

**PLEASE CHECK WWW.MOLEX.COM FOR LATEST PART INFORMATION**

**Part Number:** [0702800475](#)  
**Status:** **Active**  
**Description:** 2.54mm (.100") Pitch C-Grid® Breakaway Header, Dual Row, Vertical, High Temperature, 94 Circuits, Tin (Sn) Plating, 2.79mm (.110") PC Tail Length

**Documents:**

<a href="#">3D Model</a>	<a href="#">Product Specification PS-70280 (PDF)</a>
<a href="#">Packaging Specification (PDF)</a>	<a href="#">RoHS Certificate of Compliance (PDF)</a>
<a href="#">Drawing (PDF)</a>	

**Agency Certification**

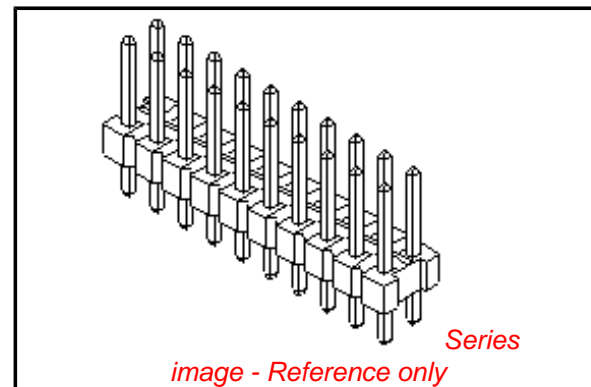
CSA	LR19980
UL	E29179

**General**

Product Family	PCB Headers
Series	<a href="#">70280</a>
Application	Board-to-Board, Wire-to-Board
Product Name	C-Grid®

**Physical**

Breakaway	Yes
Circuits (Loaded)	94
Circuits (maximum)	94
Color - Resin	Black
Durability (mating cycles max)	25
First Mate / Last Break	No
Flammability	94V-0
Glow-Wire Compliant	No
Guide to Mating Part	No
Keying to Mating Part	None
Lock to Mating Part	None
Material - Metal	Copper Alloy
Material - Plating Mating	Tin
Material - Plating Termination	Tin
Material - Resin	High Temperature Thermoplastic
Number of Rows	2
Orientation	Vertical
PC Tail Length (in)	0.110 In
PC Tail Length (mm)	2.79 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)	152.4
Plating min: Mating (µm)	3.81
Plating min: Termination (µin)	152.4
Plating min: Termination (µm)	3.81
Polarized to Mating Part	No
Shrouded	No
Stackable	Yes
Temperature Range - Operating	-40°C to +105°C
Termination Interface: Style	Through Hole



**EU RoHS**

**ELV and RoHS Compliant**  
**REACH SVHC**  
 Not Reviewed  
**Halogen-Free Status**  
 Not Reviewed

**China RoHS**



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

Email [productcompliance@molex.com](mailto: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**  
[70280Series](#)

**Electrical**

Current - Maximum per Contact

3A

Voltage - Maximum

250V

**Solder Process Data**

Lead-free Process Capability

SMC &amp; Wave Capable (TH only)

Process Temperature max. C

260

**Material Info****Reference - Drawing Numbers**

Product Specification

PS-70280

Sales Drawing

SDA-70280-0001-4000

This document was generated on 03/31/2010

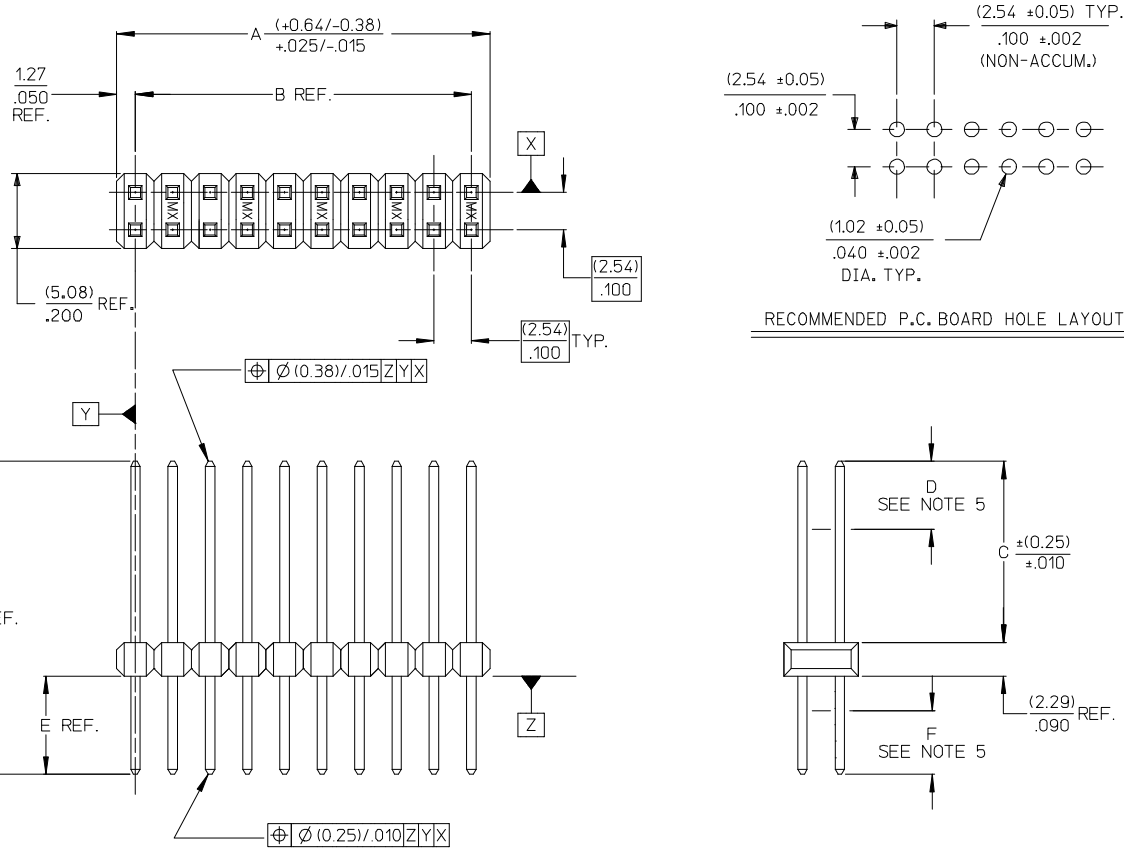
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CKT. SIZE	DIM. A REF.		DIM. B REF.		
	(MM)	INCH	(MM)	INCH	
J	4	(5.08)	.200	(2.54)	.100
	6	(7.62)	.300	(5.08)	.200
	8	(10.16)	.400	(7.62)	.300
	10	(12.70)	.500	(10.16)	.400
	12	(15.24)	.600	(12.70)	.500
	14	(17.78)	.700	(15.24)	.600
I	16	(20.32)	.800	(17.78)	.700
	18	(22.86)	.900	(20.32)	.800
	20	(25.40)	1.000	(22.86)	.900
	22	(27.94)	1.100	(25.40)	1.000
	24	(30.48)	1.200	(27.94)	1.100
	26	(33.02)	1.300	(30.48)	1.200
	28	(35.56)	1.400	(33.02)	1.300
H	30	(38.10)	1.500	(35.56)	1.400
	32	(40.64)	1.600	(38.10)	1.500
	34	(43.18)	1.700	(40.64)	1.600
	36	(45.72)	1.800	(43.18)	1.700
	38	(48.26)	1.900	(45.72)	1.800
	40	(50.80)	2.000	(48.26)	1.900
G	42	(53.34)	2.100	(50.80)	2.000
	44	(55.88)	2.200	(53.34)	2.100
	46	(58.42)	2.300	(55.88)	2.200
	48	(60.96)	2.400	(58.42)	2.300
	50	(63.50)	2.500	(60.96)	2.400
	52	(66.04)	2.600	(63.50)	2.500
	54	(68.58)	2.700	(66.04)	2.600
F	56	(71.12)	2.800	(68.58)	2.700
	58	(73.66)	2.900	(71.12)	2.800
	60	(76.20)	3.000	(73.66)	2.900
	62	(78.74)	3.100	(76.20)	3.000
	64	(81.28)	3.200	(78.74)	3.100
	66	(83.82)	3.300	(81.28)	3.200
E	68	(86.36)	3.400	(83.82)	3.300
	70	(88.90)	3.500	(86.36)	3.400
	72	(91.44)	3.600	(88.90)	3.500
	74	(93.98)	3.700	(91.44)	3.600
	76	(96.52)	3.800	(93.98)	3.700
	78	(99.06)	3.900	(96.52)	3.800
D	80	(101.06)	4.000	(99.06)	3.900
	82	(104.14)	4.100	(101.06)	4.000
	84	(106.68)	4.200	(104.14)	4.100
	86	(109.22)	4.300	(106.68)	4.200
	88	(111.76)	4.400	(109.22)	4.300
	90	(114.30)	4.500	(111.76)	4.400
	92	(116.84)	4.600	(114.30)	4.500
C	94	(119.38)	4.700	(116.84)	4.600
	96	(121.92)	4.800	(119.38)	4.700
	98	(124.46)	4.900	(121.92)	4.800
	100	(127.00)	5.000	(124.46)	4.900

**NOTES:**

- MATERIAL:  
PIN: COPPER ALLOY  
WAFER: GLASS FILLED LCP (LIQUID CRYSTAL POLYMER, UL 94V-0, COLOR: BLACK.
- FINISH:  
TIN = (0.00380)/.000150 MINIMUM TIN PLATE OVER (0.00127)/.000050 MINIMUM NICKEL PLATE.  
15 GOLD = (0.00038)/.000015 MINIMUM GOLD PLATE IN SELECT AREA, (0.00190)/.000075 MINIMUM TIN PLATE IN SELECT AREA, OVER (0.00127)/.000050 MINIMUM NICKEL PLATE OVERALL.  
30 GOLD = (0.00076)/.000030 MINIMUM GOLD PLATE IN SELECT AREA, (0.00190)/.000075 MINIMUM TIN PLATE IN SELECT AREA, OVER (0.00127)/.000050 MINIMUM NICKEL PLATE OVERALL.  
GT15 = (0.00038)/.000015 MINIMUM GOLD PLATE IN SELECT AREA, (0.00254)/.000100 MINIMUM TIN PLATE IN SELECT AREA, OVER (0.00127)/.000050 MINIMUM NICKEL PLATE OVERALL.
- PRODUCT SPECIFICATION NONE
- PACKAGING INFORMATION: (UNLESS OTHERWISE NOTED IN TABLES) BULK PACK PER PK-70873-0353.
- MEASURE POINT FOR PLATING THICKNESS.
- FOR ASSEMBLIES WITH VOIDED PINS, REFER TO DRAWING NO. SDA-70280-5001-9999.
- PIN PUSHOUT FORCE 3 POUNDS MINIMUM IN EITHER DIRECTION.
- FOR ILLUSTRATION PURPOSES, 20 (DUAL 10) CIRCUIT SIZE IS SHOWN.
- PINS MEET SOLDERABILITY SPEC SMES-152. ABSENCE OF PLATING PERMISSIBLE AT BANDOLIER PIN FAYING SURFACE. (APPROXIMATELY (0.64)/.025 INCH LONG BY (0.15)/.006 INCH WIDE AT 2 LOCATIONS)
- PARTS CONFORM TO CLASS B OF COSMETIC SPECIFICATION PS-45499-002

\* THE PRIMARY SHIPPING CARTON WILL BE LABELED "COMPLIANT TO RoHS DIRECTIVE 2002/95/EC AND ELV ANNEX II OF DIRECTIVE 2000/53/EC". CARTONS WITHOUT THIS LABEL MAY CONTAIN PRODUCT WITH LEAD PLATING.



ADD P/N 70280-1254 EC NO: UCP2008-2306 DRWN:JBELL 2008/03/31 CHKD:LSCHMIDT 2008/04/07 APPR:FSM/TH 2008/04/24	QUALITY SYMBOLS ▽=0 ▽=0	GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE MM/IN	SCALE 4:1	DESIGN UNITS INCH	THIRD ANGLE PROJECTION				
		4 PLACES ±--- ±---	3 PLACES ±--- ±.005	2 PLACES ±.013 ±.01	1 PLACE ±.025 ±---	ANGULAR ±1/2°	DRAWN BY SMR	DATE 04/19/1993	CHECKED BY DATE	TITLE SALES ASSY-HIGH TEMP. DUAL ROW WAFER W/BREAK-OFF OPT. .025 SQ PINS	
DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS		MATERIAL NO. SEE TABLE		APPROVED BY SMR		DATE 04/19/1993		DOCUMENT NO. SDA-70280-0001-4000		SHEET NO. 1 OF 9	
THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION											

9	G6
8	G5
7	G3
6	G3
5	G3
4	G3
3	G3
2	G3
1	G6
SHT. REV.	

	13	12	11	10	9	8	7	6	5	4	3	2	1	
J	ENGINEERING NUMBER A-70280-	RELEASE FOR MANUFACTURE			E REF.	J REF.	C ±(0.25) .010			CONNECTOR END PLATING		P.C. BOARD END PLATING		FOR PACKAGING INFORMATION, SEE NOTE 4, SHEET 1 (UNLESS OTHERWISE SPECIFIED BELOW)
										TYPE	D MEAS.	TYPE	F MEAS.	
	-0439/-0448	R.F.M.			(2.72) .107	(11.10) .437	(6.10) .240			TIN	(2.54) .100	TIN	(1.27) .050	
	-0449/-0458	R.F.M.			(2.72) .107	(11.10) .437	(6.10) .240			15 GOLD	(2.54) .100	TIN	(1.27) .050	
I	-0459/-0468	R.F.M.			(2.72) .107	(11.10) .437	(6.10) .240			30 GOLD	(2.54) .100	TIN	(1.23) .048	
	-0469/-0478	R.F.M.			(2.79) .110	(13.21) .520	(8.13) .320			TIN	(4.57) .180	TIN	(1.27) .050	
	-0479/-0488	R.F.M.			(2.79) .110	(13.21) .520	(8.13) .320			15 GOLD	(4.57) .180	TIN	(1.27) .050	
H	-0489/-0498	R.F.M.			(2.79) .110	(13.21) .520	(8.13) .320			30 GOLD	(4.57) .180	TIN	(1.27) .050	
	-0499/-0508	R.F.M.			(3.94) .155	(12.32) .485	(6.10) .240			30 GOLD	(2.54) .100	TIN	(1.27) .050	

	CKTS	EDP NUMBER	ENG NUMBER	EDP NUMBER	ENG NUMBER	EDP NUMBER	ENG NUMBER	EDP NUMBER	ENG NUMBER	EDP NUMBER	ENG NUMBER	EDP NUMBER	ENG NUMBER	EDP NUMBER	ENG NUMBER	EDP NUMBER	ENG NUMBER	CKTS
G	82	70280-0439	A-70280-0439	70280-0449	A-70280-0449	70280-0459	A-70280-0459	70280-0469	A-70280-0469	70280-0479	A-70280-0479	70280-0489	A-70280-0489	70280-0499	A-70280-0499	70280-0509	A-70280-0509	82
	84	70280-0440	A-70280-0440	70280-0450	A-70280-0450	70280-0460	A-70280-0460	70280-0470	A-70280-0470	70280-0480	A-70280-0480	70280-0490	A-70280-0490	70280-0500	A-70280-0500	70280-0510	A-70280-0510	84
	86	70280-0441	A-70280-0441	70280-0451	A-70280-0451	70280-0461	A-70280-0461	70280-0471	A-70280-0471	70280-0481	A-70280-0481	70280-0491	A-70280-0491	70280-0501	A-70280-0501	70280-0511	A-70280-0511	86
	88	70280-0442	A-70280-0442	70280-0452	A-70280-0452	70280-0462	A-70280-0462	70280-0472	A-70280-0472	70280-0482	A-70280-0482	70280-0492	A-70280-0492	70280-0502	A-70280-0502	70280-0512	A-70280-0512	88
	90	70280-0443	A-70280-0443	70280-0453	A-70280-0453	70280-0463	A-70280-0463	70280-0473	A-70280-0473	70280-0483	A-70280-0483	70280-0493	A-70280-0493	70280-0503	A-70280-0503	70280-0513	A-70280-0513	90
	92	70280-0444	A-70280-0444	70280-0454	A-70280-0454	70280-0464	A-70280-0464	70280-0474	A-70280-0474	70280-0484	A-70280-0484	70280-0494	A-70280-0494	70280-0504	A-70280-0504	70280-0514	A-70280-0514	92
	94	70280-0445	A-70280-0445	70280-0455	A-70280-0455	70280-0465	A-70280-0465	70280-0475	A-70280-0475	70280-0485	A-70280-0485	70280-0495	A-70280-0495	70280-0505	A-70280-0505	70280-0515	A-70280-0515	94
	96	70280-0446	A-70280-0446	70280-0456	A-70280-0456	70280-0466	A-70280-0466	70280-0476	A-70280-0476	70280-0486	A-70280-0486	70280-0496	A-70280-0496	70280-0506	A-70280-0506	70280-0516	A-70280-0516	96
	98	70280-0447	A-70280-0447	70280-0457	A-70280-0457	70280-0467	A-70280-0467	70280-0477	A-70280-0477	70280-0487	A-70280-0487	70280-0497	A-70280-0497	70280-0507	A-70280-0507	70280-0517	A-70280-0517	98
	F	100	70280-0448	A-70280-0448	70280-0458	A-70280-0458	70280-0468	A-70280-0468	70280-0478	A-70280-0478	70280-0488	A-70280-0488	70280-0498	A-70280-0498	70280-0508	A-70280-0508	70280-0518	A-70280-0518

E																		
D																		
C																		
B																		
A																		

UPDATE DIMENSIONS EC NO: UCP2007-1440 2006/12/18 DRAWN: P. DDER 2006/12/18 CHKD: ADERR 2007/01/10 APPR: F. SMITH 2007/01/10 DESCRIPTION REV	QUALITY SYMBOLS	GENERAL TOLERANCES (UNLESS SPECIFIED)	DIMENSION STYLE	SCALE	DESIGN UNITS	THIRD ANGLE PROJECTION
	=0 <=0	mm INCH	MM/IN	---	INCH	
	4 PLACES ± --- ± ---	DRAWN BY DATE	DMORGAN 04/12/16	TITLE	SALES ASSY-HIGH TEMP. DUAL ROW WAFER W/BREAK-OFF OPTION, .025 SQ PINS	
	3 PLACES ± --- ± ---	CHECKED BY DATE	BBARER 04/12/16		MOLEX INCORPORATED	
	2 PLACES ± --- ± ---	APPROVED BY DATE	SMILLER 04/12/16		DOCUMENT NO.	SHEET NO.
1 PLACE ± --- ± ---				SDA-70280-0001-4000	5 OF 8	
	ANGULAR ±1/2°	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		