

**PLEASE CHECK WWW.MOLEX.COM FOR LATEST PART INFORMATION**

**Part Number:** [0010451121](#)  
**Status:** **Active**  
**Overview:** [kk](#)  
**Description:** 5.08mm (.200") Pitch KK® Header, Vertical, Round Pin, 12 Circuits, Gold (Au) Plating, Pin Length 19.05mm (.750")

**Documents:**

[3D Model](#) [Product Specification PS-99020-0087 \(PDF\)](#)  
[Drawing \(PDF\)](#) [RoHS Certificate of Compliance \(PDF\)](#)

**Agency Certification**

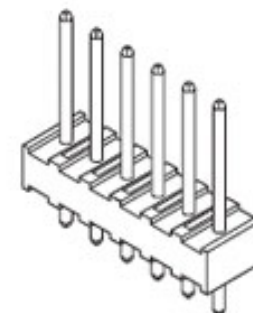
CSA LR19980  
 UL E29179

**General**

Product Family PCB Headers  
 Series [3003](#)  
 Application Board-to-Board, Wire-to-Board  
 Overview [kk](#)  
 Product Name KK®

**Physical**

Breakaway No  
 Circuits (Loaded) 12  
 Circuits (maximum) 12  
 Color - Resin Natural  
 Durability (mating cycles max) 25  
 First Mate / Last Break No  
 Flammability 94V-2  
 Glow-Wire Compliant No  
 Guide to Mating Part No  
 Keying to Mating Part None  
 Lock to Mating Part None  
 Material - Metal Brass  
 Material - Plating Mating Tin  
 Material - Plating Termination Tin  
 Material - Resin Nylon  
 Number of Rows 1  
 Orientation Vertical  
 PC Tail Length (in) 0.155 In  
 PC Tail Length (mm) 3.94 mm  
 PCB Locator No  
 PCB Retention None  
 PCB Thickness Recommended (in) 0.062 In  
 PCB Thickness Recommended (mm) 1.60 mm  
 Packaging Type Bag  
 Pitch - Mating Interface (in) 0.200 In  
 Pitch - Mating Interface (mm) 5.08 mm  
 Pitch - Term. Interface (in) 0.200 In  
 Pitch - Term. Interface (mm) 5.08 mm  
 Plating min: Mating (µin) 20  
 Plating min: Mating (µm) .5  
 Plating min: Termination (µin) 30  
 Plating min: Termination (µm) .76  
 Polarized to Mating Part No  
 Polarized to PCB No



*image - Reference only*

*Series*

**EU RoHS**

**ELV and RoHS Compliant**  
**REACH SVHC**  
 Not Reviewed  
**Halogen-Free Status**  
**Not Reviewed**

**China RoHS**



**Need more information on product environmental compliance?**

Email [productcompliance@molex.com](mailto:productcompliance@molex.com)  
 For a multiple part number RoHS Certificate of Compliance, [click here](#)

Please visit the [Contact Us](#) section for any non-product compliance questions.

**Search Parts in this Series**

[3003Series](#)

**Mates With**

KK® Crimp Terminal Housing [3001](#) , [5058](#)

Shrouded	No
Stackable	No
Surface Mount Compatible (SMC)	No
Temperature Range - Operating	0°C to +50°C
Termination Interface: Style	Through Hole

**Electrical**

Current - Maximum per Contact	7A
Voltage - Maximum	250V

**Solder Process Data**

Lead-free Process Capability	Wave Capable (TH only)
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**Material Info**

Old Part Number	3003-12AG
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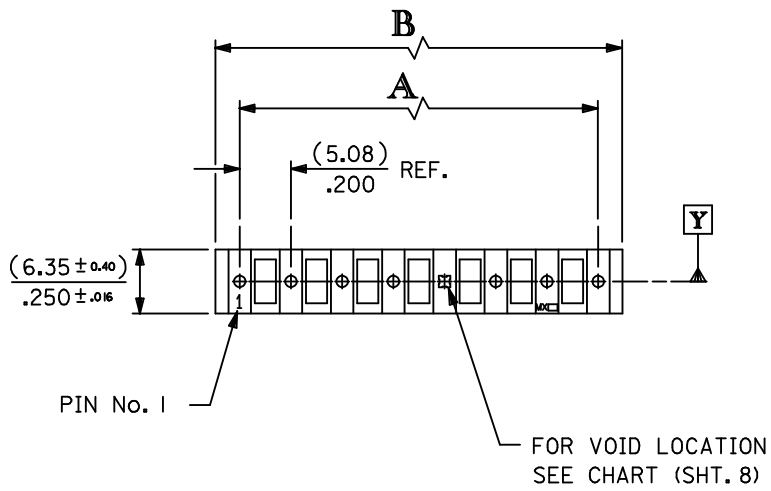
**Reference - Drawing Numbers**

Product Specification	PS-99020-0087
Sales Drawing	SDAE-3003-N*

This document was generated on 05/24/2010

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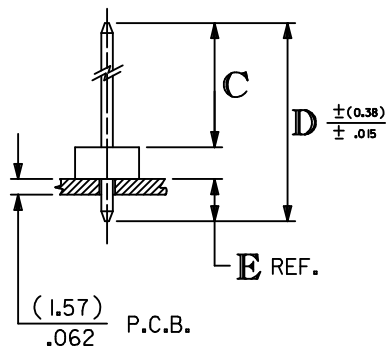
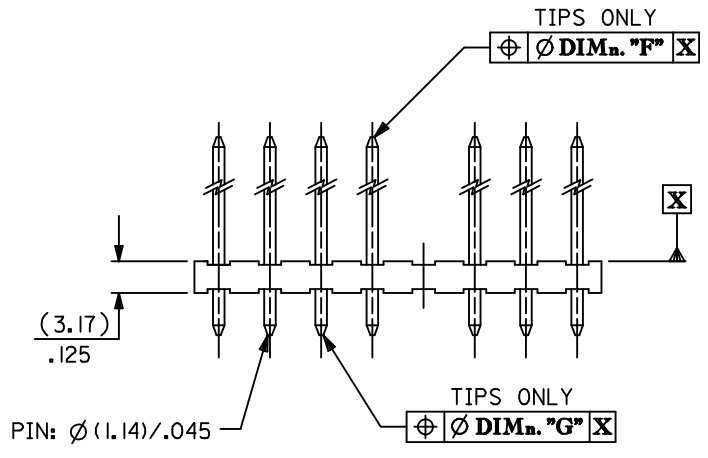
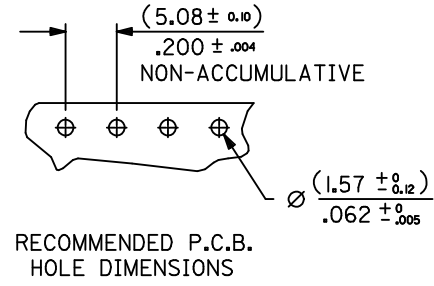
SEE CHART  
SDAE-3003-N\*



3003-N \* - \*

BASE No.                      VOID CODE

No. OF CCTS.                VERSION



No OF CCTS.	DIMn. A	DIMn. B
2	( 5.08 ± 0.05) .200 ± .002	( 9.91 ± 0.15) .390 ± .006
3	(10.16 ± 0.08) .400 ± .003	(14.99 ± 0.15) .590 ± .006
4	(15.24 ± 0.08) .600 ± .003	(20.07 ± 0.18) .790 ± .007
5	(20.32 ± 0.08) .800 ± .003	(25.15 ± 0.20) .990 ± .008
6	(25.40 ± 0.10) 1.000 ± .004	(30.23 ± 0.23) 1.190 ± .009
7	(30.48 ± 0.13) 1.200 ± .005	(35.31 ± 0.25) 1.390 ± .010
8	(35.56 ± 0.20) 1.400 ± .008	(40.39 ± 0.28) 1.590 ± .011
9	(40.64 ± 0.20) 1.600 ± .008	(45.47 ± 0.30) 1.790 ± .012
10	(45.72 ± 0.20) 1.800 ± .008	(50.55 ± 0.30) 1.990 ± .012
11	(50.80 ± 0.20) 2.000 ± .008	(55.63 ± 0.33) 2.190 ± .013
12	(55.88 ± 0.25) 2.200 ± .010	(60.71 ± 0.33) 2.390 ± .013
13	(60.96 ± 0.25) 2.400 ± .010	(65.79 ± 0.36) 2.590 ± .014
14	(66.04 ± 0.25) 2.600 ± .010	(70.87 ± 0.36) 2.790 ± .014
15	(71.12 ± 0.35) 2.800 ± .014	(75.95 ± 0.42) 2.990 ± .017
16	(76.20 ± 0.35) 3.000 ± .014	(81.03 ± 0.42) 3.190 ± .017
17	(81.28 ± 0.40) 3.200 ± .016	(86.11 ± 0.51) 3.390 ± .020
18	(86.36 ± 0.40) 3.400 ± .016	(91.19 ± 0.53) 3.590 ± .021
19	(91.44 ± 0.50) 3.600 ± .020	(96.27 ± 0.53) 3.790 ± .021
20	(96.52 ± 0.50) 3.800 ± .020	(101.35 ± 0.53) 3.990 ± .021

**NOTES:**

1. MATERIAL: WAFER, NYLON, 94V-2, COLOUR - NATURAL PINS, BRASS (FOR PLATING SEE CHARTS)
2. FOR DIMns. "A","B","C","D","E","F" AND VERSIONS, SEE CHARTS ON SHEET 2 & SUBSEQUENT SHEETS.
3. FOR VERSIONS WITH VOIDS SEE SHEET 8.
4. PIN PUSH OUT FORCE: (1.36Kg)/3lbs MIN.
5. PIN MUST MEET MOLEX SOLDERABILITY SPEC. ES-152.
6. MAX BOW (0.38)/.015 OVER (25.4)/1.00

ADD PART NO SHT 7 EC NO: E2009-0320 DRWN: BMAGUIRE 2009/04/03 CHKD: 2009/04/03 APPR: BMAGUIRE 2009/04/06	QUALITY SYMBOLS ▽=0 ∇=0	GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE MM ONLY	SCALE 1:1	DESIGN UNITS METRIC	THIRD ANGLE PROJECTION
		mm	INCH	DRAWN BY	DATE	TITLE	
BM	DESCRIPTION	4 PLACES	± ---	± ---	CHECKED BY	DATE	5.08 MM KK HDR VT RPIN
		3 PLACES	± ---	± ---			
		2 PLACES	± ---	± ---	APPROVED BY	DATE	MOLEX INCORPORATED
		1 PLACE	± ---	± ---			
		ANGULAR ± ---°		MATERIAL NO.	DOCUMENT NO.	SHEET NO.	
		DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS		SEE TABLES	SDAE-3003-N*	1 OF 00	
		SIZE	THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION				

INDEX: FOR FULL DIMENSIONS SEE RELEVANT SHEET.

ENG. No.	PLATING	DIM. C	DIM. D	SHT. No.
AE-3003-NA	(102)			3
AE-3003-NAG	(501)	(11.94) / .470	(19.05) / .750	6
AE-3003-NA(503)	(503)			6
AE-3003-NB	(102)	(16.69) / .657	(23.80) / .937	3
AE-3003-NC	(102)			3
AE-3003-NCG	(501)	(23.04) / .907	(30.48) / 1.200	6
AE-3003-ND	(102)			3
AE-3003-NDG	(501)	(27.81) / 1.095	(34.92) / 1.375	6
AE-3003-NF	(102)			3
AE-3003-NFG	(501)	(32.56) / 1.282	(39.68) / 1.562	6
AE-3003-NI	(102)	(13.51) / .532	(20.32) / .800	4
AE-3003-NJ	(102)	(21.46) / .845	(28.58) / 1.125	4
AE-3003-NK	(102)			4
AE-3003-NS	(501)	(18.29) / .720	(25.40) / 1.000	7
AE-3003-NM	(102)	(11.89) / .468	(23.80) / .937	4
AE-3003-NU	(102)	(11.18) / .440	(17.45) / .687	4
AE-3003-NV	(102)	(11.94) / .470	(18.29) / .720	5
AE-3003-NY	(102)	(10.90) / .430	(17.45) / .687	5

FOR VOID VERSIONS SEE SHEET 8.

DOCUMENT ERROR EC NO: E2009-0513 DRWN: BMAGUIRE 2009/04/07 CHKD: APPR: BMAGUIRE 2009/04/07 REV	QUALITY SYMBOLS	GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE	SCALE	DESIGN UNITS	THIRD ANGLE PROJECTION		
	▼=0 ◻=0	mm	INCH	MM ONLY	1:1	METRIC			
		4 PLACES	± ---	± ---	DRAWN BY	DATE	TITLE		
		3 PLACES	± ---	± ---	CHECKED BY	DATE	5.08 MM KK HDR VT RPIN		
	2 PLACES	± ---	± ---	APPROVED BY	DATE	MOLEX INCORPORATED			
	1 PLACE	± ---	± ---	ANGULAR ± ---°		MATERIAL NO.		SHEET NO.	
		DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS		SEE CHART		DOCUMENT NO.		2 OF 08	
				SIZE	THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION				
				A3					

ENG. NO.	AE-3003-NAG		AE-3003-NA(503)		AE-3003-NCG		AE-3003-NDG		AE-3003-NFG		
DIMN. "C"	(11.94 ± 0.51) .470 ± .020		(11.94 ± 0.51) .470 ± .020		(23.04 ± 0.51) .907 ± .020		(27.81 ± 0.51) 1.095 ± .020		(32.56 ± 0.51) 1.282 ± .020		
DIMN. "D"	(19.05) / .750		(19.05) / .750		(30.48) / 1.200		(34.92) / 1.375		(39.68) / 1.562		
DIMN. "E"	(3.94) / .155		(3.94) / .155		(4.27) / .168		(3.94) / .155		(3.94) / .155		
DIMN. "F"	(1.02) / .040		(1.02) / .040		(1.02) / .040		(1.02) / .040		(1.02) / .040		
DIMN. "G"	(1.02) / .040		(1.02) / .040		(1.02) / .040		(1.02) / .040		(1.02) / .040		
PLATING	(501) GOLD (0.5µM) / .000020 MIN. OVER NICKEL (0.76µM) / .000030 MIN.		(503) GOLD (0.76µM) / .000030 MIN. OVER NICKEL (1.27µM) / .000050 MIN.		(501) GOLD (0.5µM) / .000020 MIN. OVER NICKEL (0.76µM) / .000030 MIN.		(501) GOLD (0.5µM) / .000020 MIN. OVER NICKEL (0.76µM) / .000030 MIN.		(501) GOLD (0.5µM) / .000020 MIN. OVER NICKEL (0.76µM) / .000030 MIN.		
	PART NO.	ENG NO.			PART NO.	ENG NO.	PART NO.	ENG NO.	PART NO.	ENG NO.	
NO. OF CIRCUITS	2	10-45-1021	AE-3003-2AG	NOT TOOLED	AE-3003-2A(503)	10-45-1025	AE-3003-2CG	10-45-1024	AE-3003-2DG	38-00-2482	AE-3003-2FG
	3	▲ -1031	▲ -3AG	▲	▲ -3A(503)	▲ -1035	▲ -3CG	▲ -1034	▲ -3DG	▲ -2483	▲ -3FG
	4	-1041	-4AG		-4A(503)	-1045	-4CG	-1044	-4DG	-2484	-4FG
	5	-1051	-5AG		-5A(503)	-1055	-5CG	-1054	-5DG	-2485	-5FG
	6	-1061	-6AG		-6A(503)	-1065	-6CG	-1064	-6DG	-2486	-6FG
	7	-1071	-7AG		-7A(503)	-1075	-7CG	-1074	-7DG	-2487	-7FG
	8	-1081	-8AG		-8A(503)	-1085	-8CG	-1084	-8DG	-2488	-8FG
	9	-1091	-9AG		-9A(503)	-1095	-9CG	-1094	-9DG	-2489	-9FG
	10	-1101	-10AG		-10A(503)	-1105	-10CG	-1104	-10DG	-2490	-10FG
	11	-1111	-11AG		-11A(503)	-1115	-11CG	-1114	-11DG	-2491	-11FG
	12	-1121	-12AG		-12A(503)	-1125	-12CG	-1124	-12DG	-2492	-12FG
	13	-1131	-13AG		-13A(503)	-1135	-13CG	-1134	-13DG	-2493	-13FG
	14	-1141	-14AG		-14A(503)	-1145	-14CG	-1144	-14DG	-2494	-14FG
	15	-1151	-15AG		-15A(503)	-1155	-15CG	-1154	-15DG	-2495	-15FG
	16	-1161	-16AG		-16A(503)	-1165	-16CG	-1164	-16DG	-2496	-16FG
	17	-1171	-17AG		-17A(503)	-1175	-17CG	-1174	-17DG	-2497	-17FG
	18	-1181	-18AG		-18A(503)	-1185	-18CG	-1184	-18DG	-2498	-18FG
	19	▼ -1191	▼ -19AG	▼	▼ -19A(503)	▼ -1195	▼ -19CG	▼ -1194	▼ -19DG	▼ -2499	▼ -19FG
	20	10-45-1201	AE-3003-20AG	NOT TOOLED	AE-3003-20A(503)	10-45-1205	AE-3003-20CG	10-45-1204	AE-3003-20DG	38-00-2500	AE-3003-20FG

SEE VOIDS

FOR PREVIOUS DRAWING ISSUES SEE MRI.

BK SEE SHEET 1

THIRD ANGLE PROJECTION		REVISE ONLY ON CAD SYSTEM		SH.	REV.
DIMENSIONS SHOWN (METRIC) INCH UNLESS OTHERWISE SPECIFIED TOLERANCES: ANGULAR ± 2°		DRWG BY GCH	CADCAM FILENAME SA3003X6 DGN	THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INC. & SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION	
INCH (METRIC)		CHK'D BY	TITLE 5.08 mm KK Hdr Vt RPIn		
3 PLACE ± .		APP'D BY	MOLEX MOLEX EUROPE		
2 PLACE ± .		SCALE	SHEET NO. 60F	DATE 29/8 /86	
1 PLACE ±			PART NO. SEE CHART	DWG NO. SDAE-3003-N*	SIZE B
DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS					
DESIGN DIMENSION (PRIMARY) <input checked="" type="checkbox"/> (MM) <input type="checkbox"/> IN.					
EQUIVALENT DIMENSION (SECONDARY) <input type="checkbox"/> (MM) <input checked="" type="checkbox"/> IN.					