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Part Number: 0780162001

Status: Active

Overview:

Description: 1.00mm (.039) Pitch iCool™ Low Profile VRM, Vertical, Surface Mount, with Tower, with Beveled Metal Pins, 0.76µm (30µ") Gold (Au) Plating, Signal 22, Power 88, Leadfree

EU RoHS
ELV and RoHS Compliant

China RoHS

REACH SVHC
Contains SVHC: No

Halogen-Free Status
Not Reviewed

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
78016Series

Mates With
Voltage Regulator Module

Agency Certification

UL	E29179

General

Product Family	Edge Card Connectors
Series	78016
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
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	Wave Capable (TH only)
Max. Cycles at Max. Process Temperature	1
Process Temperature max. C	245

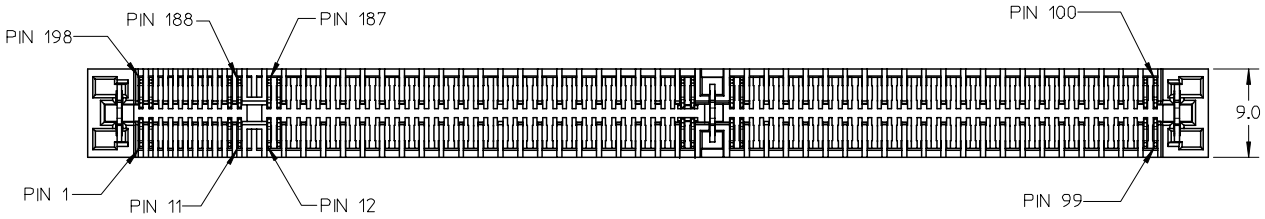
Material Info

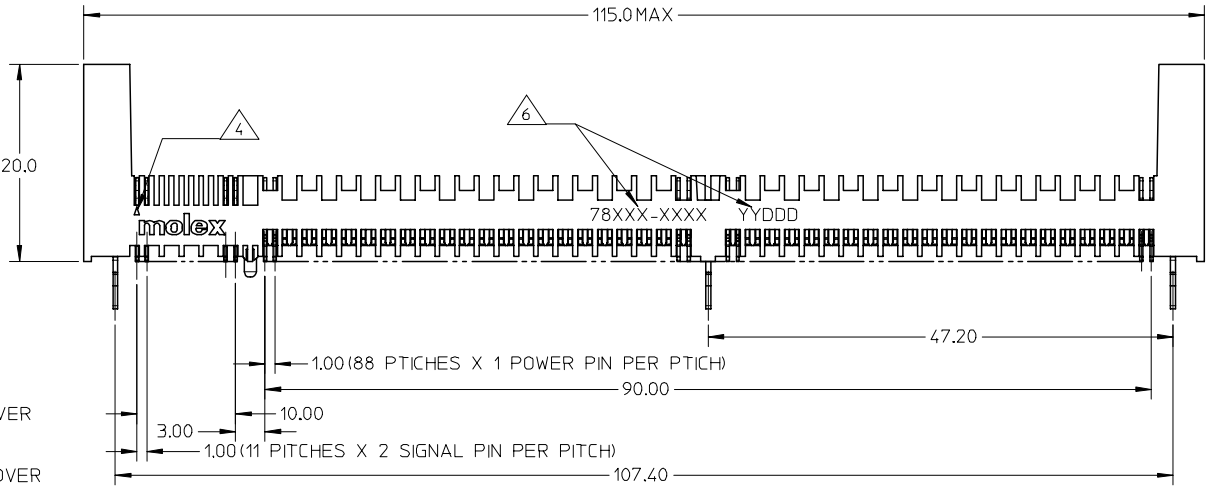
Reference - Drawing Numbers

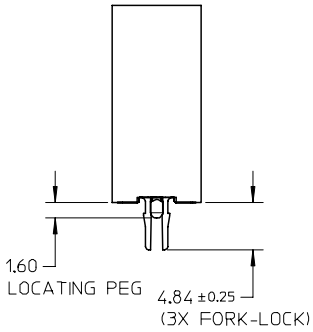
Product Specification	PS-87810-008

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NOTES:

1. MATERIAL :
   HOUSING : LCP
   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. SPECIFICATIONS:
   PRODUCT SPECIFICATION: PS-87810-008
9. PART PACK IN TRAY.

ADD NOTES
EC NO: S2006-1240 2006/06/29
DRWN:KWLOKE 2006/06/30
CHKD:BHLOW 2006/06/30
APPR:PTLIM
DESCRIPTION
REV
A2

QUALITY SYMBOLS
▼=0
▽=0

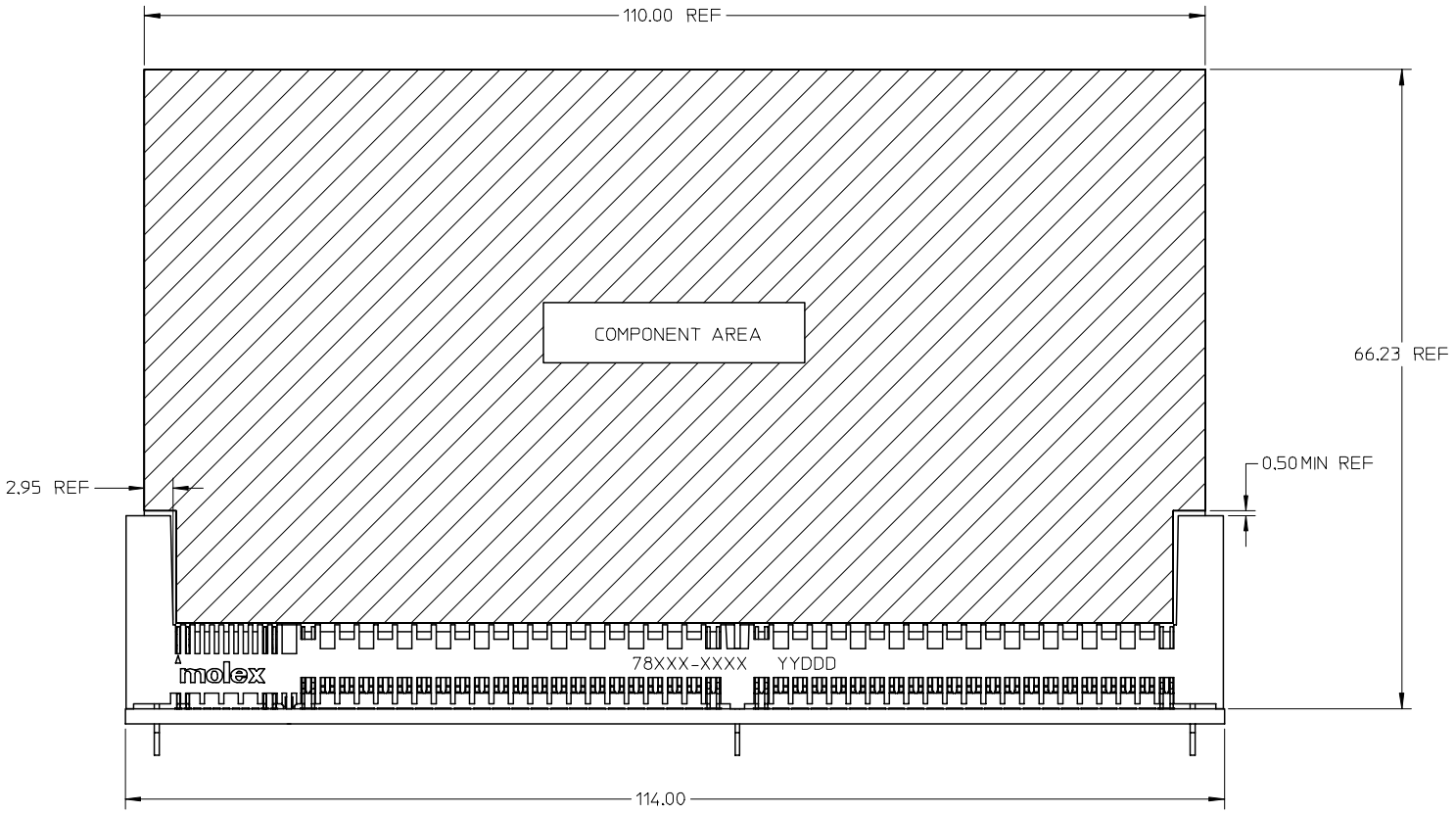
GENERAL TOLERANCES (UNLESS SPECIFIED)

	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	MM ONLY
SCALE	NTS
DESIGN UNITS	METRIC
	THIRD ANGLE PROJECTION
DRAWN BY	BHLOW
DATE	2005/11/02
CHECKED BY	CGOH
DATE	2005/11/14
APPROVED BY	PTLIM
DATE	2005/11/14
MATERIAL NO.	SEE TABLE
TITLE	LOW PROFILE VRM, 22S-88P CONFIG., SMT, BOARD-LOCK
	MOLEX INCORPORATED
DOCUMENT NO.	SD-78016-010
SHEET NO.	1 OF 5
SIZE	A3

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



ADD NOTES			DESCRIPTION	REV
EC NO: S2006-1240		2006/06/29		
DRWN:KWLOKE		2006/06/30		
CHKD:BHLOW		2006/06/30		
APPR:PTLIM				
A2				

QUALITY SYMBOLS
▼=0
▽C=0

GENERAL TOLERANCES (UNLESS SPECIFIED)

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ANGULAR ± 3 °		

DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS

DIMENSION STYLE	SCALE	DESIGN UNITS
MM ONLY	NTS	METRIC

THIRD ANGLE PROJECTION

DRAWN BY	BHLOW	DATE 2005/11/02
CHECKED BY	CGOH	DATE 2005/11/14
APPROVED BY	PTLIM	DATE 2005/11/14

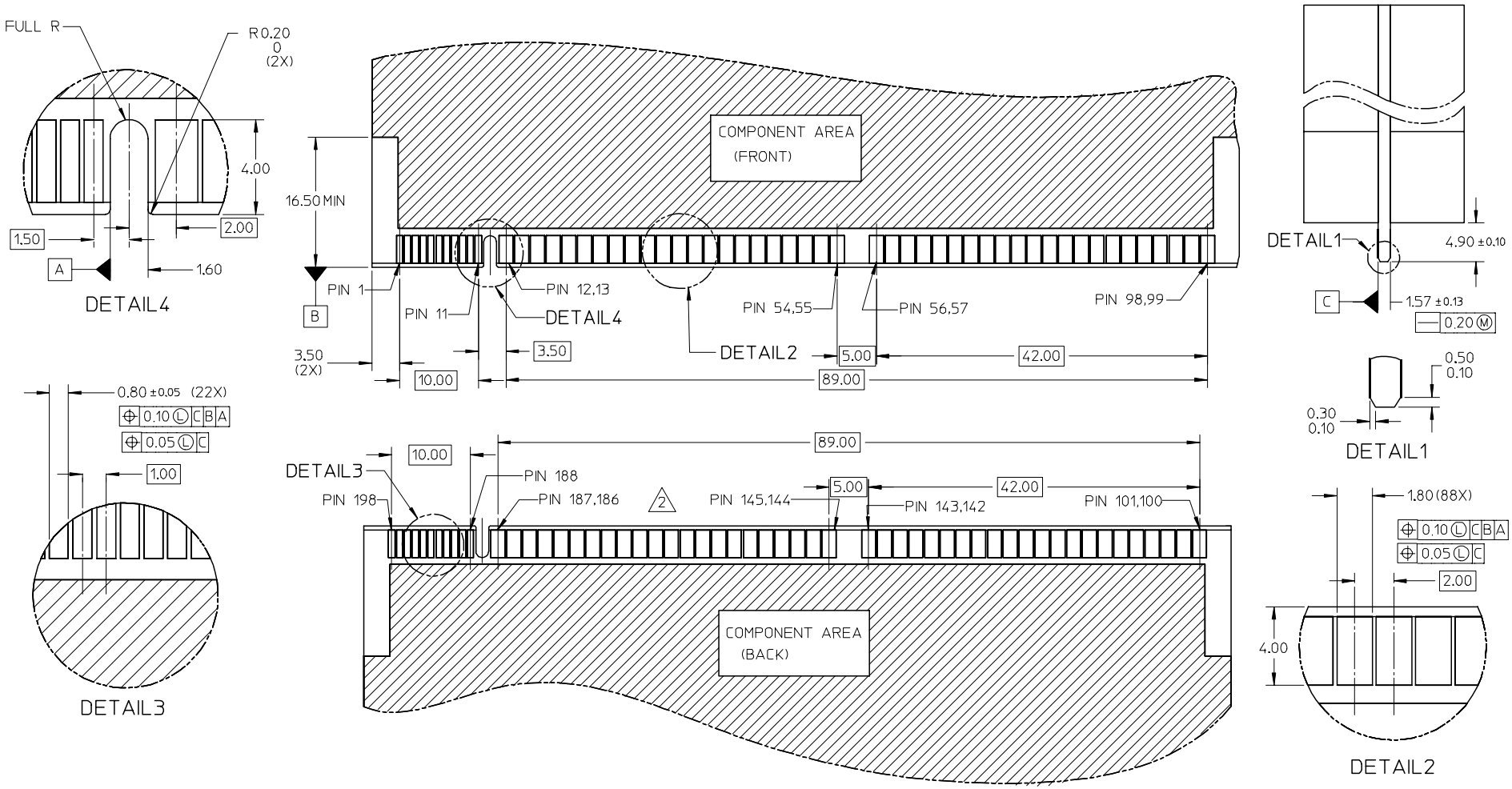
TITLE: LOW PROFILE VRM, 22S-88P CONFIG., SMT, BOARD-LOCK

molex MOLEX INCORPORATED

MATERIAL NO.	DOCUMENT NO.	SHEET NO.
SEE TABLE	SD-78016-010	2 OF 5

SIZE A3

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NOTES:

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

ADD NOTES
EC NO: S2006-1240 2006/06/29
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CHKD:BHLOW 2006/06/30
APPR:PTLIM
DESCRIPTION
REV

A2

QUALITY SYMBOLS
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▽=0

GENERAL TOLERANCES (UNLESS SPECIFIED)

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2 PLACES	± 0.13	± ---
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ANGULAR ± 3 °		

DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS

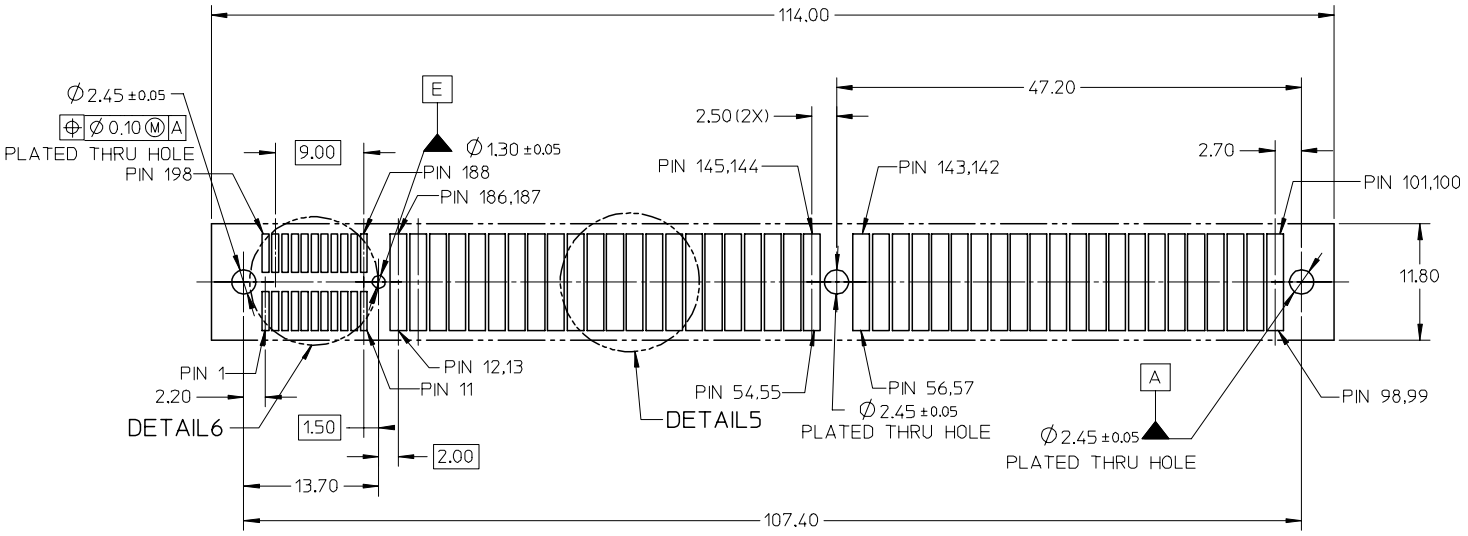
DIMENSION STYLE	MM ONLY
SCALE	NTS
DESIGN UNITS	METRIC
	THIRD ANGLE PROJECTION
DRAWN BY	BHLOW
DATE	2005/11/02
CHECKED BY	CGOH
DATE	2005/11/14
APPROVED BY	PTLIM
DATE	2005/11/14
MATERIAL NO.	SEE TABLE
DOCUMENT NO.	SD-78016-010
SHEET NO.	3 OF 5
SIZE	A3

TITLE: LOW PROFILE VRM, 22S-88P CONFIG., SMT, BOARD-LOCK

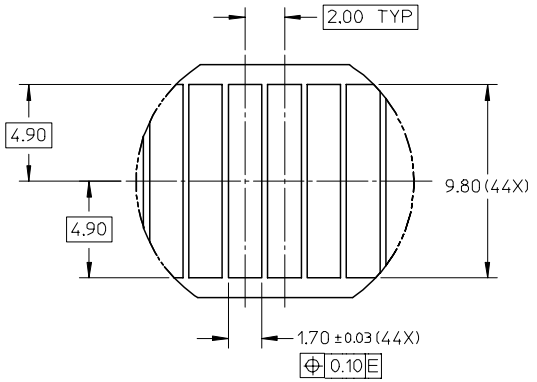
MOLEX INCORPORATED

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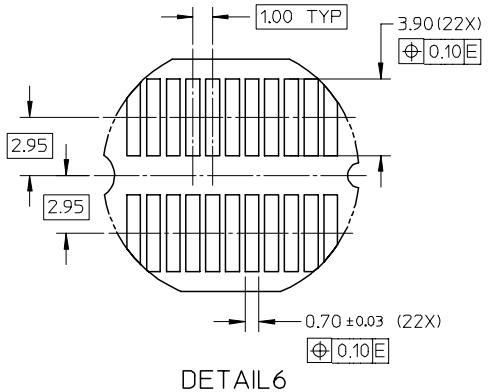
PART NUMBER	SIGNAL	POWER	PLATING OPTION	RECOMMENDED PCB THICKNESS
78016-2001	22	88	TIN	0.062" (1.57MM)



RECOMMENDED PCB LAYOUT



DETAIL5
POWER SOLDER PAD



DETAIL6

NOTES:
1. PCB LAYOUT BASED UPON SOCKET PIN CONFIGURATION OF 22 SIGNAL PINS AND 88 POWER PINS.

ADD NOTES
EC NO: S2006-1240 2006/06/29
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APPR:PTLIM
DESCRIPTION
REV

A2

QUALITY SYMBOLS
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ANGULAR ± 3 °		

DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS

DIMENSION STYLE: MM ONLY
SCALE: NTS
DESIGN UNITS: METRIC
THIRD ANGLE PROJECTION

		DATE
DRAWN BY	BHLOW	2005/11/02
CHECKED BY	CGOH	2005/11/14
APPROVED BY	PTLIM	2005/11/14

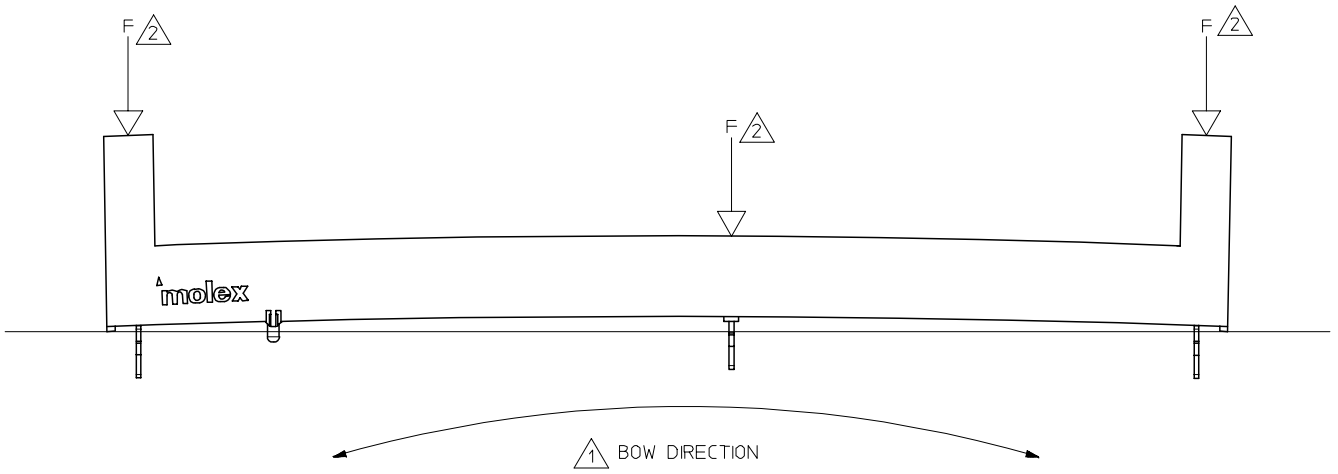
TITLE: LOW PROFILE VRM, 22S-88P CONFIG., SMT, BOARD-LOCK

MOLEX INCORPORATED

MATERIAL NO.: SEE TABLE
DOCUMENT NO.: SD-78016-010
SHEET NO.: 4 OF 5

SIZE A3

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APPLICATION NOTES:

1 ALLOWABLE BOW SHALL NOT EXCEED 0.35MM IN THIS DIRECTION.

2 CONNECTOR INSERTION FORCE (F) SHOULD BE APPLIED EVENLY AT 3 LOCATIONS TO ENSURE THE CONNECTOR IS PLACED FLATLY ONTO THE PCB SURFACE BEFORE IR.

ADD NOTES				REV
EC NO: S2006-1240	DRWN:KWLOKE	CHKD:BHLOW	APPR:PTLIM	DESCRIPTION
2006/06/29	2006/06/30	2006/06/30		

A2

QUALITY SYMBOLS
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(C)=0

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DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS

DIMENSION STYLE	MM ONLY
SCALE	NTS
DESIGN UNITS	METRIC
	THIRD ANGLE PROJECTION
DRAWN BY	BHLOW
DATE	2005/11/02
CHECKED BY	CGOH
DATE	2005/11/14
APPROVED BY	PTLIM
DATE	2005/11/14
MATERIAL NO.	SEE TABLE
DOCUMENT NO.	SD-78016-010
SHEET NO.	5 OF 5
SIZE	A3

TITLE: LOW PROFILE VRM, 22S-88P CONFIG., SMT, BOARD-LOCK

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