AC (RMS)/DC
- 4.2 **CURRENT:** .5 Amps @ 50% Energized
- 4.3 **TEMPERATURE**  
Operating: - 55 °C to + 85 °C
- 4.4 **UL/CSA CERTIFICATION**
  - 1. 71425, 71430, 73776 Series: UL file: E29179
  - 2. 71425, 71430, 73776 Series: CSA file: LR19980-520
  - 3. 74337 Series: UL file: 01NK13745
  - 4. 74337 Series: CSA file: 1194993

5.0 PERFORMANCE

5.1 ELECTRICAL PERFORMANCE :

Item	Test Condition	Requirement
5.1.1 Contact Resistance (Low Level) per EIA SP-3652, Rev.O	Mated Connectors with a maximum voltage of 20mV and a current of 100 mA.	50 milliohm Maximum Initial
5.1.2 Insulation Resistance per EIA 364, Test # 21	Mated Connectors with a voltage of 100 VDC between adjacent terminals and between terminals and mounting panel.	500 Megohms Minimum
5.1.3 Dielectric Withstanding Voltage per EIA 364, Test # 20	Mated Connectors with a voltage of 250 VAC for 1 min. between adjacent terminals.	1 ma max leakage and no breakdown or flashover
5.1.4 Temperature Rise per EIA 364, Test #70	1.5 A max with 1 contact energized, 0.5 A max with 50% of the contacts energized, and 0.3 A max with 100 % of the contacts energized.	Maximum Temperature Rise: 30°C 10 milliohm change maximum
5.1.5 Shell Interface Resistance per EIA 364,	Mated connector shells with a maximum voltage of 20mV and a current of 100 mA, between the ground leg of the receptacle	50 milliohm Maximum Initial

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PS-71425-9999			CRITICAL = 0  MAJOR =0	PS71425.LWP	3



PRODUCT SPECIFICATION



LANGUAGE

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5.2 MECHANICAL PERFORMANCE :

Item	Test Condition	Requirement
5.2.1 Mating force per EIA 364, Test #13	Measure force to mate at a rate of 13mm per minute max.	Maximum force: 0.54 N (55 grams) per contact
5.2.2 Durability per EIA 364, Test # 09	Mate connectors up to 500 cycles at a maximum rate of 500 cycles per hour. When required Pre-conditioning to be done for 10 cycles at a rate of 500 cycles per hour.	Contact Resistance : 10 milliohms Maximum Increase from Initial; No physical damage allowed
5.2.3 Mechanical Shock per EIA 364, Test # 27	30 g's peak acceleration half sine; 11 ms, 3 shocks applied along 3 mutually perpendicular planes, total 18 shocks.	Contact Resistance: 10 milliohms Maximum Increase from Initial; Discontinuity: not greater than one microsecond
5.2.4 Vibration per EIA 364, Test # 28	Amplitude: 4.44 g's RMS. Sweep: 20-500 Hz random Duration: 20 minutes	Contact Resistance: 10 milliohms Maximum Increase from Initial; Discontinuity: not greater than one microsecond
5.2.5 Unmating force per EIA 364, Test # 13	Measure force to unmate at a rate of 13mm per minute max.	.15N (15 g) minimum per contact
5.2.6 Solderability per EIA 364, Test # 52	Category 1, no steam age; RMA class 1 flux immerse in molten solder at a temperature of 245 °C at a rate of 25.4 mm per sec. Hold in solder for 5 +/- .5 sec.	Solderable area shall have a minimum of 95% solder coverage
5.2.7 Receptacle terminal retention	Measure force to extract terminal from plastic	0.5 Kg min. extraction force
5.2.8 Threaded insert push-out	Apply force at a rate of 13mm/min. max. until insert moves 0.50mm	3.0 Kg min. pushout force
5.2.9 Threaded insert Torque-out	Apply torque until threads strip or damage occurs	.11 Nm min. with no damage

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ES-4000-3996 REV. A SHEET 8 95/MAR/10 EC U5-0926 DCBRD07.MWP					





**5.2 MECHANICAL PERFORMANCE (Cont.):**

Item	Test Condition	Requirement
5.2.10 Boardlock Insertion force	Apply force to connector at a rate of 13mm/min. max. rate. Measure force to insert boardlock pc board. Hole diameter = 1.20+/-0.08mm	5.1 Kg max/connector
5.2.11 Boardlock Withdrawal force	Measure force required to remove boardlock pc board. Hole diameter = 1.20+/-0.08mm Pull at a rate of 13mm/min. max. rate.	.50 Kg min. max/connector
5.2.12 Boardlock Retention to housing (73776 Housing)	Apply force at a rate of 13mm/min. max. rate. Measure force to extract boardlock from housing	2.0 Kg min.

