

VARIATIONS AB, BB, CB, GB, HB

JEDEC SOLID STATE
PRODUCT OUTLINE
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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

240 PIN DDR3 DIMM,
1.00MM PITCH

PACKAGE DESIGNATOR

DIM

NUMBER

MO-269

ISSUE

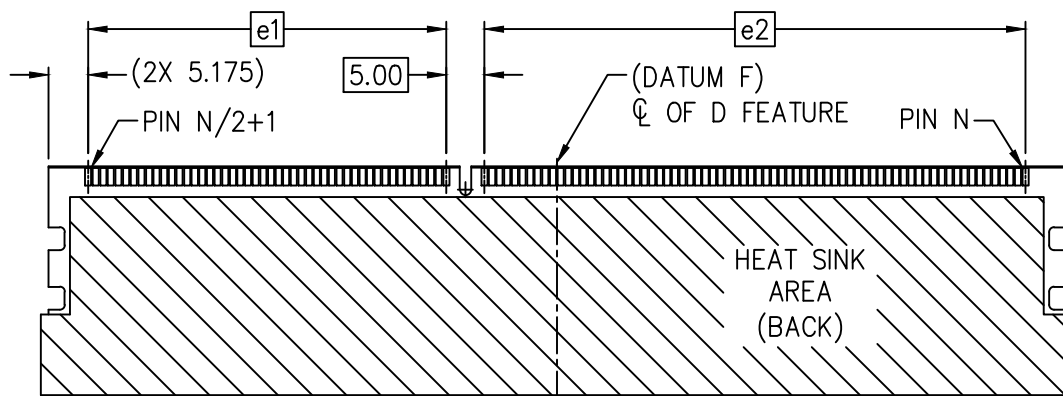
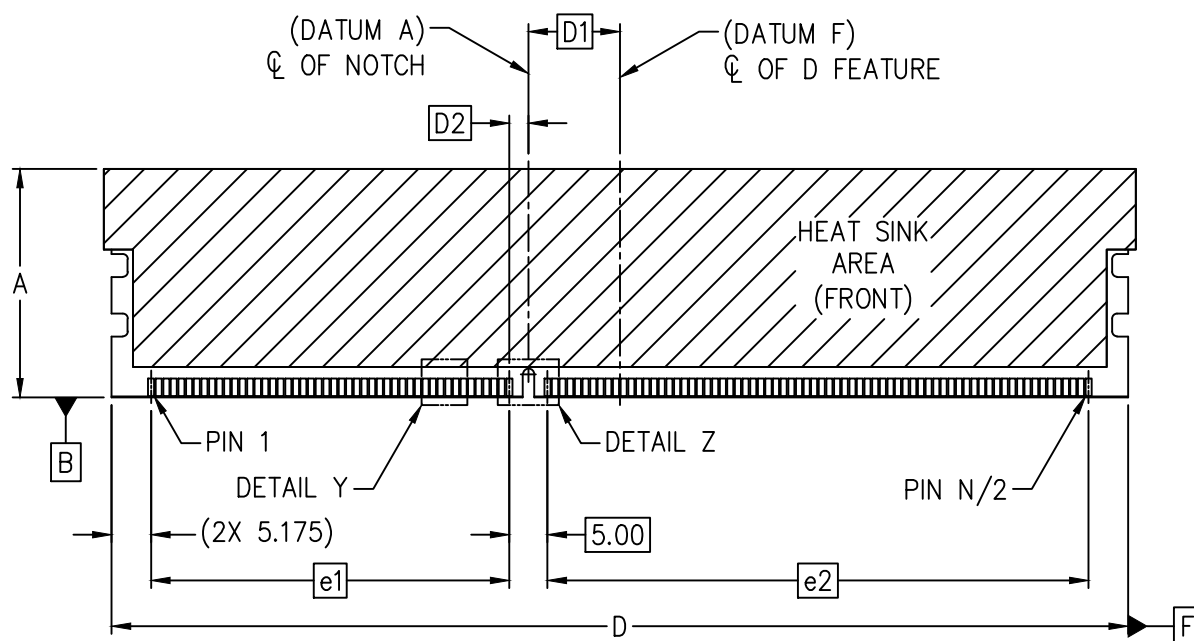
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DATE

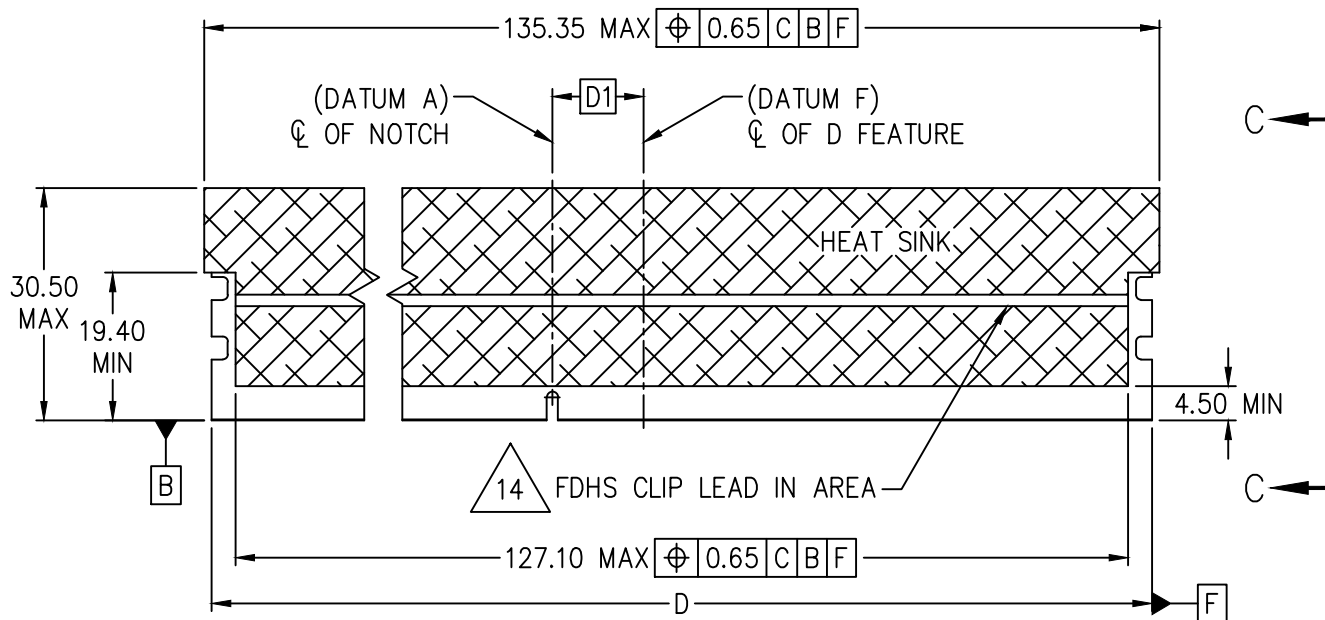
APR 2014

SHEET

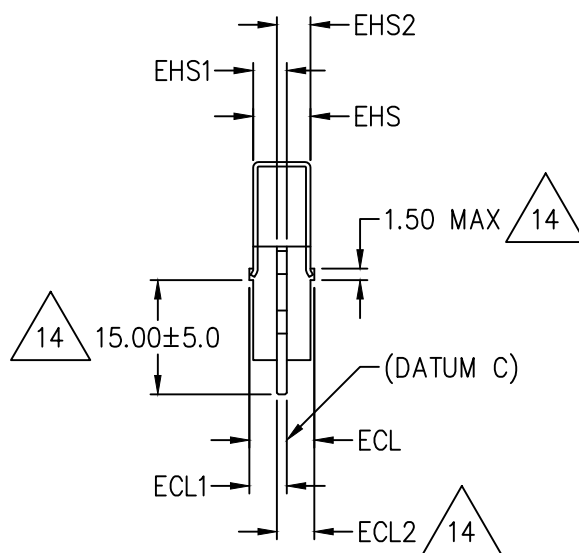
1 OF 28



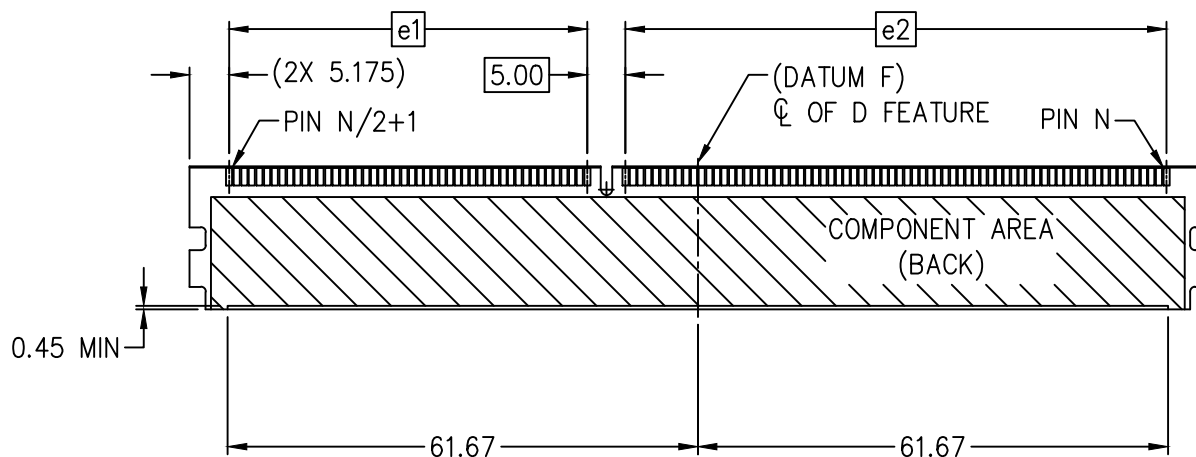
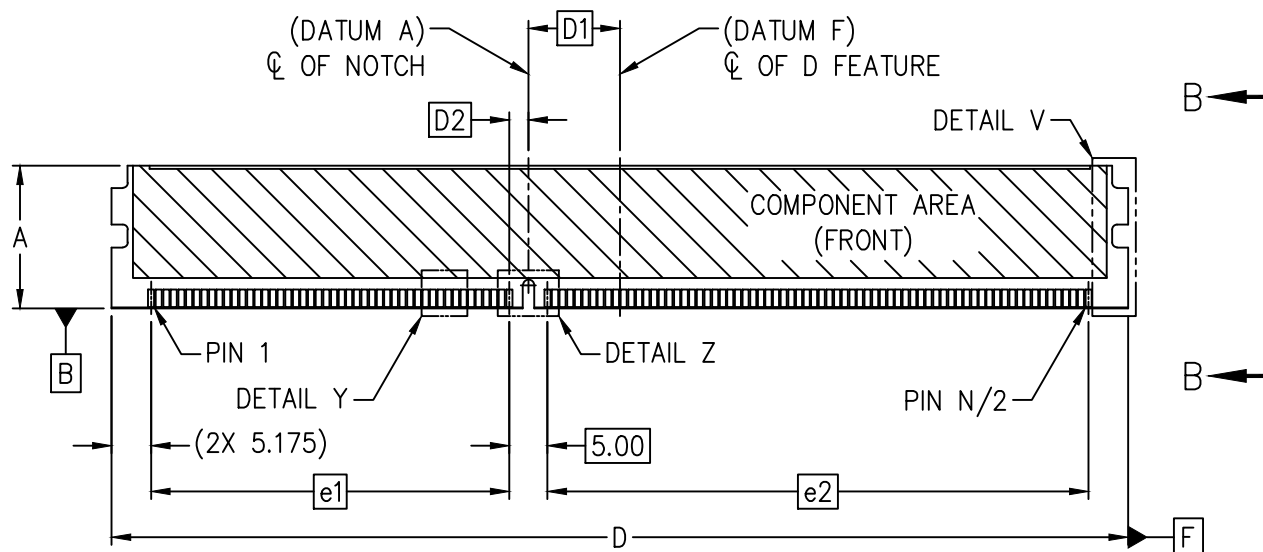
VARIATIONS HSAB, HSGB, HSHB HSJB



