

FIGURE 1 PRINCIPAL DIMENSIONS & DATUMS

JEDEC SOLID STATE PRODUCT OUTLINES	TITLE PLASTIC QUAD FLAT PACK .025" LEAD SPACING (GULLWING)	ISSUE B	DATE 10/90	MO-069	PAGE 1 OF 13
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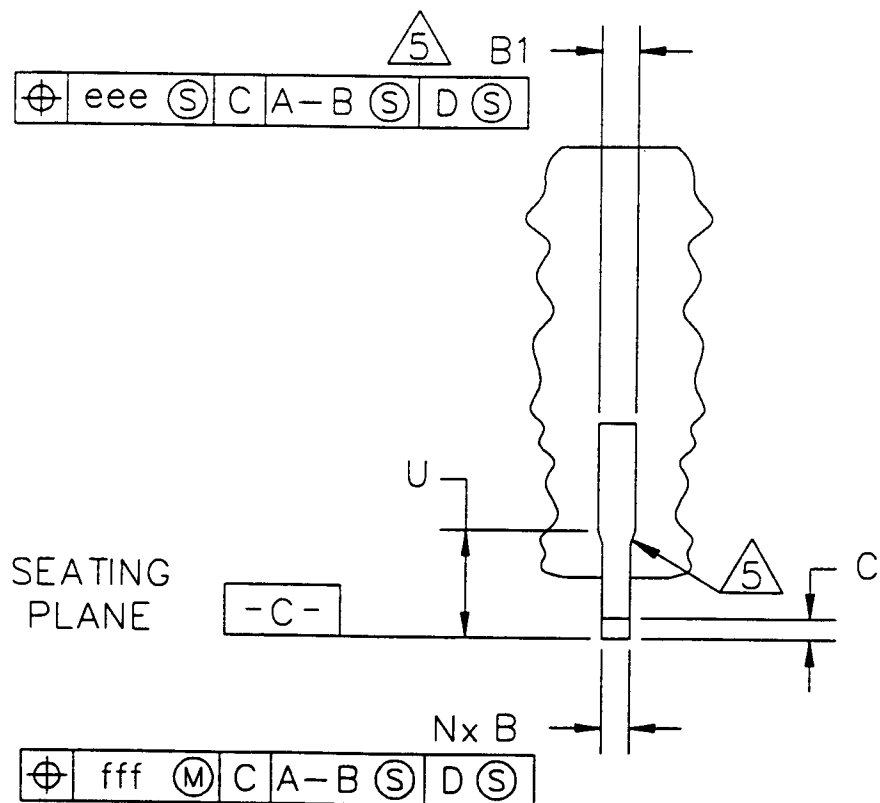


FIGURE 2 — TERMINAL DETAIL

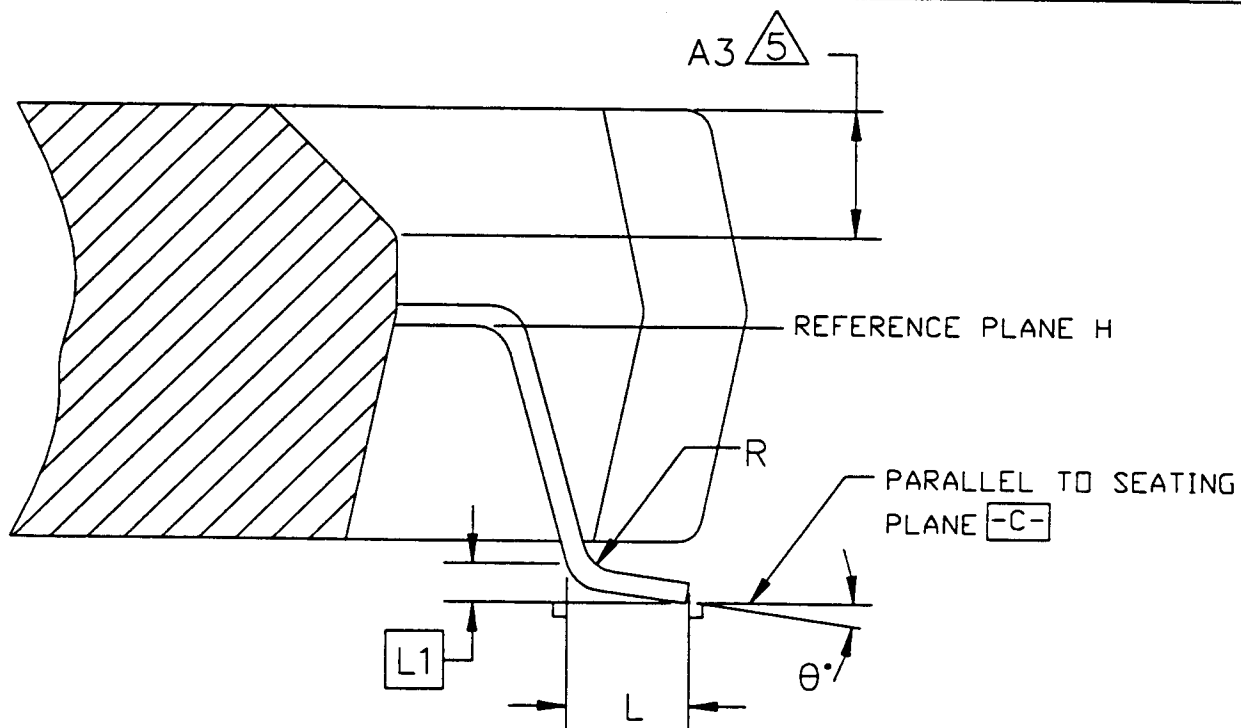


FIGURE 3 — SECTION A-A

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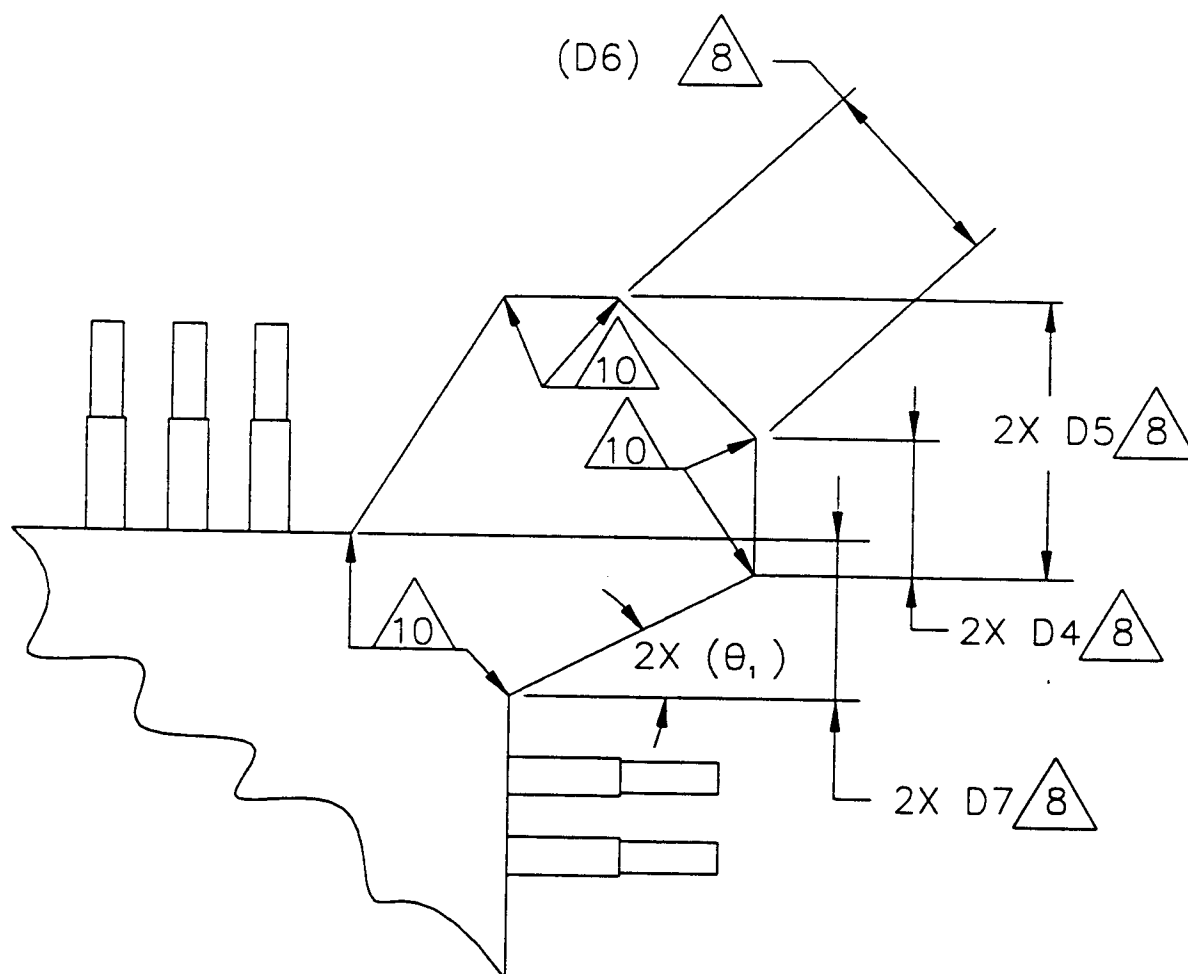


FIGURE 4 (TYP ALL CORNERS)

SYMBOL	COMMON DIMENSIONS INCHES		NOTE
	MIN	MAX	
A	---	.180	
A1	.020	.040	
A2	.130	.150	
A3	.042	.056	
B	.008	.012	10
B1	.008	.016	10
C	.0055	.0080	
D4	.035	---	8
D5	.076	.080	8
D6	.060 (REF)		8
D7	.048	.052	8
e	--.025 BASIC--		
L	.036	.046	
L1	--.010 BASIC--		
R	---	.012	
U	.035	---	
aaa	---	.010	
bbb	---	.012	
ccc	---	.002	
ddd	---	.004	
eee	---	.006	
fff	---	.006	
ggg	---	.005	
hhh	---	.016	
$\theta$	0	8°	
$\theta_1$	32° (REF)		

SYMBOL	VARIATIONS ALL DIMENSIONS IN INCHES							
	AA	NOTE	AB	NOTE	AC	NOTE	AD	NOTE
	BASIC		BASIC		BASIC		BASIC	
D	.580	4	.680	4	.780	4	.880	4
D1	.450	6,8	.550	6,8	.650	6,8	.750	6,8
D2	.600	6,8	.700	6,8	.800	6,8	.900	6,8
D3	.300	8	.400	8	.500	8	.600	8
E	.580	4	.680	4	.780	4	.880	4
E1	.450	6,8	.550	6,8	.650	6,8	.750	6,8
E2	.600	6,8	.700	6,8	.800	6,8	.900	6,8
E3	.300	8	.400	8	.500	8	.600	8
N	52		68		84		100	
NOTE	1,9							
REF.	11-285							
ISSUE	B							

SYMBOL	VARIATIONS ALL DIMENSIONS IN INCHES							
	AE	NOTE	AF	NOTE	AG	NOTE	AH	NOTE
	BASIC		BASIC		BASIC		BASIC	
D	1.080	4	1.280	4	1.480	4	1.780	4
D1	.950	6,8	1.150	6,8	1.350	6,8	1.650	6,8
D2	1.100	6,8	1.300	6,8	1.500	6,8	1.800	6,8
D3	.800	8	1.000	8	1.200	8	1.500	8
E	1.080	4	1.280	4	1.480	4	1.780	4
E1	.950	6,8	1.150	6,8	1.350	6,8	1.650	6,8
E2	1.100	6,8	1.300	6,8	1.500	6,8	1.800	6,8
E3	.800	8	1.000	8	1.200	8	1.500	8
N	132		164		196		244	
NOTE	1,9							
REF.	11-285							
ISSUE	B							

NOTES:

1 ALL DIMENSIONS AND TOLERANCES CONFORM TO ANSI Y14.5M-1982.



2 REFERENCE PLANE "H" LOCATED AT MOLD PARTING LINE AND COINCIDENT WITH BOTTOM OF LEAD, WHERE IT EXITS PLASTIC BODY.



3 DATUM -A-B- AND -D- TO BE DETERMINED WHERE CENTER LEADS EXIT PLASTIC BODY AT REFERENCE PLANE "H".



4 TO BE DETERMINED AT SEATING PLANE -C-.



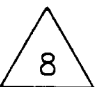
5 OPTIONAL FEATURE.



