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**Part Number:** [0877861011](#)  
**Status:** **Active**  
**Overview:**  
**Description:** 1.00mm (.039") Pitch iCool™ Low Profile VRM, Vertical, Surface Mount, with Latches, with Beveled Metal Pins, Signal 24, Power 70, 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) 94  
 Circuits (maximum) 94  
 Circuits Detail 24 Signal, 70 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

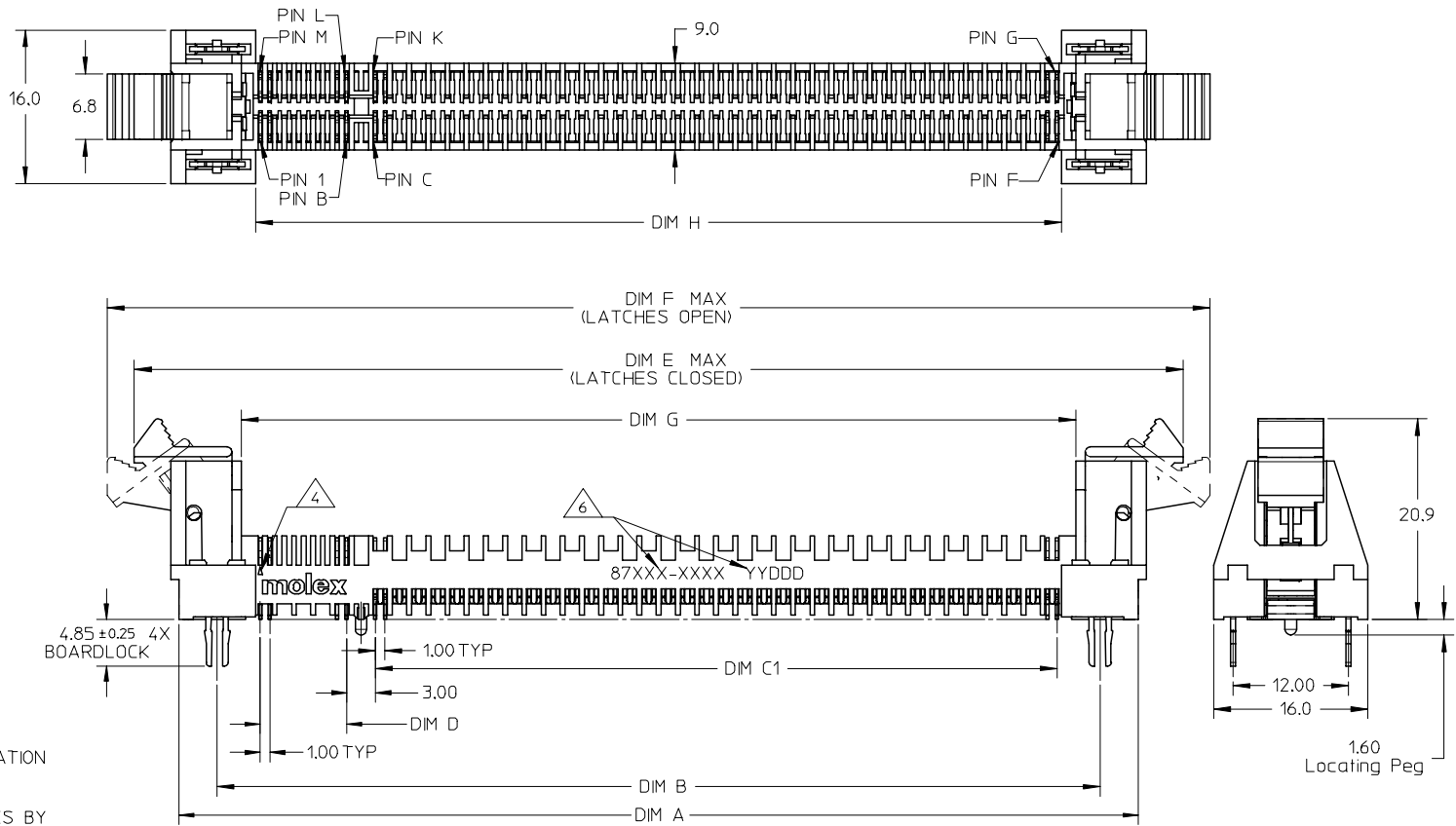
**Reference - Drawing Numbers**

Sales Drawing

SD-87786-001

This document was generated on 06/04/2010

