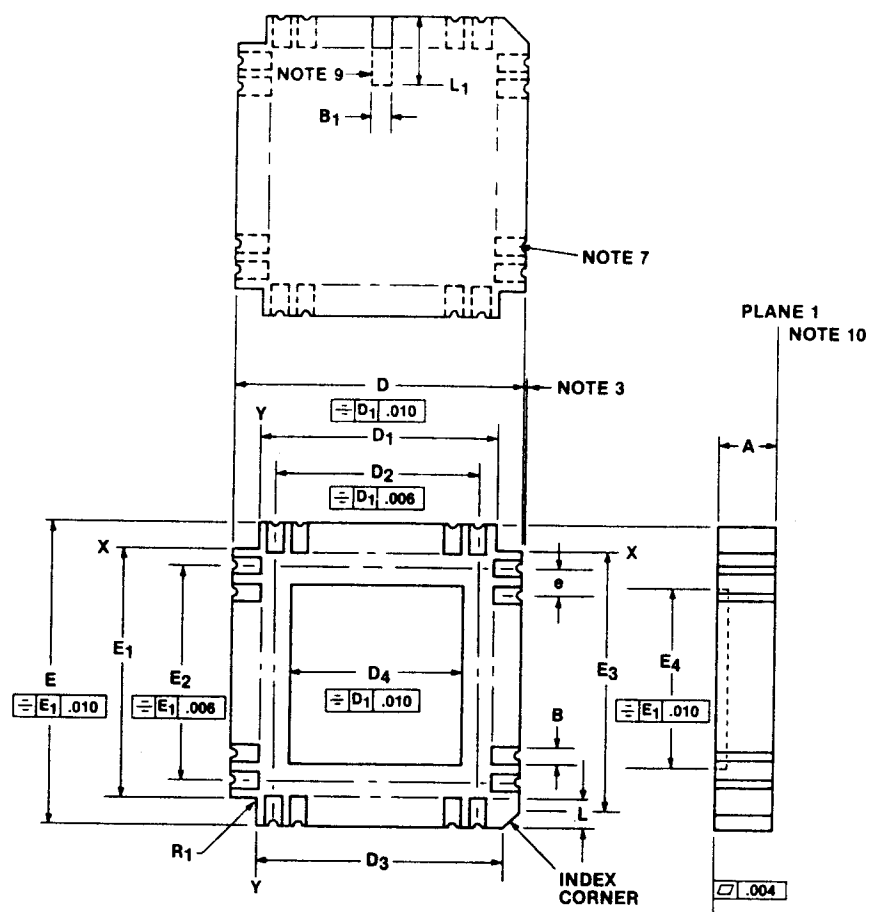


**MS005**

.050" CENTER, LEADLESS TYPE D



## NOTES:

1. REFER TO APPLICABLE SYMBOL LIST.
2. DIMENSIONING AND TOLERANCING PER ANSI Y14.5 1973.
3. OVERALL MATERIAL PROTRUSION OF 0.020" (0.508mm) MAXIMUM ABOVE THE MAXIMUM DIMENSION SHOWN, NOT TO EXCEED 0.010" (0.25mm) MAXIMUM PER SIDE.
4. RELIEF ON CORNER TERMINAL MAXIMUM DIMENSION PERMISSIBLE.
5. N IS THE MAXIMUM QUANTITY OF TERMINAL POSITIONS. REFER TO NUMBERING CONVENTION.
6. X AND Y ARE REFERENCE DATUMS.
7. ELECTRICAL CONNECTION IS REQUIRED ON PLANE 2 AND IS OPTIONAL ON PLANE 1.
8. DIMENSIONS VARY IN DIRECT PROPORTION TO FEATURE SIZE OF D<sub>1</sub> AND E<sub>1</sub>.
9. FEATURES FOR ELECTRICAL/OPTICAL ORIENTATION OR HANDLING PURPOSES MUST BE WITHIN THE AREA SHOWN.
10. PLANE 1 IS HEAT RADIATING SURFACE. METALLIZATION IS OPTIONAL, HOWEVER IF PRESENT, A CLEARANCE OF .020" (.508mm) MUST BE MAINTAINED FROM ALL FEATURES.
11. CONTROLLING DIMENSION: INCH.

NOTE				
REF.				
ISSUE				
JEDEC SOLID STATE PRODUCT OUTLINES		TITLE .050" CENTER LEADLESS TYPE D	ISSUE A	DATE 9/29/80
MS005				

STANDARD

ALL DIMENSIONS SHOWN IN INCHES

SYMBOL	VARIATIONS											
	DA		NOTE	DB		NOTE	DC		NOTE	DD		NOTE
	MIN.	MAX.		MIN.	MAX		MIN.	MAX		MIN.	MAX.	
A	.050	.080		.050	.080		.050	.080		.050	.080	
B	.033	.039		.033	.039		.033	.039		.033	.039	
B <sub>1</sub>	.022	.041		.022	.041		.022	.041		.022	.041	
D	.445	.455	3	.643	.657	3	.742	.758	3	.940	.960	3
D <sub>1</sub>	.345	.355		.544	.556		.643	.657		.842	.858	
D <sub>2</sub>	.300		8	.500		8	.600		8	.800		8
D <sub>3</sub>	.365 REF			.566 REF			.667 REF			.868 REF		
D <sub>4</sub>	.278	.290		.350	.490		.386	.590		.458	.790	
E	.445	.455	3	.643	.657	3	.742	.758	3	.940	.960	3
E <sub>1</sub>	.345	.355		.544	.556		.643	.657		.842	.858	
E <sub>2</sub>	.300		8	.500		8	.600		8	.800		8
E <sub>3</sub>	.365 REF			.566 REF			.667 REF			.868 REF		
E <sub>4</sub>	.278	.290		.350	.490		.386	.590		.458	.790	
e	.050 BSC			.050 BSC			.050 BSC			.050 BSC		
L	.045	.055	4	.045	.055	4	.045	.055	4	.045	.055	4
L <sub>1</sub>	.077	.093	9	.077	.093	9	.077	.093	9	.077	.093	9
N	28		5	44		5	52		5	68		5
R <sub>1</sub>	.000	.010		.000	.010		.000	.010		.000	.010	

ALL DIMENSIONS SHOWN IN MILLIMETERS

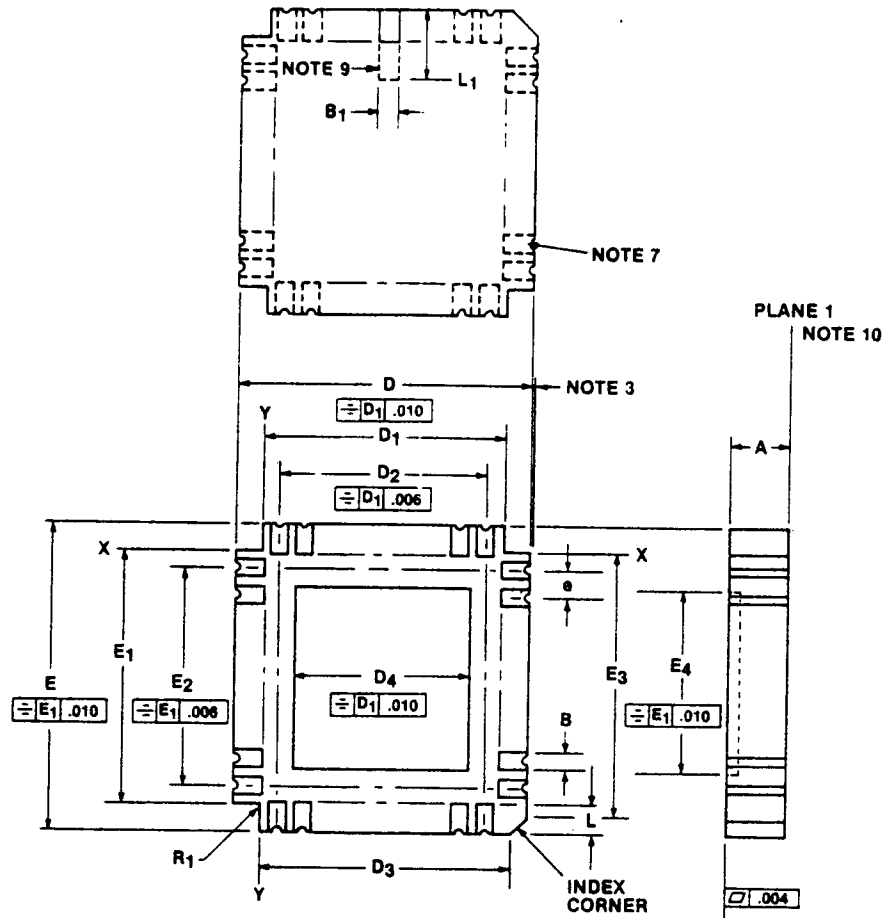
SYMBOL	VARIATIONS											
	DA		NOTE	DB		NOTE	DC		NOTE	DD		NOTE
	MIN.	MAX.		MIN.	MAX		MIN.	MAX		MIN.	MAX.	
A	1.27	2.03		1.27	2.03		1.27	2.03		1.27	2.03	
B	.839	.990		.839	.990		.839	.990		.839	.990	
B <sub>1</sub>	.56	1.04		.56	1.04		.56	1.04		.56	1.04	
D	11.31	11.55	3	16.34	16.68	3	18.85	19.25	3	23.88	24.38	3
D <sub>1</sub>	8.77	9.01		13.82	14.12		16.34	16.68		21.39	21.79	
D <sub>2</sub>	7.62		8	12.70		8	15.24		8	20.32		8
D <sub>3</sub>	9.27 REF			14.38 REF			16.94 REF			22.05 REF		
D <sub>4</sub>	7.07	7.36		8.9	12.4		9.9	14.9		11.7	20.0	
E	11.31	11.55	3	16.34	16.68	3	18.85	19.25	3	23.88	24.38	3
E <sub>1</sub>	8.77	9.01		13.82	14.12		16.34	16.68		21.39	21.79	
E <sub>2</sub>	7.62		8	12.70		8	15.24		8	20.32		8
E <sub>3</sub>	9.27 REF			14.38 REF			16.94 REF			22.05 REF		
E <sub>4</sub>	7.07	7.36		8.9	12.4		9.9	14.9		11.7	20.0	
e	1.27 BSC			1.27 BSC			1.27 BSC			1.27 BSC		
L	1.15	1.39	4	1.15	1.39	4	1.15	1.39	4	1.15	1.39	4
L <sub>1</sub>	1.96	2.36	9	1.96	2.36	9	1.96	2.36	9	1.96	2.36	9
N	28		5	44		5	52		5	68		5
R <sub>1</sub>	.00	.25		.00	.25		.00	.25		.00	.25	
NOTE	1, 2, 6, 7, 10, 11			1, 2, 6, 7, 10, 11			1, 2, 6, 7, 10, 11			1, 2, 6, 7, 10, 11		
F												
ISSUE												

**JEDEC  
SOLID STATE PRODUCT  
OUTLINES**

**TITLE**  
.050" CENTER  
LEADLESS TYPE D

**ISSUE**  
A  
**DATE**  
9/29/80

**MS005**



## NOTES:

1. REFER TO APPLICABLE SYMBOL LIST.
2. DIMENSIONING AND TOLERANCING PER ANSI Y14.5 1973.
3. OVERALL MATERIAL PROTRUSION OF 0.020" (0.508mm) MAXIMUM ABOVE THE MAXIMUM DIMENSION SHOWN, NOT TO EXCEED 0.010" (0.25mm) MAXIMUM PER SIDE.
4. RELIEF ON CORNER TERMINAL MAXIMUM DIMENSION PERMISSIBLE.
5. N IS THE MAXIMUM QUANTITY OF TERMINAL POSITIONS. REFER TO NUMBERING CONVENTION.
6. X AND Y ARE REFERENCE DATUMS.
7. ELECTRICAL CONNECTION IS REQUIRED ON PLANE 2 AND IS OPTIONAL ON PLANE 1.
8. DIMENSIONS VARY IN DIRECT PROPORTION TO FEATURE SIZE OF  $D_1$  AND  $E_1$ .
9. FEATURES FOR ELECTRICAL/OPTICAL ORIENTATION OR HANDLING PURPOSES MUST BE WITHIN THE AREA SHOWN.
10. PLANE 1 IS HEAT RADIATING SURFACE. METALLIZATION IS OPTIONAL, HOWEVER IF PRESENT, A CLEARANCE OF .020" (.508mm) MUST BE MAINTAINED FROM ALL FEATURES.
11. CONTROLLING DIMENSION: INCH.

NOTE				
REF.				
ISSUE				
JEDEC SOLID STATE PRODUCT OUTLINES		TITLE .050" CENTER LEADLESS TYPE D	ISSUE A	DATE 9/29/80
		MS005		

ALL DIMENSIONS SHOWN IN INCHES

SYMBOL	VARIATIONS											
	DE		NOTE	DF		NOTE	DG		NOTE	DH		NOTE
	MIN.	MAX.		MIN.	MAX		MIN.	MAX		MIN.	MAX.	
A	.050	.080		.050	.095		.050	.095		.050	.095	
B	.033	.039		.037	.041		.037	.041		.037	.041	
B <sub>1</sub>	.022	.041		.022	.041		.022	.041		.022	.041	
D	1.139	1.161	3	1.339	1.361	3	1.639	1.661	3	2.039	2.061	3
D <sub>1</sub>	1.042	1.058		1.239	1.261		1.539	1.561		1.939	1.961	
D <sub>2</sub>	1.000		8	1.200		8	1.500		8	1.900		8
D <sub>3</sub>	1.069 REF			1.265 REF			1.565 REF			1.965 REF		
D <sub>4</sub>	.530	.990		.602	1.190		.710	1.490		.822	1.890	
E	1.139	1.161	3	1.339	1.361	3	1.639	1.661	3	2.039	2.061	3
E <sub>1</sub>	1.042	1.058		1.239	1.261		1.539	1.561		1.939	1.961	
E <sub>2</sub>	1.000		8	1.200		8	1.500		8	1.900		8
E <sub>3</sub>	1.069 REF			1.265 REF			1.565 REF			1.965 REF		
E <sub>4</sub>	.530	.990		.602	1.190		.710	1.490		.822	1.890	
e	.050 BSC			.050 BSC			.050 BSC			.050 BSC		
L	.045	.055	4	.045	.055	4	.045	.055	4	.045	.055	4
L <sub>1</sub>	.077	.093	9	.077	.093	9	.077	.093	9	.077	.093	9
N	84		5	100		5	124		5	156		5
R <sub>1</sub>	.000	.010		.000	.010		.000	.010		.000	.010	

ALL DIMENSIONS SHOWN IN MILLIMETERS

SYMBOL	VARIATIONS											
	DE		NOTE	DF		NOTE	DG		NOTE	DH		NOTE
	MIN.	MAX.		MIN.	MAX		MIN.	MAX		MIN.	MAX.	
A	1.27	2.03		1.27	2.41		1.27	2.41		1.27	2.41	
B	.839	.990		.940	1.041		.940	1.041		.940	1.041	
B <sub>1</sub>	.56	1.04		.56	1.04		.56	1.04		.56	1.04	
D	28.91	29.51	3	34.02	34.56	3	41.64	42.18	3	51.80	52.34	3
D <sub>1</sub>	26.47	26.87		31.48	32.02		39.10	39.64		49.26	49.80	
D <sub>2</sub>	25.40		8	30.48		8	38.10		8	48.26		8
D <sub>3</sub>	27.15 REF			32.13 REF			39.75 REF			49.91 REF		
D <sub>4</sub>	13.5	25.1		15.3	30.2		18.1	37.8		21	48	
E	28.91	29.51	3	34.02	34.56	3	41.64	42.18	3	51.80	52.34	3
E <sub>1</sub>	26.47	26.87		31.48	32.02		39.10	39.64		49.26	49.80	
E <sub>2</sub>	25.40		8	30.48		8	38.10		8	48.26		8
E <sub>3</sub>	27.15 REF			32.13 REF			39.75 REF			49.91 REF		
E <sub>4</sub>	13.5	25.1		15.3	30.2		18.1	37.8		21	48	
e	1.27 BSC			1.27 BSC			1.27 BSC			1.27 BSC		
L	1.15	1.39	4	1.15	1.39	4	1.15	1.39	4	1.15	1.39	4
L <sub>1</sub>	1.96	2.36	9	1.96	2.36	9	1.96	2.36	9	1.96	2.36	9
N	84		5	100		5	124		5	156		5
R <sub>1</sub>	.00	.25		.00	.25		.00	.25		.00	.25	

NOTE 1, 2, 6, 7, 10, 11

1, 2, 6, 7, 10, 11

1, 2, 6, 7, 10, 11

1, 2, 6, 7, 10, 11

REF.

ISSUE

JEDEC  
SOLID STATE PRODUCT  
OUTLINESTITLE  
.050" CENTER  
LEADLESS TYPE DISSUE  
A  
DATE  
9/29/80

MS005