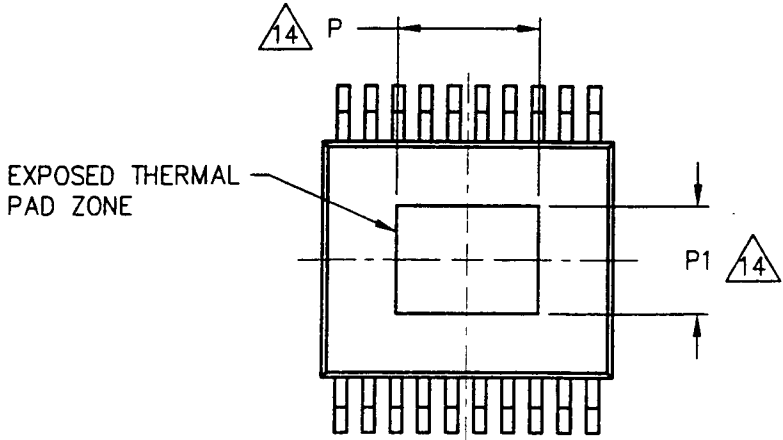
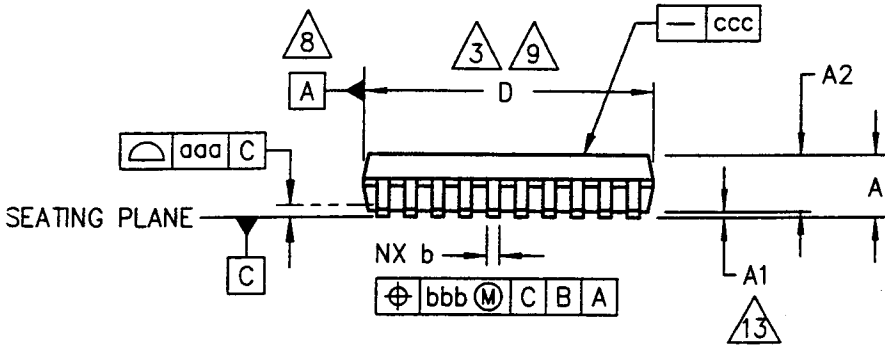
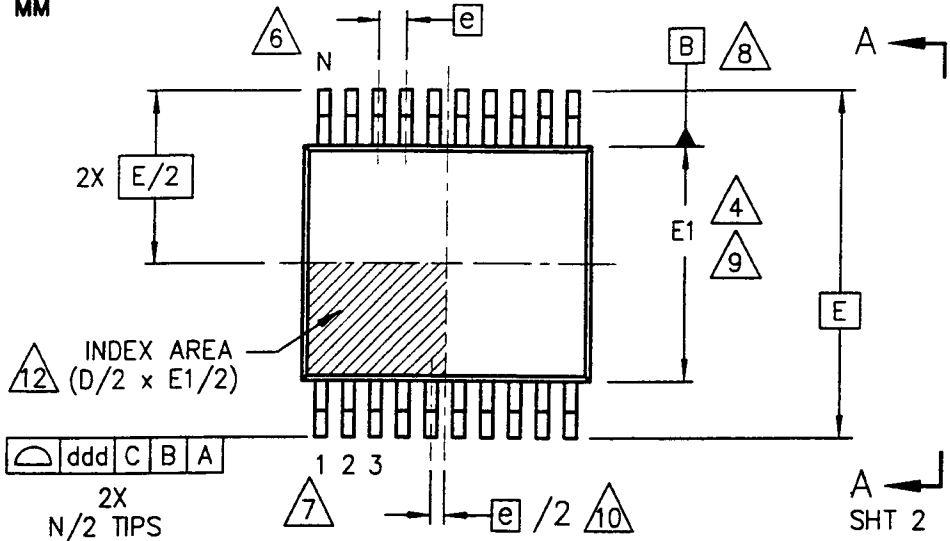


DIMENSIONS IN MM



BOTTOM VIEW
(THERMALLY ENHANCED VARIATIONS ONLY)

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 PLASTIC THIN SHRINK
SMALL OUTLINE PKG

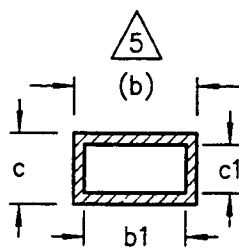
JESD-30 DESIGNATOR
R-PDSO-G/TSSOP
/HTSSOP

ISSUE
D

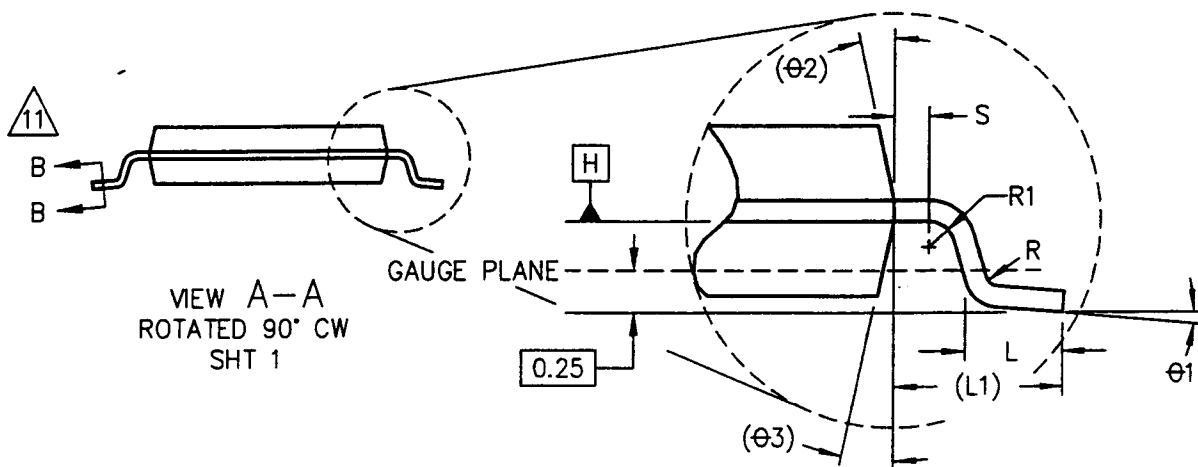
DATE
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SECTION B-B



S Y M B O L	COMMON DIMENSIONS (MILLIMETERS)											
	TSSOP											
	0.65 mm LEAD PITCH			N O T E	0.50 mm LEAD PITCH			N O T E	0.40 mm LEAD PITCH			N O T E
	MIN	NOM	MAX		MIN	NOM	MAX		MIN	NOM	MAX	
A	—	—	1.20	—	—	—	1.20	—	—	—	1.20	—
A1	0.05	—	0.15	13	0.05	—	0.15	13	0.05	—	0.15	13
A2	0.80	1.00	1.05	—	0.80	1.00	1.05	—	0.80	1.00	1.05	—
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	—	—	—
S	0.20	—	—	*	0.20	—	—	*	0.20	—	—	*
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	—
Ø	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			—
ccc	0.05			—	0.05			—	0.05			—
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	11-360, 11-465 *				11-360, 11-465 *				11-360, 11-465 *			
ISSUE	A				A				A			

JEDEC
SOLID STATE PRODUCT
OUTLINES

TITLE PLASTIC THIN SHRINK
SMALL OUTLINE PKG
R-PDSO-G/TSSOP/HTSSOP

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NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETERS (ANGLES IN DEGREES).
2. DIMENSIONING AND TOLERANCING PER ASME Y14.5M-1994.

△ 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 A (SEE NOTE 10) TO AVOID ANY ARRAY SHIFTING.

△ 7 TERMINAL NUMBERS ARE SHOWN FOR REFERENCE ONLY.

△ 8 DATUMS A AND B TO BE DETERMINED AT DATUM PLANE H.

△ 9 DIMENSIONS 'D' AND 'E1' TO BE DETERMINED AT DATUM PLANE H.

△ 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 B-B 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.

△ 13 'A1' DIMENSION FOR THERMALLY ENHANCED VARIATIONS IS REDUCED TO 0.00 - 0.10 MM.

△ 14 THERMAL PAD SIZE AND CONFIGURATION MAY VARY WITHIN THE ALLOWABLE ZONE.

JEDEC SOLID STATE PRODUCT OUTLINES	TITLE PLASTIC THIN SHRINK SMALL OUTLINE PKG R-PDSO-G/TSSOP/HTSSOP	ISSUE D	DATE 4 / 97	MO-153	SHEET 4 OF 17
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SUMMARY TABLE – TSSOP VARIATIONS						
BODY WIDTH	LEAD PITCH	LEAD COUNT	VARIATION			
			STD	THERMAL ENHANCED (T)		
4.4	0.65	8	AA	AAT		
		14	AB-1	ABT-1		
		16	AB	ABT		
		20	AC	ACT		
		24	AD	ADT		
		28	AE	AET		
	0.50	20	BA	BAT		
		24	BB	BBT		
		28	BC	BCT		
		36	BD	BDT		
	0.40	24	CA	CAT		
		32	CB	CBT		
		36	CC	CCT		
		48	CD	CDT		
	6.1	0.65	24	DA	DAT	
			28	DB	DBT	
30			DB-1	DBT-1		
32			DC	DCT		
36			DD	DDT		
40			DE	DET		
0.50		28	EA	EAT		
		36	EB	EBT		
		40	EC	ECT		
		44	EC-1	ECT-1		
		48	ED	EDT		
		56	EE	EET		
		64	EF	EFT		
		0.40	36	FA	FAT	
48			FB	FBT		
52			FC	FCT		
56			FD	FDT		
64			FE	FET		
80			FF	FFT		
8.0			0.65	28	GA	GAT
				32	GB	GBT
		36		GC	GCT	
		40		GD	GDT	
		0.50	36	HA	HAT	
	40		HB	HBT		
	48		HC	HCT		
	56		HD	HDT		
0.40	48	JA	JAT			
	52	JB	JBT			
	56	JC	JCT			
	60	JC-1	JCT-1			
	64	JD	JDT			
	68	JD-1	JDT-1			
JEDEC SOLID STATE PRODUCT OUTLINES		TITLE PLASTIC THIN SHRINK SMALL OUTLINE PKG R-PDSO-G/TSSOP/HTSSOP	ISSUE D	DATE 4/97	MO-153	SHEET 5 OF 17

S Y M B O L	STANDARD VARIATIONS											
	AA			N O T E	AB-1			N O T E	AB			N O T E
	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	11-360				11-441				11-360			
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	11-360				11-360				11-360			
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	11-360				11-360				11-360			
ISSUE	A				A				A			

JEDEC
SOLID STATE PRODUCT
OUTLINES

TITLE
PLASTIC THIN SHRINK
SMALL OUTLINE PKG
R-PDSO-G/TSSOP/HTSSOP

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S Y M B O L	STANDARD VARIATIONS											
	BD			N O T E	CA			N O T E	CB			N O T E
	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	11-360				11-360				11-360			
ISSUE	A				A				A			

S Y M B O L	STANDARD VARIATIONS											
	CC			N O T E	CD			N O T E	DA			N O T E
	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	11-360				11-360				11-360			
ISSUE	A				A				A			

S Y M B O L	STANDARD VARIATIONS											
	DB			N O T E	DB-1			N O T E	DC			N O T E
	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	11-360				11-441				11-360			
ISSUE	A				C				A			

JEDEC
SOLID STATE PRODUCT
OUTLINES

TITLE PLASTIC THIN SHRINK
SMALL OUTLINE PKG
R-PDSO-G/TSSOP/HTSSOP

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S Y M B O L	STANDARD VARIATIONS											
	DD			N O T E	DE			N O T E	EA			N O T E
	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	11-360				11-360				11-360			
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	11-360				11-360				11-441			
ISSUE	A				A				C			

S Y M B O L	STANDARD VARIATIONS											
	ED			N O T E	EE			N O T E	EF			N O T E
	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	11-397				11-360				11-397			
ISSUE	B				A				B			

JEDEC SOLID STATE PRODUCT OUTLINES		TITLE PLASTIC THIN SHRINK SMALL OUTLINE PKG R-PDSO-G/TSSOP/HTSSOP		ISSUE D	DATE 4 / 97	MO-153	SHEET 8 OF 17
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S Y M B O L	STANDARD VARIATIONS											
	FA			N O T E	FB			N O T E	FC			N O T E
	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			6,7
NOTE	1,2				1,2				1,2			
REF	11-360				11-360				11-360			
ISSUE	A				A				A			

S Y M B O L	STANDARD VARIATIONS											
	FD			N O T E	FE			N O T E	FF			N O T E
	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	11-397				11-360				11-397			
ISSUE	B				A				B			

S Y M B O L	STANDARD VARIATIONS											
	GA			N O T E	GB			N O T E	GC			N O T E
	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	11-360				11-360				11-360			
ISSUE	A				A				A			

JEDEC
SOLID STATE PRODUCT
OUTLINES

TITLE PLASTIC THIN SHRINK
SMALL OUTLINE PKG
R-PDSO-G/TSSOP/HTSSOP

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S Y M B O L	STANDARD VARIATIONS											
	GD			N O T E	HA			N O T E	HB			N O T E
	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	11-360				11-360				11-360			
ISSUE	A				A				A			

S Y M B O L	STANDARD VARIATIONS											
	HC			N O T E	HD			N O T E	JA			N O T E
	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	11-360				11-360				11-360			
ISSUE	A				A				A			

S Y M B O L	STANDARD VARIATIONS											
	JB			N O T E	JC			N O T E	JC-1			N O T E
	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	11-360				11-360				11-441			
ISSUE	A				A				C			

JEDEC
SOLID STATE PRODUCT
OUTLINES

TITLE PLASTIC THIN SHRINK
SMALL OUTLINE PKG
R-PDSO-G/TSSOP/HTSSOP

ISSUE
D

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S Y M B O L	STANDARD VARIATIONS											
	JD			N O T E	JD-1			N O T E				N O T E
	MIN	NOM	MAX		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	11-360				11-441							
ISSUE	A				C							

S Y M B O L	STANDARD VARIATIONS											
				N O T E				N O T E				N O T E
	MIN	NOM	MAX		MIN	NOM	MAX		MIN	NOM	MAX	
D												
E1												
E												
e												
N												
NOTE												
REF												
ISSUE												

S Y M B O L	STANDARD VARIATIONS											
				N O T E				N O T E				N O T E
	MIN	NOM	MAX		MIN	NOM	MAX		MIN	NOM	MAX	
D												
E1												
E												
e												
N												
NOTE												
REF												
ISSUE												

JEDEC
SOLID STATE PRODUCT
OUTLINES

TITLE PLASTIC THIN SHRINK
SMALL OUTLINE PKG
R-PDSO-G/TSSOP/HTSSOP

ISSUE

D

DATE

4 /97

MO-153

SHEET

11 OF 17

S Y M B O L	THERMALLY ENHANCED VARIATIONS											
	AAT			N O T E	ABT-1			N O T E	ABT			N O T E
	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
P	1.0		1.8	14	1.7		3.0	14	1.7		3.0	14
P1	1.5		2.6	14	1.5		2.6	14	1.5		2.6	14
NOTE	1,2				1,2				1,2			
REF	11-441				11-441				11-441			
ISSUE	C				C				C			

S Y M B O L	THERMALLY ENHANCED VARIATIONS											
	ACT			N O T E	ADT			N O T E	AET			N O T E
	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
P	2.2		3.9	14	2.7		4.7	14	3.3		5.8	14
P1	1.5		2.6	14	1.5		2.6	14	1.5		2.6	14
NOTE	1,2				1,2				1,2			
REF	11-441				11-441				11-441			
ISSUE	C				C				C			

S Y M B O L	THERMALLY ENHANCED VARIATIONS											
	BAT			N O T E	BBT			N O T E	BCT			N O T E
	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
P	1.7		3.0	14	2.2		3.9	14	2.7		4.7	14
P1	1.5		2.6	14	1.5		2.6	14	1.5		2.6	14
NOTE	1,2				1,2				1,2			
REF	11-441				11-441				11-441			
ISSUE	C				C				C			

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SHEET

12 OF 17

S Y M B O L	THERMALLY ENHANCED VARIATIONS											
	BDT			N O T E	CAT			N O T E	CBT			N O T E
	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	0.05 BSC				0.40 BSC				0.40 BSC			
N	36			6,7	24			6,7	32			6,7
P	3.3		5.8	14	1.7		3.0	14	2.2		3.9	14
P1	1.5		2.6	14	1.5		2.6	14	1.5		2.6	14
NOTE	1,2				1,2				1,2			
REF	11-441				11-441				11-441			
ISSUE	C				C				C			

SYMBOL	THERMALLY ENHANCED VARIATIONS											
	CCT			NOTE	CDT			NOTE	DAT			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
P	2.7		4.7	14	3.3		5.8	14	2.7		4.7	14
P1	1.5		2.6	14	1.5		2.6	14	2.1		3.7	14
NOTE	1,2				1,2				1,2			
REF	11-441				11-441				11-441			
ISSUE	C				C				C			

S Y M B O L	THERMALLY ENHANCED VARIATIONS											
	DBT			N O T E	DBT-1			N O T E	DCT			N O T E
	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
P	3.3		5.8	14	3.3		5.8	14	3.8		6.6	14
P1	2.1		3.7	14	2.1		3.7	14	2.1		3.7	14
NOTE	1,2				1,2				1,2			
REF	11-441				11-441				11-441			
ISSUE	C				C				C			

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TITLE PLASTIC THIN SHRINK
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ISSUE
D

DATE
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SHEET
13 OF 17

S Y M B O L	THERMALLY ENHANCED VARIATIONS											
	DDT			N O T E	DET			N O T E	EAT			N O T E
	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
P	4.3		7.5	14	4.9		8.4	14	2.7		4.7	14
P1	2.1		3.7	14	2.1		3.7	14	2.1		3.7	14
NOTE	1,2				1,2				1,2			
REF	11-441				11-441				11-441			
ISSUE	C				C				C			

S Y M B O L	THERMALLY ENHANCED VARIATIONS											
	EBT			N O T E	ECT			N O T E	ECT-1			N O T E
	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
P	3.3		5.8	14	3.8		6.6	14	3.8		6.6	14
P1	2.1		3.7	14	2.1		3.7	14	2.1		3.7	14
NOTE	1,2				1,2				1,2			
REF	11-441				11-441				11-441			
ISSUE	C				C				C			

S Y M B O L	THERMALLY ENHANCED VARIATIONS											
	EDT			N O T E	EET			N O T E	EFT			N O T E
	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
P	4.3		7.5	14	4.9		8.4	14	5.9		10.2	14
P1	2.1		3.7	14	2.1		3.7	14	2.1		3.7	14
NOTE	1,2				1,2				1,2			
REF	11-441				11-441				11-441			
ISSUE	C				C				C			

JEDEC SOLID STATE PRODUCT OUTLINES		TITLE PLASTIC THIN SHRINK SMALL OUTLINE PKG R-PDSO-G/TSSOP/HTSSOP		ISSUE D	DATE 4 /97	MO-153	SHEET 14 OF 17
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S Y M B O L	THERMALLY ENHANCED VARIATIONS											
	FAT			N O T E	FBT			N O T E	FCT			N O T E
	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			6,7
P	2.7		4.7	14	3.3		5.8	14	3.8		6.6	14
P1	2.1		3.7	14	2.1		3.7	14	2.1		3.7	14
NOTE	1,2				1,2				1,2			
REF	11-441				11-441				11-441			
ISSUE	C				C				C			

SYMBOL	THERMALLY ENHANCED VARIATIONS											
	FDT			NOTE	FET			NOTE	FFT			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
P	4.3		7.5	14	4.9		8.4	14	5.9		10.2	14
P1	2.1		3.7	14	2.1		3.7	14	2.1		3.7	14
NOTE	1,2				1,2				1,2			
REF	11-441				11-441				11-441			
ISSUE	C				C				C			

S Y M B O L	THERMALLY ENHANCED VARIATIONS											
	GAT			N O T E	GBT			N O T E	GCT			N O T E
	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
P	3.3	5.8		14	4.9	8.4		14	4.3	7.5		14
P1	2.8	4.8		14	2.8	4.8		14	2.8	4.8		14
NOTE	1,2				1,2				1,2			
REF	11-441				11-441				11-441			
ISSUE	C				C				C			

JEDEC SOLID STATE PRODUCT OUTLINES		TITLE PLASTIC THIN SHRINK SMALL OUTLINE PKG R-PDSO-G/TSSOP/HTSSOP		ISSUE D	DATE 4 /97	MO-153	SHEET 15 OF 17
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S Y M B O L	THERMALLY ENHANCED VARIATIONS											
	GDT			N O T E	HAT			N O T E	HBT			N O T E
	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
P	4.9		8.4	14	3.3		5.8	14	3.8		6.6	14
P1	2.8		4.8	14	2.8		4.8	14	2.8		4.8	14
NOTE	1,2				1,2				1,2			
REF	11-441				11-441				11-441			
ISSUE	C				C				C			

S Y M B O L	THERMALLY ENHANCED VARIATIONS											
	HCT			N O T E	HDT			N O T E	JAT			N O T E
	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
P	5.9		10.2	14	4.9		8.4	14	3.3		5.8	14
P1	2.8		4.8	14	2.8		4.8	14	2.8		4.8	14
NOTE	1,2				1,2				1,2			
REF	11-441				11-441				11-441			
ISSUE	C				C				C			

S Y M B O L	THERMALLY ENHANCED VARIATIONS											
	JBT			N O T E	JCT			N O T E	JCT-1			N O T E
	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
P	3.8		6.6	14	5.9		10.2	14	5.9		10.2	14
P1	2.8		4.8	14	2.8		4.8	14	2.8		4.8	14
NOTE	1,2				1,2				1,2			
REF	11-441				11-441				11-441			
ISSUE	C				C				C			

JEDEC
SOLID STATE PRODUCT
OUTLINES

TITLE PLASTIC THIN SHRINK
SMALL OUTLINE PKG
R-PDSO-G/TSSOP/HTSSOP

ISSUE
D

DATE
4 / 97

MO-153

SHEET
16 OF 17

S Y M B O L	THERMALLY ENHANCED VARIATIONS											
	JDT			N O T E	JDT-1			N O T E				N O T E
	MIN	NOM	MAX		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				
P	4.9		8.4	14	4.9		8.4	14				
P1	2.8		4.8	14	2.8		4.8	14				
NOTE	1,2				1,2							
REF	11-441				11-441							
ISSUE	C				C							

S Y M B O L	THERMALLY ENHANCED VARIATIONS											
				N O T E				N O T E				N O T E
	MIN	NOM	MAX		MIN	NOM	MAX		MIN	NOM	MAX	
D												
E1												
E												
e												
N												
P												
P1												
NOTE												
REF												
ISSUE												

S Y M B O L	THERMALLY ENHANCED VARIATIONS											
				N O T E				N O T E				N O T E
	MIN	NOM	MAX		MIN	NOM	MAX		MIN	NOM	MAX	
D												
E1												
E												
e												
N												
P												
P1												
NOTE												
REF												
ISSUE												