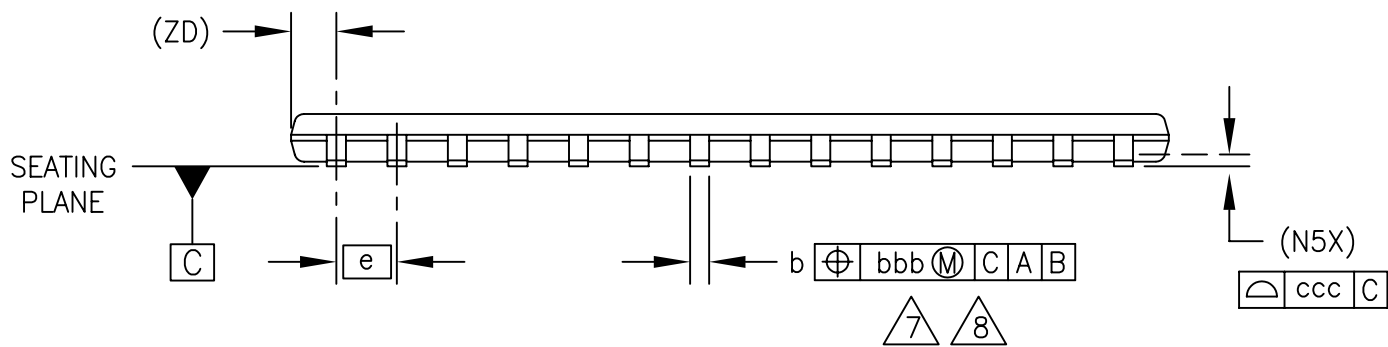


TOP VIEW



SIDE VIEW

JEDEC
SOLID STATE PRODUCT
OUTLINES

THIS STANDARD OUTLINE HAS BEEN PREPARED BY JEDEC JC-11 COMMITTEE
AND APPROVED BY THE JEDEC COUNCIL AND REFLECTS A PRODUCT WITH WIDE
ACCEPTANCE IN ELECTRONICS INDUSTRY; CHANGES ARE NOT LIKELY TO OCCUR.

TITLE: THIN SMALL OUTLINE
PACKAGE
10.16 mm BODY FAMILY

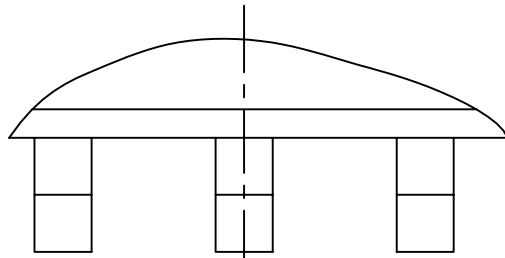
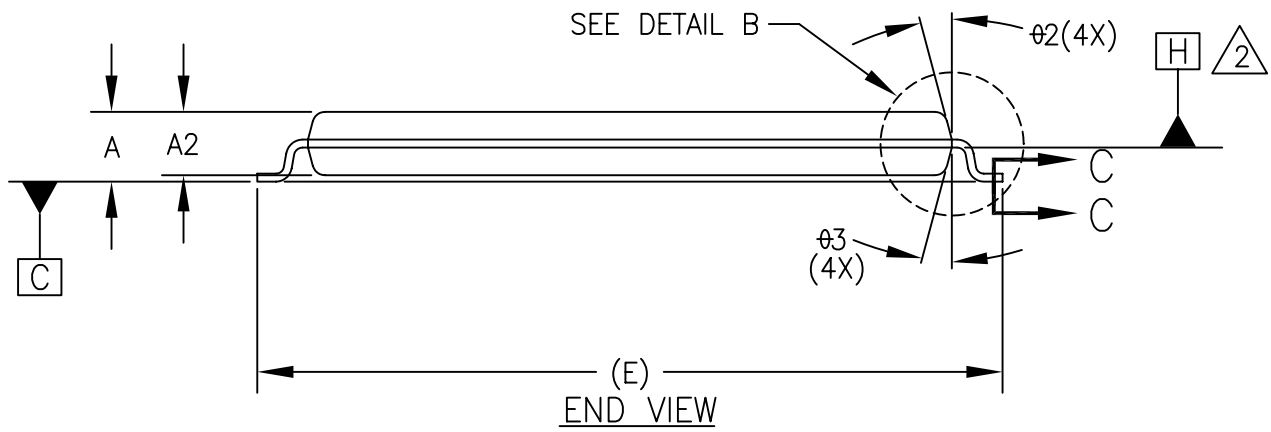
R-PDSO-G/TSOPII

ISSUE:
H

DATE:
Jun 2006

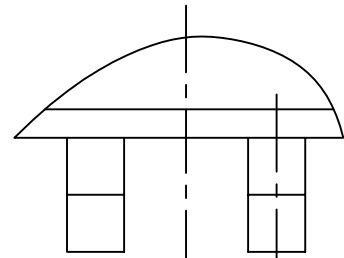
MS-024

PAGE:
1 OF 7



(b) →

(DATUM PLANE A)

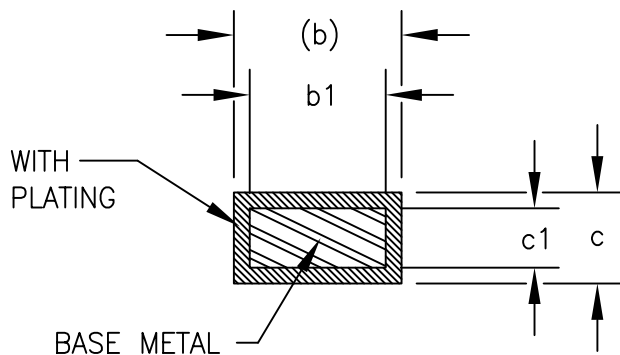


$e/2$

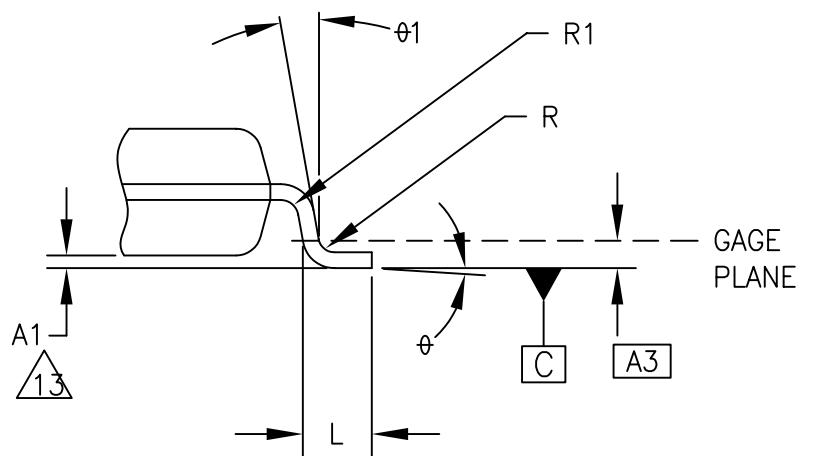
ODD LEADS/SIDE

EVEN LEADS/SIDE

DETAIL A

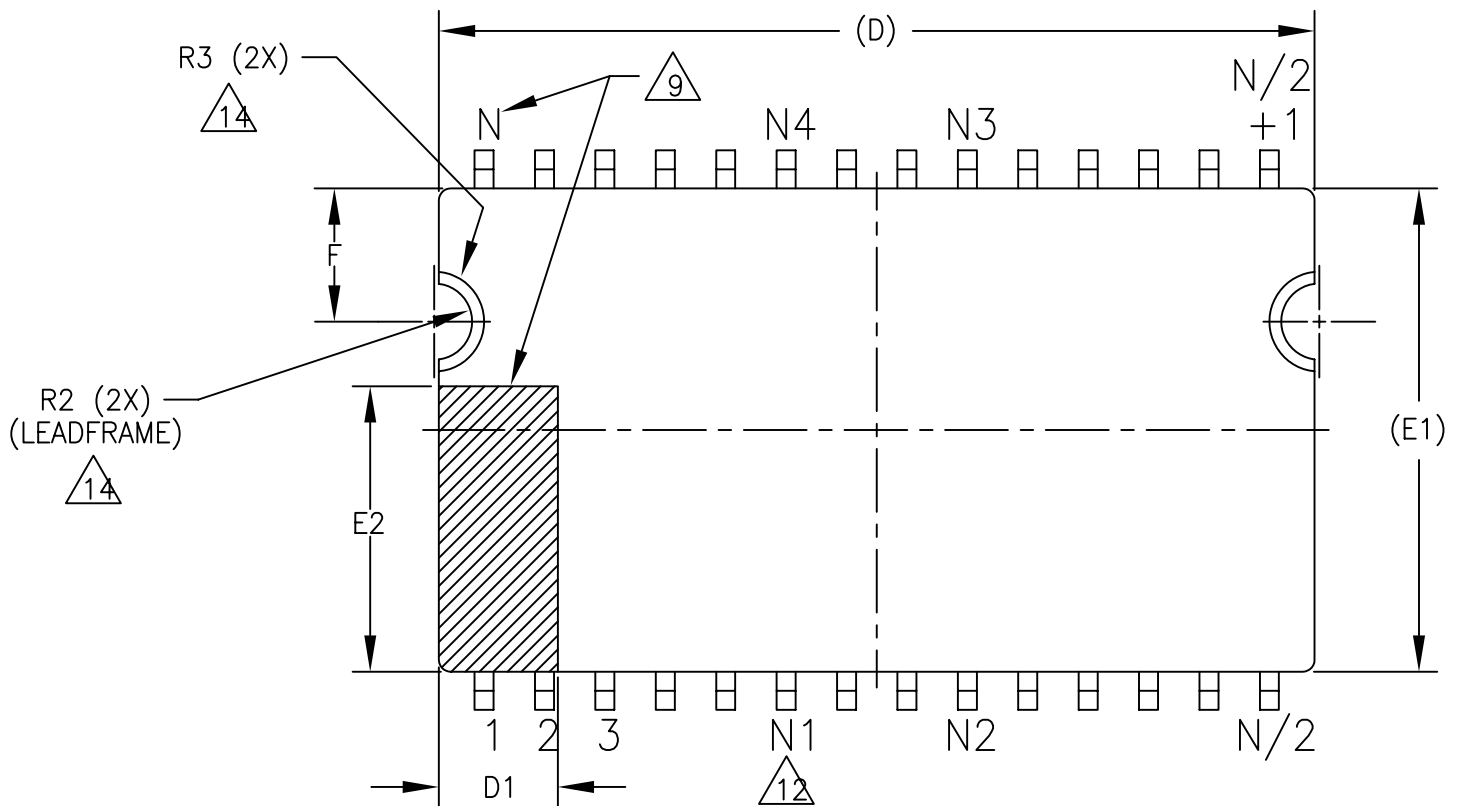


SECTION C-C



DETAIL B

LEAD NUMBERING – STANDARD LEAD FUNCTION



LEAD NUMBERING – MIRROR IMAGE LEAD FUNCTION

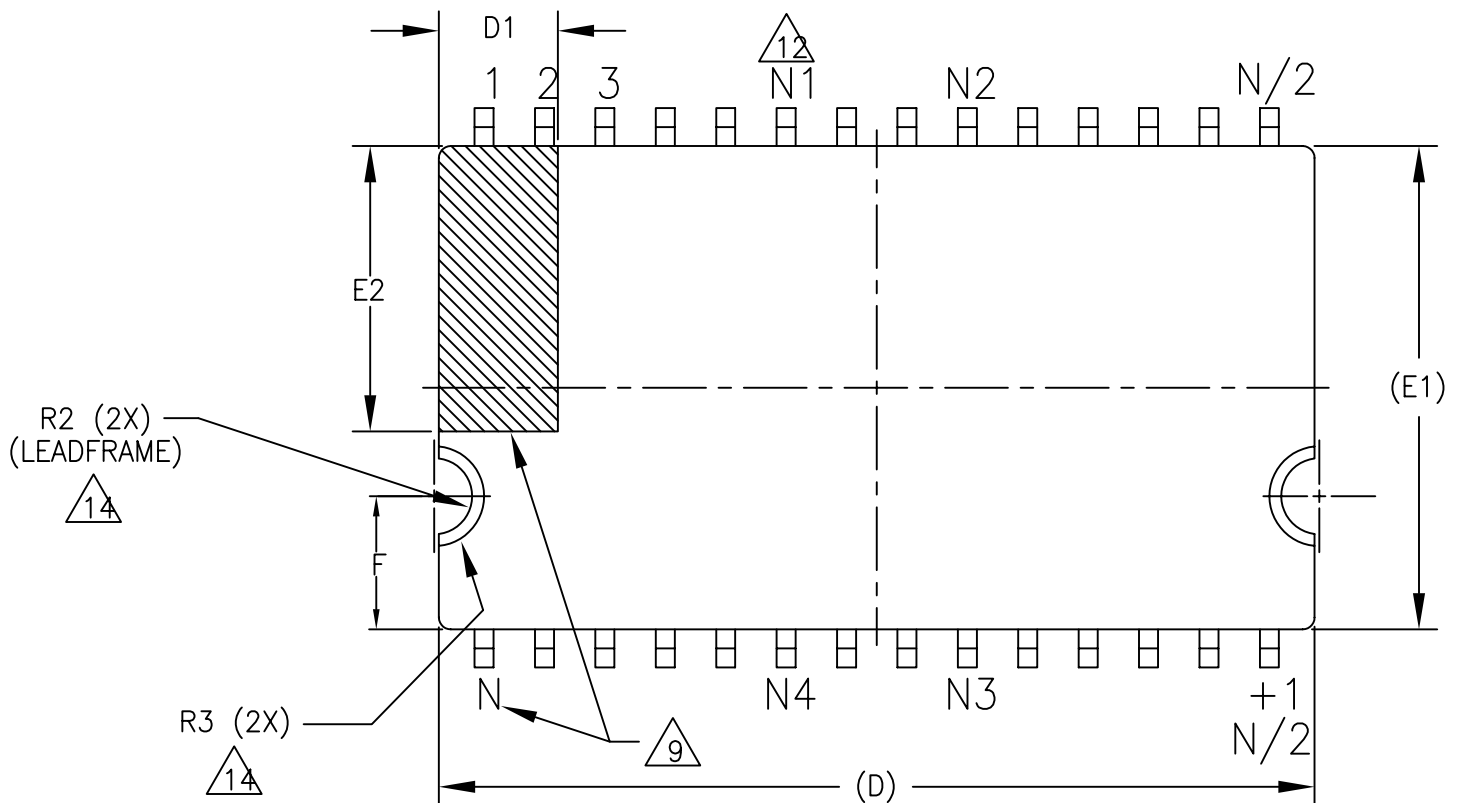


TABLE 1

SYMBOL	COMMON DIMENSIONS ALL DIMENSIONS IN MILLIMETERS			NOTE
	MIN	NOM	MAX	
A	----	----	1.20	
A1	0.05	----	0.15	13
A2	0.95	1.00	1.05	
A3	0.25 BSC			
c	0.10	----	0.21	7
c1	0.10	----	0.16	7
D1	----	----	2.50	9
E	11.76 BSC			3
E1	10.16 BSC			6
E2	----	----	6.00	9
F	2.60	2.80	3.00	14
L	0.40	0.50	0.60	
R	0.12	----	0.35	
R1	0.12	----	----	
R2	0.69	0.74	0.80	14
R3	----	----	1.05	14
θ	0°	----	8°	
θ1	0°	----	----	
θ2	10°	15°	20°	
θ3	10°	15°	20°	
TOLERANCE OF FORM AND POSITION				
aaa	0.13			
ddd	0.20			
NOTE	1, 5			
REF	11.11-753S			
ISSUE	H			

TABLE 2

VARIATIONS ALL DIMENSIONS IN MILLIMETERS									
VARIATION SYMBOL		AA	AB	AC	BA	BB	BC	NOTE	
b	MIN	0.30	0.30	0.30	0.30	0.30	0.30	7, 8	
	NOM	----	----	----	----	----	----		
	MAX	0.52	0.52	0.45	0.52	0.45	0.45		
b1	MIN	0.30	0.30	0.30	0.30	0.30	0.30	7	
	NOM	0.40	0.40	0.35	0.40	0.35	0.35		
	MAX	0.45	0.45	0.40	0.45	0.40	0.40		
D		18.41 BSC	18.41 BSC	18.41 BSC	20.95 BSC	20.95 BSC	20.95 BSC	6	
ZD		0.95 REF.	0.95 REF.	0.805 REF.	0.95 REF.	0.875 REF.	0.875 REF.		
e		1.27 BSC	1.27 BSC	0.80 BSC	1.27 BSC	0.80 BSC	0.80 BSC		
N		28	28	44	32	50	50	11	
N1		----	6	10	----	11	----	12	
N2		----	9	13	----	15	----	12	
N3		----	20	32	----	36	----	12	
N4		----	23	35	----	40	----	12	
N5		28	24	40	32	44	50	12	
TOLERANCE OF FORM AND POSITION									
bbb		0.20	0.20	0.20	0.20	0.20	0.20		
ccc		0.10	0.10	0.10	0.10	0.10	0.10		
NOTE		1, 5							
REF.		11.11-753S							
ISSUE		H							
JEDEC SOLID STATE PRODUCT OUTLINES			TITLE: THIN SMALL OUTLINE PACKAGE 10.16 mm BODY FAMILY			ISSUE: H	DATE: Jun 2006	MS-024	PAGE: 4 OF 7

TABLE 2 CONTINUED

VARIATIONS ALL DIMENSIONS IN MILLIMETERS									
VARIATION SYMBOL		BD	CA	CB	DA	EA	FA	NOTE	
b	MIN	0.17	0.30	0.22	0.30	0.30	0.30	7, 8	
	NOM	---	---	---	---	---	---		
	MAX	0.27	0.52	0.38	0.52	0.45	0.45		
b1	MIN	0.17	0.30	0.22	0.30	0.30	0.30	7	
	NOM	0.20	0.40	0.30	0.40	0.35	0.35		
	MAX	0.23	0.45	0.33	0.45	0.40	0.40		
D		20.95 BSC	23.49 BSC	23.49 BSC	26.03 BSC	28.57 BSC	22.22 BSC	6	
ZD		0.725 REF.	0.95 REF.	0.695 REF.	0.95 REF.	0.685 REF.	0.71 REF.		
e		0.50 BSC	1.27 BSC	0.65 BSC	1.27 BSC	0.80 BSC	0.80 BSC		
N		80	36	70	40	70	54	11	
N1		---	---	---	---	---	---	12	
N2		---	---	---	---	---	---	12	
N3		---	---	---	---	---	---	12	
N4		---	---	---	---		---	12	
N5		80	36	70	40	70	54	12	
TOLERANCE OF FORM AND POSITION									
bbb		0.08	0.20	0.12	0.20	0.20	0.20		
ccc		0.10	0.10	0.10	0.10	0.10	0.10		
NOTE		1, 5							
REF.		11.11-753S							
ISSUE		H							
VARIATIONS ALL DIMENSIONS IN MILLIMETERS									
VARIATION SYMBOL		FB	FC	GA	XX	XX	XX	NOTE	
b	MIN	0.17	0.22	0.13				7, 8	
	NOM	---	---	---					
	MAX	0.27	0.38	0.23					
b1	MIN	0.17	0.22	0.13				7	
	NOM	0.20	0.30	0.16					
	MAX	0.23	0.33	0.19					
D		22.22 BSC	22.22 BSC	11.20 BSC	X.XX BSC	X.XX BSC	X.XX BSC	6	
ZD		0.61 REF.	0.71 REF.	0.40 REF.					
e		0.50 BSC	0.65 BSC	0.40 BSC					
N		86	66	54				11	
N1		---	---	---				12	
N2		---	---	---				12	
N3		---	---	---				12	
N4		---	---	---				12	
N5		86	66	54				12	
TOLERANCE OF FORM AND POSITION									
bbb		0.08	0.12	0.07					
ccc		0.10	0.10	0.08					
NOTE		1, 5							
REF.		11.11-753S							
ISSUE		H							
JEDEC SOLID STATE PRODUCT OUTLINES			TITLE: THIN SMALL OUTLINE PACKAGE 10.16 mm BODY FAMILY			ISSUE: H	DATE: Jun 2006	MS-024	PAGE: 5 OF 7

NOTES:

- 1 DIMENSIONING AND TOLERANCING CONFORM TO ASME Y14.5M-1994. θ ANGLE ARE IN DEGREES.
- 2 DATUM PLANE H COINCIDENT WITH BOTTOM OF LEAD, WHERE LEAD EXITS BODY.
- 3 TO BE DETERMINED AT SEATING PLANE C.
- 4 DATUMS A AND B TO BE DETERMINED AT DATUM H.
- 5 ALL DIMENSIONS IN MILLIMETERS.
- 6 DIMENSION D AND E1 ARE DETERMINED AT DATUM H. DIMENSION D DOES NOT INCLUDE MOLD PROTRUSIONS OR GATE BURRS. MOLD PROTRUSIONS AND GATE BURRS SHALL NOT EXCEED 0.15 mm PER SIDE. DIMENSION E1 DOES NOT INCLUDE INTERLEAD MOLD PROTRUSIONS. INTERLEAD MOLD PROTRUSIONS SHALL NOT EXCEED 0.25 mm PER SIDE.
- 7 THESE DIMENSIONS APPLY TO THE FLAT SECTION OF THE LEAD BETWEEN 0.10 mm AND 0.25 mm FROM THE LEAD TIP.
- 8 DIMENSION b DOES NOT INCLUDE DAMBAR PROTRUSION/INTRUSION. ALLOWABLE DAMBAR PROTRUSION SHALL NOT CAUSE THE LEAD TO BE WIDER THAN THE MAXIMUM b DIMENSION BY MORE THAN 0.13 mm. DAMBAR INTRUSION SHALL NOT CAUSE THE LEAD TO BE NARROWER THAN THE MINIMUM b DIMENSION BY MORE THAN 0.07 mm.
- 9 THE LEAD #1 IDENTIFIER AND LEAD NUMBERING CONVENTION SHALL CONFORM TO JEP 95, SECTION 3, SPP-012. DETAILS OF LEAD #1 IDENTIFIER ARE OPTIONAL BUT MUST BE LOCATED WITHIN THE ZONE INDICATED. THE LEAD #1 IDENTIFIER MAY BE EITHER A MOLDED OR A MARKED FEATURE.
- 10 EXACT DESIGN OF THIS FEATURE IS OPTIONAL.
- 11 N IS THE MAXIMUM NUMBER OF LEADS.
- 12 FOR LEAD IDENTIFICATION PURPOSES ONLY. LEADS BETWEEN N1 AND N2 AND BETWEEN N3 AND N4 WILL BE OMITTED IF VALUES FOR N1, N2, N3 AND N4 ARE LISTED IN VARIATION TABLE. N5 IS THE ACTUAL LEAD COUNT.
- 13 A1 IS DEFINED AS THE DISTANCE FROM THE SEATING PLANE TO THE LOWEST POINT OF THE PACKAGE BODY.
- 14 THIS ALIGNMENT FEATURE IS OPTIONAL.

JEDEC SOLID STATE PRODUCT OUTLINES	TITLE: THIN SMALL OUTLINE PACKAGE 10.16 mm BODY FAMILY	ISSUE: H	DATE: Jun 2006	MS-024	PAGE: 6 OF 7
--	--	-------------	-------------------	--------	-----------------

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 occur.

Issue:	Date:	JC11 Item Number
A	August 1994	11.11-368S
B	June 1995	11.11-398S
C	January 1996	11.11-413S
D	June 1997	11.11-420S
E	February 1999	11.11-502S
F	December 1999	11.11-517S
G	October 2000	11.11-566S

Change Record History

Issue H	Date: June 2006	Item Number 11.11-753S
Location	Change from:	Changed to:
Page 4, Table 1, Common Dimensions	C = 0.12 min.--- Nom, 0.21 Max. c1 = 0.12 Min, 0.15 Nom, 0.16 Max.	C = 0.10 min.--- Nom, 0.21 Max. c1 = 0.10 Min, --- Nom, 0.16 Max.

Issue:	Date:	Item Number:
Location	Change from:	Changed to: