

PLEASE CHECK WWW.MOLEX.COM FOR LATEST PART INFORMATION

Part Number: [0022053241](#)
Status: **Active**
Description: 2.54mm (.100") Pitch KK® Solid Header, Right Angle, with Friction Lock, 24 Circuits, Tin (Sn) Plating

Documents:

3D Model	Product Specification PS-10-07 (PDF)
Drawing (PDF)	RoHS Certificate of Compliance (PDF)

Agency Certification

CSA	LR19980
UL	E29179

General

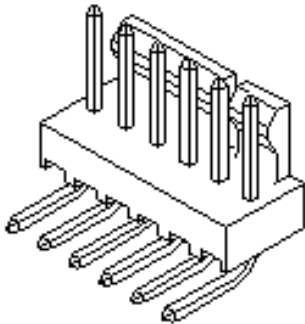
Product Family	PCB Headers
Series	7478
Application	Wire-to-Board
Product Name	KK®

Physical

Breakaway	No
Circuits (Loaded)	24
Circuits (maximum)	24
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 - 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 (µin)	200
Plating min: Mating (µm)	5
Plating min: Termination (µin)	200
Plating min: Termination (µm)	5
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
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*Series
image - Reference only*

EU RoHS

**ELV and RoHS
Compliant**
REACH SVHC
Not Reviewed
**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

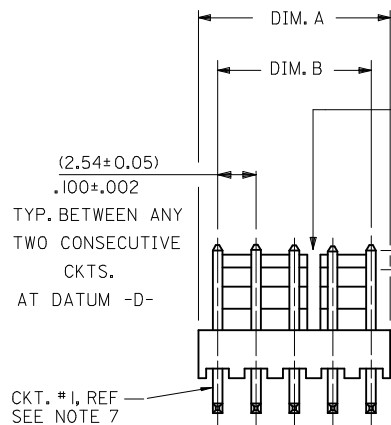
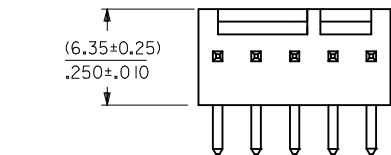
[2695](#) , [6471](#) , [7880](#) , [4455](#) , [7720](#)

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
Process Temperature max. C	235
Material Info	
Old Part Number	A-7478-24A102
Reference - Drawing Numbers	
Product Specification	PS-10-07
Sales Drawing	SDA-7478

This document was generated on 04/09/2010

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	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									
	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									
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									
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:KIPPER	2009/01/30	CHKD:SSOUSEK	2009/01/30	APPR:FSMITH	2009/01/30
REV	DESCRIPTION	DATE	DATE	DATE	DATE	DATE	DATE	DATE
Z								

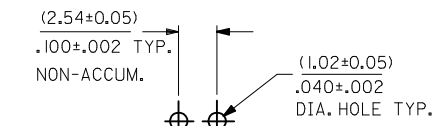
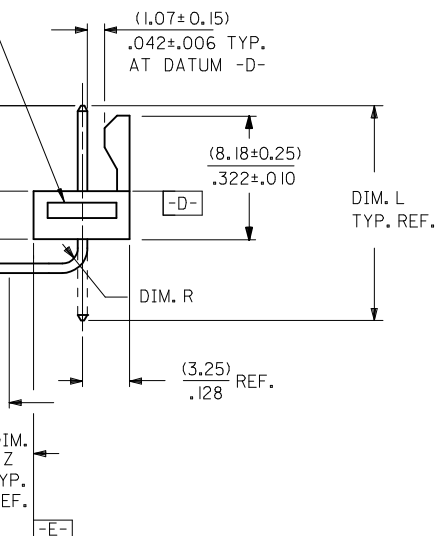
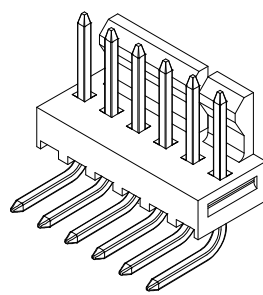
NOTES:

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 (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 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).

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

CENTERLINE OF PIN IN AREA SHOWN
NOT TO VARY FROM CENTERLINE OF
PIN AT DATUM -E- BY MORE THAN
(0.13)±.005 IN ANY DIRECTION



