

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: **0022122084**

Status: **Active**

Description: 2.54mm (.100") Pitch KK® Solid Header, Right Angle, with Friction Lock, 8 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:

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

General

Physical

Electrical

Material Info

Reference - Drawing Numbers

General

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

Physical

Breakaway	No
Circuits (Loaded)	8
Circuits (maximum)	8
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 - 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

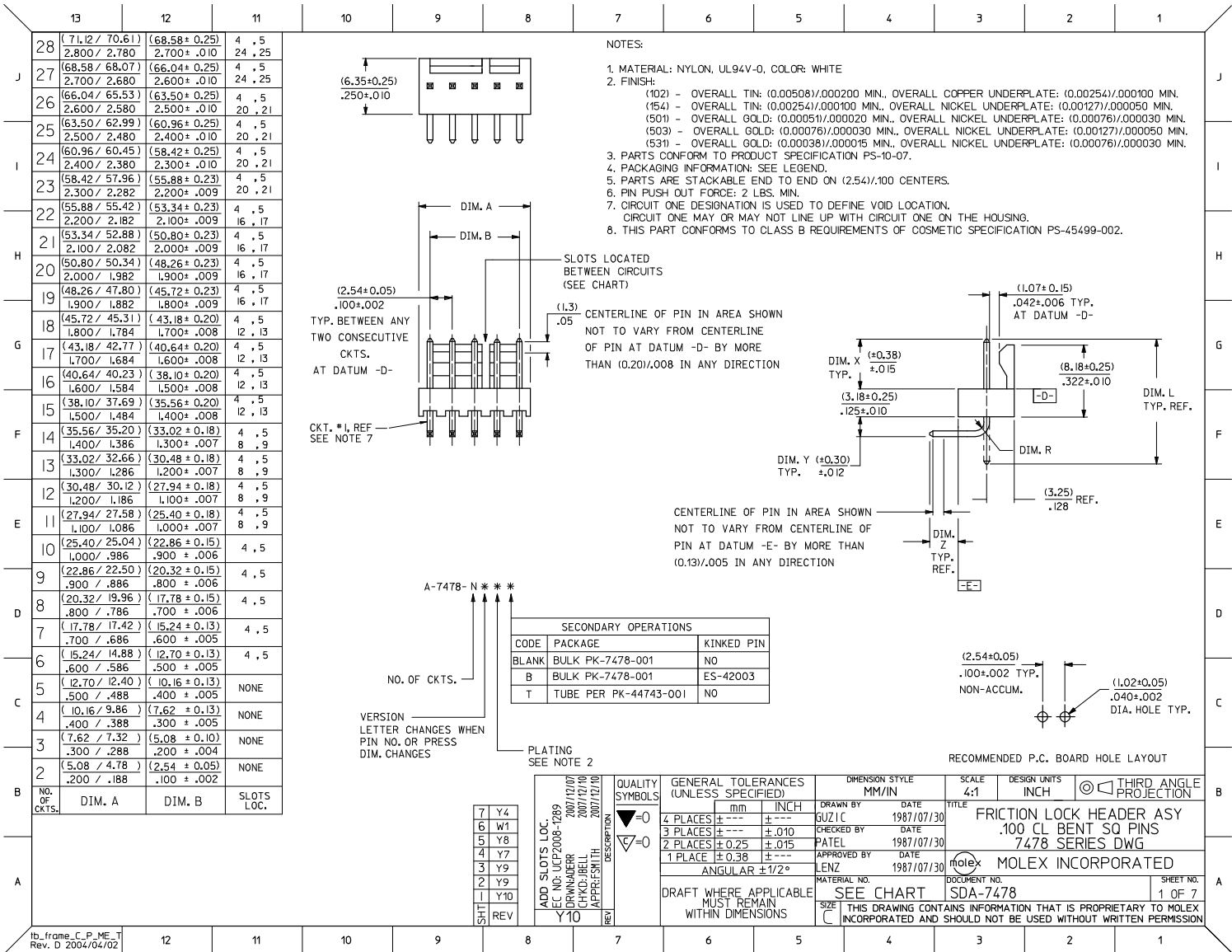
CSA	LR19980
Current - Maximum	4.00 Amp
UL	E29179
Voltage - Maximum	250V

Material Info

Old Part Number	A-7478-08A501
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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 16 .17									
	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 8 .9									
	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									
C	6	(15.24 / 14.88) .600 / .586	(12.70 ± 0.13) .500 ± .005	4 .5									
	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													

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

ADD SLOTS LOC.	REV	DESCRIPTION	QUALITY SYMBOLS	GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE		SCALE	DESIGN UNITS	THIRD ANGLE PROJECTION
				mm	INCH	MM/IN	INCH			
7	Y4		▽=0	4 PLACES ± .010	± .010	DRAWN BY	DATE	4:1	INCH	FRICITION LOCK HEADER ASY .100 CL BENT SQ PINS 7478 SERIES DWG
6	W1		▽=0	3 PLACES ± .010	± .010	GUZIC	1987/07/30			
5	Y8			2 PLACES ± 0.25	± .015	CHECKED BY	DATE	MATERIAL NO.	DOCUMENT NO.	SHEET NO.
4	Y7			1 PLACE ± 0.38	± .015	PATEL	1987/07/30			
3	Y9			ANGULAR ± 1/2°		APPROVED BY	DATE	MOLEX INCORPORATED		
2	Y10			DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS		LENZ	1987/07/30	THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION		

lb_frame_C_P_ME_T
Rev. D 2004/04/02

	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 (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									I
	A-7478-NA I02T	2766-4 (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																	B
A																	A
	ib_frame_C_P_ME_T Rev. D 2004/04/02																

ADD A-7478-NA I02T
 SEC NO. UCP2006-1815 2006/02/06
 Y0 DRWNA50I 2006/02/06
 UFKOJELHAG 2006/02/06
 APPRESMITH 2006/02/09

QUALITY SYMBOLS
 ▽=0
 ▽=0
 DESCRIPTION
 REV

GENERAL TOLERANCES (UNLESS SPECIFIED)

	mm	INCH
4 PLACES	±.005	±.0002
3 PLACES	±.004	±.00015
2 PLACES	±.003	±.0001
1 PLACE	±.002	±.000075
ANGULAR	±.005°	±.0002°

DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS

DIMENSION STYLE IN/MM

DRAWN BY	DATE
SUZIK	1987/07/10
CHECKED BY	DATE
PATEL	1987/07/10
APPROVED BY	DATE
LENZ	1987/07/10

MATERIAL NO. SEE CHART
 SIZE C

SCALE --- DESIGN UNITS INCH

THIRD ANGLE PROJECTION

TITLE
 FRICTION LOCK HEADER ASY
 .100 CL BENT SQ PINS
 7478 SERIES DWG

MOLEX INCORPORATED

DOCUMENT NO. SDA-7478
 SHEET NO. 2 OF 7

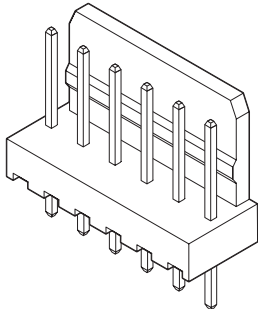
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		13	12	11	10	9	8	7	6	5	4	3	2	1		
		A-7478-NA I02		A-7478-NA50 I		A-7478-NA50 I T		A-7478-NA I02 T								
J		PART NO.	ENG. NO.	PART NO.	ENG. NO.	PART NO.	ENG. NO.	PART NO.	ENG. NO.	PART NO.	ENG. NO.	PART NO.	ENG. NO.	PART NO.	ENG. NO.	J
		22-05-3021	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									
		22-05-3091	A-7478-9A I02	22-12-2094	A-7478-9A50 I	50-29-1716	A-7478-9A50 I T									
H		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									
F		22-05-3201	A-7478-20A I02	22-12-2204	A-7478-20A50 I	50-29-1727	A-7478-20A50 I T									
		22-05-3211	A-7478-21A I02	22-12-2214	A-7478-21A50 I	50-29-1728	A-7478-21A50 I T									
		22-05-3221	A-7478-22A I02	22-12-2224	A-7478-22A50 I	50-29-1729	A-7478-22A50 I T									
		22-05-3231	A-7478-23A I02	22-12-2234	A-7478-23A50 I	50-29-1730	A-7478-23A50 I T									
		22-05-3241	A-7478-24A I02	22-12-2244	A-7478-24A50 I	50-29-1731	A-7478-24A50 I T									
		22-05-3251	A-7478-25A I02	22-12-2254	A-7478-25A50 I	50-29-1732	A-7478-25A50 I T									
		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									
D																
C																
B																
A																

ADD PINS EC NO. UCP2006-1815 2006/02/06 DRW:ADBR 2006/02/06 CHK:BELHAG 2006/02/06 APP:FSMTH 2006/02/09 Y9	QUALITY SYMBOLS	GENERAL TOLERANCES (UNLESS SPECIFIED)	DIMENSION STYLE	SCALE	DESIGN UNITS	THIRD ANGLE PROJECTION																		
	$\nabla=0$ $\sphericalangle=0$	<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>ANGULAR</td> <td>±---</td> <td>±---</td> </tr> </table>		mm	INCH	4 PLACES	±---	±---	3 PLACES	±---	±---	2 PLACES	±---	±---	1 PLACE	±---	±---	ANGULAR	±---	±---	IN/MM DRAWN BY SUZIK DATE 1987/07/10 CHECKED BY DATE PATEL 1987/07/10 APPROVED BY LENZ DATE 1987/07/10	---	INCH	
		mm	INCH																					
	4 PLACES	±---	±---																					
3 PLACES	±---	±---																						
2 PLACES	±---	±---																						
1 PLACE	±---	±---																						
ANGULAR	±---	±---																						
DESCRIPTION	DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS	SEE CHART	MATERIAL NO. DOCUMENT NO. SDA-7478 SHEET NO. 3 OF 7	TITLE FRICTION LOCK HEADER ASY .100 CL BENT SQ PINS 7478 SERIES DWG. MOLEX INCORPORATED																				

THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION

2.54mm (.100") Pitch KK[®] 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

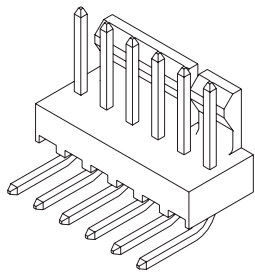
Housing: Nylon, UL 94V-0
 Contact: Brass, 0.64mm (.025") square
 Plating: See Table
 Operating Temperature: 0 to +75°C

Circuits	Order No.		Lead-free
	Tin	Gold	
2	22-27-2021	22-29-2021	Yes
3	22-27-2031	22-29-2031	
4	22-27-2041	22-29-2041	
5	22-27-2051	22-29-2051	
6	22-27-2061	22-29-2061	
7	22-27-2071	22-29-2071	
8	22-27-2081	22-29-2081	
9	22-27-2091	22-29-2091	
10	22-27-2101	22-29-2101	

Circuits	Order No.		Lead-free
	Tin	Gold	
11	22-27-2111	22-29-2111	Yes
12	22-27-2121	22-29-2121	
13	22-27-2131	22-29-2131	
14	22-27-2141	22-29-2141	
15	22-27-2151	22-29-2151	
16	22-27-2161	22-29-2161	
17	22-27-2171	22-29-2171	
18	22-27-2181	22-29-2181	
19	22-27-2191	22-29-2191	

Circuits	Order No.		Lead-free
	Tin	Gold	
20	22-27-2201	22-29-2201	Yes
21	22-27-2211	22-29-2211	
22	22-27-2221	22-29-2221	
23	22-27-2231	22-29-2231	
24	22-27-2241	22-29-2241	
25	22-27-2251	22-29-2251	
26	22-27-2261	22-29-2261	
27	22-27-2271	22-29-2271	
28	22-27-2281	22-29-2281	

2.54mm (.100") Pitch KK[®] 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	22-05-3021	22-12-2024	Yes
3	22-05-3031	22-12-2034	
4	22-05-3041	22-12-2044	
5	22-05-3051	22-12-2054	
6	22-05-3061	22-12-2064	
7	22-05-3071	22-12-2074	
8	22-05-3081	22-12-2084	
9	22-05-3091	22-12-2094	
10	22-05-3101	22-12-2104	

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

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

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