

PLEASE CHECK WWW.MOLEX.COM FOR LATEST PART INFORMATION

Part Number: [0908791254](#)
Status: **Active**
Overview: [rast 5 connector system](#)
Description: 5.00mm (.197") Pitch Appli-Mate RAST 5 Header, Right Angle, Male, Natural, Unblocked Position Key: 1B, Unblocked Coding Keys: 01C & D20, Latch Position 1/2, 3 Circuits

Documents:

3D Model	Product Specification PS-99020-0037 (PDF)
Drawing (PDF)	RoHS Certificate of Compliance (PDF)
Packaging Specification (PDF)	

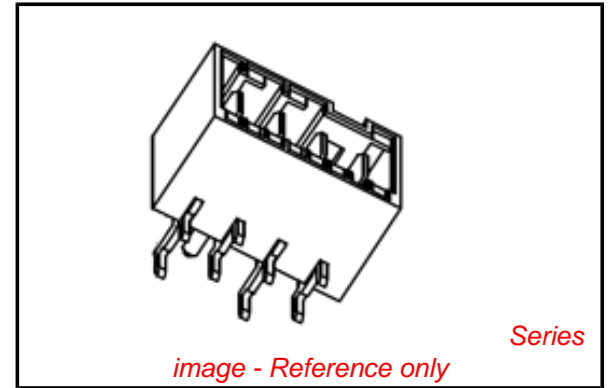


image - Reference only

Agency Certification

CSA	LR19980
UL	E29179

General

Product Family	PCB Headers
Series	90879
Application	Wire-to-Board
Comments	Male Indirect Receptacle Reference K01
Overview	rast 5 connector system
Product Name	RAST 5

Physical

Breakaway	No
Circuits (Loaded)	4
Circuits (maximum)	4
Color - Resin	Natural
Durability (mating cycles max)	10
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	Yes
Material - Metal	Brass
Material - Plating Mating	Tin
Material - Plating Termination	Tin
Material - Resin	Polyester
Number of Rows	1
Orientation	Right Angle
PC Tail Length (in)	0.016 In
PC Tail Length (mm)	0.40 mm
PCB Locator	Yes
PCB Retention	None
PCB Thickness Recommended (in)	0.055 In
PCB Thickness Recommended (mm)	1.40 mm
Packaging Type	Bag
Pitch - Mating Interface (in)	0.197 In
Pitch - Mating Interface (mm)	5.00 mm
Pitch - Term. Interface (in)	0.197 In
Pitch - Term. Interface (mm)	5.00 mm
Polarized to Mating Part	Yes
Polarized to PCB	Yes
Shrouded	Fully

EU RoHS

ELV and RoHS Compliant
REACH SVHC Contains SVHC: No
Halogen-Free Status

China RoHS



Need more information on product environmental compliance?

Email 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

[90879Series](#)

Mates With

[91338](#) Appli-Mate Female Connector. Appli-Mate 5.0 IDT Connector System Female Receptacle [90833](#) , [90835](#). Appli-Mate RAST 5 IDT Housing [91777](#) , [91778](#)

Stackable	Yes
Surface Mount Compatible (SMC)	No
Temperature Range - Operating	-20°C to +85°C
Termination Interface: Style	Through Hole

Electrical

Current - Maximum per Contact	16A
Voltage - Maximum	250V AC

Solder Process Data

Duration at Max. Process Temperature (seconds)	10
Lead-free Process Capability	Wave Capable (TH only)
Process Temperature max. C	260

