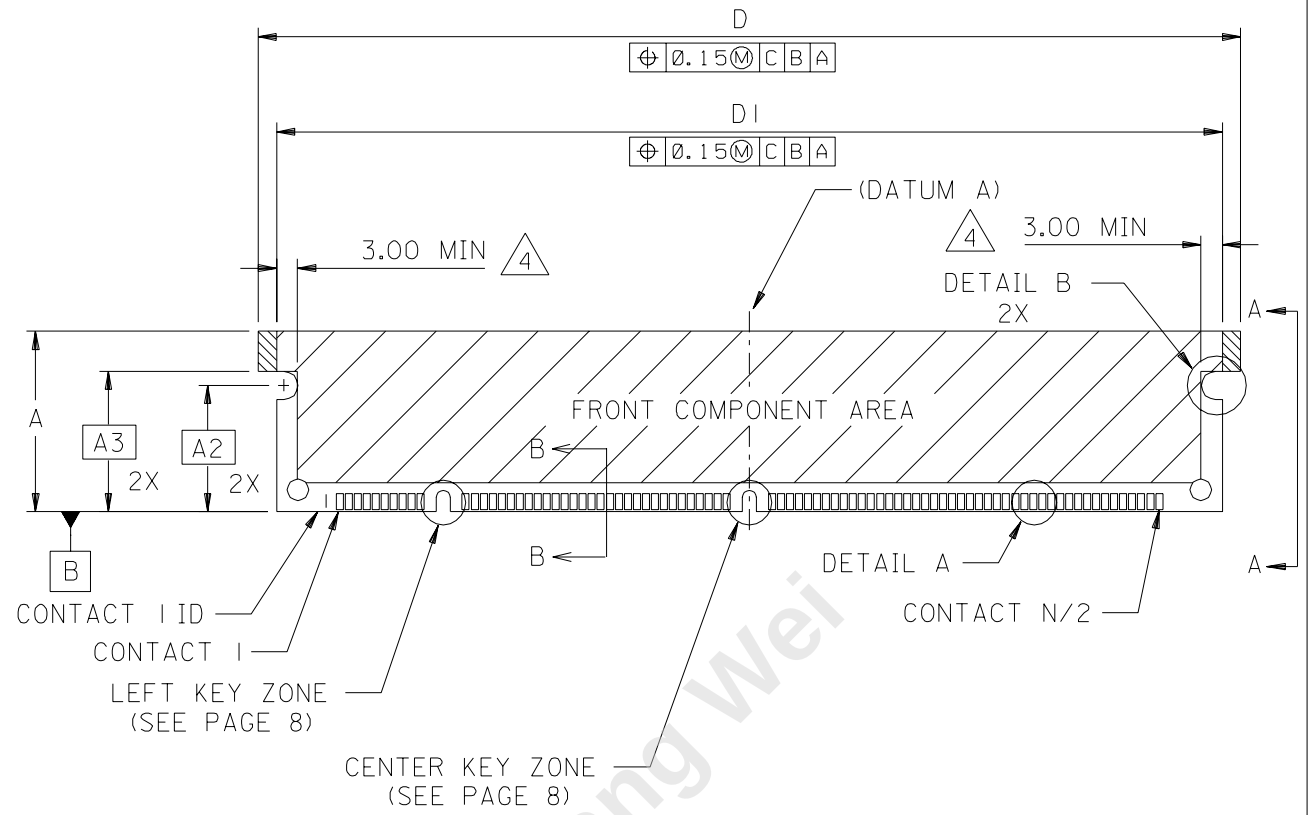
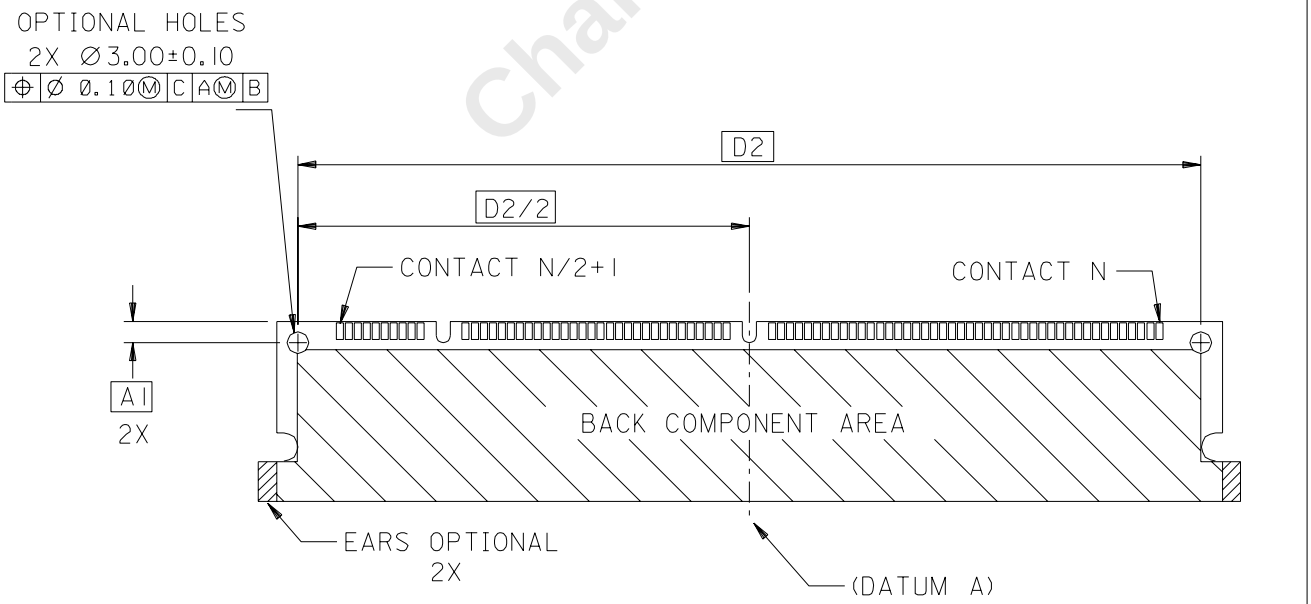
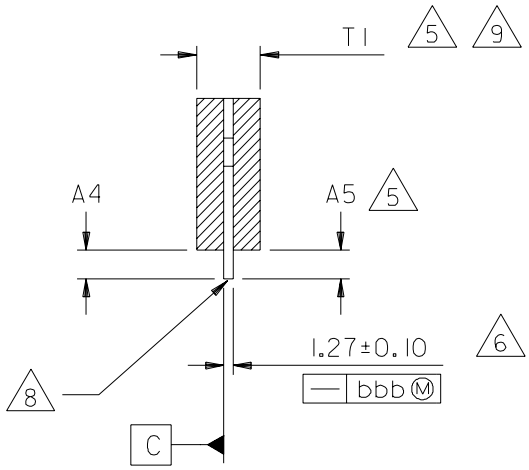




