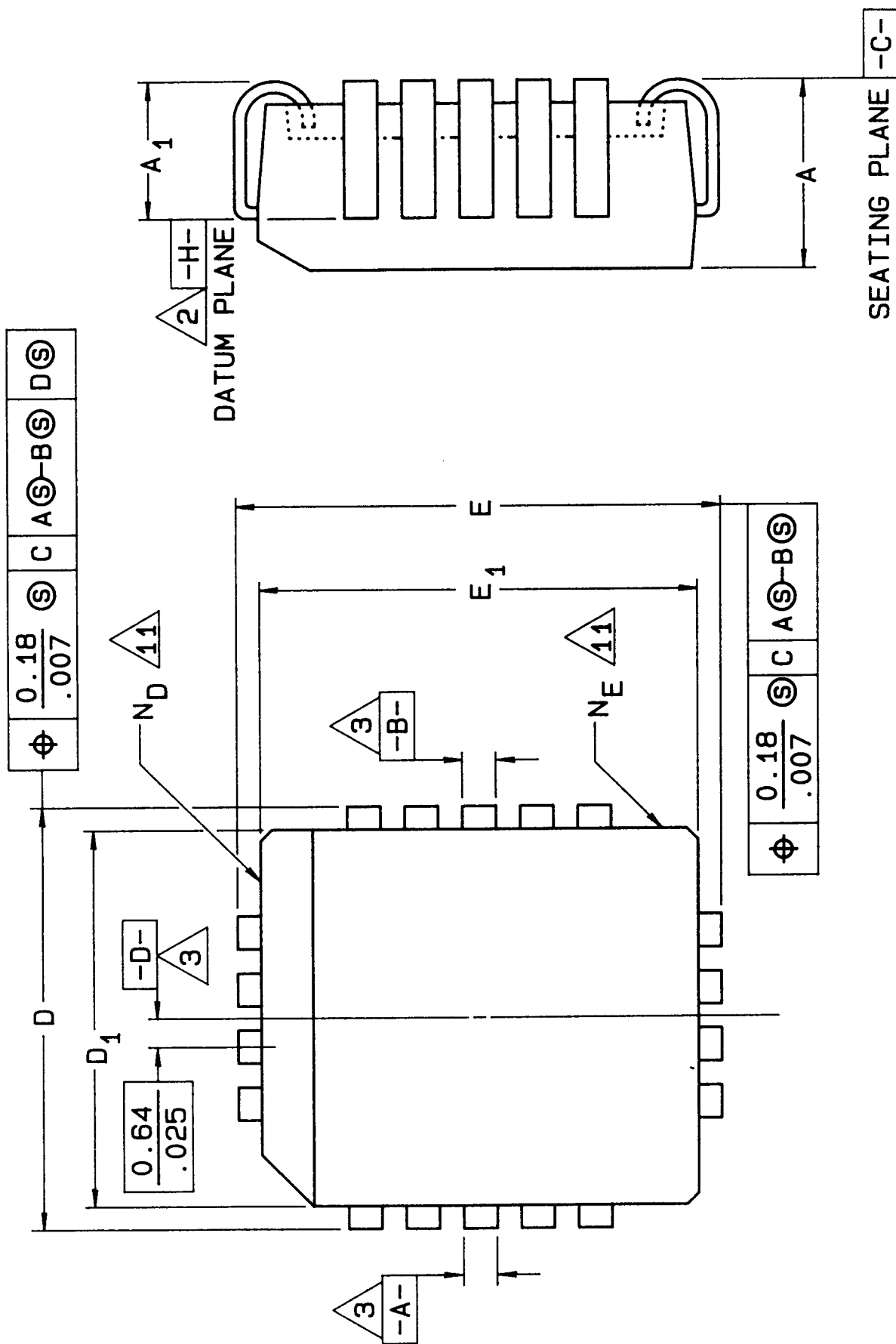


**MS-016**

PLASTIC CHIP CARRIER  
(PCC) FAMILY

1.27mm/.050" LEAD