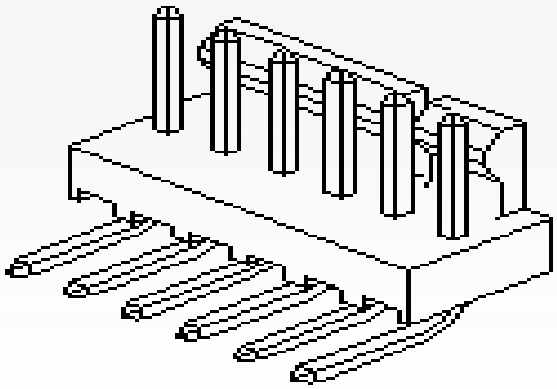


Series image - Reference only

EU RoHS
ELV and RoHS Compliant

China RoHS

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:0022122064

Status:Active

Description:2.54mm (.100") Pitch KK® Solid Header, Right Angle, with Friction Lock, 6 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

Request Samples

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)	6
Circuits (maximum)	6
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

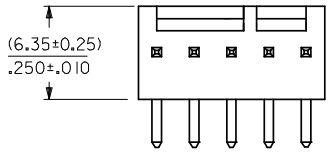
Old Part Number	A-7478-06A501

Reference - Drawing Numbers

Product Specification	PS-10-07
Sales Drawing	SDA-7478

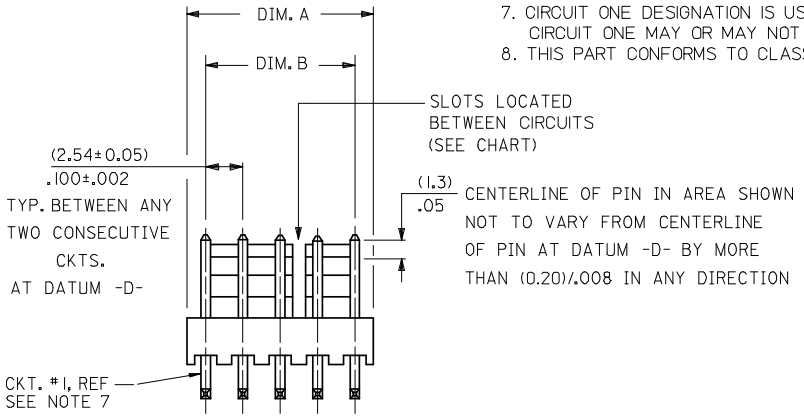
Copyright 2005-2008

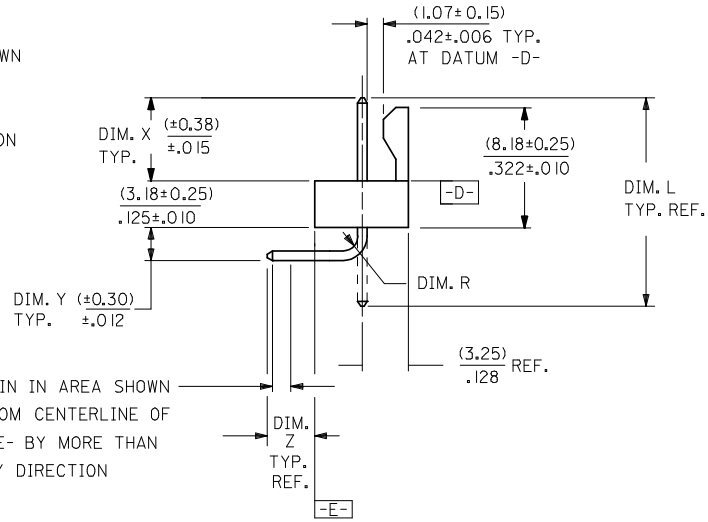
NO. OF CKTS.	DIM. A	DIM. B	SLOTS LOC.
28	(71.12 / 70.61) 2.800 / 2.780	(68.58 ± 0.25) 2.700 ± .010	4 , 5 24 , 25
27	(68.58 / 68.07) 2.700 / 2.680	(66.04 ± 0.25) 2.600 ± .010	4 , 5 24 , 25
26	(66.04 / 65.53) 2.600 / 2.580	(63.50 ± 0.25) 2.500 ± .010	4 , 5 20 , 21
25	(63.50 / 62.99) 2.500 / 2.480	(60.96 ± 0.25) 2.400 ± .010	4 , 5 20 , 21
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
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
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
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
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
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
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

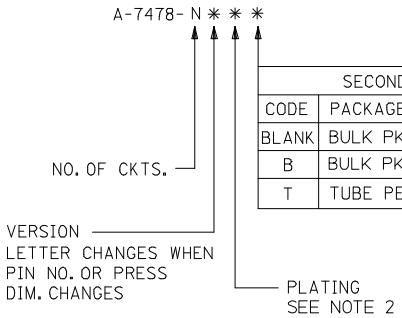


NOTES:

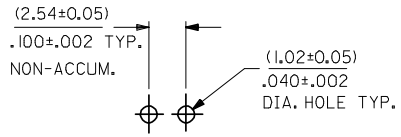
1. MATERIAL: NYLON, UL94V-0, COLOR: WHITE
2. FINISH:
   (102) - OVERALL TIN: (0.00508)/.000200 MIN., OVERALL COPPER UNDERPLATE: (0.00254)/.000100 MIN.
   (154) - OVERALL TIN: (0.00254)/.000100 MIN., OVERALL NICKEL UNDERPLATE: (0.00127)/.000050 MIN.
   (501) - OVERALL GOLD: (0.00051)/.000020 MIN., OVERALL 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 HOUSING.
8. THIS PART CONFORMS TO CLASS B REQUIREMENTS OF COSMETIC SPECIFICATION PS-45499-002.







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



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. 2007/12/07
EC NO: UCP2008-1289 2007/12/10
DRWN:ADERR 2007/12/10
CH'KD:JBELL
APPR:FSMITH
DESCRIPTION
Y10
REV

QUALITY SYMBOLS
▼=0
▽=0

GENERAL TOLERANCES (UNLESS SPECIFIED)

	mm	INCH
4 PLACES	± ---	± ---
3 PLACES	± ---	± .010
2 PLACES	± 0.25	± .015
1 PLACE	± 0.38	± ---
ANGULAR ±1/2°		

DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS

DIMENSION STYLE: MM/IN
SCALE: 4:1
DESIGN UNITS: INCH
THIRD ANGLE PROJECTION

DRAWN BY: GUZIC DATE: 1987/07/30
CHECKED BY: PATEL DATE: 1987/07/30
APPROVED BY: LENZ DATE: 1987/07/30

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

MOLEX INCORPORATED

MATERIAL NO.: SEE CHART
DOCUMENT NO.: SDA-7478
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

ENG. NO.	PIN NO.	DIM. L	DIM. X	DIM. Z	DIM. Y	DIM. W	DIM. R
A-7478-NA102	2766-4102	(18.69) .736	(6.60) .260	(3.58) .141	(3.05) .120	90°	(1.17) .046
A-7478-NA501	2766-4501	(18.69) .736	(6.60) .260	(3.58) .141	(3.05) .120	90°	(1.17) .046
A-7478-NA501T	2766-4501	(18.69) .736	(6.60) .260	(3.58) .141	(3.05) .120	90°	(1.17) .046
A-7478-NA102T	2766-4102	(18.69) .736	(6.60) .260	(3.58) .141	(3.05) .120	90°	(1.17) .046

ENG. NO.	PIN NO.	DIM. L	DIM. X	DIM. Z	DIM. Y	DIM. W	DIM. T

ADD A-7478-NA102T
EC NO: UCP2006-1815 2006/02/06
DRWN:ADERR 2006/02/06
CHKD:AELHAG 2006/02/09
APPR:FSMITH
DESCRIPTION
REV
Y9

QUALITY SYMBOLS
▼=0
▽=0

GENERAL TOLERANCES (UNLESS SPECIFIED)

	mm	INCH
4 PLACES	± ---	± ---
3 PLACES	± ---	± ---
2 PLACES	± ---	± ---
1 PLACE	± ---	± ---
ANGULAR ±---°		

DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS

DIMENSION STYLE: IN/MM
SCALE: ---
DESIGN UNITS: INCH
THIRD ANGLE PROJECTION

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

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

MOLEX INCORPORATED

MATERIAL NO.: SEE CHART
DOCUMENT NO.: SDA-7478
SHEET NO.: 2 OF 7
SIZE: C

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

A-7478-NA102

PART NO.		ENG. NO.
22-05-3021	*	A-7478-2A102
22-05-3031	*	A-7478-3A102
22-05-3041	*	A-7478-4A102
22-05-3051	*	A-7478-5A102
22-05-3061	*	A-7478-6A102
22-05-3071	*	A-7478-7A102
22-05-3081	*	A-7478-8A102
22-05-3091	*	A-7478-9A102
22-05-3101	*	A-7478-10A102
22-05-3111	*	A-7478-11A102
22-05-3121	*	A-7478-12A102
22-05-3131	*	A-7478-13A102
22-05-3141	*	A-7478-14A102
22-05-3151	*	A-7478-15A102
22-05-3161	*	A-7478-16A102
22-05-3171	*	A-7478-17A102
22-05-3181	*	A-7478-18A102
22-05-3191	*	A-7478-19A102
22-05-3201	*	A-7478-20A102
22-05-3211	*	A-7478-21A102
22-05-3221	*	A-7478-22A102
22-05-3231	*	A-7478-23A102
22-05-3241	*	A-7478-24A102
22-05-3251	*	A-7478-25A102
22-05-3261	*	A-7478-26A102
22-05-3271	*	A-7478-27A102
22-05-3281	*	A-7478-28A102

A-7478-NA501

PART NO.		ENG. NO.
22-12-2024	*	A-7478-2A501
22-12-2034	*	A-7478-3A501
22-12-2044	*	A-7478-4A501
22-12-2054		A-7478-5A501
22-12-2064	*	A-7478-6A501
22-12-2074	*	A-7478-7A501
22-12-2084	*	A-7478-8A501
22-12-2094	*	A-7478-9A501
22-12-2104	*	A-7478-10A501
22-12-2114	*	A-7478-11A501
22-12-2124	*	A-7478-12A501
22-12-2134	*	A-7478-13A501
22-12-2144	*	A-7478-14A501
22-12-2154	*	A-7478-15A501
22-12-2164	*	A-7478-16A501
22-12-2174	*	A-7478-17A501
22-12-2184	*	A-7478-18A501
22-12-2194	*	A-7478-19A501
22-12-2204	*	A-7478-20A501
22-12-2214	*	A-7478-21A501
22-12-2224	*	A-7478-22A501
22-12-2234	*	A-7478-23A501
22-12-2244	*	A-7478-24A501
22-12-2254	*	A-7478-25A501
22-12-2264	*	A-7478-26A501
22-12-2274	*	A-7478-27A501
22-12-2284	*	A-7478-28A501

A-7478-NA50IT

PART NO.	ENG. NO.
50-29-1710	A-7478-2A50IT
50-29-1711	A-7478-3A50IT
50-29-1705	A-7478-4A50IT
50-29-1712	A-7478-5A50IT
50-29-1713	A-7478-6A50IT
50-29-1714	A-7478-7A50IT
50-29-1715	A-7478-8A50IT
50-29-1716	A-7478-9A50IT
50-29-1717	A-7478-10A50IT
50-29-1718	A-7478-11A50IT
50-29-1719	A-7478-12A50IT
50-29-1720	A-7478-13A50IT
50-29-1721	A-7478-14A50IT
50-29-1722	A-7478-15A50IT
50-29-1723	A-7478-16A50IT
50-29-1724	A-7478-17A50IT
50-29-1725	A-7478-18A50IT
50-29-1726	A-7478-19A50IT
50-29-1727	A-7478-20A50IT
50-29-1728	A-7478-21A50IT
50-29-1729	A-7478-22A50IT
50-29-1730	A-7478-23A50IT
50-29-1731	A-7478-24A50IT
50-29-1732	A-7478-25A50IT
50-29-1733	A-7478-26A50IT
50-29-1734	A-7478-27A50IT
50-29-1735	A-7478-28A50IT

A-7478-NA102T

PART NO.	ENG. NO.
50-34-8500	A-7478-2A102T
50-34-8501	A-7478-3A102T
50-34-8502	A-7478-4A102T

PART NO.	ENG. NO.

PART NO.	ENG. NO.

ADD P/N'S
EC NO: UCP2006-1815 2006/02/06
DRWN:ADERR 2006/02/06
CHKD:AELHAG 2006/02/09
APPR:FSMITH
DESCRIPTION
REV
Y9

QUALITY SYMBOLS
▼=0
▽=0

GENERAL TOLERANCES (UNLESS SPECIFIED)

	mm	INCH
4 PLACES	± ---	± ---
3 PLACES	± ---	± ---
2 PLACES	± ---	± ---
1 PLACE	± ---	± ---
ANGULAR ±---°		

DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS

DIMENSION STYLE: IN/MM
SCALE: ---
DESIGN UNITS: INCH
THIRD ANGLE PROJECTION

DRAWN BY: GUZIK DATE: 1987/07/10
CHECKED BY: PATEL DATE: 1987/07/10
APPROVED BY: LENZ DATE: 1987/07/10

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

molex MOLEX INCORPORATED

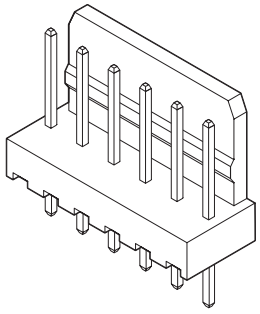
MATERIAL NO.: SEE CHART
DOCUMENT NO.: SDA-7478
SHEET NO.: 3 OF 7

SIZE C

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

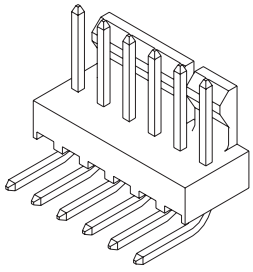
Circuits	Order No.		Lead-free
	Tin	Gold	
2	22-27-2021	22-29-2021	Yes
3	22-27-2031	22-29-2031	
4	22-27-2041	22-29-2041	
5	22-27-2051	22-29-2051	
6	22-27-2061	22-29-2061	
7	22-27-2071	22-29-2071	
8	22-27-2081	22-29-2081	
9	22-27-2091	22-29-2091	
10	22-27-2101	22-29-2101	

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.