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Jameco Part Number 514095

FEATURES AND SPECIFICATIONS

Features and Benefits

- Sizes 4 to 80 circuits
- High profile: .220" high
- Stackable end-to-end (on unbroken edges)
- Easy breakaway to smaller sizes
- Drawn .025" square wire provides 4-sided smooth surface for quality interface

Reference Information

Product Specification: PS-70216

Packaging: Tube

UL File No.: E29179 (H)

CSA File No.: LR19980A

Mates With: 7859 Shunts, C-Grid Receptacles, SL Crimp and IDT Housings

Designed In: Inches

Electrical

Voltage: 250V

Current: 3.0A

Contact Resistance: 15mΩ max.

Dielectric Withstanding Voltage: 1500V

Insulation Resistance: 1000 MΩ min.

Mechanical

Pin Retention to Header: 17.79N (4 lb)

Durability: 25 cycles Tin/Lead and 50 cycles Gold

Physical

Housing: Glass-filled polyester, UL 94V-0

Contact: Phosphor Bronze

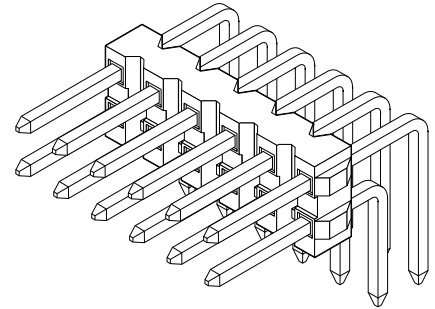
Plating: See Table

Operating Temperature: -40 to +105°C

molex® 2.54mm (.100") Pitch C-Grid® Breakaway Header

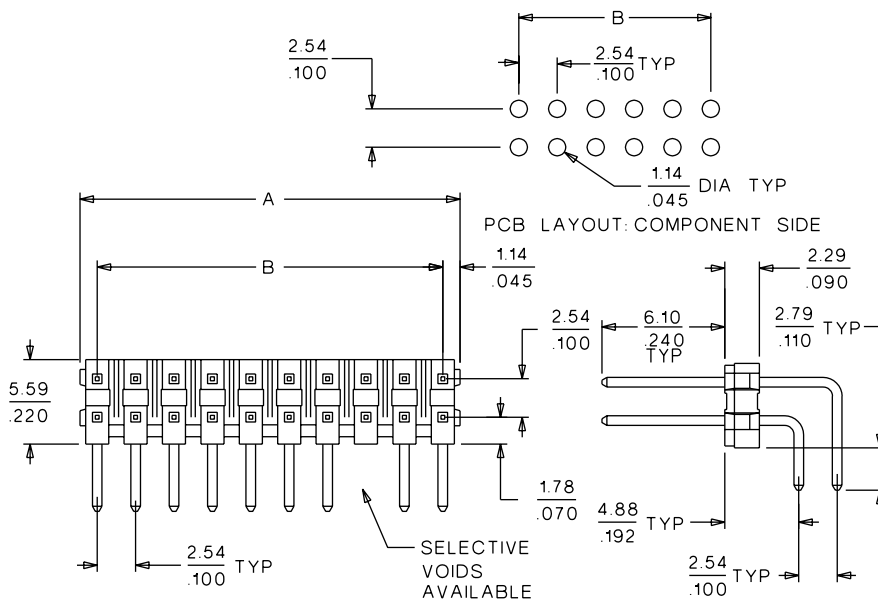
70216

High Profile, Dual Row Right Angle



CATALOG DRAWING (FOR REFERENCE ONLY)