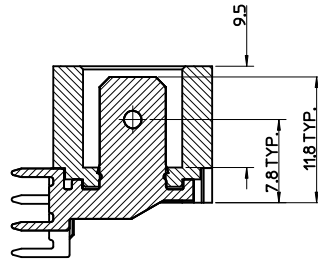
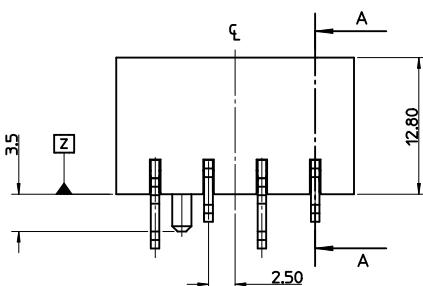
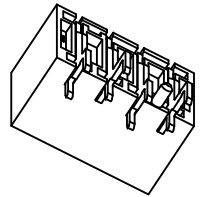
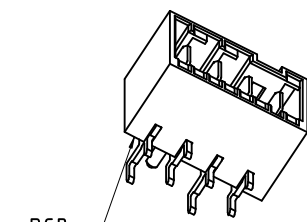
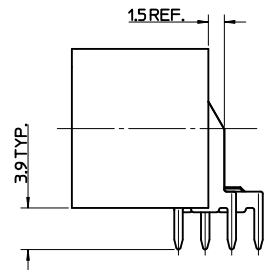
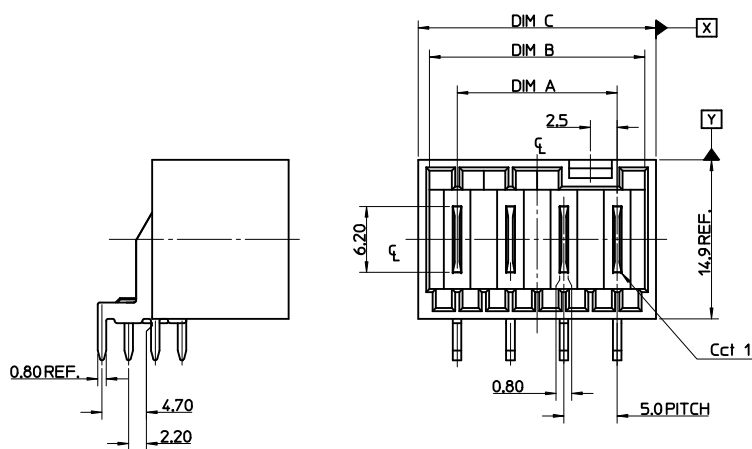
Material Info

Reference - Drawing Numbers

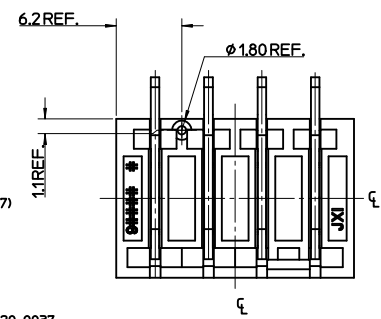
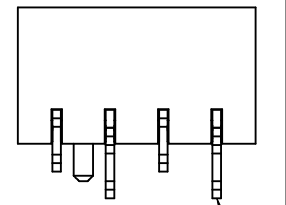
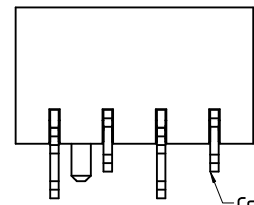
Packaging Specification	PK-90858-001
Product Specification	PS-99020-0037
Sales Drawing	SD-90879-001

This document was generated on 05/26/2010

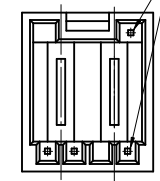
PLEASE CHECK WWW.MOLEX.COM FOR LATEST PART INFORMATION



A-A
Scale 3:1



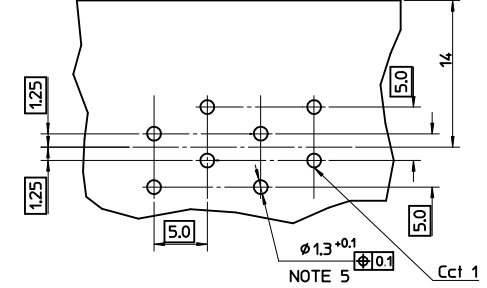
HOLES ON SOME
TOOLED VERSIONS



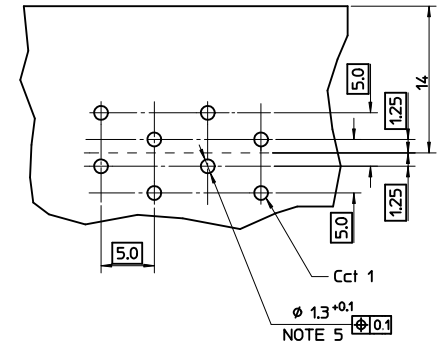
CCT	DIM A	DIM B	DIM C	TOL
2	5.00	10.20	12.30	
3	10.00	15.20	17.30	
4	15.00	20.20	22.30	
5	20.00	25.20	27.30	
6	25.00	30.20	32.30	
7	30.00	35.20	37.30	+/-0.30
8	35.00	40.20	42.30	
9	40.00	45.20	47.30	
10	45.00	50.20	52.30	
11	50.00	55.20	57.30	
12	55.00	60.20	62.30	

RECOMMENDED PCB LAYOUT

P.C.B. POLARISATION OPTION 'A'



P.C.B. POLARISATION OPTION 'B'
(FOR REVERSE FOOTPRINT)



- NOTES:
- MATERIAL:
HOUSING: 30% GLASS-FILLED PBT, UL94 V-0
TERMINAL: BRASS 0.80REF. THICK
PLATING: OPTIONAL (SEE CHARTS SHEETS 2-7)
54µm TIN OVER
2.54µm NICKEL ALLOVER
SELECTIVE SILVER
21µm SILVER OVER
2.54µm NICKEL ALLOVER
 - PRODUCT CONFORMS TO SPECIFICATION PS-99020-0037
 - MATES WITH MOLEX 91338, 90833, 90835, 91777, 91778 & 91779
 - PARTS PACKAGED LOOSE IN PLASTIC BAGS
 - PLATED THRU HOLE
 - RECOMMENDED PCB THICKNESS: 1.4±0.1mm.
 - PCB VIEW IS FROM SOLDER SIDE

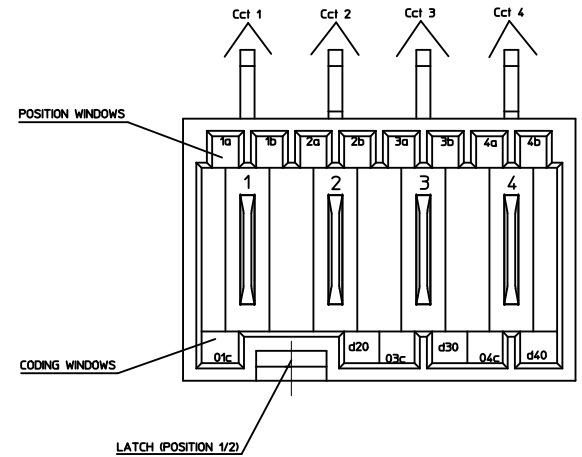
MOULD TOOLING CHANGE EC NO: E2010-0370 DRWN: BRUTTLE 2010/07/24 CHKD: DENNEHY 2004/05/23 APPR: BMAGUIRE 2010/06/08	QUALITY SYMBOLS ▽=0 ▽=0	GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE MM ONLY	SCALE 1:1	DESIGN UNITS METRIC	THIRD ANGLE PROJECTION
		4 PLACES ± --- ± --- 3 PLACES ± --- ± --- 2 PLACES ± 0.1 ± --- 1 PLACE ± 0.2 ± --- ANGULAR ± 2 °	DRAWN BY NMCNAMAR DATE 2004/05/22	CHECKED BY JDENNEHY DATE 2004/05/23	APPROVED BY BMAGUIRE DATE 2004/05/27	TITLE RAST 5 R.A. HDR	
MATERIAL NO. SEE SHEETS 2 TO 7	DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS		MATERIAL NO. SEE SHEETS 2 TO 7		DOCUMENT NO. SD-90879-001		SHEET NO. 1 OF 5
THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION							

2 CIRCUIT

SEE CODE DESIGNATION TABLE FOR NUMBERING
FORMAT WHEN ADDING NEW PART NUMBERS

P.C.B.
POLARISATION
OPTION.

PART NO. (TIN)	COLOUR	UNBLOCKED POSITION KEYS	UNBLOCKED CODING KEYS	LATCH POSITION	CONFIGURATION (SEE NOTES)	REF	PART NO. (SILVER)	P.C.B. POLARISATION OPTION.
90879-0003	NATURAL	1b 2a	01c d20	1/2		K01	90879-0499	A
90879-0046	NATURAL	1a 2b	01c	1/2		K02	90879-0498	A
90879-0026	NATURAL	1b 2b	01c	1/2		K09	90879-0488	A
90879-0018	NATURAL	2a	01c, d20	1/2		K03	90879-0495	A
90879-0021	NATURAL	1b	01c, d20	1/2		K16	90879-0492	A
90879-0022	NATURAL	1a 2b	NONE	1/2		K06	90879-0491	A
90879-0019	NATURAL	1a 2b	d20	1/2		K05	90879-0478	A
90879-0058	NATURAL	2b	NONE	1/2		K11	90879-0476	A
90879-0029	NATURAL	1a 1b	d20	1/2		K13	90879-0486	A
90879-0030	NATURAL	2a 2b	NONE	1/2		K31	90879-0485	A
90879-0059	NATURAL	2b	d20	1/2		K38	90879-0475	A
90879-0060	NATURAL	1a 2a	01c d20	1/2		K44	90879-0474	A
90879-0061	NATURAL	1a 1b	NONE	1/2		K40	90879-0473	A
90879-0020	NATURAL	1a 1b	01c	1/2		K04	90879-0493	A
90879-0062	NATURAL	2b	01c d20	1/2		K15	90879-0472	A
90879-0057	NATURAL	1a	01c d20	1/2		K12	90879-0477	A
90879-0009	NATURAL	1a 2a	01c	1/2		K10	90879-0496	A
90879-0049	NATURAL	ALL	d20	1/2		K34	90879-0481	A
90879-0056	NATURAL	1b 2a 2b	d20	1/2		K07	90879-0479	A
90879-0063	NATURAL	1b 2a	01c d20	1/2		K01	90879-0471	B
90879-0064	NATURAL	2a	01c	1/2		k42	90879-0470	A



KEYING, CODING & LATCH POSITION
(4CCT EXAMPLE SHOWN)
VIEW INMATING DIRECTION

SEE SHEET 1 EC NO: DRWNBUTTLE 2010/02/24 CHKD: JDENNEY2004/05/23 APPR: BMAGUIRE 2010/06/08	QUALITY SYMBOLS	GENERAL TOLERANCES (UNLESS SPECIFIED)	SCALE 1:1	DESIGN UNITS METRIC	THIRD ANGLE PROJECTION	REVISE ON CAD ONLY
	▽ - 0	4 PLACES ± --- ± ---	mm INCH	DIMENSION STYLE MM ONLY	TITLE RAST 5 R.A. HDR	
	▽ - 0	3 PLACES ± --- ± ---		DRAWN BY DATE		
		2 PLACES ± 0.1 ± ---		NMCNAMAR 2004/05/22		
	1 PLACE ± 0.2 ± ---		CHECKED BY DATE			
	ANGULAR ± 2 °		JDENNEY 2004/05/23			
DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS			APPROVED BY DATE	MATERIAL NO. DOCUMENT NO. SHEET NO.		
			BMAGUIRE 2004/05/27	SEE CHART SD-90879-001 2 OF 5		
THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION						

3 CIRCUIT		SEE CODE DESIGNATION TABLE FOR NUMBERING FORMAT WHEN ADDING NEW PART NUMBERS						P.C.B. POLARISATION OPTION
PART NO. (TIN)	COLOUR	UNBLOCKED POSITION KEYS	UNBLOCKED CODING KEYS	LATCH POSITION	CONFIGURATION (SEE NOTES)	REF	PART NO. (SILVER)	
90879-0502	NATURAL	1b	01c, d20	1/2		K01	90879-1249	A
90879-0508	NATURAL	1a	03c	1/2		K04	90879-1248	A
90879-0528	NATURAL	1a 1b	d30	1/2		K05	90879-1247	A
90879-0512	NATURAL	1a 3b	01c	1/2		K06	90879-1246	A
90879-0513	NATURAL	1b	d20 03c	1/2		K09	90879-1245	A
90879-0529	NATURAL	1b 2a 2b	d30	1/2		K33	90879-1244	A
90879-0530	NATURAL	2b	d20	1/2		K56	90879-1243	A
90879-0526	NATURAL	ALL	d10 d30	2/3		K38	90879-1242	A
90879-0527	NATURAL	ALL	d20	1/2		K40	90879-1241	A
90879-0531	NATURAL	2b, 3a	d10, d30	2/3		K---	90879-1240	A
90879-0532	NATURAL	2b, 3b	d10, 02c	2/3		K---	90879-1239	A
90879-0533	NATURAL	1b	01c, d20	1/2		K01	90879-1238	B
90879-0534	NATURAL	1b, 2a, 2b, 3b,	NONE	2/3		K---	90879-1237	B

4 CIRCUIT		SEE CODE DESIGNATION TABLE FOR NUMBERING FORMAT WHEN ADDING NEW PART NUMBERS						P.C.B. POLARISATION OPTION
PART NO. (TIN)	COLOUR	UNBLOCKED POSITION KEYS	UNBLOCKED CODING KEYS	LATCH POSITION	CONFIGURATION (SEE NOTES)	REF	PART NO. (SILVER)	
90879-1254	NATURAL	1b	03c d40	1/2 3/4		K01	90879-1999	A
90879-1264	NATURAL	1a 4b	d40	1/2 3/4		K03	90879-1997	A
90879-1265	NATURAL	2a 4b	d20	1/2 3/4		K07	90879-1996	A
90879-1267	NATURAL	1b 2a 3a 4b	01c d40	1/2 3/4		K37	90879-1994	A
90879-1278	NATURAL	1a 2b 4b	01c 03c d40	1/2 3/4		K44	90879-1988	A
90879-1279	NATURAL	1a 3a 3b	01c d20 d40	1/2 3/4		K32	90879-1987	A
90879-1280	NATURAL	1b 2a 4b	01c d20 03c	1/2 3/4		K61	90879-1986	A
90879-1281	NATURAL	1a 3a	d40	1/2 3/4		K06	90879-1985	A
90879-1282	NATURAL	1a 2b 3b 4a	01c 03c d40	1/2 3/4		K65	90879-1984	A
90879-1266	NATURAL	2a 4b	d20 03c	1/2 3/4		K30	90879-1995	A
90879-1276	NATURAL	3b	d30	2/3		K04	90879-1989	A
90879-1283	NATURAL	1b, 2a, 3a, 4b	d20, d40	1/2, 3/4		K109	90879-1983	A
90879-1284	NATURAL	ALL	ALL	1/2, 3/4		---	90879-1982	A

SEE SHEET 1 EC NO: DRWINBRUTTLE 2010/02/24 CHKD: JDENNEHY2004/05/23 APPR: BMAGUIRE 2010/06/08	QUALITY SYMBOLS ▽ 0 ▽ 0	GENERAL TOLERANCES (UNLESS SPECIFIED)		SCALE 1:1	DESIGN UNITS METRIC	THIRD ANGLE PROJECTION	REVISE ON CAD ONLY
				DIMENSION STYLE MM ONLY		TITLE RAST 5 R.A. HDR	
		4 PLACES ± --- ± ---		DRAWN BY DATE NMCNAMAR 2004/05/22		MATERIAL NO. DOCUMENT NO.	
		3 PLACES ± --- ± ---		CHECKED BY DATE JDENNEHY 2004/05/23		SHEET NO. 3 OF 5	
2 PLACES ± 0.1 ± ---		APPROVED BY DATE BMAGUIRE 2004/05/27		MOLEX INCORPORATED		THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION	
1 PLACE ± 0.2 ± ---		ANGULAR ± 2 °		MUST REMAIN WITHIN DIMENSIONS		A1	

5 CIRCUIT		SEE CODE DESIGNATION TABLE FOR NUMBERING FORMAT WHEN ADDING NEW PART NUMBERS						P.C.B. POLARISATION OPTION
PART NO. (TIN)	COLOUR	UNBLOCKED POSITION KEYS	UNBLOCKED CODING KEYS	LATCH POSITION	CONFIGURATION (SEE NOTES)	REF	PART NO. (SILVER)	
90879-2000	NATURAL	1a 5b	01c d30	1/2 2/3		K01	90879-2749	A
90879-2001	NATURAL	1a 3a	01c d30	1/2 4/5		K30	90879-2748	A
90879-2002	NATURAL	1a 5b	01c d20 03c d50	1/2 3/4		K31	90879-2747	A
90879-2003	NATURAL	1b 2a 3b 5a	01c 03c	1/2 3/4		K35	90879-2746	A
90879-2023	NATURAL	1a 2a 2b 4b 5b	01c d30 04c d50	1/2 2/3 4/5		K36	90879-2732	A
90879-2024	NATURAL	2a	01c d50	2/3 4/5		K43	90879-2731	A
90879-2025	NATURAL	2a 4b	01c d20 d40	1/2 3/4		K44	90879-2730	A
90879-2026	NATURAL	2b	d20	1/2 4/5		K02	90879-2729	A
90879-2027	NATURAL	4b 5a	01c d30 04c d50	1/2 4/5		K45	90879-2728	A
90879-2028	NATURAL	NONE	01c d40	1/2 3/4		K46	90879-2727	A
90879-2029	NATURAL	1a 4b	d30	1/2 4/5		K04	90879-2726	A
90879-2030	NATURAL	1a 5b	d20 d40	1/2 3/4		K77	90879-2725	A
90879-2005	NATURAL	1b 2b 4a	d20 d30 d50	1/2 4/5		K40	90879-2744	A
90879-2016	NATURAL	3b 4a 5b	01c d30 d50	2/3 4/5		k47	90879-2738	A
90879-2018	NATURAL	1a 4b	01c	1/2 3/4		K48	90879-2736	A
90879-2020	NATURAL	1a 5b	d30 04c	2/3		K50	90879-2734	A
90879-2021	NATURAL	1b 2a 4a	01c 04c d50	1/2 4/5		K51	90879-2733	A
90879-2022	NATURAL	2b 3b 4a	01c d20 d40	1/2 3/4		K52	90879-2735	A

6 CIRCUIT		SEE CODE DESIGNATION TABLE FOR NUMBERING FORMAT WHEN ADDING NEW PART NUMBERS						P.C.B. POLARISATION OPTION
PART NO. (TIN)	COLOUR	UNBLOCKED POSITION KEYS	UNBLOCKED CODING KEYS	LATCH POSITION	CONFIGURATION (SEE NOTES)	REF	PART NO. (SILVER)	
90879-2753	NATURAL	1b	03c d60	1/2 4/5		K01	90879-3499	A
90879-2754	NATURAL	1a 3b 4b	01c d50 06c	1/2 4/5		K30	90879-3498	A
90879-2755	NATURAL	1a 1b 2b 3a 3b 4b	d30 04c d50	1/2 2/3 4/5		K37	90879-3497	A
90879-2756	NATURAL	1a 1b 4a 4b	d10 d50	2/3 4/5		K39	90879-3496	A
90879-2757	NATURAL	2a 4b 5a 6b	d20 03c 05c	1/2 3/4 5/6		K42	90879-3495	A
90879-2758	NATURAL	1a 2b 3a 3b 5b 6b	01c d40 d60	1/2 3/4 5/6		K43	90879-3494	A
90879-2759	NATURAL	1b 2a 3a 4b 5a 5b 6b	01c 03c d60	1/2 3/4 5/6		K44	90879-3493	A
90879-2760	NATURAL	2b	d20 d60	1/2 5/6		K46	90879-3492	A
90879-2761	NATURAL	2b 3b 4a	01c d50 06c	1/2 4/5		K36	90879-3491	A
90879-2762	NATURAL	1b 4b	d20 03c d50 06c	1/2 4/5		K58	90879-3486	A
90879-2764	NATURAL	1a 2b 3b 4a 6b	01c 03c d40 05c d60	1/2 3/4 5/6		K59	90879-3485	A
90879-2765	NATURAL	1a 2b 4a 6b	01c d40	1/2 3/4 5/6		K62	90879-3484	A
90879-2763	NATURAL	1b 2b 3b	01c 05c d60	1/2 3/4 5/6		K51	90879-3490	A
90879-2766	NATURAL	1b	d20 03c	1/2 4/5		K55	90879-3489	A
90879-2767	NATURAL	1b 2a 3a 5a 5b	01c d20 03c d40 d60	1/2 3/4 5/6		K56	90879-3488	A
90879-2771	NATURAL	1a 3a 3b 5b 6a	01c d20 240 05c d60	1/2 3/4 5/6		K60	90879-3487	A

SEE SHEET 1	EC NO: 2010/02/24	QUALITY SYMBOLS	GENERAL TOLERANCES (UNLESS SPECIFIED)	SCALE 1:1	DESIGN UNITS METRIC	THIRD ANGLE PROJECTION	REVISE ON CAD ONLY	
	DRW: BRUTTLE 2010/05/23	▽ -0	mm INCH	DIMENSION STYLE		TITLE		
	CHK: JDENNEHY 2004/05/23	▽ -0	4 PLACES ± --- ± ---	MM ONLY		RAST 5 R.A. HDR		
	APP: BMAGUIRE 2010/06/08		3 PLACES ± --- ± ---	DRAWN BY DATE		MATERIAL NO. DOCUMENT NO. SHEET NO.		
			2 PLACES ± 0.1 ± ---	NMCNAMAR 2004/05/22		SEE CHART SD-90879-001 4 OF 5		
			1 PLACE ± 0.2 ± ---	CHECKED BY DATE		MATERIAL NO. DOCUMENT NO. SHEET NO.		
			ANGULAR ± 2 °	JDENNEHY 2004/05/23		MATERIAL NO. DOCUMENT NO. SHEET NO.		
			DRAFT WHERE APPLICABLE	APPROVED BY DATE		MATERIAL NO. DOCUMENT NO. SHEET NO.		
			MUST REMAIN WITHIN DIMENSIONS	BMAGUIRE 2004/05/27		MATERIAL NO. DOCUMENT NO. SHEET NO.		
				THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION				A1

7 CIRCUIT		SEE CODE DESIGNATION TABLE FOR NUMBERING FORMAT WHEN ADDING NEW PART NUMBERS					P.C.B. POLARISATION OPTION	
PART NO. (TIN)	COLOUR	UNBLOCKED POSITION KEYS	UNBLOCKED CODING KEYS	LATCH POSITION	CONFIGURATION (SEE NOTES)	REF	PART NO. (SILVER)	
90879-3500	NATURAL	NONE	03c d40 07c	1/2 5/6		K01	90879-4220	A
90879-3512	NATURAL	3a 4a	d30 d70	1/2 5/6		K30	90879-4248	A
90879-3504	NATURAL	2b	d20 d60	1/2 5/6		K32	90879-4247	A
90879-3513	NATURAL	1a 1b 3a 4b 5a	01c 07c	1/2 3/4 5/6		K40	90879-4240	A
90879-3514	NATURAL	2a	01c d50	2/3 4/5		K41	90879-4239	A
90879-3515	NATURAL	7b	01c d40 d70	1/2 3/4 6/7		K43	90879-4238	A
90879-3516	NATURAL	1b	03c d60	1/2 4/5		K31	90879-4237	A
90879-3517	NATURAL	1a 3a 4b 7b	01c d20 03c 06c	1/2 3/4 6/7		K45	90879-4236	A
90879-3518	NATURAL	1b 7a	02c d50	2/3 6/7		K48	90879-4235	A
90879-3519	NATURAL	1a 2b 3a 4b 6a	d20 03c d40 d50 d70	1/2 3/4 6/7		K51	90879-4234	A
90879-3520	NATURAL	1b 6a	d20 03c d50 d70	1/2 3/4 6/7		K69	90879-4233	A
90879-3505	NATURAL	1b 2a 5a 5b 7b	d20 d50 06c d70	1/2 4/5 6/7		K34	90879-4246	A
90879-3506	NATURAL	2b	d20 07c	1/2 3/4 5/6		K35	90879-4245	A
90879-3507	NATURAL	2a 2b 4b 5b 6a	d20 03c d40 d60	1/2 3/4 5/6		K38	90879-4244	A
90879-3510	NATURAL	2b 4a 4b 5b 6a	01c d20 d40 d60	1/2 3/4 5/6		K42	90879-4241	A

SEE SHEET 1 EC NO: DRW:BRUTTLE 2010/02/24 CHKD: JDENNEHY2004/05/23 APPR: BMAGUIRE 2010/06/08	QUALITY SYMBOLS	GENERAL TOLERANCES (UNLESS SPECIFIED)	SCALE 1:1	DESIGN UNITS METRIC	THIRD ANGLE PROJECTION	REVISE ON CAD ONLY
		mm	INCH	DIMENSION STYLE MM ONLY		TITLE RAST 5 R.A. HDR
		4 PLACES ± --- ± ---			DRAWN BY NMCNAMAR	
		3 PLACES ± --- ± ---			CHECKED BY JDENNEHY	DATE 2004/05/23
2 PLACES ± 0.1 ± ---				APPROVED BY BMAGUIRE DATE 2004/05/27		
	1 PLACE ± 0.2 ± ---			ANGULAR ± 2 °		THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION
				DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS		