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ELECTRONICS

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Jameco Part Number 796521

FEATURES AND SPECIFICATIONS

Features and Benefits

- Sizes 4 to 54 circuits
- End-to-end and side-to-side stackable for dual row connections to a 2.54mm (.100") pitch grid pin field

Reference Information

Product Specification: PS-70058

Packaging: Bag

UL File No.: E29179

CSA File No.: LR19980

Mates With: 8624, 8723, 8724, 70029, 70203, 70204, 70227, 70260, 70280, 70287, 70567, 70568, 71308 and 71349 Molex dual row headers

Use With: 70058 and 71851 crimp terminals

Designed In: Inches

Physical

Housing: Black glass-filled polyester, UL 94V-0

Operating Temperature: -40 to +105°C



2.54mm (.100") Pitch

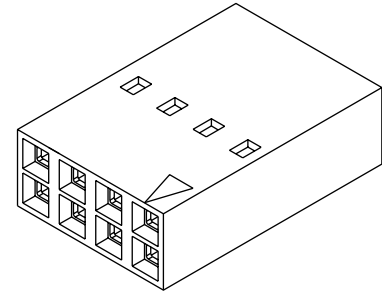
SL™

Crimp Housing

70450

Dual Row

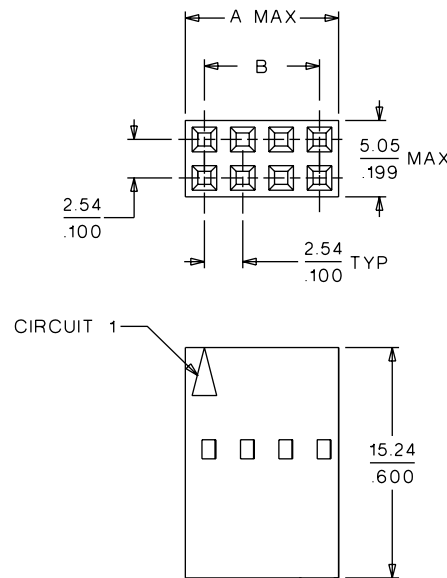
Version A, Nonpolarized



2.54mm (.100") Pitch

CATALOG DRAWING (FOR REFERENCE ONLY)

Not For Use With C-Grid III™ Components



Delivered on a carrier with 20 pieces per strip.

Actual Size



Universal Polarizing Pin
40713-1

Order No. 15-04-0292

ORDERING INFORMATION AND DIMENSIONS

Circuits	Order No.	Dimension	
		A	B
4	• 22-55-2041	5.05 (.199)	2.54 (.100)
6	• 22-55-2061	7.59 (.299)	5.08 (.200)
8	• 22-55-2081	10.13 (.399)	7.62 (.300)
10	• 22-55-2101	12.67 (.499)	10.16 (.400)
12	• 22-55-2121	15.21 (.599)	12.70 (.500)
14	• 22-55-2141	17.75 (.699)	15.24 (.600)
16	• 22-55-2161	20.29 (.799)	17.78 (.700)
18	• 22-55-2181	22.83 (.899)	20.32 (.800)
20	• 22-55-2201	25.37 (.999)	22.86 (.900)
22	• 22-55-2221	27.91 (1.099)	25.40 (1.000)
24	• 22-55-2241	30.45 (1.199)	27.94 (1.100)
26	• 22-55-2261	32.99 (1.299)	30.48 (1.200)
28	• 22-55-2281	35.53 (1.399)	33.02 (1.300)

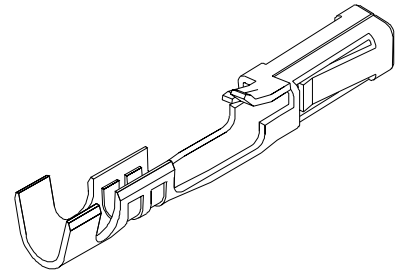
Circuits	Order No.	Dimension	
		A	B
30	• 22-55-2301	38.07 (1.499)	35.56 (1.400)
32	• 22-55-2321	40.61 (1.599)	38.10 (1.500)
34	• 22-55-2341	43.15 (1.699)	40.64 (1.600)
36	• 22-55-2361	45.69 (1.799)	43.18 (1.700)
38	• 22-55-2381	48.23 (1.899)	45.72 (1.800)
40	• 22-55-2401	50.77 (1.999)	48.26 (1.900)
42	• 22-55-2421	53.31 (2.099)	50.80 (2.000)
44	• 22-55-2441	55.85 (2.199)	53.34 (2.100)
46	• 22-55-2461	58.39 (2.299)	55.88 (2.200)
48	• 22-55-2481	60.93 (2.399)	58.42 (2.300)
50	• 22-55-2501	63.47 (2.499)	60.96 (2.400)
52	• 22-55-2521	66.01 (2.599)	63.50 (2.500)
54	• 22-55-2541	68.55 (2.699)	66.04 (2.600)

• US Standard Product, available through Molex franchised distributors



PRODUCT SPECIFICATION

“SL CRIMP TERMINAL”



1.0 SCOPE

This specification covers the crimp terminal #70058-**** used with the single row fully stackable connector housing #70066-****, and the dual row fully stackable connector housing #70450-****.

2.0 PRODUCT DESCRIPTION

SERIES 70058 TERMINAL

2.1 Product is available in single row 2-25 circuits, on (2.54) .100” centers, or dual row 4-50 circuits on (2.54) .100 x (2.54) .100 centers.

2.2 Connector assemblies will mate with the following:

2.2.1 (0.64) .025” square or round pins assembled directly into P.C. board on .100 centers.

2.2.2 Shrouded or unshrouded single or dual-row wafers, with (0.64) .025 square or round pins.

2.2 Connectors are stackable end to end, side to side on (2.54) .100” center pins with option “A” housing only.

2.2.1 Polarizing ribs available on front of housing for use with headers, or on back for use with interim clip assemblies, housing #70066-**** only.

2.2.2 Active latch with polarizing ribs, for use with headers, housing #70066-**** only.

2.3 Maximum mating pin height to be (8.13) .320”, minimum pin height to be (5.08) .200”. Pin height, measured from top of wafers or P.C. board, to top of pin.

REVISION: F	ECR/ECN INFORMATION: EC No: UDT2002-1319 DATE: 2002 / 04 / 30	TITLE: PRODUCT SPECIFICATION FOR SL CRIMP TERMINAL SERIES 70058	SHEET No. 1 of 8
DOCUMENT NUMBER: PS-70058	CREATED / REVISED BY: ACHAMMER	CHECKED BY: BRINKMAN	APPROVED BY: BRINKMAN



PRODUCT SPECIFICATION

“SL CRIMP TERMINAL”

2.4 Connector assembly will accept wire range from 36 to 20 AWG. Refer to the table below for the wire gage, wire requirements, and crimp height.

WIRE GAGE (AWG)	CRIMP HEIGHT	WIRE TYPE
30	.027" to .029"	Stranded, Stranded
28	.030" to .032"	Tinned, Stranded Top Coated
26	.031" to .033"	1.52mm/.060in Maximum Insulation Diameter
24	.033" to .035"	Stranded, Stranded Tinned, Stranded Top
22	.033" to .035"	Coated 1.63mm/.064in Maximum Insulation Diameter
20	.033" to .035"	Stranded 0.5mm ² /.0078in ² Maximum Conductor Area. PVC Insulation, 1.70mm/.067in Maximum Diameter

<u>REVISION:</u> F	<u>ECR/ECN INFORMATION:</u> EC No: UDT2002-1319 DATE: 2002 / 04 / 30	<u>TITLE:</u> PRODUCT SPECIFICATION FOR SL CRIMP TERMINAL SERIES 70058	<u>SHEET No.</u> 2 of 8
<u>DOCUMENT NUMBER:</u> PS-70058	<u>CREATED / REVISED BY:</u> ACHAMMER	<u>CHECKED BY:</u> BRINKMAN	<u>APPROVED BY:</u> BRINKMAN



PRODUCT SPECIFICATION

“SL CRIMP TERMINAL”

3.0 RECOGNIZED AGENCY APPROVALS

3.1 Underwriters Laboratories: UL #E29179.

3.2 Canadian Standards Associations: CSA #LR19980.

4.0 MECHANICAL SPECIFICATIONS

4.1 Materials

4.1.1 Housing #70066-**** and #70450-**** is molded of black G.F. polyester 94V-0.

4.1.2 Terminal 70058-**** is a high strength copper alloy.

4.1.2.1 Finish .000200 min. electro-tin plate over .000100 min. copper plate overall.

4.1.2.2 Finish .000015 min. gold plate in selected area over .000050 min. nickel overall, with .000075 min. electro-tin lead (90/10) in selected area.

4.1.2.3 Finish .000030 min. gold in selected area over .000050 min. nickel plate overall, with .000075 min. electro-tin/lead (90/10) in selected area.

4.1.2.4 For special finish requirements, consult Molex marketing as to availability, cost and lead time.

4.2 Terminal Pull-Out Force, from Housing:

Must withstand gradual applied force of 4 pounds for 15 seconds.

4.3 Insulating Materials:

Temperature rating -40°C to +105°C

<u>REVISION:</u> F	<u>ECR/ECN INFORMATION:</u> EC No: UDT2002-1319 DATE: 2002 / 04 / 30	<u>TITLE:</u> PRODUCT SPECIFICATION FOR SL CRIMP TERMINAL SERIES 70058	<u>SHEET No.:</u> 3 of 8
<u>DOCUMENT NUMBER:</u> PS-70058	<u>CREATED / REVISED BY:</u> ACHAMMER	<u>CHECKED BY:</u> BRINKMAN	<u>APPROVED BY:</u> BRINKMAN



PRODUCT SPECIFICATION

"SL CRIMP TERMINAL"

4.4 Insertion/Withdrawal Forces:

AVERAGE INSERTION AND WITHDRAWAL FORCES *

PLATING TYPE	AFTER 1 CYCLE		AFTER 10 CYCLES		AFTER 25 CYCLES		AFTER 50 CYCLES	
	INSERTION FORCE	WITHDRAWAL FORCE	INSERTION FORCE	WITHDRAWAL FORCE	INSERTION FORCE	WITHDRAWAL FORCE	INSERTION FORCE	WITHDRAWAL FORCE
TIN	.32 lbf	.26 lbf	.23 lbf	.27 lbf	.24 lbf	.25 lbf	No	No
4.4.1	1.4 N	1.2 N	1.0 N	1.2 N	1.1 N	1.1 N	Data	data
GOLD	.34 lbf	.18 lbf	.27 lbf	.15 lbf	No	No	.25 lbf	.14 lbf
4.4.4	1.5 N	0.8 N	1.2 N	0.7 N	Data	Data	1.1 N	0.6 N

*Steel gage pins used to perform test:

Insertion Gage Pin: .0260+.0000-.0001

Withdrawal Gage Pin: .0240+.0001-.0000

4.4.1 "Tin" Plating System: .000200 Min. Tin over .000100 Min. copper

4.4.2 "Gold" Plating System: .000030 Min. Gold over .000050 Min. nickel

5.0 ELECTRICAL/ENVIRONMENTAL SPECIFICATIONS:

5.1 The following performance criteria is based on grouped, sequential testing.

5.2 All contact resistance values measured at 20 millivolts max. open circuit voltage and 5-15 milliamperes using the 4 point dry circuit method, with a Hewlett-Packard Milliohmeter, Model #4328A.

5.3 All tin contact systems cycled 1, 5 & 25 times prior to grouped sequential testing, using (0.64) .025" square pins with .000200 min. tin over .000100 min. copper.

All gold contact systems cycled 1, 25 & 50 times prior to grouped sequential testing, using (0.64) .025" square pins with .000030 min. gold over .000050 min. nickel.

REVISION: F	ECR/ECN INFORMATION: EC No: UDT2002-1319 DATE: 2002 / 04 / 30	TITLE: PRODUCT SPECIFICATION FOR SL CRIMP TERMINAL SERIES 70058	SHEET No. 4 of 8
DOCUMENT NUMBER: PS-70058	CREATED / REVISED BY: ACHAMMER	CHECKED BY: BRINKMAN	APPROVED BY: BRINKMAN



PRODUCT SPECIFICATION

“SL CRIMP TERMINAL”

5.4 Group I Sequence: Mated Environment

	Test/Specifications	Test Severity/Duration
5.4.1	Thermal Shock IEC 68-2-14	-40°C to +105°C 30 minute dwell at each temperature is one cycle. 10 cycles
5.4.2	Thermal Aging Mil. Std. -202F, 108A	+105°C for 10 days
5.4.3	Cyclic Humidity Mil. Std. -202F, 106D without cold dip	Temperature cycles between +25°C to +65°C at 96% R.H. for 240 hours.
5.4.4	Flowers of Sulphur	Exposed to sulphur vapors for 24 hours at +65°C.
5.4.5	Contact Resistance not to exceed 15 milliohms, total	

<u>REVISION:</u> F	<u>ECR/ECN INFORMATION:</u> EC No: UDT2002-1319 DATE: 2002 / 04 / 30	<u>TITLE:</u> PRODUCT SPECIFICATION FOR SL CRIMP TERMINAL SERIES 70058	<u>SHEET No.</u> 5 of 8
<u>DOCUMENT NUMBER:</u> PS-70058	<u>CREATED / REVISED BY:</u> ACHAMMER	<u>CHECKED BY:</u> BRINKMAN	<u>APPROVED BY:</u> BRINKMAN



PRODUCT SPECIFICATION

"SL CRIMP TERMINAL"

5.5 Group II Sequence: Un-Mated Environment:

	Test/Specifications	Test Severity/Duration
5.5.1	Thermal Shock IEC 68-2-14	-40°C to +105°C 30 minute dwell at each temperature is one cycle. 10 cycles
5.5.2	Thermal Aging Mil. Std. -202F, 108A	+105°C for 10 days
5.5.3	Steady State Humidity Mil. Std. -202F, 103B Condition A	+40°C at 96% R.H. for 10 days
5.5.4	Flowers of Sulphur IEC 69-2-42	Exposed to sulphur vapors for 24 hours at +65°C
5.5.5	Mate once, contact resistance not to exceed 15 milliohms, total	

<u>REVISION:</u> F	<u>ECR/ECN INFORMATION:</u> EC No: UDT2002-1319 DATE: 2002 / 04 / 30	<u>TITLE:</u> PRODUCT SPECIFICATION FOR SL CRIMP TERMINAL SERIES 70058	<u>SHEET No.:</u> 6 of 8
<u>DOCUMENT NUMBER:</u> PS-70058	<u>CREATED / REVISED BY:</u> ACHAMMER	<u>CHECKED BY:</u> BRINKMAN	<u>APPROVED BY:</u> BRINKMAN



PRODUCT SPECIFICATION

“SL CRIMP TERMINAL”

5.6 Group III Sequence: Mated Environment Gold Contact System

	Test/Specifications	Test Severity/Duration
5.6.1	Steady State Humidity, Mil. Std. -202F, 103B Condition A	+40°C at 96% R.H. for 10 days.
5.6.2	Salt Spray Mil. Std. -202F 101D, Condition A	96 hours at +35°C, 5% sodium chloride
5.6.3	Physical Shock Mil. Std. -202F 213B	½ Sine Wave, 50G, 11MS pulse 3 shocks per axis for 240 hours.
5.6.4	Vibration Mil. Std. -202F, 201A	10-55-10 HZ, 1 minute cycles for 2 hours in each axis. .03 inch excursion, 10G.
5.6.5	Contact resistance not to exceed 15 milliohms, total	

<u>REVISION:</u> F	<u>ECR/ECN INFORMATION:</u> EC No: UDT2002-1319 DATE: 2002 / 04 / 30	<u>TITLE:</u> PRODUCT SPECIFICATION FOR SL CRIMP TERMINAL SERIES 70058	<u>SHEET No.</u> 7 of 8
<u>DOCUMENT NUMBER:</u> PS-70058	<u>CREATED / REVISED BY:</u> ACHAMMER	<u>CHECKED BY:</u> BRINKMAN	<u>APPROVED BY:</u> BRINKMAN



PRODUCT SPECIFICATION

“SL CRIMP TERMINAL”

5.7 Group IV Sequence: Mated Electrical

	Test/Specifications	Test Severity/Duration
5.7.1	Steady State Humidity, Mil. Std. -202F, 103B Condition A	+40°C at 96% R.H. for 10 days.
5.7.2	Temperature Rise	Increase current to achieve 30°C rise above ambient. Dwell for 48 hours at that current.
5.7.3	Current Ratings:	30 Awg - 0.7A 36 Awg - 0.21A 28 Awg - 1.2A 34 Awg - 0.32A 26 Awg - 1.8A 32 Awg - .045A 24 Awg - 3.0A 22 Awg - 3.0A

5.8 Insulation Resistance: Per Mil. Std. 202, Method 302, Condition B. Resistance measured after sequence 5.5.1 thru 5.5.5 to be no less than 10K megohms.

5.9 Dielectric Strength: AC voltage increased until breakdown.

Voltage measured after sequence 5.5.1 thru 5.5.5 to be no less than 600 volts AC R.M.S. for 1 minute at sea level to 5,000 feet.

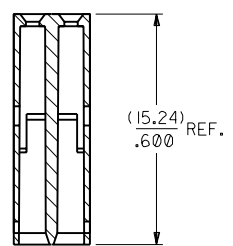
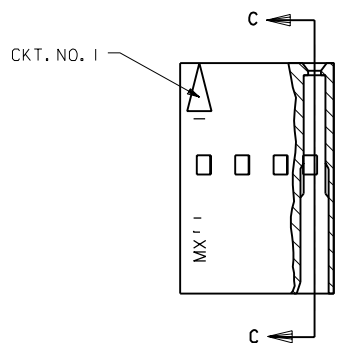
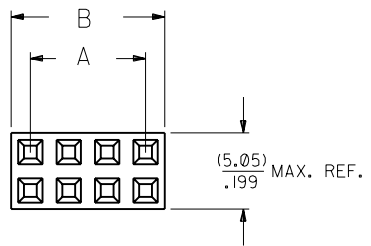
5.10 Capacitance: Less than 1.2 pico-farads.

<u>REVISION:</u> F	<u>ECR/ECN INFORMATION:</u> EC No: UDT2002-1319 DATE: 2002 / 04 / 30	<u>TITLE:</u> PRODUCT SPECIFICATION FOR SL CRIMP TERMINAL SERIES 70058	<u>SHEET No.</u> 8 of 8
<u>DOCUMENT NUMBER:</u> PS-70058	<u>CREATED / REVISED BY:</u> ACHAMMER	<u>CHECKED BY:</u> BRINKMAN	<u>APPROVED BY:</u> BRINKMAN

NOTES:

- 1) MATERIAL: G.F. POLYESTER
- 2) HOUSING TO BE USED WITH TERMINALS
PT. NO. 70058-**** & 70028-****
- 3) SEE CHART FOR CIRCUIT SIZES.
- 4) TO BE USED WITH (0.64)/.025 SQ. OR RD. PINS.
- 5) PARTS STACKABLE END TO END AND SIDE BY
SIDE ON (2.54)/.100 CENTERS.
- 6) REFER TO PRODUCT SPECIFICATION PS-70058.
- 7) PACKAGE PER PK-70450-100.

-OPTION "A"-



CKT. SIZE	EDP. NO.	ENG. NO.	A	B
4	022-55-2041	70450-0001	(2.54) .100	(5.05) .199
6	022-55-2061	70450-0002	(5.08) .200	(7.59) .299
8	022-55-2081	70450-0003	(7.62) .300	(10.13) .399
10	022-55-2101	70450-0004	(10.16) .400	(12.67) .499
12	022-55-2121	70450-0005	(12.70) .500	(15.21) .599
14	022-55-2141	70450-0006	(15.24) .600	(17.75) .699
16	022-55-2161	70450-0007	(17.78) .700	(20.29) .799
18	022-55-2181	70450-0008	(20.32) .800	(22.83) .899
20	022-55-2201	70450-0009	(22.86) .900	(25.37) .999
22	022-55-2221	70450-0010	(25.40) 1.000	(27.91) 1.099
24	022-55-2241	70450-0011	(27.94) 1.100	(30.45) 1.199
26	022-55-2261	70450-0012	(30.48) 1.200	(32.99) 1.299
28	022-55-2281	70450-0013	(33.02) 1.300	(35.53) 1.399
30	022-55-2301	70450-0014	(35.56) 1.400	(38.07) 1.499
32	022-55-2321	70450-0015	(38.10) 1.500	(40.61) 1.599
34	022-55-2341	70450-0016	(40.64) 1.600	(43.15) 1.699
36	022-55-2361	70450-0017	(43.18) 1.700	(45.69) 1.799
38	022-55-2381	70450-0018	(45.72) 1.800	(48.23) 1.899
40	022-55-2401	70450-0019	(48.26) 1.900	(50.77) 1.999
42	022-55-2421	70450-0020	(50.80) 2.000	(53.31) 2.099
44	022-55-2441	70450-0021	(53.34) 2.100	(55.85) 2.199
46	022-55-2461	70450-0022	(55.88) 2.200	(58.39) 2.299
48	022-55-2481	70450-0023	(58.42) 2.300	(60.93) 2.399
50	022-55-2501	70450-0024	(60.96) 2.400	(63.47) 2.499
52	022-55-2521	70450-0025	(63.50) 2.500	(66.01) 2.599
54	022-55-2541	70450-0026	(66.04) 2.600	(68.55) 2.699

REVISED PER ECR # U00293 07-13-90 MGB/DJK ADD PKG NOTE PER UDT2000-0468 SCHAFFER 99/12/1 REVISED PER ECN UDT1999-0722 R.S.FOX 99/03/09		D C B		PER ECR # 10059 05/01/87 MJM/JAS ADD NOTE 6 PER ECR # 10059 05/01/87 MJM/JAS REDRAWN ON CAD PER ECR # 9296 10/22/86 MJM		DIMENSIONS SHOWN (METRIC) INCH UNLESS OTHERWISE SPECIFIED TOLERANCES: ANGULAR ± 1/2° 3 PLACE ± .010 2 PLACE ± .014 ± 0.25 1 PLACE --- ± 0.35 DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS DRWG. BY: MJM CHK'D. BY: MJM APP'D. BY: WAZ SCALE: 4:1		∇ = 0 ▼ = 0 REVISE ONLY ON CAD SYSTEM TITLE: HOUSING - CONNECTOR DUAL ROW (2.54)/.100 GRID STACKABLE FROM: MOLEX INCORPORATED LISLE, ILL. 60532 U.S.A. SHEET NO. 1 OF 1 DATE 10/22/86 PART NO. SD-70450-0001-0026 SEE CHART THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INC. AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION.	
LTR.	REVISIONS	LTR.	REVISIONS	LTR.	REVISIONS	LTR.	REVISIONS	LTR.	REVISIONS