RECOMMENDED P.C. BOARD HOLE LAYOUT

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 MOLEX INCORPORATED			
4 PLACES	± ---	± ---	GUZIC	1987/07/30				
3 PLACES	± ---	±.010	CHECKED BY	DATE				
2 PLACES	± 0.25	±.015	PATEL	1987/07/30				
1 PLACE	± 0.38	± ---	APPROVED BY	DATE				
ANGULAR ±1/2°			LENZ	1987/07/30	DOCUMENT NO.			
DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS			MATERIAL NO.		SHEET NO.			
			SEE CHART		SDA-7478			
			SIZE		1 OF 7			
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
	A-7478-NA I02	2766-4 I(I02)	(18.69) .736	(6.60) .260	(3.58) .141	(3.05) .120	90°	(1.17) .046										
	A-7478-NA50 I	2766-4 I(50 I)	(18.69) .736	(6.60) .260	(3.58) .141	(3.05) .120	90°	(1.17) .046										
I	A-7478-NA50 IT	2766-4 I(50 I)	(18.69) .736	(6.60) .260	(3.58) .141	(3.05) .120	90°	(1.17) .046										I
	A-7478-NA I02T	2766-4 I(I02)	(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-NA I02T EC NO: UCP2006-1815 2006/02/06 2006/02/06 2006/02/09 DRWN:ADRR CHKD:AEI:HAG APPR:FSM:TH DESCRIPTION Y9 REV								QUALITY SYMBOLS	GENERAL TOLERANCES (UNLESS SPECIFIED)	DIMENSION STYLE	SCALE	DESIGN UNITS	THIRD ANGLE PROJECTION	FRICION LOCK HEADER ASY .100 CL BENT SQ PINS 7478 SERIES DWG			B
									mm INCH	IN/MM	---	INCH						
									4 PLACES ± 3 PLACES ± 2 PLACES ± 1 PLACE ±	DATE DATE DATE DATE	1987/07/10 1987/07/10 1987/07/10 1987/07/10	GUZIK CHECKED BY PATEL APPROVED BY	DATE DATE DATE DATE					
A									ANGULAR ± °	LENZ MATERIAL NO.	1987/07/10 SEE CHART	SIZE C	THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION	SHEET NO. 2 OF 7	A			
	13	12	11	10	9	8	7	6	5	4	3	2	1					

tb_frame_C_P_ME_T
Rev. D 2004/04/02

	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																																																																																		
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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																																																																																				
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<table><tr><td rowspan="6">ADD P/N'S EC NO: UCP2006-1815 DRAWN BY: DRW:ADERR CHKD: AELHAG APPR: FSM TH Y9</td><td rowspan="6">DESCRIPTION 2006/02/06 2006/02/06 2006/02/09</td><td rowspan="6">QUALITY SYMBOLS ▽=0 ▽=0</td><td colspan="2">GENERAL TOLERANCES (UNLESS SPECIFIED)</td><td colspan="2">DIMENSION STYLE IN/MM</td><td>SCALE ---</td><td>DESIGN UNITS INCH</td><td colspan="2">THIRD ANGLE PROJECTION</td><td colspan="2" rowspan="6">FRICION LOCK HEADER ASY .100 CL BENT SQ PINS 7478 SERIES DWG. MOLEX INCORPORATED SDA-7478 3 OF 7</td></tr><tr><td>mm</td><td>INCH</td><td>DRAWN BY</td><td>DATE</td><td rowspan="5">molex</td><td rowspan="5">DOCUMENT NO.</td><td rowspan="5">SHEET NO.</td></tr><tr><td>4 PLACES</td><td>± ---</td><td>± ---</td><td>GUZIK</td><td>1987/07/10</td></tr><tr><td>3 PLACES</td><td>± ---</td><td>± ---</td><td>CHECKED BY</td><td>DATE</td></tr><tr><td>2 PLACES</td><td>± ---</td><td>± ---</td><td>PATEL</td><td>1987/07/10</td></tr><tr><td>1 PLACE</td><td>± ---</td><td>± ---</td><td>APPROVED BY</td><td>DATE</td></tr><tr><td colspan="2">ANGULAR</td><td>± ---°</td><td>LENZ</td><td>1987/07/10</td><td colspan="2"></td><td colspan="2"></td><td colspan="2"></td></tr><tr><td colspan="3">DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS</td><td colspan="2">SEE CHART</td><td colspan="4"></td><td colspan="2"></td><td colspan="2"></td></tr><tr><td colspan="3"></td><td colspan="2"></td><td colspan="4">THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION</td><td colspan="2"></td><td colspan="2"></td></tr></table>														ADD P/N'S EC NO: UCP2006-1815 DRAWN BY: DRW:ADERR CHKD: AELHAG APPR: FSM TH Y9	DESCRIPTION 2006/02/06 2006/02/06 2006/02/09	QUALITY SYMBOLS ▽=0 ▽=0	GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE IN/MM		SCALE ---	DESIGN UNITS INCH	THIRD ANGLE PROJECTION		FRICION LOCK HEADER ASY .100 CL BENT SQ PINS 7478 SERIES DWG. MOLEX INCORPORATED SDA-7478 3 OF 7		mm	INCH	DRAWN BY	DATE	molex	DOCUMENT NO.	SHEET NO.	4 PLACES	± ---	± ---	GUZIK	1987/07/10	3 PLACES	± ---	± ---	CHECKED BY	DATE	2 PLACES	± ---	± ---	PATEL	1987/07/10	1 PLACE	± ---	± ---	APPROVED BY	DATE	ANGULAR		± ---°	LENZ	1987/07/10							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							
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