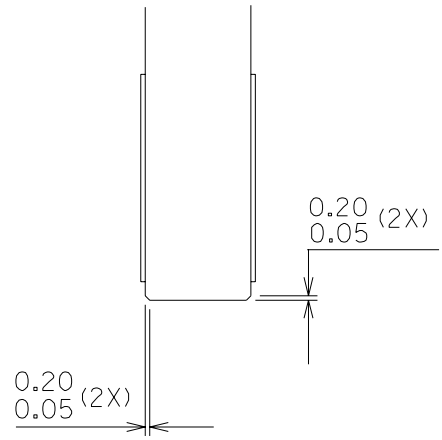
JEDEC SOLID STATE PRODUCT OUTLINE	THIS REGISTERED OUTLINE HAS BEEN PREPARED BY THE JEDEC JC-11 COMMITTEE AND REFLECTS A PRODUCT WITH ANTICIPATED USAGE IN THE ELECTRONICS INDUSTRY; CHANGES ARE LIKELY TO OCCUR.

TITLE	DESIGNATOR	ISSUE	DATE		SHEET
DUAL INLINE MEMORY MODULE (DIMM) FAMILY WITH MULTIPLE KEYWAYS 1.27 mm CONTACT CENTERS		F	01/2003	MO-161	1/13

