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Part Number: 0022013047

Status: Active

Overview: KK®

Description: 2.54mm (.100") Pitch KK® Crimp Terminal Housing, Friction Ramp, 4 Circuits, Use with

0°C to +75°C

2759|41572|6459

**Documents:** 

3D Model Product Specification PS-10-07 (PDF)

<u>Drawing (PDF)</u> <u>Related Catalog Page (PDF)</u>

General

Product Family Crimp Housings

 Series
 2695

 Overview
 KK®

 Product Name
 KK®

**Physical** 

Circuits (maximum)

Natural (White) Color - Resin 94V-0 Flammability Gender Female Glow-Wire Compliant Nο Lock to Mating Part Yes Material - Resin Nylon Number of Rows Packaging Type Bag Panel Mount No Pitch - Mating Interface (in) 0.100 In Pitch - Mating Interface (mm) 2.54 mm Polarized to Mating Part Yes Stackable No

Temperature Range - Operating

Electrical

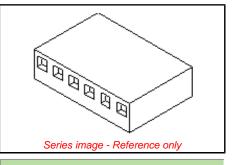
CSA LR19980 UL E29179

**Material Info** 

Old Part Number 2695-04RP

**Reference - Drawing Numbers** 

Product Specification PS-10-07 Sales Drawing SD-2695



EU RoHS
ELV and RoHS
Compliant
REACH SVHC
Contains SVHC: No



China RoHS

## Need more information on product environmental compliance?

Email <u>productcompliance@molex.com</u>
Please visit the <u>Contact Us</u> section for any non-product compliance questions.

HFLH Halogen-Free

Search Parts in this Series

2695 Series

**Mates With** 

2.54mm (.100") Pitch KK® Crimp Terminal Housing, Friction Ramp, 4 Circuits, Use with 2759|41572|6459

**Use With** 

KK® Crimp Terminal Housing  $\underline{2695}$  ,  $\underline{6471}$  ,  $\underline{7880}$ 

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#### 1.0 SCOPE

This Product Specification covers the 2.54 mm (.100 inch) centerline (pitch) 0.64 mm (.025) square pin headers when mated with either printed circuit board (PCB) connectors or connectors terminated with 22 to 28 AWG wire using crimp technology.

#### 2.0 PRODUCT DESCRIPTION

#### 2.1 PRODUCT NAME AND SERIES NUMBERS

Crimp Terminals: 2759, 41572, 6459

Crimp Housings: 2695

PCB Connectors: 4455, 42625

Headers: 4030, 4094, 6373, 7478, 42225, 42226, 42227, 42228, 42152, 42153, 42375, 42376,

42377, 42624.

Other products conforming to this specification are noted on the individual drawings.

### 2.2 DIMENSIONS, MATERIALS, PLATINGS AND MARKINGS

Terminal Material: Brass or Phos. Bronze (for Max performance use phos bronze material.)

Housing: Nylon or Polyester Pins: Brass or Phos. Bronze

For more information on dimensions, materials, and plating see the individual drawings.

### 2.3 SAFETY AGENCY APPROVALS

UL File Number E29179	
CSALR19980	0

### 3.0 APPLICABLE DOCUMENTS AND SPECIFICATIONS

None

### 4.0 RATINGS

#### 4.1 VOLTAGE

250 Volts

**4.2 CURRENT AND APPLICABLE WIRES** (Current is dependent on connector size, contact material, plating, ambient temperature, printed circuit board characteristics and related factors. Actual current rating is application dependent and should be evaluated for each application.)

AWG	Amps (Max)	Outside Insulation Diameter
22	4.00	See Drawings
24	3.75	See Drawings
26	3.50	See Drawings
28	3.00	See Drawings

### 4.3 TEMPERATURE (ambient + 30° temp rise)

Operating: 0°C to +75°C Nonoperating: -40°C to +105°C

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### **5.0 PERFORMANCE**

### **5.1 ELECTRICAL REQUIREMENTS**

DESCRIPTION	TEST CONDITION	REQUIREMENT
Contact Resistance (Low Level)	Mate connectors: apply a maximum voltage of 20 mV and a current of 100 mA.	10 milliohms MAXIMUM [initial]
Contact Resistance of Wire Termination (Low Level)	Terminate the applicable wire to the terminal and measure wire using a voltage of 20 mV and a current of 100 mA.	2 milliohms MAXIMUM [initial]
Insulation Resistance	Unmate & unmount connectors: apply a voltage of 500 VDC between adjacent terminals and between terminals to ground.	1000 Megohms MINIMUM
Dielectric Withstanding Voltage	Unmate connectors: apply a voltage of {two times the rated voltage plus 1000 volts} VAC for 1 minute between adjacent terminals and between terminals to ground.	No breakdown
Capacitance	Measure between adjacent terminals at 1 MHz.	2 picofarads MAXIMUM
Temperature Rise (via Current Cycling)	Mate connectors: measure the temperature rise at the rated current after:  1) 96 hours (steady state)  2) 240 hours (45 minutes ON and 15 minutes OFF per hour)  3) 96 hours (steady state)	Temperature rise: +30°C MAXIMUM

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### 5.2 MECHANICAL REQUIREMENTS

DESCRIPTION	TEST CONDITION	RE	QUIREME	NT
Connector Mate and Unmate Forces	Per circuit when mated to an .025 Sq. pin.  Mate and unmate connector (male to female) at a rate of 25 ± 6 mm (1 ± ¼ inch) per minute.	MAXIM 0.5	5 N (0.438 UM insertic & 6 N (0.125 M withdrav	on force lbf)
Terminal Retention Force (in Housing)	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. (Forces will change with platings and materials.)		7.8 N (4.0 lb M withdrav	
Terminal Insertion Force (into Housing)	Apply an axial insertion force on the terminal at a rate of $25 \pm 6$ mm ( $1 \pm \frac{1}{4}$ inch) per minute. (Forces will change with platings and materials.)		67 N (1.5 lt UM insertic	
Durability	Mate connectors up to 25 cycles at a maximum rate of 10 cycles per minute prior to Environmental Tests.		iohms MA>	
Vibration (Random)	Mate connectors and vibrate per EIA 364-28, test condition VII.	(chan	iohms MA> ge from ini uity < 1 mid	tial) &
Shock (Mechanical)	Mate connectors and shock at 50 g's with ½ sine wave (11 milliseconds) shocks in the ±X,±Y,±Z axes (18 shocks total).	(chan	iohms MA> ge from init uity < 1 mid	ial]) &
Wire Pullout Force (Axial)	Apply an axial pullout force on the wire at a rate of 25 ± 6 mm (1 ± ¼ inch) per minute. (For maximum performance use Molex application tooling with stranded tinned copper wire)	24 av 26 av 28 av	vg = 44 N ( vg = 35 N ( vg = 26 N ( vg = 17 N ( vg = 13 N (	8 lbf) 6 lbf) 4 lbf)
Normal Force	Apply a perpendicular force.	2.94 N (3	300 grams)	average
		Number of kinked pins	Maximum Insertion force (per pin)	Average Insertion force (per pin)
Kinked PC Pin Insertion Force (into PCB Hole)	Apply an axial insertion force on pins at a rate of 25 $\pm$ 6 mm (1 $\pm$ $\frac{1}{4}$ inch) per minute.	2	44.0 N (9.9 lbf)	15.1N (3.4 lbf)
(		4	21.4 N (4.8 lbf)	9.8 N (2.2 lbf)
		6	18.2 N (4.1 lbf)	4.9 N (1.1 lbf)

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# 5.3 ENVIRONMENTAL REQUIREMENTS

DESCRIPTION	TEST CONDITION	REQUIREMENT
Shock (Thermal)	Mate connectors; expose to 5 cycles of:         Temperature °C       Duration (Minutes)         -40 +0/-3       30         +25 ±10       5 MAXIMUM         +105 +3/-0       30         +25 ±10       5 MAXIMUM	10 milliohms MAXIMUM (change from initial) & Visual: No Damage
Thermal Aging	Mate connectors; expose to: 96 hours at 105 ± 2°C	10 milliohms MAXIMUM (change from initial]) & Visual: No Damage
Humidity (Steady State)	Mate connectors: expose to a temperature of 40 ± 2°C with a relative humidity of 90-95% for 96 hours.  Note: Remove surface moisture and air dry for 1 hour prior to measurements.	10 milliohms MAXIMUM (change from initial) & Dielectric Withstanding Voltage: No Breakdown at 500 VAC & Insulation Resistance: 1000 Megohms MINIMUM & Visual: No Damage
Humidity (Cyclic)	Mate connectors: cycle per EIA-364-31: 24 cycles at temperature 25 ± 3°C at 80 ± 5% relative humidity and 65 ± 3°C at 50 ± 5% relative humidity; dwell time of 1.0 hour; ramp time of 0.5 hours.  {Note: Remove surface moisture and air dry for 1 hour prior to measurements.}	10 milliohms MAXIMUM (change from initial) & Dielectric Withstanding Voltage: No Breakdown at 500 VAC & Insulation Resistance: 1000 Megohms MINIMUM & Visual: No Damage
Solderability	Per SMES-152	Solder coverage: 95% MINIMUM (per SMES-152)

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### **5.3 ENVIRONMENTAL REQUIREMENTS**

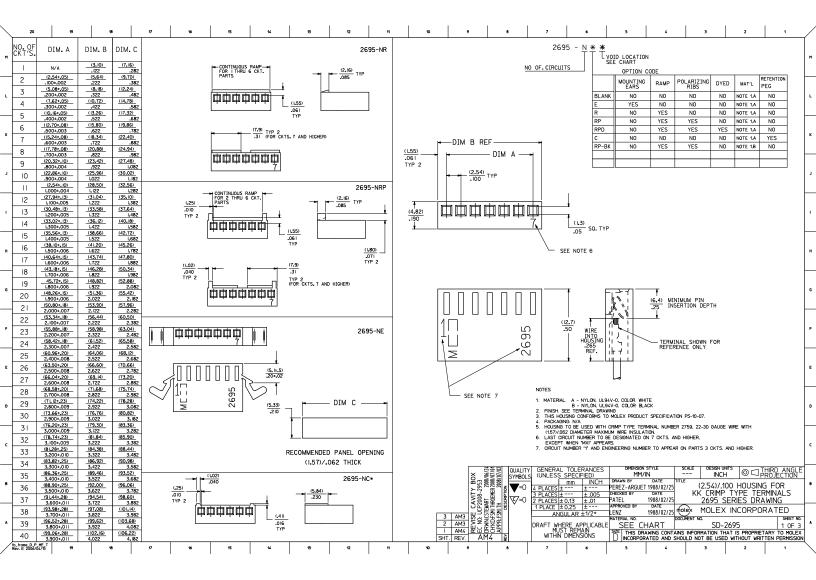
DESCRIPTION	TEST CONDITION	REQUIREMENT
Solder Resistance	Dip connector terminal tails in solder: Solder Duration: 5 ± 0.5 seconds; Solder Temperature: 230 ± 5°C	Visual: No Damage to insulator material
Cold Resistance	Mate connectors: Duration: 96 hours; Temperature: -40 ± 3°C	10 milliohms MAXIMUM (change from initial) & Visual: No Damage
Corrosive Atmosphere: Flowing Mixed Gas (FMG)	Test per EIA-364-65, Class II, Exposure to gasses for 4 days, unmated.	10 milliohms MAXIMUM (change from initial) & Visual: No Damage

### 6.0 PACKAGING

Parts shall be packaged to protect against damage during handling, transit and storage.

- 7.0 GAGES AND FIXTURES
- 8.0 OTHER

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2-01-2011   2655-1	2-01-2011   2695-1
-01-2331	-01-2331

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