



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
2 & 4 LEAD SURFACE MOUNT POWER PACKAGE	(H,HB1)–PDSO (H,HB1)–PSOF	C	JULY 08	TO–270	1 OF 14



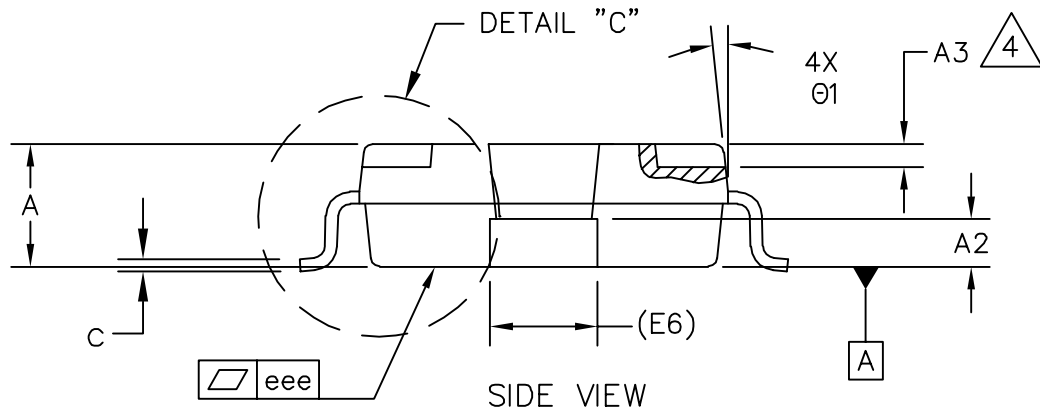
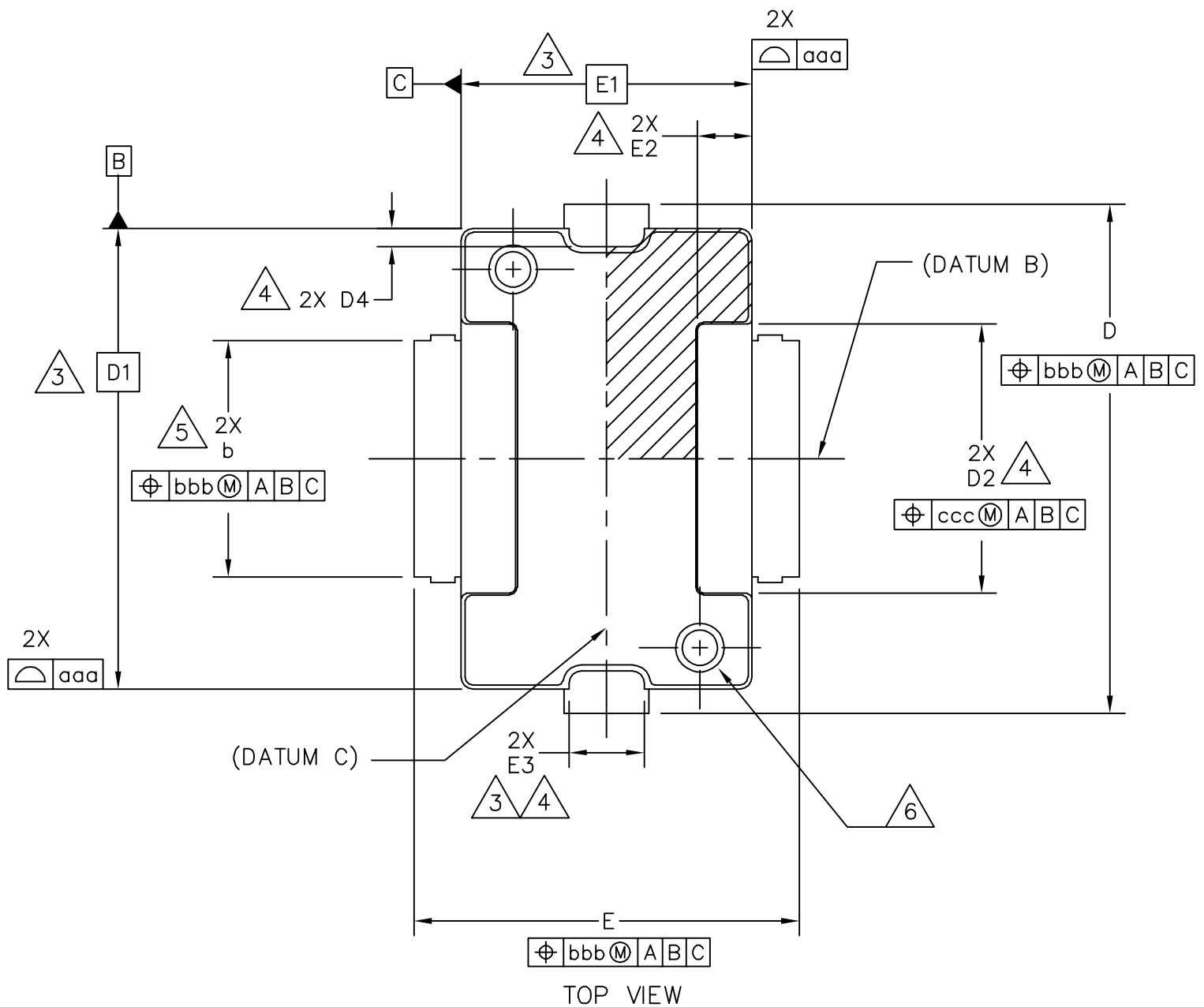
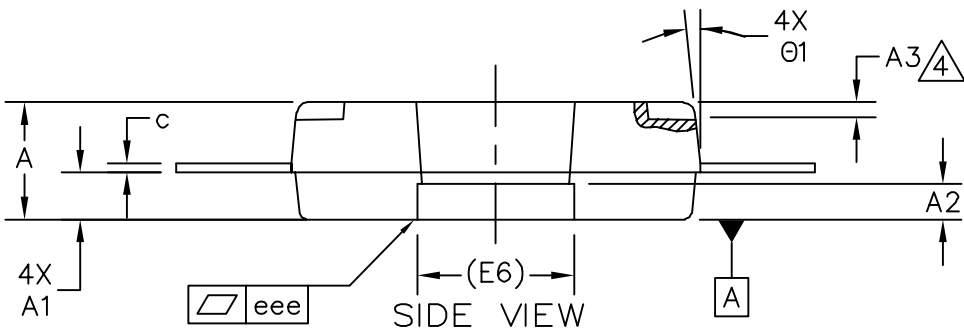


FIG 2





JEDEC SOLID STATE PRODUCT OUTLINE	TITLE  2 & 4 LEAD SURFACE MOUNT POWER PACKAGE	ISSUE  C	DATE  JULY 08	TO-270	SHEET  5 OF 14
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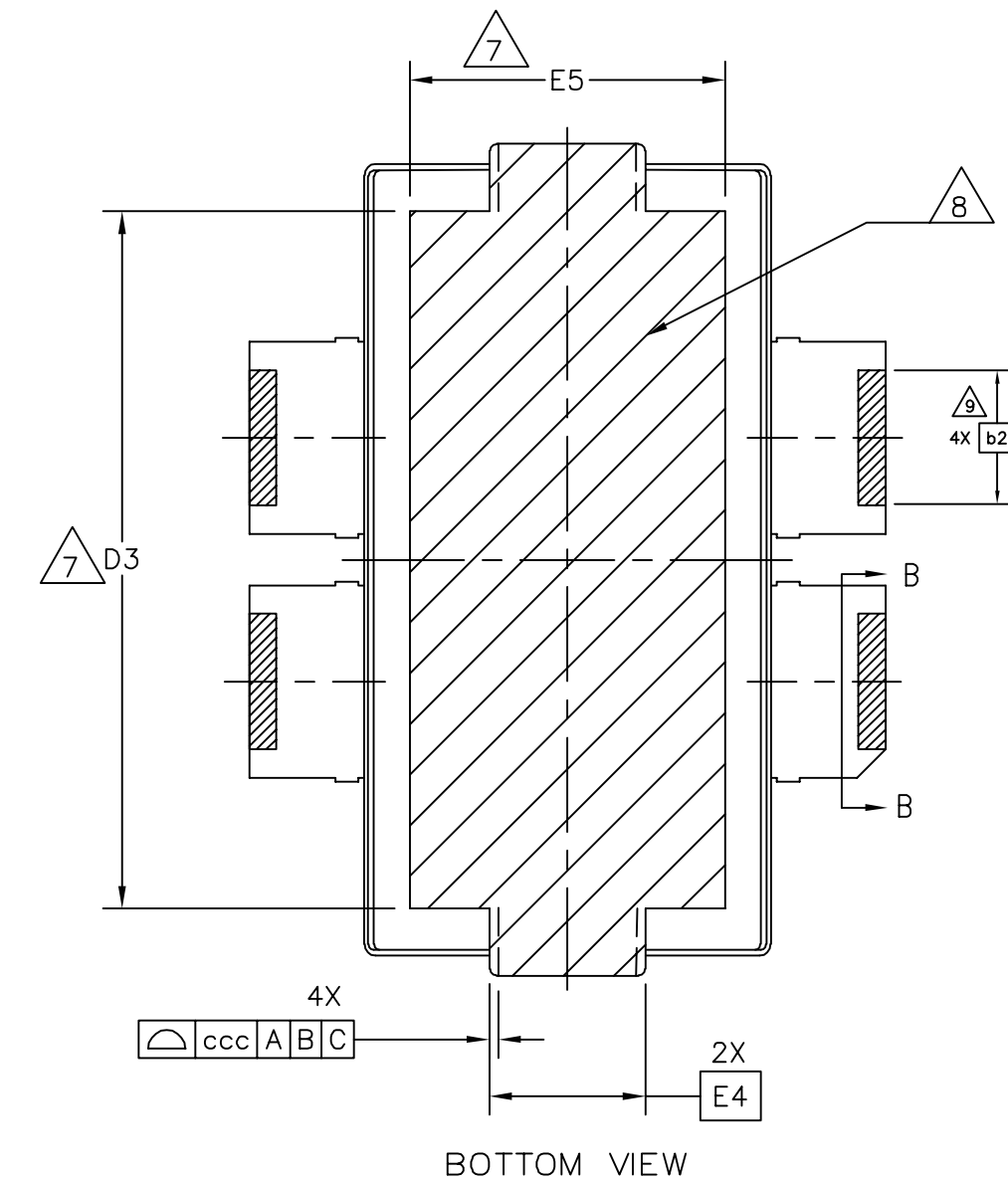