Not For Use With Molex C-Grid III™ Components



ORDERING INFORMATION AND DIMENSIONS

Circuits	Dimension	
	A	B
4	4.83 (.190)	2.54 (.100)
6	7.37 (.290)	5.08 (.200)
8	9.91 (.390)	7.62 (.300)
10	12.45 (.490)	10.16 (.400)
12	14.99 (.590)	12.70 (.500)
14	17.53 (.690)	15.24 (.600)
16	20.07 (.790)	17.78 (.700)
18	22.61 (.890)	20.32 (.800)
20	25.15 (.990)	22.86 (.900)
22	27.69 (1.090)	25.40 (1.000)
24	30.23 (1.190)	27.94 (1.100)
26	32.77 (1.290)	30.48 (1.200)
28	35.31 (1.390)	33.02 (1.300)

Circuits	Dimension	
	A	B
30	37.85 (1.490)	35.56 (1.400)
32	40.39 (1.590)	38.10 (1.500)
34	42.93 (1.690)	40.64 (1.600)
36	45.47 (1.790)	43.18 (1.700)
38	48.01 (1.890)	45.72 (1.800)
40	50.55 (1.990)	48.26 (1.900)
42	53.09 (2.090)	50.80 (2.000)
44	55.63 (2.190)	53.34 (2.100)
46	58.17 (2.290)	55.88 (2.200)
48	60.71 (2.390)	58.42 (2.300)
50	63.25 (2.490)	60.96 (2.400)
52	65.79 (2.590)	63.50 (2.500)
54	68.33 (2.690)	66.04 (2.600)

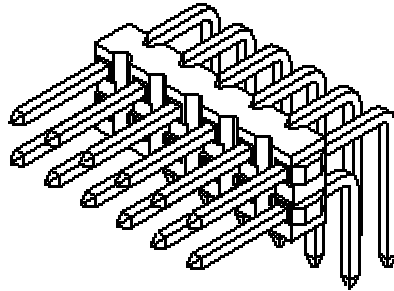
Circuits	Dimension	
	A	B
56	70.87 (2.790)	68.58 (2.700)
58	73.41 (2.890)	71.12 (2.800)
60	75.95 (2.990)	73.66 (2.900)
62	78.49 (3.090)	76.20 (3.000)
64	81.03 (3.190)	78.74 (3.100)
66	83.57 (3.290)	81.28 (3.200)
68	86.11 (3.390)	83.82 (3.300)
70	88.65 (3.490)	86.36 (3.400)
72	91.19 (3.590)	88.90 (3.500)
74	93.73 (3.690)	91.44 (3.600)
76	96.27 (3.790)	93.98 (3.700)
78	98.81 (3.890)	96.52 (3.800)
80	101.35 (3.990)	99.06 (3.900)

Plating Option	Order No.
15μ" min. select Gold	• 10-89-4XX2
30μ" min. select Gold	• 10-89-4XX6
150μ" Tin/Lead, Nickel overall	• 10-88-3XX1
Replace XX with no. of circuits, 04-80 (even only)	

• US Standard Product, available through Molex franchised distributors (80 circuit only)



PRODUCT SPECIFICATION



SERIES 70216

C-GRID® RIGHT ANGLE THROUGH HOLE .100" GRID DUAL ROW HIGH PROFILE HEADER WITH BREAK OFF OPTION SERIES 70216

- 1.0 SCOPE
- 2.0 PRODUCT DESCRIPTION
 - 2.1 PRODUCT NAME AND SERIES NUMBER
 - 2.2 DIMENSIONS, MATERIALS, PLATINGS AND MARKINGS
 - 2.3 SAFETY AGENCY APPROVALS
- 3.0 APPLICABLE DOCUMENTS AND SPECIFICATIONS
- 4.0 RATINGS
 - 4.1 VOLTAGE
 - 4.2 CURRENT
 - 4.3 TEMPERATURE
- 5.0 PERFORMANCE
 - 5.1 ELECTRICAL REQUIREMENTS
 - 5.2 MECHANICAL REQUIREMENTS
- 6.0 PACKAGING

REVISION: C	EGR/ECN INFORMATION: EC No: UCP2004-2180 DATE: 2004/04/30	TITLE: .100" GRID RIGHT ANGLE DUAL ROW HIGH PROFILE BREAKAWAY HEADER	SHEET No. 1 of 3
DOCUMENT NUMBER: PS-70216	CREATED / REVISED BY: ACHAMMER/RWHITE	CHECKED BY: DMORGAN	APPROVED BY: SMILLER



PRODUCT SPECIFICATION

1.0 SCOPE:

This specification covers the C-Grid® right angle high profile dual row header with break-off option. The wafer (header body) has a high profile and is designed to be easily modified to a smaller circuit size in the field if required. The mating pins are .025in (0.64mm) square and have .100in (2.54mm) grid spacing. The solder tails are rounded to enhance registration to circuit board during assembly.

2.0 PRODUCT DESCRIPTION

2.1 PRODUCT NAME AND SERIES NUMBER

SERIES 70216: Right angle through hole dual row header with break off notches.

2.2 DIMENSIONS, MATERIALS, PLATINGS AND MARKINGS

The product is available in circuit sizes of 2 through 80 circuits and is end to end stackable when supplied in discrete circuit size by Molex manufacturing. Product can also be ordered with selective voids. The wafer is produced from glass filled polyester having a UL 94V-0 flammability rating. Mating pin lengths are .240in (6.0mm), and .320in (8.1mm) with gold or tin plating. Tail length options are .110in (2.8mm) and .175in (4.4mm) with tin plating only. For further details, please refer to the sales documents in section 3.0.

2.3 RECOGNIZED AGENCY APPROVALS:

2.3.1 UNDERWRITERS' LABORATORIES: E29179

2.3.2 CANADIAN STANDARDS ASSOCIATION: LR19980

3.0 APPLICABLE DOCUMENTS AND SPECIFICATIONS:

<u>MOLEX DOCUMENT</u>	<u>DESCRIPTION</u>
SDA-70216-0079-5000	SALES DRAWING, RIGHT ANGLE THROUGH HOLE DUAL ROW HEADER WITH BREAK OFF OPTION
SDA-70216-5001-9999	SALES DRAWING, RIGHT ANGLE THROUGH HOLE DUAL ROW HEADER WITH BREAK OFF OPTION AND SELECTIVE VOIDS
PK-70873-0325	PACKAGING SPECIFICATION RIGHT ANGLE THROUGH HOLE DUAL ROW HEADER CIRCUIT SIZES 2 THROUGH 8
PK-70873-0075	PACKAGING SPECIFICATION RIGHT ANGLE THROUGH HOLE DUAL ROW HEADER CIRCUIT SIZES 10 AND OVER

4.0 RATINGS

4.1 **VOLTAGE:** 250 Volts D.C.

4.2 **CURRENT:** 2.5 Amp D.C. max.

4.3 **TEMPERATURE:**

4.3.1 **PROCESSING TEMPERATURE:** Product is suitable for wave solder processing and is not I.R. reflow compatible

4.3.2 **OPERATING TEMPERATURE:** -40 °C to 120 °C.

<u>REVISION:</u> C	<u>EGR/ECN INFORMATION:</u> EC No: UCP2004-2180 DATE: 2004/04/30	<u>TITLE:</u> .100" GRID RIGHT ANGLE DUAL ROW HIGH PROFILE BREAKAWAY HEADER	<u>SHEET No.</u> 2 of 3
<u>DOCUMENT NUMBER:</u> PS-70216	<u>CREATED / REVISED BY:</u> ACHAMMER/RWHITE	<u>CHECKED BY:</u> DMORGAN	<u>APPROVED BY:</u> SMILLER



PRODUCT SPECIFICATION

5.0 PERFORMANCE

5.1 ELECTRICAL REQUIREMENTS

5.1.1 INSULATION RESISTANCE: Greater than 1,000MΩ at sea level.

5.1.2 DIELECTRIC WITHSTANDING VOLTAGE: Greater than 600 Volts at sea level.

5.2 MECHANICAL REQUIREMENTS:

Header pin retention (push out force): 4 lbs min before soldering.