6 DIMENSIONS D1 AND E1 DO NOT INCLUDE MOLD PROTRUSION. ALLOWABLE MOLD PROTRUSION IS .010" PER SIDE ON D1 AND E1 DIMENSIONS, AND .007" PER SIDE ON D2 AND E2 DIMENSIONS



7 DETAILS OF PIN 1 IDENTIFIER ARE OPTIONAL BUT MUST BE CONTAINED WITHIN THE ZONE INDICATED. MAX WIDTH = .075" MAX LENGTH = .105".



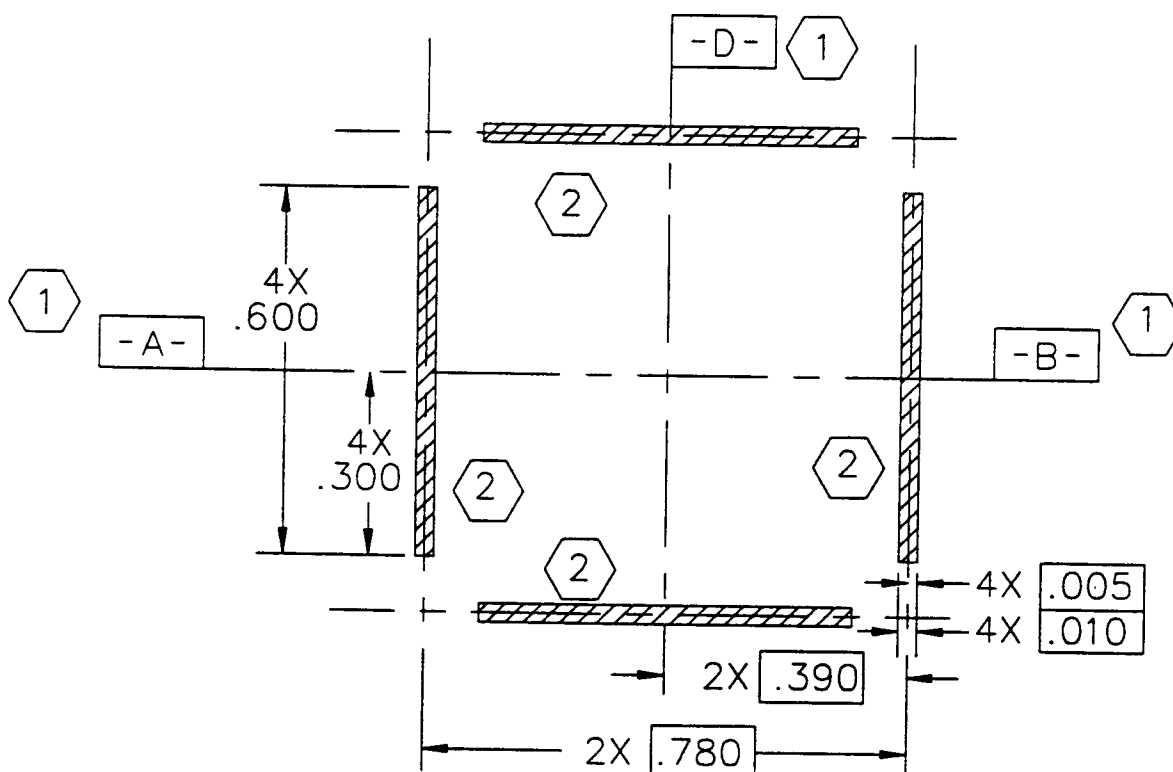
8 THESE DIMENSIONS TO BE DETERMINED AT REFERENCE PLANE "H".