SPACING, RECTANGULAR

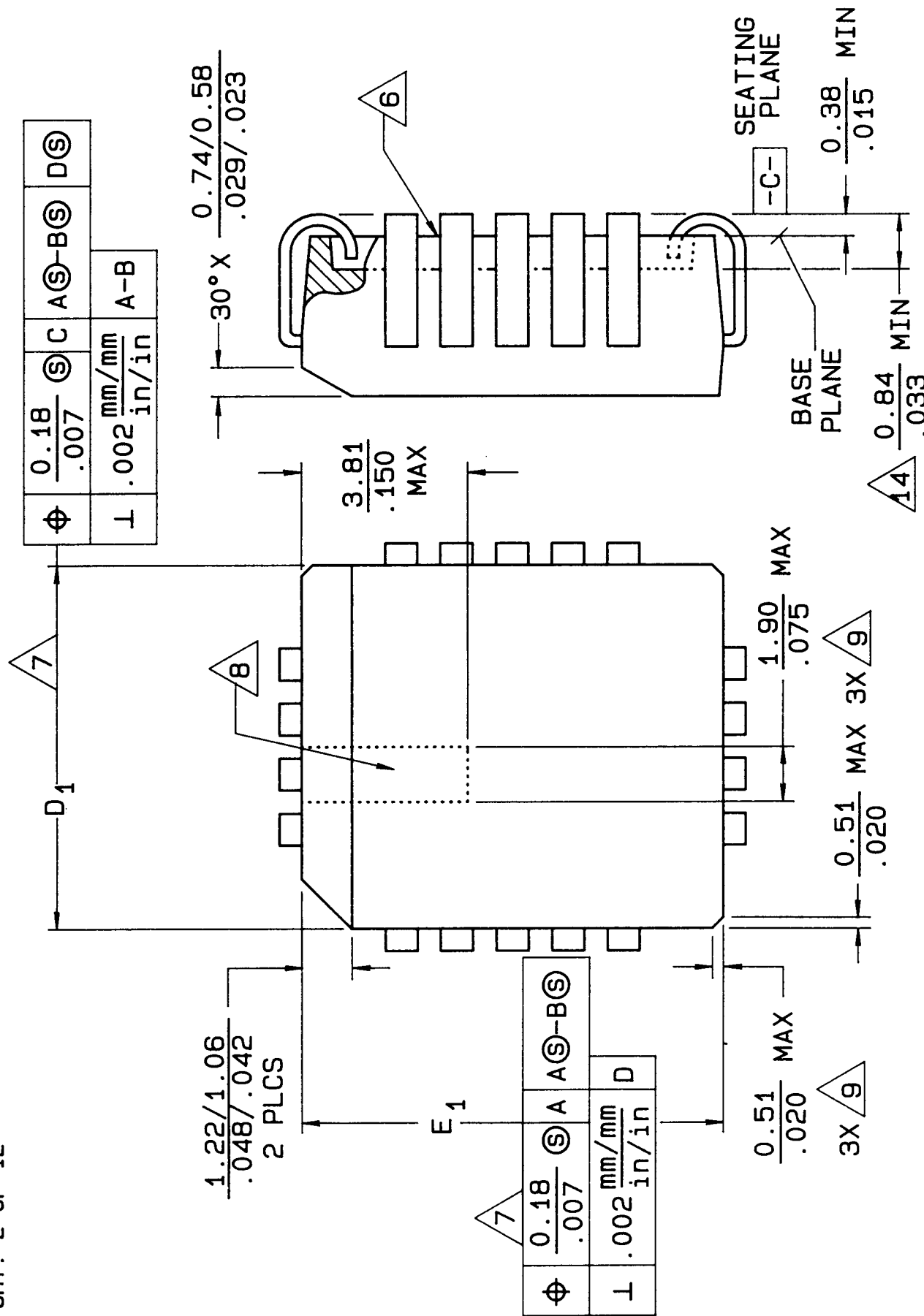
JEDEC SOLID STATE PRODUCTS  
STANDARD OUTLINE



mm  
inch

FIGURE 1 PRINCIPAL DIMENSIONS & DATUMS

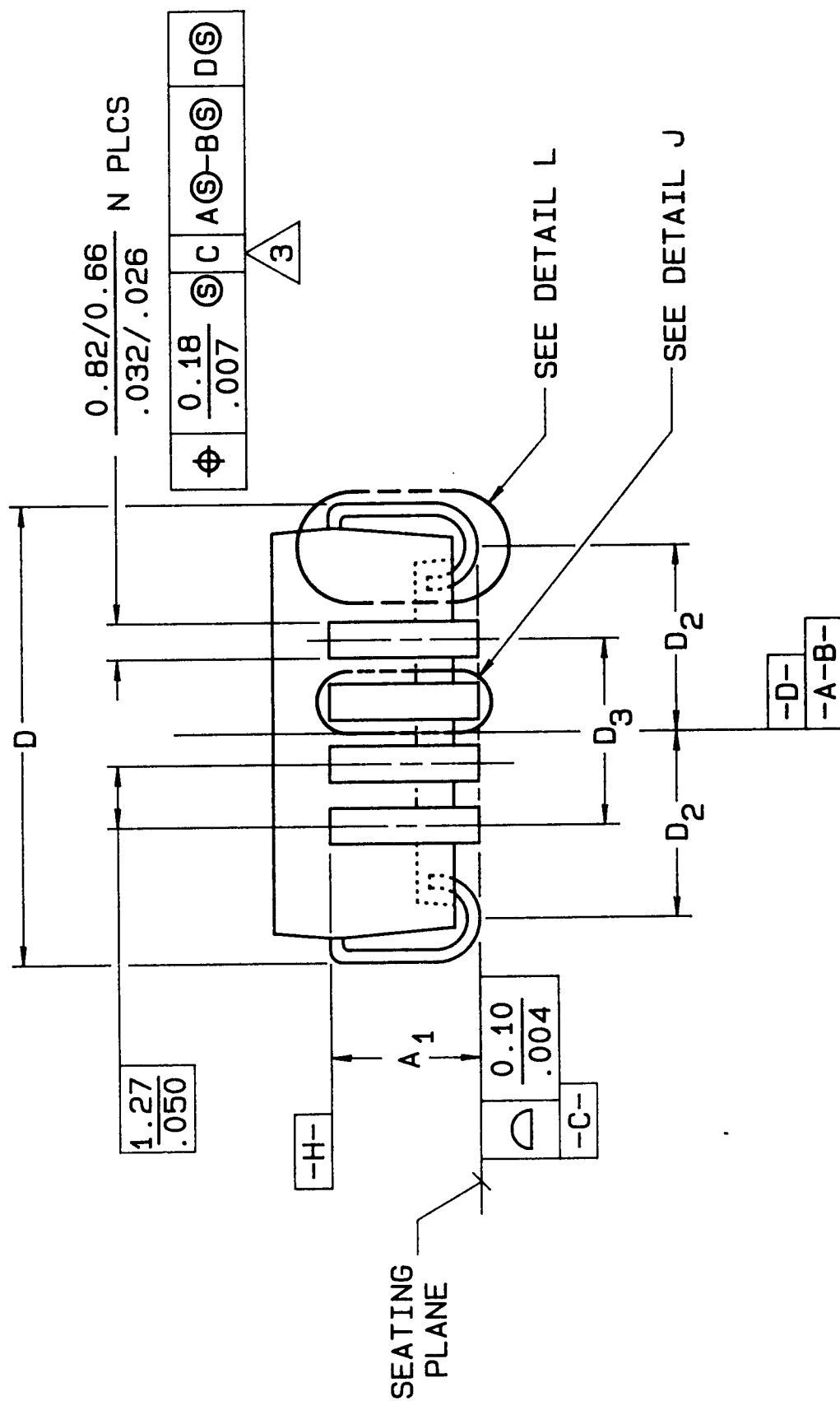
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mm  
inch

FIGURE 2 MOLDED DETAILS

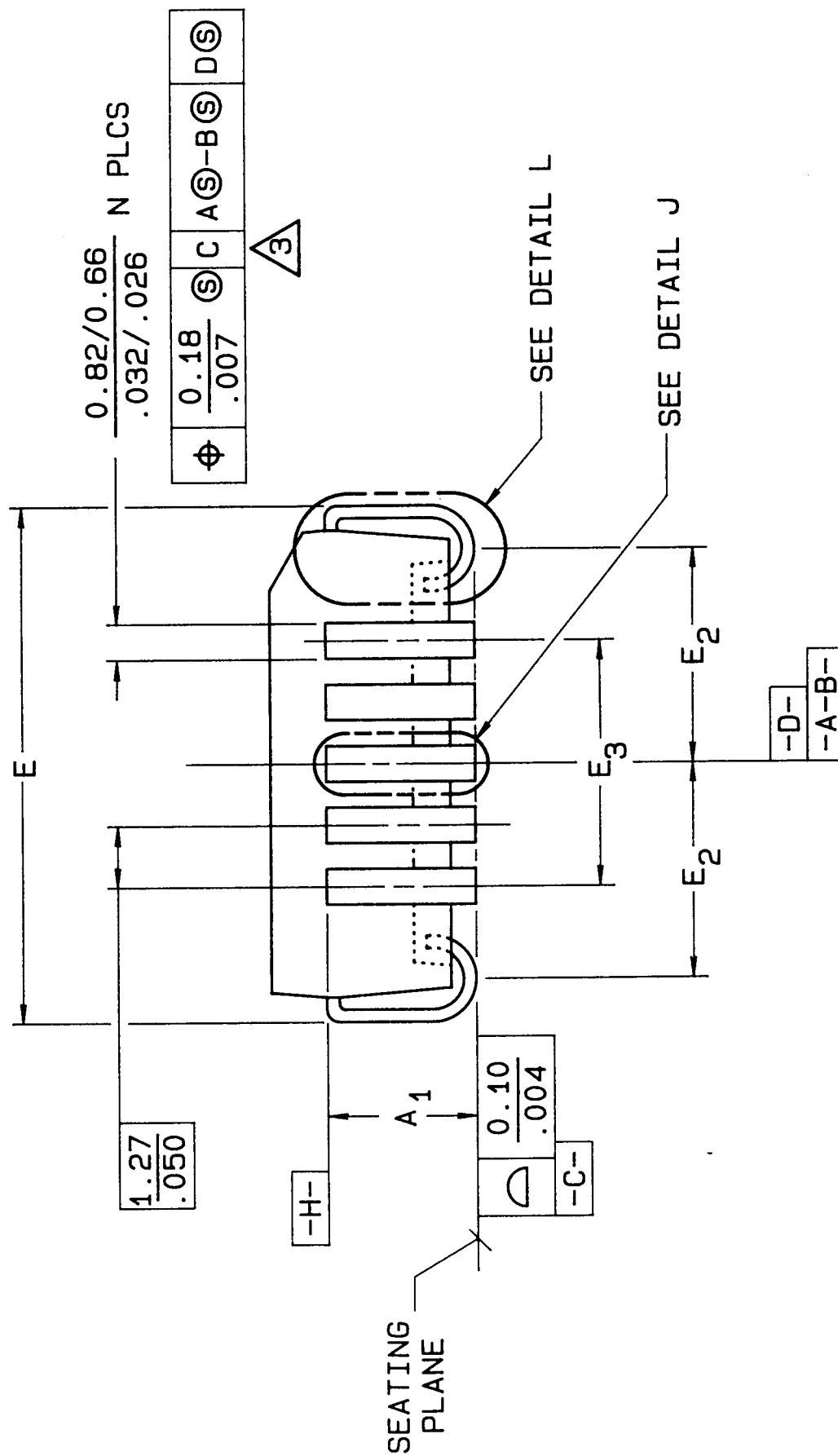
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### FIGURE 3 TERMINAL DETAILS (N<sub>D</sub> SIDE)

mm  
inch

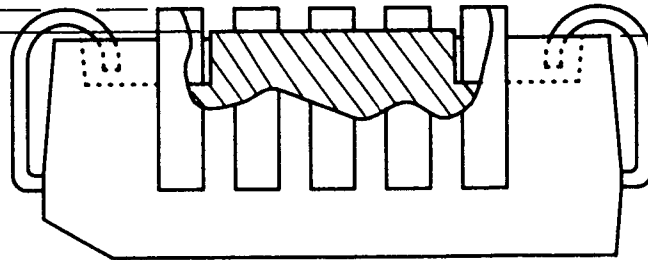
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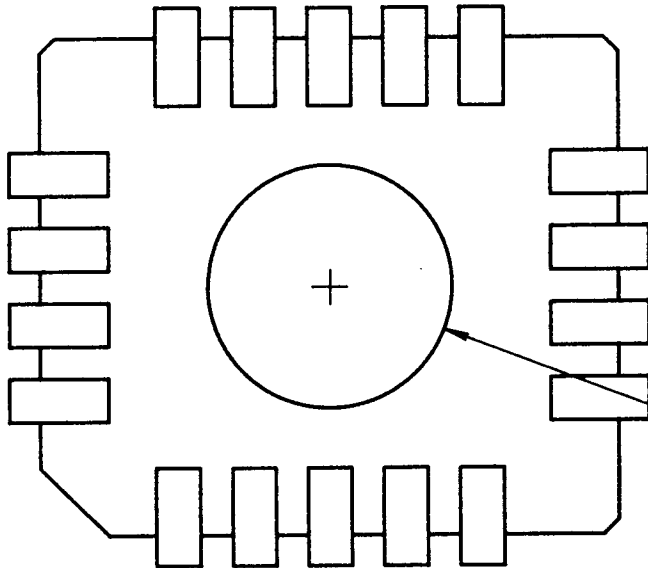
## FIGURE 4 TERMINAL DETAILS (N<sub>E</sub> SIDE)

SEATING PLANE

$\frac{0.36}{0.15}$   
 $\frac{.014}{.006}$



BASE PLANE



Ø P

Φ	$\frac{0.25}{.010}$	Ⓛ	C	A Ⓢ-B Ⓢ	D Ⓢ
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**FIGURE 5** ADHESIVE PEDESTAL DETAILS

NOTE: ADHESIVE PEDESTAL IS AN OPTIONAL FEATURE  
(VARIATION 3 OF DETAIL M)

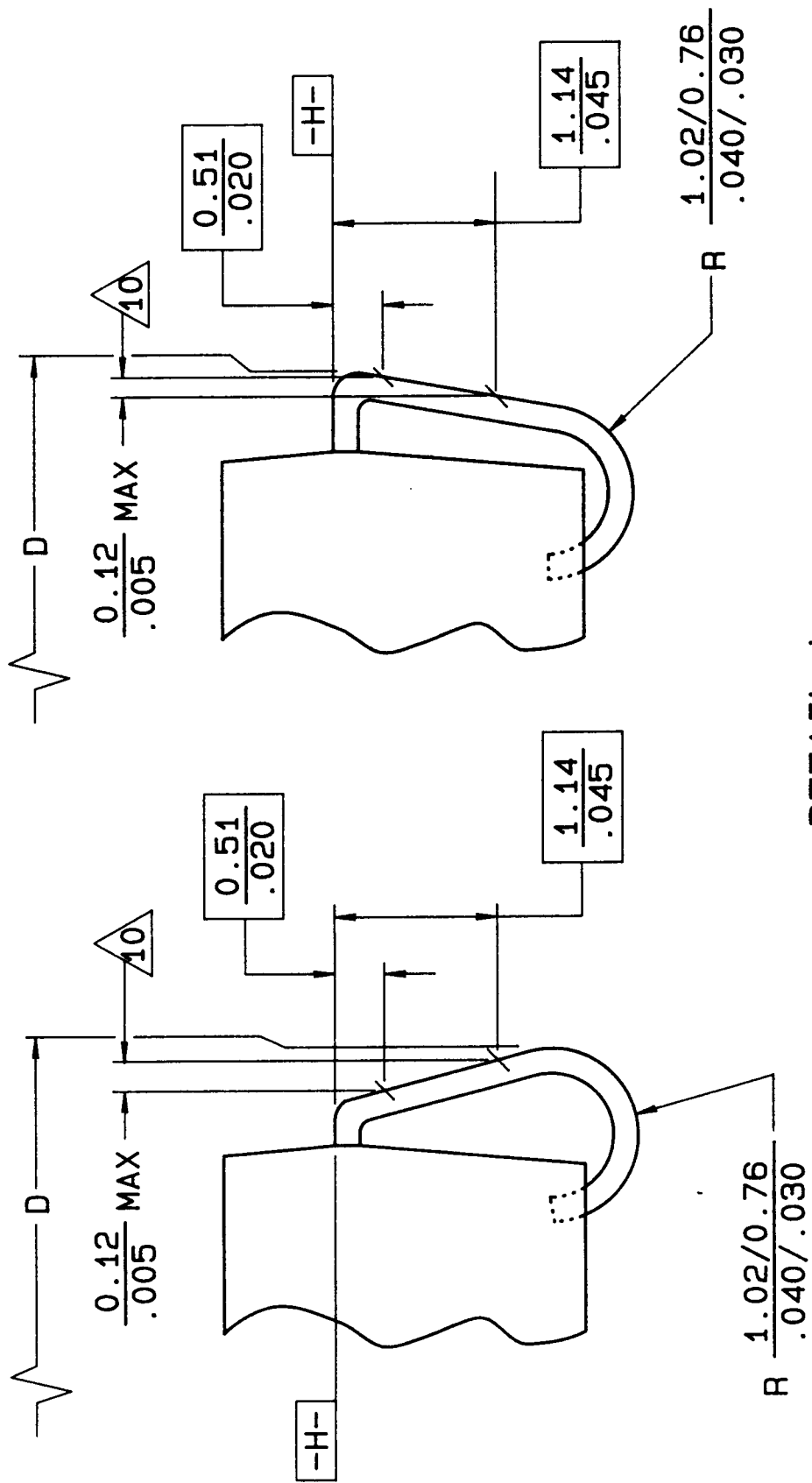
$\frac{\text{mm}}{\text{inch}}$

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## TYP ALL SIDES

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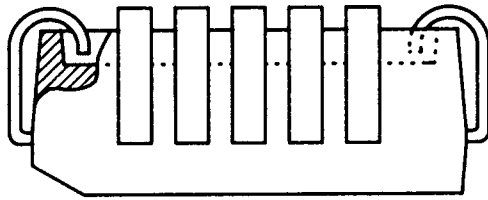


DETAIL L  
TYP ALL SIDES

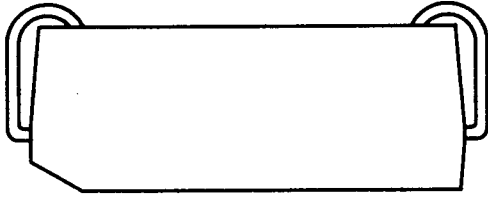
$$\frac{mm}{inch}$$

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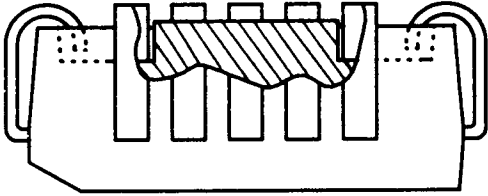




1  
CAVITY



2  
FLAT



3  
PEDESTAL

mm  
inch

DETAIL M  
PACKAGE VARIATIONS

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ALL DIMENSIONS IN INCHES

SYMBOL	VARIATIONS											
	AA		NOTE	AB		NOTE	AC		NOTE	AD		NOTE
	MIN.	MAX.		MIN.	MAX.		MIN.	MAX.		MIN.	MAX.	
A	.125	.140	7	.125	.140	7	.125	.140	7	.125	.140	7
A1	.060	.095		.060	.095		.060	.095		.060	.095	
D	.317	.327		.320	.335		.320	.335		.385	.395	
D1	.282	.288		.287	.293		.287	.293		.347	.353	
D2	.104	.140		.104	.140		.104	.140		.138	.173	
D3	.150 BSC			.150 BSC			.150 BSC			.200 BSC		
E	.457	.467	7	.520	.535	7	.520	.535	7	.585	.595	7
E1	.422	.428		.487	.493		.487	.493		.547	.553	
E2	.174	.210		.204	.240		.204	.240		.238	.273	
E3	.200 BSC			.200 BSC			.300 BSC			.400 BSC		
N	18			18			22			28		
ND	4	11		4	11		4	11		5	11	
NE	5	11		5	11		7	11		9	11	
ØP	.080	.105		.080	.105		.080	.105		.130	.205	

ALL DIMENSIONS IN INCHES

SYMBOL	VARIATIONS												
	AE		NOTE			NOTE			NOTE			NOTE	
	MIN.	MAX.		MIN.	MAX.		MIN.	MAX.		MIN.	MAX.		
A	.125	.140	7										
A1	.060	.095											
D	.485	.495											
D1	.447	.453											
D2	.188	.223											
D3	.300	BSC	7										
E	.585	.595											
E1	.547	.553											
E2	.238	.273											
E3	.400	BSC											
N		32	11										
ND		7											
NE		9	11										
ØP	.130	.205											
NOTE													
REF	ITEM 11-241												
ISSUE													
JEDEC SOLID STATE PRODUCTS OUTLINES				TITLE: PLASTIC CHIP CARRIER (PCC) FAMILY .050 LEAD-SPACING, RECTANGULAR				ISSUE A		DATE 12/89		MS-016	

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ALL DIMENSIONS IN **MILLIMETERS**

SYMBOL	VARIATIONS											
	AA		NOTE	AB		NOTE	AC		NOTE	AD		NOTE
	MIN.	MAX.		MIN.	MAX.		MIN.	MAX.		MIN.	MAX.	
A	3.18	3.55	7	3.18	3.55	7	3.18	3.55	7	3.18	3.55	7
A1	1.53	2.41		1.53	2.41		1.53	2.41		1.53	2.41	
D	8.06	8.30		8.13	8.50		8.13	8.50		9.78	10.03	
D1	7.17	7.31		7.29	7.44		7.29	7.44		8.82	8.96	
D2	2.65	3.55		2.65	3.55		2.65	3.55		3.51	4.39	
D3	3.81 BSC		7	3.81 BSC		7	3.81 BSC		7	5.08 BSC		7
E	11.61	11.86		13.21	13.58		13.21	13.58		14.86	15.11	
E1	10.72	10.87		12.37	12.52		12.37	12.52		13.90	14.04	
E2	4.42	5.33		5.19	6.09		5.19	6.09		6.05	6.93	
E3	5.08 BSC			5.08 BSC			7.62 BSC			10.16 BSC		
N	18		11	18		11	22		11	28		11
ND	4			4			4			5		
NE	5			5			7			9		
ØP	2.04			2.04			2.04			3.31		
	2.66			2.66			2.66			5.20		

ALL DIMENSIONS IN **MILLIMETER**

SYMBOL	VARIATIONS												
	AE		NOTE			NOTE			NOTE			NOTE	
	MIN.	MAX.		MIN.	MAX.		MIN.	MAX.		MIN.	MAX.		
A	3.18	3.55	7										
A1	1.53	2.41											
D	12.32	12.57											
D1	11.36	11.50											
D2	4.78	5.66											
D3	7.62	BSC	7										
E	14.86	15.11											
E1	13.90	14.04											
E2	6.05	6.93											
E3	10.16	BSC											
N	32		11										
ND	7												
NE	9												
ØP	3.31	5.20	11										
NOTE													
REF	ITEM 11-241												
ISSUE													
JEDEC SOLID STATE PRODUCTS OUTLINES				TITLE: PLASTIC CHIP CARRIER (PCC) FAMILY 1.27 LEAD-SPACING, RECTANGULAR				ISSUE A		DATE 12/89		MS-016	

NOTES:

- 1 ALL DIMENSIONS AND TOLERANCES CONFORM TO ANSI Y14.5M-1982.
- 2 DATUM PLANE -H- LOCATED AT TOP OF MOLD PARTING LINE AND COINCIDENT WITH TOP OF LEAD, WHERE LEAD EXITS PLASTIC BODY.
- 3 DATUMS A-B AND -D- ARE USED TO INDICATE THAT THE PACKAGE CENTER IS DETERMINED FROM THE TWO DATUMS DETERMINED WHERE LEAD OF CHOICE EXITS PLASTIC BODY AT DATUM PLANE -H-. WHEN NUMBER OF LEADS PER SIDE IS EVEN, DATUMS A-B AND -D- ARE DETERMINED BY ADDING THE HALF-PITCH BASIC DIMENSION TO THE CENTERLINE OF THE ADJACENT LEAD. WHEN NUMBER OF LEADS PER SIDE IS ODD, DATUMS A-B AND -D- ARE DETERMINED BY THE CENTERLINE OF THE CENTER LEADS.
- 4 TO BE DETERMINED AT SEATING PLANE -C-.
- 5 TRANSITION IS OPTIONAL.
- 6 PLASTIC BODY DETAILS BETWEEN LEADS ARE OPTIONAL.
- 7 DIMENSIONS  $D_1$  AND  $E_1$  DO NOT INCLUDE MOLD PROTRUSION. ALLOWABLE MOLD PROTRUSION IS 0.254 mm/0.010 in PER SIDE. DIMENSIONS  $D$ , AND  $E$ , INCLUDE MOLD MISMATCH AND ARE DETERMINED AT PARTING LINE.
- 8 DETAILS OF PIN 1 IDENTIFIER ARE OPTIONAL BUT MUST BE LOCATED WITHIN ZONE INDICATED. IF THE NUMBER OF TERMINALS ON A SIDE IS ODD, TERMINAL 1 IS THE CENTER TERMINAL. IF THE NUMBER OF TERMINALS ON A SIDE IS EVEN, TERMINAL 1 IS THE TERMINAL WHICH IS ADJACENT TO THE CENTERLINE OF THE TERMINAL ARRAY AND IN THE DIRECTION OF THE INDEX CORNER.
- 9 EXACT SHAPE OF THIS FEATURE IS OPTIONAL.

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- △10 THESE TWO DIMENSIONS DETERMINE MAXIMUM ANGLE OF THE LEAD FOR CERTAIN SOCKET APPLICATIONS. IF UNIT IS INTENDED TO BE SOCKETED, IT IS ADVISABLE TO REVIEW THESE DIMENSIONS WITH THE SOCKET SUPPLIER.
- △11 N<sub>D</sub> DENOTES THE NUMBER OF LEADS ON THE TWO SHORT SIDES OF THE PACKAGE, ONE OF WHICH CONTAINS PIN #1. N<sub>E</sub> DENOTES THE NUMBER OF LEADS ON THE TWO LONG SIDES OF THE PACKAGE.
- △12 ALL DIMENSIONS AND TOLERANCES INCLUDE LEAD TRIM OFFSET AND LEAD FINISH.
- 13 CONTROLLING DIMENSION: INCH.
- △14 PACKAGE-TO-BOARD CLEARANCE AT CENTER APPLIES ONLY TO PACKAGE VARIATION 1 (DETAIL M).