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**Part Number:** [0877861002](#)  
**Status:** **Active**  
**Overview:**  
**Description:** 1.00mm (.039") Pitch iCool™ Low Profile VRM, Vertical, Surface Mount, with Latches, with Beveled Metal Pins, Signal 20, Power 72, 0.76µm(30µ")Gold (Au) Plating, Leadfree

**Agency Certification**

CSA	LR19980
UL	E29179

**General**

Product Family	Edge Card Connectors
Series	87786
Comments	Latches in Natural Color
Component Type	Edgecard to PCB
Overview	icool
Product Name	iCool™, VRM

**Physical**

Circuits (Loaded)	92
Circuits (maximum)	92
Circuits Detail	20 Signal, 72 Power
Color - Resin	Black, Natural
Durability (mating cycles max)	25
Entry Angle	Vertical (Top Entry)
Flammability	94V-0
Keying to Mating Part	Yes
Material - Metal	High Performance Alloy (HPA), Phosphor Bronze
Material - Plating Mating	Gold
Material - Plating Termination	Tin
Material - Resin	High Temperature Thermoplastic
PCB Locator	Yes
PCB Retention	Yes
Packaging Type	Tray
Pitch - Mating Interface (in)	0.039 In
Pitch - Mating Interface (mm)	1.00 mm
Plating min: Mating (µin)	30.4
Plating min: Mating (µm)	0.76
Plating min: Termination (µin)	152.4
Plating min: Termination (µm)	3.81
Polarized to Mating Part	Yes
Temperature Range - Operating	-10°C to +105°C
Termination Interface: Style	Surface Mount

**Electrical**

Current - Maximum per Contact	1A, 4A
Voltage - Maximum	48V

**Solder Process Data**

Duration at Max. Process Temperature (seconds)	5
Lead-free Process Capability	Reflow Capable (SMT only)
Max. Cycles at Max. Process Temperature	1
Process Temperature max. C	245

**Material Info**

**EU RoHS**  
**ELV and RoHS**  
**Compliant**  
**REACH SVHC**  
**Contains SVHC: No**  
**Halogen-Free**  
**Status**  
**Not Halogen-Free**

