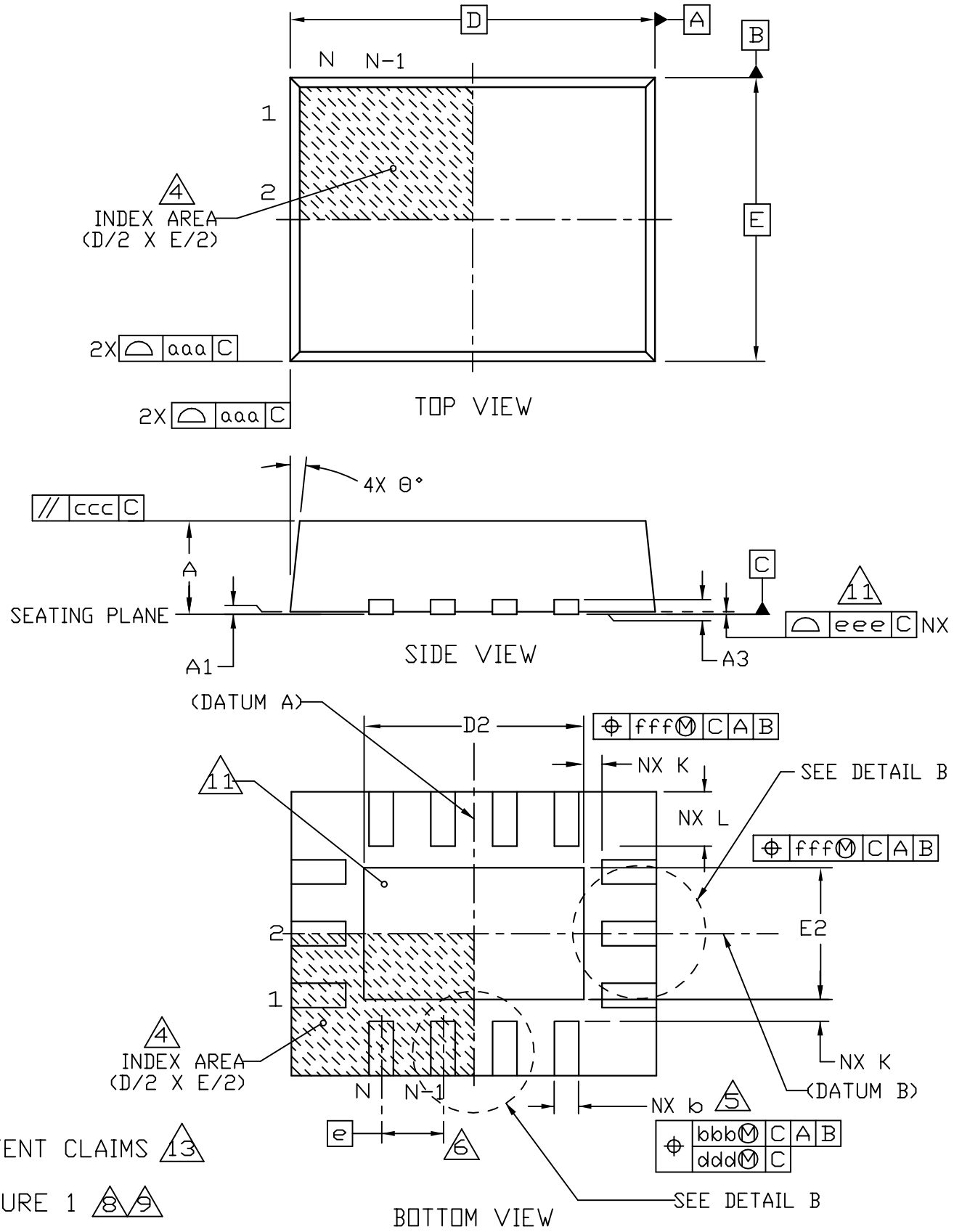


PATENT CLAIMS 13

FIGURE 1 8 9

JEDEC SOLID STATE PRODUCT OUTLINE	*THIS REGISTERED OUTLINE HAS BEEN PREPARED BY THE JEDEC JC-II COMMITEE AND REFLECTS A PRODUCT WITH ANTICIPATED USAGE IN THE ELECTRONICS INDUSTRY; CHANGES ARE LIKELY TO OCCUR*				
THERMALLY ENHANCED PLASTIC ULTRA THIN AND EXTRA THIN FINE PITCH QUAD FLAT NO LEAD PACKAGE	JESD-30 DESIGNATOR H(U,X1)F-PQFN	ISSUE E	DATE: June 2006	MO-248	PAGE 1 OF 12

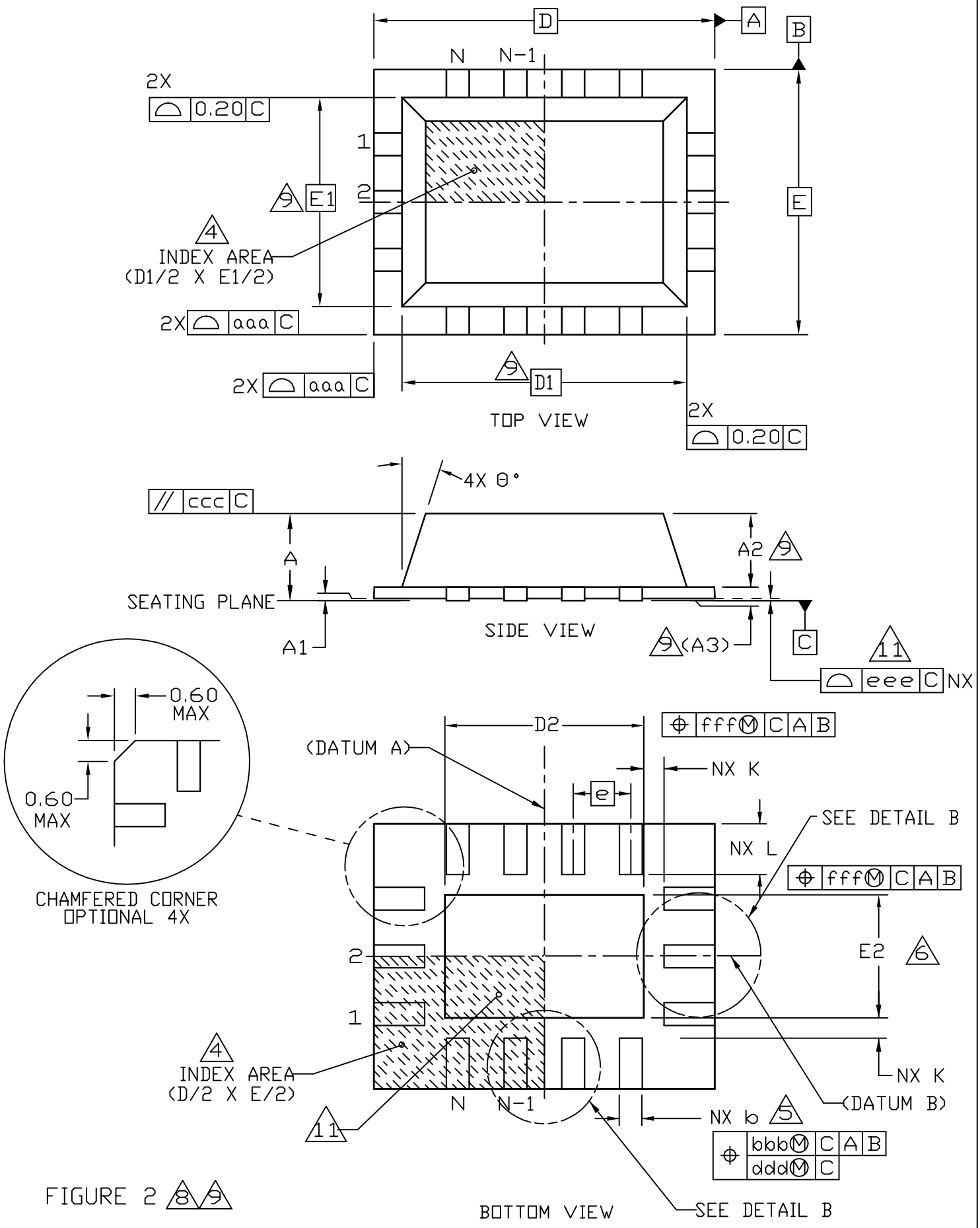
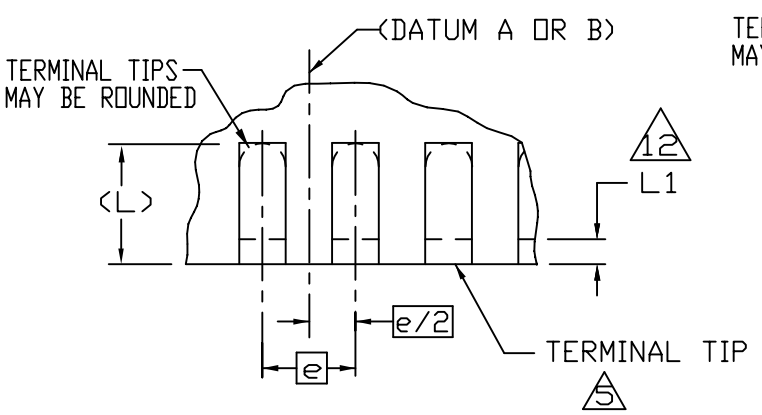
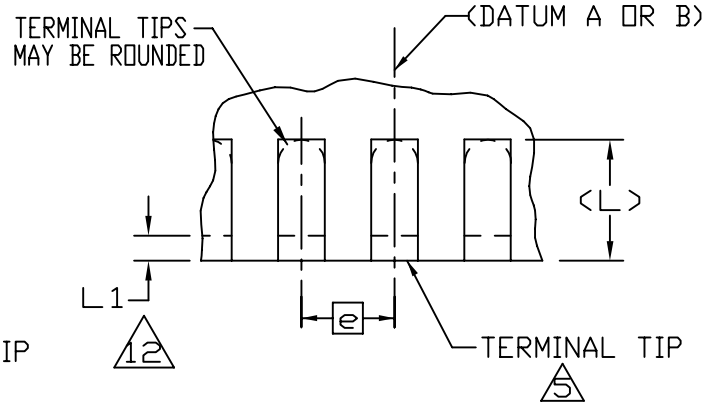


FIGURE 2 8 9

JEDEC SOLID STATE PRODUCT OUTLINE	TITLE: THERMALLY ENHANCED PLASTIC ULTRA THIN AND EXTRA THIN FINE PITCH QUAD FLAT NO LEAD PACKAGE	ISSUE E	DATE: June 2006	MO-248	PAGE 2 OF 12



EVEN TERMINAL/SIDE



ODD TERMINAL/SIDE

DETAIL B

TABLE 1

VARIATION DESIGNATORS							
FIRST DIGIT CODE		SECOND DIGIT CODE		THIRD DIGIT CODE		FOURTH DIGIT CODE	
OVERALL HEIGHT		*BODY LENGTH*		*BODY WIDTH*		*TERMINAL PITCH*	
A	LETTER CODE	D	LETTER CODE	E	LETTER CODE	e	LETTER CODE
0.65 MAX	U	1.0	A	1.0	A	1.00	A
0.50 MAX	X	1.5	B	1.5	B	0.80	B
–	–	2.0	C	2.0	C	0.65	C
–	–	2.5	D	2.5	D	0.50	D
–	–	3.0	E	3.0	E	0.40	E
–	–	3.5	F	3.5	F	–	–
–	–	4.0	G	4.0	G	–	–
–	–	5.0	H	5.0	H	–	–
–	–	6.0	J	6.0	J	–	–
–	–	7.0	K	7.0	K	–	–
–	–	8.0	L	8.0	L	–	–
–	–	9.0	M	9.0	M	–	–
–	–	10.0	N	10.0	N	–	–
–	–	11.0	P	11.0	P	–	–
–	–	12.0	R	12.0	R	–	–
–	–	4.5	S	4.5	S	–	–
–	–	5.5	T	5.5	T	–	–
–	–	6.5	U	6.5	U	–	–

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TABLE 2

COMMON DIMENSIONS							
	U: ULTRA THIN			X1: EXTRA THIN			NOTE
SYMBOL	*MIN*	*NOM*	*MAX*	*MIN*	*NOM*	*MAX*	
* A	>0.50	0.60	0.65	>0.40	0.48	0.50	
A1	0	0.02	0.05	0	0.02	0.05	
A2	0.00	0.40	0.65	0.00	0.30	0.50	9
A3	–	–	0.22	–	–	0.22	
L	0.30	0.40	0.50	0.30	0.40	0.50	
L1	0.00	–	0.15	0.00	–	0.15	12
θ	0°	–	12°	0°	–	12°	
K	0.20	–	–	0.20	–	–	
R	b MIN/2	–	–	b MIN/2	–	–	
NOTES	1,2						
REF	11.11-702						
ISSUE	C						

* NOTE : A IS THE CONTROLLING DIMENSION

TABLE 3

LEAD WIDTH			
b			
PITCH	*MIN*	*NOM*	*MAX*
1.00	0.30	0.40	0.45
0.80	0.25	0.30	0.35
0.65	0.25	0.30	0.35
0.50	0.18	0.25	0.30
0.40	0.15	0.20	0.25
NOTES	5,14		
REF	11.11-667		
ISSUE	A		

TABLE 4

TOLERANCE OF FORM & POSITION		
symbol \ pitch	0.40mm	>0.40mm
aaa	0.10	0.15
bbb	0.07	0.10
ccc	0.10	0.10
ddd	0.05	0.05
eee	0.08	0.08
fff	0.10	0.10
NOTES	1,2	
REF	11-744	
ISSUE	E	

EXAMPLE: A 20 TERMINAL PQFN WHICH IS 5mm LONG (DIMENSION D) BY 5mm WIDE (DIMENSION E) AND A 0.65mm PITCH WILL BE VARIATION HHC.

TABLE 5A

SUMMARY TABLE				
BODY SIZE	LEAD PITCH	LEAD COUNT	ULTRA THIN FQFP-N	EXTRA- THIN FQFP-N
3.00 X 3.00	0.65	12	UEEC	XEEC
	0.65	8	UEEC-1	XEEC-1
	0.50	16	UEED	XEED
	0.50	16	UEED-1	XEED-1
	0.50	12	UEED-2	XEED-2
	0.40	20	UEEE	XEEE
	0.40	16	UEEE-1	XEEE-1
4.00 X 4.00	0.65	16	UGGC	XGGC
	0.65	16	UGGC-1	XGGC-1
	0.65	12	UGGC-2	XGGC-2
	0.50	24	UGGD	XGGD
	0.50	24	UGGD-1	XGGD-1
	0.50	20	UGGD-2	XGGD-2
4.00 X 5.00	0.40	28	UGGE	XGGE
	0.50	28	UGHD	XGHD
5.00 X 5.00	0.50	24	UGHD-1	XGHD-1
	0.65	24	UHHC	XHHC
	0.65	20	UHHC-1	XHHC-1
	0.50	32	UHHD	XHHD
	0.50	32	UHHD-1	XHHD-1
	0.50	28	UHHD-2	XHHD-2
	0.40	36	UHHE	XHHE
5.00 X 6.00	0.40	40	UHHE-1	XHHE-1
5.00 X 7.00	0.65	22	UHJC	XHJC
6.00 X 6.00	0.50	38	UHKD	XHKD
	0.65	32	UJJC	XJJC
	0.65	28	UJJC-1	XJJC-1
	0.65	24	UJJC-2	XJJC-2
	0.50	40	UJJD	XJJD
	0.50	40	UJJD-1	XJJD-1
	0.50	36	UJJD-2	XJJD-2
7.00 X 7.00	0.40	48	UJJE/UJJE-1	XJJE/XJJE-1
	0.65	36	UKKC	XKKC
	0.65	32	UKKC-1	XKKC-1
	0.50	48	UKKD	XKKD
	0.50	48	UKKD-1	XKKD-1
	0.50	44	UKKD-2	XKKD-2
	0.50	40	UKKD-3	XKKD-3
	0.40	56	UKKE	XKKE

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TABLE 5B

SUMMARY TABLE (CONTINUED)				
BODY SIZE	LEAD PITCH	LEAD COUNT	ULTRA THIN FQFP-N	EXTRA- THIN FQFP-N
8.00 X 8.00	0.65	44	ULLC	XLLC
	0.65	40	ULLC-1	XLLC-1
	0.65	36	ULLC-2	XLLC-2
	0.50	56	ULLD	XLLD
	0.50	52	ULLD-1	XLLD-1
	0.50	48	ULLD-2	XLLD-2
	0.40	64	ULLE	XLLE
	0.40	68	ULLE-1	XLLE-1
9.00 X 9.00	0.65	48	UMMC	XMMC
	0.65	44	UMMC-1	XMMC-1
	0.50	64	UMMD	XMMD
	0.50	60	UMMD-1	XMMD-1
	0.50	56	UMMD-2	XMMD-2
	0.40	72	UMME	XMME
	0.40	76	UMME-1	XMME-1

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TABLE 6A

e=0.65 PITCH											
VARIATION / SYMBOL		UEEC	UEEC-1	UGGC	UGGC-1	UGGC-2	UHHC	UHHC-1	UHJC	UJJC	NOTE
		XEEC	XEEC-1	XGGC	XGGC-1	XGGC-2	XHHC	XHHC-1	XHJC	XJJC	
D BSC		3.00	3.00	4.00	4.00	4.00	5.00	5.00	5.00	6.00	
E BSC		3.00	3.00	4.00	4.00	4.00	5.00	5.00	6.00	6.00	
D1 BSC		2.75	2.75	3.75	3.75	3.75	4.75	4.75	4.75	5.75	9
E1 BSC		2.75	2.75	3.75	3.75	3.75	4.75	4.75	5.75	5.75	9
D2	MIN	1.50	1.50	2.50	2.05	2.50	3.50	3.50	3.50	4.50	
	NOM	1.65	1.65	2.65	-	2.65	3.65	3.65	3.65	4.65	
	MAX	1.80	1.80	2.80	2.55	2.80	3.80	3.80	3.80	4.80	
E2	MIN	1.50	1.50	2.50	2.05	2.50	3.50	3.50	4.50	4.50	
	NOM	1.65	1.65	2.65	-	2.65	3.65	3.65	4.65	4.65	
	MAX	1.80	1.80	2.80	2.55	2.80	3.80	3.80	4.80	4.80	
N		12	8	16	16	12	24	20	22	32	7, 3
ND		3	2	4	4	3	6	5	5	8	6
NE		3	2	4	4	3	6	5	6	8	6
NOTES		1,2,10	1,2,10	1,2,10	1,2,10	1,2,10	1,2,10	1,2,10	1,2,10	1,2,10	
REF		11-702									
ISSUE		C									

TABLE 6B

e=0.65 PITCH											
VARIATION		UJJC-1	UJJC-2	UKKC	UKKC-1	ULLC	ULLC-1	ULLC-2	UMMC	UMMC-1	NOTE
SYMBOL		XJJC-1	XJJC-2	XKKC	XKKC-1	XLLC	XLLC-1	XLLC-2	XMMC	XMMC-1	
D BSC		6.00	6.00	7.00	7.00	8.00	8.00	8.00	9.00	9.00	
E BSC		6.00	6.00	7.00	7.00	8.00	8.00	8.00	9.00	9.00	
D1 BSC		5.75	5.75	6.75	6.75	7.75	7.75	7.75	8.75	8.75	9
E1 BSC		5.75	5.75	6.75	6.75	7.75	7.75	7.75	8.75	8.75	9
D2	MIN	4.50	4.50	5.50	5.50	6.50	6.50	6.50	7.50	7.50	
	NOM	4.65	4.65	5.65	5.65	6.65	6.65	6.65	7.65	7.65	
	MAX	4.80	4.80	5.80	5.80	6.80	6.80	6.80	7.80	7.80	
E2	MIN	4.50	4.50	5.50	5.50	6.50	6.50	6.50	7.50	7.50	
	NOM	4.65	4.65	5.65	5.65	6.65	6.65	6.65	7.65	7.65	
	MAX	4.80	4.80	5.80	5.80	6.80	6.80	6.80	7.80	7.80	
N		28	24	36	32	44	40	36	48	44	7, 3
ND		7	6	9	8	11	10	9	12	11	6
NE		7	6	9	8	11	10	9	12	11	6
NOTES		1,2,10	1,2,10	1,2,10	1,2,10	1,2,10	1,2,10	1,2,10	1,2,10	1,2,10	
REF		11-702									
ISSUE		C									

TABLE 7A

e=0.50 PITCH											
VARIATION		UEED	UEED-1	UEED-2	UGGD	UGGD-1	UGGD-2	UGHD	UGHD-1	UHHD	NOTE
SYMBOL		XEED	XEED-1	XEED-2	XGGD	XGGD-1	XGGD-2	XGHD	XGHD-1	XHHD	
D BSC		3.00	3.00	3.00	4.00	4.00	4.00	4.00	4.00	5.00	
E BSC		3.00	3.00	3.00	4.00	4.00	4.00	5.00	5.00	5.00	
D1 BSC		2.75	2.75	2.75	3.75	3.75	3.75	3.75	3.75	4.75	9
E1 BSC		2.75	2.75	2.75	3.75	3.75	3.75	4.75	4.75	4.75	9
D2	MIN	1.50	1.25	1.50	2.50	2.50	2.50	2.50	2.50	3.50	
	NOM	1.65	-	1.65	2.65	-	2.65	2.65	2.65	3.65	
	MAX	1.80	1.55	1.80	2.80	2.80	2.80	2.80	2.80	3.80	
E2	MIN	1.50	1.25	1.50	2.50	2.50	2.50	3.50	3.50	3.50	
	NOM	1.65	-	1.65	2.65	-	2.65	3.65	3.65	3.65	
	MAX	1.80	1.55	1.80	2.80	2.80	2.80	3.80	3.80	3.80	
N		16	16	12	24	24	20	28	24	32	7, 3
ND		4	4	3	6	6	5	6	5	8	6
NE		4	4	3	6	6	5	8	7	8	6
NOTES		1,2,10	1,2,10	1,2,10	1,2,10	1,2,10	1,2,10	1,2,10	1,2,10	1,2,10	
REF		11-702									
ISSUE		C									

TABLE 7B

e=0.50 PITCH											
VARIATION		UHHD-1	UHHD-2	UHKD	UJJD	UJJD-1	UJJD-2	UKKD	UKKD-1	UKKD-2	NOTE
SYMBOL		XHHD-1	XHHD-2	XHKD	XJJD	XJJD-1	XJJD-2	XKKD	XKKD-1	XKKD-2	
D BSC		5.00	5.00	5.00	6.00	6.00	6.00	7.00	7.00	7.00	
E BSC		5.00	5.00	7.00	6.00	6.00	6.00	7.00	7.00	7.00	
D1 BSC		4.75	4.75	4.75	5.75	5.75	5.75	6.75	6.75	6.75	9
E1 BSC		4.75	4.75	6.75	5.75	5.75	5.75	6.75	6.75	6.75	9
D2	MIN	3.05	3.50	3.50	4.50	4.05	4.50	5.50	5.00	5.50	
	NOM	-	3.65	3.65	4.65	-	4.65	5.65	-	5.65	
	MAX	3.55	3.80	3.80	4.80	4.55	4.80	5.80	5.50	5.80	
E2	MIN	3.05	3.50	5.50	4.50	4.05	4.50	5.50	5.00	5.50	
	NOM	-	3.65	5.65	4.65	-	4.65	5.65	-	5.65	
	MAX	3.55	3.80	5.80	4.80	4.55	4.80	5.80	5.50	5.80	
N		32	28	38	40	40	36	48	48	44	7, 3
ND		8	7	7	10	10	9	12	12	11	6
NE		8	7	12	10	10	9	12	12	11	6
NOTES		1,2,10	1,2,10	1,2,10	1,2,10	1,2,10	1,2,10	1,2,10	1,2,10	1,2,10	
REF		11-702									
ISSUE		C									

TABLE 7C

e=0.50 PITCH											
VARIATION		UKKD-3	ULLD	ULLD-1	ULLD-2	UMMD	UMMD-1	UMMD-2			NOTE
SYMBOL		XKKD-3	XLLD	XLLD-1	XLLD-2	XMMD	XMMD-1	XMMD-2			
D BSC		7.00	8.00	8.00	8.00	9.00	9.00	9.00			
E BSC		7.00	8.00	8.00	8.00	9.00	9.00	9.00			
D1 BSC		6.75	7.75	7.75	7.75	8.75	8.75	8.75			
E1 BSC		6.75	7.75	7.75	7.75	8.75	8.75	8.75			
D2	MIN	5.50	6.50	6.50	6.50	7.50	7.50	7.50			
	NOM	5.65	6.65	6.65	6.65	7.65	7.65	7.65			
	MAX	5.80	6.80	6.80	6.80	7.80	7.80	7.80			
E2	MIN	5.50	6.50	6.50	6.50	7.50	7.50	7.50			
	NOM	5.65	6.65	6.65	6.65	7.65	7.65	7.65			
	MAX	5.80	6.80	6.80	6.80	7.80	7.80	7.80			
N		40	56	52	48	64	60	56			7, 3
ND		10	14	13	12	16	15	14			6
NE		10	14	13	12	16	15	14			6
NOTES		1,2,10	1,2,10	1,2,10	1,2,10	1,2,10	1,2,10	1,2,10			
REF		11-702									
ISSUE		C									

TABLE 8A

e=0.40 PITCH										
VARIATION / SYMBOL		UEEE	UEEE-1	UGGE	UHHE	UHHE-1	UJJE	UJJE-1	UKKE	ULLE	NOTE
		XEEE	XEEE-1	XGGE	XHHE	XHHE-1	XJJE	XJJE-1	XKKE	XLLE	
D BSC		3.00	3.00	4.00	5.00	5.00	6.00	6.00	7.00	8.00	
E BSC		3.00	3.00	4.00	5.00	5.00	6.00	6.00	7.00	8.00	
D1 BSC		———	2.75	3.75	4.75	———	5.75	5.75	6.75	7.75	
E1 BSC		———	2.75	3.75	4.75	———	5.75	5.75	6.75	7.75	
D2	MIN	0.95	0.95	1.95	2.95	3.45	3.95	4.45	4.95	5.95	
	NOM	1.10	1.10	2.10	3.10	3.60	4.10	4.60	5.10	6.10	
	MAX	1.25	1.25	2.25	3.25	3.75	4.25	4.75	5.25	6.25	
E2	MIN	0.95	0.95	1.95	2.95	3.45	3.95	4.45	4.95	5.95	
	NOM	1.10	1.10	2.10	3.10	3.60	4.10	4.60	5.10	6.10	
	MAX	1.25	1.25	2.25	3.25	3.75	4.25	4.75	5.25	6.25	
N		20	16	28	36	40	48	48	56	64	7, 3
ND		5	4	7	9	10	12	12	14	16	6
NE		5	4	7	9	10	12	12	14	16	6
NOTES		1,2,10	1,2,10	1,2,10	1,2,10	1,2,10	1,2,10	1,2,10	1,2,10	1,2,10	
REF		11-744	11-744	11-706	11-706	11-744	11-706	11-706	11-706	11-706	
ISSUE		E	E	D	D	E	D	D	D	D	

TABLE 8B

e=0.40 PITCH											
VARIATION / SYMBOL		ULLE-1	UMME	UMME-1							NOTE
		XLLE-1	XMME	XMME-1							
D BSC		8.00	9.00	9.00							
E BSC		8.00	9.00	9.00							
D1 BSC		7.75	8.75	8.75							
E1 BSC		7.75	8.75	8.75							
D2	MIN	5.95	6.95	6.95							
	NOM	6.10	7.10	7.10							
	MAX	6.25	7.25	7.25							
E2	MIN	5.95	6.95	6.95							
	NOM	6.10	7.10	7.10							
	MAX	6.25	7.25	7.25							
N		68	72	76							7, 3
ND		17	18	19							6
NE		17	18	19							6
NOTES		1,2,10	1,2,10	1,2,10							
REF		11-744	11-706	11-744							
ISSUE		E	D	E							

NOTES:

1. DIMENSIONING AND TOLERANCING CONFORM TO ASME Y14.5M-1994.

2. ALL DIMENSIONS ARE IN MILLIMETERS, θ IS IN DEGREES.

3. N IS THE TOTAL NUMBER OF TERMINALS.

4. THE TERMINAL #1 IDENTIFIER AND TERMINAL NUMBERING CONVENTION SHALL CONFORM TO JEDEC PUBLICATION 95 SPP-002. DETAILS OF TERMINAL #1 IDEN TIFIER ARE OPTIONAL, BUT MUST BE LOCATED WITHIN THE ZONE INDICATED. THE TERMINAL #1 IDENTIFIER MAY BE EITHER A MOLD OR MARKED FEATURE.

5. DIMENSION b APPLIES TO METALLIZED TERMINAL AND IS MEASURED BETWEEN 0.15 mm AND 0.30 mm FROM THE TERMINAL TIP. IF THE TERMINAL HAS THE OPTIONAL RADIUS ON THE OTHER END OF THE TERMINAL, THE DIMENSION b SHOULD NOT BE MEASURED IN THAT RADIUS AREA.

6. ND AND NE REFER TO THE NUMBER OF TERMINALS ON EACH D AND E SIDE RESPECTIVELY.

7. DEPOPULATION IS POSSIBLE IN A SYMMETRICAL FASHION.

8. A 14 TERMINAL 0.50 mm PITCH 5.00 X 4.00 mm PACKAGE IS SHOWN FOR ILLUSTRATION ONLY

9. ALL VARIATIONS MAY BE CONSTRUCTED PER FIGURE 1, VARIATIONS MAY BE ALTERNATELY BE CONSTRUCTED PER FIGURE 2 IF A2, D1 & E1 ARE SPECIFIED IN THE DIMENSION TABLES, IN ALL CASES, THE MINIMUM "K" VALUE OF 0.20 mm APPLIES.

10. FOR A COMPLETE SET OF DIMENSIONS FOR EACH VARIATION, SEE THE INDIVIDUAL VARIATION TABLES AND THE COMMON DIMENSIONS (TABLE 2), LEAD WIDTH (TABLE 3) AND TOLERANCE OF FORM & POSITION (TABLE 4).

11. UNILATERAL COPLANARITY ZONE APPLIES TO THE EXPOSED HEAT SINK SLUG AS WELL AS THE TERMINALS.

12. DEPENDING ON THE METHOD OF LEAD TERMINATION AT THE EDGE OF THE PACKAGE, PULL BACK (L1) MAYBE PRESENT. L MINUS L1 TO BE EQUAL TO OR GREATER THAN 0.30 mm.

13. VARIOUS COMPANIES HAVE ISSUED PATENTS AND RELATED PATENT APPLICATIONS THAT MAY APPLY TO THIS REGISTRATION. IF THE CURRENT ISSUE PATENTS OR LATER PATENTS RESULTING FROM RELATED APPLICATIONS DO APPLY, THESE COMPANIES INTEND TO COMPLY WITH THE JEDEC PATENT POLICY AND LICENSE UNDER REASONABLE TERMS AND CONDITIONS THAT ARE DEMONSTRABLY FREE OF ANY UNFAIR DISCRIMINATION. REFERENCED PATENTS ARE AS FOLLOWS.

AMKOR TECHNOLOGY	U.S. PATENT - No. 5,866,939; 6,143,981; 6,281,568; 6,331,451;
	6,433,277;6,448,633;6,455,356; 6,469,369;6,475,827;
	6,476,478; 6,501,161; 6,521,987; 6,525,406; 6,545,345;
	6,555,899; 6,580,159; 6,597,059; 6,605,865; 6,605,866;
	6,608,366; 6,611,047; 6,616,436; 6,627,976; 6,630,728;
	6,639,308;6,646,339;6,677,662; 6,667,663;6,684,496;
	6,696,747; 6,700,187; 6,713,322; 6,730,544; 6,750,545;
	6,753,597; 6,756,658;
	6,759,737; 6,770,961; 6,777,789; 6,798,047; 6,803,645; 6,825,062;
	6,833,609; 6,841,414; 6,847,009; 6,847,103; 6,853,059; 6,853,919
	6,867,071; 6,873,032; 6,885,086; 6,893,900
ASAT	U.S. PATENTS - No. 6,229,200B1; 6,242,281B1; 6,294,100B1;
	6,545,347B2; 6,585,905B1
NATIONAL SEMICONDUCTOR	U.S. PATENT No. 6,130,473 6,589,814;6,483,180;6,452,255;
	6,399,415;6,372,539;6,551,048; 6,576,989;6,488,107;
	6,564,447;6,629,880;

14. WHEN MORE THAN ONE VARIATION (OPTION) EXISTS FOR THE SAME PROFILE HEIGHT, BODY SIZE (D x E), AND PITCH, THEN THOSE VARIATIONS WILL BE DENOTED BY AN ADDITIONAL DASH NUMBER (ie: -1, -2, etc.) DESIGNATOR TO IDENTIFY THEM. THE NEW VARIATIONS WOULD BE CREATED FROM ALL OR ANY OF THE FOLLOWING REASONS LEAD COUNTS, TERMINAL LENGTHS, AND OR THERMAL PAD SIZES.

Change Record

If the changes involves any words added or deleted (excluding deletion of accidentally repeated words), the change is included. Punctuation changes may or may not be included.

Initial Issue: A	Date: October 2003	Item: 11–667

Revision History:

Issues A thru C: Detailed Revision History not Available

Issue: D	Date: May 2005	Item: 11–705

Location	Change Description:
Tables 5a, 5b, 8	Add new variations with 0.4mm pitch

Issue: E	Date: February 2006	Item: 11–744

Location	Change from:	Change to:
Variations & Summary tables	(ADD NEW VARIATIONS)	(U/X) EEE-1, LLE-1 AND MME-1
TABLE 8A	DELETE D1 & E1 VALUES FOR (U/X) EEE & HHE-1	
TABLE 8B	CREATE NEW TABLE FOR ADDED VARIATIONS	
PAGE 4 - TABLE 2	L1 MIN=0.03	L1 MIN=0.00
PAGE 4 - TABLE 4	NEW VALUES	aaa & bbb FOR 0.40 PITCH
PAGE 11	ADD ADDITIONAL PATENT NUMBERS	

Issue:	Date:	Item:

Location	Change from:	Change to: