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**Part Number:** 0022053041

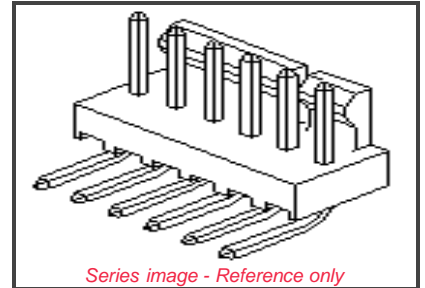
**Status:** Active

**Description:** 2.54mm (.100") Pitch KK® Solid Header, Right Angle, with Friction Lock, 4 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)	4
Circuits (maximum)	4
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 - 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
Polarized to Mating Part	Yes
Polarized to PCB	Yes
Shrouded	Partial
Stackable	Yes
Temperature Range - Operating	0°C to +75°C
Termination Interface: Style	Through Hole

**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](#)

**Electrical**

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

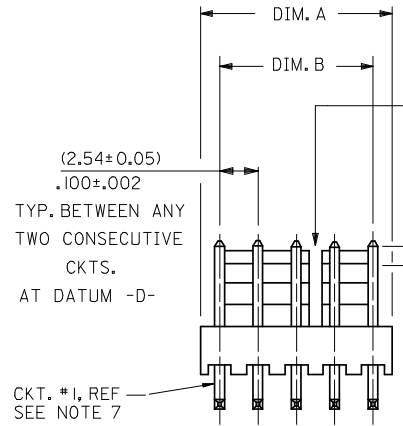
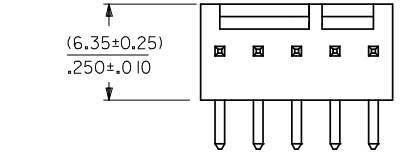
**Material Info**

Old Part Number	A-7478-04A102
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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									
	21	(53.34 / 52.88) 2.100 / 2.082	(50.80 ± 0.23) 2.000 ± .009	4 , 5 16 , 17									
H	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									
E	12	(30.48 / 30.12) 1.200 / 1.186	(27.94 ± 0.18) 1.100 ± .007	4 , 5 8 , 9									
	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									

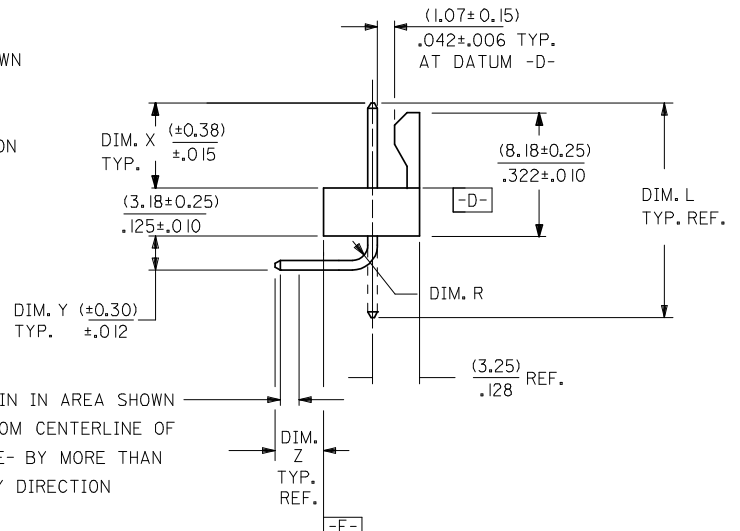


NOTES:

- MATERIAL: NYLON, UL94V-0, COLOR: WHITE
- 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.
- PARTS CONFORM TO PRODUCT SPECIFICATION PS-10-07.
- PACKAGING INFORMATION: SEE LEGEND.
- PARTS ARE STACKABLE END TO END ON (2.54)/.100 CENTERS.
- PIN PUSH OUT FORCE: 2 LBS. MIN.
- CIRCUIT ONE DESIGNATION IS USED TO DEFINE VOID LOCATION. CIRCUIT ONE MAY OR MAY NOT LINE UP WITH CIRCUIT ONE ON THE HOUSING.
- THIS PART CONFORMS TO CLASS B REQUIREMENTS OF COSMETIC SPECIFICATION PS-45499-002.

SLOTS LOCATED BETWEEN CIRCUITS (SEE CHART)

CENTERLINE OF PIN IN AREA SHOWN NOT TO VARY FROM CENTERLINE OF PIN AT DATUM -D- BY MORE THAN (0.20)/.008 IN ANY DIRECTION



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

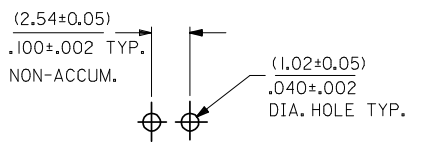
A-7478-N\*\*\*

NO. OF CKTS.

VERSION LETTER CHANGES WHEN PIN NO. OR PRESS DIM. CHANGES

PLATING SEE NOTE 2

RECOMMENDED P.C. BOARD HOLE LAYOUT



7	Y4
6	W1
5	Y8
4	Y7
3	Y9
2	Y9
1	Y11
SHT	REV

REMOVE ES-42003	QUALITY SYMBOLS
EC NO: UCP2009-0359	▽=0
DRWNG:GVERILL 2008/08/12	▽=0
CHKD:HK IPPER 2008/08/14	
APPR:FSM LTH 2008/08/14	
REV	
Y11	

GENERAL TOLERANCES (UNLESS SPECIFIED)		
	mm	INCH
4 PLACES	± .010	± .0004
3 PLACES	± .010	± .0004
2 PLACES	± .025	± .010
1 PLACE	± 0.38	± .015
ANGULAR ±1/2°		
DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS		

DIMENSION STYLE		SCALE	DESIGN UNITS	THIRD ANGLE PROJECTION
MM/IN		4:1	INCH	
DRAWN BY	DATE	TITLE		
GUZIC	1987/07/30	FRICTION LOCK HEADER ASY		
CHECKED BY	DATE	.100 CL BENT SQ PINS		
PATEL	1987/07/30	7478 SERIES DWG		
APPROVED BY	DATE	MOLEX INCORPORATED		
LENZ	1987/07/30	DOCUMENT NO. SDA-7478		
MATERIAL NO.	SEE CHART	SHEET NO. 1 OF 7		
SIZE	C	THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION		

	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	J
I	A-7478-NA102	2766-41(I102)	(18.69) .736	(6.60) .260	(3.58) .141	(3.05) .120	90°	(1.17) .046									I
	A-7478-NA50I	2766-41(I50I)	(18.69) .736	(6.60) .260	(3.58) .141	(3.05) .120	90°	(1.17) .046									
	A-7478-NA50IT	2766-41(I50IT)	(18.69) .736	(6.60) .260	(3.58) .141	(3.05) .120	90°	(1.17) .046									
	A-7478-NA102T	2766-41(I102T)	(18.69) .736	(6.60) .260	(3.58) .141	(3.05) .120	90°	(1.17) .046									
H																	H
G																	G
F																	F
E																	E
D																	D
C																	C

B	ADD A-7478-NA102T EC NO: UCP2006-1815 DRAWN: ADERR 2006/02/06 CHKD: AELHAG 2006/02/06 APPR: FSM TH 2006/02/09	QUALITY SYMBOLS ▽=0 ▽=0	GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE IN/MM		SCALE ---	DESIGN UNITS INCH	THIRD ANGLE PROJECTION		TITLE FRICTION LOCK HEADER ASY .100 CL BENT SQ PINS 7478 SERIES DWG molex MOLEX INCORPORATED
			mm	INCH	DRAWN BY GUZIK	DATE 1987/07/10	CHECKED BY PATEL	DATE 1987/07/10	APPROVED BY LENZ	DATE 1987/07/10	
A	Y9		DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS		SEE CHART		THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION		SHEET NO. 2 OF 7		

	13	12	11	10	9	8	7	6	5	4	3	2	1	
	A-7478-NA102		A-7478-NA501		A-7478-NA501T		A-7478-NA102T							
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-7478-2A102	22-12-2024	* A-7478-2A501	50-29-1710	A-7478-2A501T	50-34-8500	A-7478-2A102T						
	22-05-3031	* A-7478-3A102	22-12-2034	* A-7478-3A501	50-29-1711	A-7478-3A501T	50-34-8501	A-7478-3A102T						
	22-05-3041	* A-7478-4A102	22-12-2044	* A-7478-4A501	50-29-1705	A-7478-4A501T	50-34-8502	A-7478-4A102T						
I	22-05-3051	* A-7478-5A102	22-12-2054	* A-7478-5A501	50-29-1712	A-7478-5A501T								
	22-05-3061	* A-7478-6A102	22-12-2064	* A-7478-6A501	50-29-1713	A-7478-6A501T								
	22-05-3071	* A-7478-7A102	22-12-2074	* A-7478-7A501	50-29-1714	A-7478-7A501T								
	22-05-3081	* A-7478-8A102	22-12-2084	* A-7478-8A501	50-29-1715	A-7478-8A501T								
	22-05-3091	* A-7478-9A102	22-12-2094	* A-7478-9A501	50-29-1716	A-7478-9A501T								
H	22-05-3101	* A-7478-10A102	22-12-2104	* A-7478-10A501	50-29-1717	A-7478-10A501T								
	22-05-3111	* A-7478-11A102	22-12-2114	* A-7478-11A501	50-29-1718	A-7478-11A501T								
	22-05-3121	* A-7478-12A102	22-12-2124	* A-7478-12A501	50-29-1719	A-7478-12A501T								
	22-05-3131	* A-7478-13A102	22-12-2134	* A-7478-13A501	50-29-1720	A-7478-13A501T								
	22-05-3141	* A-7478-14A102	22-12-2144	* A-7478-14A501	50-29-1721	A-7478-14A501T								
	22-05-3151	* A-7478-15A102	22-12-2154	* A-7478-15A501	50-29-1722	A-7478-15A501T								
G	22-05-3161	* A-7478-16A102	22-12-2164	* A-7478-16A501	50-29-1723	A-7478-16A501T								
	22-05-3171	* A-7478-17A102	22-12-2174	* A-7478-17A501	50-29-1724	A-7478-17A501T								
	22-05-3181	* A-7478-18A102	22-12-2184	* A-7478-18A501	50-29-1725	A-7478-18A501T								
	22-05-3191	* A-7478-19A102	22-12-2194	* A-7478-19A501	50-29-1726	A-7478-19A501T								
	22-05-3201	* A-7478-20A102	22-12-2204	* A-7478-20A501	50-29-1727	A-7478-20A501T								
	22-05-3211	* A-7478-21A102	22-12-2214	* A-7478-21A501	50-29-1728	A-7478-21A501T								
F	22-05-3221	* A-7478-22A102	22-12-2224	* A-7478-22A501	50-29-1729	A-7478-22A501T								
	22-05-3231	* A-7478-23A102	22-12-2234	* A-7478-23A501	50-29-1730	A-7478-23A501T								
	22-05-3241	* A-7478-24A102	22-12-2244	* A-7478-24A501	50-29-1731	A-7478-24A501T								
	22-05-3251	* A-7478-25A102	22-12-2254	* A-7478-25A501	50-29-1732	A-7478-25A501T								
	22-05-3261	* A-7478-26A102	22-12-2264	* A-7478-26A501	50-29-1733	A-7478-26A501T								
E	22-05-3271	* A-7478-27A102	22-12-2274	* A-7478-27A501	50-29-1734	A-7478-27A501T								
	22-05-3281	* A-7478-28A102	22-12-2284	* A-7478-28A501	50-29-1735	A-7478-28A501T								

D  
C  
B  
A

ADD P/N'S FCC NO. UCP2006-1815 DRAWN/ADDER CHKD: AELHAG APPR: FSM TH Y9 REVISION DESCRIPTION 2006/02/06 2006/02/06 2006/02/09	QUALITY SYMBOLS	GENERAL TOLERANCES (UNLESS SPECIFIED) <table border="1"> <tr> <th></th> <th>mm</th> <th>INCH</th> </tr> <tr> <td>4 PLACES</td> <td>± ---</td> <td>± ---</td> </tr> <tr> <td>3 PLACES</td> <td>± ---</td> <td>± ---</td> </tr> <tr> <td>2 PLACES</td> <td>± ---</td> <td>± ---</td> </tr> <tr> <td>1 PLACE</td> <td>± ---</td> <td>± ---</td> </tr> <tr> <td colspan="3">ANGULAR ± --- °</td> </tr> </table>		mm	INCH	4 PLACES	± ---	± ---	3 PLACES	± ---	± ---	2 PLACES	± ---	± ---	1 PLACE	± ---	± ---	ANGULAR ± --- °			DIMENSION STYLE	SCALE	DESIGN UNITS	THIRD ANGLE PROJECTION
			mm	INCH																				
	4 PLACES		± ---	± ---																				
	3 PLACES		± ---	± ---																				
2 PLACES	± ---	± ---																						
1 PLACE	± ---	± ---																						
ANGULAR ± --- °																								
		IN/MM	---	INCH	☉																			
		DRAWN BY	DATE	TITLE	FRICION LOCK HEADER ASY .100 CL BENT SQ PINS 7478 SERIES DWG.																			
		GUZIK	1987/07/10																					
		CHECKED BY	DATE																					
		PATEL	1987/07/10																					
		APPROVED BY	DATE																					
		LENZ	1987/07/10																					
		MATERIAL NO.	DOCUMENT NO.	SHEET NO.																				
		SEE CHART	SDA-7478	3 OF 7																				
		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																						