FIG 3

JEDEC SOLID STATE PRODUCT OUTLINE	TITLE  2 & 4 LEAD SURFACE MOUNT POWER PACKAGE	ISSUE  C	DATE  JULY 08	TO-270	SHEET  6 OF 14
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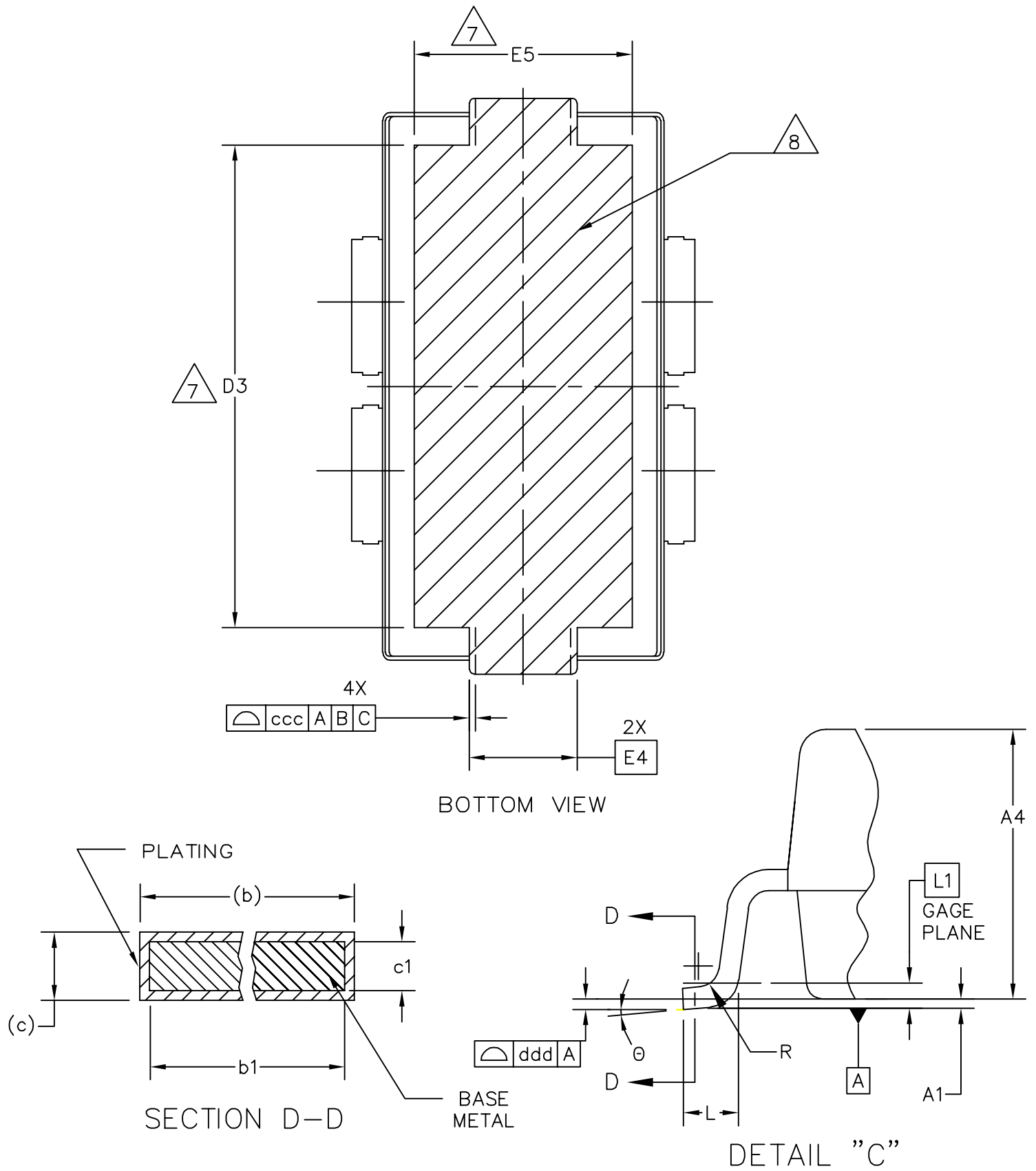


FIG 4

JEDEC SOLID STATE PRODUCT OUTLINE	TITLE  2 & 4 LEAD SURFACE MOUNT POWER PACKAGE	ISSUE  C	DATE  JULY 08	TO-270	SHEET  8 OF 14
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TABLE 1

SUMMARY TABLE			
BODY SIZE	LEAD COUNT	VARIATIONS	
		STRAIGHT LEAD FIG #	GULL WING FIG #
6.10 X 9.65	2	AA FIG 1	BA FIG 2
9.02 X 17.53	4	AB FIG 3	BB FIG 4
9.02 X 23.62	4	AC FIG 3	BC FIG 4

TABLE 2

COMMON DIMENSIONS				
SYMBOL	MIN	NOM	MAX	NOTE
A2	0.75	0.79	0.83	
A3	-----	-----	0.44	4
c	0.15	-----	0.34	
c1	0.15	0.20	0.28	
D4	-----	-----	0.62	4
E2	-----	-----	1.19	4
Ø1	4°	6°	8°	
NOTES	1, 2			
REF	10-428, 10-446			
ISSUE	C			

TABLE 3

TOLERANCE OF FORM & POSITION	
aaa	0.20
bbb	0.12
ccc	0.20
ddd	0.10
eee	0.05
NOTES	1, 2
REF	10-386, 10-446
ISSUE	C

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TABLE 4

VARIATIONS												
	AA				AB				AC			
SYMBOL	MIN	NOM	MAX	NOTE	MIN	NOM	MAX	NOTE	MIN	NOM	MAX	NOTE
A	----	----	2.13		----	----	2.69		----	----	3.28	
A1	0.96	1.04	1.12		0.96	1.04	1.12		0.96	1.04	1.12	
b	4.88	----	5.14	5	4.14	----	4.40	5	4.70	----	4.85	5
b1	4.88	4.98	5.08		4.14	4.24	4.34		4.70	----	4.80	
b2	3.00 BSC			9	2.25 BSC			9	3.00 BSC			9
D	10.57	10.67	10.77		18.34	18.44	18.54		24.15	24.30	24.45	
D1	9.65 BSC			3	17.53 BSC			3	23.62 BSC			3
D2	----	----	5.74	4	----	----	10.35	4	----	----	12.10	4
D3	7.67	----	----	7	15.34	----	----	7	20.40	----	----	7
E	11.08	11.18	11.28		14.00	14.10	14.20		14.00	14.10	14.20	
E1	6.10 BSC			3	9.02 BSC			3	9.02 BSC			3
E3	1.48	1.58	1.68	4	3.15	3.25	3.35	4	3.15	3.25	3.35	4
E4	1.78 BSC			7	3.45 BSC			7	3.45 BSC			7
E5	4.12	----	----	7	6.88	----	----	7	6.88	----	----	7
e	----	----	----		5.38 BSC				6.68 BSC			
k	0.66	0.76	0.86		0.66	0.76	0.86		0.66	0.76	0.86	
N	2			11	4			11	4			11
NOTES	1, 2				1, 2				1, 2			
REF	10-386, 10-428, 10-446				10-428, 10-446				10-446			
ISSUE	C				C				C			

TABLE 5

VARIATIONS												
	BA				BB				BC			
SYMBOL	MIN	NOM	MAX	NOTE	MIN	NOM	MAX	NOTE	MIN	NOM	MAX	NOTE
A	1.96	2.10	2.23		2.51	2.65	2.79		3.10	3.24	3.38	
A1	0.02	0.06	0.10		0.02	0.06	0.10		0.02	0.06	0.10	
A4	1.96	2.04	2.13		2.49	2.59	2.69		3.08	3.18	3.28	
b	4.88	-----	5.14	5	4.14	----	4.40	5	4.70	----	4.85	5
b1	4.88	4.98	5.08		4.14	4.24	4.34		4.70	----	4.80	
D	10.57	10.67	10.77		18.34	18.44	18.54		24.15	24.30	24.45	
D1	9.65 BSC			3	17.53 BSC			3	23.62 BSC			3
D2	----	----	5.74	4	----	----	10.35	4	----	----	12.10	4
D3	7.67	----	----	7	15.34	----	----	7	20.40	----	----	7
E	8.03	8.13	8.23		10.90	11.0	11.10		10.90	11.00	11.10	
E1	6.10 BSC			3	9.02 BSC			3	9.02 BSC			3
E3	1.48	1.58	1.68	4	3.15	3.25	3.35	4	3.15	3.25	3.35	4
E4	1.78 BSC			7	3.45 BSC			7	3.45 BSC			7
E5	4.12	----	----	7	6.88	----	----	7	6.88	----	----	7
e	-----				5.38 BSC				6.68 BSC			
L	0.43	0.53	0.63		0.43	0.53	0.63		0.43	0.53	0.63	
L1	0.25 BSC				0.25 BSC				0.25 BSC			
R	----	----	0.45		----	----	0.45		----	----	0.45	
Θ	2°	5°	8°		2°	5°	8°		2°	5°	8°	
N	2			11	4			11	4			11
NOTES	1, 2				1, 2				1, 2			
REF	10-428, 10-446				10-428, 10-446				10-446			
ISSUE	C				C				C			

## NOTES

1. DIMENSIONING AND TOLERANCING CONFORM TO ASME Y14.5M-1994.
2. ALL DIMENSIONS IN MILLIMETERS, ANGLES IN DEGREES.
3. D1 AND E1 ARE DETERMINED AT THE PLANE WHERE THE TOP OF THE LEADS EXIT THE PACKAGE. D1, E1, AND E3 DO NOT INCLUDE MOLD PROTRUSION. MOLD PROTRUSION SHALL NOT EXCEED 0.15mm PER SIDE.
4. A3, D2, D4, E2, AND E3 DEFINE OPTIONAL FEATURES.
5. THE b DIMENSION DOES NOT INCLUDE DAM BAR PROTRUSION. ALLOWABLE PROTRUSION SHALL BE 0.15 TOTAL IN EXCESS OF THE "b" DIMENSION AT MAXIMUM MATERIAL CONDITION.
6. THE LOCATION AND SIZE OF THE HOLES THROUGH TO THE HEAT SLUG ARE OPTIONAL.
7. DIMENSION D3 AND E5 DEFINE THE MINIMUM EXPOSED AREA OF THE HEAT SLUG. THE MAXIMUM EXPOSED AREA OF THE HEAT SLUG MAY EXTEND TO THE PACKAGE EDGE.
8. CROSSHATCHING REPRESENTS THE EXPOSED AREA OF THE HEAT SLUG.
9. LEAD EDGE MAY BE UNDERCUT BY UP TO 0.5mm IN THIS ZONE.
10. THE TERMINAL #1 IDENTIFIER AND TERMINAL NUMBERING CONVENTION SHALL CONFORM TO JEP95 SPP-012. DETAILS OF TERMINAL #1 IDENTIFIER ARE OPTIONAL, BUT MUST BE LOCATED WITHIN THE ZONE INDICATED. THE TERMINAL #1 IDENTIFIER MAY BE EITHER A MOLD, MARKED OR MECHANICAL FEATURE.
11. N IS THE TOTAL NUMBER OF TERMINALS.

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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.

Initial Issue: A	Date: Jun 99	Item: 10-386
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Revision History:
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Issue: B	Date: Feb 04	Item: 10-428
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Location	Change from:	Change to:
Sht 5 Summary Table Common Dimesnion Table	NA	Added AB, BA & BB
		Added
Sht: 5 D4	0.42	0.62
Sht: 6 Variation AA Dim E3	2.05 Min 2.15 Nom 2.25 Max	1.48 Min 1.58 Nom 1.68 MAX
Sht: 8 Note 5	Protrusions shall not cause the lead width to exceed 5.35mm.	Allowable protrusions shall not be 0.15 total in excess of the "b" dimesnion at maximum material condition.
Sht: 8 Note 6	...are optional in this zone defined by dimension Q max.	..., location and size are optional.
Sht: 8 Note 11	NA	Added

Issue: C	Date: JULY 08	Item: 10-446
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Location	Change from:	Change to:
Sht 1, 3, 5 & 7	A1	A2
	A2	A1
	NA	Relocated datum "B"
Sht 1,3,5,& 7 Dim's D4 & E3	NA	Added note 4 ref
Sht 2,4,6 & 8	D5	D3
	D3 & E5 BSC	D3 & E5 (toleranced dim)
	NA	Added Dim r
	NA	Added Profile ddd
Sht 9 Table 1	NA	Added AC & BC & FIG #
Sht 9 Tabel 2	A1	A2
Sht 9 Table 2 Dimension D4	NA	Added note 4 ref
Sht 9 Table 3 Dimension ddd	0.15NA	0.10
Sht 10	NA	Added AC
Sht 10	A1	A2
Sht 10 Dim E3	NA	Added note 4 ref
	D5	D3
	E6 BSC	E4 BSC
	D3 & E5 BSC	D3 & E5 (toleranced dim)

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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.

Issue: C	Date: JULY 08	Item: 10-446
Location	Change from:	Change to:
Sht 11	NA	Added BC
	A1	A2
	NA	Added note 4 ref
	D5	D3
	E6 BSC	E4 BSC
	D3 & E5 BSC	D3 & E5 (toleranced dim)
	NA	Added Dim R
Sht 12 Note 4	D2, E2, and A3	A3, D2, D4, E2 and E3
Sht 12 Note 7	One way profile...	Reworded note.
Sht 12 Note 10	Conform to JESD 95-1 SPP-012..	Conform to JEP95, SPP-012...
Sht 13 & 14	NA	Added Change Record