**5.3 ENVIRONMENTAL PERFORMANCE :**



Item	Test Condition	Requirement
5.3.1 Humidity- Temp cycling per EIA 364, Test #31	Mated connectors exposed for 10 cycles (240 hours total) at 90-95% humidity and vary temperature from 25°C to 65°C. Remove surface moisture and air dry for 1 hour prior to measurements.	Appearance: No Damage Contact Resistance: 10 milliohms Maximum Increase from Initial; Insulation Resistance: 500 Megohms Minimum, Dielectric Withstanding: Voltage 250 VAC
5.3.2 Thermal Shock per EIA 364, Test #32	Mated connectors exposed to 25 cycles -55° C to +85° C , half hour dwell, at extremes. 10 mate/unmate precycles required (See 5.2.2)	No physical damage and pass subsequent tests Contact Resistance: 10 milliohms Maximum Increase from Initial
5.3.3 Temperature Life per EIA 364, Test #17	+85° C for 500 hours	No physical damage and pass subsequent tests Contact Resistance: 10 milliohms Maximum Increase from Initial
5.3.4 Flowing Mixed Gas (FMG) per EIA 364, Test #65	Mated connector exposed to Class III for 20 days.	No physical damage and pass subsequent tests Contact Resistance: 10 milliohms Maximum Increase from Initial

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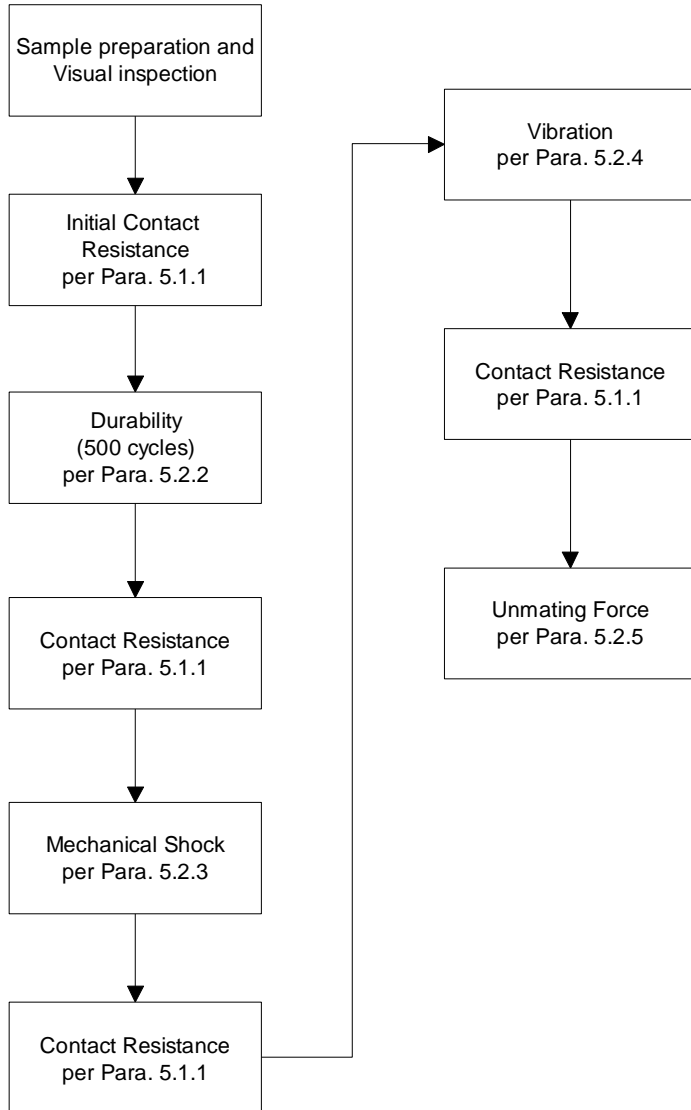
5.3 ENVIRONMENTAL PERFORMANCE (Cont.)

Item	Test Condition	Requirement
5.3.5 Resistance to soldering heat per EIA 364, Test 56	Surface mount at 235°C +10°C,-0°C; all other specimens at 260°C +/-5°C	There shall be no defects that would impair normal operations.
5.3.6 Resistance to solvents per EIA 364, Test 11	Trichloroethylene	There shall be no defects that would impair normal operations.

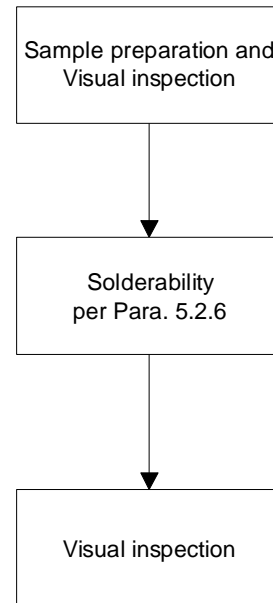
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ES-4000-3996 REV. A SHEET 8 95/MAR/10 EC U5-0926 DCBRD07.MWP					



Mechanical Test Group I  
(EIA Group AP)



Mechanical Test Group II  
(EIA Group EP)

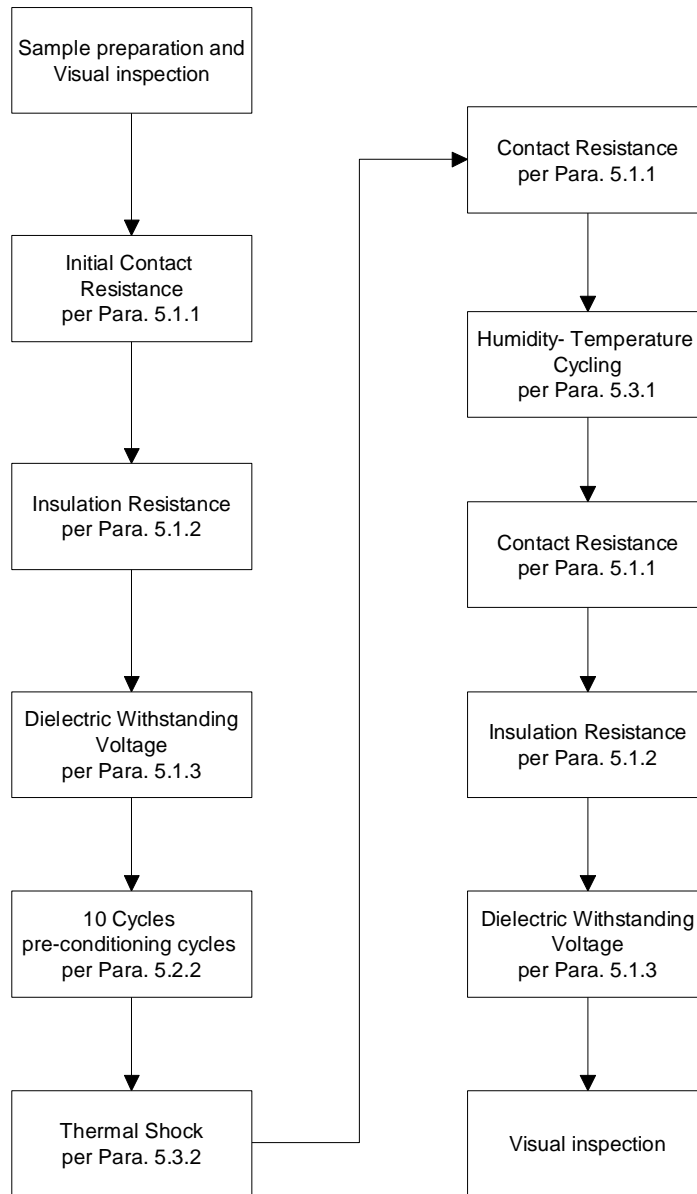


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ES-4000-3996 REV. A SHEET 8 95/MAR/10 EC U5-0926 DCBRD07.MWP				





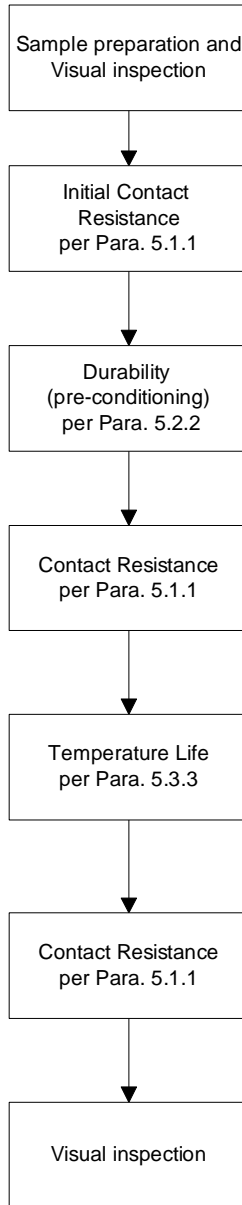
Enviromental Test Group I  
(EIA Group DP)



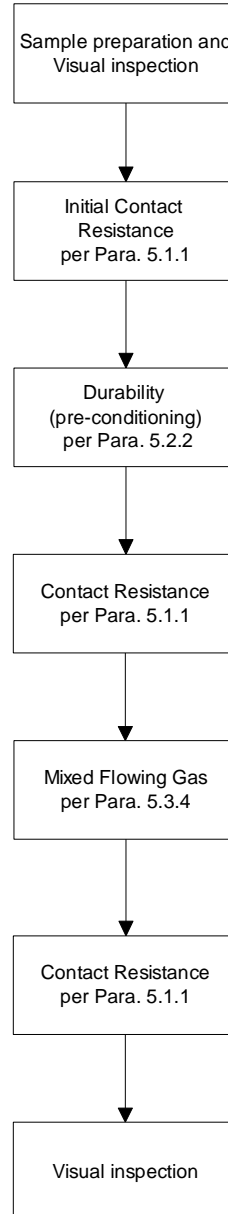
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Enviromental Test Group II  
(EIA Group BP)



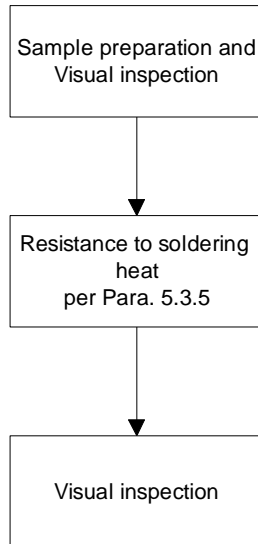
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(EIA Group CP)



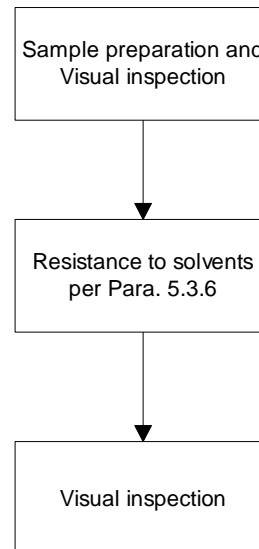
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ES-4000-3996 REV. A SHEET 8 95/MAR/10 EC U5-0926 DCBRD07.MWP					





Enviromental Test Group IV  
(EIA Group GP)



Enviromental Test Group V  
(EIA Group HP)

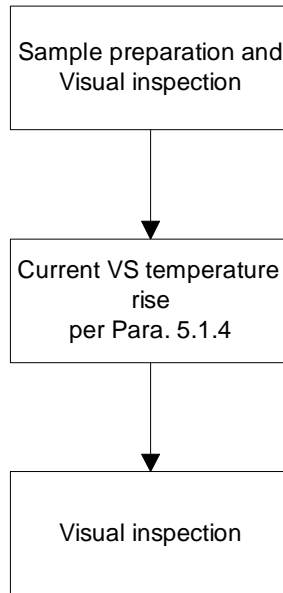


6.0 TEST SEQUENCE AND QUALIFICATION

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				SHEET 10



### Electrical Test Group I (EIA Group FP)



#### 6.1 QUALIFICATION REQUIREMENT

6.1.1 Samples shall be taken from approved production processes.

6.1.2 The chart below specifies the number of samples required to be tested within each test group.

6.1.3 Acceptance criteria shall be as defined in the applicable test requirement in sections 5.1 - 5.3.

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ES-4000-3996 REV. A SHEET 8 95/MAR/10 EC U5-0926 DCBRD07.MWP				



PRODUCT SPECIFICATION



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7.0 PACKAGING

7.1 METHOD

7.1.1 Product shall be tray and tube packaged per the packaging specification as called out on the applicable assembly print.

7.2 REQUIREMENTS

7.2.1 Packaging shall meet the requirements and be tested per Molex specification PK-70180-5001.

8.0 MISCELLANEOUS

8.1 Test groups

Test group	Minimum number of samples	Permitted # of defects
Mechanical Test Group I	5 Assemblies	0
Mechanical Test Group II	5 Assemblies	0
Enviromental Test Group I	15 Assemblies	0
Enviromental Test Group II	15 Assemblies	0
Enviromental Test Group III	15 Assemblies	0
Enviromental Test Group IV	5 Assemblies	0
Enviromental Test Group V	5 Assemblies	0
Electrical Test Group I	5 Assemblies	0

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