**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**  
[87786Series](#)

**Mates With**  
 Voltage Regulator Module

**Reference - Drawing Numbers**

Sales Drawing

SD-87786-001

This document was generated on 06/04/2010

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10 9 8 7 6 5 4 3 2 1

F

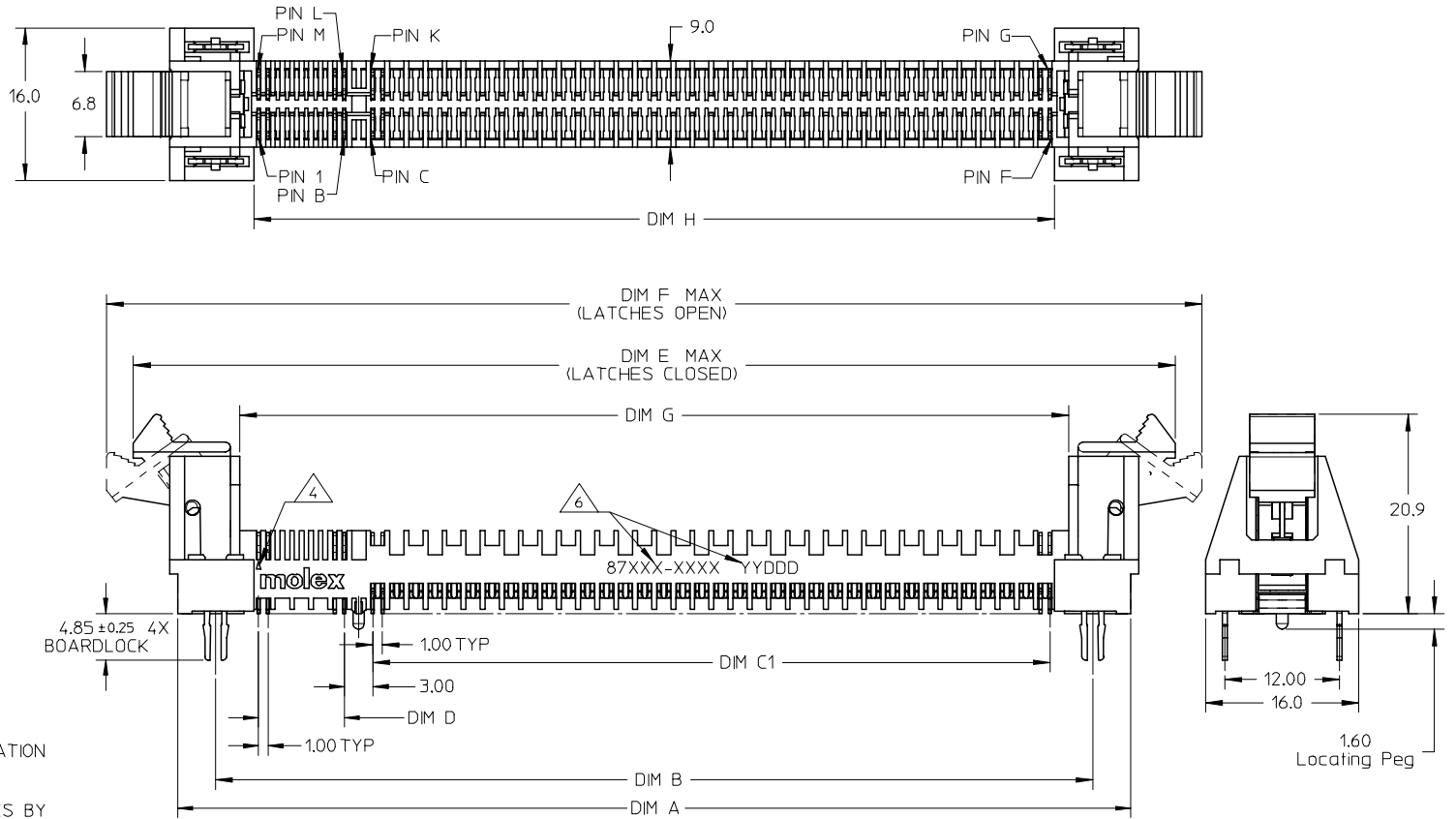
E

D

C

B

A



NOTES:

1. MATERIAL :  
HOUSING: LCP, GLASS FILLED,  
UL94V-0, COLOR: BLACK  
LATCHES: NYLON 46, GLASS FILLED,  
UL94V-0, COLOR: BEIGE  
CONTACTS, FORKLOCK & FITTING NAIL:  
COPPER ALLOY
2. FINISH:  
CONTACTS : 0.76um(30u") MIN GOLD OVER  
1.27um (50u") MIN NICKEL  
SMT TAIL : 3.81um (150u") MIN TIN OVER  
1.27um (50u") MIN NICKEL
3. THIS DRAWING IS BASED UPON PIN CONFIGURATION  
OF 20 SIGNALS AND 72 POWER PINS.  
a) THE OVERALL CONNECTOR LENGTH INCREASES BY  
1.00MM FOR EVERY ADDITIONAL 2 SIGNAL PINS.  
b) THE OVERALL CONNECTOR LENGTH INCREASES BY  
2.00MM FOR EVERY ADDITIONAL 2 POWER PINS.
4. MOLDED-PIN #1 INDICATOR
5. FORKLOCK IS TO BE SOLDERED ONTO PCB.
6. PART NUMBER AND DATE CODE (YYDD) TO BE  
LASER MARKED ONTO HOUSING.
7. UNLESS SPECIFIED OTHERWISE, ALL DIMENSIONS  
ARE FOR REFERENCE PURPOSES ONLY.
8. SPECIFICATIONS:  
PRODUCT SPECIFICATION: PS-87786-008.

OBS TIN/LEAD P/N	EC NO: S2006-0791	2006/03/30
	DRWN:MLONG	2006/03/30
	CHKD:CGOH	2006/03/30
	APPR:PTLIM	2006/03/30
REV	DESCRIPTION	

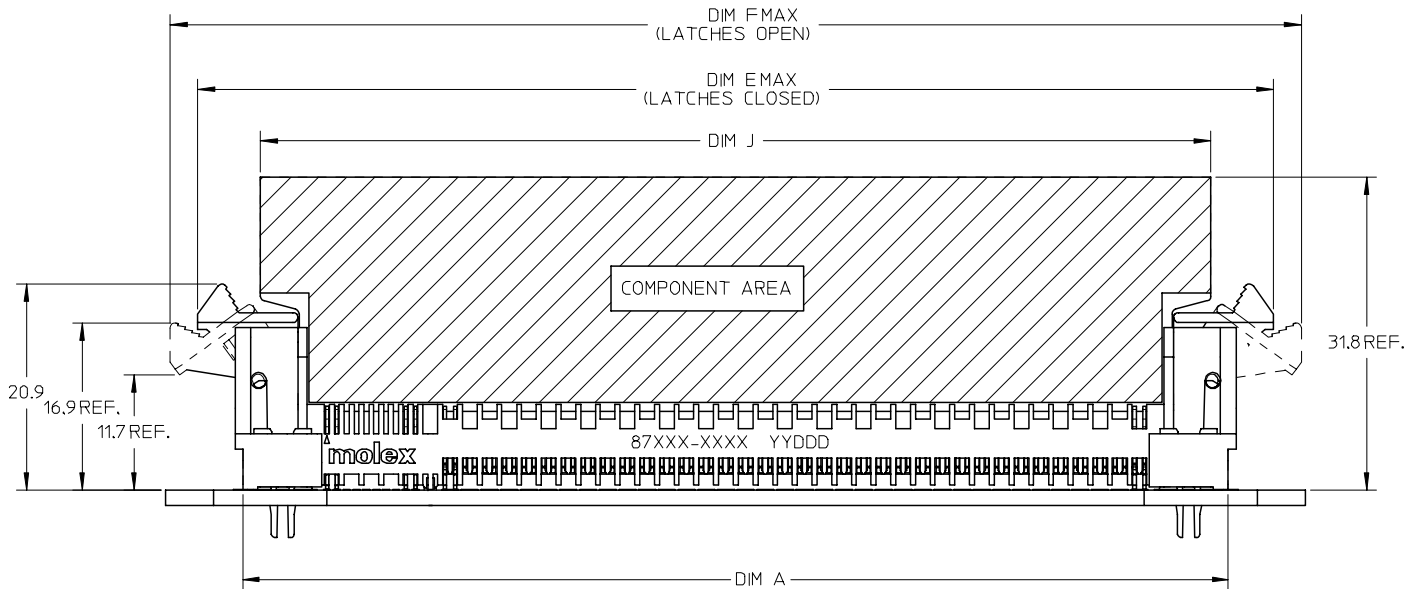
QUALITY SYMBOLS	=0
	=0

GENERAL TOLERANCES (UNLESS SPECIFIED)	mm	INCH
	4 PLACES ± ---	± ---
	3 PLACES ± ---	± ---
	2 PLACES ± 0.13	± ---
	1 PLACE ± 0.25	± ---
	ANGULAR ± 3 °	
DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS		

DIMENSION STYLE		SCALE	DESIGN UNITS	THIRD ANGLE PROJECTION
MM ONLY		NTS	METRIC	
DRAWN BY	DATE	TITLE	LOW PROFILE VRM SOCKET W/LATCH, SMT	
KMGOH	2003/02/25			
CHECKED BY	DATE			
BHLOW	2003/03/05			
APPROVED BY	DATE	MOLEX INCORPORATED		
PTLIM	2003/03/05			
MATERIAL NO.	DOCUMENT NO.	SHEET NO.		
	SD-87786-001	1 OF 4		

SIZE	THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION		
A3			

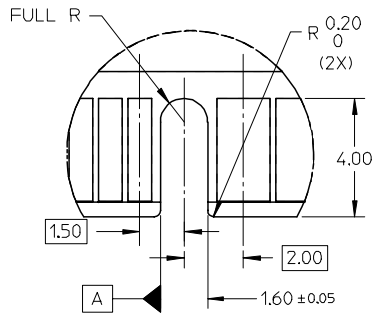
9 8 7 6 5 4 3 2 1



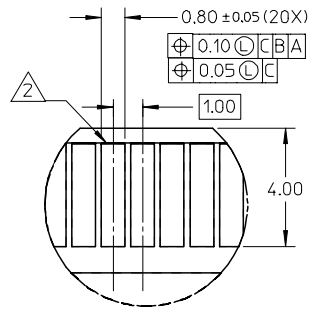
OBS TIN/LEAD P/N EC NO: S2006-0791 DRWN:MLONG CHKD:CGOH APPR:PTL IM	2006/03/30 2006/03/30 2006/03/30	QUALITY SYMBOLS ▽=0 ∇=0	GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE MM ONLY		SCALE NTS	DESIGN UNITS METRIC	THIRD ANGLE PROJECTION	
			mm	INCH	DRAWN BY KMG0H	DATE 2003/02/25	TITLE LOW PROFILE VRM SOCKET W/LATCH, SMT			
REV C	DESCRIPTION	DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS	4 PLACES	± ---	± ---	CHECKED BY BHLOW	DATE 2003/03/05	MOLEX INCORPORATED		SHEET NO. 2 OF 4
			3 PLACES	± ---	± ---	APPROVED BY PTL IM	DATE 2003/03/05	DOCUMENT NO. SD-87786-001		
			2 PLACES	± 0.13	± ---					
			1 PLACE	± 0.25	± ---					
			ANGULAR ± 3 °		SEE TABLE					

NOTES:

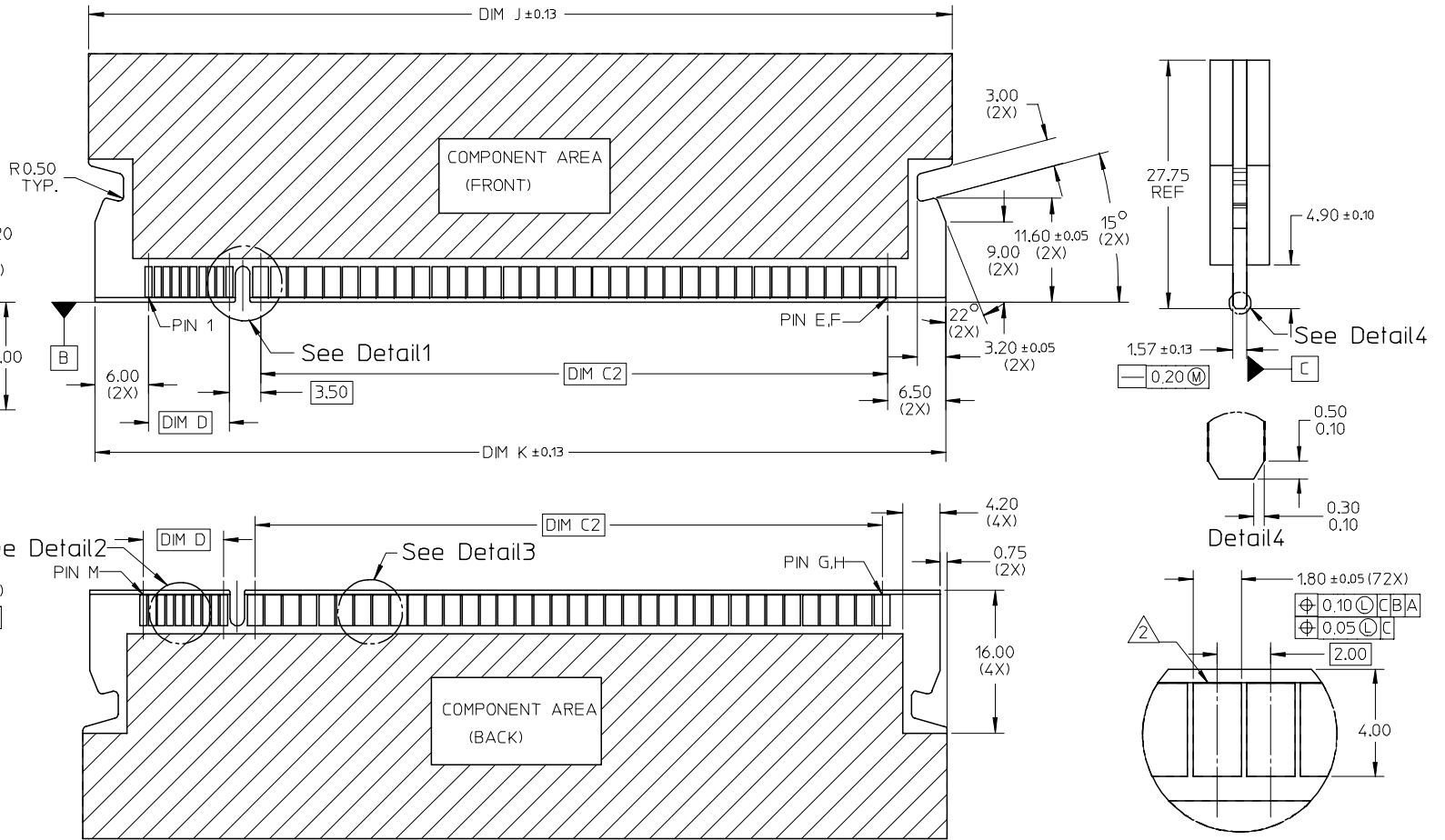
- 1. OPPOSING POWER PADS MUST BE OF THE SAME POLARITY.
- APPLICATION NOTE:  
EDGE OF CONTACT PADS SHALL BE FREE OF BURRS AND EXTERNAL TIE BARS.



Detail1



Detail2



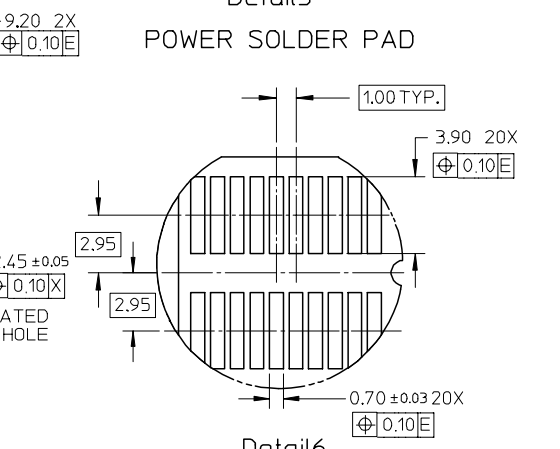
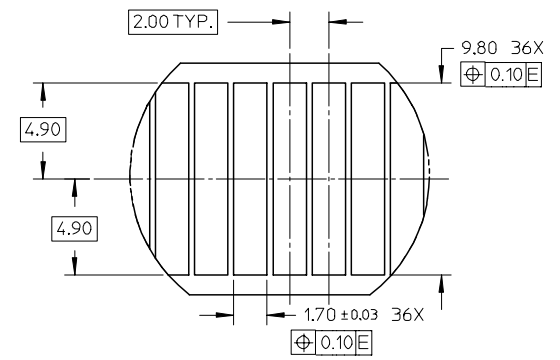
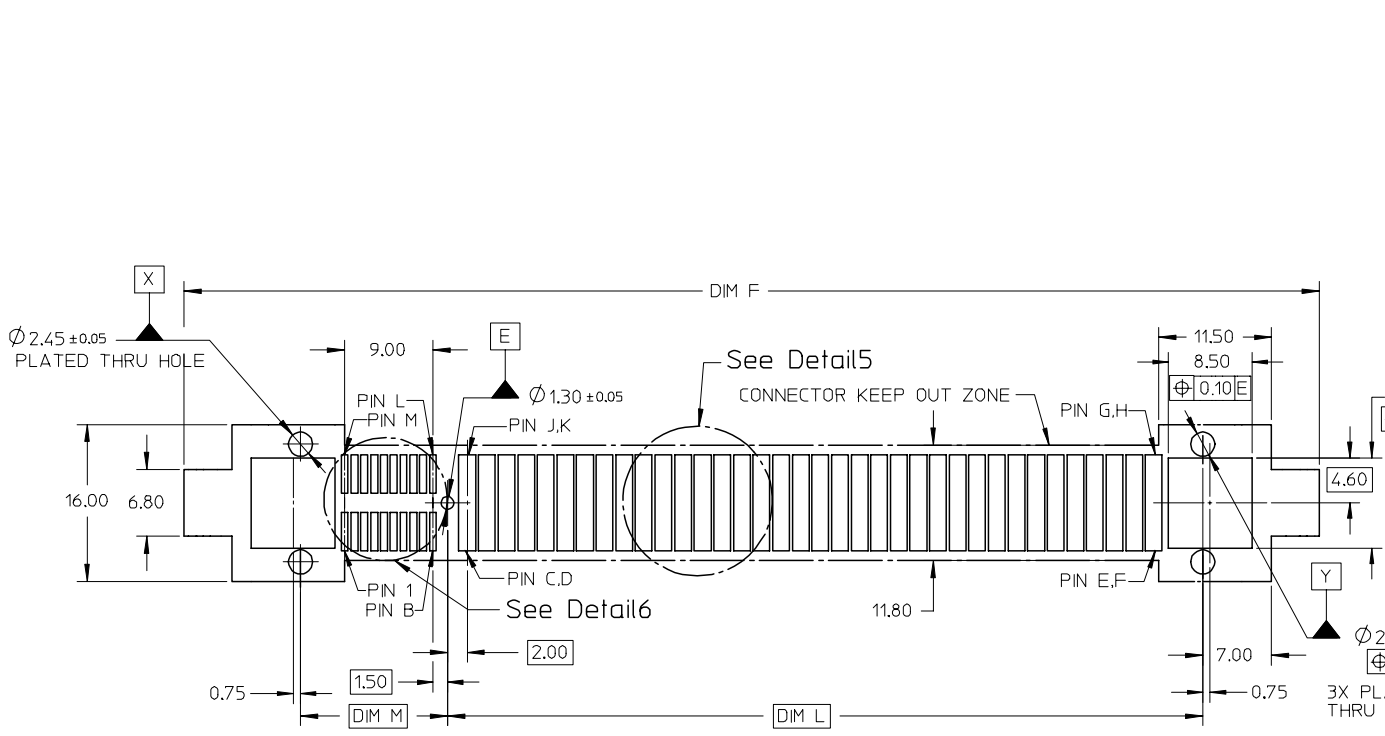
Detail3

Detail4

RECOMMENDED MODULE OUTLINE

OBS TIN/LEAD P/N EC NO: S2006-0791 DRWN:MLONG CHKD:CGOH APPR:PTLIM 2006/03/30 2006/03/30 2006/03/30	QUALITY SYMBOLS ▽=0 ◻=0	GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE MM ONLY		SCALE NTS	DESIGN UNITS METRIC	THIRD ANGLE PROJECTION			
		4 PLACES ± --- ± ---	3 PLACES ± --- ± ---	2 PLACES ± 0.13 ± ---	1 PLACE ± 0.25 ± ---	ANGULAR ± 3 °		DRAWN BY KMG0H	DATE 2003/02/25	TITLE LOW PROFILE VRM SOCKET W/LATCH, SMT	
		DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS		SEE TABLE		APPROVED BY PTLIM	DATE 2003/03/05	MOLEX INCORPORATED		SHEET NO. 3 OF 4	
		SIZE A3		THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION		MATERIAL NO.		DOCUMENT NO. SD-87786-001		MOLEX	

10	9	8	7	6	5	4	3	2	1																			
PART NUMBER	TYPE	SIGNAL	POWER	PLATING OPTION	DIM A	DIM B	DIM C1	DIM C2	DIM D	DIM E	DIM F	DIM G	DIM H	DIM J	DIM K	DIM L	DIM M	PIN NUMBER CONFIGURATION										
87786-1002	VRM10	20	72	TIN	100.00	92.00	71.00	70.00	9.00	110.50	116.80	87.00	84.00	96.50	95.00	77.00	15.00	B	C	D	E	F	G	H	J	K	L	M
87786-1011	VRM11	24	70	TIN	100.00	92.00	69.00	68.00	11.00	110.50	116.80	87.00	84.00	96.50	95.00	75.00	17.00	12	13	14	81	82	83	84	151	152	153	164



RECOMMENDED PCB LAYOUT

OBS TIN/LEAD P/N EC NO: S2006-0791 DRWN:MLNG 2006/03/30 CHKD:CGOH 2006/03/30 APPR:PTLIM 2006/03/30	QUALITY SYMBOLS ▽=0 ∇=0	GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE MM ONLY		SCALE NTS	DESIGN UNITS METRIC	THIRD ANGLE PROJECTION		
			mm	INCH	DRAWN BY KMG0H	DATE 2003/02/25	TITLE LOW PROFILE VRM SOCKET W/LATCH, SMT			
		4 PLACES	± ---	± ---	CHECKED BY BHL0W	DATE 2003/03/05				
		3 PLACES	± ---	± ---	APPROVED BY PTLIM	DATE 2003/03/05				
			1 PLACE	± 0.25	± ---	MATERIAL NO. SEE TABLE		DOCUMENT NO. SD-87786-001		SHEET NO. 4 OF 4
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								