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Jameco Part Number 516293

FEATURES AND SPECIFICATIONS

Features and Benefits

- Sizes 1 to 28 circuits
- Standard with locking ramp
- Suitable for high vibration requirements

Reference Information

Product Specification: PS-7879
 Packaging: Bag
 UL File No.: E29179
 CSA File No.: LR19980
 Mates With: Molex KK 2.54mm (.100") pitch headers
 Use With: 7879 terminals
 Designed In: Inches

Electrical*

Voltage: 250V
 Current: 2.5A
 Contact Resistance: 20mΩ max.
 Dielectric Withstanding Voltage: 1500V AC
 Insulation Resistance: 500K MΩ min.

Mechanical*

Contact Insertion Force: 1.5 lb max.
 Contact Retention to Housing: 8 lb min.
 Mating Force: 475g max.
 Unmating Force: 100g min.
 Normal Force: 430g min.

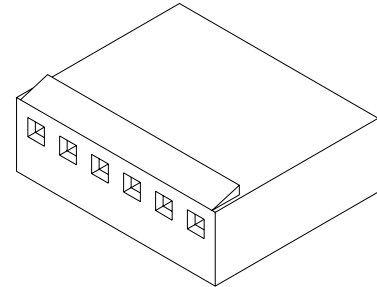
Physical

Housing: White nylon, UL 94V-0
 Operating Temperature: -0 to +75°C



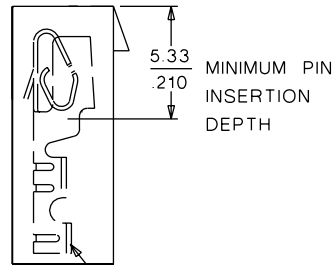
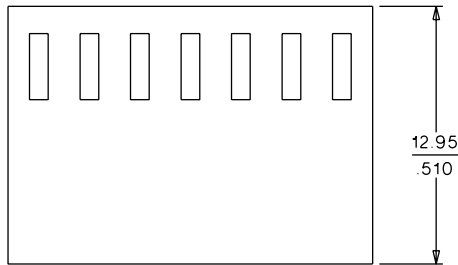
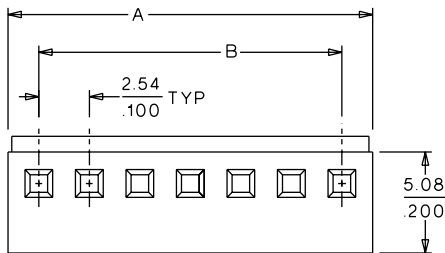
2.54mm (.100") Pitch KK® Crimp Terminal Housing

7880 High Pressure



C
 2.54mm (.100") Pitch

CATALOG DRAWING (FOR REFERENCE ONLY)



TERMINAL SHOWN FOR REFERENCE ONLY

ORDERING INFORMATION AND DIMENSIONS

Circuits	Order No.	Dimension	
		A	B
1	• 10-11-2013	3.10 (.122)	
2	• 10-11-2023	5.64 (.222)	2.54 (.100)
3	• 10-11-2033	8.18 (.322)	5.08 (.200)
4	• 10-11-2043	10.72 (.422)	7.62 (.300)
5	• 10-11-2053	13.26 (.522)	10.16 (.400)
6	• 10-11-2063	15.80 (.622)	12.70 (.500)
7	• 10-11-2073	18.34 (.722)	15.24 (.600)
8	• 10-11-2083	20.88 (.822)	17.78 (.700)
9	• 10-11-2093	23.42 (.922)	20.32 (.800)
10	• 10-11-2103	25.96 (1.022)	22.86 (.900)
11	• 10-11-2113	28.50 (1.122)	25.40 (1.000)
12	• 10-11-2123	31.04 (1.222)	27.94 (1.100)
13	• 10-11-2133	33.58 (1.322)	30.48 (1.200)
14	• 10-11-2143	36.12 (1.422)	33.02 (1.300)

Circuits	Order No.	Dimension	
		A	B
15	• 10-11-2153	38.66 (1.522)	35.56 (1.400)
16	• 10-11-2163	41.20 (1.622)	38.10 (1.500)
17	• 10-11-2173	43.74 (1.722)	40.64 (1.600)
18	• 10-11-2183	46.28 (1.822)	43.18 (1.700)
19	• 10-11-2193	48.82 (1.922)	45.72 (1.800)
20	• 10-11-2203	51.36 (2.022)	48.26 (1.900)
21	• 10-11-2213	53.90 (2.122)	50.80 (2.000)
22	• 10-11-2223	56.44 (2.222)	53.34 (2.100)
23	• 10-11-2233	59.98 (2.322)	55.88 (2.200)
24	• 10-11-2243	61.52 (2.422)	58.42 (2.300)
25	• 10-11-2253	64.06 (2.522)	60.96 (2.400)
26	• 10-11-2263	66.60 (2.622)	63.50 (2.500)
27	• 10-11-2273	69.14 (2.722)	66.04 (2.600)
28	• 10-11-2283	71.68 (2.822)	68.58 (2.700)

* US Standard Product, available through Molex franchised distributors

* When mated with Molex product only

Note: In the Far East this housing has a different Engineering Series No. and different Order No.



PRODUCT SPECIFICATION

TITLE

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 connectors terminated with 22 to 30 AWG wire using crimp technology.

2.0 PRODUCT DESCRIPTION

2.1 PRODUCT NAME AND SERIES NUMBERS

Crimp Terminals: 7879

Crimp Housings: 7880

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, 94V-0, Color: White

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

None

4.0 RATINGS

4.1 VOLTAGE

250 Volts AC (RMS) {or 176 Volts DC}

4.2 CURRENT AND APPLICABLE WIRES

Current is dependent on wire size, connector size, contact material, plating, ambient temperature, 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

<u>REVISION:</u> G	<u>EGR/ECN INFORMATION:</u> EC No: UCP2003-0471 DATE: 4/11/2002 Samiec	<u>TITLE:</u> PRODUCT SPECIFICATION .100 CENTER KK CONNECTORS	<u>SHEET No.</u> 1 of 5
<u>DOCUMENT NUMBER:</u> PS-7879	<u>CREATED / REVISED BY:</u> SAMIEC	<u>CHECKED BY:</u> MUELLER	<u>APPROVED BY:</u> MARGULIS



PRODUCT SPECIFICATION

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 15 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 15 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

REVISION: G	EGR/ECN INFORMATION: EC No: UCP2003-0471 DATE: 4/11/2002 Samiec	TITLE: PRODUCT SPECIFICATION .100 CENTER KK CONNECTORS	SHEET No. 2 of 5
DOCUMENT NUMBER: PS-7879	CREATED / REVISED BY: SAMIEC	CHECKED BY: MUELLER	APPROVED BY: MARGULIS



PRODUCT SPECIFICATION

5.2 MECHANICAL REQUIREMENTS

DESCRIPTION	TEST CONDITION	REQUIREMENT
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.	4.6 N (1.0 lbf) MAXIMUM insertion force & 0.8 N (0.22 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 ± ¼ inch).	6.67 N (1.5 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 ± ¼ inch) per minute.	17.8 N (4.0 lbf) MINIMUM withdrawal force
Durability	Mate connectors up to 25 cycles at a maximum rate of 5 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 ½ sine wave (11 milliseconds) shocks in the ±X,±Y,±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 ± ¼ inch). (When terminated using Molex Application Tooling.)	24 awg = 35 N (8 lbf) 26 awg = 26 N (6 lbf) 28 awg = 17 N (4 lbf) 30 awg = 13 N (3 lbf)
Normal Force	Apply a perpendicular force.	6.28 N (640 grams) average

REVISION: G	EGR/ECN INFORMATION: EC No: UCP2003-0471 DATE: 4/11/2002 Samiec	TITLE: PRODUCT SPECIFICATION .100 CENTER KK CONNECTORS	SHEET No. 3 of 5
DOCUMENT NUMBER: PS-7879	CREATED / REVISED BY: SAMIEC	CHECKED BY: MUELLER	APPROVED BY: MARGULIS



PRODUCT SPECIFICATION

5.3 ENVIRONMENTAL REQUIREMENTS

DESCRIPTION	TEST CONDITION	REQUIREMENT										
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>-40 +0/-3</td> <td>30</td> </tr> <tr> <td>+25 ±10</td> <td>5 MAXIMUM</td> </tr> <tr> <td>+105 +3/-0</td> <td>30</td> </tr> <tr> <td>+25 ±10</td> <td>5 MAXIMUM</td> </tr> </tbody> </table>	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
Temperature °C	Duration (Minutes)											
-40 +0/-3	30											
+25 ±10	5 MAXIMUM											
+105 +3/-0	30											
+25 ±10	5 MAXIMUM											
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)										
Salt Spray	Mate connectors: Duration: 48 hours exposure; Atmosphere: salt spray from a 5% solution; Temperature: 35 +1/-2°C	10 milliohms MAXIMUM (change from initial) & Visual: No Damage										

REVISION: G	EGR/ECN INFORMATION: EC No: UCP2003-0471 DATE: 4/11/2002 Samiec	TITLE: PRODUCT SPECIFICATION .100 CENTER KK CONNECTORS	SHEET No. 4 of 5
DOCUMENT NUMBER: PS-7879	CREATED / REVISED BY: SAMIEC	CHECKED BY: MUELLER	APPROVED BY: MARGULIS



PRODUCT SPECIFICATION

6.0 PACKAGING

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

7.0 GAGES AND FIXTURES

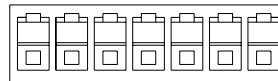
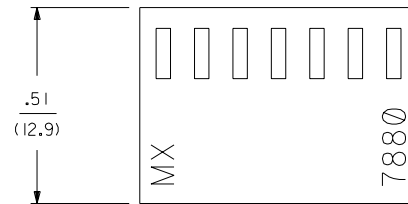
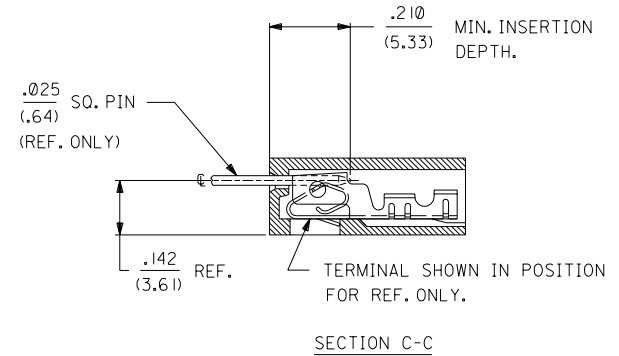
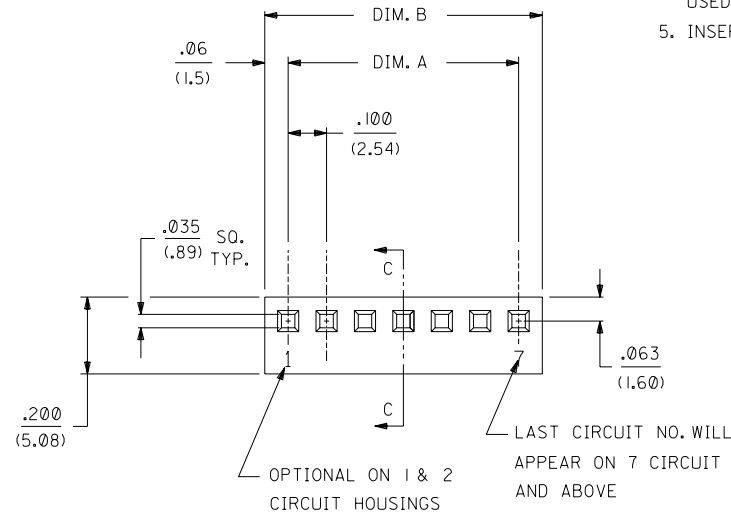
8.0 OTHER

<u>REVISION:</u> G	<u>EGR/ECN INFORMATION:</u> EC No: UCP2003-0471 DATE: 4/11/2002 Samiec	<u>TITLE:</u> PRODUCT SPECIFICATION .100 CENTER KK CONNECTORS	<u>SHEET No.</u> 5 of 5
<u>DOCUMENT NUMBER:</u> PS-7879	<u>CREATED / REVISED BY:</u> SAMIEC	<u>CHECKED BY:</u> MUELLER	<u>APPROVED BY:</u> MARGULIS

	13	12	11	10	9	8	7	6	7880	4	3	2	1
J	NO. OF CKT'S.	DIM. A	DIM. B										
	1		.122±.010 (3.10±.25)										
	2	.100±.004 (2.54±.10)	.222±.010 (5.64±.25)										
	3	.200±.004 (5.08±.10)	.322±.010 (8.18±.25)										
I	4	.300±.004 (7.62±.10)	.422±.010 (10.72±.25)										
	5	.400±.004 (10.16±.10)	.522±.010 (13.26±.25)										
	6	.500±.005 (12.70±.13)	.622±.010 (15.80±.25)										
H	7	.600±.005 (15.24±.13)	.722±.011 (18.34±.28)										
	8	.700±.005 (17.78±.13)	.822±.011 (20.88±.28)										
	9	.800±.006 (20.32±.15)	.922±.011 (23.42±.28)										
G	10	.900±.006 (22.86±.15)	1.022±.012 (25.96±.30)										
	11	1.000±.006 (25.40±.15)	1.122±.012 (28.50±.30)										
	12	1.100±.006 (27.94±.15)	1.222±.012 (31.04±.30)										
F	13	1.200±.007 (30.48±.18)	1.322±.012 (33.58±.30)										
	14	1.300±.007 (33.02±.18)	1.422±.013 (36.12±.33)										
	15	1.400±.011 (35.56±.28)	1.522±.013 (38.66±.33)										
E	16	1.500±.011 (38.10±.28)	1.622±.013 (41.20±.33)										
	17	1.600±.011 (40.64±.28)	1.722±.013 (43.74±.33)										
	18	1.700±.011 (43.18±.28)	1.822±.014 (46.28±.36)										
D	19	1.800±.011 (45.72±.28)	1.922±.014 (48.82±.36)										
	20	1.900±.011 (48.26±.28)	2.022±.014 (51.36±.36)										
	21	2.000±.012 (50.80±.30)	2.122±.015 (53.90±.38)										
	22	2.100±.012 (53.34±.30)	2.222±.015 (56.44±.38)										
C	23	2.200±.012 (55.88±.30)	2.322±.015 (59.98±.38)										
	24	2.300±.012 (58.42±.30)	2.422±.016 (61.52±.41)										
	25	2.400±.013 (60.96±.33)	2.522±.016 (64.06±.41)										
B	26	2.500±.013 (63.50±.33)	2.622±.016 (66.60±.41)										
	27	2.600±.013 (66.04±.33)	2.722±.016 (69.14±.41)										
	28	2.700±.013 (68.58±.33)	2.822±.017 (71.68±.43)										

NOTES:

1. DIMENSIONS GIVEN ACROSS CENTERLINES ARE SYMMETRICAL ABOUT THOSE CENTERLINES WITHIN HALF THE TOTAL TOLERANCES.
2. THIS HOUSING FOR USE WITH SHROUDED TERMINAL 7879.
3. THIS PRODUCT COMPLIES WITH MOLEX PRODUCT SPEC. NO. 7879.
4. SPECIAL SUPPORT MAY BE REQUIRED FOR PRINTED CIRCUIT BOARDS USED WITH 10 OR MORE CIRCUIT CONNECTORS.
5. INSERTION AND WITHDRAWL FORCES RANGE FROM 1.3 TO 1.9 POUNDS PER CIRCUIT.



7880 - N * - *

NO. OF CKTS.

VOID CODE
NO. CORRESPONDS TO
CKT. NO. VOIDED.
MULT. VOIDS START WITH 51.

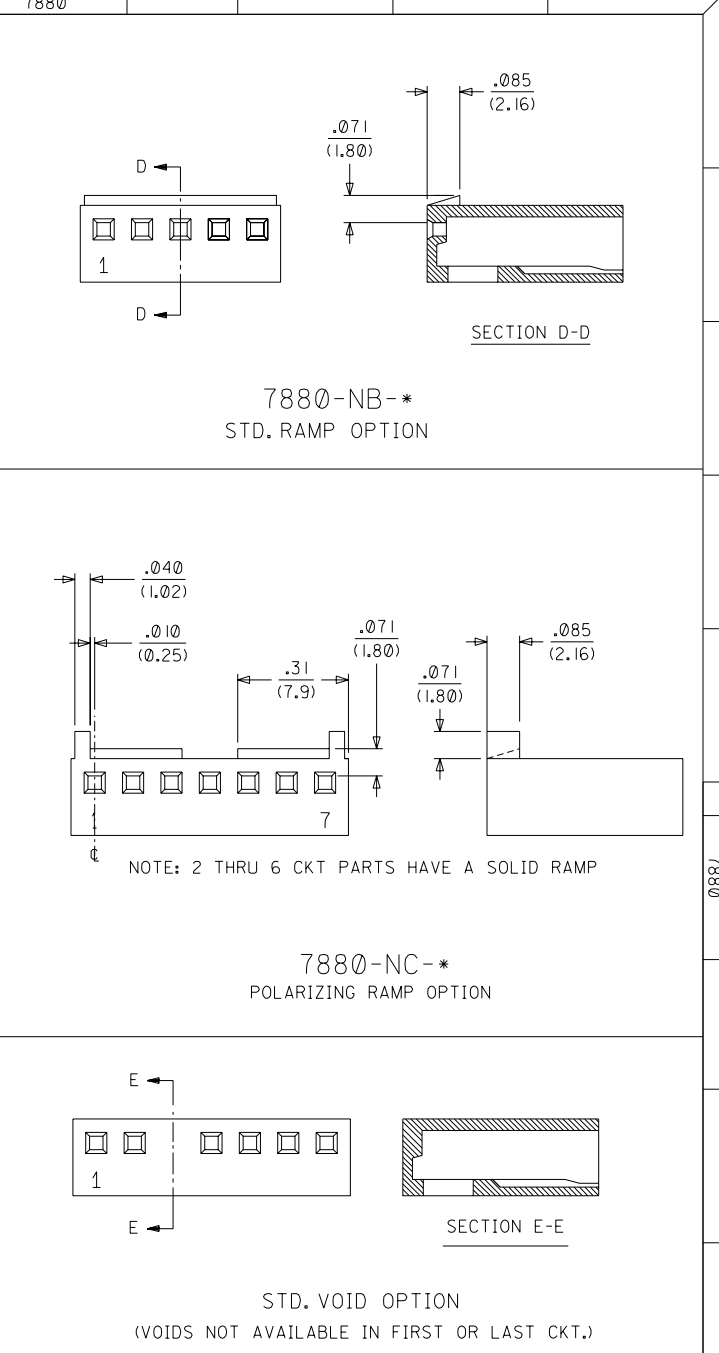
OPTION CODE		
OPT. CODE	RAMP	MATERIAL
A	NONE	NYLON, 94V-0, COLOR-WHITE
B	STD. RAMP	NYLON, 94V-0, COLOR-WHITE
C	POL. RAMP	NYLON, 94V-0, COLOR-WHITE

DIMENSIONS SHOWN (METRIC) INCH UNLESS OTHERWISE SPECIFIED TOLERANCES: ANGULAR ± 1/2°		$\nabla = 0$ $\blacktriangledown = 0$ REVISE ONLY ON CAD SYSTEM TITLE (2.54)/.100 KK, HOUSING FOR SHROUDED CRIMP TYPE TERMINAL	
3 PLACE ± .010 --- 2 PLACE ± .014 ± 0.25 1 PLACE --- ± 0.35		SHEET NO. DATE 1 OF 2 08/24/88	
DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS		MOLEX INCORPORATED LITTLE ROCK, AR 60532 U.S.A.	
DRWG. BY: GUZIK CHK'D. BY: PATEL APP'D. BY: LENZ SCALE:		PART NO. SD-7880 SEE CHART	
LTR. REVISIONS LTR. REVISIONS		THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INC. AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION.	

2	L
1	L I

MFG. SH. REV.

7880-NA-*			7880-NB-*			7880-NC-*		
PART NO.	ENG. NO.	VOID CKT.	PART NO.	ENG. NO.	VOID CKT.	PART NO.	ENG. NO.	VOID CKT.
10-01-2019	7880-1A		10-11-2013	7880-1B		N/A	7880-1C	
10-01-2029	7880-2A		10-11-2023	7880-2B		10-11-2024	7880-2C	
10-01-2039	7880-3A		10-11-2033	7880-3B		10-11-2034	7880-3C	
10-01-2049	7880-4A		10-11-2043	7880-4B		10-11-2044	7880-4C	
10-01-2059	7880-5A		10-11-2053	7880-5B		10-11-2054	7880-5C	
10-01-2069	7880-6A		10-11-2063	7880-6B		10-11-2064	7880-6C	
10-01-2079	7880-7A		10-11-2073	7880-7B		10-11-2074	7880-7C	
10-01-2089	7880-8A		10-11-2083	7880-8B		10-11-2084	7880-8C	
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10-01-2119	7880-11A		10-11-2113	7880-11B		10-11-2114	7880-11C	
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10-01-2159	7880-15A		10-11-2153	7880-15B		10-11-2154	7880-15C	
10-01-2169	7880-16A		10-11-2163	7880-16B		10-11-2164	7880-16C	
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10-01-2189	7880-18A		10-11-2183	7880-18B		10-11-2184	7880-18C	
10-01-2199	7880-19A		10-11-2193	7880-19B		10-11-2194	7880-19C	
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10-01-2239	7880-23A		10-11-2233	7880-23B		10-11-2234	7880-23C	
10-01-2249	7880-24A		10-11-2243	7880-24B		10-11-2244	7880-24C	
10-01-2259	7880-25A		10-11-2253	7880-25B		10-11-2254	7880-25C	
10-01-2269	7880-26A		10-11-2263	7880-26B		10-11-2264	7880-26C	
10-01-2279	7880-27A		10-11-2273	7880-27B		10-11-2274	7880-27C	
10-01-2289	7880-28A		10-11-2283	7880-28B		10-11-2284	7880-28C	
			10-11-2052	7880-5B-2	2			
			10-11-2092	7880-9B-2	2			
			10-11-2105	7880-10B-4	4			



SEE SHEET I	SEE SHEET I	SEE SHEET I	SEE SHEET I
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SEE SHEET I	K3	SEE SHEET I	SEE SHEET I
SEE SHEET I	H	SEE SHEET I	SEE SHEET I
LTR.	REVISIONS	LTR.	REVISIONS

DIMENSIONS SHOWN (METRIC) INCH
UNLESS OTHERWISE SPECIFIED
TOLERANCES: ANGULAR ± 1/2°

INCH	METRIC
5 PLACE ± .010	
2 PLACE ± .014 ± 0.25	
1 PLACE ± 0.36	

DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS

DRWG. BY: GUZIK CHK'D. BY: PATEL
APP'D. BY: LENZ SCALE: :

REVISIONS: LTR. REVISIONS: LTR.

FILE NAME: THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INC. AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION.

REVISE ONLY ON CAD SYSTEM

TITLE: (2.54)/.100 KK, HOUSING FOR SHROUDED CRIMP TYPE TERMINAL

MOLEX INCORPORATED U.S.A.
L15LEJLL 60532

PART NO. SHEET NO. DATE
SEE CHART 2 08/24/88

DRWG. NO. SD-7880