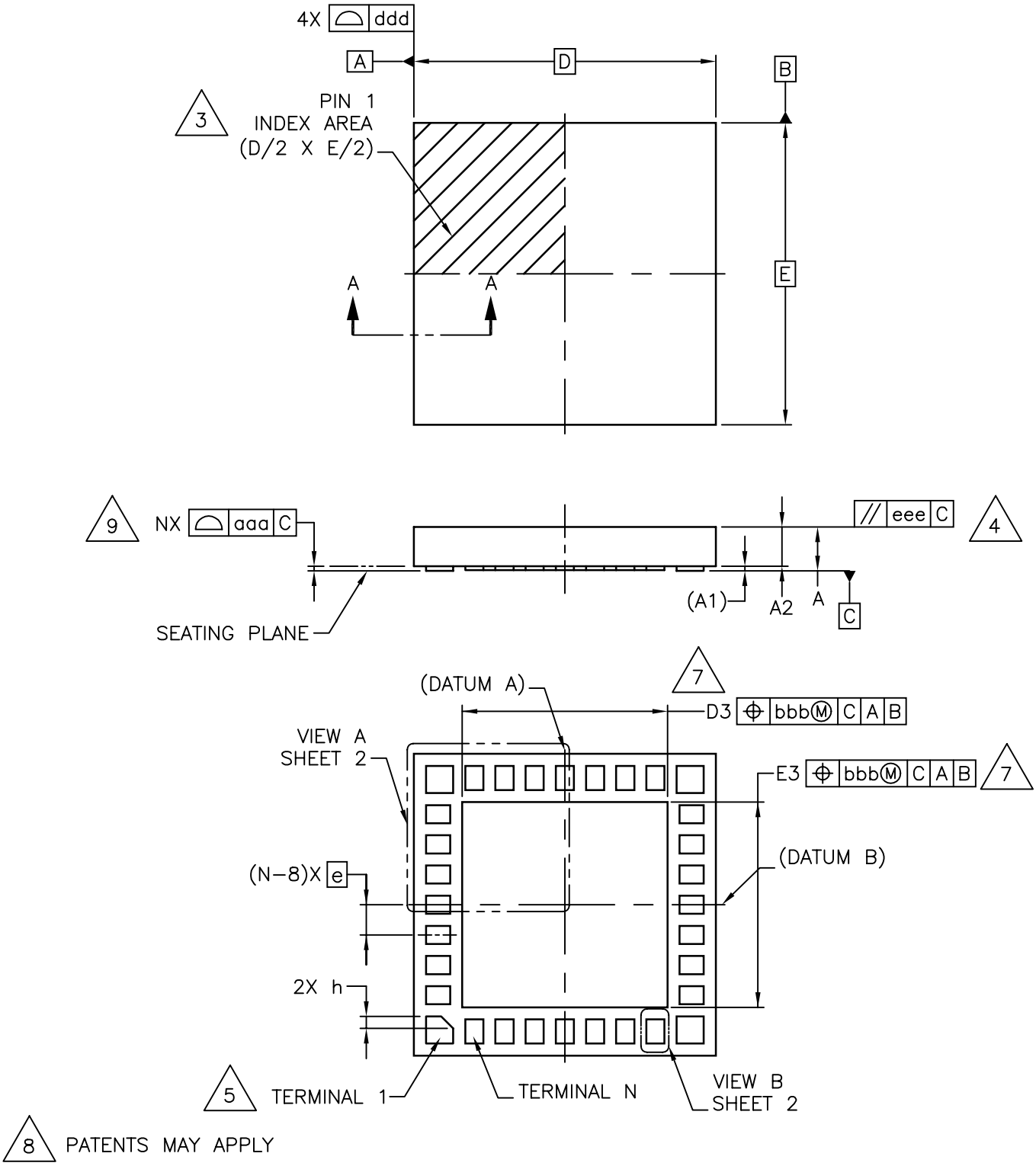
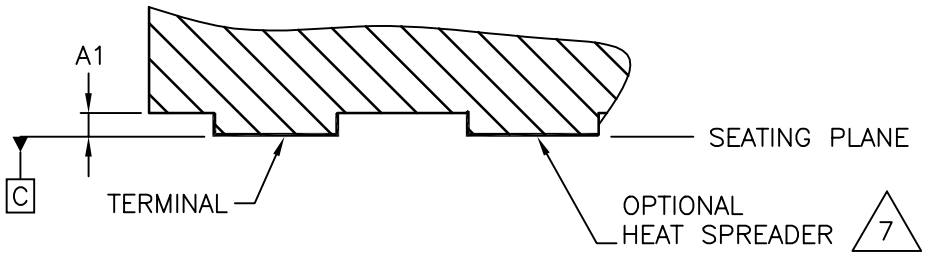
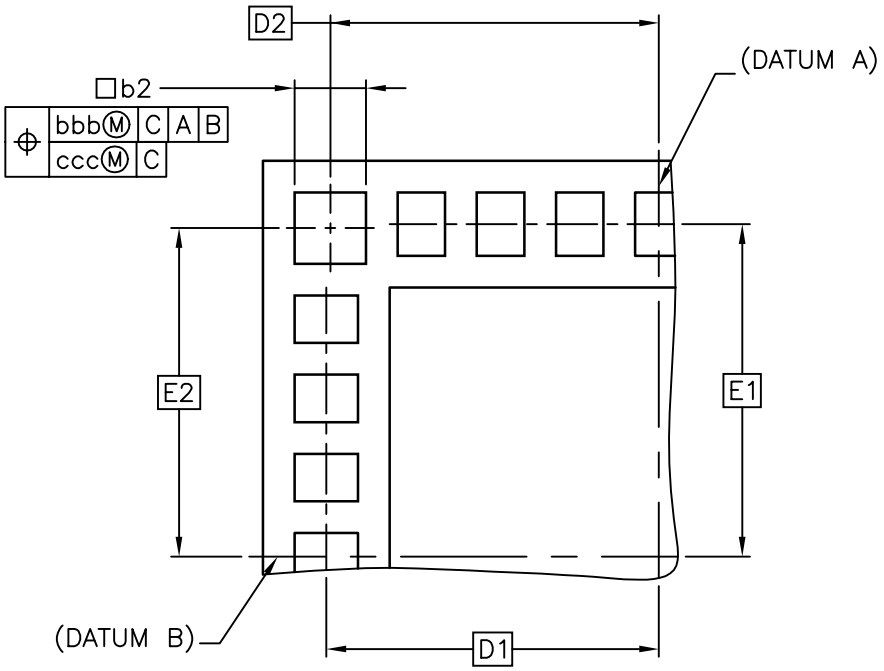


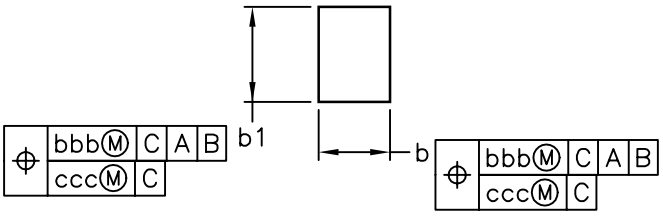
JEDEC SOLID STATE PRODUCT OUTLINES	THIS ***REGISTERED OUTLINE*** HAS BEEN PREPARED BY THE JEDEC JC-11 COMMITTEE AND REFLECTS A PRODUCT WITH ANTICIPATED USAGE IN THE ELECTRONICS INDUSTRY; CHANGES ARE LIKELY TO OCCUR				
TITLE VERY VERY THIN QUAD BOTTOM TERMINAL CHIP CARRIER FAMILY	JESD-30 DESIGNATOR W-PBCC-B/ WH-PBCC-B	ISSUE B	DATE 11/01	MO-217	SHEET 1 OF 6



SECTION A–A



VIEW A
4 PLACES



VIEW B
(N–4) PLACES

SUMMARY OF VARIATIONS				
VARIATIONS W/O HEAT SPREADER		TERMINALS	VARIATIONS WITH HEAT SPREADER	
AA	4x4	24	BA	4x4
AB	5x5	32	BB	5x5
AC	7x7	48	BC	7x7
AD	9x9	64	BD	9x9
AE	3x3	16	BE	3x3
AF	6x6	40	BF	6x6
AG	8x8	56	BG	8x8

COMMON DIMENSIONS				
SYMBOL	MIN	NOM	MAX	NOTE
A	-	-	0.80	
A1	0.05	-	0.10	
A2	0.60	0.65	0.70	
b	0.20	-	0.37	
b1	0.30	-	0.50	
b2	0.35	-	0.52	
e	-	0.50 BSC	-	
h	0.10	0.20	0.30	
NOTES	1,2			
REF	11-536			
ISSUE	A			

TOLERANCES OF FORM AND POSITION		
SYMBOL	TOLERANCE	NOTES
aaa	0.05	9
bbb	0.15	
ccc	0.03	
ddd	0.15	
eee	0.20	4
NOTES	1,2	
REF	11-536	
ISSUE	A	

VARIATIONS (WITHOUT HEAT SPREADER)

SYMBLE	AA	AB	AC	AD	AE	AF	AG	NOTES
	VALUE	VALUE	VALUE	VALUE	VALUE	VALUE	VALUE	
D	4.00 BSC	5.00 BSC	7.00 BSC	9.00 BSC	3.00 BSC	6.00 BSC	8.00 BSC	
D1	1.60 BSC	2.10 BSC	3.10 BSC	4.10 BSC	1.10 BSC	2.60 BSC	3.60 BSC	
D2	1.575 BSC	2.075 BSC	3.075 BSC	4.075 BSC	1.075 BSC	2.575 BSC	3.575 BSC	
E	4.00 BSC	5.00 BSC	7.00 BSC	9.00 BSC	3.00 BSC	6.00 BSC	8.00 BSC	
E1	1.60 BSC	2.10 BSC	3.10 BSC	4.10 BSC	1.10 BSC	2.60 BSC	3.60 BSC	
E2	1.575 BSC	2.075 BSC	3.075 BSC	4.075 BSC	1.075 BSC	2.575 BSC	3.575 BSC	
N	24	32	48	64	16	40	56	6
NOTES	1,2				1,2			
REF	11-536				11-621			
ISSUE	A				B			

VARIATIONS (WITH HEAT SPREADER)													
SYMBLE	BA			BB			BC			BD			NOTES
	VALUE			VALUE			VALUE			VALUE			
	MIN	NOM	MAX	MIN	NOM	MAX	MIN	NOM	MAX	MIN	NOM	MAX	
D	-	4.00 BSC	-	-	5.00 BSC	-	-	7.00 BSC	-	-	9.00 BSC	-	
D1	-	1.60 BSC	-	-	2.10 BSC	-	-	3.10 BSC	-	-	4.10 BSC	-	
D2	-	1.575 BSC	-	-	2.075 BSC	-	-	3.075 BSC	-	-	4.075 BSC	-	
D3	1.90	2.00	2.10	2.90	3.00	3.10	4.90	5.00	5.10	6.90	7.00	7.10	
E	-	4.00 BSC	-	-	5.00 BSC	-	-	7.00 BSC	-	-	9.00 BSC	-	
E1	-	1.60 BSC	-	-	2.10 BSC	-	-	3.10 BSC	-	-	4.10 BSC	-	
E2	-	1.575 BSC	-	-	2.075 BSC	-	-	3.075 BSC	-	-	4.075 BSC	-	
E3	1.90	2.00	2.10	2.90	3.00	3.10	4.90	5.00	5.10	6.90	7.00	7.10	
N	24			32			48			64			6
NOTES	1,2												
REF	11-536												
ISSUE	A												

VARIATIONS (WITH HEAT SPREADER)													
SYMBLE	BE			BF			BG						NOTES
	VALUE			VALUE			VALUE						
	MIN	NOM	MAX	MIN	NOM	MAX	MIN	NOM	MAX				
D	-	3.00 BSC	-	-	6.00 BSC	-	-	8.00 BSC	-				
D1	-	1.10 BSC	-	-	2.60 BSC	-	-	3.60 BSC	-				
D2	-	1.075 BSC	-	-	2.575 BSC	-	-	3.575 BSC	-				
D3	0.90	1.00	1.10	3.90	4.00	4.10	5.90	6.00	6.10				
E	-	3.00 BSC	-	-	6.00 BSC	-	-	8.00 BSC	-				
E1	-	1.10 BSC	-	-	2.60 BSC	-	-	3.60 BSC	-				
E2	-	1.075 BSC	-	-	2.575 BSC	-	-	3.575 BSC	-				
E3	0.90	1.00	1.10	3.90	4.00	4.10	5.90	6.00	6.10				
N	16			40			56						6
NOTES	1,2												
REF	11-621												
ISSUE	B												

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETERS.

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

3 THE TERMINAL#1 IDENTIFIER AND TERMINAL NUMBERING CONVENTION SHALL CONFORM TO JESD 95-1 SPP-002. DETAILS OF TERMINAL IDENTIFIER ARE OPTIONAL, BUT MUST BE LOCATED WITHIN THE ZONE INDICATED. THE TERMINAL #1 IDENTIFIER MAY BE A MOLDED OR MARKED FEATURE.

4 PARALLELISM MEASUREMENT SHALL EXCLUDE ANY EFFECT OF MARK ON TOP SURFACE OF PACKAGE.

5 VARIATION BB IS SHOWN FOR ILLUSTRATION ONLY.

6. N IS THE MAXIMUM NUMBER OF TERMINALS.

7 AX VARIATIONS DO NOT HAVE A HEAT SPREADER. BX VARIATIONS HAVE A BOTTOM HEAT SPREADER, INTENDED TO BE SOLDERED TO THE BOARD.

8 FUJITSU LIMITED HAS STATED THAT U.S. PATENT NUMBER 5,656,550 MAY RELATE TO A CERTAIN IMPLEMENTATION OF THIS OUTLINE.

9 COPLANARITY APPLIES N+1 PLACES WHEN HEAT SPREADER IS PRESENT, N PLACES IF NOT PRESENT.