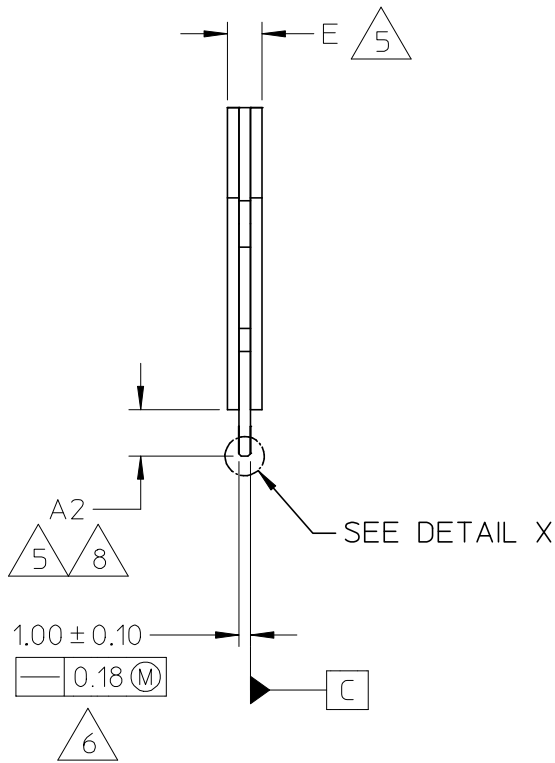


PATENT ISSUES 

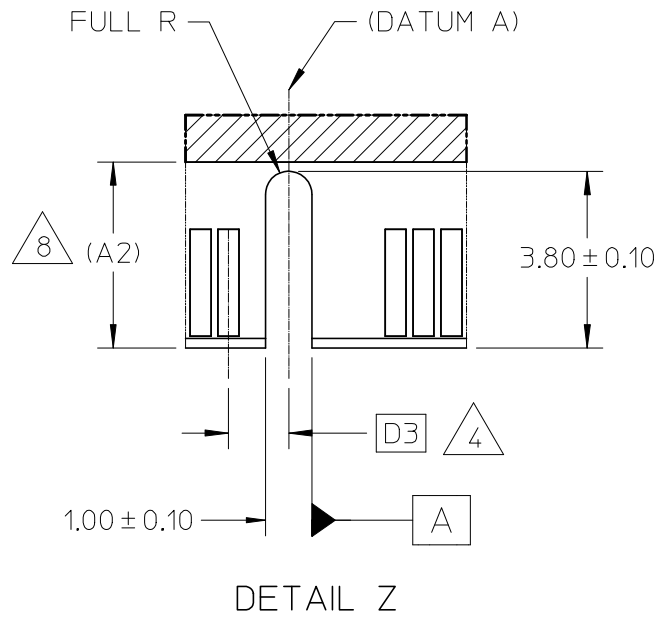
JEDEC  
SOLID STATE  
PRODUCT OUTLINE

THIS REGISTERED OUTLINE HAS BEEN PREPARED BY THE JEDEC JC-11 COMMITTEE AND REFLECTS A PRODUCT WITH ANTICIPATED USAGE IN THE ELECTRONICS INDUSTRY; CHANGES ARE LIKELY TO OCCUR.

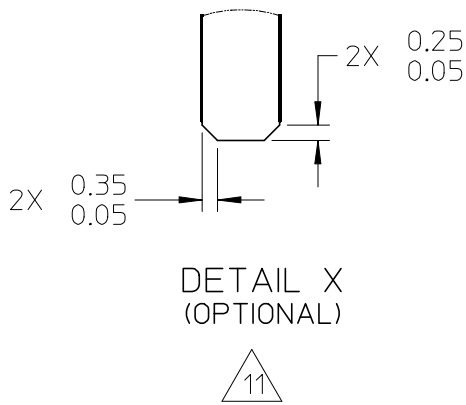
TITLE	PACKAGE DESIGNATOR	ISSUE	DATE		SHEET
244 PIN DDR2/DDR3 MINI DIMM 0.60 mm LEAD CENTERS	DIM	C	FEB 2008	MO-244	1 OF 7



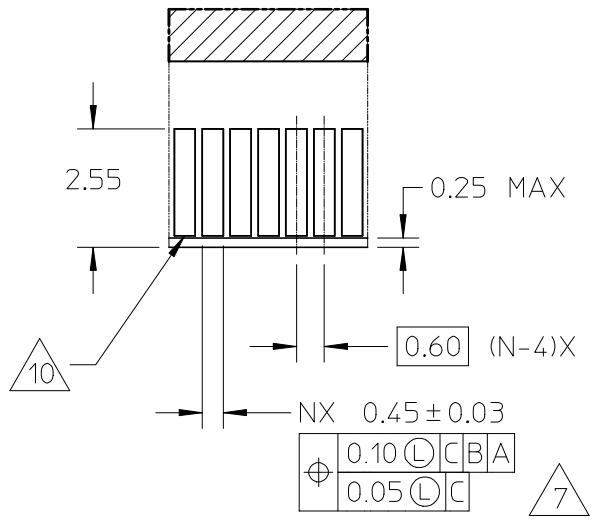
VIEW A-A



DETAIL Z



DETAIL X  
(OPTIONAL)



DETAIL Y

JEDEC SOLID STATE PRODUCT OUTLINE	TITLE 244 PIN DDR2/DDR3 MINI DIMM 0.60 mm LEAD CENTERS	ISSUE C	DATE FEB 2008	MO-244	SHEET 2 OF 7
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COMMON DIMENSION TABLE				
SYMBOL	MIN	NOM	MAX	NOTES
A1	6.00 BASIC			
A2	4.00	--	--	5.8
A3	20.00 BASIC			
A4	10.00 BASIC			
D	81.85	82.00	82.15	
D1	39.60 BASIC			
D2	78.00 BASIC			
e1	38.40 BASIC			
e2	33.60 BASIC			
N	244			
ISSUE	A			
REF	14-057			
NOTES	1,2,3			

VARIATIONS							
	AA			AB			
SYMBOL	MIN	NOM	MAX	MIN	NOM	MAX	NOTES
A	29.85	30.00	30.15	29.85	30.00	30.15	
D3	1.30 BASIC			2.30 BASIC			4
D4	1.30 BASIC			2.30 BASIC			
D5	1.90 BASIC			2.90 BASIC			
E	--	--	3.80	--	--	3.80	5
ISSUE	A						
REF	14-057						
NOTES	1,2,3						



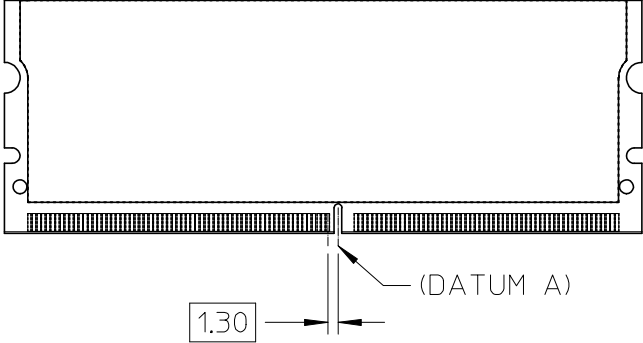
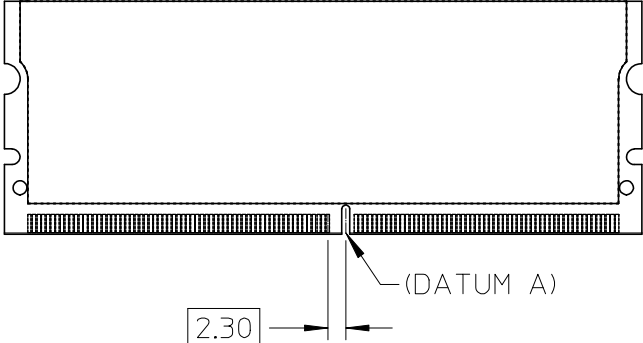
VARIATIONS							
	BA			BB			
SYMBOL	MIN	NOM	MAX	MIN	NOM	MAX	NOTES
A	29.85	30.00	30.15	29.85	30.00	30.15	
D3	1.30 BASIC			2.30 BASIC			4
D4	1.30 BASIC			2.30 BASIC			
D5	1.90 BASIC			2.90 BASIC			
E	--	--	6.45	--	--	6.45	5
ISSUE	B						
REF	14-072						
NOTES	1,2,3						

VARIATIONS							
	CA			CB			
SYMBOL	MIN	NOM	MAX	MIN	NOM	MAX	NOTES
A	29.85	30.00	30.15	29.85	30.00	30.15	
D3	1.30 BASIC			2.30 BASIC			4
D4	1.30 BASIC			2.30 BASIC			
D5	1.90 BASIC			2.90 BASIC			
E	--	--	7.25	--	--	7.25	5
ISSUE	B						
REF	14-072						
NOTES	1,2,3						

JEDEC SOLID STATE PRODUCT OUTLINE	TITLE 244 PIN DDR2/DDR3 MINI DIMM 0.60 mm LEAD CENTERS	ISSUE C	DATE FEB 2008	MO-244	SHEET 4 OF 7
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# MECHANICAL KEYING

## (FRONT VIEWS)

POWER SUPPLY 	
DDR2 1.8 V	
DDR3 1.5 V	

NOTES :

1. DIMENSIONING AND TOLERANCING CONFORM TO ASME Y14.5M-1994.
2. TOLERANCES ON ALL DIMENSIONS  $\pm 0.15$  UNLESS OTHERWISE SPECIFIED.
3. ALL DIMENSIONS ARE MM.

4 APPLICATION NOTE :  
VARYING THE POSITION OF THE NOTCH IDENTIFIES THE OPERATIONAL VOLTAGE: 1.8 VOLT (xA). 1.5 VOLT (xB).

5 DIMENSIONS APPLICABLE WHEN COMPONENTS MOUNTED ON BOTH SIDES.

6 CARD THICKNESS APPLIES ACROSS TABS AND INCLUDES PLATING AND/OR METALIZATION.

7 APPLICATION NOTE :  
RECOMMENDED PLATING FOR CONTACT PADS ARE ;  
1) PREFERABLE PLATING : ELECTROLYTIC GOLD PLATING 0.76 MICROMETERS MINIMUM OVER ELECTROLYTIC NI 2.00 MICROMETERS MINIMUM.  
2) ALTERNATIVE PLATING : GOLD PLATING 0.05-0.75 MICROMETERS OVER NI 2.00 MICROMETERS MINIMUM MUST USE AN ELECTRONIC CONTACT GRADE CORROSIVE BARRIER LUBRICANT.

8 BORDER OF COMPONENT AREA.

9 THE JC-45 COMMITTEE CONTROLS THE INFORMATION IN THIS COLUMN.  
IT IS SHOWN HERE FOR REFERENCE ONLY, AND IS SUBJECTED TO CHANGE.

10 APPLICATION NOTE :  
EDGE OF CONTACT PADS SHALL BE FREE OF BURRS AND EXTERNAL TIE BARS.

11 THE ADDITION OF THIS BEVEL IS A FABRICATION OPTION AND IS NOT REQUIRED.  
THE BEVEL AIDS THE INSERTION OF THE MODULE INTO THE CONNECTOR.  
THE BEVEL IS NOT TO HIT THE PLATED CONTACTS.

12 PATENT CLAIM :  
IT HAS BEEN STATED THAT U.S. PATENT NO. 5,227,664 (HELD BY HITACHI) MAY BE RELATED TO CERTAIN IMPLEMENTATIONS OF THIS PACKAGE OUTLINE.

JEDEC SOLID STATE PRODUCT OUTLINE	TITLE 244 PIN DDR2/DDR3 MINI DIMM 0.60 mm LEAD CENTERS	ISSUE C	DATE FEB 2008	MO-244	SHEET 6 OF 7
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# Change Record

If the changes involves any words added or deleted ( excluding deletion of accidentally repeated words ), the change is included. Punctuation changes may or may not be included.

Initial Issue : A	Date : APRIL 2004	Item : JC11.14-057
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Revision History
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Issue : B	Date : DECEMBER 2004	Item : JC11.14-072 & 14-075
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Location :	Change from :	Change to :
PAGE 2	1.00±0.05	1.00±0.10
PAGE 2	NEW HEIGHT VARIATIONS	BA, BB, CA, CB

Issue : C	Date : FEBRUARY 2008	Item : JC11.14-121
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Location :	Change from :	Change to :
PAGE 1	NEW POSITIONAL TOLERANCE	$\Phi$ 0.10 $\text{\textcircled{M}}$ CBA
PAGE 1	EDIT GD&T CONTROL FRAMES	REMOVE DIAMETER SYMBOLS
PAGE 1	NEW TEXT	"(OPTIONAL NOTCH)"
PAGE 1	$\Phi$ $\emptyset$ 0.10 $\text{\textcircled{M}}$ CBA	$\Phi$ 0.10 $\text{\textcircled{M}}$ CB
PAGE 2	CHAMFER 0.25/0.05	CHAMFER 0.35/0.05
PAGE 2	EDIT GD&T CONTROL FRAME	COMPOSITE TOLERANCE
PAGE 5	DEFINE DDR2 VOLTAGE KEY	DDR2 & 1.8 V
PAGE 5	DEFINE DDR3 VOLTAGE KEY	DDR3 & 1.5 V
PAGE 6 (NOTE 9)	JC-42.5	JC-45
PAGE 7	NEW PAGE	ADDED CHANGE RECORD PAGE
PAGES 1 TO 7	REVISED TITLE	INCLUDE TEXT "DDR3"

Issue :	Date :	Item :
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Location :	Change from :	Change to :