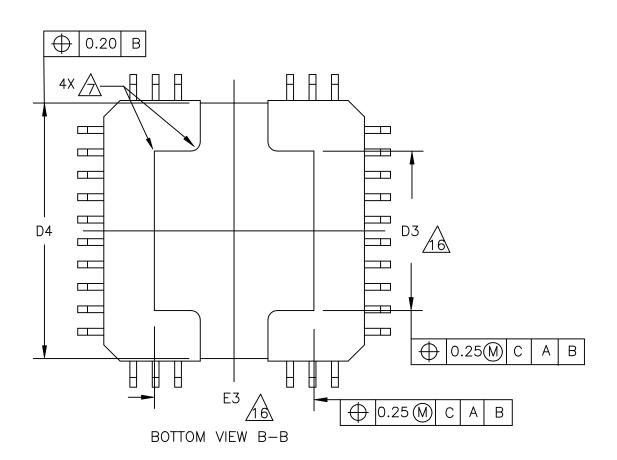
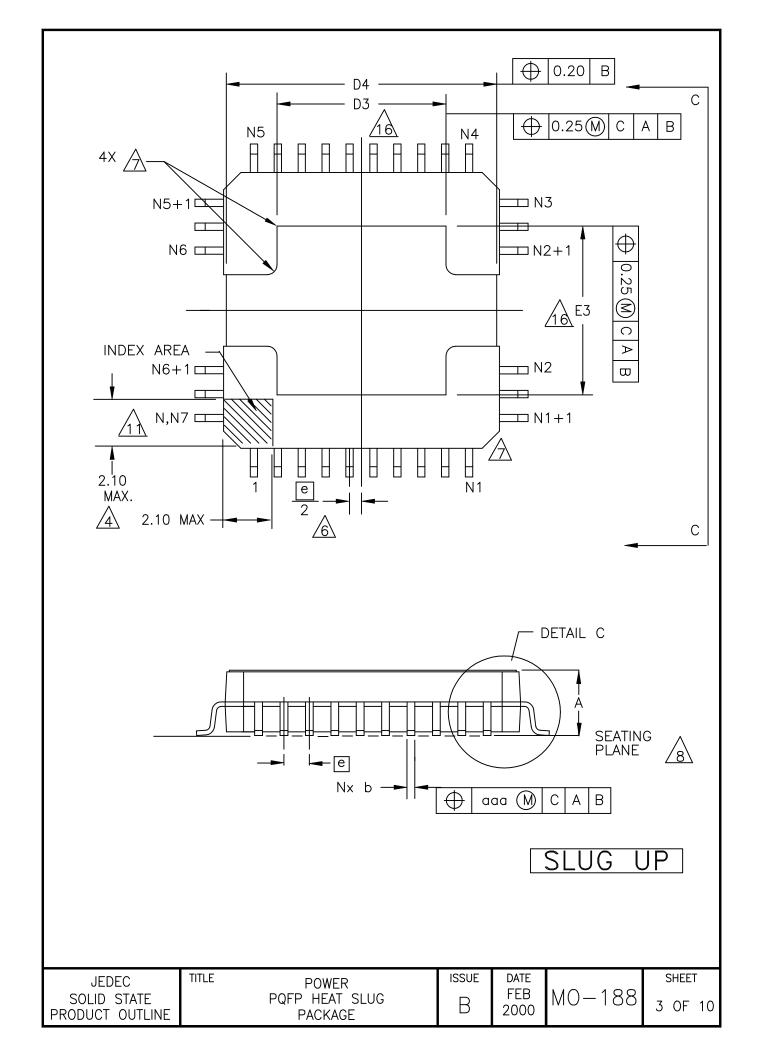


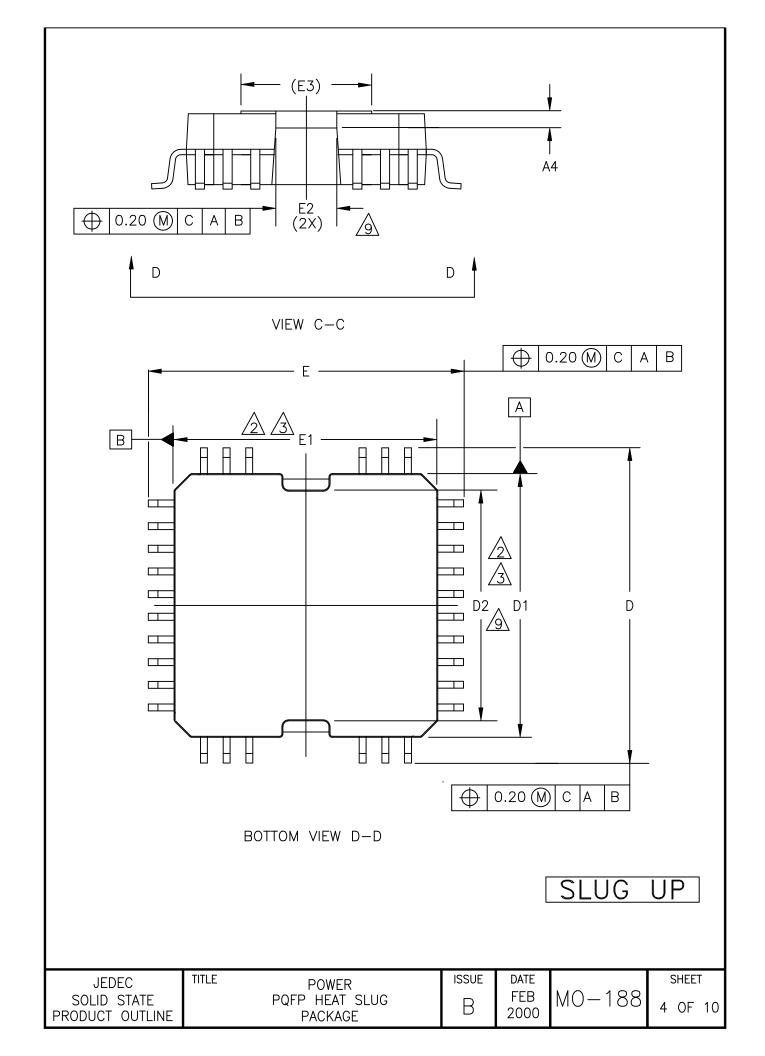
VIEW A-A

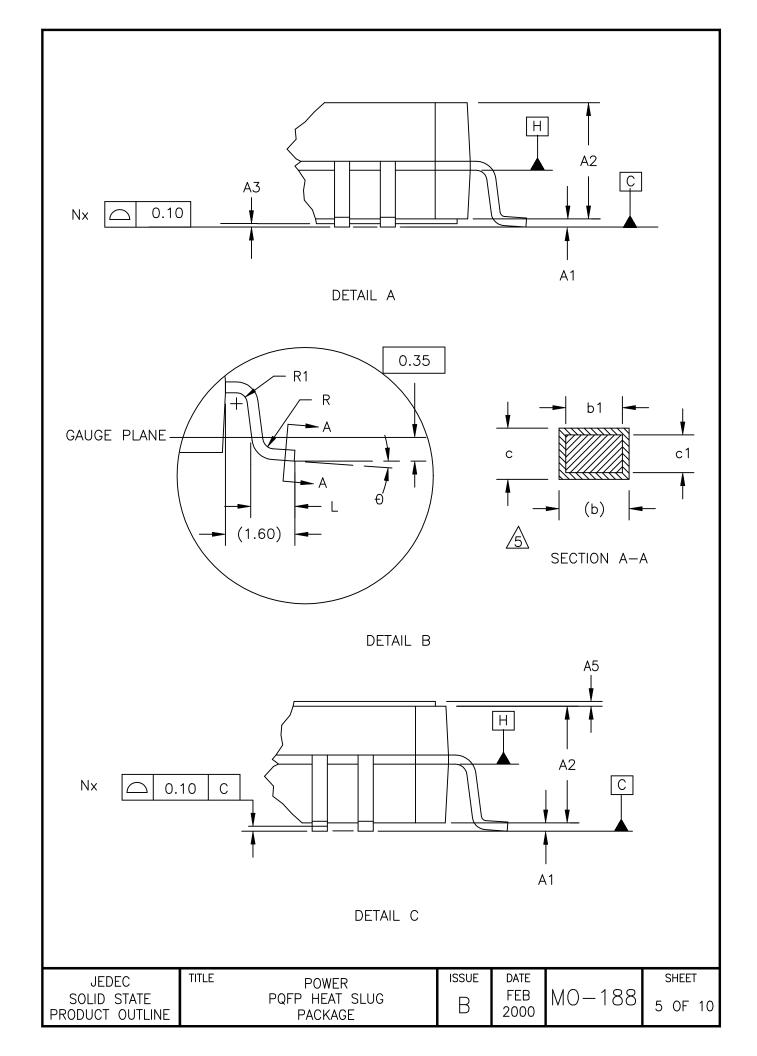


## SLUG DOWN

JEDEC	TITLE POWER	ISSUE	DATE		SHEET
SOLID STATE PRODUCT OUTLINE	PQFP HEAT SLUG PACKAGE	В	FEB 2000	MO-188	2 OF 10







	SUMMARY TABLE											
BODY	LEAD		VARIATI	VARIATIONS								
SIZE	PITCH	COUNT	SLUG DOWN	SLUG UP	NOTE							
14X14	1.27	20	AA	ВА	13							
14X14	1.27	32	AB	BB								
14X14	1.00	26/52	AC	BC	12,13							
14X14	1.00	42/52	AD	BD	12							
14X14	0.80	32/64	AE	BE	12,13							
14X14	0.80	52/64	AF	BF	12							
14X14	0.65	40/80	AG	BG	12,13							
14X14	0.65	64/80	АН	ВН	12							
14X14	0.50	78	AJ	BJ								

SMBOL	Γ	MIK		
9	MIN	NOM	MAX	A
A2	2.50	2.70	2.90	
A4	0.80	0.90	1.00	
С	0.23	_	0.32	5
c1	0.23	0.25	0.29	5
D1	13.90	14.00	14.10	2,3,10
D2	12.50	12.70	12.90	9
D3	9.30	9.50	9.70	16
D4	13.40	13.50	13.60	
Е	16.95	17.20	17.45	
E1	13.90	14.00	14.10	2,3,10
E2	2.35	_	2.65	9
E3	9.30	9.50	9.70	16
R	0.15	_	_	
R1	0.10	_	_	
θ	0°	_	7°	
θ1	0°	_	10°	
L	0.80	_	1.10	
REF.	11-4	442 / 1	1-559	
ISSUE		A / B		
NOTE				

	JEDEC	TITLE	POWER	ISSUE	DATE		SHEET
ı	SOLID STATE PRODUCT OUTLINE		PQFP HEAT SLUG PACKAGE	В	FEB 2000	MO-188	6 OF 10

S <sub>2</sub>	VA	VARIATIONS (ALL DIMENSIONS I							•				
SAMBOLS		AA		MOTES	AB			NOTES		AC		MOTES	
	MIN	NOM	MAX	45	MIN	NOM	MAX	TS	MIN	NOM	MAX	Ŕ	
A A1 A3 A5	- 0 0 -		3.15 0.25 0.10		1001		3.15 0.25 0.10		- 0 0 -	_ _ _	3.15 0.25 0.10		
b b1	0.40 0.40	– 0.45	0.53 0.50	5 5	0.40 0.40	_ 0.45	0.53 0.50	5	0.35 0.35		0.50 0.45	5 5	
D N1	_	10	_		16.95	17.20 10	17.45	5	_	13	_		
N2 N3 N4 N5 N6 N7	10 - - 11 20 - -			14		13 16 17 26 29 32		14		- 14 26 -		14	
N e	1	20 27 B:	S.C.	11	1	32 .27 B	<u> </u>	11		26 1.00 B	SC	11	
	1 1.	<u> </u>		L		F FORM		POSITION		1.00 B	<u> </u>		
aaa		0.25				0.25				0.20			
NOTES	1,15				1,15				1,15				
REF.	1	11-442			11	<u>1-442</u>			11-442				
ISSUE		Α			А					Α .			
Sylvania	VAI	RIATIO	NS	4	(ALL DIMENSIONS IN				·				
SAMBOLS	MIN	AD 7		NOTES	MIN	AE NOM	MAX	MOTES	MIN	AF NOM	MAX	MOTES	
A A1 A3 A5	- 0 0		3.15 0.25 0.10	,	- 0 0		3.15 0.25 0.10		- 0 0 -	_ _ _ _	3.15 0.25 0.10		
b b1	0.35 0.35	_ 0.40	0.50 0.45	5 5	0.30 0.30	– 0.35	0.45 0.40	5 5	0.30 0.30	- 0.35	0.45 0.40	5 5	
D N14	16.95	17.20	17.45		_	16	_		16.95		17.45		
N1 N2 N3 N4 N5 N6 N7	13 17 21 22 34 14 38 42			14	16 - - 17 32 -		14		16 21 26 27 42 47 52		14		
N	4	42	<u>`</u>	11		32		11		52		11	
е	1.	00 BS		OLFRAN	ICES OF	.80 BS		POSITIO		D.80 BS	SC		
aaa		0.20			,525 01	0.20	, , , , ,	7 331110	Ī	0.20			
NOTES	1	,15				1,15				1,15			
REF.	11	<u>-442</u>			1	1-442			1	1-442			
ISSUE		A <b>T</b> =::=: =				Α		1		A			
JEDEC TITLE SOLID STATE PRODUCT OUTLINE				PQFP	OWER HEAT SL CKAGE	.UG	[ ]:		DATE FEB 2000	10-1	88	SHEET 7 OF 10	

STOBINS	V	ARIATIC	)NS		(ALL	DIMEN:	SIONS	IN MILLIMETERS)					
MBO		AG		MOTES		АН		NOTES		AJ		MOTES	
<u></u>	MIN	NOM	MAX	15	MIN	NOM	MAX	15	MIN	NOM	MAX	53	
A A1 A3 A5	1001	1 1 1 1	3.15 0.25 0.10		- - -		3.15 0.25 0.10		- 0 0 -		3.15 0.25 0.10		
b b1	0.22 0.22	_ .030	0.38 0.33	5 5	0.22 0.22	_ 0.30	0.38 0.33	5 5	0.15 0.15		0.28 0.24	5 5	
D N1	_	-	_		16.95	17.20	17.45	)	_		_		
N2 N3 N4 N5 N6 N7	20 - - 21 40 - -			14		20 26 32 33 52 58 64		14		25 32 39 40 64 71 78		14	
N		40		11		64		11		78		11	
е		).65 B				).65 B		<u> </u>		D.50 B	SC		
		0.40		ΓOLERA	NCES (		RM AN	D POSI	TION •	0.10			
aaa NOTES	0.12 1,15					0.12 1,15		1		0.10			
REF.					11-442				1	1-559	<u> </u>		
ISSUE	11-442 A			A				B					
	\/.	ARIATIC	NIC		(ALL		SIUNIS	INI MII					
100	V /		/113	1			310113		LLIMETERS)			1	
SAMBOLS	MIN	BA NOM	MAX	MOTES	MIN	BB NOM	MAX	NOTES	MIN	BC NOM	MAX	MOTES	
A A1 A3 A5	- 0 - 0.07	- - - 0.10	3.40 0.25 - 0.13		- 0 - 0.07	- - 0.10	3.40 0.25 - 0.13		0 - 0.07	- - - 0.10	3.40 0.25 - 0.13		
b b1			0.53 0.50	5 5	0.40 0.40	_ 0.45	0.53 0.50		0.35 0.35		0.50 0.45	5 5	
D	16.95		17.45		16.95	l	17.45	1		<u>-</u> 13	_		
N1 N2 N3 N4 N5 N6 N7	10 - - 11 20 -			14	10 13 16 17 26 29 32		14	- - 14 26 - -		14			
N		20		11		32		11		26		11	
е	1	.27 B				.27 B		<u> </u>		1.00 B	SC		
222		0.05	-	TOLERA	NCES (		RM AN	D POSI	TION	0.00			
aaa NOTES		0.25 1,15				0.25 1,15		1		0.20 1,15			
REF.		42/11	_550		11_4	1,13 42/11-		1	11_/	42/11-	_550		
ISSUE	11-4	A/B	555		44	+2/ 1 1 <sup>-</sup> A/B	-008	1	'   <del>- 4</del>	42/113 A/B			
JEDEC TITLE			PQFP I	OWER HEAT SL CKAGE	·	IS		PATE FEB 000	10-1	88	SHEET 8 OF 10		

υχ	V	ARIATIC	NS		(ALL	(ALL DIMENSIONS IN MILLIMETERS)						
MAG		BD		6		BE		6		BF		5.
SMBOLS	MIN	NOM	MAX	MOTES	MIN	NOM	MAX	MIES	MIN	NOM	MAX	MOTES
Α	_ O	_	3.40 0.25		0	_	3.40 0.25		_ 0	_	3.40 0.25	
A1 A3 A5	_	_			_	_	0.23		_	0.10	_	
A5 b	0.07 0.35	0.10	0.13 0.50		0.07	0.10	0.13		0.07 0.30		0.13	
b1	0.35		0.45	5 5	0.30	0.35	0.40	5 5	0.30	0.35	0.40	5 5
D	16.95	17.20	17.45		_	-	_		16.95	17.20	17.45	
N1 N2		13 17				16 -				16 21		
N3 N4		21 22				_ 17				21 26 27		
N5		34		14		32		14		42		14
N6 N7		38 42				_				47 52		
N		42		11		32		11		52		11
е	1	.00 B		TO 1 5 5 1		).80 B				).80 E	SC	
aaa		0.20		IOLERA	NCES (	0.20	≺M AN	D POS	IION I	0.20		<b>I</b>
NOTES	1,15					1,15			1,15			
REF.	11-442/11-559				11-442/11-559			11-4	42/11	-559		
ISSUE	A/B					A/B			A/B			
SMBOLS	V	ARIATIC	NS		(ALL DIMENSIONS IN			IN MIL	IN MILLIMETERS)			
MEO		BG		MOTES		ВН		MOTES		BJ		NOTES
	MIN	NOM	MAX	3	MIN	NOM	MAX	3	MIN	NOM	MAX	~~
A A1	0	_	3.40 0.25		0	_	3.40 0.25		0	_	3.40 0.25	
A3	_ 0.07	_ 0.10	_		_ 0.07	_ 0.10	_ 0.13		_ 0.07	_ 0.10	_ 0.13	
A5 b	0.07	0.10	0.13	 5	0.22	-	0.13		0.07	0.10	0.13	
b1	0.22	0.30	0.33	5 5	0.22	0.30	0.33		0.15		0.24	
D N1	_		_			17.20 20	17.45			17.20	17.45	
N2		<u> -</u>			20 26					25 32		
N3 N4		_ 21				32 33				39 40		
N5		40		14		52 58				64 71		
N6 N7						64				71 78		
N	40			11		64	20			78 ).50 B	SC	
e		.00 B		TOI FRA	NCES (	.65 B:		D POS		,.JU B	<u> </u>	<u> </u>
aaa		0.20		· OLLIV	., 1020	0.12	TATEL CALL	1		0.10		
NOTES		1,15				1,15				1,15		
REF.	11-4	42/11	-559		11-44	42/11	-559		1	1-559		
ISSUE		A/B				A/B		<u> </u>	<u> </u>	В		
JEDEC TITLE				_	OWED		l IS	SUE [	DATE			SHEET
JEDE SOLID S		IIILE			OWER HEAT SL	HC				10-1	88	9 OF 10

## NOTES:

1. DIMENSIONING AND TOLERANCING PER ASME Y14.5M-1994.



DIMENSION D1 AND E1 DO NOT INCLUDE MOLD FLASH, PROTRUSIONS OR GATE BURRS. MOLD FLASH, PROTRUSIONS OR GATE BURRS SHALL NOT EXCEED 0.15 PER SIDE.



DIMENSION D1 AND E1 D0 NOT INCLUDE INTERLEAD FLASH OR PROTRUSION. INTERLEAD FLASH OR PROTRUSION SHALL NOT EXCEED 0.15 PER SIDE.



A VISUAL INDEX FEATURE MUST BE LOCATED WITHIN THE CROSS-HATCHED AREA.



THESE DIMENSIONS APPLY TO THE FLAT SECTION OF THE LEAD BETWEEN 0.10 AND 0.25 mm FROM THE LEADTIP.



THIS DIMENSION IS 0.00 FOR VARIATIONS WHICH HAVE AN ODD NUMBER OF LEADS PER SIDE.



EXACT SHAPE AND SIZE OF THIS FEATURE IS OPTIONAL.



SEATING PLANE IS DEFINED BY LEAD TIPS ONLY.



E2 AND D2 ARE THE DIMENSIONS OF THE MOLDED PLASTIC AT THE BASE OF THE DRAFT ANGLE.

10. E1 AND D1 ARE MEASURED AT DATUM H.



N IS THE MAX NUMBER OF LEADS

- 12. X/Y IS WHERE X IS ACTUAL LEAD COUNT FOR VARIATION SHOWN, Y IS THEORETICAL MAX LEAD COUNT FOR 14X14 BODY SIZE.
- 13. THESE VARIATIONS HAVE LEADS ON 2 SIDES ONLY.
- 14. DESIGNATION Nx, WHERE x VARIES FROM 1 TO 7, INDICATES THE LEAD NUMBER AT THAT POSITION.
- 15. DIMENSIONS ARE IN MILLIMETERS.



DIMENSIONS SHOW THE EXPOSED HEAT SLUG

JEDEC	TITLE POWER	ISSUE	DATE		SHEET	l
SOLID STATE PRODUCT OUTLINE	PQFP HEAT SLUG PACKAGE	В	FEB 2000	MO-188	10 OF 10	