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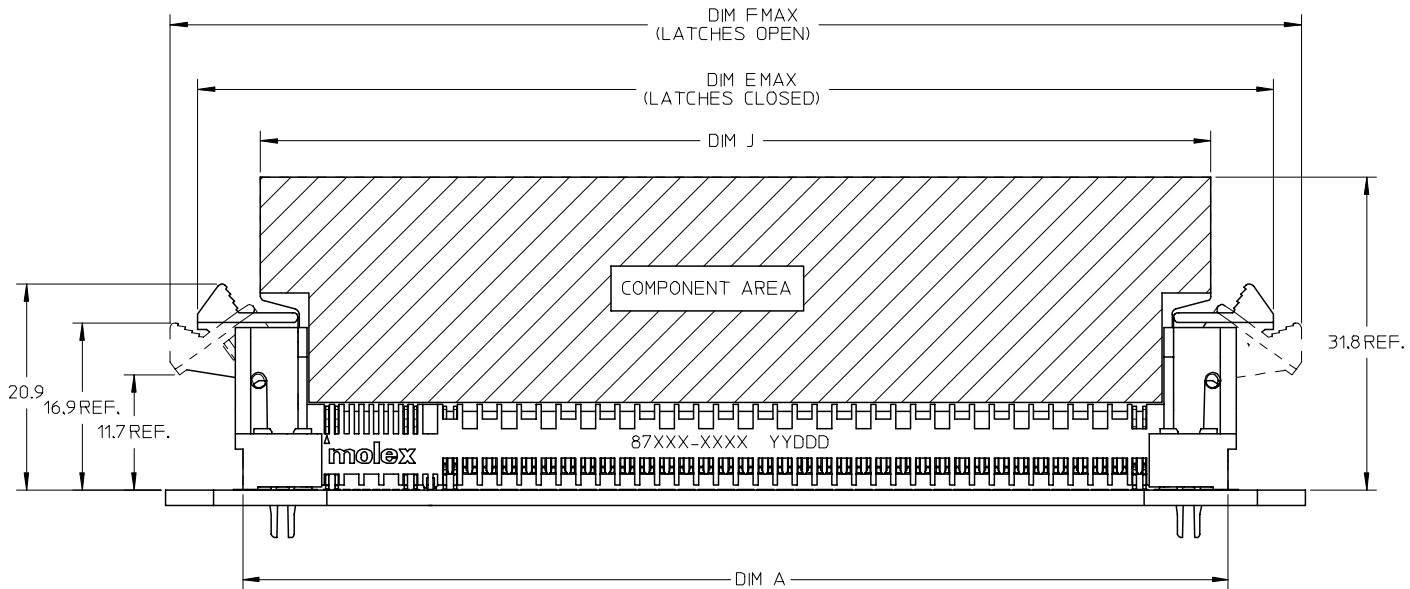


NOTES:

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.

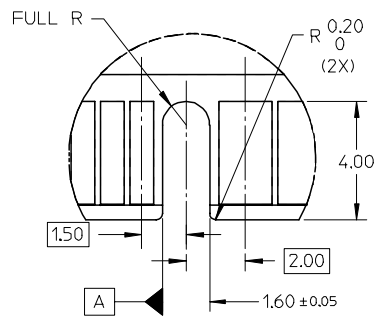
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					DRAWN BY KMG0H		DATE 2003/02/25		TITLE LOW PROFILE VRM SOCKET W/LATCH, SMT			
					CHECKED BY BHL0W		DATE 2003/03/05		APPROVED BY PTLIM			
					APPROVED BY PTLIM		DATE 2003/03/05		MATERIAL NO. SD-87786-001			
DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS			SIZE A3		SEE TABLE				DOCUMENT NO. SD-87786-001		SHEET NO. 1 OF 4	



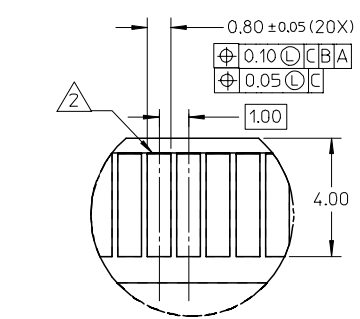
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			mm	INCH	DRAWN BY KMG0H	DATE 2003/02/25	TITLE LOW PROFILE VRM SOCKET W/LATCH, SMT			
		4 PLACES	$\pm$ ---	$\pm$ ---	CHECKED BY BHLOW	DATE 2003/03/05				
		3 PLACES	$\pm$ ---	$\pm$ ---	APPROVED BY PTL IM	DATE 2003/03/05	MOLEX INCORPORATED			
	2 PLACES	$\pm$ 0.13	$\pm$ ---	MATERIAL NO. SEE TABLE		DOCUMENT NO. SD-87786-001		SHEET NO. 2 OF 4		
	1 PLACE	$\pm$ 0.25	$\pm$ ---	DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS						
		ANGULAR $\pm$ 3 °		SIZE A3 THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION						

10 9 8 7 6 5 4 3 2 1

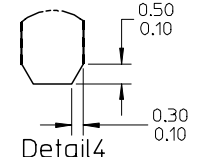
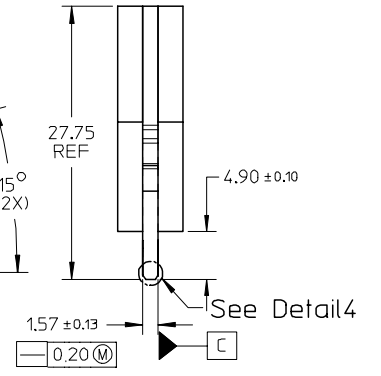
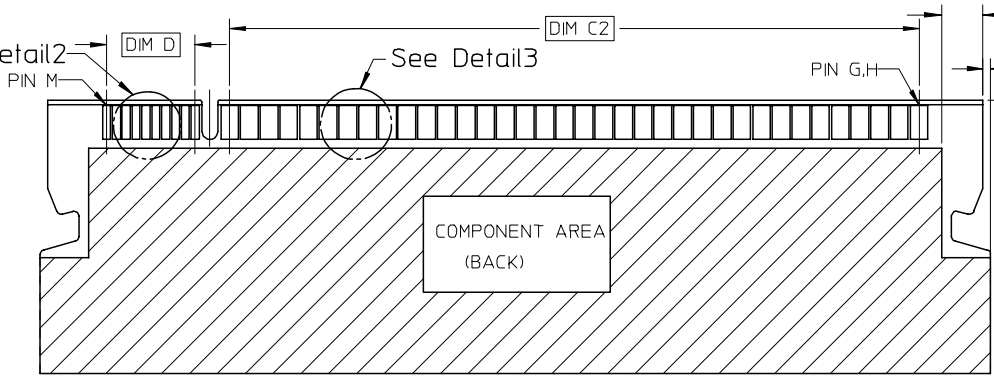
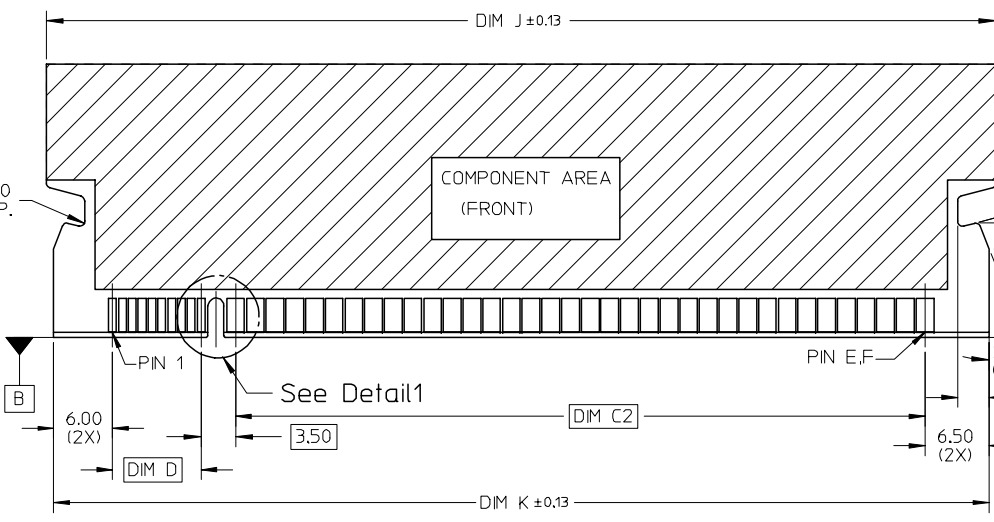
NOTES:  
 1. OPPOSING POWER PADS MUST BE OF THE SAME POLARITY.  
 APPLICATION NOTE:  
 EDGE OF CONTACT PADS SHALL BE FREE OF BURRS AND EXTERNAL TIE BARS.



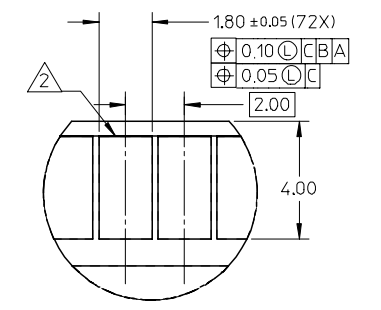
Detail1



Detail2



Detail4



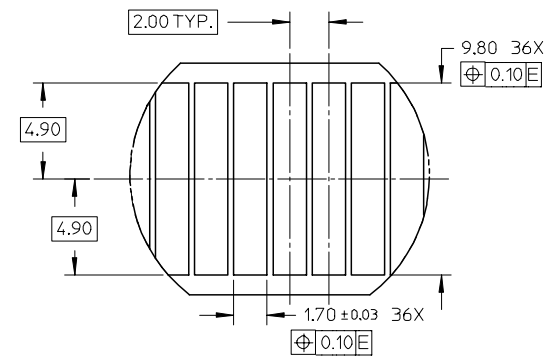
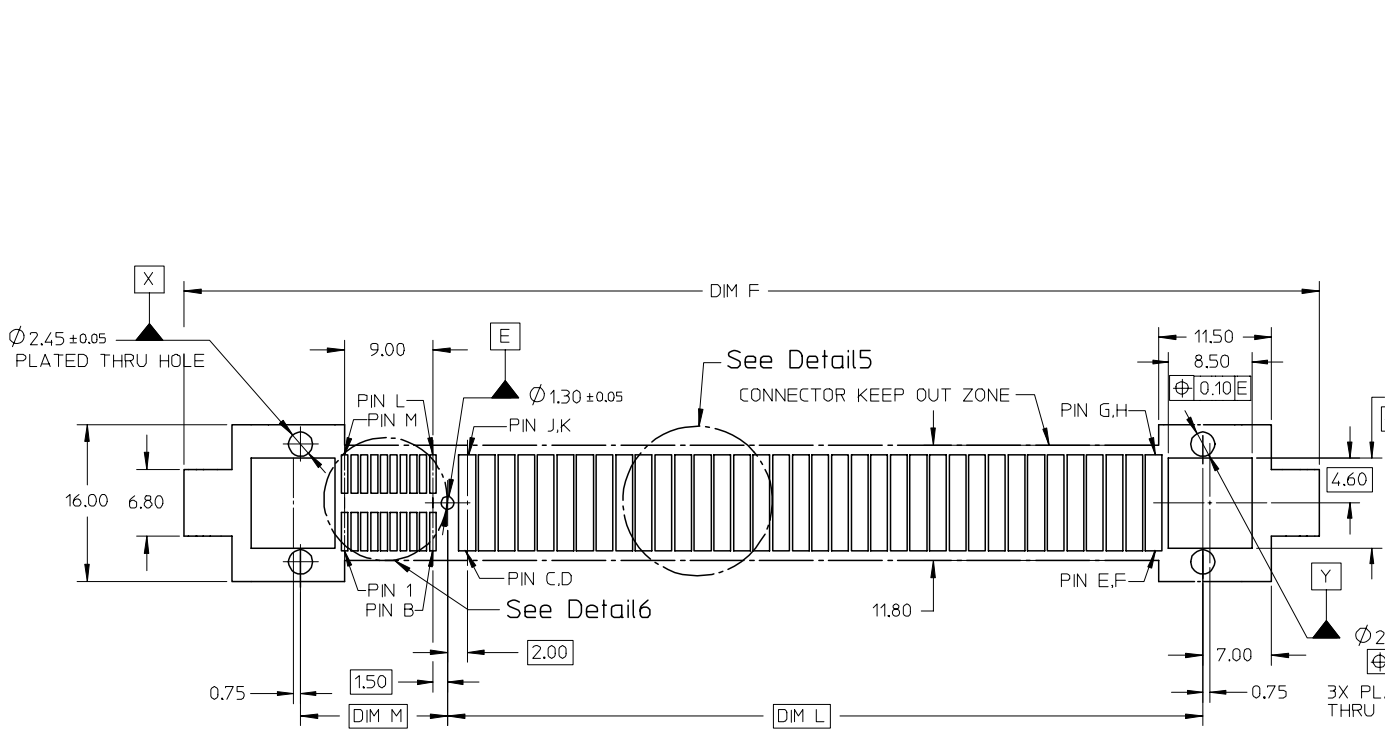
Detail3

RECOMMENDED MODULE OUTLINE

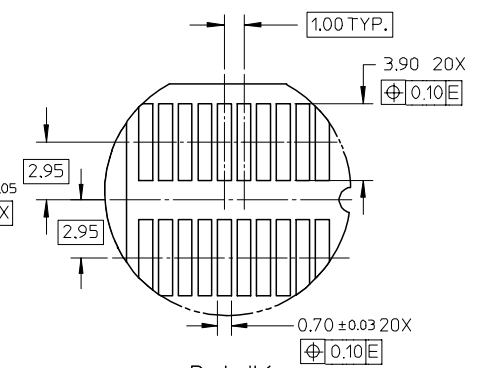
OBS TIN/LEAD P/N EC NO: S2006-0791 DRWN:MLONG CHKD:CGOH APPR:PTLIM 2006/03/30 2006/03/30 2006/03/30	QUALITY SYMBOLS ▽=0 ◻=0	GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE MM ONLY		SCALE NTS	DESIGN UNITS METRIC	THIRD ANGLE PROJECTION			
		4 PLACES ± --- ± ---	3 PLACES ± --- ± ---	2 PLACES ± 0.13 ± ---	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					CHECKED BY BHLOW	DATE 2003/03/05	APPROVED BY PTLIM		
		MATERIAL NO. SEE TABLE					DATE 2003/03/05	MOLEX INCORPORATED		DOCUMENT NO. SD-87786-001	SHEET NO. 3 OF 4

9 8 7 6 5 4 3 2 1

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	10	11	12	81	82	83	84	153	154	155	164
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											



Detail 5  
POWER SOLDER PAD



Detail 6  
SIGNAL SOLDER PAD

RECOMMENDED PCB LAYOUT

OBS TIN/LEAD P/N EC NO: S2006-0791 DRWN:MLG 2006/03/30 CHKD:CGH 2006/03/30 APPR:PTLIM 2006/03/30	DESCRIPTION REV	QUALITY SYMBOLS	GENERAL TOLERANCES (UNLESS SPECIFIED)	DIMENSION STYLE	SCALE	DESIGN UNITS	THIRD ANGLE PROJECTION	
		▽=0 ∇=0	mm INCH	MM ONLY	NTS	METRIC		
			4 PLACES ± --- ± --- 3 PLACES ± --- ± --- 2 PLACES ± 0.13 ± --- 1 PLACE ± 0.25 ± ---	DRAWN BY DATE KMG0H 2003/02/25	TITLE	LOW PROFILE VRM SOCKET W/LATCH, SMT		
			ANGULAR ± 3 °	CHECKED BY DATE BHL0W 2003/03/05	APPROVED BY DATE PTLIM 2003/03/05	MOLEX MOLEX INCORPORATED		
		DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS		MATERIAL NO.	DOCUMENT NO.	SHEET NO.		
				SEE TABLE	SD-87786-001	4 OF 4		
				THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION				