

PLEASE CHECK WWW.MOLEX.COM FOR LATEST PART INFORMATION

Part Number: [0022053021](#)
Status: **Active**
Description: 2.54mm (.100") Pitch KK® Solid Header, Right Angle, with Friction Lock, 2 Circuits, Tin (Sn) Plating

Documents:
[3D Model](#)
[Drawing \(PDF\)](#)

[Product Specification PS-10-07 \(PDF\)](#)
[RoHS Certificate of Compliance \(PDF\)](#)

Agency Certification

CSA	LR19980
UL	E29179

General

Product Family	PCB Headers
Series	7478
Application	Wire-to-Board
Product Name	KK®

Physical

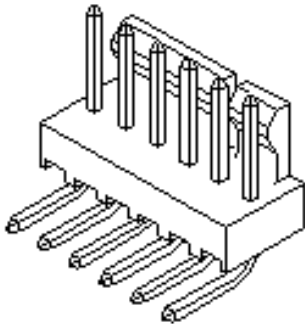
Breakaway	No
Circuits (Loaded)	2
Circuits (maximum)	2
Color - Resin	Natural (White)
Durability (mating cycles max)	25
Flammability	94V-0
Glow-Wire Compliant	No
Lock to Mating Part	Yes
Material - Metal	Brass
Material - Plating Mating	Tin
Material - Resin	Nylon
Number of Rows	1
Orientation	Right Angle
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

Electrical

Current - Maximum per Contact	4A
Voltage - Maximum	250V

Solder Process Data

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



*Series
image - Reference only*

EU RoHS

**ELV and RoHS
Compliant**
**REACH SVHC
Contains SVHC: No**
**Halogen-Free
Status**

China RoHS



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

Email 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
[7478Series](#)

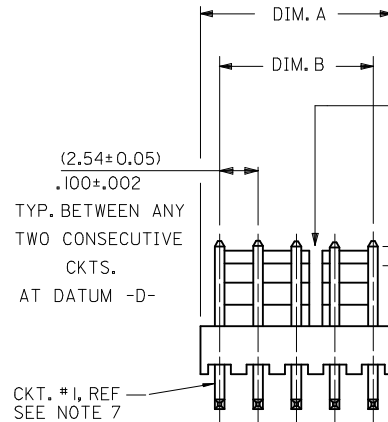
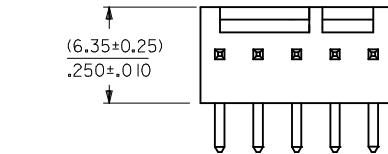
Mates With
[2695](#) , [6471](#) , [7880](#) , [4455](#) , [7720](#)

Process Temperature max. C	235
Material Info	
Old Part Number	A-7478-02A102
Reference - Drawing Numbers	
Packaging Specification	PK-7478-001
Product Specification	PS-10-07, RPS-7478-001
Sales Drawing	SDA-7478

This document was generated on 05/10/2010

PLEASE CHECK WWW.MOLEX.COM FOR LATEST PART INFORMATION

	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									
I	25	(63.50 / 62.99) 2.500 / 2.480	(60.96 ± 0.25) 2.400 ± .010	4 , 5 20 , 21									
	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									
H	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									
	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									
D	9	(22.86 / 22.50) .900 / .886	(20.32 ± 0.15) .800 ± .006	4 , 5									
	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		NO. OF CKTS.											
		DIM. A	DIM. B	SLOTS LOC.									



CKT. #1, REF
SEE NOTE 7

A-7478-N***
NO. OF CKTS.
VERSION
LETTER CHANGES WHEN
PIN NO. OR PRESS
DIM. CHANGES

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

PLATING
SEE NOTE 2

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

ADD GROOVE	EC NO: UCP2009-0785	2008/12/29
DRWN:MKIPPER	2009/01/30	
CHKD:SSOUSEK	2009/01/30	
APPR:FSMITH	2009/01/30	
REV	DESCRIPTION	
Z		

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 (.254)/.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 MATING HOUSING.

8. THIS PART CONFORMS TO CLASS B REQUIREMENTS OF COSMETIC SPECIFICATION PS-45499-002.

GROOVE MAY BE PRESENT
ON 2-6 CIRCUIT PARTS
(BOTH SIDES).

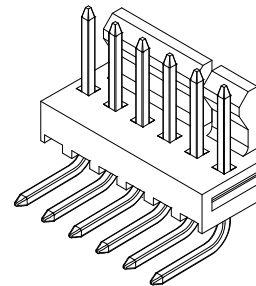
(1.3)

.05

CENTERLINE OF PIN IN AREA SHOWN
NOT TO VARY FROM CENTERLINE
OF PIN AT DATUM -D- BY MORE
THAN (.020)/.008 IN ANY DIRECTION

DIM. Y (+0.30)
TYP. ±.012

CENTERLINE OF PIN IN AREA SHOWN
NOT TO VARY FROM CENTERLINE OF
PIN AT DATUM -E- BY MORE THAN
(.013)/.005 IN ANY DIRECTION



RECOMMENDED P.C. BOARD HOLE LAYOUT

(2.54±0.05)
.100±.002 TYP.
NON-ACCUM.
(1.02±0.05)
.040±.002
DIA. HOLE TYP.

GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE MM/IN		SCALE 4:1	DESIGN UNITS INCH	THIRD ANGLE PROJECTION	
	mm INCH	DRAWN BY	DATE	TITLE FRICTION LOCK HEADER ASY .100 CL BENT SQ PINS 7478 SERIES DWG			
4 PLACES	± --- ± ---	GUZIC	1987/07/30				
3 PLACES	± --- ± .010	CHECKED BY	DATE	MOLEX INCORPORATED			
2 PLACES	± 0.25 ± .015	PATEL	1987/07/30				
1 PLACE	± 0.38 ± ---	APPROVED BY	DATE	SDA-7478			
ANGULAR ±1/2°		LENZ	1987/07/30				
DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS		MATERIAL NO.		DOCUMENT NO.		SHEET NO.	
		SEE CHART		SDA-7478		1 OF 7	
SIZE		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																														
	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.	J																														
	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							I																														
	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							H																														
	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							G																														
	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																																					
F	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							E																														
	22-05-3281	* A-7478-28A102	22-12-2284	* A-7478-28A501	50-29-1735	A-7478-28A501T																																					
D													D																														
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A													A																														
ADD P/N'S EC NO: UCP2006-1815 2006/02/06 DRWN:ADERR 2006/02/06 CHKD:AEHAG 2006/02/09 APPR:FSM TH 2006/02/09 REV Y9 DESCRIPTION QUALITY SYMBOLS ▽=0 ▽=0 GENERAL TOLERANCES (UNLESS SPECIFIED) <table><tr><td></td><td>mm</td><td>INCH</td></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> DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS DIMENSION STYLE IN/MM <table><tr><td>DRAWN BY</td><td>DATE</td></tr><tr><td>GUZIK</td><td>1987/07/10</td></tr><tr><td>CHECKED BY</td><td>DATE</td></tr><tr><td>PATEL</td><td>1987/07/10</td></tr><tr><td>APPROVED BY</td><td>DATE</td></tr><tr><td>LENZ</td><td>1987/07/10</td></tr></table> MATERIAL NO. SEE CHART SIZE C SCALE --- DESIGN UNITS INCH THIRD ANGLE PROJECTION FRICITION LOCK HEADER ASY .100 CL BENT SQ PINS 7478 SERIES DWG. molex MOLEX INCORPORATED DOCUMENT NO. SDA-7478 SHEET NO. 3 OF 7 THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION															mm	INCH	4 PLACES	± ---	± ---	3 PLACES	± ---	± ---	2 PLACES	± ---	± ---	1 PLACE	± ---	± ---	ANGULAR ± ---°			DRAWN BY	DATE	GUZIK	1987/07/10	CHECKED BY	DATE	PATEL	1987/07/10	APPROVED BY	DATE	LENZ	1987/07/10
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