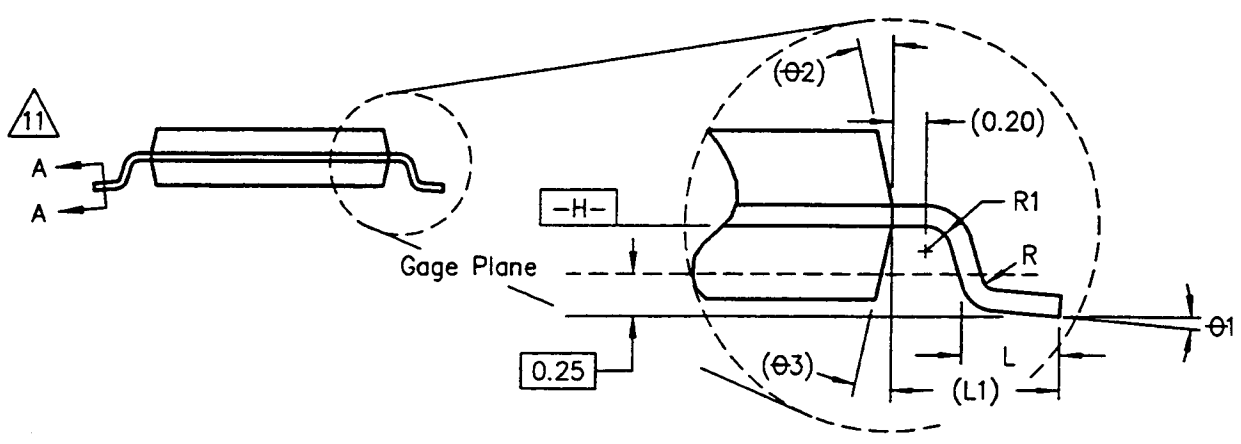
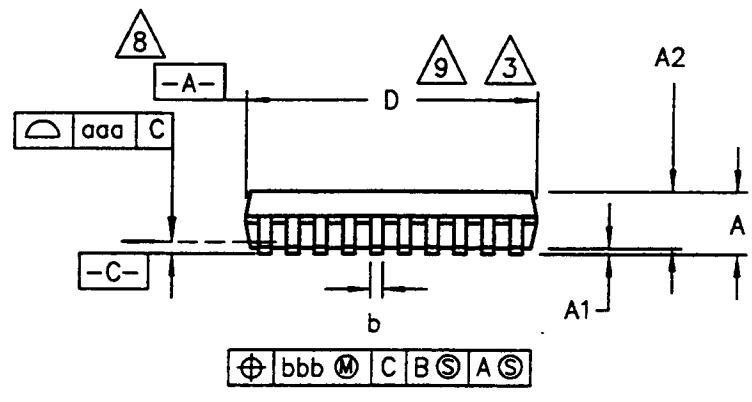
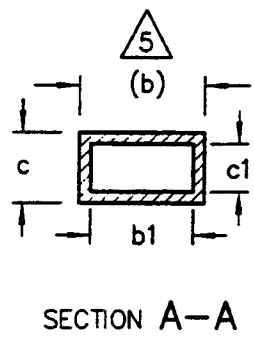
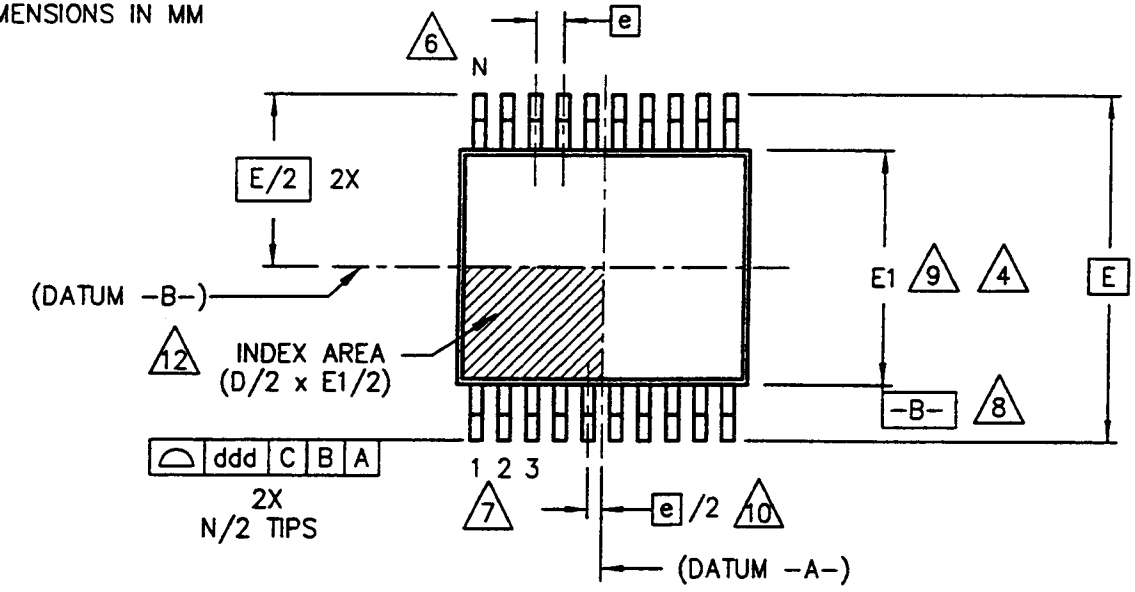


DIMENSIONS IN MM



JEDEC
SOLID STATE PRODUCT
OUTLINES

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	JESD-30 DESIGNATOR	ISSUE	DATE	MO-152	SHEET 1 OF 10
PLASTIC SHRINK SMALL OUTLINE PKG	R-PDSO-G/SSOP	C	1/96		

46

SYMBOL	COMMON DIMENSIONS (MILLIMETERS)											
	SSOP											
	0.65 mm LEAD PITCH			NOTE	0.50 mm LEAD PITCH			NOTE	0.40 mm LEAD PITCH			NOTE
	MIN.	NOM.	MAX.		MIN.	NOM.	MAX.		MIN.	NOM.	MAX.	
A	—	—	2.00	—	—	—	2.00	—	—	—	2.00	—
A1	0.05	—	0.25	—	0.05	—	0.25	—	0.05	—	0.25	—
A2	1.45	—	1.75	—	1.45	—	1.75	—	1.45	—	1.75	—
L	0.45	0.60	0.75	—	0.45	0.60	0.75	—	0.45	0.60	0.75	—
R	0.09	—	—	—	0.09	—	—	—	0.09	—	—	—
R1	0.09	—	—	—	0.09	—	—	—	0.09	—	—	—
b	0.19	—	0.30	5	0.17	—	0.27	5	0.13	—	0.23	5
b1	0.19	0.22	0.25	—	0.17	0.20	0.23	—	0.13	0.16	0.19	—
c	0.09	—	0.20	—	0.09	—	0.20	—	0.09	—	0.20	—
c1	0.09	—	0.16	—	0.09	—	0.16	—	0.09	—	0.16	—
Ø1	0	—	8	—	0	—	8	—	0	—	8	—
L1	1.0 REF			—	1.0 REF			—	1.0 REF			—
aaa	0.10			—	0.10			—	0.08			—
bbb	0.10			—	0.08			—	0.07			—
ddd	0.20			—	0.20			—	0.20			—
e	0.65 BSC			—	0.50 BSC			—	0.40 BSC			—
Ø2	12 REF			—	12 REF			—	12 REF			—
Ø3	12 REF			—	12 REF			—	12 REF			—
NOTE	1,2			—	1,2			—	1,2			—
REF.	11-355			—	11-355			—	11-355			—
ISSUE	A			—	A			—	A			—

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETERS (ANGLES IN DEGREES).

2. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M-1982.

3. DIMENSION 'D' DOES NOT INCLUDE MOLD FLASH, PROTRUSIONS OR GATE BURRS. MOLD FLASH, PROTRUSIONS OR GATE BURRS SHALL NOT EXCEED 0.15 PER SIDE.

4. DIMENSION 'E1' DOES NOT INCLUDE INTERLEAD FLASH OR PROTRUSION. INTERLEAD FLASH OR PROTRUSION SHALL NOT EXCEED 0.25 PER SIDE.

5. DIMENSION 'b' DOES NOT INCLUDE DAMBAR PROTRUSION. ALLOWABLE DAMBAR PROTRUSION SHALL BE 0.08 MM TOTAL IN EXCESS OF THE 'b' DIMENSION AT MAXIMUM MATERIAL CONDITION. DAMBAR CANNOT BE LOCATED ON THE LOWER RADIUS OF THE FOOT. MINIMUM SPACE BETWEEN PROTRUSION AND ADJACENT LEAD IS 0.07 MM FOR 0.4 MM AND 0.5 MM PITCH PACKAGES.

6. "N" IS THE MAXIMUM NUMBER OF TERMINAL POSITIONS FOR THE SPECIFIED PACKAGE LENGTH. DEPOPULATION IS ALLOWED, BUT ONLY UNDER THE FOLLOWING CONDITIONS:

A) DEPOPULATION MAY REDUCE "N" BY INCREMENTS OF FOUR (4) LEADS ONLY.

B) ONLY END LEADS MAY BE REMOVED

C) LEADS MUST BE SYMMETRICALLY ARRANGED WITH RESPECT TO DATUM $\square A \square$ (SEE NOTE 10) TO AVOID ANY PATTERN SHIFTING.

7. TERMINAL NUMBERS ARE SHOWN FOR REFERENCE ONLY.

8. DATUMS $\square A \square$ AND $\square B \square$ TO BE DETERMINED AT DATUM PLANE $\square H \square$.

9. DIMENSIONS 'D' AND 'E1' ARE TO BE DETERMINED AT DATUM PLANE $\square H \square$.

10. THIS DIMENSION APPLIES ONLY TO VARIATIONS WITH AN EVEN NUMBER OF LEADS PER SIDE. FOR VARIATIONS WITH AN ODD NUMBER OF LEADS PER SIDE, THE "CENTER" LEAD MUST BE COINCIDENT WITH THE PACKAGE CENTERLINE, DATUM A.

11. CROSS SECTION A-A TO BE DETERMINED AT 0.10 TO 0.25 MM FROM THE LEAD TIP.

12. DETAILS OF THE PIN 1 IDENTIFIER ARE OPTIONAL, BUT MUST BE LOCATED WITHIN THE ZONE INDICATED.

JEDEC SOLID STATE PRODUCT OUTLINES	TITLE PLASTIC SHRINK SMALL OUTLINE PKG R-PDSO-G/SSOP	ISSUE C	DATE 1/96	MO-152	SHEET 3 OF 10
--	---	------------	--------------	--------	------------------

SUMMARY TABLE

SSOP VARIATIONS

BODY WIDTH	LEAD PITCH	LEAD COUNT	VARIATION	
4.4	0.65	8	AA	
		14	AB-1	
		16	AB	
		20	AC	
		24	AD	
		28	AE	
	0.50	20	BA	
		24	BB	
		28	BC	
		36	BD	
		0.40	24	CA
			32	CB
	36		CC	
	6.1	0.65	48	CD
			24	DA
28			DB	
30			DB-1	
32			DC	
36			DD	
0.50		40	DE	
		28	EA	
		36	EB	
		40	EC	
		44	EC-1	
		48	ED	
		56	EE	
0.40		64	EF	
		36	FA	
		48	FB	
		52	FC	
		56	FD	
		64	FE	
8.0		0.65	80	FF
			28	GA
	32		GB	
	36		GC	
	40		GD	
	0.50	36	HA	
		40	HB	
		48	HC	
		56	HD	
		0.40	48	JA
	52		JB	
	56		JC	
	60		JC-1	
	64		JD	
			68	JD-1

JEDEC
SOLID STATE PRODUCT
OUTLINES

TITLE
PLASTIC SHRINK
SMALL OUTLINE PKG
R-PDSO-G/SSOP

ISSUE
C

DATE
1/96

MO-152

SHEET
4 OF 10

SYMBOL	STANDARD VARIATIONS											
	AA			NOTE	AB-1			NOTE	AB			NOTE
	MIN.	NOM.	MAX.		MIN.	NOM.	MAX.		MIN.	NOM.	MAX.	
D	2.9	3.0	3.1	3,9	4.9	5.0	5.1	3,9	4.9	5.0	5.1	3,9
E1	4.3	4.4	4.5	4,9	4.3	4.4	4.5	4,9	4.3	4.4	4.5	4,9
E	6.4 BSC				6.4 BSC				6.4 BSC			
e	0.65 BSC				0.65 BSC				0.65 BSC			
N	8			6,7	14			6,7	16			6,7
NOTE	1,2				1,2				1,2			
REF.	11-355				11-440				11-355			
ISSUE	A				C				A			

SYMBOL	STANDARD VARIATIONS											
	AC			NOTE	AD			NOTE	AE			NOTE
	MIN.	NOM.	MAX.		MIN.	NOM.	MAX.		MIN.	NOM.	MAX.	
D	6.4	6.5	6.6	3,9	7.7	7.8	7.9	3,9	9.6	9.7	9.8	3,9
E1	4.3	4.4	4.5	4,9	4.3	4.4	4.5	4,9	4.3	4.4	4.5	4,9
E	6.4 BSC				6.4 BSC				6.4 BSC			
e	0.65 BSC				0.65 BSC				0.65 BSC			
N	20			6,7	24			6,7	28			6,7
NOTE	1,2				1,2				1,2			
REF.	11-355				11-355				11-355			
ISSUE	A				A				A			

SYMBOL	STANDARD VARIATIONS											
	BA			NOTE	BB			NOTE	BC			NOTE
	MIN.	NOM.	MAX.		MIN.	NOM.	MAX.		MIN.	NOM.	MAX.	
D	4.9	5.0	5.1	3,9	6.4	6.5	6.6	3,9	7.7	7.8	7.9	3,9
E1	4.3	4.4	4.5	4,9	4.3	4.4	4.5	4,9	4.3	4.4	4.5	4,9
E	6.4 BSC				6.4 BSC				6.4 BSC			
e	0.50 BSC				0.50 BSC				0.50 BSC			
N	20			6,7	24			6,7	28			6,7
NOTE	1,2				1,2				1,2			
REF.	11-355				11-355				11-355			
ISSUE	A				A				A			

SYMBOL	STANDARD VARIATIONS											
	BD			NOTE	CA			NOTE	CB			NOTE
	MIN.	NOM.	MAX.		MIN.	NOM.	MAX.		MIN.	NOM.	MAX.	
D	9.6	9.7	9.8	3,9	4.9	5.0	5.1	3,9	6.4	6.5	6.6	3,9
E1	4.3	4.4	4.5	4,9	4.3	4.4	4.5	4,9	4.3	4.4	4.5	4,9
E	6.4 BSC				6.4 BSC				6.4 BSC			
e	0.50 BSC				0.40 BSC				0.40 BSC			
N	36			6,7	24			6,7	32			6,7
NOTE	1,2				1,2				1,2			
REF.	11-355				11-355				11-355			
ISSUE	A				A				A			

SYMBOL	STANDARD VARIATIONS											
	CC			NOTE	CD			NOTE	DA			NOTE
	MIN.	NOM.	MAX.		MIN.	NOM.	MAX.		MIN.	NOM.	MAX.	
D	7.7	7.8	7.9	3,9	9.6	9.7	9.8	3,9	7.7	7.8	7.9	3,9
E1	4.3	4.4	4.5	4,9	4.3	4.4	4.5	4,9	6.0	6.1	6.2	4,9
E	6.4 BSC				6.4 BSC				8.1 BSC			
e	0.40 BSC				0.40 BSC				0.65 BSC			
N	36			6,7	48			6,7	24			6,7
NOTE	1,2				1,2				1,2			
REF.	11-355				11-355				11-355			
ISSUE	A				A				A			

SYMBOL	STANDARD VARIATIONS											
	DB			NOTE	DB-1			NOTE	DC			NOTE
	MIN.	NOM.	MAX.		MIN.	NOM.	MAX.		MIN.	NOM.	MAX.	
D	9.6	9.7	9.8	3,9	9.6	9.7	9.8	3,9	10.9	11.0	11.1	3,9
E1	6.0	6.1	6.2	4,9	6.0	6.1	6.2	4,9	6.0	6.1	6.2	4,9
E	8.1 BSC				8.1 BSC				8.1 BSC			
e	0.65 BSC				0.65 BSC				0.65 BSC			
N	28			6,7	30			6,7	32			6,7
NOTE	1,2				1,2				1,2			
REF.	11-355				11-440				11-355			
ISSUE	A				C				A			

SYMBOL	STANDARD VARIATIONS											
	DD			NOTE	DE			NOTE	EA			NOTE
	MIN.	NOM.	MAX.		MIN.	NOM.	MAX.		MIN.	NOM.	MAX.	
D	12.4	12.5	12.6	3,9	13.9	14.0	14.1	3,9	7.7	7.8	7.9	3,9
E1	6.0	6.1	6.2	4,9	6.0	6.1	6.2	4,9	6.0	6.1	6.2	4,9
E	8.1 BSC				8.1 BSC				8.1 BSC			
e	0.65 BSC				0.65 BSC				0.50 BSC			
N	36			6,7	40			6,7	28			6,7
NOTE	1,2				1,2				1,2			
REF.	11-355				11-355				11-355			
ISSUE	A				A				A			

SYMBOL	STANDARD VARIATIONS											
	EB			NOTE	EC			NOTE	EC-1			NOTE
	MIN.	NOM.	MAX.		MIN.	NOM.	MAX.		MIN.	NOM.	MAX.	
D	9.6	9.7	9.8	3,9	10.9	11.0	11.1	3,9	10.9	11.0	11.1	3,9
E1	6.0	6.1	6.2	4,9	6.0	6.1	6.2	4,9	6.0	6.1	6.2	4,9
E	8.1 BSC				8.1 BSC				8.1 BSC			
e	0.50 BSC				0.50 BSC				0.50 BSC			
N	36			6,7	40			6,7	44			6,7
NOTE	1,2				1,2				1,2			
REF.	11-355				11-355				11-440			
ISSUE	A				A				C			

SYMBOL	STANDARD VARIATIONS											
	ED			NOTE	EE			NOTE	EF			NOTE
	MIN.	NOM.	MAX.		MIN.	NOM.	MAX.		MIN.	NOM.	MAX.	
D	12.4	12.5	12.6	3,9	13.9	14.0	14.1	3,9	16.9	17.0	17.1	3,9
E1	6.0	6.1	6.2	4,9	6.0	6.1	6.2	4,9	6.0	6.1	6.2	4,9
E	8.1 BSC				8.1 BSC				8.1 BSC			
e	0.50 BSC				0.50 BSC				0.50 BSC			
N	48			6,7	56			6,7	64			6,7
NOTE	1,2				1,2				1,2			
REF.	11-355				11-355				11-396			
ISSUE	A				A				B			

52

SYMBOL	STANDARD VARIATIONS											
	FA			NOTE	FB			NOTE	FC			NOTE
	MIN.	NOM.	MAX.		MIN.	NOM.	MAX.		MIN.	NOM.	MAX.	
D	7.7	7.8	7.9	3,9	9.6	9.7	9.8	3,9	10.9	11.0	11.1	3,9
E1	6.0	6.1	6.2	4,9	6.0	6.1	6.2	4,9	6.0	6.1	6.2	4,9
E	8.1 BSC				8.1 BSC				8.1 BSC			
e	0.40 BSC				0.40 BSC				0.40 BSC			
N	36			6,7	48			6,7	52			
NOTE	1,2				1,2				1,2			
REF.	11-355				11-355				11-355			
ISSUE	A				A				A			

SYMBOL	STANDARD VARIATIONS											
	FD			NOTE	FE			NOTE	FF			NOTE
	MIN.	NOM.	MAX.		MIN.	NOM.	MAX.		MIN.	NOM.	MAX.	
D	12.4	12.5	12.6	3,9	13.9	14.0	14.1	3,9	16.9	17.0	17.1	3,9
E1	6.0	6.1	6.2	4,9	6.0	6.1	6.2	4,9	6.0	6.1	6.2	4,9
E	8.1 BSC				8.1 BSC				8.1 BSC			
e	0.40 BSC				0.40 BSC				0.40 BSC			
N	56			6,7	64			6,7	80			6,7
NOTE	1,2				1,2				1,2			
REF.	11-396				11-355				11-396			
ISSUE	B				A				B			

SYMBOL	STANDARD VARIATIONS											
	GA			NOTE	GB			NOTE	GC			NOTE
	MIN.	NOM.	MAX.		MIN.	NOM.	MAX.		MIN.	NOM.	MAX.	
D	9.6	9.7	9.8	3,9	10.9	11.0	11.1	3,9	12.4	12.5	12.6	3,9
E1	7.9	8.0	8.1	4,9	7.9	8.0	8.1	4,9	7.9	8.0	8.1	4,9
E	10.0 BSC				10.0 BSC				10.0 BSC			
e	0.65 BSC				0.65 BSC				0.65 BSC			
N	28			6,7	32			6,7	36			6,7
NOTE	1,2				1,2				1,2			
REF.	11-355				11-355				11-355			
ISSUE	A				A				A			

SYMBOL	STANDARD VARIATIONS											
	GD			NOTE	HA			NOTE	HB			NOTE
	MIN.	NOM.	MAX.		MIN.	NOM.	MAX.		MIN.	NOM.	MAX.	
D	13.9	14.0	14.1	3,9	9.6	9.7	9.8	3,9	10.9	11.0	11.1	3,9
E1	7.9	8.0	8.1	4,9	7.9	8.0	8.1	4,9	7.9	8.0	8.1	4,9
E	10.0 BSC				10.0 BSC				10.0 BSC			
e	0.65 BSC				0.50 BSC				0.50 BSC			
N	40			6,7	36			6,7	40			6,7
NOTE	1,2				1,2				1,2			
REF.	11-355				11-355				11-355			
ISSUE	A				A				A			

SYMBOL	STANDARD VARIATIONS											
	HC			NOTE	HD			NOTE	JA			NOTE
	MIN.	NOM.	MAX.		MIN.	NOM.	MAX.		MIN.	NOM.	MAX.	
D	12.4	12.5	12.6	3,9	13.9	14.0	14.1	3,9	9.6	9.7	9.8	3,9
E1	7.9	8.0	8.1	4,9	7.9	8.0	8.1	4,9	7.9	8.0	8.1	4,9
E	10.0 BSC				10.0 BSC				10.0 BSC			
e	0.50 BSC				0.50 BSC				0.40 BSC			
N	48			6,7	56			6,7	48			6,7
NOTE	1,2				1,2				1,2			
REF.	11-355				11-355				11-366			
ISSUE	A				A				A			

SYMBOL	STANDARD VARIATIONS											
	JB			NOTE	JC			NOTE	JC-1			NOTE
	MIN.	NOM.	MAX.		MIN.	NOM.	MAX.		MIN.	NOM.	MAX.	
D	10.9	11.0	11.1	3,9	12.4	12.5	12.6	3,9	12.4	12.5	12.6	3,9
E1	7.9	8.0	8.1	4,9	7.9	8.0	8.1	4,9	7.9	8.0	8.1	4,9
E	10.0 BSC				10.0 BSC				10.0 BSC			
e	0.40 BSC				0.40 BSC				0.40 BSC			
N	52			6,7	56			6,7	60			6,7
NOTE	1,2				1,2				1,2			
REF.	11-355				11-355				11-440			
ISSUE	A				A				C			

JEDEC SOLID STATE PRODUCT OUTLINES	TITLE PLASTIC SHRINK SMALL OUTLINE PKG R-PDSO-G/SSOP	ISSUE C	DATE 1/96	MO-152	SHEET 9 OF 10
--	---	------------	--------------	--------	------------------

SYMBOL	STANDARD VARIATIONS										
	JD			NOTE	JD-1			NOTE			
	MIN.	NOM.	MAX.		MIN.	NOM.	MAX.				
D	13.9	14.0	14.1	3,9	13.9	14.0	14.1	3,9			
E1	7.9	8.0	8.1	4,9	7.9	8.0	8.1	4,9			
E	10.0 BSC				10.0 BSC						
e	0.40 BSC				0.40 BSC						
N	64			6,7	68			6,7			
NOTE	1,2				1,2						
REF.	11-355				11-440						
ISSUE	A				C						