9 ALL DIMENSIONS ARE IN INCHES.



10 THIS FEATURE MAY BE A CHAMFER OR RADIUS.

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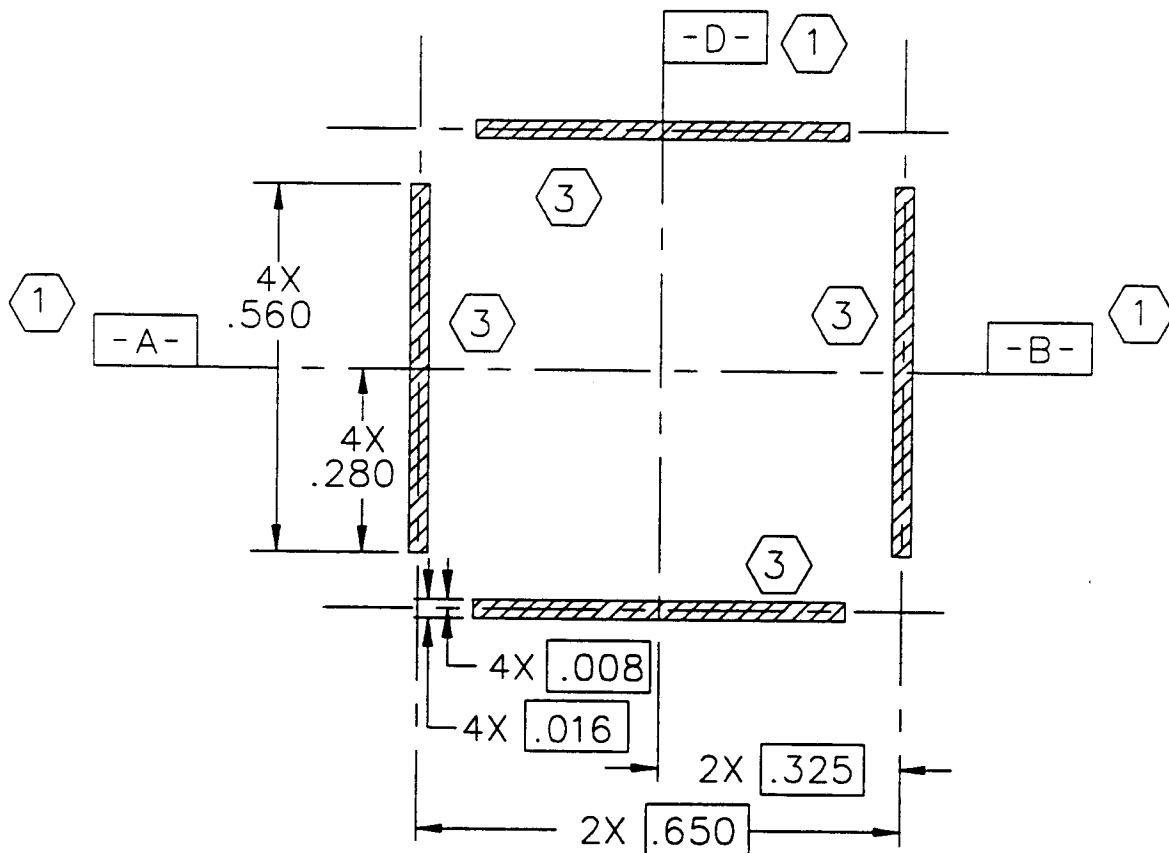


GAGE-D TERMINAL TIPS  
VARIATION AC  
TOLERANCE aaa



SEE NOTES FOR GAGES



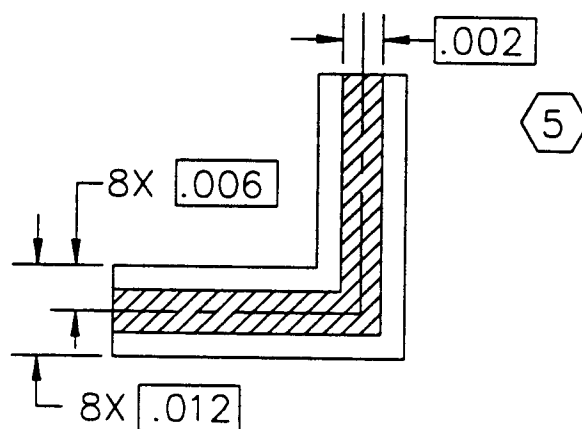
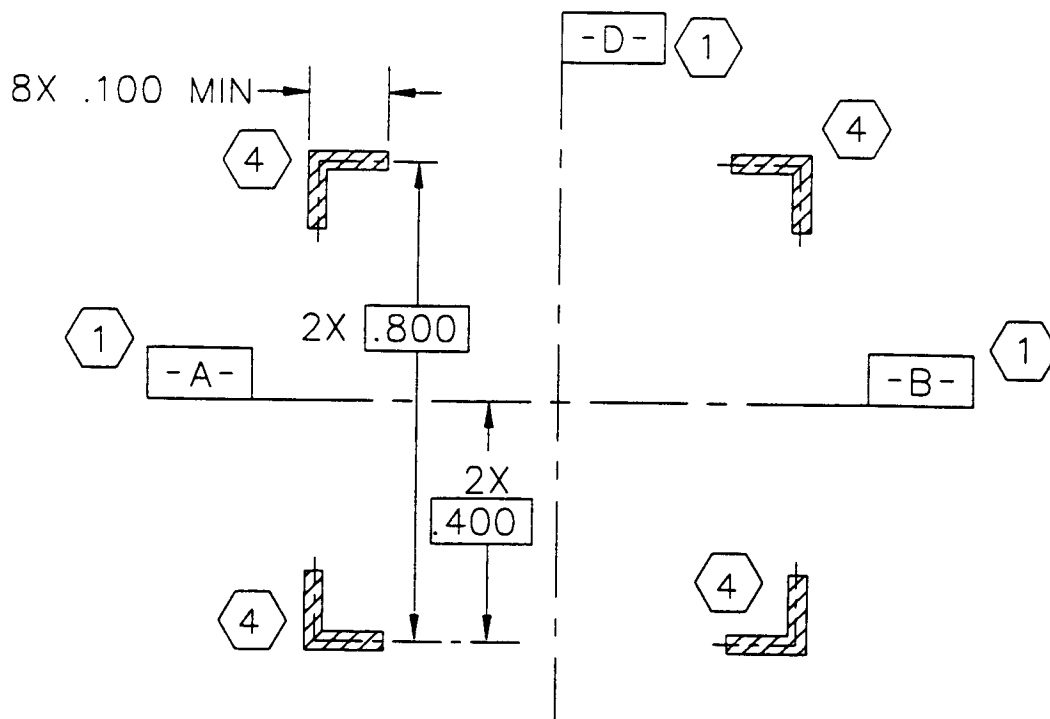


GAGE-D1 PACKAGE SIDES  
VARIATION AC  
TOLERANCE hhh



SEE NOTES FOR GAGES

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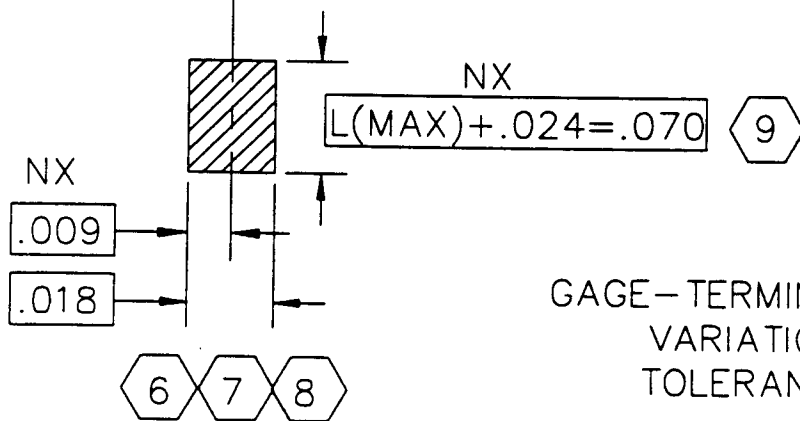
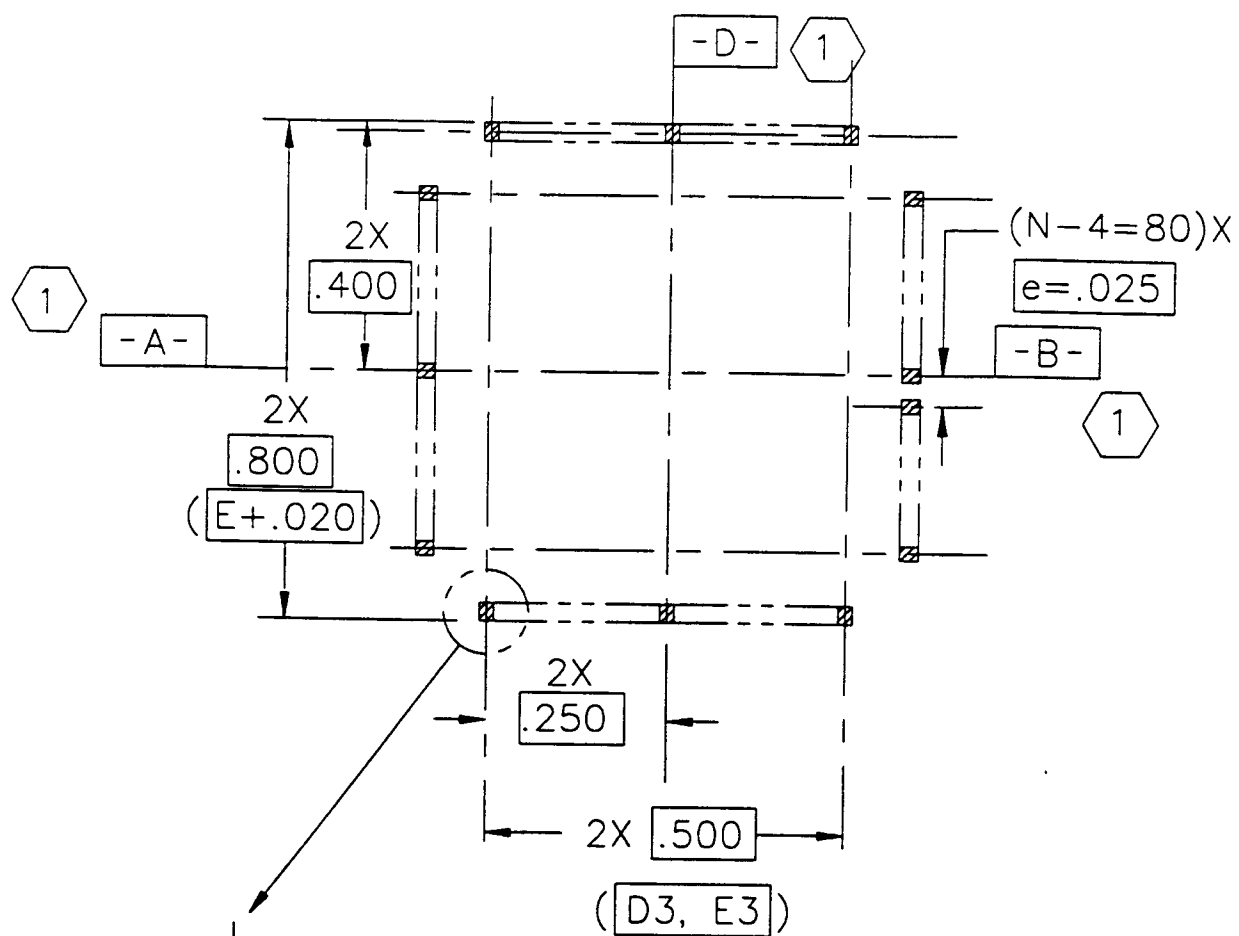


CORNER DETAIL

SEE NOTES FOR GAGES

GAGE-D2 BUMPERS  
VARIATION AC  
TOLERANCE bbb & ccc

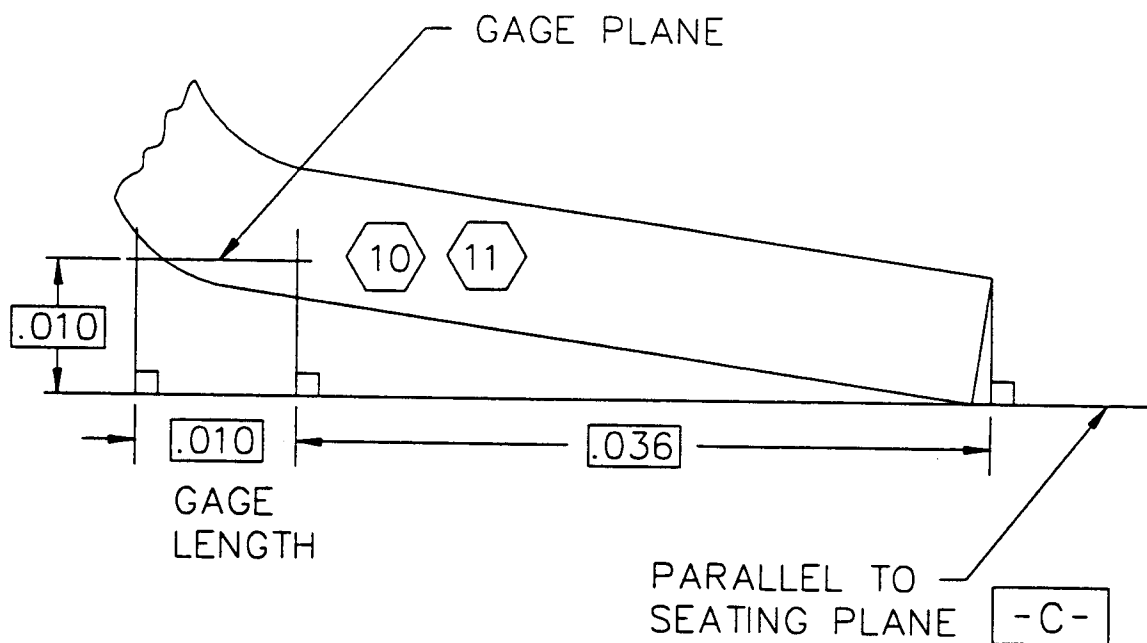
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GAGE—TERMINAL FOOT  
VARIATION AC  
TOLERANCE fff



SEE NOTES FOR GAGES



GAGE-L TERMINAL FLAT  
ALL VARIATIONS

 SEE NOTES FOR GAGES

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## NOTES FOR GAGES

1. ALIGN DATUMS [A-B] AND [D] WITH CENTERLINE OF CENTER LEADS OF PACKAGE WHERE LEADS EXIT BODY.
2. TIPS OF TERMINALS MUST FALL IN TOLERANCE ZONE, SHADED AREA.
3. SIDES OF PACKAGE MUST FALL IN TOLERANCE ZONE, SHADED AREA.
4. EDGES OF BUMPERS MUST FALL IN TOLERANCE ZONE, SHADED AREA.
5. BUMPER OUTLINE MUST FALL IN THIS TOLERANCE ZONE, .002 WIDE SHADED AREA (SEE CORNER DETAIL). THIS ZONE MAY FLOAT WITHIN THE .012 WIDE TOLERANCE ZONE BUT MUST BE PARALLEL TO DATUMS [A-B] OR [D].
6. DIMENSION OF B OF TERMINAL FOOT MUST COMPLY WITH SIZE TOLERANCE BEFORE GAGE CAN BE USED
7. TOLERANCE ZONE = OUTER LOCUS OF TERMINAL FOOT  

$$\text{OUTER LOCUS} = \text{MMC} + \text{POS. TOL.} = .012 + .006 = .018$$
8. DIMENSION B OF TERMINAL FOOT MUST FALL IN TOLERANCE ZONE.
9. THIS DIMENSION MADE OVERSIZE TO ASSURE COVERAGE OF FOOT FOR INSPECTION.
10. DIMENSION R, C AND  $\theta^\circ$  MUST COMPLY WITH TOLERANCES BEFORE THE GAGE CAN BE USED
11. LOWER CONTOUR OF TERMINAL FOOT MUST FALL WITHIN GAGE LENGTH AS SHOWN.

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