Jameco Part Number 1303530

PRODUCT SPECIFICATION

22.5°Angle Mini DIMM, 200 / 244 Ckt 0.60mm pitch SMT

1.0 SCOPE

This Product Specification covers the performance requirements of the 0.60 mm centerline edge card socket for board to board interconnect of 1.00 mm thick memory modules.

2.0 PRODUCT DESCRIPTION

2.1 PRODUCT NAME AND SERIES NUMBER (S)

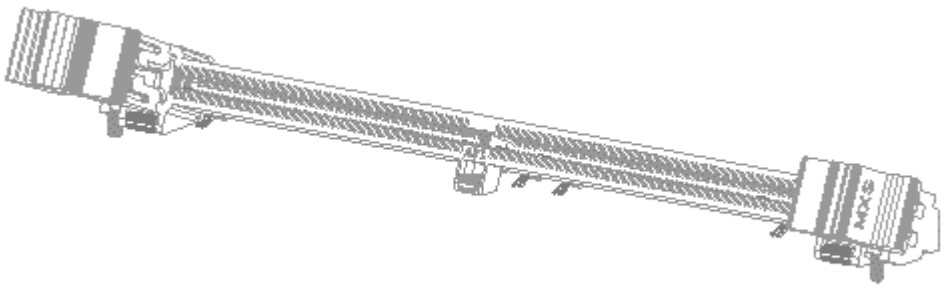
Series Number	Product Descriptions
87783	200/244 Ckt 22.5 Deg Angle Mini DIMM

2.2 DIMENSIONS, MATERIALS, PLATINGS AND MARKINGS

See the appropriate Sales Drawings for information on dimensions, materials, plating and markings**,** recommended module outlines and footprint Specifications.

2.3 SAFETY AGENCY APPROVALS

UL File : E29179
CSA File : 1699020 (LR 19980)



TENTATIVE RELEASE: THIS SPECIFICATION IS BASED ON DESIGN OBJECTIVES AND IS STRICTLY TENTATIVE. PRELIMINARY TEST DATA MAY EXIST, BUT THIS SPECIFICATION IS SUBJECTED TO CHANGE BASED ON THE RESULTS OF ADDITIONAL TESTING AND EVALUATION.

3.0 APPLICABLE DOCUMENTS AND SPECIFICATIONS

The following documents are part of this specification between the requirements of this specified herewith. In the event of conflict between the requirements of this specification and the product drawings, the product drawings shall take precedence. In the event of conflict between the requirements of this specification and reference documents, this specification shall take precedence.

4.0 RATINGS

4.1 VOLTAGE
30 VRMS at 60 Hz

4.2 CURRENT
1.0 Amps at 30°C Temperature Rise

4.3 TEMPERATURE
Operating Temperature: -10°C to +85°C

5.0 PERFORMANCE

5.1 ELECTRICAL REQUIREMENTS

ITEM	DESCRIPTION	TEST CONDITION	REQUIREMENT
1	**Contact Resistance (Low Level)**	Mate connectors: apply a maximum voltage of 20 mV and a current of 100 mA. EIA-364-23	40 mΩ maximum at initial 10 mΩ maximum change from initial
2	**Temperature Rise at rated current**	Temperature of mater connector at rated current for 96 hours (6 consecutive ckts link in series)	1.0 Amps per contact at a maximum of 30°C temperature rise
3	**Insulation Resistance**	Unmate & unmount connectors: apply a voltage of 500 VDC between adjacent terminals and between terminals to ground. EIA-364-21	1000 Mega Ω minimum
4	**Dielectric Withstanding Voltage**	Apply 500 VAC for 1 minute between adjacent terminals of an unmated connector. EIA-364-20	No breakdown or flashover

5.2 MECHANICAL REQUIREMENTS

ITEM	DESCRIPTION	TEST CONDITION	REQUIREMENT
5	**Vibration**	Amplitude : 1.50mm peak to peak Sweep : 10-55-10 Hz in one min. Duration : 2 hrs each on XYZ axis Module weight : 15g for 244Ckt and 13g for 200Ckt. EIA 364-28	No change in LLCR greater than 10mΩ from initial. Discontinuity : No greater than 1.0 micro sec.
6	**Shock (Mechanical)**	Mate connectors and shock at 30 g's with half-sine waveform for 11 milliseconds, 3 shocks in each perpendicular axis (18 shocks total). Module weight : 15g for 244Ckt and 13g for 200Ckt.	No change in LLCR greater than 10mΩ from initial. Discontinuity : No greater than 1.0 micro sec.
7	**Durability**	Mate and unmated connectors up to 25 cycles at a maximum rate of 10 cycles per minute.	No change in LLCR greater than 10 mΩ from initial.
8	**Module Insertion Force (w/ Latches)**	Insert a 1.00 mm thick Module(0.10x0.10 mm chamfer) at a rate of 25 ± 6mm (1 ± ¼ inch) per minute. See Sales drawing for PCB/ Module details.	Total insertion force not to exceed : 195.0 N (43.73lbs) for 200 ckt 238.0 N (53.37lbs) for 244 ckt
9	**Module Rip Out Force**	Apply a pulling force on module card at a rate of 25 ± 6 mm/ min. (1 ± ¼ inch) with recommended test module as per sales drawing, inserted into connector with latches closed.	35.0 N (7.85lbs) min. retention force of the module in connector with no damage
10	**Latch Actuation Force**	Apply an actuation force on each latch at a rate of 25 ± 6 mm/ min (1 ± ¼ inch) with recommended test module as per sales drawing, inserted into connector.	The force to fully actuate the latch open shall be 45 N (10lbs) max. per latch.
11	**Latch Overstress Force**	Apply an actuation force on each latch at a rate of 25 ± 6 mm / min (1 ± ¼ inch) in the fully open position.	45 N (10lbs) min force with no damage.
12	**Terminal Retention Force**	Axial pullout force on the terminal in the housing at a rate of 25 ± 6 mm (1 ± ¼ inch) per minute.	3 N minimum

5.3 ENVIRONMENTAL REQUIREMENTS

ITEM	DESCRIPTION	TEST CONDITION	REQUIREMENT
13	**Shock (Thermal)**	Mate connectors; expose to 5 cycles of: Temperature °C — Duration (Minutes) -55 +0/-3 — 30 +25 ±10 — 5 MAXIMUM +85 +3/-0 — 30 +25 +10/-5 — 5 MAXIMUM EIA-364-32 – Test condition 1	No change in LLCR greater than 10 mΩ from initial.
14	**Thermal Aging**	Mate connectors and expose to 48 hours at 105 ± 2°C. Per EIA-364-17	No change in LLCR greater than 10 mΩ from initial.
15	**Cyclic Temperature & Humidity**	Mate connectors and expose for 10 days at 25°C to 65°C at 90-98% RH. Per EIA-364-31, Method III.	No change in LLCR greater than 10 mΩ from initial.
16	**Solderability**	Solder time: 5±0.5 sec Solder temperature: 260±5°C Subject to steam aging for 8 hours ± 5 mins.	Solder coverage: 95% minimum
17	**Porosity**	Nitric Acid Test, 10 contacts per contact type selected at random. Per EIA 364-53	Maximum number of pores : 30uin-1 pore per 10 contacts
18	**Solvent Resistance**	42 parts DI water by volume, 1 part of propylene glycol monomethyl ether(Glycol ether PM, 1 methoxy-2-propanol). 1 part by volume of monoethanolamine. Per MIL-STD-202F Method 215J	No Damage or discoloration of connector materials or marking.
19	**Resistance to Soldering Heat Test**	Unmated, exposed to reflow profile as defined in Section 8.1.	No Damage or blistering.

6.0 TEST SEQUENCE

Test Description Sequence	Test Group											
	1	2	3	4	5	6	7	8	9	10	11	12
Contact Resistance	1 3 5 7	1 3	1 3 5									
Temperature Rise											1	
Insulation Resistance				1 5								
Dielectric Withstand Voltage				2 6								
Vibration	6											
Mechanical Shock	4											
Durability	2											
Module Insertion Force					1							
Module Ripout Force					2							
Latch Actuation Force												1
Latch Overstress Force												2
Thermal Shock			2	3								
Thermal Aging		2										
Cyclic Temp & Humidity			4	4								
Plating thickness						1						
Solderability								1				
Porosity									1			
Solvent Resistance							1					
Terminal Retention Force										1 3		
Resistance to Soldering Heat										2		
Sample Size per Test Group	5	5	5	5	5	5	5	5	5	10	5	5

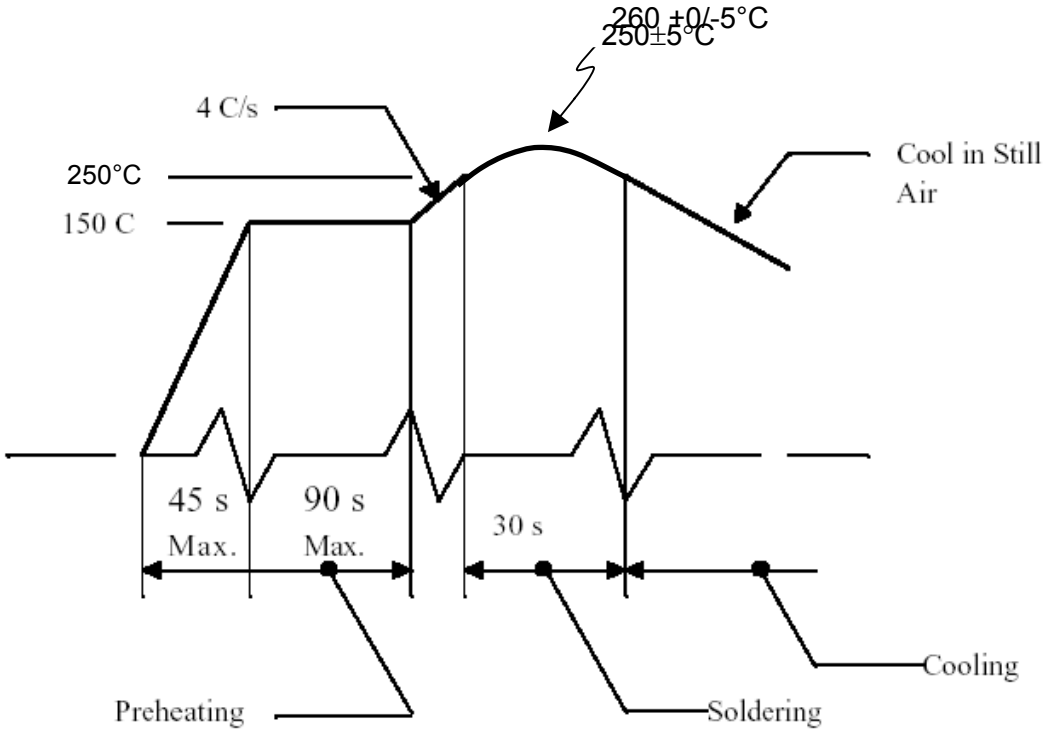
7.0 PACKAGING

Parts shall be packed in trays and protected against damage during handling, transportation and

storage.

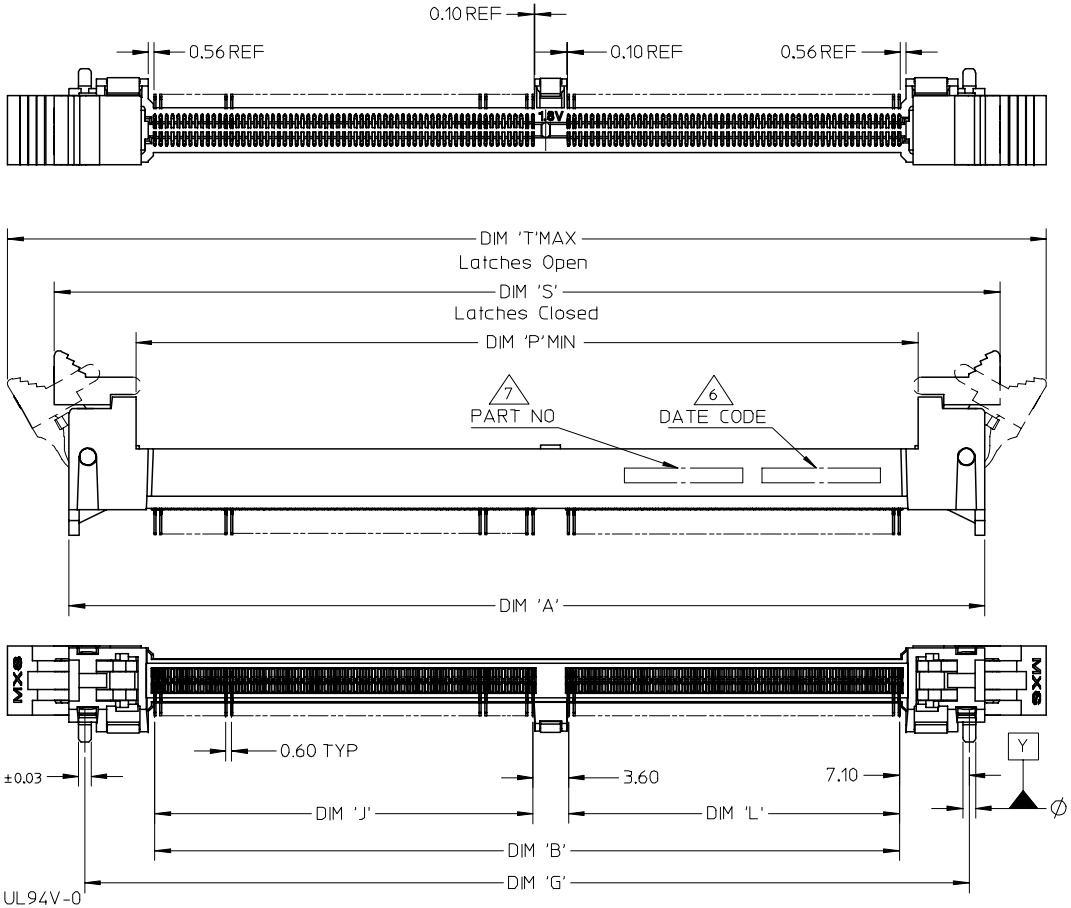
8.0 OTHER INFORMATIONS

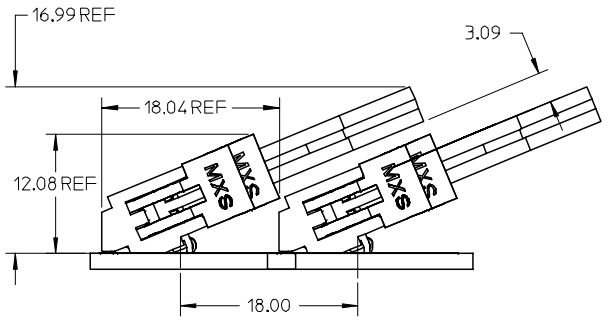
8.1 Reflow Profile.



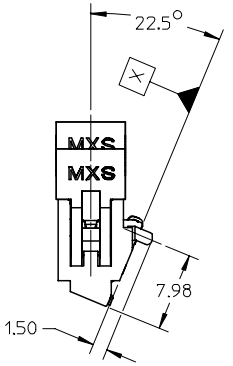
Notes :

1. Reflow solder Preheat at 3°C/s to 150°C.
2. Reflow at 250°C for 30s per figure.
3. Peak temperature to be at 260 +0/-5°C
4. Component must withstand (2) reflow solder cycles with a cool down between.





MINIMUM HEIGHT OF SOCKET WITH MODULE CARD HEIGHT OF 30.00MM AND THICKNESS OF 4MM.



NOTES :
1. MATERIAL :
   HOUSING :HIGH TEMPERATURE LIQUID CRYSTAL POLYMER, UL94V-0
   COLOUR : BLACK
   CONTACTS : COPPER ALLOY
   LATCHES : HIGH TEMPERATURE NYLON, UL94V-0
   COLOUR : NATURAL (OFF-WHITE)
   COVER : HIGH TEMPERATURE NYLON,UL 94V-0
   COLOUR : BLACK

2. FINISH
   CONTACTS : 0.76 MICROMETER (30 MICROINCH) MIN GOLD OVER 1.25 MICROMETER (50 MICROINCH) MIN NICKEL
   SMT TAIL : 2.54 MICROMETER (100 MICROINCH) MIN TIN OVER 1.25 MICROMETER (50 MICROINCH) MIN NICKEL
3. PRODUCT SPECIFICATION : PS-87783-001.
4. ACCEPTS 1.0mm THICK MEMORY MODULE PER JEDEC MO-244 FOR 244 CKTS AND MO-258 FOR 200 CKTS.
5. PRODUCT SHALL BE PACKED IN TRAY

△6. DATE CODE SHALL BE MARKED LEGIBLY AS SHOWN : YY DDD.

△7. PART NUMBER SHALL BE MARKED LEGIBLY AS SHOWN : 87783-XXXX (REFER TO TABLE).

REVISED
EC NO: S2007-0293 2006/10/05
DRWN:DWLEE01 2006/10/05
CHKD:SHLENI 2006/10/06
APPR:GGLEE
DESCRIPTION
REV
D1

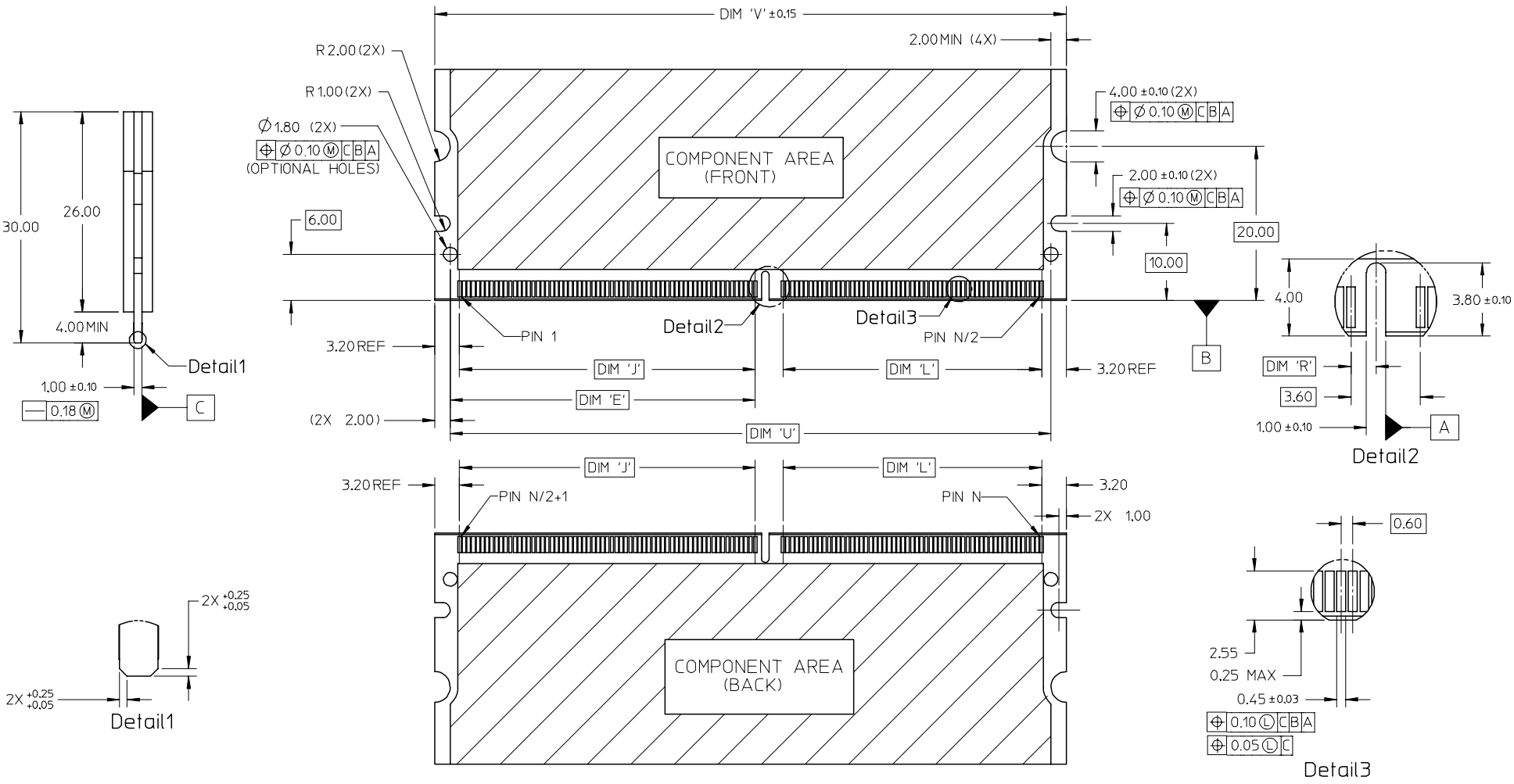
QUALITY SYMBOLS
▼=0
▽C=0

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
SCALE	NTS
DESIGN UNITS	METRIC
	THIRD ANGLE PROJECTION
DRAWN BY	MLONG
DATE	2003/08/04
CHECKED BY	SRRAMESH
DATE	2004/11/19
APPROVED BY	GGLEE
DATE	2004/11/19
MATERIAL NO.	SEE TABLE
TITLE	ANGLE MINI DIMM 0.6MM PITCH, 244/200 CKT 22.5 DEG
	MOLEX INCORPORATED
DOCUMENT NO.	SD-87783-001
SHEET NO.	1 OF 5
SIZE	A3



REVISED				REV
EC NO: S2007-0293	DRWN:DWLEE01	CHKD:SHLENI	APPR:GGLEE	DESCRIPTION
	2006/10/05	2006/10/05	2006/10/06	
D1				

QUALITY SYMBOLS
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Ⓒ=0

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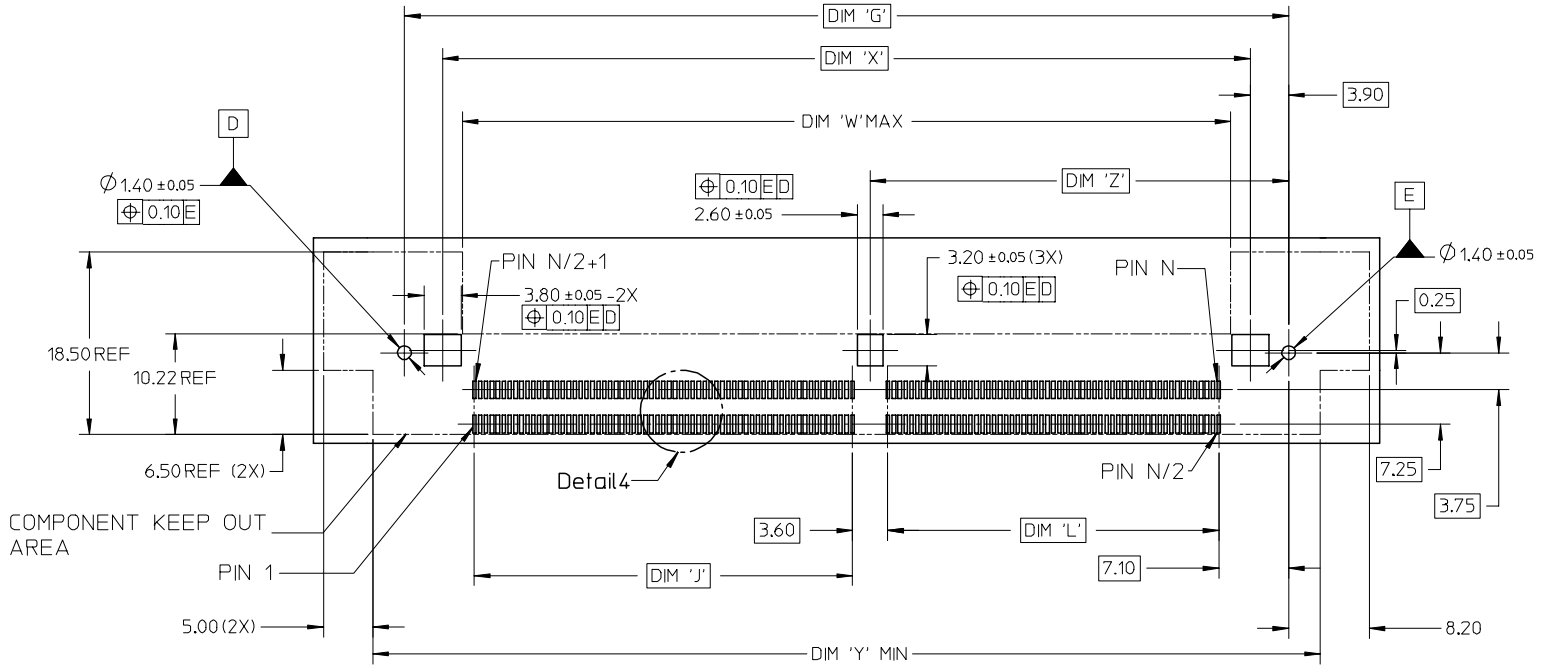
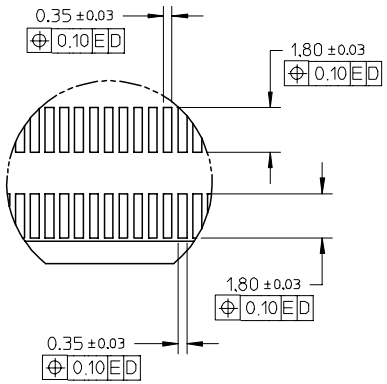
DIMENSION STYLE: MM ONLY	SCALE: NTS	DESIGN UNITS: METRIC	THIRD ANGLE PROJECTION
DRAWN BY: MLONG	DATE: 2003/08/04	TITLE: ANGLE MINI DIMM 0.6MM PITCH, 244/200 CKT 22.5 DEG	
CHECKED BY: SRRAMESH	DATE: 2004/11/19		
APPROVED BY: GGLEE	DATE: 2004/11/19	molex MOLEX INCORPORATED	
MATERIAL NO.: SEE TABLE		DOCUMENT NO.: SD-87783-001	SHEET NO.: 2 OF 5
SIZE: A3			



RECOMMENDED PCB LAYOUT



Detail4

REVISED				REV	DESCRIPTION
EC NO: S2007-0293	2006/10/05			D1	
DRWN: DWLEE01	2006/10/05				
CHKD: SHLENI	2006/10/06				
APPR: GGLEE					

QUALITY SYMBOLS
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ANGULAR ± 1 °		

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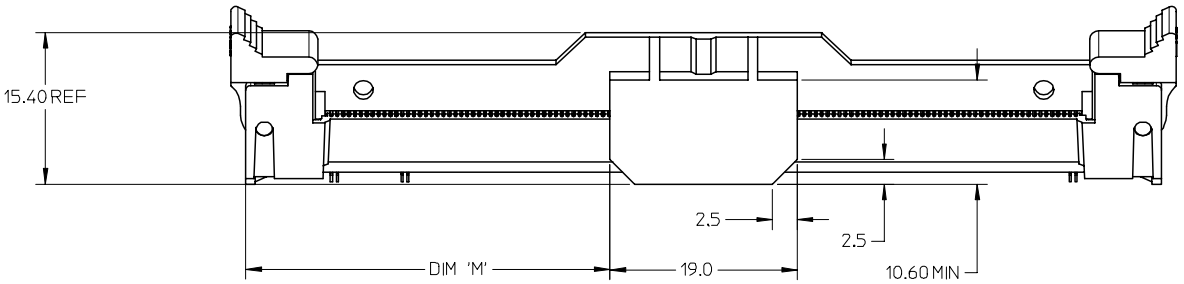
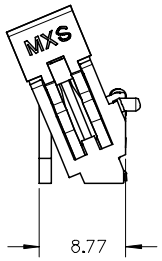
DRAWN BY: MLONG DATE: 2003/08/04	TITLE: ANGLE MINI DIMM 0.6MM PITCH, 244/200 CKT 22.5 DEG		
CHECKED BY: SRRAMESH DATE: 2004/11/19			
APPROVED BY: GGLEE DATE: 2004/11/19	molex MOLEX INCORPORATED		
MATERIAL NO.: SEE TABLE	DOCUMENT NO.: SD-87783-001	SHEET NO.: 3 OF 5	
SIZE: A3	THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION		





SHOWN WITH PICK & PLACE COVER

CKT SIZE 'N'	PART NUMBER	VOLTAGE KEY	DIM 'R'	DIM 'E'	DIM 'J'	DIM 'L'	DIM 'M'	DIM 'P'	DIM 'G'	DIM 'S'	DIM 'T'	DIM 'U'	DIM 'V'	DIM 'W'	DIM 'X'	DIM 'Y'	DIM 'Z'	DIM 'A'	DIM 'B'
244	87783-0001	1.8 V	1.30	39.60	38.40	33.60	37.0	79.0	89.80	96.0	106.20	78.00	82.00	78.0	82.00	96.20	42.50	93.0	75.60
	87783-0002	2.5 V	2.30																
200	87783-0201	1.8 V	1.30	24.60	23.40	35.40	30.40	65.8	76.60	82.8	93.00	64.80	68.80	64.8	68.80	83.00	44.30	79.8	62.40
	87783-0202	2.5 V	2.30																

REVISED
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DRWN:DWLEE01 2006/10/05
CH'KD:SHLENI 2006/10/06
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DESCRIPTION
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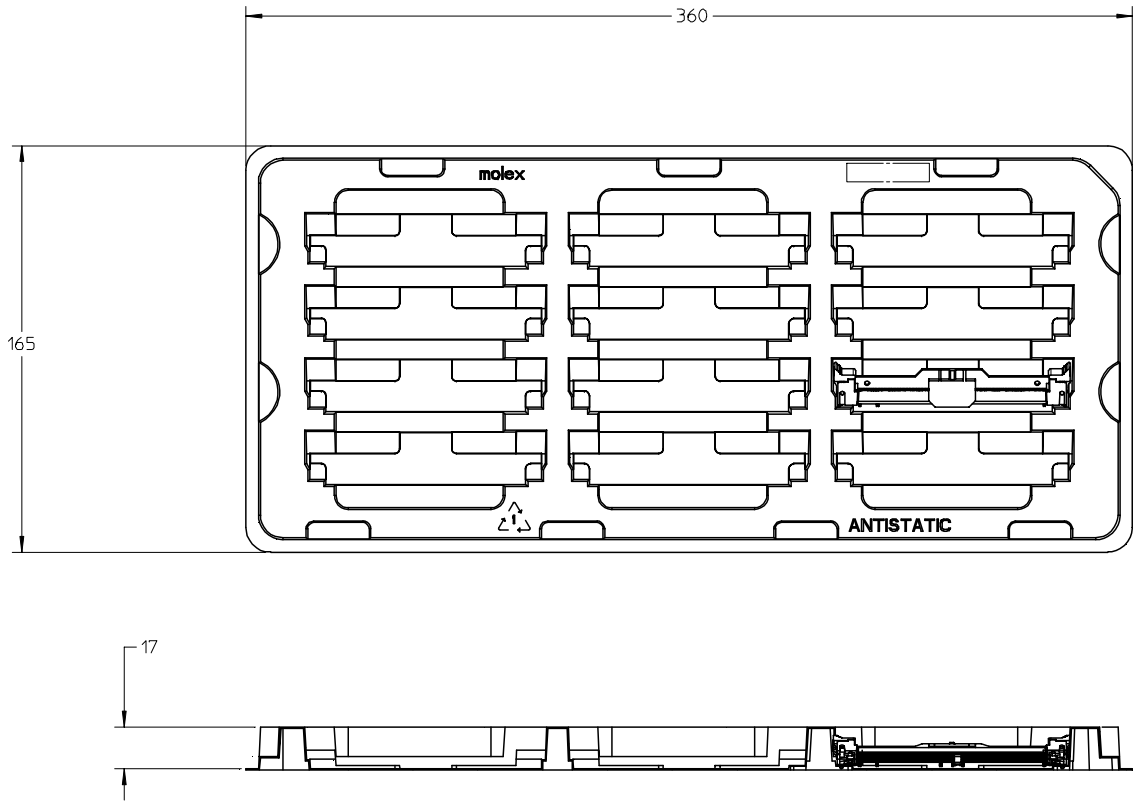
SCALE: NTS
DESIGN UNITS: METRIC
THIRD ANGLE PROJECTION

		DATE
DRAWN BY	MLONG	2003/08/04
CHECKED BY	SRRAMESH	2004/11/19
APPROVED BY	GGLEE	2004/11/19

TITLE: ANGLE MINI DIMM 0.6MM PITCH, 244/200 CKT 22.5 DEG

molex MOLEX INCORPORATED

MATERIAL NO.: SEE TABLE
DOCUMENT NO.: SD-87783-001
SHEET NO.: 4 OF 5
SIZE: A3



VIEW OF PACKAGING TRAY

NOTES:

1. QTY OF CAVITY: 3 X 4 = 12 PCS

REVISED				REV
EC NO: S2007-0293	2006/10/05	DRWN:DWLEE01	2006/10/05	D1
CHKD:SHLENI	2006/10/06	APPR:GGLEE	DESCRIPTION	

QUALITY SYMBOLS
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▽(C)=0

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ANGULAR ± 1 °		

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MM ONLY	NTS	METRIC	THIRD ANGLE PROJECTION

DRAWN BY	DATE
MLONG	2003/08/04
CHECKED BY	DATE
SRRAMESH	2004/11/19
APPROVED BY	DATE
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TITLE: ANGLE MINI DIMM 0.6MM PITCH, 244/200 CKT 22.5 DEG

MOLEX INCORPORATED

MATERIAL NO.	DOCUMENT NO.	SHEET NO.
SEE TABLE	SD-87783-001	5 OF 5

SIZE A3