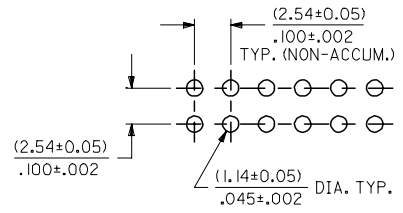
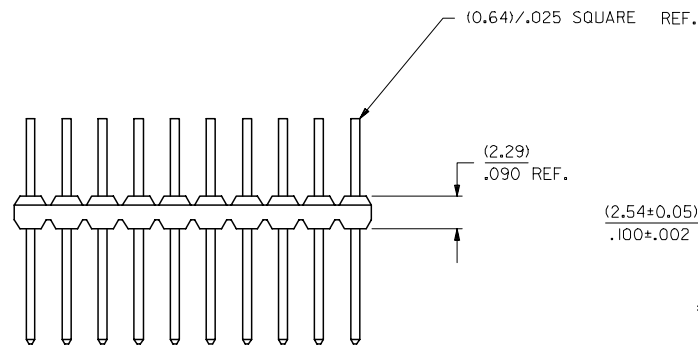
6.0 PACKAGING: Refer to section 3.0 for packaging documents

REVISION: C	EGR/ECN INFORMATION: EC No: UCP2004-2180 DATE: 2004/04/30	TITLE: .100" GRID RIGHT ANGLE DUAL ROW HIGH PROFILE BREAKAWAY HEADER	SHEET No. 3 of 3
DOCUMENT NUMBER: PS-70216	CREATED / REVISED BY: ACHAMMER/RWHITE	CHECKED BY: DMORGAN	APPROVED BY: SMILLER

13 12 11 10 9 8 7 6 5 4 3 2 1

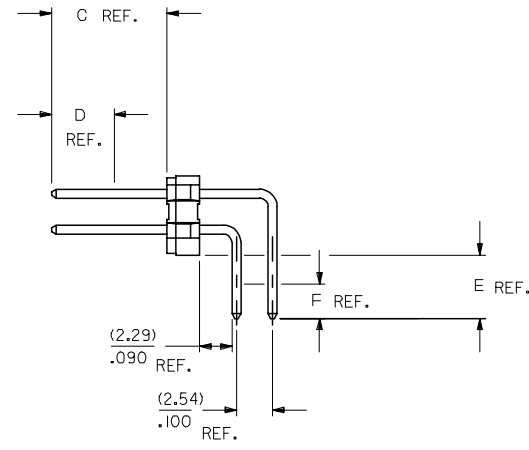
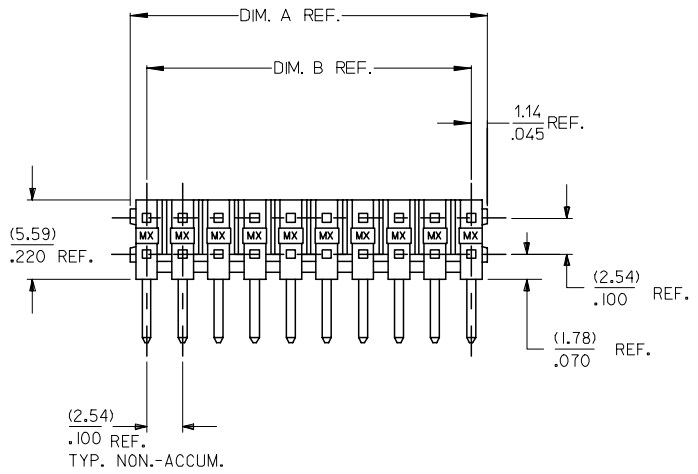
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RECOMMENDED P.C. BOARD HOLE LAYOUT

CKT. SIZE	DIM. A		DIM. B	
	MM	INCH	MM	INCH
04	4.83	.190	2.54	.100
06	7.37	.290	5.08	.200
08	9.91	.390	7.62	.300
10	12.45	.490	10.16	.400
12	14.99	.590	12.70	.500
14	17.53	.690	15.24	.600
16	20.07	.790	17.78	.700
18	22.61	.890	20.32	.800
20	25.15	.990	22.86	.900
22	27.69	1.090	25.40	1.000
24	30.23	1.190	27.94	1.100
26	32.77	1.290	30.48	1.200
28	35.31	1.390	33.02	1.300
30	37.85	1.490	35.56	1.400



- NOTES:
- MATERIAL: WAFER - GLASS FILLED. POLYESTER, 94V-0, COLOR: BLACK.
PINS - PHOS. BRONZE.
 - FINISH:
TIN - 0.00381/0.000150 MINIMUM TIN OVER 0.00127/0.000050 MINIMUM NICKEL OVERALL.
15 GOLD - 0.00038/0.000015 MINIMUM GOLD PLATE IN SELECTED AREA AND 0.00191/0.000075 MINIMUM TIN IN SELECTED AREA OVER 0.00127/0.000050 MINIMUM NICKEL OVERALL.
30 GOLD - 0.00076/0.000030 MINIMUM GOLD PLATE IN SELECTED AREA AND 0.00191/0.000075 MINIMUM TIN IN SELECTED AREA OVER 0.00121/0.000050 MINIMUM NICKEL OVERALL.
 - PRODUCT SPECIFICATION: PS-70216.
 - PACKAGING SPECIFICATION: FOR 4 THROUGH 8 CIRCUIT PARTS US PK-70873-0353.
FOR 10 CIRCUITS AND OVER USE PK-70873-0075.
 - PIN PUSHOUT FORCE: 4 LBS. MINIMUM.
 - FOR ILLUSTRATION PURPOSES, 20 (DUAL 10) CIRCUIT SIZE WAFER IS SHOWN.
 - PINS MUST MEET SOLDERABILITY SPEC. NO. 152.
 - WAFER TO BE FLAT WITHIN (0.03 MM/CM) OR .003 IN./IN.
 - FOR ASSEMBLIES WITH VOIDED PINS, CONTACT MOLEX SALES REPRESENTATIVE.

2	A
1	A
SHT. REV.	

UPDATE FORMAT FC NO: UCP2007-0449 DRAWN/PRD/DER 2006/08/29 CHKD:ADERR 2006/09/01 APPR:FSM TH 2006/09/18 REV A	QUALITY SYMBOLS ▽=0 ▽=0	GENERAL TOLERANCES (UNLESS SPECIFIED) <table border="1"> <tr><th></th><th>mm</th><th>INCH</th></tr> <tr><td>4 PLACES</td><td>±.005</td><td>±.0005</td></tr> <tr><td>3 PLACES</td><td>±.005</td><td>±.0005</td></tr> <tr><td>2 PLACES</td><td>±.013</td><td>±.001</td></tr> <tr><td>1 PLACE</td><td>±0.25</td><td>±.010</td></tr> </table> ANGULAR ±1/2°		mm	INCH	4 PLACES	±.005	±.0005	3 PLACES	±.005	±.0005	2 PLACES	±.013	±.001	1 PLACE	±0.25	±.010	DIMENSION STYLE MM/IN	SCALE 4:1	DESIGN UNITS INCH	THIRD ANGLE PROJECTION
		mm	INCH																		
	4 PLACES	±.005	±.0005																		
	3 PLACES	±.005	±.0005																		
2 PLACES	±.013	±.001																			
1 PLACE	±0.25	±.010																			
DRAWN BY RCB	DATE 1994/05/18	CHECKED BY DATE	APPROVED BY DATE	MATERIAL NO. SEE CHART	DOCUMENT NO. SD-70216-001	SHEET NO. 1 OF *															
DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS																					
THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION																					

12 11 10 9 8 7 6 5 4 3 2 1

ENG. NO: A-70216-0079/0092			ENG. NO: A-70216-0118/0131			ENG. NO: A-70216-0235/0248		
DIM. C		(6.10)/.240	DIM. C		(8.13)/.320	DIM. C		(6.10)/.240
DIM. E (REF.)		(2.79)/.110	DIM. E (REF.)		(2.79)/.110	DIM. E (REF.)		(2.79)/.110
FINISH		TIN	FINISH		TIN	FINISH		15 GOLD
CONNECTOR END PLATING		TIN	CONNECTOR END PLATING		TIN	CONNECTOR END PLATING		GOLD
DIM. D (MEASURE PT.)		(2.54)/.100	DIM. D (MEASURE PT.)		(4.57)/.180	DIM. D (MEASURE PT.)		(2.54)/.100
P.C. BOARD END PLATING		TIN	P.C. BOARD END PLATING		TIN	P.C. BOARD END PLATING		TIN
DIM. F (MEASURE PT.)		(1.27)/.050	DIM. F (MEASURE PT.)		(1.27)/.050	DIM. F (MEASURE PT.)		(1.27)/.050
PACKAGING		SEE NOTE 4 ON SHT. 1	PACKAGING		SEE NOTE 4 ON SHT. 1	PACKAGING		SEE NOTE 4 ON SHT. 1
CKTS	EDP NUMBER	ENG. NUMBER	CKTS	EDP NUMBER	ENG. NUMBER	CKTS	EDP NUMBER	ENG. NUMBER
04	10-88-3041	A-70216-0079	04	10-88-3042	A-70216-0118	04	10-89-4042	A-70216-0235
06	10-88-3061	A-70216-0080	06	10-88-3062	A-70216-0119	06	10-89-4062	A-70216-0236
08	10-88-3081	A-70216-0081	08	10-88-3082	A-70216-0120	08	10-89-4082	A-70216-0237
10	10-88-3101	A-70216-0082	10	10-88-3102	A-70216-0121	10	10-89-4102	A-70216-0238
12	10-88-3121	A-70216-0083	12	10-88-3122	A-70216-0122	12	10-89-4122	A-70216-0239
14	10-88-3141	A-70216-0084	14	10-88-3142	A-70216-0123	14	10-89-4142	A-70216-0240
16	10-88-3161	A-70216-0085	16	10-88-3162	A-70216-0124	16	10-89-4162	A-70216-0241
18	10-88-3181	A-70216-0086	18	10-88-3182	A-70216-0125	18	10-89-4182	A-70216-0242
20	10-88-3201	A-70216-0087	20	10-88-3202	A-70216-0126	20	10-89-4202	A-70216-0243
22	10-88-3221	A-70216-0088	22	10-88-3222	A-70216-0127	22	10-89-4222	A-70216-0244
24	10-88-3241	A-70216-0089	24	10-88-3242	A-70216-0128	24	10-89-4242	A-70216-0245
26	10-88-3261	A-70216-0090	26	10-88-3262	A-70216-0129	26	10-89-4262	A-70216-0246
28	10-88-3281	A-70216-0091	28	10-88-3282	A-70216-0130	28	10-89-4282	A-70216-0247
30	10-88-3301	A-70216-0092	30	10-88-3302	A-70216-0131	30	10-89-4302	A-70216-0248

A	REV:	ECR/ECN INFORMATION	TITLE:	RT. ANG. WAFER ASS'Y 2.54/.100 GRID, DUAL ROW BREAKAWAY 0.64/.025 PINS	SHEET No.		
		EC No: UCP2007-0449			- 2 -		
		DATE: 2006-08-22					
DOCUMENT NUMBER:		CREATED / REVISED BY:		CHECKED BY:		APPROVED BY:	
SD-70216-001		PRIDDER		ADERR		FSMITH	

ENG. NO: A-70216-0274/0287			ENG. NO: A-70216-0391/0404			ENG. NO: A-70216-0430/0443		
DIM. C		(8.13)/.320	DIM. C		(6.10)/.240	DIM. C		(8.13)/.320
DIM. E (REF.)		(2.79)/.110	DIM. E (REF.)		(2.79)/.110	DIM. E (REF.)		(2.79)/.110
FINISH		15 GOLD	FINISH		30 GOLD	FINISH		30 GOLD
CONNECTOR END PLATING		GOLD	CONNECTOR END PLATING		GOLD	CONNECTOR END PLATING		GOLD
DIM. D (MEASURE PT.)		(4.57)/.180	DIM. D (MEASURE PT.)		(2.54)/.100	DIM. D (MEASURE PT.)		(4.57)/.180
P.C. BOARD END PLATING		TIN	P.C. BOARD END PLATING		TIN	P.C. BOARD END PLATING		TIN
DIM. F (MEASURE PT.)		(1.27)/.050	DIM. F (MEASURE PT.)		(1.27)/.050	DIM. F (MEASURE PT.)		(1.27)/.050
PACKAGING		SEE NOTE 4 ON SHT. 1	PACKAGING		SEE NOTE 4 ON SHT. 1	PACKAGING		SEE NOTE 4 ON SHT. 1
CKTS	EDP NUMBER	ENG. NUMBER	CKTS	EDP NUMBER	ENG. NUMBER	CKTS	EDP NUMBER	ENG. NUMBER
04	10-89-4043	A-70216-0274	04	10-89-4046	A-70216-0391	04	10-89-4047	A-70216-0430
06	10-89-4063	A-70216-0275	06	10-89-4066	A-70216-0392	06	10-89-4067	A-70216-0431
08	10-89-4083	A-70216-0276	08	10-89-4086	A-70216-0393	08	10-89-4087	A-70216-0432
10	10-89-4103	A-70216-0277	10	10-89-4106	A-70216-0394	10	10-89-4107	A-70216-0433
12	10-89-4123	A-70216-0278	12	10-89-4126	A-70216-0395	12	10-89-4127	A-70216-0434
14	10-89-4143	A-70216-0279	14	10-89-4146	A-70216-0396	14	10-89-4147	A-70216-0435
16	10-89-4163	A-70216-0280	16	10-89-4166	A-70216-0397	16	10-89-4167	A-70216-0436
18	10-89-4183	A-70216-0281	18	10-89-4186	A-70216-0398	18	10-89-4187	A-70216-0437
20	10-89-4203	A-70216-0282	20	10-89-4206	A-70216-0399	20	10-89-4207	A-70216-0438
22	10-89-4223	A-70216-0283	22	10-89-4226	A-70216-0400	22	10-89-4227	A-70216-0439
24	10-89-4243	A-70216-0284	24	10-89-4246	A-70216-0401	24	10-89-4247	A-70216-0440
26	10-89-4263	A-70216-0285	26	10-89-4266	A-70216-0402	26	10-89-4267	A-70216-0441
28	10-89-4283	A-70216-0286	28	10-89-4286	A-70216-0403	28	10-89-4287	A-70216-0442
30	10-89-4303	A-70216-0287	30	10-89-4306	A-70216-0404	30	10-89-4307	A-70216-0443

A	REV:	ECR/ECN INFORMATION	TITLE:	RT. ANG. WAFER ASS'Y 2.54/.100 GRID, DUAL ROW BREAKAWAY 0.64/.025 PINS	SHEET No.
		EC No: UCP2007-0449			- 3 -
		DATE: 2006-08-22			
DOCUMENT NUMBER:		CREATED / REVISED BY:	CHECKED BY:	APPROVED BY:	
SD-70216-001		PRIDDER	ADERR	FSMITH	