

Series image - Reference only

EU RoHS

China RoHS

ELV and RoHS Compliant



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](#)

**Part Number:** **0022122044**

**Status:** **Active**

**Description:** 2.54mm (.100") Pitch KK® Solid Header, Right Angle, with Friction Lock, 4 Circuits, 0.51µm (20µ") Gold (Au) Plating

### Documents:

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

### Order Products:

○ [Check Distributor Inventory](#)

Part Detail: [\(show all\)](#)

## General

## Physical

## Electrical

## Material Info

## Reference - Drawing Numbers

**General**

Product Family	PCB Headers
Series	<u>7478</u>
Application	Wire-to-Board
Product Name	KK®

**Physical**

Breakaway	No
Circuits (Loaded)	4
Circuits (maximum)	4
Color - Resin	Natural (White)
Durability (mating cycles) min	50 cycles
Flammability	94V-0
Lock to Mating Part	Yes
Material - Metal	Brass
Material - Plating Mating	Gold
Material - Plating Termination	Gold
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)	20
Plating min: Mating (um)	0.5
Plating min: Termination (uin)	20
Plating min: Termination (um)	0.5
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**

CSA	LR19980
Current - Maximum	4.00 Amp
UL	E29179
Voltage - Maximum	250V

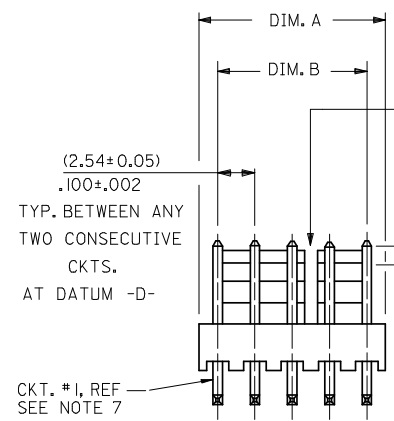
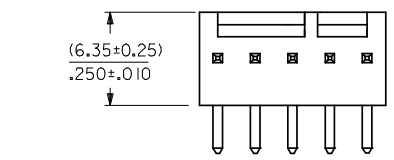
### **Material Info**

Old Part Number	A-7478-04A501
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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									
J	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									
	2	(5.08 / 4.78) .200 / .188	(2.54 ± 0.05) .100 ± .002	NONE									
B	NO. OF CKTS.	DIM. A	DIM. B	SLOTS LOC.									
A													



- 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.

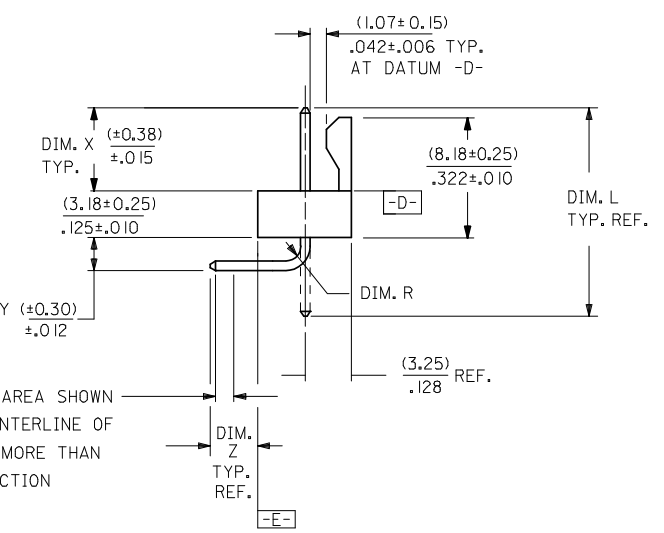
SLOTS LOCATED BETWEEN CIRCUITS (SEE CHART)

(2.54±0.05) ±.002

TYP. BETWEEN ANY TWO CONSECUTIVE CKTS. AT DATUM -D-

(1.3) ±.05

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

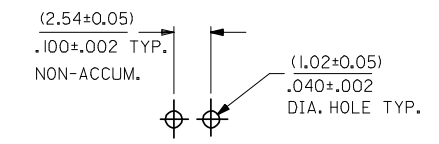
A-7478-N\*\*\*

NO. OF CKTS.

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

SECONDARY OPERATIONS		
CODE	PACKAGE	KINKED PIN
BLANK	BULK PK-7478-001	NO
B	BULK PK-7478-001	ES-42003
T	TUBE PER PK-44743-001	NO

PLATING SEE NOTE 2






RECOMMENDED P.C. BOARD HOLE LAYOUT

SHT	REV
7	Y4
6	W1
5	Y8
4	Y7
3	Y9
2	Y9
1	Y10

ADD SLOTS LOC. EC NO: UCP2008-1289 DRWN: ADERR 2007/12/07 CHKD: JBELL 2007/12/10 APPR: FSM/TH 2007/12/10	QUALITY SYMBOLS ▽=0 ▽=0	GENERAL TOLERANCES (UNLESS SPECIFIED) ± mm    ± INCH	DIMENSION STYLE MM/IN	SCALE 4:1	DESIGN UNITS INCH	THIRD ANGLE PROJECTION
		4 PLACES ± --- ± --- 3 PLACES ± --- ± .010 2 PLACES ± 0.25 ± .015 1 PLACE ± 0.38 ± --- ANGULAR ± 1/2°	DRAWN BY GUZIC 1987/07/30 CHECKED BY PATEL 1987/07/30 APPROVED BY LENZ 1987/07/30	DATE DATE DATE	TITLE <b>FRICTION LOCK HEADER ASY          .100 CL BENT SQ PINS          7478 SERIES DWG</b>	MOLEX <b>MOLEX INCORPORATED</b>
DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS		MATERIAL NO. <b>SEE CHART</b>		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-NA102	2766-41(I102)	(18.69) .736	(6.60) .260	(3.58) .141	(3.05) .120	90°	(1.17) .046									
	A-7478-NA50I	2766-41(I50I)	(18.69) .736	(6.60) .260	(3.58) .141	(3.05) .120	90°	(1.17) .046									
I	A-7478-NA50IT	2766-41(I50IT)	(18.69) .736	(6.60) .260	(3.58) .141	(3.05) .120	90°	(1.17) .046									I
	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:ADER 2006/02/06 CHKD:AEI/HAG 2006/02/06 APPR:FSM/TH 2006/02/09	QUALITY SYMBOLS  = 0.010  = 0.020	GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE		SCALE	DESIGN UNITS	THIRD ANGLE PROJECTION		TITLE <b>FRICTION LOCK HEADER ASY .100 CL BENT SQ PINS 7478 SERIES DWG</b>	DOCUMENT NO. <b>SDA-7478</b>	SHEET NO. <b>2 OF 7</b>
			mm	INCH	IN/MM	---	INCH	DRAWN BY <b>GUZIK</b>	DATE <b>1987/07/10</b>				
A	Y9		4 PLACES ± --- ± ---		DRAWN BY		---	INCH			MATERIAL NO. <b>SEE CHART</b>		THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION
			3 PLACES ± --- ± ---		CHECKED BY								
			2 PLACES ± --- ± ---		PATEL		DATE						
			1 PLACE ± --- ± ---		APPROVED BY		DATE						
			ANGULAR ± --- °		LENZ		1987/07/10						

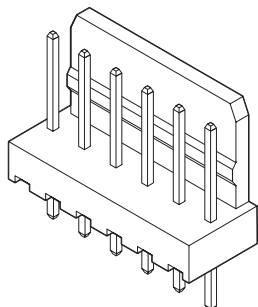
	13	12	11	10	9	8	7	6	5	4	3	2	1	
	A-7478-NA I02		A-7478-NA50 I		A-7478-NA50 IT		A-7478-NA I02T							
J	PART NO.	ENG. NO.	PART NO.	ENG. NO.	PART NO.	ENG. NO.	PART NO.	ENG. NO.	PART NO.	ENG. NO.	PART NO.	ENG. NO.	PART NO.	ENG. NO.
	22-05-302 I	* A-7478-2A I02	22-12-2024	* A-7478-2A50 I	50-29- I7 I0	A-7478-2A50 IT	50-34-8500	A-7478-2A I02T						
	22-05-303 I	* A-7478-3A I02	22-12-2034	* A-7478-3A50 I	50-29- I7 I I	A-7478-3A50 IT	50-34-8501	A-7478-3A I02T						
	22-05-304 I	* A-7478-4A I02	22-12-2044	* A-7478-4A50 I	50-29- I705	A-7478-4A50 IT	50-34-8502	A-7478-4A I02T						
I	22-05-305 I	* A-7478-5A I02	22-12-2054	* A-7478-5A50 I	50-29- I7 I2	A-7478-5A50 IT								
	22-05-306 I	* A-7478-6A I02	22-12-2064	* A-7478-6A50 I	50-29- I7 I3	A-7478-6A50 IT								
	22-05-307 I	* A-7478-7A I02	22-12-2074	* A-7478-7A50 I	50-29- I7 I4	A-7478-7A50 IT								
	22-05-308 I	* A-7478-8A I02	22-12-2084	* A-7478-8A50 I	50-29- I7 I5	A-7478-8A50 IT								
	22-05-309 I	* A-7478-9A I02	22-12-2094	* A-7478-9A50 I	50-29- I7 I6	A-7478-9A50 IT								
	22-05-3 I0 I	* A-7478- I0A I02	22-12-2 I04	* A-7478- I0A50 I	50-29- I7 I7	A-7478- I0A50 IT								
H	22-05-3 I I I	* A-7478- I I A I02	22-12-2 I I4	* A-7478- I I A50 I	50-29- I7 I8	A-7478- I I A50 IT								
	22-05-3 I2 I	* A-7478- I2A I02	22-12-2 I24	* A-7478- I2A50 I	50-29- I7 I9	A-7478- I2A50 IT								
	22-05-3 I3 I	* A-7478- I3A I02	22-12-2 I34	* A-7478- I3A50 I	50-29- I720	A-7478- I3A50 IT								
	22-05-3 I4 I	* A-7478- I4A I02	22-12-2 I44	* A-7478- I4A50 I	50-29- I72 I	A-7478- I4A50 IT								
	22-05-3 I5 I	* A-7478- I5A I02	22-12-2 I54	* A-7478- I5A50 I	50-29- I722	A-7478- I5A50 IT								
	22-05-3 I6 I	* A-7478- I6A I02	22-12-2 I64	* A-7478- I6A50 I	50-29- I723	A-7478- I6A50 IT								
G	22-05-3 I7 I	* A-7478- I7A I02	22-12-2 I74	* A-7478- I7A50 I	50-29- I724	A-7478- I7A50 IT								
	22-05-3 I8 I	* A-7478- I8A I02	22-12-2 I84	* A-7478- I8A50 I	50-29- I725	A-7478- I8A50 IT								
	22-05-3 I9 I	* A-7478- I9A I02	22-12-2 I94	* A-7478- I9A50 I	50-29- I726	A-7478- I9A50 IT								
	22-05-320 I	* A-7478-20A I02	22-12-2204	* A-7478-20A50 I	50-29- I727	A-7478-20A50 IT								
	22-05-32 I I	* A-7478-2 I A I02	22-12-22 I4	* A-7478-2 I A50 I	50-29- I728	A-7478-2 I A50 IT								
F	22-05-322 I	* A-7478-22A I02	22-12-2224	* A-7478-22A50 I	50-29- I729	A-7478-22A50 IT								
	22-05-323 I	* A-7478-23A I02	22-12-2234	* A-7478-23A50 I	50-29- I730	A-7478-23A50 IT								
	22-05-324 I	* A-7478-24A I02	22-12-2244	* A-7478-24A50 I	50-29- I73 I	A-7478-24A50 IT								
	22-05-325 I	* A-7478-25A I02	22-12-2254	* A-7478-25A50 I	50-29- I732	A-7478-25A50 IT								
	22-05-326 I	* A-7478-26A I02	22-12-2264	* A-7478-26A50 I	50-29- I733	A-7478-26A50 IT								
E	22-05-327 I	* A-7478-27A I02	22-12-2274	* A-7478-27A50 I	50-29- I734	A-7478-27A50 IT								
	22-05-328 I	* A-7478-28A I02	22-12-2284	* A-7478-28A50 I	50-29- I735	A-7478-28A50 IT								

D														
C														

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

# 2.54mm (.100") Pitch KK<sup>®</sup> Header

## 6410 Vertical Friction Lock



### Features and Benefits

- Sizes 2 to 28 circuits
- Friction lock provides passive lock to connector with ramp
- Good in high vibration applications
- Higher backwall than the 6373 Series
- Various pin lengths available

### Reference Information

Product Specification: PS-10-07  
 Packaging: Bag  
 UL File No.: E29179  
 CSA File No.: LR19980  
 Mates With: 2695 with locking ramp, 6471 and 7880  
 Designed In: Inches

### Electrical

Voltage: 250V  
 Current: 4.0A  
 Contact Resistance: 20 milliohms max.  
 Dielectric Withstanding Voltage: 1500V  
 Insulation Resistance: 50K Megohms min.

### Physical

Housing: Nylon, UL 94V-0  
 Contact: Brass, 0.64mm (.025") square  
 Plating: See Table  
 Operating Temperature: 0 to +75°C

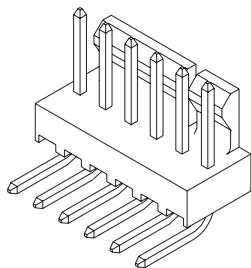
Circuits	Order No.		Lead-free
	Tin	Gold	
2	<a href="#">22-27-2021</a>	<a href="#">22-29-2021</a>	Yes
3	<a href="#">22-27-2031</a>	<a href="#">22-29-2031</a>	
4	<a href="#">22-27-2041</a>	<a href="#">22-29-2041</a>	
5	<a href="#">22-27-2051</a>	<a href="#">22-29-2051</a>	
6	<a href="#">22-27-2061</a>	<a href="#">22-29-2061</a>	
7	<a href="#">22-27-2071</a>	<a href="#">22-29-2071</a>	
8	<a href="#">22-27-2081</a>	<a href="#">22-29-2081</a>	
9	<a href="#">22-27-2091</a>	<a href="#">22-29-2091</a>	
10	<a href="#">22-27-2101</a>	<a href="#">22-29-2101</a>	

Circuits	Order No.		Lead-free
	Tin	Gold	
11	<a href="#">22-27-2111</a>	<a href="#">22-29-2111</a>	Yes
12	<a href="#">22-27-2121</a>	<a href="#">22-29-2121</a>	
13	<a href="#">22-27-2131</a>	<a href="#">22-29-2131</a>	
14	<a href="#">22-27-2141</a>	<a href="#">22-29-2141</a>	
15	<a href="#">22-27-2151</a>	<a href="#">22-29-2151</a>	
16	<a href="#">22-27-2161</a>	<a href="#">22-29-2161</a>	
17	<a href="#">22-27-2171</a>	<a href="#">22-29-2171</a>	
18	<a href="#">22-27-2181</a>	<a href="#">22-29-2181</a>	
19	<a href="#">22-27-2191</a>	<a href="#">22-29-2191</a>	

Circuits	Order No.		Lead-free
	Tin	Gold	
20	<a href="#">22-27-2201</a>	<a href="#">22-29-2201</a>	Yes
21	<a href="#">22-27-2211</a>	<a href="#">22-29-2211</a>	
22	<a href="#">22-27-2221</a>	<a href="#">22-29-2221</a>	
23	<a href="#">22-27-2231</a>	<a href="#">22-29-2231</a>	
24	<a href="#">22-27-2241</a>	<a href="#">22-29-2241</a>	
25	<a href="#">22-27-2251</a>	<a href="#">22-29-2251</a>	
26	<a href="#">22-27-2261</a>	<a href="#">22-29-2261</a>	
27	<a href="#">22-27-2271</a>	<a href="#">22-29-2271</a>	
28	<a href="#">22-27-2281</a>	<a href="#">22-29-2281</a>	

# 2.54mm (.100") Pitch KK<sup>®</sup> Solid Header

## 7478 Right Angle, Friction Lock



### Features and Benefits

- Sizes 2 to 28 circuits
- Friction lock provides passive lock to connector with ramp
- 7478 with voids is 7832 Series
- Various pin lengths available
- End-to-end stackable
- Edge mount only

### Reference Information

Product Specification: PS-10-07  
 Packaging: Bag  
 UL File No.: E29179  
 CSA File No.: LR19980  
 Mates With: 2695, 4455, 6471, 7720 and 7880  
 Designed In: Inches

### Electrical

Voltage: 250V  
 Current: 4.0A  
 Contact Resistance: 20 milliohms max.  
 Dielectric Withstanding Voltage: 1500V  
 Insulation Resistance: 50K Megohms min.

### Mechanical

Durability: Tin—25 cycles max.  
 Gold—100 cycles max.

### Physical

Housing: Nylon, UL 94V-0  
 Contact: Brass, 0.64mm (.025") square  
 Plating: See Table  
 Operating Temperature: 0 to +75°C

Circuits	Order No.		Lead-free
	Tin	Gold	
2	<a href="#">22-05-3021</a>	<a href="#">22-12-2024</a>	Yes
3	<a href="#">22-05-3031</a>	<a href="#">22-12-2034</a>	
4	<a href="#">22-05-3041</a>	<a href="#">22-12-2044</a>	
5	<a href="#">22-05-3051</a>	<a href="#">22-12-2054</a>	
6	<a href="#">22-05-3061</a>	<a href="#">22-12-2064</a>	
7	<a href="#">22-05-3071</a>	<a href="#">22-12-2074</a>	
8	<a href="#">22-05-3081</a>	<a href="#">22-12-2084</a>	
9	<a href="#">22-05-3091</a>	<a href="#">22-12-2094</a>	
10	<a href="#">22-05-3101</a>	<a href="#">22-12-2104</a>	

Circuits	Order No.		Lead-free
	Tin	Gold	
11	<a href="#">22-05-3111</a>	<a href="#">22-12-2114</a>	Yes
12	<a href="#">22-05-3121</a>	<a href="#">22-12-2124</a>	
13	<a href="#">22-05-3131</a>	<a href="#">22-12-2134</a>	
14	<a href="#">22-05-3141</a>	<a href="#">22-12-2144</a>	
15	<a href="#">22-05-3151</a>	<a href="#">22-12-2154</a>	
16	<a href="#">22-05-3161</a>	<a href="#">22-12-2164</a>	
17	<a href="#">22-05-3171</a>	<a href="#">22-12-2174</a>	
18	<a href="#">22-05-3181</a>	<a href="#">22-12-2184</a>	
19	<a href="#">22-05-3191</a>	<a href="#">22-12-2194</a>	

Circuits	Order No.		Lead-free
	Tin	Gold	
20	<a href="#">22-05-3201</a>	<a href="#">22-12-2204</a>	Yes
21	<a href="#">22-05-3211</a>	<a href="#">22-12-2214</a>	
22	<a href="#">22-05-3221</a>	<a href="#">22-12-2224</a>	
23	<a href="#">22-05-3231</a>	<a href="#">22-12-2234</a>	
24	<a href="#">22-05-3241</a>	<a href="#">22-12-2244</a>	
25	<a href="#">22-05-3251</a>	<a href="#">22-12-2254</a>	
26	<a href="#">22-05-3261</a>	<a href="#">22-12-2264</a>	
27	<a href="#">22-05-3271</a>	<a href="#">22-12-2274</a>	
28	<a href="#">22-05-3281</a>	<a href="#">22-12-2284</a>	

Note: Circuit 1 designation is used to orient the header to locate the voided circuit. Review mating connector to assure correct mating orientation.

