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**Part Number:** 0022053031

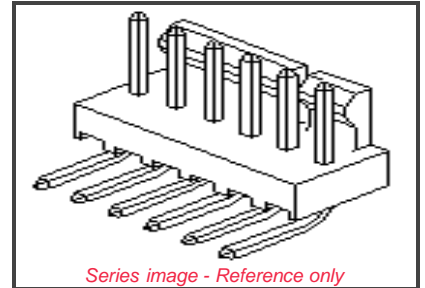
**Status:** Active

**Description:** 2.54mm (.100") Pitch KK® Solid Header, Right Angle, with Friction Lock, 3 Circuits, Tin (Sn) Plating

**Documents:**

*Note - Please disable browser pop-up blockers for documents on www.molex.com*

- [Drawing \(PDF\)](#)
- [Product Specification PS-10-07 \(PDF\)](#)
- [3D Model](#)
- [Packaging Specification \(PDF\)](#)
- [Related Catalog Page \(PDF\)](#)



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**Part Detail: (show all)**

- [General](#)
- [Physical](#)
- [Electrical](#)
- [Material Info](#)

**General**

Product Family	PCB Headers
Series	<a href="#">7478</a>
Application	Wire-to-Board
Product Name	KK®

**Physical**

Breakaway	No
Circuits (Loaded)	3
Circuits (maximum)	3
Color - Resin	Natural (White)
Durability (mating cycles) min	25 cycles
Flammability	94V-0
Lock to Mating Part	Yes
Material - Metal	Brass
Material - Plating Mating	Tin
Material - Plating Termination	Tin
Material - Resin	Nylon
Number of Rows	1
Orientation	Right Angle
PC Tail Length (in)	0.141 In
PC Tail Length (mm)	3.58 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)	0.100 In
Pitch - Mating Interface (mm)	2.54 mm
Plating min: Mating (uin)	200
Plating min: Mating (um)	5
Plating min: Termination (uin)	200
Plating min: Termination (um)	5
Polarized to Mating Part	Yes
Polarized to PCB	Yes

**EU RoHS**    **China RoHS**  
**ELV and RoHS Compliant**



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Duration at Max. Process Temperature (seconds)	5
Lead-free Process Capability	Wave Capable (TH only)
Max. Cycles at Max. Process Temperature	1
Process Temperature max. C	235

**Search Parts in this Series**

[7478](#) Series

**Mates With**

[2695](#), [6471](#), [7880](#), [4455](#), [7720](#)

Shrouded	Partial
Stackable	Yes
Temperature Range - Operating	0°C to +75°C
Termination Interface: Style	Through Hole

**Electrical**

CSA	LR19980
Current - Maximum	4.000 Amp
UL	E29179
Voltage - Maximum	250V

**Material Info**

Old Part Number	A-7478-03A102
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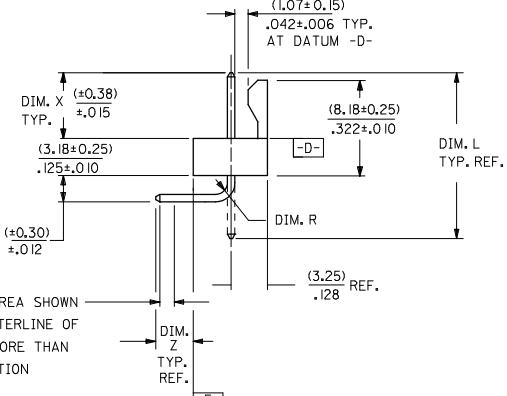
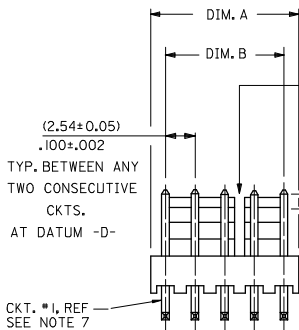
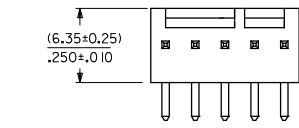
**Reference - Drawing Numbers**

Product Specification	PS-10-07
Sales Drawing	SDA-7478

	13	12	11	10	9	8	7	6	5	4	3	2	1
J	28	( 71.12 / 70.61 ) 2.800 / 2.780	( 68.58 ± 0.25 ) 2.700 ± .010	4 , 5 24 , 25									
	27	( 68.58 / 68.07 ) 2.700 / 2.680	( 66.04 ± 0.25 ) 2.600 ± .010	4 , 5 24 , 25									
	26	( 66.04 / 65.53 ) 2.600 / 2.580	( 63.50 ± 0.25 ) 2.500 ± .010	4 , 5 20 , 21									
	25	( 63.50 / 62.99 ) 2.500 / 2.480	( 60.96 ± 0.25 ) 2.400 ± .010	4 , 5 20 , 21									
I	24	( 60.96 / 60.45 ) 2.400 / 2.380	( 58.42 ± 0.25 ) 2.300 ± .010	4 , 5 20 , 21									
	23	( 58.42 / 57.96 ) 2.300 / 2.282	( 55.88 ± 0.23 ) 2.200 ± .009	4 , 5 20 , 21									
	22	( 55.88 / 55.42 ) 2.200 / 2.182	( 53.34 ± 0.23 ) 2.100 ± .009	4 , 5 16 , 17									
H	21	( 53.34 / 52.88 ) 2.100 / 2.082	( 50.80 ± 0.23 ) 2.000 ± .009	4 , 5 16 , 17									
	20	( 50.80 / 50.34 ) 2.000 / 1.982	( 48.26 ± 0.23 ) 1.900 ± .009	4 , 5 16 , 17									
	19	( 48.26 / 47.80 ) 1.900 / 1.882	( 45.72 ± 0.23 ) 1.800 ± .009	4 , 5 16 , 17									
G	18	( 45.72 / 45.31 ) 1.800 / 1.784	( 43.18 ± 0.20 ) 1.700 ± .008	4 , 5 12 , 13									
	17	( 43.18 / 42.77 ) 1.700 / 1.684	( 40.64 ± 0.20 ) 1.600 ± .008	4 , 5 12 , 13									
	16	( 40.64 / 40.23 ) 1.600 / 1.584	( 38.10 ± 0.20 ) 1.500 ± .008	4 , 5 12 , 13									
F	15	( 38.10 / 37.69 ) 1.500 / 1.484	( 35.56 ± 0.20 ) 1.400 ± .008	4 , 5 12 , 13									
	14	( 35.56 / 35.20 ) 1.400 / 1.386	( 33.02 ± 0.18 ) 1.300 ± .007	4 , 5 8 , 9									
	13	( 33.02 / 32.66 ) 1.300 / 1.286	( 30.48 ± 0.18 ) 1.200 ± .007	4 , 5 8 , 9									
	12	( 30.48 / 30.12 ) 1.200 / 1.186	( 27.94 ± 0.18 ) 1.100 ± .007	4 , 5 8 , 9									
E	11	( 27.94 / 27.58 ) 1.100 / 1.086	( 25.40 ± 0.18 ) 1.000 ± .007	4 , 5 8 , 9									
	10	( 25.40 / 25.04 ) 1.000 / .986	( 22.86 ± 0.15 ) .900 ± .006	4 , 5									
	9	( 22.86 / 22.50 ) .900 / .886	( 20.32 ± 0.15 ) .800 ± .006	4 , 5									
D	8	( 20.32 / 19.96 ) .800 / .786	( 17.78 ± 0.15 ) .700 ± .006	4 , 5									
	7	( 17.78 / 17.42 ) .700 / .686	( 15.24 ± 0.13 ) .600 ± .005	4 , 5									
	6	( 15.24 / 14.88 ) .600 / .586	( 12.70 ± 0.13 ) .500 ± .005	4 , 5									
C	5	( 12.70 / 12.40 ) .500 / .488	( 10.16 ± 0.13 ) .400 ± .005	NONE									
	4	( 10.16 / 9.86 ) .400 / .388	( 7.62 ± 0.13 ) .300 ± .005	NONE									
	3	( 7.62 / 7.32 ) .300 / .288	( 5.08 ± 0.10 ) .200 ± .004	NONE									
B	2	( 5.08 / 4.78 ) .200 / .188	( 2.54 ± 0.05 ) .100 ± .002	NONE									
A													

NOTES:

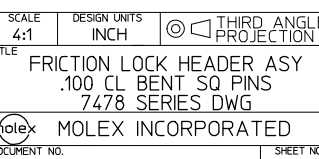
1. MATERIAL: NYLON, UL94V-0, COLOR WHITE
2. FINISH:
  - (102) - OVERALL TIN: (0.00508)/.000200 MIN., OVERALL COPPER UNDERPLATE: (0.00254)/.000100 MIN.
  - (154) - OVERALL TIN: (0.00254)/.000100 MIN., OVERALL NICKEL UNDERPLATE: (0.00127)/.000050 MIN.
  - (501) - OVERALL GOLD: (0.00051)/.000020 MIN., OVERALL NICKEL UNDERPLATE: (0.00076)/.000030 MIN.
  - (503) - OVERALL GOLD: (0.00076)/.000030 MIN., OVERALL NICKEL UNDERPLATE: (0.00127)/.000050 MIN.
  - (531) - OVERALL GOLD: (0.00038)/.000015 MIN., OVERALL NICKEL UNDERPLATE: (0.00076)/.000030 MIN.
3. PARTS CONFORM TO PRODUCT SPECIFICATION PS-10-07.
4. PACKAGING INFORMATION: SEE LEGEND.
5. PARTS ARE STACKABLE END TO END ON (2.54)/.100 CENTERS.
6. PIN PUSH OUT FORCE: 2 LBS. MIN.
7. CIRCUIT ONE DESIGNATION IS USED TO DEFINE VOID LOCATION. CIRCUIT ONE MAY OR MAY NOT LINE UP WITH CIRCUIT ONE ON THE HOUSING.
8. THIS PART CONFORMS TO CLASS B REQUIREMENTS OF COSMETIC SPECIFICATION PS-45499-002.



SECONDARY OPERATIONS	
CODE	PACKAGE
BLANK	BULK PK-7478-001
T	TUBE PER PK-44743-001

A-7478-N\*\*\*  
 NO. OF CKTS. →  
 VERSION LETTER CHANGES WHEN PIN NO. OR PRESS DIM. CHANGES  
 PLATING SEE NOTE 2

RECOMMENDED P.C. BOARD HOLE LAYOUT



REMOVE ES-42003 EC NO. UCP2009-0359 DRAWING: GAVRILL 2008/08/12 CHK: CHOKKI PPR 2008/08/14 APPR: ESMITH 2008/08/14	QUALITY SYMBOLS ▽=0 ▽=0	GENERAL TOLERANCES (UNLESS SPECIFIED): mm INCH 4 PLACES ±.005 ±.005 3 PLACES ±.005 ±.010 2 PLACES ±.025 ±.015 1 PLACE ±.038 ±.015 ANGULAR ±1/2°	DIMENSION STYLE: MM/IN DRAWN BY: GUZIC DATE: 1987/07/30 CHECKED BY: PATEL DATE: 1987/07/30 APPROVED BY: LENZ DATE: 1987/07/30	SCALE: 4:1 DESIGN UNITS: INCH THIRD ANGLE PROJECTION
		DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS	SEE CHART	MATERIAL NO.: SDA-7478 DOCUMENT NO.: SDA-7478 SHEET NO.: 1 OF 7

		13	12	11	10	9	8	7	6	5	4	3	2	1															
J	ENG. NO.	PIN NO.	DIM. L	DIM. X	DIM. Z	DIM. Y	DIM. W	DIM. R	ENG. NO.	PIN NO.	DIM. L	DIM. X	DIM. Z	DIM. Y	DIM. W	DIM. T													
	A-7478-NA I02	2766-4 (I02)	(18.69) .736	(6.60) .260	(3.58) .141	(3.05) .120	90°	(1.17) .046																					
	A-7478-NA50I	2766-4 (K50 I)	(18.69) .736	(6.60) .260	(3.58) .141	(3.05) .120	90°	(1.17) .046																					
I	A-7478-NA50IT	2766-4 (K50 I)	(18.69) .736	(6.60) .260	(3.58) .141	(3.05) .120	90°	(1.17) .046																					
	A-7478-NA I02T	2766-4 (I02)	(18.69) .736	(6.60) .260	(3.58) .141	(3.05) .120	90°	(1.17) .046																					
H																													
G																													
F																													
E																													
D																													
C																													
B	<table border="1"> <tr> <td rowspan="2">           ADD A-7478-NA I02T            SEC NO. UCP2006-1815            DRW:WADRR            CHK:KJELHAG            APP:RSMITH            Y9         </td> <td>           QUALITY SYMBOLS            ▽=0            ▽=0         </td> <td>           GENERAL TOLERANCES (UNLESS SPECIFIED)            4 PLACES ±--- ±---            3 PLACES ±--- ±---            2 PLACES ±--- ±---            1 PLACE ±--- ±---            ANGULAR ±---°         </td> <td>           DIMENSION STYLE            IN/MM         </td> <td>           SCALE            ---         </td> <td>           DESIGN UNITS            INCH         </td> <td>           THIRD ANGLE PROJECTION         </td> </tr> <tr> <td>           DRAWN BY            SUZIK            1987/07/10         </td> <td>           CHECKED BY            PATEL            1987/07/10         </td> <td>           APPROVED BY            LENZ            1987/07/10         </td> <td>           MATERIAL NO.            SEE CHART         </td> <td>           DOCUMENT NO.            SDA-7478         </td> <td>           SHEET NO.            2 OF 7         </td> <td>           TITLE            FRICTION LOCK HEADER ASY            .100 CL BENT SQ PINS            7478 SERIES DWG            MOLEX INCORPORATED         </td> </tr> </table>							ADD A-7478-NA I02T SEC NO. UCP2006-1815 DRW:WADRR CHK:KJELHAG APP:RSMITH Y9	QUALITY SYMBOLS ▽=0 ▽=0	GENERAL TOLERANCES (UNLESS SPECIFIED) 4 PLACES ±--- ±--- 3 PLACES ±--- ±--- 2 PLACES ±--- ±--- 1 PLACE ±--- ±--- ANGULAR ±---°	DIMENSION STYLE IN/MM	SCALE ---	DESIGN UNITS INCH	THIRD ANGLE PROJECTION	DRAWN BY SUZIK 1987/07/10	CHECKED BY PATEL 1987/07/10	APPROVED BY LENZ 1987/07/10	MATERIAL NO. SEE CHART	DOCUMENT NO. SDA-7478	SHEET NO. 2 OF 7	TITLE FRICTION LOCK HEADER ASY .100 CL BENT SQ PINS 7478 SERIES DWG MOLEX INCORPORATED								
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A																													

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	13	12	11	10	9	8	7	6	5	4	3	2	1																			
	A-7478-NA I02		A-7478-NA50 I		A-7478-NA50 I T		A-7478-NA I02 T																									
J	PART NO.	ENG. NO.	PART NO.	ENG. NO.	PART NO.	ENG. NO.	PART NO.	ENG. NO.	PART NO.	ENG. NO.	PART NO.	ENG. NO.	PART NO.	ENG. NO.																		
	22-05-3021	A-7478-2A I02	22-12-2024	A-7478-2A50 I	50-29-1710	A-7478-2A50 I T	50-34-8500	A-7478-2A I02 T																								
	22-05-3031	A-7478-3A I02	22-12-2034	A-7478-3A50 I	50-29-1711	A-7478-3A50 I T	50-34-8501	A-7478-3A I02 T																								
	22-05-3041	A-7478-4A I02	22-12-2044	A-7478-4A50 I	50-29-1705	A-7478-4A50 I T	50-34-8502	A-7478-4A I02 T																								
I	22-05-3051	A-7478-5A I02	22-12-2054	A-7478-5A50 I	50-29-1712	A-7478-5A50 I T																										
	22-05-3061	A-7478-6A I02	22-12-2064	A-7478-6A50 I	50-29-1713	A-7478-6A50 I T																										
	22-05-3071	A-7478-7A I02	22-12-2074	A-7478-7A50 I	50-29-1714	A-7478-7A50 I T																										
	22-05-3081	A-7478-8A I02	22-12-2084	A-7478-8A50 I	50-29-1715	A-7478-8A50 I T																										
H	22-05-3091	A-7478-9A I02	22-12-2094	A-7478-9A50 I	50-29-1716	A-7478-9A50 I T																										
	22-05-3101	A-7478-10A I02	22-12-2104	A-7478-10A50 I	50-29-1717	A-7478-10A50 I T																										
	22-05-3111	A-7478-11A I02	22-12-2114	A-7478-11A50 I	50-29-1718	A-7478-11A50 I T																										
	22-05-3121	A-7478-12A I02	22-12-2124	A-7478-12A50 I	50-29-1719	A-7478-12A50 I T																										
	22-05-3131	A-7478-13A I02	22-12-2134	A-7478-13A50 I	50-29-1720	A-7478-13A50 I T																										
	22-05-3141	A-7478-14A I02	22-12-2144	A-7478-14A50 I	50-29-1721	A-7478-14A50 I T																										
G	22-05-3151	A-7478-15A I02	22-12-2154	A-7478-15A50 I	50-29-1722	A-7478-15A50 I T																										
	22-05-3161	A-7478-16A I02	22-12-2164	A-7478-16A50 I	50-29-1723	A-7478-16A50 I T																										
	22-05-3171	A-7478-17A I02	22-12-2174	A-7478-17A50 I	50-29-1724	A-7478-17A50 I T																										
	22-05-3181	A-7478-18A I02	22-12-2184	A-7478-18A50 I	50-29-1725	A-7478-18A50 I T																										
	22-05-3191	A-7478-19A I02	22-12-2194	A-7478-19A50 I	50-29-1726	A-7478-19A50 I T																										
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	22-05-3261	A-7478-26A I02	22-12-2264	A-7478-26A50 I	50-29-1733	A-7478-26A50 I T																										
E	22-05-3271	A-7478-27A I02	22-12-2274	A-7478-27A50 I	50-29-1734	A-7478-27A50 I T																										
	22-05-3281	A-7478-28A I02	22-12-2284	A-7478-28A50 I	50-29-1735	A-7478-28A50 I T																										
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DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS												THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION																				

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