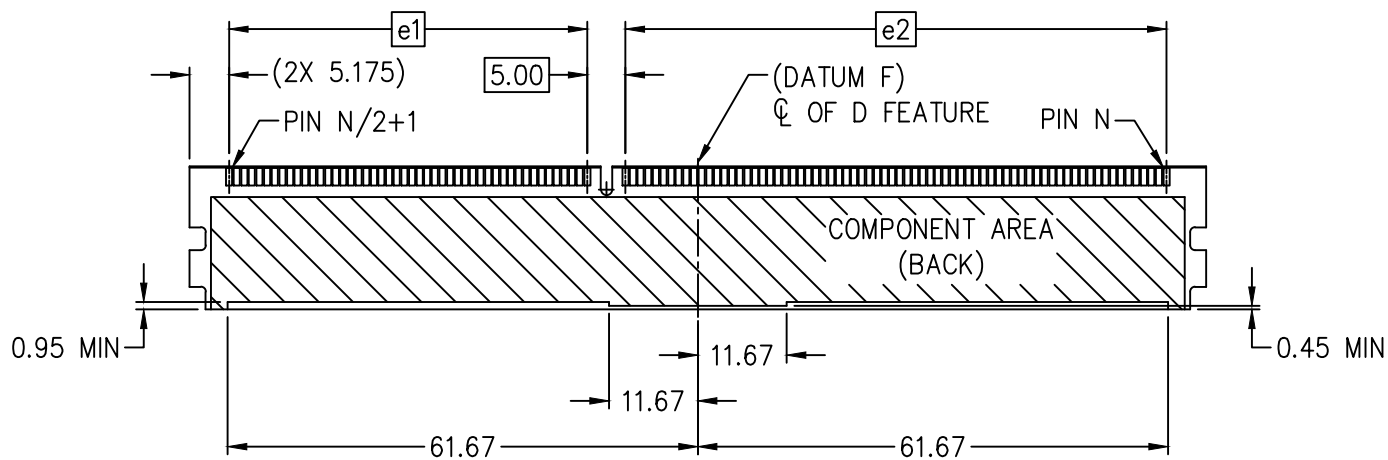
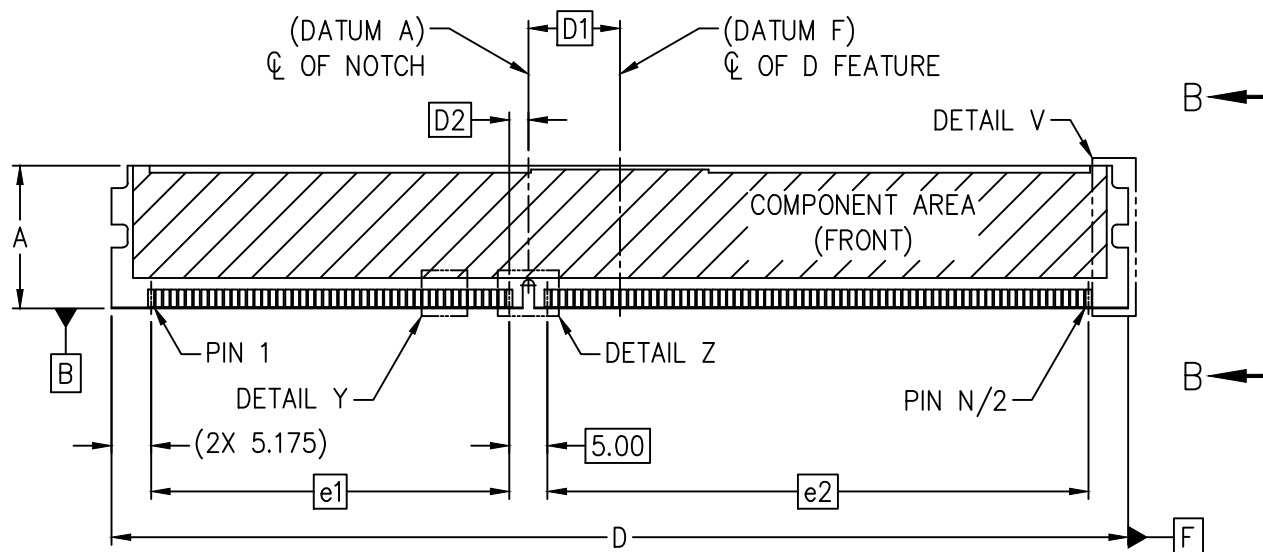
FDHS VOLUMETRIC KEEPIN
VARIATIONS HSAB, HSGB, HSHB, HSJB



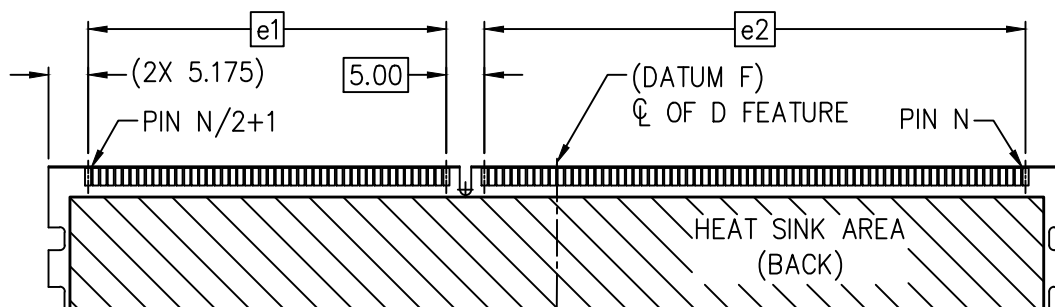
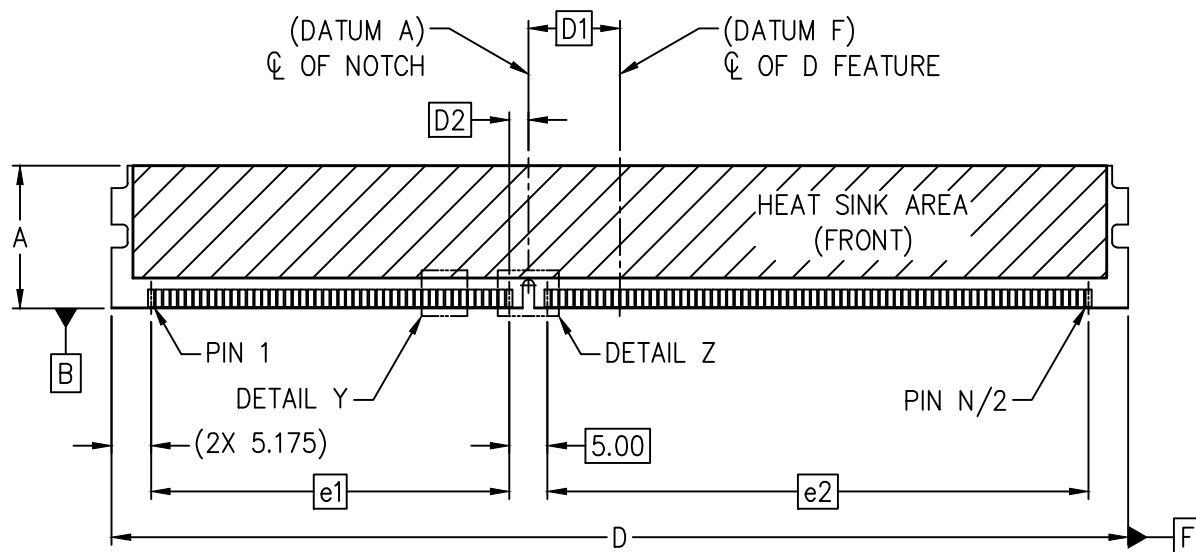
VIEW C-C



