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Part Number: [0878101002](#)
Status: **Active**
Overview:
Description: 1.00mm (.039") Pitch iCool™ Low Profile VRM, Vertical, Through Hole, with Tower, with Beveled Metal Pins, 22 Signal, 88 Power, 0.76µm (30µ") Gold (Au) Plating, Leadfree

Agency Certification

CSA LR19980
 UL E29179

General

Product Family Edge Card Connectors
 Series 87810
 Component Type Edgecard to PCB
 Overview icool
 Product Name iCool™, VRM

Physical

Circuits (Loaded) 110
 Circuits (maximum) 110
 Circuits Detail 22 Signal, 88 Power
 Color - Resin Black
 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
 PC Tail Length (in) 0.150 In
 PC Tail Length (mm) 3.80 mm
 PCB Locator No
 PCB Retention Yes
 PCB Thickness Recommended (in) 0.093 In
 PCB Thickness Recommended (mm) 2.40 mm
 Packaging Type Tray
 Pitch - Mating Interface (in) 0.039 In
 Pitch - Mating Interface (mm) 1.00 mm
 Plating min: Mating (µin) 30
 Plating min: Mating (µm) 0.76
 Plating min: Termination (µin) 150
 Plating min: Termination (µm) 3.81
 Polarized to Mating Part Yes
 Temperature Range - Operating -10°C to +105°C
 Termination Interface: Style Through Hole

Electrical

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

Solder Process Data

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

EU RoHS

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

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

87810Series

Mates With

Voltage Regulator Module

Material Info

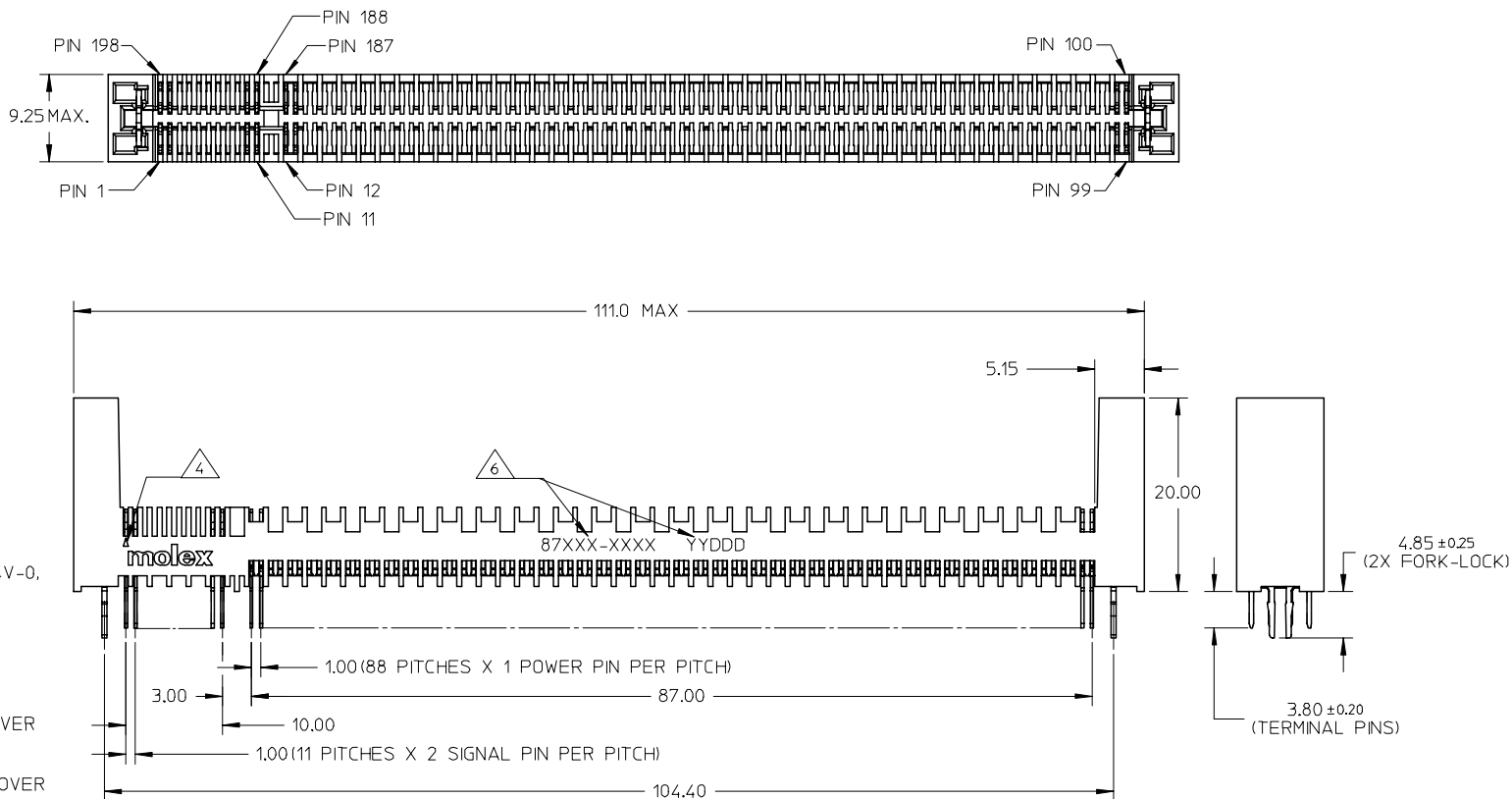
Reference - Drawing Numbers

Sales Drawing

SD-87810-030

This document was generated on 06/04/2010

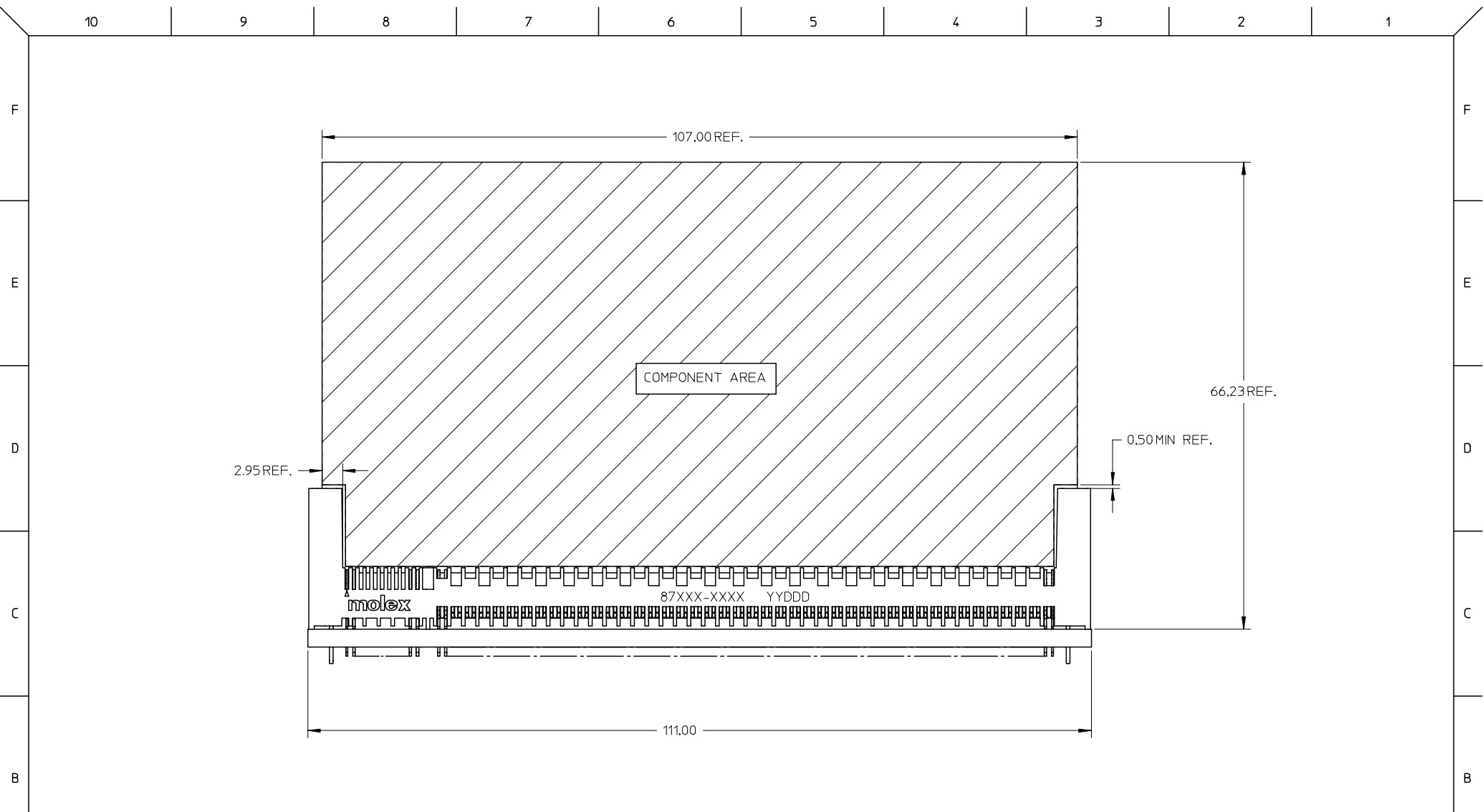
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NOTES:

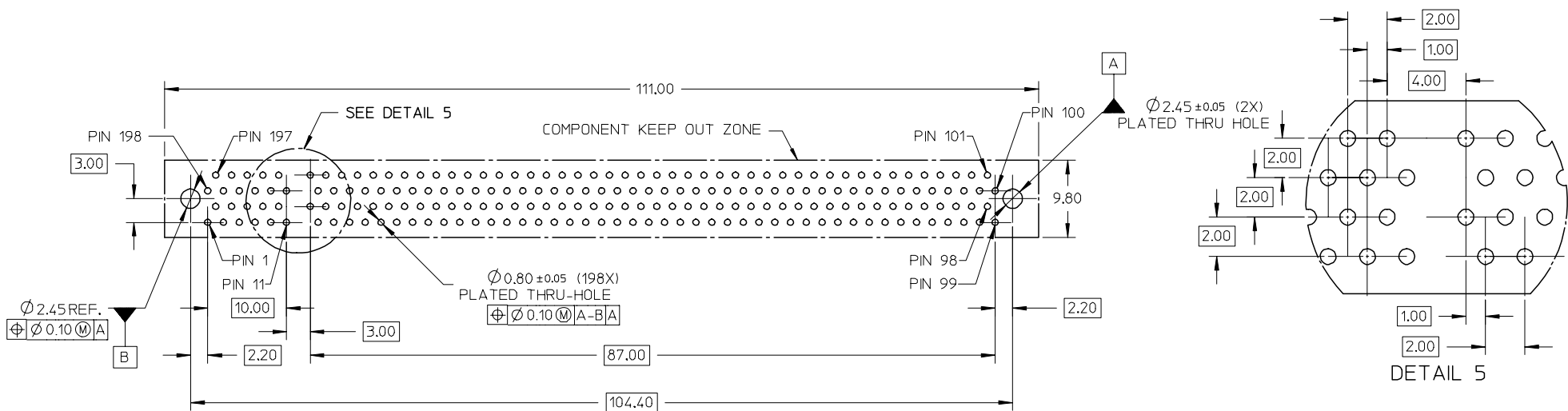
1. MATERIAL :
HOUSING : LCP, GLASS FILLED, UL94V-0,
COLOR: BLACK
CONTACTS : COPPER ALLOY
FORKLOCKS : COPPER ALLOY
2. FINISH :
CONTACTS : 0.76um (30u") MIN GOLD OVER
1.27um (50u") MIN NICKEL
SOLDER TAIL : 3.81um (150u") MIN TIN OVER
1.27um (50u") MIN NICKEL
3. THIS DRAWING IS BASED UPON PIN CONFIGURATION OF 22 SIGNALS and 88 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 TO BE SOLDERED ONTO PCB BOARD.
6. PART NUMBER AND DATE CODE (YYDDD) TO BE LASER MARK ONTO HOUSING.
7. EXTERNAL MEANS OF MECHANICAL HOLD DOWN DEVICES ARE NEEDED FOR THE SHOCK AND VIBRATION.
8. PRODUCT SPECIFICATION: PS-87810-008.
9. PARTS PACKAGED IN TRAY.

ADDED NOTES EC NO: S2007-0383 DRWN:KLOKE CHKD:NAJESHKN APPR:PTLIM	2006/10/20 2006/10/25 2006/10/27	DESCRIPTION REV	QUALITY SYMBOLS	GENERAL TOLERANCES (UNLESS SPECIFIED)	DIMENSION STYLE	SCALE	DESIGN UNITS	THIRD ANGLE PROJECTION
			$\nabla=0$ $\triangle=0$	mm INCH 4 PLACES ± --- ± --- 3 PLACES ± --- ± --- 2 PLACES ± 0.13 ± --- 1 PLACE ± 0.25 ± --- ANGULAR ± 1 °	MM ONLY	NTS	METRIC	TITLE
								LOW PROFILE VRM SOCKET THROUGH HOLE, BOARD-LOCK
								MOLEX MOLEX INCORPORATED
				DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS	SEE TABLE		DOCUMENT NO.	SHEET NO.
							SD-87810-030	1 OF 4
THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION								



ADDED NOTES EC NO: S2007-0383 2006/10/20 DRWN:KLOKE 2006/10/25 CHKD:NAJESHKN 2006/10/25 APPR:PTL IM 2006/10/27	DESCRIPTION C1	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 2004/02/05	TITLE LOW PROFILE VRM SOCKET THROUGH HOLE, BOARD-LOCK			
			4 PLACES	± ---	± ---	CHECKED BY PTL IM	DATE 2004/02/16	MOLEX INCORPORATED			
			3 PLACES	± ---	± ---	APPROVED BY KCL ING	DATE 2004/02/16	DOCUMENT NO. SD-87810-030	SHEET NO. 2 OF 4		
	2 PLACES	± 0.13	± ---	SEE TABLE		THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION					
	1 PLACE	± 0.25	± ---	DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS							
		ANGULAR ± 1 °									

10	9	8	7	6	5	4	3	2	1
PART NUMBER	SIGNAL	POWER							
87810-1002	22	88							



RECOMMENDED PCB LAYOUT

- NOTES:
1. PCB LAYOUT BASED UPON SOCKET PIN CONFIGURATION OF 22 SIGNAL PINS AND 88 POWER PINS.
 2. THERE IS ONE SOLDER TAIL FOR EACH SIGNAL PIN AND TWO SOLDER TAILS FOR EACH POWER PIN.
 3. THE PCB THICKNESS ARE BASED FROM 0.093 INCH (2.36MM) TO 0.110 INCH (2.79MM).

ADDED NOTES	DESCRIPTION
EC NO: S2007-0383	2006/10/20
DRWN:KLOKE	2006/10/25
CHKD:NGESHKN	2006/10/27
APPR:PTLIM	
C1	REV

QUALITY SYMBOLS	DESCRIPTION
▽=0	
∇=0	

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

DIMENSION STYLE	
MM ONLY	
DRAWN BY	DATE
DATE	TITLE
CHECKED BY	DATE
DATE	TITLE
APPROVED BY	DATE
DATE	TITLE
MATERIAL NO.	
SEE TABLE	
SIZE	
A3	

SCALE	DESIGN UNITS	THIRD ANGLE PROJECTION
NTS	METRIC	
TITLE		
LOW PROFILE VRM SOCKET THROUGH HOLE, BOARD-LOCK		
MOLEX INCORPORATED		
DOCUMENT NO.	SHEET NO.	
SD-87810-030	4 OF 4	
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