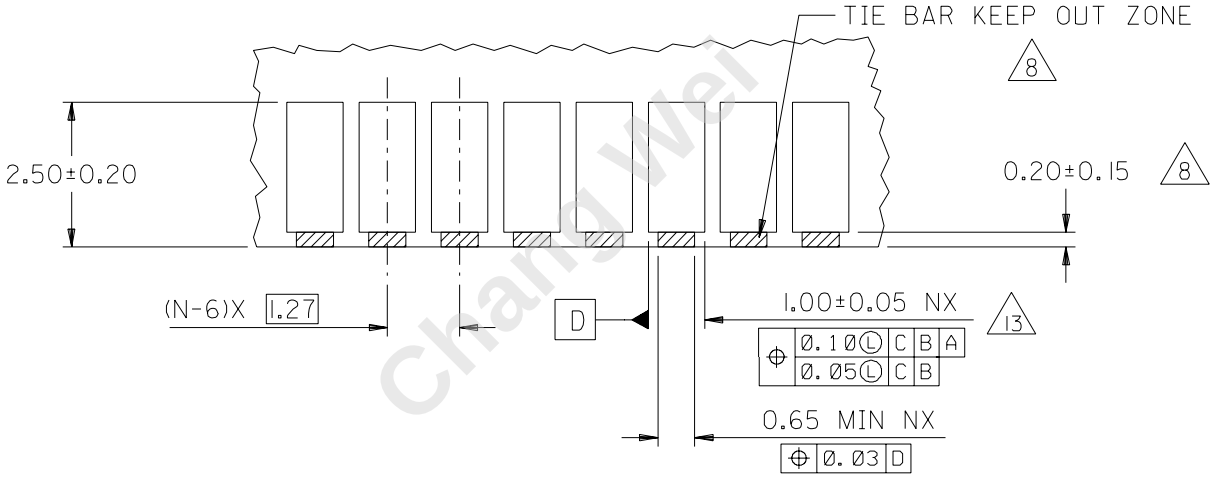
VIEW A-A



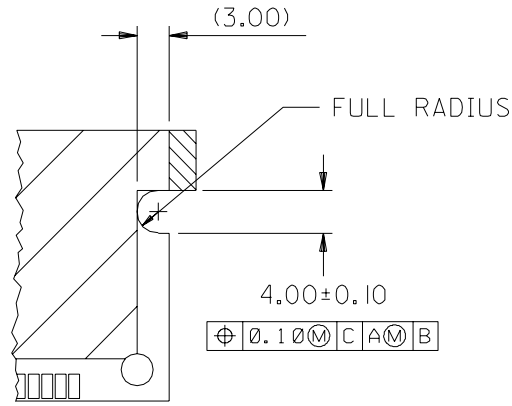
VIEW B-B OPTIONAL 12



DETAIL A

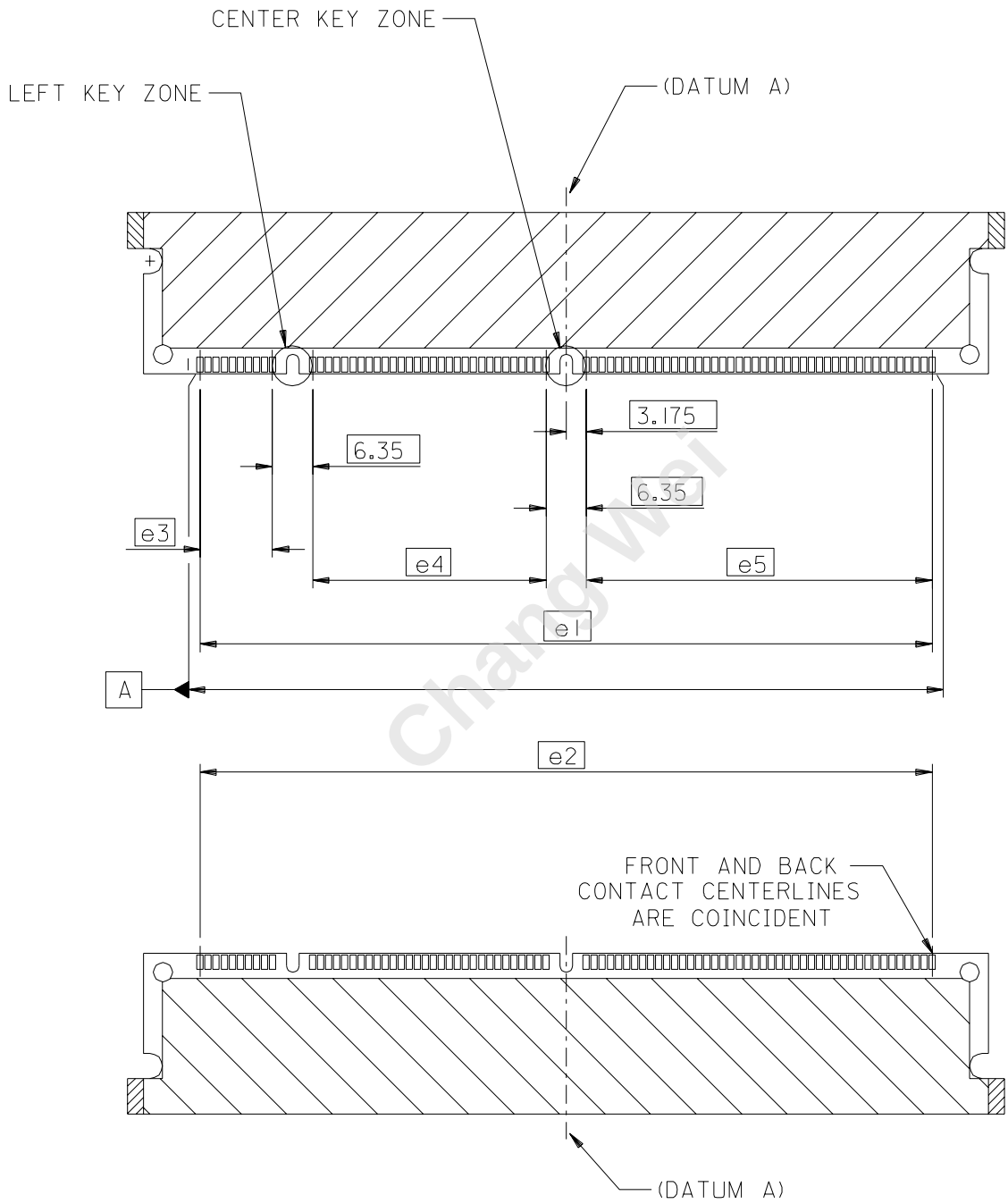


DETAIL B



JEDEC SOLID STATE PRODUCT OUTLINE	TITLE DUAL INLINE MEMORY MODULE (DIMM) FAMILY WITH MULTIPLE KEYWAYS 1.27 mm CONTACT CENTERS	ISSUE F	DATE 01/2003	MO-161	SHEET 2/13

168 CKT
LEFT POLARIZED CONFIGURATION
(VARIATION D1)



REFER TO PAGE 6 FOR KEYWAY CONFIGURATIONS

JEDEC SOLID STATE PRODUCT OUTLINE	TITLE DUAL INLINE MEMORY MODULE (DIMM) FAMILY WITH MULTIPLE KEYWAYS 1.27 mm CONTACT CENTERS	ISSUE F	DATE 01/2003	MO-161	SHEET 3/13

168 CKT
RIGHT POLARIZED CONFIGURATION
(VARIATION N1)

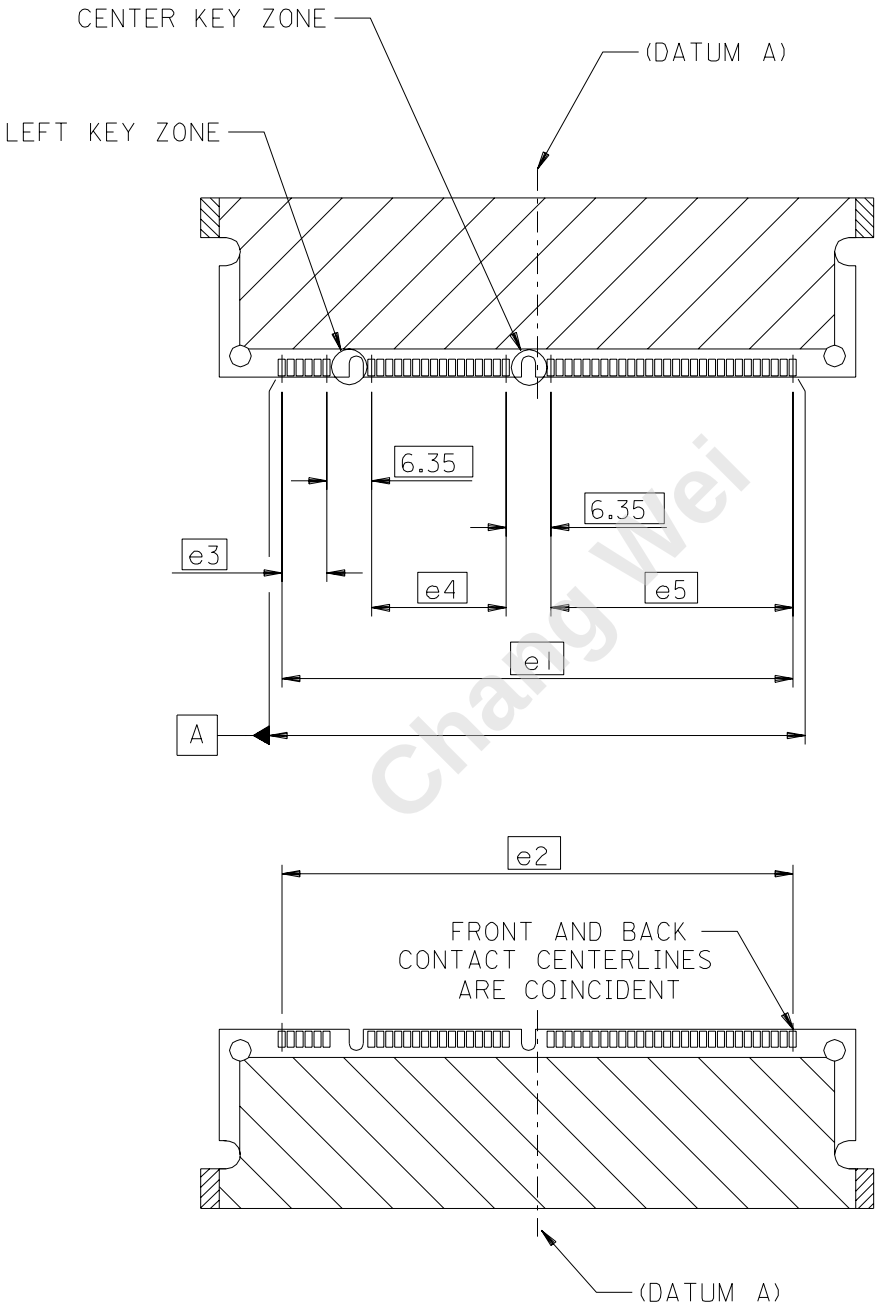
INACTIVATED

ITEM#: 11.14-056

DATE: 01/2003

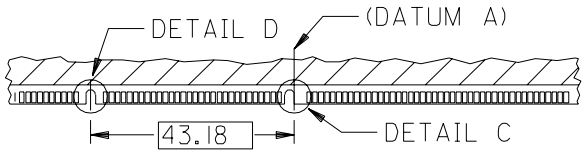
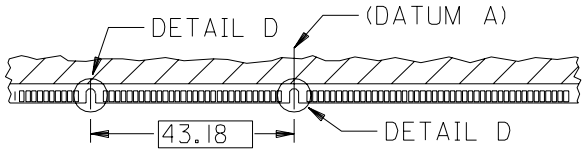
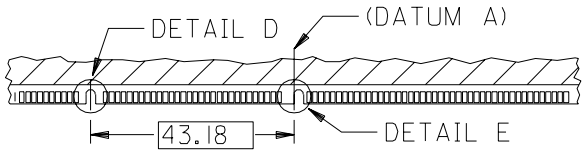
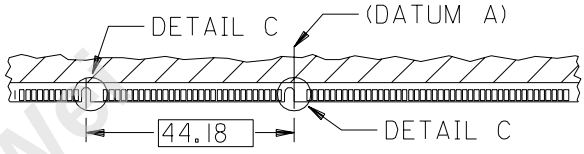
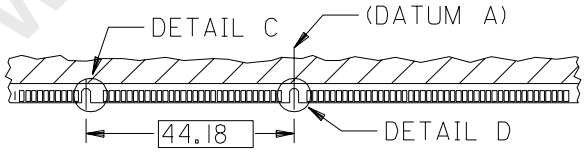
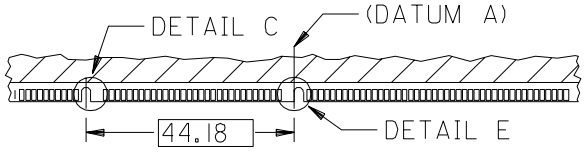
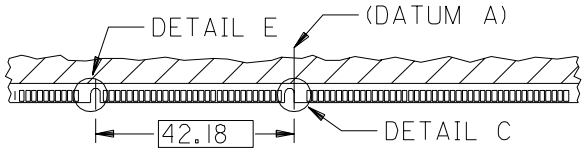
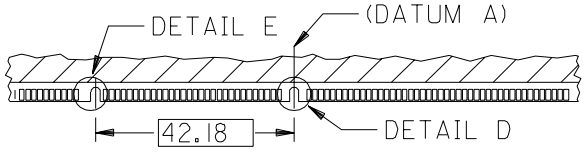
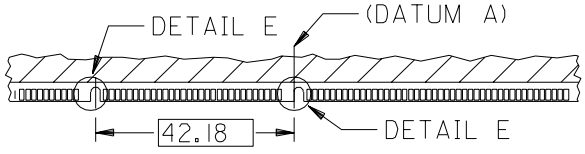
REFER TO PAGE 7 FOR KEYWAY CONFIGURATIONS

100 CKT
LEFT POLARIZED CONFIGURATION
(VARIATION U1)



REFER TO PAGE 8 FOR KEYWAY CONFIGURATIONS

168 CKT LEFT POLARIZED CONFIGURATIONS

VARIATION	LEFT KEY ZONE ⚠1	CENTER KEY ZONE ⚠1	N	MODULE KEYWAY POSITION DETAIL
D1	1ST GENERATION	5.0V	168	
D2	1ST GENERATION	3.3V	168	
D3	1ST GENERATION	X.XV	168	
D4	RESERVED	5.0V	168	
D5	RESERVED	3.3V	168	
D6	RESERVED	X.XV	168	
D7	2ND GENERATION	5.0V	168	
D8	2ND GENERATION	3.3V	168	
D9	2ND GENERATION	X.XV	168	

REFER TO PAGE 8 FOR KEYWAY DETAILS

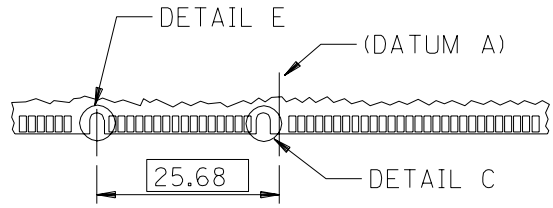
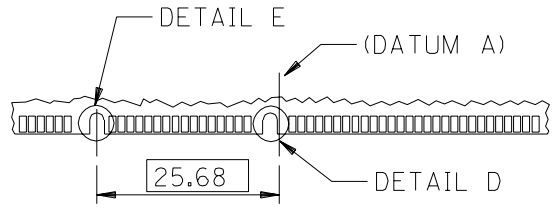
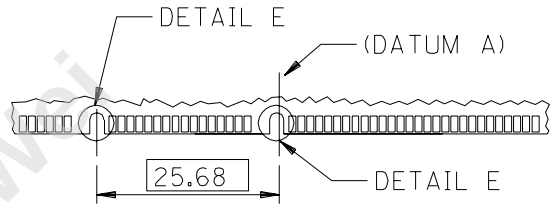
168 CKT RIGHT POLARIZED CONFIGURATIONS

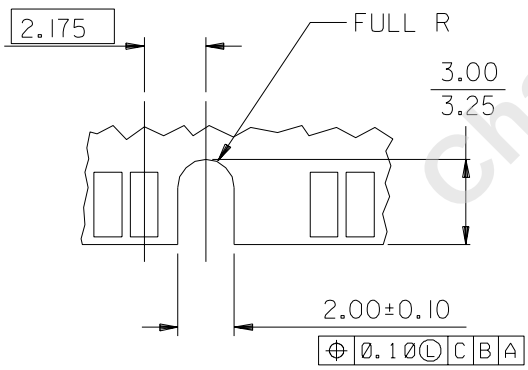
VARIATION	CENTER KEY ZONE ⚠11	RIGHT KEY ZONE ⚠11	N	MODULE KEYWAY POSITION DETAIL
N1				
N2				
N3				
N4				
N5				
N6				
N7				
N8				
N9				

INACTIVATED
ITEM#: 11-14-056
DATE: 01/2003

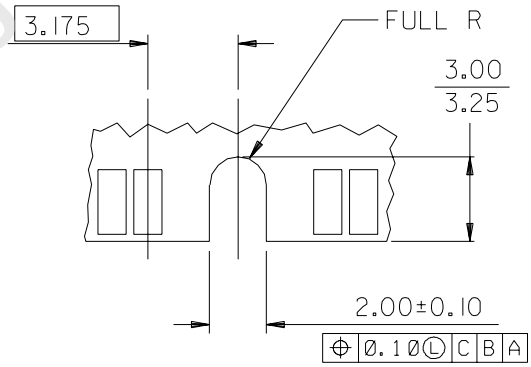
REFER TO PAGE 8 FOR KEYWAY DETAILS

100 CKT LEFT POLARIZED CONFIGURATIONS

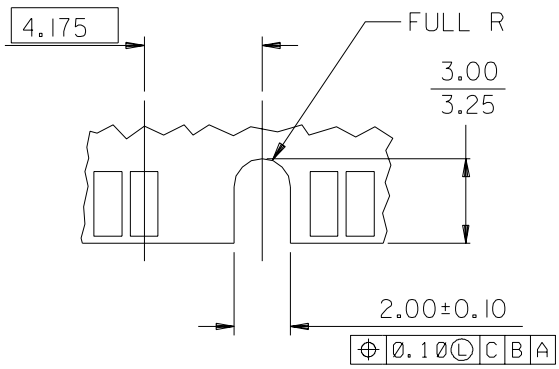
VARIATION	LEFT KEY ZONE ⚠11	CENTER KEY ZONE ⚠11	N	MODULE KEYWAY POSITION DETAIL
U1	2ND GENERATION	5.0V	100	
U2	2ND GENERATION	3.3V	100	
U3	DDR	2.5V	100	



DETAIL C - LEFT OFFSET KEYWAY



DETAIL D - CENTER KEYWAY



DETAIL E - RIGHT OFFSET KEYWAY

JEDEC SOLID STATE PRODUCT OUTLINE	TITLE DUAL INLINE MEMORY MODULE (DIMM) FAMILY WITH MULTIPLE KEYWAYS 1.27 mm CONTACT CENTERS	ISSUE	DATE		SHEET
		F	01/2003	MO-161	8/13

168 CKT LEFT POLARIZED VARIATIONS

SYMBOL	AA-XX (10)			AB-XX (10)		
	MIN	NOM	MAX	MIN	NOM	MAX
A	25.27	25.40	25.53	25.27	25.40	25.53
A1		3.00 BASIC			3.00 BASIC	
A2		17.80 BASIC			17.80 BASIC	
A3	19.80	———	———	19.80	———	———
A4	4.00	———	———	4.00	———	———
A5	4.00	———	———	4.00	———	———
D	138.30	138.45	138.60	138.30	138.45	138.60
D1	133.20	133.35	133.50	133.20	133.35	133.50
D2		127.35 BASIC			127.35 BASIC	
e1		115.57 BASIC			115.57 BASIC	
e2		115.57 BASIC			115.57 BASIC	
e3		11.43 BASIC			11.43 BASIC	
e4		36.83 BASIC			36.83 BASIC	
e5		54.61 BASIC			54.61 BASIC	
T1	———	———	4.00	———	———	9.00
N		168			168	
bbb		0.40			0.40	
NOTE		1, 2, 3			1, 2, 3	
REF		14-014			14-014	
ISSUE		B			B	

SYMBOL	BA-XX (10)			BB-XX (10)		
	MIN	NOM	MAX	MIN	NOM	MAX
A	31.62	31.75	31.88	31.62	31.75	31.88
A1		3.00 BASIC			3.00 BASIC	
A2		17.80 BASIC			17.80 BASIC	
A3	19.80	———	———	19.80	———	———
A4	4.00	———	———	4.00	———	———
A5	4.00	———	———	4.00	———	———
D	138.30	138.45	138.60	138.30	138.45	138.60
D1	133.20	133.35	133.50	133.20	133.35	133.50
D2		127.35 BASIC			127.35 BASIC	
e1		115.57 BASIC			115.57 BASIC	
e2		115.57 BASIC			115.57 BASIC	
e3		11.43 BASIC			11.43 BASIC	
e4		36.83 BASIC			36.83 BASIC	
e5		54.61 BASIC			54.61 BASIC	
T1	———	———	4.00	———	———	9.00
N		168			168	
bbb		0.40			0.40	
NOTE		1, 2, 3			1, 2, 3	
REF		14-014			14-014	
ISSUE		B			B	

JEDEC SOLID STATE PRODUCT OUTLINE	TITLE DUAL INLINE MEMORY MODULE (DIMM) FAMILY WITH MULTIPLE KEYWAYS 1.27 mm CONTACT CENTERS	ISSUE F	DATE 01/2003	MO-161	SHEET 9/13

168 CKT LEFT POLARIZED VARIATIONS

SYMBOL	CA-XX (10)			CB-XX (10)		
	MIN	NOM	MAX	MIN	NOM	MAX
A	37.97	38.10	38.23	37.97	38.10	38.23
A1		3.00 BASIC			3.00 BASIC	
A2		17.80 BASIC			17.80 BASIC	
A3	19.80	———	———	19.80	———	———
A4	4.00	———	———	4.00	———	———
A5	4.00	———	———	4.00	———	———
D	138.30	138.45	138.60	138.30	138.45	138.60
D1	133.20	133.35	133.50	133.20	133.35	133.50
D2		127.35 BASIC			127.35 BASIC	
e1		115.57 BASIC			115.57 BASIC	
e2		115.57 BASIC			115.57 BASIC	
e3		11.43 BASIC			11.43 BASIC	
e4		36.83 BASIC			36.83 BASIC	
e5		54.61 BASIC			54.61 BASIC	
T1	———	———	4.00	———	———	9.00
N		168			168	
bbb		0.40			0.40	
NOTE		1, 2, 3			1, 2, 3	
REF		14-014			14-014	
ISSUE		B			B	

SYMBOL	CC-XX (10)			CD-XX (10)		
	MIN	NOM	MAX	MIN	NOM	MAX
A	43.05	43.18	43.31	43.05	43.18	43.31
A1		3.00 BASIC			3.00 BASIC	
A2		17.80 BASIC			17.80 BASIC	
A3	19.80	———	———	19.80	———	———
A4	4.00	———	———	4.00	———	———
A5	4.00	———	———	4.00	———	———
D	138.30	138.45	138.60	138.30	138.45	138.60
D1	133.20	133.35	133.50	133.20	133.35	133.50
D2		127.35 BASIC			127.35 BASIC	
e1		115.57 BASIC			115.57 BASIC	
e2		115.57 BASIC			115.57 BASIC	
e3		11.43 BASIC			11.43 BASIC	
e4		36.83 BASIC			36.83 BASIC	
e5		54.61 BASIC			54.61 BASIC	
T1	———	———	4.00	———	———	9.00
N		168			168	
bbb		0.40			0.40	
NOTE		1, 2, 3			1, 2, 3	
REF		14-045			14-045	
ISSUE		E			E	

JEDEC SOLID STATE PRODUCT OUTLINE	TITLE DUAL INLINE MEMORY MODULE (DIMM) FAMILY WITH MULTIPLE KEYWAYS 1.27 mm CONTACT CENTERS	ISSUE	DATE		SHEET
		F	01/2003	MO-161	10/13

100 CKT LEFT POLARIZED VARIATIONS

SYMBOL	DA-XX (10)			DB-XX (10)		
	MIN	NOM	MAX	MIN	NOM	MAX
A	25.27	25.40	25.53	25.27	25.40	25.53
A1		3.00 BASIC			3.00 BASIC	
A2		17.80 BASIC			17.80 BASIC	
A3	19.80	———	———	19.80	———	———
A4	4.00	———	———	4.00	———	———
A5	4.00	———	———	4.00	———	———
D	95.14	95.29	95.44	95.14	95.29	95.44
D1	90.04	90.19	90.34	90.04	90.19	90.34
D2		84.17 BASIC			84.17 BASIC	
e1		72.39 BASIC			72.39 BASIC	
e2		72.39 BASIC			72.39 BASIC	
e3		6.35 BASIC			6.35 BASIC	
e4		19.05 BASIC			19.05 BASIC	
e5		34.29 BASIC			34.29 BASIC	
T1	———	———	4.00	———	———	9.00
N		100			100	
bbb		0.27			0.27	
NOTE		1, 2, 3			1, 2, 3	
REF		14-014			14-014	
ISSUE		B			B	

SYMBOL	EA-XX (10)			EB-XX (10)		
	MIN	NOM	MAX	MIN	NOM	MAX
A	31.62	31.75	31.88	31.62	31.75	31.88
A1		3.00 BASIC			3.00 BASIC	
A2		17.80 BASIC			17.80 BASIC	
A3	19.80	———	———	19.80	———	———
A4	4.00	———	———	4.00	———	———
A5	4.00	———	———	4.00	———	———
D	95.14	95.29	95.44	95.14	95.29	95.44
D1	90.04	90.19	90.34	90.04	90.19	90.34
D2		84.17 BASIC			84.17 BASIC	
e1		72.39 BASIC			72.39 BASIC	
e2		72.39 BASIC			72.39 BASIC	
e3		6.35 BASIC			6.35 BASIC	
e4		19.05 BASIC			19.05 BASIC	
e5		34.29 BASIC			34.29 BASIC	
T1	———	———	4.00	———	———	9.00
N		100			100	
bbb		0.27			0.27	
NOTE		1, 2, 3			1, 2, 3	
REF		14-014			14-014	
ISSUE		B			B	

JEDEC SOLID STATE PRODUCT OUTLINE	TITLE DUAL INLINE MEMORY MODULE (DIMM) FAMILY WITH MULTIPLE KEYWAYS 1.27 mm CONTACT CENTERS	ISSUE	DATE		SHEET
		F	01/2003	MO-161	11/13

100 CKT LEFT POLARIZED VARIATIONS

SYMBOL	FA-XX (10)			FB-XX (10)		
	MIN	NOM	MAX	MIN	NOM	MAX
A	34.80	34.93	35.06	34.80	34.93	35.06
A1		3.00 BASIC			3.00 BASIC	
A2		17.80 BASIC			17.80 BASIC	
A3	19.80	———	———	19.80	———	———
A4	4.00	———	———	4.00	———	———
A5	4.00	———	———	4.00	———	———
D	95.14	95.29	95.44	95.14	95.29	95.44
D1	90.04	90.19	90.34	90.04	90.19	90.34
D2		84.17 BASIC			84.17 BASIC	
e1		72.39 BASIC			72.39 BASIC	
e2		72.39 BASIC			72.39 BASIC	
e3		6.35 BASIC			6.35 BASIC	
e4		19.05 BASIC			19.05 BASIC	
e5		34.29 BASIC			34.29 BASIC	
T1	———	———	4.00	———	———	9.00
N		100			100	
bbb		0.27			0.27	
NOTE		1, 2, 3			1, 2, 3	
REF		14-014			14-014	
ISSUE		B			B	

SYMBOL	GA-XX (10)		
	MIN	NOM	MAX
A	30.37	30.50	30.63
A1		3.00 BASIC	
A2		17.80 BASIC	
A3	19.80	———	———
A4	4.00	———	———
A5	4.00	———	———
D	95.14	95.29	95.44
D1	90.04	90.19	90.34
D2		84.17 BASIC	
e1		72.39 BASIC	
e2		72.39 BASIC	
e3		6.35 BASIC	
e4		19.05 BASIC	
e5		34.29 BASIC	
T1	———	———	4.00
N		100	
bbb		0.27	
NOTE		1, 2, 3	
REF		11.14-055	
ISSUE		F	

JEDEC SOLID STATE PRODUCT OUTLINE	TITLE DUAL INLINE MEMORY MODULE (DIMM) FAMILY WITH MULTIPLE KEYWAYS 1.27 mm CONTACT CENTERS	ISSUE	DATE		SHEET
		F	01/2003	MO-161	12/13

NOTES

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

2. TOLERANCES ON ALL DIMENSIONS ±0.13 UNLESS OTHERWISE SPECIFIED.

3. ALL DIMENSIONS ARE IN MILLIMETERS.

4. 3.00 mm MINIMUM APPLIES TO BOTH 4.00 mm WIDE NOTCH LENGTH AND COMPONENT KEEPOUT AREA.

5. DIMENSION APPLICABLE WHEN COMPONENTS MOUNTED ON BOTH SIDES.

6. CARD THICKNESS APPLIES ACROSS THE CONTACTS AND INCLUDES PLATING AND/OR METALIZATION. STRAIGHTNESS CALLOUT APPLIES TO ZONE DEFINED BY A4, A5, AND D.

7. N IS THE TOTAL NUMBER OF CIRCUIT CONTACTS (PINS, LEADS, TABS, OR PADS).

8. LEADING EDGE OF CONTACT PADS SPECIFIED BY THE KEEP OUT ZONE SHALL BE FREE OF BURRS AND EXTERNAL TIE BARS.

9. WHEN SOJ DEVICES ARE USED FOR ASSEMBLY OF THIS MODULE, THE MAXIMUM THICKNESS OVERALL SHALL NOT EXCEED 9.00 mm. WHEN THE TSOP DEVICES ARE USED, THE MAXIMUM THICKNESS SHALL NOT EXCEED 4.00 mm.

10. XX = D1, D2, ..., D9 OR U1, U2 DEPENDING UPON CIRCUIT SIZE AND VARIATION. FOR EXAMPLE, VARIATION AA-D1 DENOTES A 168 CKT, 4.00mm THICK, 25.40 mm HIGH, 5V DRAM DUAL INLINE MEMORY MODULE.

11. THE JC-42.5 COMMITTEE CONTROLS THE INFORMATION IN THIS COLUMN. IT IS SHOWN HERE FOR REFERENCE ONLY AND IS SUBJECT TO CHANGE.

12. THE ADDITION OF THIS BEVEL IS A FABRICATION OPTION AND IS NOT REQUIRED. THE BEVEL AIDS INSERTION OF THE MODULE INTO THE CONNECTOR. THE BEVEL IS NOT TO INFRINGE THE GOLD CONTACTS

13. APPLICATION NOTE ;

    RECOMMENDED PLATING FOR CONTACT PADS ARE ;

    1) PREFERABLE PLATING : ELECTROLYTIC GOLD PLATING 0.76 MICROMETERS MINIMUM OVER ELECTROLYTIC NI 2.00 MICROMETERS MINIMUM.

    2) ALTERNATIVE PLATING : GOLD PLATING 0.05-0.75 MICROMETERS OVER NI 2.00 MICROMETERS MINIMUM MUST USE AN ELECTRONIC CONTACT GRADE CORROSIVE BARRIER LUBRICANT.

14. FOR OPTIMUM PERFORMANCE, THE TIEBAR IS TO BE ON AN INTERNAL LAYER, SO THAT THE REMNANT CANNOT CAUSE CONTACT DAMAGE.

JEDEC SOLID STATE PRODUCT OUTLINE	TITLE DUAL INLINE MEMORY MODULE (DIMM) FAMILY WITH MULTIPLE KEYWAYS 1.27 mm CONTACT CENTERS	ISSUE	DATE		SHEET
		F	01/2003	MO-161	13/13