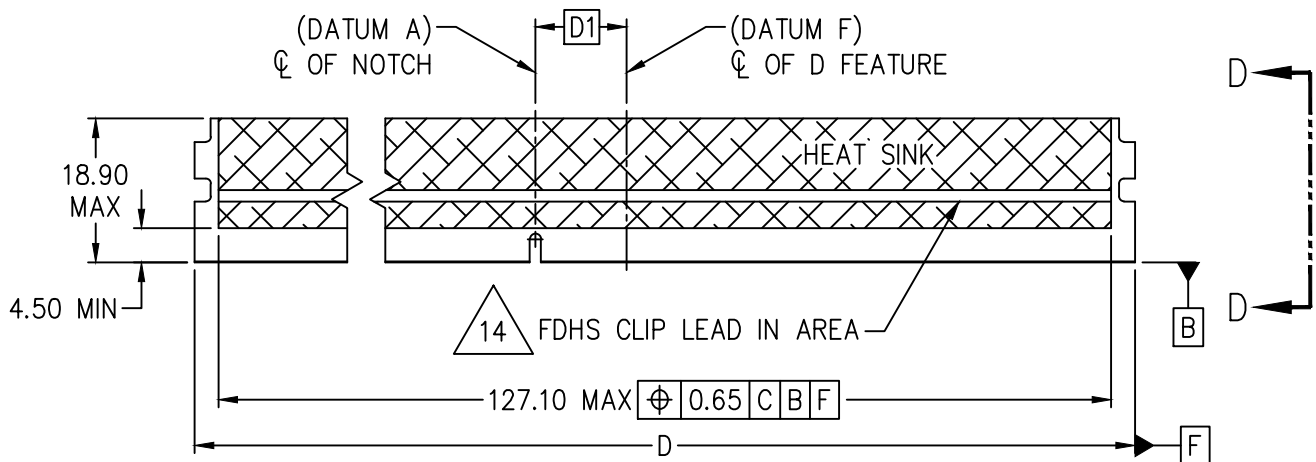
VARIATIONS DB, EB, FB WITHOUT HEAT SINK



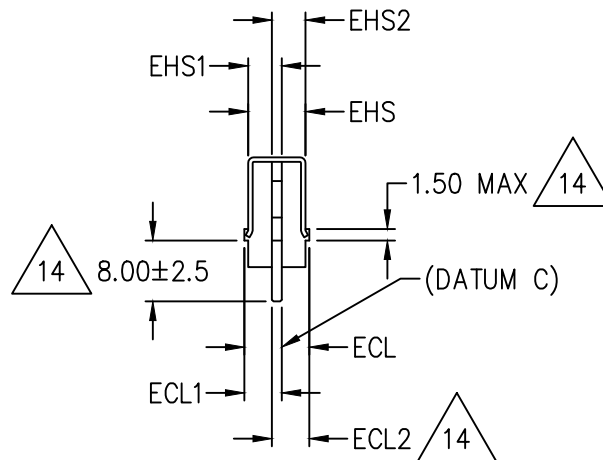
VARIATIONS DB, EB, FB WITH HEAT SINK



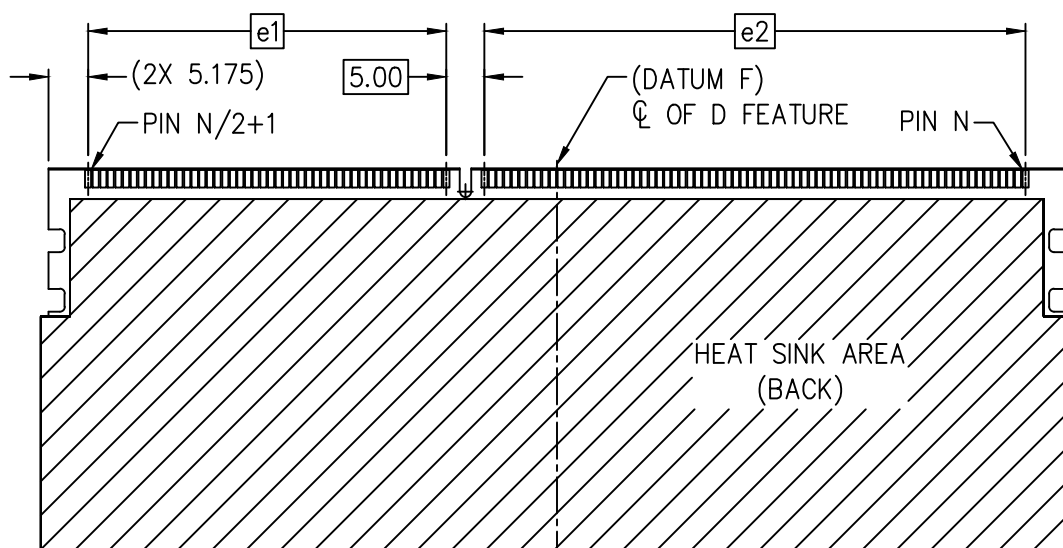
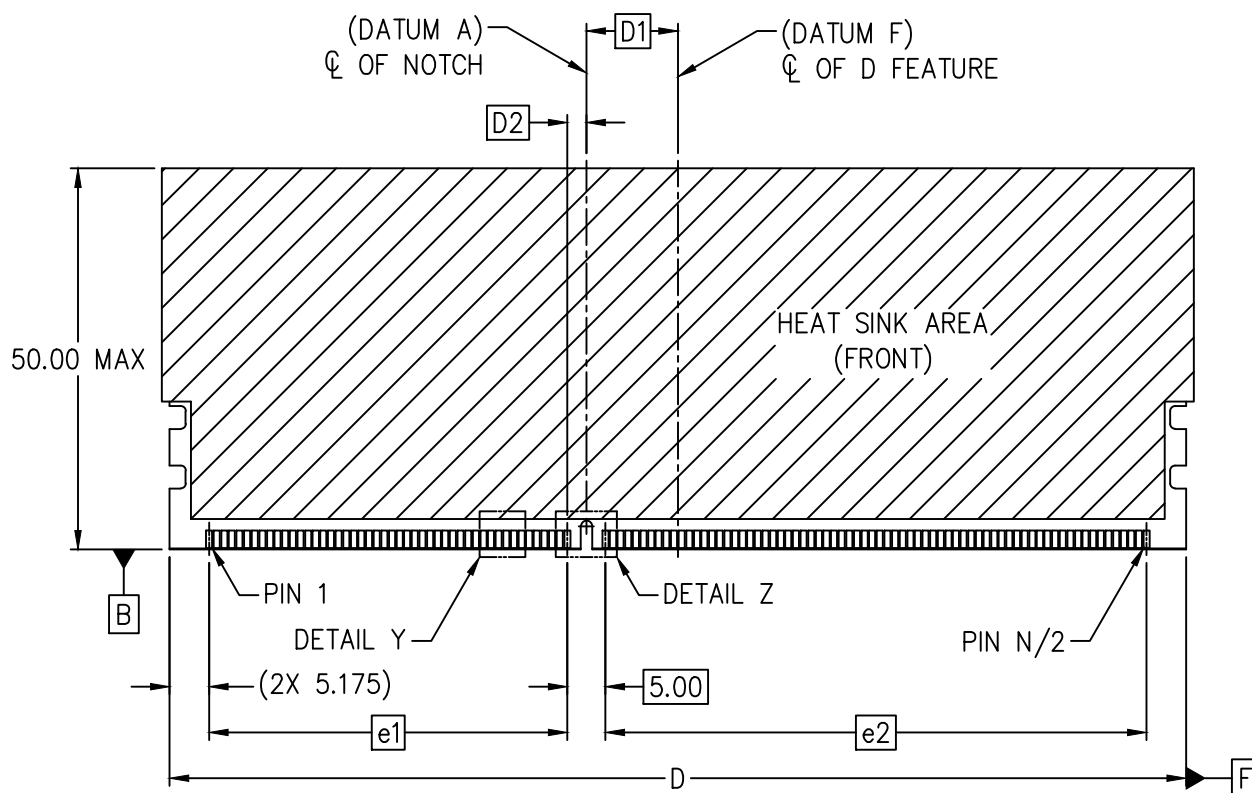
VARIATIONS HSDB, HSEB, HSFB



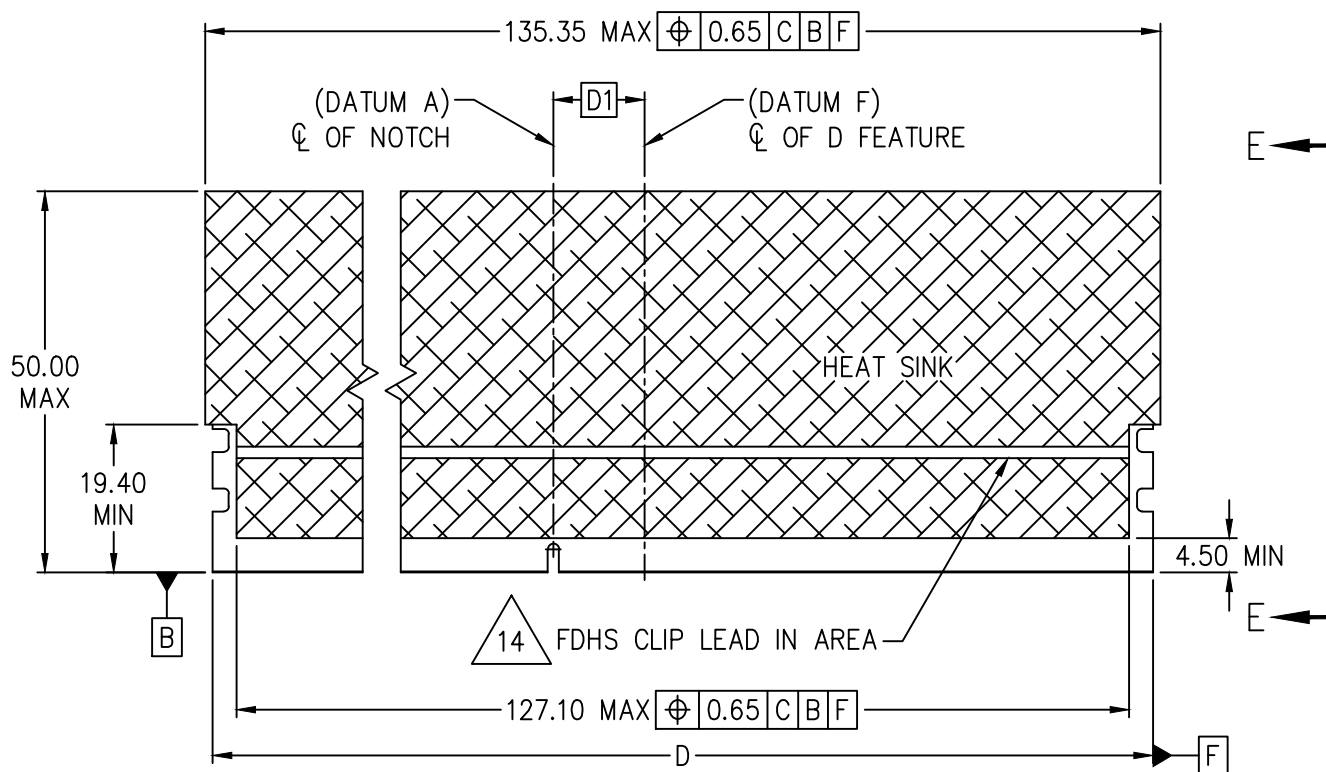
FDHS VOLUMETRIC KEEPIN FOR RDIMM
VARIATION HSDB



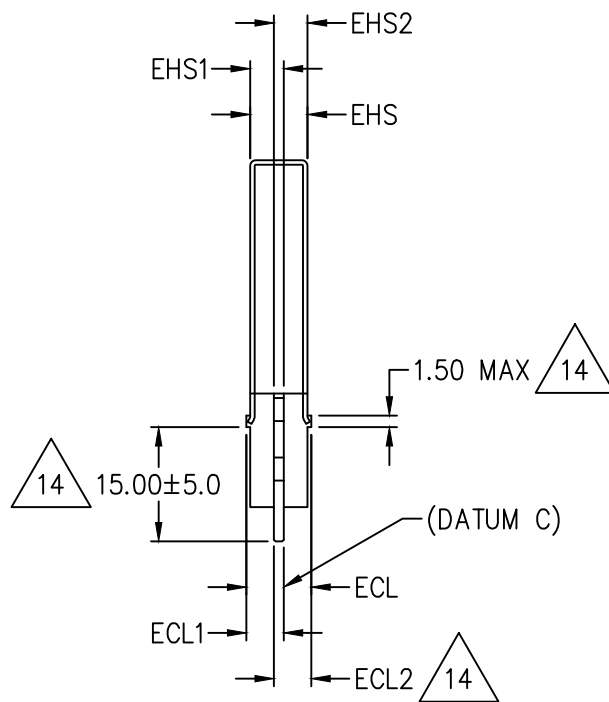
VIEW D-D



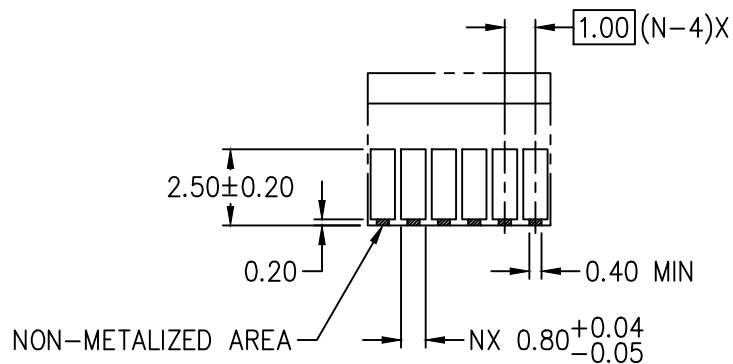
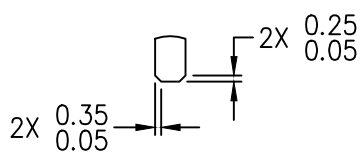
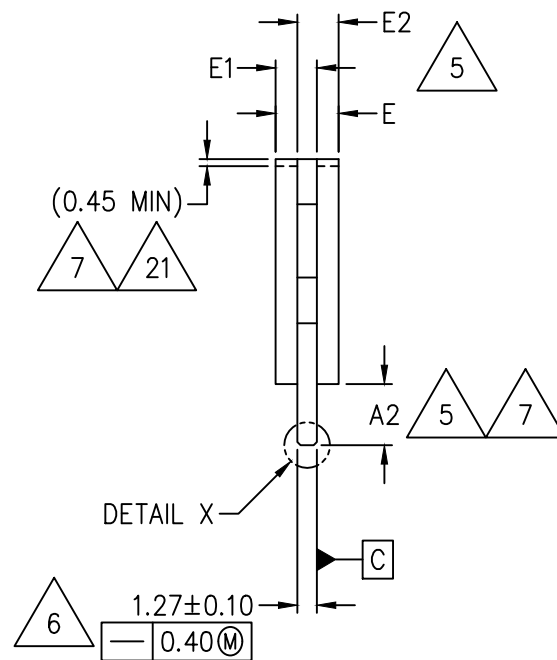
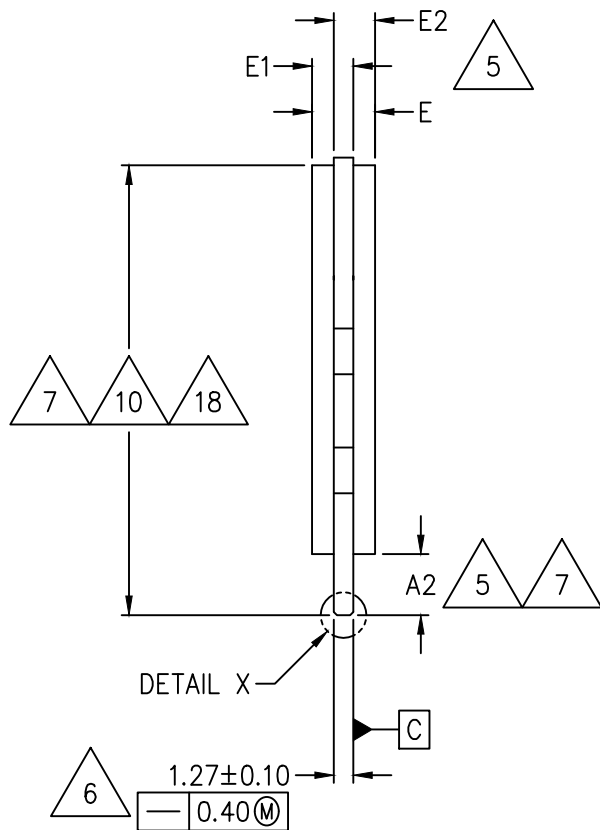
VARIATION THAB, USING VARIATIONS AB, BB, CB, GB, HB



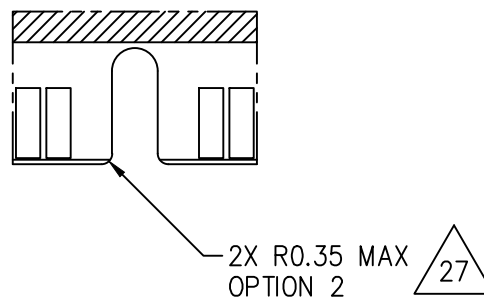
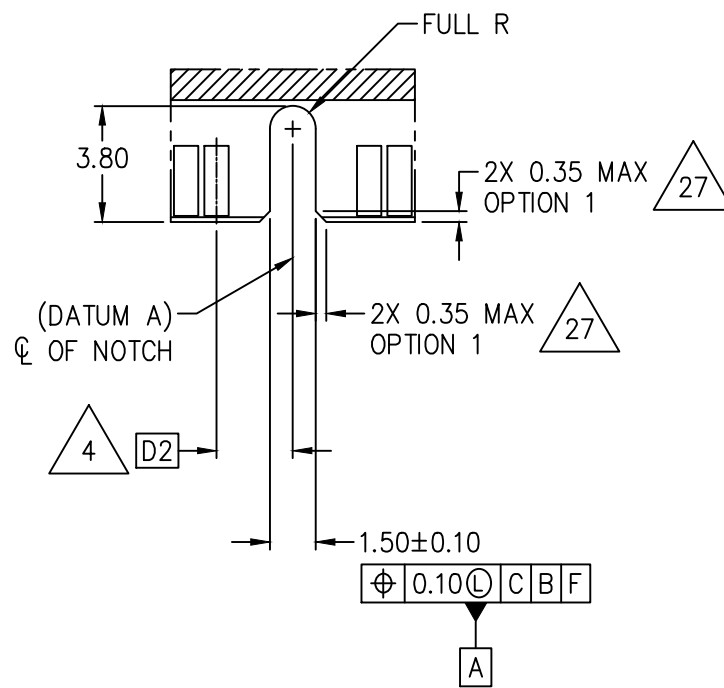
FDHS VOLUMETRIC KEEPIN
VARIATION THAB, USING VARIATIONS AB, BB, CB, GB, HB



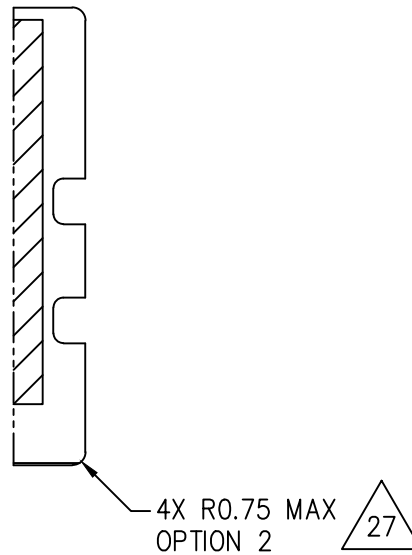
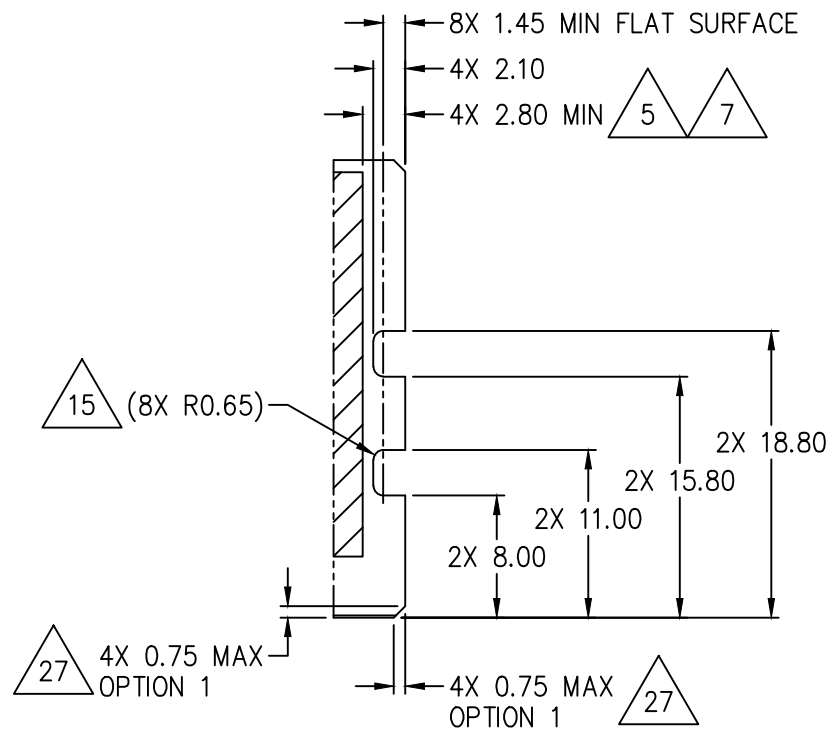
VIEW E-E



Φ	0.10Ⓢ	C	B	A
	0.05Ⓢ	C		

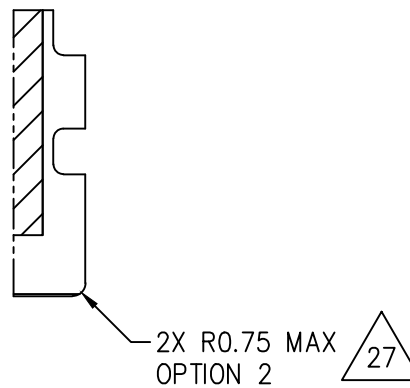
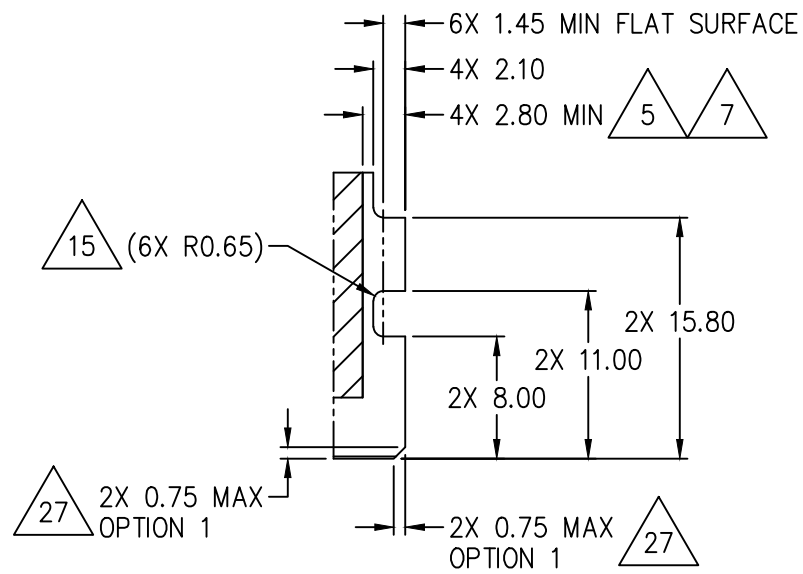


DETAIL Z



DETAIL W 12

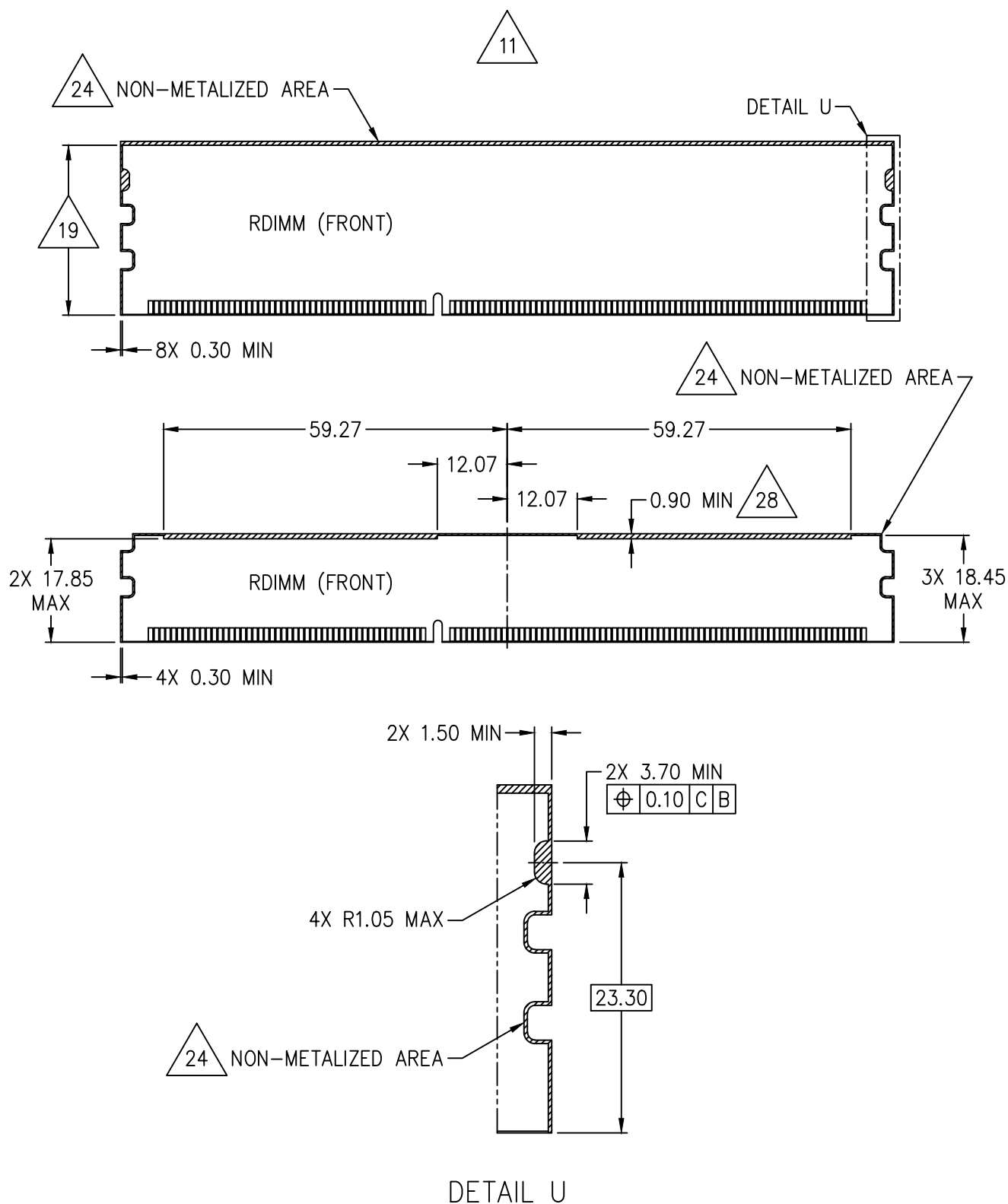
VARIATIONS AB, BB, CB, GB, HB, HSAB, HSGB, HSHB, HSJB, THAB



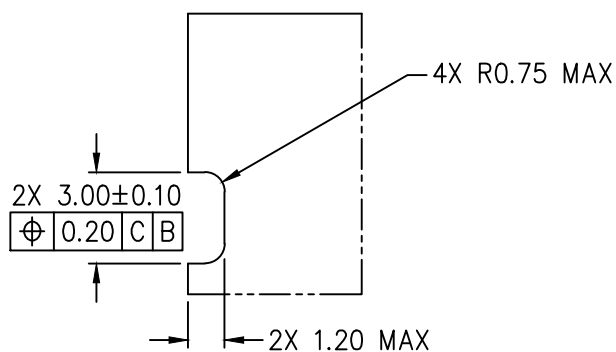
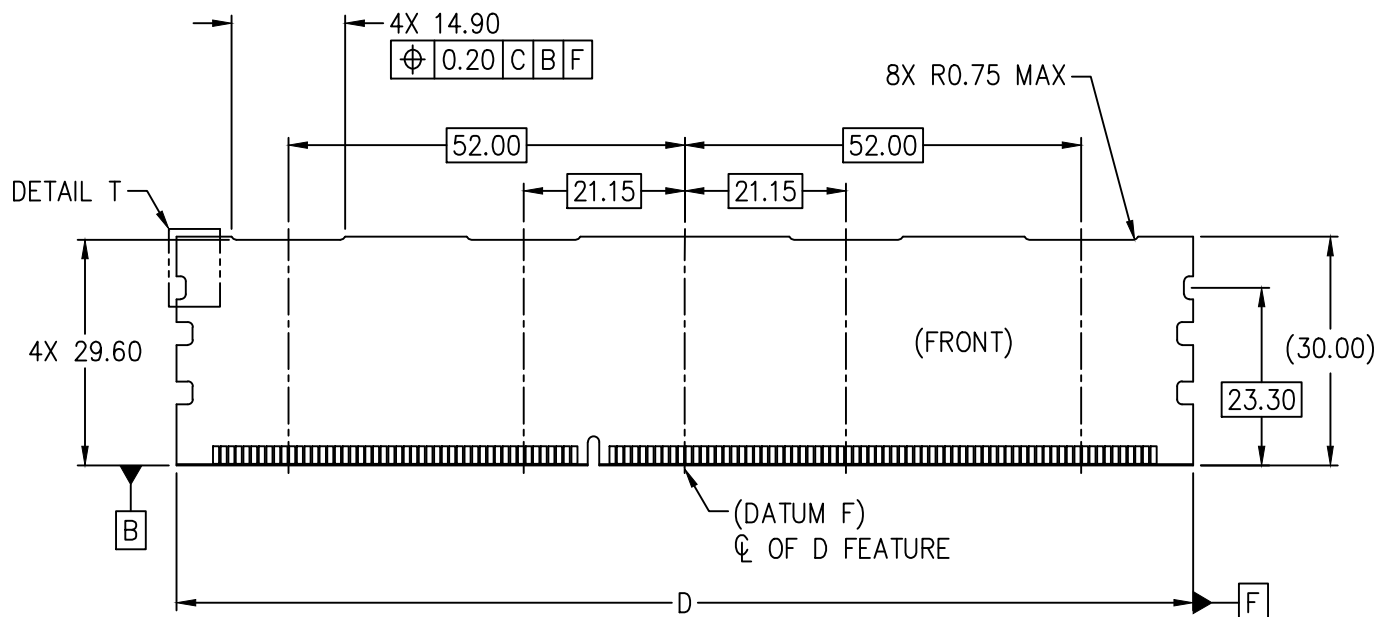
DETAIL V 12

VARIATIONS DB, EB, FB, HSDB, HSEB, HSFB

NON-METALIZED DEFINITION FOR OUTER LAYERS – BOTH SIDES
REFERENCE TO DIMM NOMINAL DIMENSIONS
OPTIONAL CHAMFER DETAIL NOT SHOWN

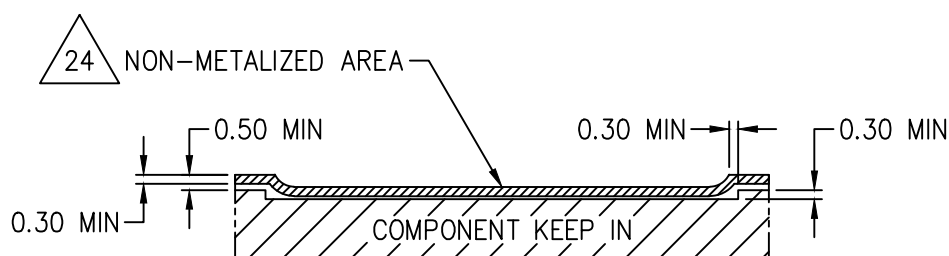
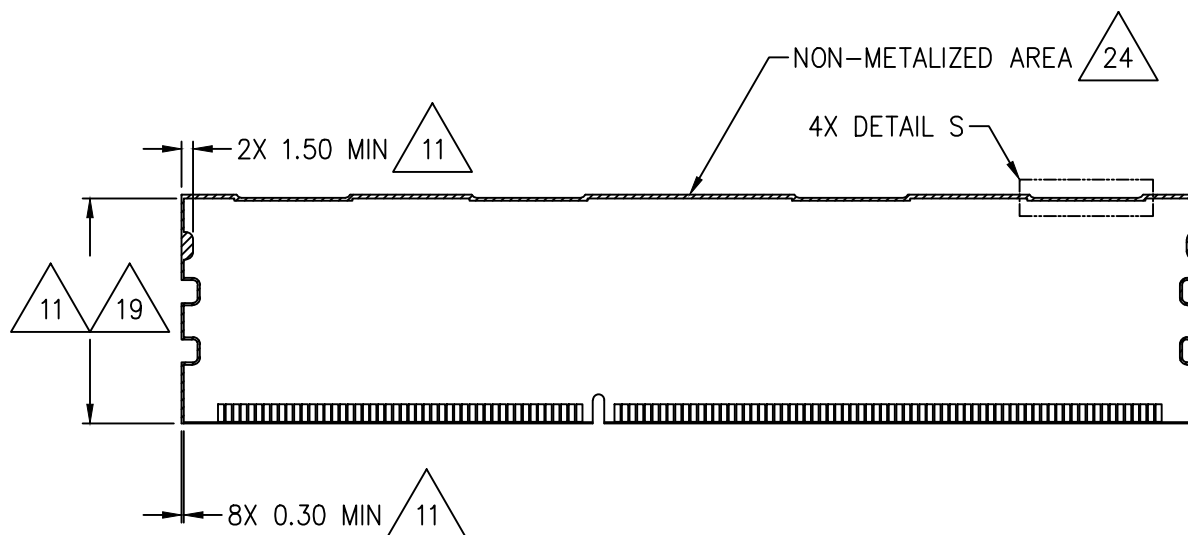


FDHS REFERENCE NOTCH – BOTH SIDES
OPTIONAL CHAMFER DETAIL NOT SHOWN



DETAIL T

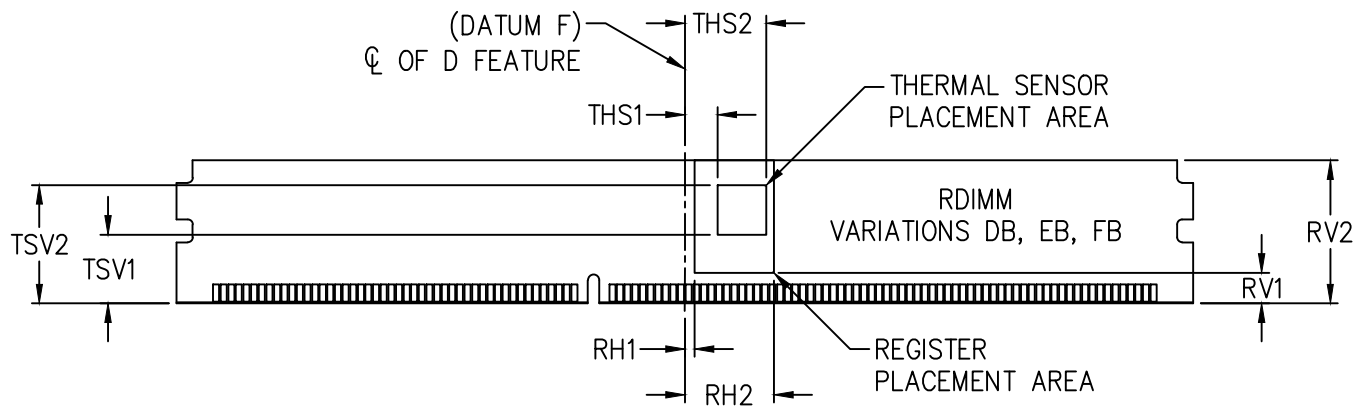
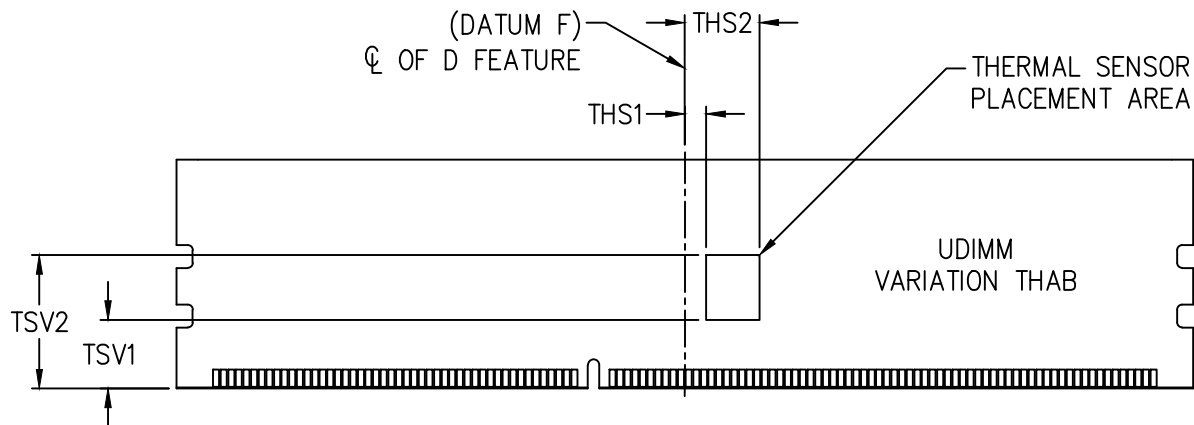
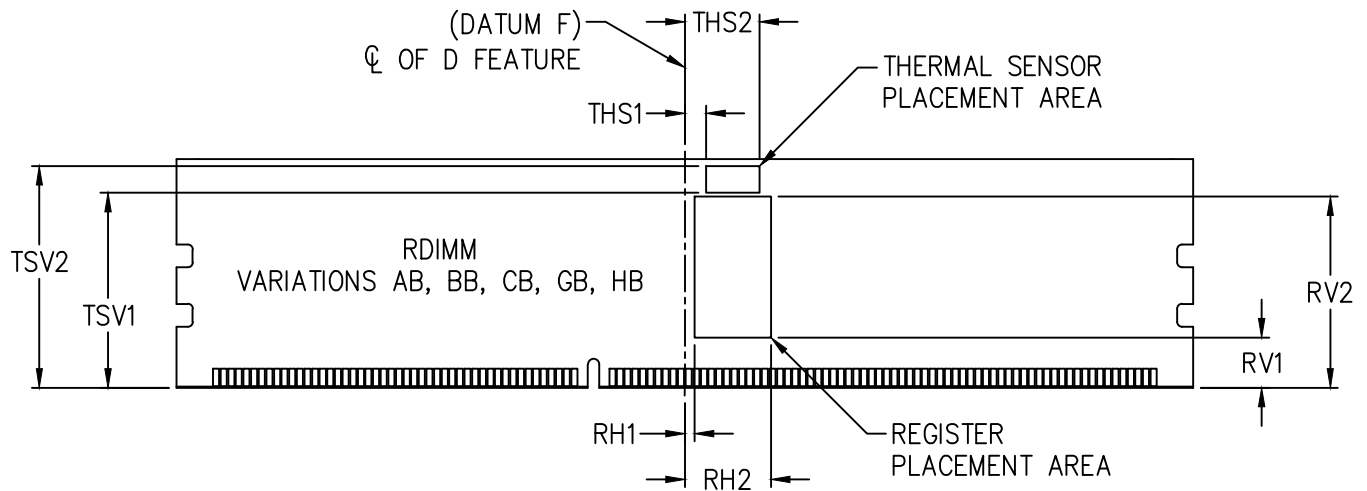
NON-METALIZED AREA AND COMPONENT KEEP IN – BOTH SIDES
REFERENCE TO VARIATION HSAB NOMINAL DIMENSIONS
OPTIONAL CHAMFER DETAIL NOT SHOWN



DETAIL S

THERMAL SENSOR AND REGISTER LOCATIONS OPTIONAL CHAMFER DETAIL NOT SHOWN

13



MECHANICAL KEYING
FRONT VIEW
OPTIONAL CHAMFER DETAIL NOT SHOWN

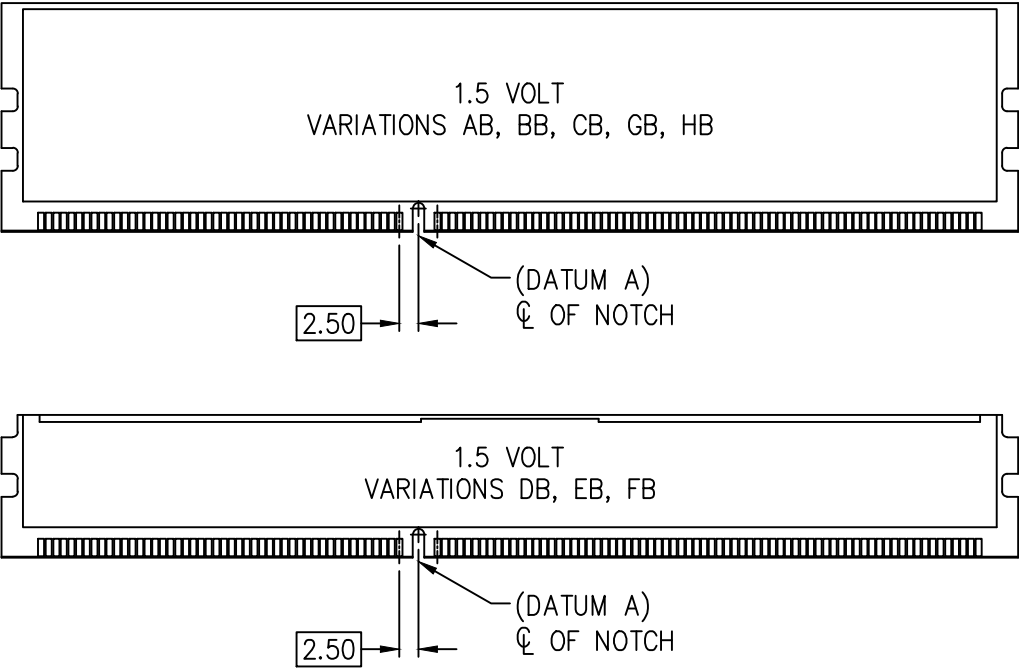


TABLE 1

COMMON DIMENSIONS				
SYMBOL	MIN	NOM	MAX	NOTES
A2	4.00	---	---	
D	133.20	133.35	133.50	
e1	47.00 BASIC			
e2	71.00 BASIC			
N	240			8
ISSUE	A			
REF	14-086			
NOTES	1, 2, 3			

TABLE 2

VARIATIONS							
SYMBOL	AB			BB			NOTES
	MIN	NOM	MAX	MIN	NOM	MAX	
A	29.85	30.00	30.50	29.85	30.00	30.50	
D1	12.00 BASIC			12.00 BASIC			4
D2	2.50 BASIC			2.50 BASIC			4
E	----	----	4.00	----	----	6.75	
E1	----	----	2.70	----	----	4.05	
E2	----	----	2.70	----	----	4.05	
NOTES	1, 2, 3, 10, 12						
REF	14-086, 14-160						
ISSUE	A						

TABLE 2 CONTINUED

VARIATIONS							
SYMBOL	CB			GB			NOTES
	MIN	NOM	MAX	MIN	NOM	MAX	
A	29.85	30.00	30.50	29.85	30.00	30.50	
D1	12.00 BASIC			12.00 BASIC			4
D2	2.50 BASIC			2.50 BASIC			4
E	----	----	7.55	----	----	4.00	
E1	----	----	4.45	----	----	2.70	
E2	----	----	4.45	----	----	2.70	
NOTES	1, 2, 3, 10, 12			1, 2, 3, 12, 18			
REF	14-086, 14-160			14-127, 14-160			
ISSUE	A			E			

TABLE 2 CONTINUED

VARIATIONS				
SYMBOL	HB			NOTES
	MIN	NOM	MAX	
A	29.85	30.00	30.50	
D1	12.00 BASIC			4
D2	2.50 BASIC			4
E	---	---	6.75	
E1	---	---	4.05	
E2	---	---	4.05	
NOTES	1, 2, 3, 12, 18			
REF	14–127, 14–160			
ISSUE	E			

TABLE 3

VARIATIONS							
SYMBOL	DB			EB			NOTES
	MIN	NOM	MAX	MIN	NOM	MAX	
A	18.60	18.75	18.90	18.60	18.75	18.90	
D1	12.00 BASIC			12.00 BASIC			4
D2	2.50 BASIC			2.50 BASIC			4
E	----	----	4.00	----	----	6.75	
E1	----	----	2.70	----	----	4.05	
E2	----	----	2.70	----	----	4.05	
NOTES	1, 2, 3, 12						
REF	14–086, 14–160						
ISSUE	A						

TABLE 3 CONTINUED

VARIATIONS				
SYMBOL	FB			NOTES
	MIN	NOM	MAX	
A	18.60	18.75	18.90	
D1	12.00 BASIC			4
D2	2.50 BASIC			4
E	----	----	7.55	
E1	----	----	4.45	
E2	----	----	4.45	
NOTES	1, 2, 3, 12			
REF	14–086, 14–160			
ISSUE	A			

TABLE 4

FDHS VARIATIONS							
SYMBOL	HSAB			THAB			NOTES
	MIN	NOM	MAX	MIN	NOM	MAX	
A	29.85	30.00	30.50	29.85	30.00	30.50	
D1	12.00 BASIC			12.00 BASIC			4
D2	2.50 BASIC			2.50 BASIC			4
EHS	----	----	7.55	----	----	7.55	
EHS1	----	----	4.45	----	----	4.45	
EHS2	----	----	4.45	----	----	4.45	
ECL	----	----	8.50	----	----	8.50	
ECL1	----	----	4.95	----	----	4.95	
ECL2	----	----	4.95	----	----	4.95	
ISSUE	D, E						
REF	14–120, 14–125						
NOTES	1, 2, 3						

TABLE 4 CONTINUED

FDHS VARIATIONS							
SYMBOL	HSDB			HSGB			NOTES
	MIN	NOM	MAX	MIN	NOM	MAX	
A	18.60	18.75	18.90	29.85	30.00	30.50	
D1	12.00 BASIC			12.00 BASIC			4
D2	2.50 BASIC			2.50 BASIC			4
EHS	----	----	7.55	----	----	7.55	
EHS1	----	----	4.45	----	----	4.45	
EHS2	----	----	4.45	----	----	4.45	
ECL	----	----	8.50	----	----	8.50	
ECL1	----	----	4.95	----	----	4.95	
ECL2	----	----	4.95	----	----	4.95	
ISSUE	G			E			
REF	14–129			14–127			
NOTES	1, 2, 3						

TABLE 4 CONTINUED

FDHS VARIATIONS							
SYMBOL	HSHB			HSJB			NOTES
	MIN	NOM	MAX	MIN	NOM	MAX	
A	29.85	30.00	30.50	30.20	30.35	30.50	
D1	12.00 BASIC			12.00 BASIC			4
D2	2.50 BASIC			2.50 BASIC			4
EHS	----	----	9.55	----	----	7.55	
EHS1	----	----	5.45	----	----	4.45	
EHS2	----	----	5.45	----	----	4.45	
ECL	----	----	10.00	----	----	8.50	
ECL1	----	----	5.95	----	----	4.95	
ECL2	----	----	5.95	----	----	4.95	
ISSUE	E			G			
REF	14–127			14–129			
NOTES	1, 2, 3						

TABLE 5

THERMAL SENSOR AND REGISTER PLACEMENT DIMENSIONS							
SYMBOL	RDIMM			RDIMM			
	VARIATIONS AB, BB, CB, GB, HB			VARIATIONS DB, EB, FB			
	MIN	NOM	MAX	MIN	NOM	MAX	NOTES
TSH1	2.80	---	---	4.30	---	---	
TSH2	---	---	9.80	---	---	10.70	
TSV1	25.60	---	---	9.00	---	---	
TSV2	---	---	29.10	---	---	15.50	
RH1	1.30	---	---	1.30	---	---	
RH2	---	---	11.30	---	---	11.70	
RV1	6.60	---	---	4.00	---	---	
RV2	---	---	25.60	---	---	18.75	
ISSUE	D			G			
REF	14–120			14–129			
NOTES	1, 2, 3			1, 2, 3			

TABLE 5 CONTINUED

THERMAL SENSOR AND REGISTER PLACEMENT DIMENSIONS				
SYMBOL	UDIMM			
	VARIATION THAB			
	MIN	NOM	MAX	NOTES
TSH1	2.80	----	----	
TSH2	----	----	9.80	
TSV1	9.00	----	----	
TSV2	----	----	17.50	
RH1	----	----	----	
RH2	----	----	----	
RV1	----	----	----	
RV2	----	----	----	
ISSUE	D			
REF	14–120			
NOTES	1, 2, 3			

NOTES:

1. DIMENSIONING AND TOLERANCING CONFORM ASME Y14.5–2009.

2. TOLERANCES ON ALL DIMENSIONS ± 0.15 UNLESS OTHERWISE SPECIFIED.

3. ALL DIMENSIONS ARE MILLIMETERS.

4 THE POSITION OF THE NOTCH IDENTIFIES THE OPERATIONAL VOLTAGE.
THE JC–45 COMMITTEE CONTROLS THE SIGNIFICANCE OF THE OFFSET KEY POSITION.
IT IS SHOWN FOR REFERENCE ONLY AND IS SUBJECT TO CHANGE.

5 DIMENSIONS APPLICABLE WHEN COMPONENTS MOUNTED ON BOTH SIDES.
PCB THICKNESS NOT TO BE EXCEEDED OUTSIDE OF COMPONENT AREA.

6 CARD THICKNESS APPLIES ACROSS TABS AND INCLUDES PLATING AND/OR METALIZATION.
STRAIGHTNESS CALLOUT APPLIES TO ZONE DEFINED BY THE 4.00MM CONTACT AREA
DIMENSION FOR THE ENTIRE LENGTH OF 133.35MM.

7 BORDER OF COMPONENT AREA.

8. N IS THE TOTAL NUMBER OF CIRCUIT CONTACTS (PINS, LEADS, TABS, PADS).

9 EDGE OF CONTACT PADS SPECIFIED BY THE NON–METALIZED AREA SHALL BE FREE
OF BURRS.

10 THE COMPONENT KEEPIN ON VIEW A–A DIFFERS BETWEEN UDIMM AND RDIMM.
UDIMM: 29.5MM MAX COMPONENT KEEP IN.
RDIMM: 29.2MM MAX COMPONENT KEEP IN.

11 NON–METALIZED AREA REFERENCE TO THE MEMORY MODULE AT NOMINAL DIMENSION
CONDITIONS AT ALL LAYERS.

12 VIEWS DEPICT DIMM WITHOUT THE FULL DIMM HEAT SPREADER (FDHS) ATTACHED.

13 VIEW DEPICTS PLACEMENT LOCATIONS FOR THE THERMAL SENSOR AND REGISTER FOR THE
RDIMM. THE THERMAL SENSOR PLACEMENT AREA IS FOR ALL RDIMM RAW CARDS. THE
REGISTER PLACEMENT AREA IS REQUIRED FOR ALL RDIMM RAW CARDS WHERE THE REGISTER
AND THE DRAM HEIGHTS ARE NOT EQUAL. PLEASE REFER TO DDR3 RDIMM SPECIFICATION
FOR SPECIFIC RAW CARD REQUIREMENTS.

14 DIMENSIONS AND HATCHED AREA DEPICT LOCATION FOR THE HEAT SPREADER CLIP LEAD IN
FEATURE WHICH MAY PROTRUDE HIGHER THAN THE EHS DIMENSION.

15 THE (R0.65) DIMENSION IS FOR REFERENCE ONLY. THE 1.45MM MIN FLAT SURFACE AND THE
2.10 DIMENSIONS CONTROL THE FEATURE.

16. THE THERMAL SENSOR MUST NOT CONTACT THE HEAT SPREADER OR THE THERMAL INTERFACE
MATERIAL. A 0.15 MM GAP IS REQUIRED.

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17. VARIATION HSAB IS DEFINED AS VARIATION AB WITH THE FULL DIMM HEAT SPREADER ATTACHED. VARIATION THAB IS DEFINED AS VARIATION AB WITH THE FULL TALL DIMM HEAT SPREADER ATTACHED. MODULE AB IS DEFINED FOR BOTH SINGLE AND DUAL DIE APPLICATIONS.



COMPONENT KEEP IN ON VIEW A-A FOR VARIATIONS GB AND HB:

UDIMM: 29.50MM MAX COMPONENT KEEP IN.

RDIMM: 29.50MM MAX COMPONENT KEEP IN EXCEPT INSIDE 0.30MM HORIZONTAL SPAN OF HEATSINK NOTCH EDGES WHERE KEEP IN IS 29.20MM MAX.



MAX NON-METALIZED AREA IS 29.30MM

FOR VARIATIONS GB AND HB: MAX NON-METALIZED AREA IS 29.70MM EXCEPT AREAS INSIDE THE 0.30MM HORIZONTAL SPAN OF HEATSINK NOTCH EDGES WHERE MAX NON-METALIZED AREA IS 29.30MM.

20. PASSIVE COMPONENTS LOCATED UNDER THE HEAT SINK AREA SHALL MAINTAIN MINIMUM CLEARANCE OF 0.13MM. IN THE EVENT THE MINIMUM COMPONENT CLEARANCE CANNOT BE MAINTAINED A SECONDARY ELECTRICAL INSULATOR MUST BE EMPLOYED TO PREVENT SHORTING.



FOR DEFINED DIMM RAW CARDS, THE PRACTICAL DISTANCE OF REGISTER COMPONENT TO UPPER PCB EDGE MAY BE SMALLER THAN 0.45MM MIN BUT MUST BE LARGER THAN 0.0MM MIN THIS EXCEPTION IS ONLY TOLERATED FOR THE REGISTER COMPONENT.

APPLICATION NOTES:



THE ADDITION OF THIS BEVEL IS A FABRICATION OPTION AND IS NOT REQUIRED. THE BEVEL IS NOT TO HIT THE PLATED CONTACTS.



RECOMMENDED PLATING FOR CONTACT PADS ARE:

1) GOLD PLATING 0.76 MICROMETERS MINIMUM OVER 2.00 MICROMETERS MINIMUM NICKEL.

2) GOLD PLATING 0.05 MICROMETERS MINIMUM OVER 0.25 MICROMETERS MINIMUM PALLADIUM OVER 2.00 MICROMETERS MINIMUM NICKEL

3) GOLD PLATING 0.05 MICROMETERS MINIMUM OVER 2.00 MICROMETERS MINIMUM NICKEL.

MODULE PLATING RECOMMENDATIONS TESTED PER INDUSTRY STANDARD EIA 364-1000.

RELIABILITY TESTING REQUIRES TEST MODULE, CONNECTOR, AND IDENTIFICATION OF TEST CONDITIONS.



'METALIZED' IS DEFINED AS ANY METAL SURFACE THAT HAS A RETURN PATH TO POWER SUPPLY OR GROUND, THROUGH A COMPONENT OR CONDUCTIVE PLANE VCC OR VDD, BLIND OR PLATED THROUGH HOLE (PTH), AS WELL AS NARROW OR WIDE TRACES. ANY SURFACE METALS SUCH AS CONNECTOR PIN IDENTIFICATION, PCB VENDOR CODE, ETC. THAT DO NOT HAVE A METALS AS A RETURN PATH ARE ACCEPTABLE.

'NON-METALIZED' IS DEFINED AS THE OPPOSITE TO 'METALIZED' AND DOES NOT INCLUDE ANY METAL OR CONDUCTIVE ELEMENTS THAT MAY CAUSE ELECTRICAL SHORT CIRCUIT. HOWEVER, ANY SURFACE METALS SUCH AS CONNECTOR PIN IDENTIFICATION, PCB VENDOR NAME OR CODE, ETC. THAT DOES NOT HAVE CONDUCTIVE RETURN PATH TO VCC OR VDD IS ACCEPTABLE.

- 25 VARIATION HSAB AND THAB FDHS REFERENCE NOTCH.
- 26 VARIATIONS GB AND HB ROUTE KEEP OUT AND COMPONENT KEEP IN REFERENCE.
- 27 OPTIONAL CHAMFER OR RADIUS.
- 28 WHEN MODULE IS DESIGNED FOR USE WITHOUT A HEAT SINK, THE 0.90 MIN NON-METALIZED AREA CAN BE REDUCED TO 0.30 MIM.

CHANGE RECORD

IF THE CHANGE INVOLVES ANY WORDS ADDED OR DELETED (EXCLUDING DELETION OF ACCIDENTALLY REPEATED WORDS), THE CHANGE IS TO BE INCLUDED BELOW. PUNCTUATION CHANGES MAY OR MAY NOT BE INCLUDED.

INITIAL ISSUE: A	DATE: DEC 2005	ITEM NUMBER: 14-086
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CHANGE RECORD HISTORY:

ISSUE: B	DATE: APR 2006	ITEM NUMBER: 14-095
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LOCATION:	CHANGED FROM:	CHANGED TO:
PAGE 4, DETAIL E & F	DEPTH OF LATCH NOTCH FROM 1.90	CHANGED TO 2.10±0.15
PAGE 4, DETAIL E & F	RADIUS: FROM R0.30 MIN	RADIUS: FROM R0.70 MAX

ISSUE: C	DATE: SEPT 2007	ITEM NUMBER: 14-115 & 116
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LOCATION:	CHANGED FROM:	CHANGED TO:
PAGE 5, ROUTE KEEP OUT	N/A	ADDED PAGE 5, DETAIL G
PAGE 4, VIEW B-B	0.50 MIN	ADDED NOTE 10
PAGE 4, VIEW D-D	N/A	ADDED VIEW D-D
PAGE 2	VIEW B-B	VIEW D-D
PAGE 10	N/A	ADDED NOTES 10 & 11
PAGES 10-11	APL. NOTES 10-12	RENAMED 12-14
PAGE RENUMBERING	PAGES 5, 6, 7, 8, 9, 10	PAGES 6, 7, 8, 9, 10, 11
PAGES 10-11	N/A	UPDATED FONT STYLE/SIZE
PAGE 9, VARIATIONS: DA, DB DC, EA, EB, EC, FA, FB, & FC	18.25 (MIN), 18.40 (NOM) & 18.55 (MAX)	18.60 (MIN), 18.75 (NOM) & 18.90 (MAX)

ISSUE: D	DATE: FEB 2008	ITEM NUMBER: 14-120
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LOCATION:	CHANGED FROM:	CHANGED TO:
PAGE 1 & 3	SHEET 3	SHEET 5
PAGE 2	N/A	ADDED PAGE 2
PAGE 4	N/A	ADDED PAGE 4
PAGE 5	0.20MM	0.35MM
PAGE 5 & 9	CENTER KEY ZONE	KEY ZONE
PAGE 6, NOTE 10	TOP REFERENCE	BOTTOM EDGE REFERENCE

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CHANGE RECORD

IF THE CHANGE INVOLVES ANY WORDS ADDED OR DELETED (EXCLUDING DELETION OF ACCIDENTALLY REPEATED WORDS), THE CHANGE IS TO BE INCLUDED BELOW. PUNCTUATION CHANGES MAY OR MAY NOT BE INCLUDED.

LOCATION:	CHANGED FROM:	CHANGED TO:
PAGE 6	POSITIONAL TOLERANCE	8.00MM AND 15.80MM
PAGE 7	0.70MM MAX TOP REFERENCE	29.30MM MAX BOTTOM REFERENCE
PAGE 7	R1.00 MAX	R1.05 MAX
SHEET 8	N/A	ADDED PAGE 8 TO DEFINE THERMAL SENSOR AND REGISTER LOCATIONS
PAGE 9	xA, xB AND xC	xB
PAGE 10	A1 AND A2	REMOVED A1 & A3
PAGE 10	N/A	ADDED THERMAL SENSOR VARIABLE TABLE
PAGE 11	N/A	UPDATED VARIATIONS TABLE
PAGE 12	N/A	ADDED HSAB FDHS VARIATIONS
PAGE 13	N/A	ADDED NOTES 12–17
PAGE 14	N/A	ADDED APPLICATION NOTE 21
PAGE 7	46.60	23.30 CORRECTED SCALE ERROR

ISSUE: E	DATE: AUG 2008	ITEM NUMBER: 14–126 & 127
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LOCATION:	CHANGED FROM:	CHANGED TO:
PAGE 1	N/A	ADDED REFERENCE TO VARIATIONS GB AND HB
PAGE 2 & 4	N/A	ADDED REFERENCE TO VARIATIONS HSGB AND HSHB
PAGE 4	N/A	ADDED DIM 4.50MM MIN
PAGE 5	NOTE NUMBER 19	RENUMBERED TO 21
PAGE 5	DETAIL D DIMENSIONAL TOLERANCE OF ± 0.05	+0.04/–0.05
PAGE 6	N/A	ADDED NOTE 18 AND REFERENCWE TO VARIATIONS GB & HB
PAGE 7	"29.30MM MAX" ROUTE KEEP OUT	NOTE 19
PAGE 8	N/A	ADDED HB & GB

CHANGE RECORD

IF THE CHANGE INVOLVES ANY WORDS ADDED OR DELETED (EXCLUDING DELETION OF ACCIDENTALLY REPEATED WORDS), THE CHANGE IS TO BE INCLUDED BELOW. PUNCTUATION CHANGES MAY OR MAY NOT BE INCLUDED.

LOCATION:	CHANGED FROM:	CHANGED TO:
PAGE 11	N/A	ADDED NEW LP VARIATIONS GB & HB
PAGE 12	N/A	ADDED NEW VARIATIONS HSGB & HSHB
PAGE 13	N/A	ADDED NOTE 18
PAGE 14	N/A	ADDED NOTES 19 & 20
PAGE 15	NOTES 18–21	RENUMBERED TO 20–23
PAGE 16	N/A	ADDED NOTE 24

ISSUE: F	DATE: NOV 2008	ITEM NUMBER: 14–125
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LOCATION:	CHANGED FROM:	CHANGED TO:
PAGE 1–3	KEY CONFIGURATION SEE PAGE 5	KEY CONFIGURATION SEE PAGE 7
PAGE 5	N/A	ADDED PAGE 5
PAGE 6	N/A	ADDED PAGE 6 TO DEFINE VOLUMETRIC KEEP IN FOR VARIATION THAB
PAGE 8	VIEW B–B & DETAIL E	ADDED TEXT 'THAB'
PAGE 10	N/A	ADDED TEXT 'THAB'
PAGE 14	N/A	ADDED THAB COLUMN 14–125 TO REF 'E' TO ISSUE
PAGE 15	N/A	REVISED NOTE 17
PAGE 17	NOTE 24	ADDED TEXT 'THAB'
PAGE 22	N/A	ADDED PAGE 22, ADDED CHANGE RECORD FOR 14–125

ISSUE: G	DATE: DEC 2009	ITEM NUMBER: 14–129
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LOCATION:	CHANGED FROM:	CHANGED TO:
PAGE 3	FLAT COMPONENT KEEP OUT AREA (TOP)	ADDED 0.95 MIN COMPONENT KEEP OUT AREA
PAGE 4	N/A	ADDED FDHS VOLUMETRIC KEEP IN FOR VLP RDIMM

CHANGE RECORD

IF THE CHANGE INVOLVES ANY WORDS ADDED OR DELETED (EXCLUDING DELETION OF ACCIDENTALLY REPEATED WORDS), THE CHANGE IS TO BE INCLUDED BELOW. PUNCTUATION CHANGES MAY OR MAY NOT BE INCLUDED.

LOCATION:	CHANGED FROM:	CHANGED TO:
PAGE 9	N/A	ADDED ROUTING KEEP OUT AREA FOR VLP RDIMM
PAGES 12, 14	N/A	ADDED VLP RDIMM, HSDB
PAGES 1, 2, 3, 5, 9, 18	CENTER LINES OF NOTCH CURVATURE WITHOUT DIMENSION	DELETE
PAGES 8, 16	N/A	ADDED NOTE 26
PAGE 10	N/A	ADD "DB, EB, FB" ON VARIATIONS
PAGES 2, 4	N/A	ADDED LR-DIMM, HSJB
PAGE 8	N/A	ADD HSAB, HSGB, HSHB, HSJB ON DETAIL E AND VIEW B-B

ISSUE: H	DATE: DECEMBER 2012	ITEM NUMBER: 14-134
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LOCATION:	CHANGED FROM:	CHANGED TO:
SHEET 4		NEW SHEET FOR HEAT SINK
SHEET 5, 10, & 27 NOTE 21	0.50 MIN	0.45 MIN
SHEET 11		ADDED SLOT CHAMFER/RADIUS OPTION 1 OR 2
SHEETS 12 & 13		ADDED MODULE CHAMFER/RADIUS OPTION 1 OR 2
SHEET 27		REMOVED PATENT CLAIM FROM APPLICATIONS NOTES
SHEET 28		NEW NOTE
ALL SHEETS		REDRAWN

ISSUE: I	DATE: FEBRUARY 2014	ITEM NUMBER: 14-160
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LOCATION:	CHANGED FROM:	CHANGED TO:
SHEET 7	... KEEPIN FOR VLP RDIMM...	... KEEPIN FOR RDIMM...
SHEET 14	VLP RDIMM (FRONT) ON VIEW WITH 18.45 MAX DIM	RDIMM (FRONT) ON VIEW WITH 18.45 MAX DIM
SHEET 17	VLP RDIMM, VARIATIONS DB, EB, FB	RDIMM, VARIATIONS DB, EB, FB
SHEETS 20 & 21	LP VARIATIONS	VARIATIONS

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CHANGE RECORD

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LOCATION:	CHANGED FROM:	CHANGED TO:
SHEET 22	VLP VARIATIONS	VARIATIONS
SHEET 27, NOTE 21	FOR DEFINED VLP DIMM ...	FOR DEFINED DIMM ...
SHEET 28, NOTE 26	LP VARIATIONS GB AND HB...	VARIATIONS GB AND HB...

ISSUE: J	DATE: APRIL 2014	ITEM NUMBER: 14-163
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LOCATION:	CHANGED FROM:	CHANGED TO:
SHEET 11	0.11 MAX, R0.2 MAX	0.35 MAX, R0.35 MAX