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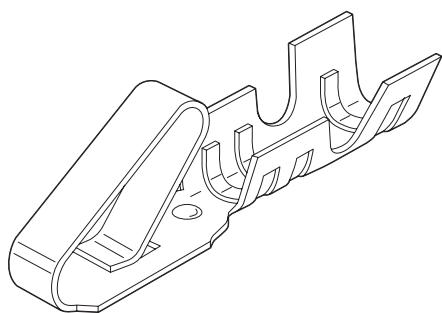


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Jameco Part Number 1297803

2.54mm (.100") Pitch KK® Crimp Terminal 2759/6459



Features and Benefits

- Standard cantilever terminal
- Cantilever design provides high contact pressure
- Wiping action cleans oxides when connector is mated
- 2759 Series is Brass
- 6459 Series is Phosphor Bronze

Reference Information

Product Specification: PS-10-07
 Packaging: Reel or bag
 Tooling Information: See crimp tooling section
 UL File No.: E29179
 CSA File No.: LR19980
 Use With: 2695, 5051 and 6745 housings
 Designed In: Inches

Electrical

Voltage: 250V
 Current: 6459—4.0A
 2759—2.5A
 Contact Resistance: 20 milliohms max.
 Dielectric Withstanding Voltage: 1500V
 Insulation Resistance: 50K Megohms min.

Mechanical

Wire Pull-Out Force:

Wire Gauge (AWG)	22	24	26	28	30
Pull-Out Force (lb)	10	8	6	4	3

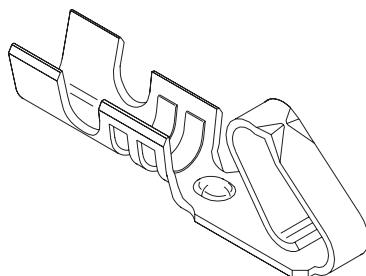
Mating Force: 255g max.
 Unmating Force: 50g min.
 Normal Force: 200g min.

Physical

Contact: 6459—Phosphor Bronze; 2759—Brass
 Plating: See Table
 Wire Accommodation: 22 to 30 AWG
 Insulation Range: 1.58mm (.062") diameter max.

Contact	Order No.						Wire Gauge (AWG)	Insulation OD	Lead-free			
	Tin Plating		15μ" Gold Plating		15μ" Selective Gold Plating							
	Reel	Bag	Reel	Bag	Reel	Bag						
Brass	08-50-0113	08-50-0114	08-56-0109	08-56-0110	08-55-0101	08-55-0102	22-30	1.57 (.062)	Yes			
Phosphor Bronze	08-52-0101	08-52-0123	08-65-0813	08-65-0814	08-65-0815	08-65-0816						

2.54mm (.100") Pitch KK® Cat Ear Terminal 5159



Features and Benefits

- Similar to 2759/6459 Series with cat ears
- Cat ears provide 2 high pressure points of contact
- Suitable for high vibrational requirements

Reference Information

Product Specification: PS-10-07
 Packaging: Bag or reel
 Tooling Information: See crimp tooling section
 UL File No.: E29179
 CSA File No.: LR19980
 Use With: 2695, 5051 and 6471
 Designed In: Inches

Electrical

Voltage: 250V
 Current: 3.0A
 Contact Resistance: 20 milliohms max.
 Dielectric Withstanding Voltage: 1000V AC
 Insulation Resistance: 1000 Megohms min.

Physical

Contact: Phosphor Bronze and Brass
 Plating: Tin
 Wire Accommodation: 22 to 30 AWG

Order No.				Lead-free	
Phosphor Bronze		Brass			
Bag	Reel	Bag	Reel		
08-70-0049	08-70-0048	08-70-0069	08-70-0064	Yes	

Preferred version in the Far East



PRODUCT SPECIFICATION

1.0 SCOPE

This Product Specification covers the 3.96 mm (.156 inch) centerline (pitch) 1.14mm (.045) square pin headers when mated with either printed circuit board (PCB) connectors or connectors terminated with 18 to 26 AWG wire using crimp technology.

2.0 PRODUCT DESCRIPTION

2.1 PRODUCT NAME AND SERIES NUMBERS

Crimp Terminals: 2478,2578,2878,2477,

Crimp Housings: 2139, 41695

PCB Connectors: 2145, 41815

Headers: 41771, 41772, 41791, 41792, 42471, 42472, 42491, 42492, 41661, 41662, 41671, 61672, 41681, 41682

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

3.0 APPLICABLE DOCUMENTS AND SPECIFICATIONS

3.1 PS-45499-002 COSMETIC SPECIFICATION

4.0 RATINGS

4.1 VOLTAGE

250 Volts

4.2 CURRENT (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.)

a. For Crimp Terminals- and Applicable Wires

Wire Awg	Amps (Max) With Brass	Amps (Max) With Phos Bronze	Wire Insulation Dia
18	5.00	7.00	See terminal drawings
20	4.75	6.25	See terminal drawings
22	4.50	5.50	See terminal drawings
24	4.25	5.00	See terminal drawings
26	4.00	4.50	See terminal drawings

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PRODUCT SPECIFICATION

4.2 CURRENT (cont)

b. For Printed Circuit Board Connectors

Connector Style	Amps (Max) With Brass	Amps (Max) With Phos Bronze
Top Entry	4.50	5.00
Right Angle	4.50	5.00
Bottom Entry	4.00	4.50

4.3 TEMPERATURE (ambient + 30°C temp rise)

	Brass	Phos Bronze
Operating Temperature	0°C to +50°C	0°C to +75°C
Non Operating Temperature	-40°C to +105°C	-40°C to +105°C

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.	1.2 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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PRODUCT SPECIFICATION

5.2 MECHANICAL REQUIREMENTS

DESCRIPTION	TEST CONDITION	REQUIREMENT
Connector Mate and Unmate Forces	Per circuit when mated to a .045 Sq. pin. Mate and unmate connector (male to female) at a rate of 25 ± 6 mm ($1 \pm \frac{1}{4}$ inch) per minute.	<u>Without Friction Lock</u> 9.4 N (2.12 lbf) MAXIMUM insertion force & 1.8 N (0.40 lbf) MINIMUM withdrawal force
		<u>With Friction Lock</u> 10.7 N (2.40 lbf) MAXIMUM insertion force & 4.0 N (0.90 lbf) MINIMUM withdrawal force
Terminal Insertion Force (into Housing)	Apply an axial insertion force on the terminal at a rate of 25 ± 6 mm ($1 \pm \frac{1}{4}$ inch). (Forces will change with platings and materials.)	17.8 N (4.0 lbf) MAXIMUM insertion force
Terminal Retention Force (in Housing)	Axial pullout force on the terminal in the housing at a rate of 25 ± 6 mm ($1 \pm \frac{1}{4}$ inch) per minute. (Forces will change with platings and materials.)	35.6 N (8.0 lbf) MINIMUM withdrawal force
Durability	Mate connectors up to 25 cycles at a maximum rate of 10 cycles per minute prior to Environmental Tests.	10 milliohms MAXIMUM (change from initial)
Vibration (Random)	Mate connectors and vibrate per EIA 364-28, test condition VII.	10 milliohms MAXIMUM (change from initial) & Discontinuity < 1 microsecond
Shock (Mechanical)	Mate connectors and shock at 50 g's with $\frac{1}{2}$ sine wave (11 milliseconds) shocks in the $\pm X, \pm Y, \pm Z$ axes (18 shocks total).	10 milliohms MAXIMUM (change from initial) & Discontinuity < 1 microsecond
Wire Pullout Force (Axial)	Apply an axial pullout force on the wire at a rate of 25 ± 6 mm ($1 \pm \frac{1}{4}$ inch). (For maximum performance use Molex application tooling with stranded tinned copper wire)	18 awg = 89 N (20 lbf) 20 awg = 66 N (15 lbf) 22 awg = 53 N (12 lbf) 24 awg = 35 N (8 lbf) 26 awg = 22 N (5 lbf)
Normal Force	Apply a perpendicular force.	7.34 N (748 grams) average

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PRODUCT SPECIFICATION

5.3 ENVIRONMENTAL REQUIREMENTS

DESCRIPTION	TEST CONDITION	REQUIREMENT
Shock (Thermal)	Mate connectors; expose to 5 cycles of: <u>Temperature °C</u> <u>Duration (Minutes)</u> -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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PRODUCT SPECIFICATION

5.3 ENVIRONMENTAL REQUIREMENTS

DESCRIPTION	TEST CONDITION	REQUIREMENT
Solder Resistance	Dip connector terminal tails in solder: Solder Duration: 5 ± 0.5 seconds; Solder Temperature: $230 \pm 5^\circ\text{C}$	Visual: No Damage to insulator material
Cold Resistance	Mate connectors: Duration: 96 hours; Temperature: $-40 \pm 3^\circ\text{C}$	10 milliohms MAXIMUM (change from initial) & Visual: No Damage
Corrosive Atmosphere: Flowing Mixed Gas (FMG)	Mate connectors: Test per EIA-364-65, method 2A	10 milliohms MAXIMUM (change from initial) & Visual: No Damage

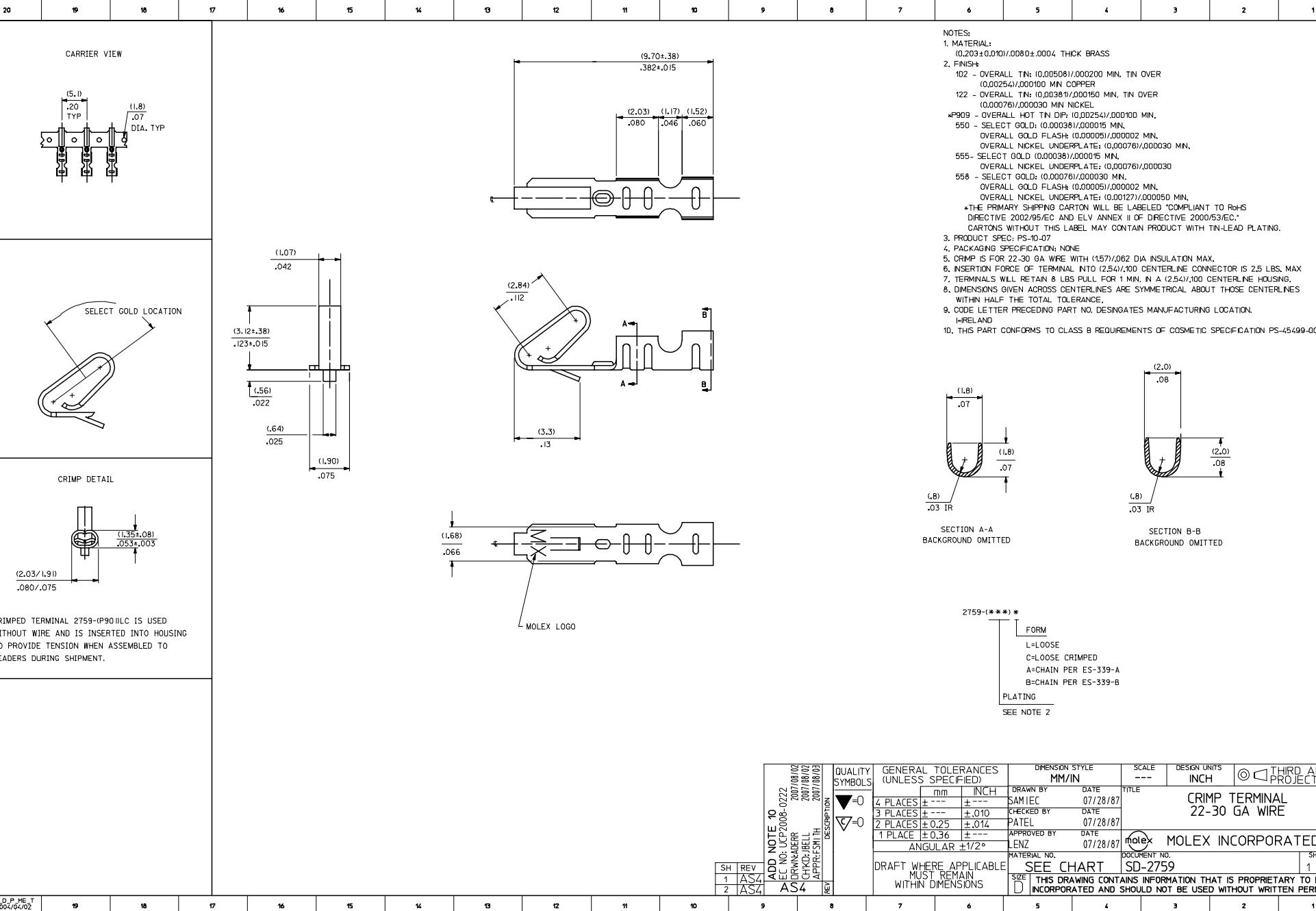
6.0 PACKAGING

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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	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	
M																					M
L																					L
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D																					D
C																					C
B																					B
A																					A

REMOVE *999 PARTS		GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE MM/IN		SCALE ---	DESIGN UNITS INCH	THIRD ANGLE PROJECTION	
EC NO: IFC2008-0222		mm	INCH	DRAWN BY DPMANDERR	DATE 07/28/87				
4 PLACES \pm ---		\pm ---	\pm ---	SAMIEC	07/28/87				
3 PLACES \pm ---		\pm ---	\pm ---	CHECKED BY CHOBELL	07/28/87				
2 PLACES \pm ---		\pm ---	\pm ---	PATEI	07/28/87				
1 PLACE \pm ---		\pm ---	\pm ---	APPROVED BY APPRFSMTH	07/28/87				
ANGULAR \pm 1/2°				LENZ	07/28/87				
AS4				REVISION REV					
DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS									
SEE CHART									
MOLEX MOLEX INCORPORATED									
MATERIAL NO. SD-2759									
DOCUMENT NO. 2 OF 2									
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