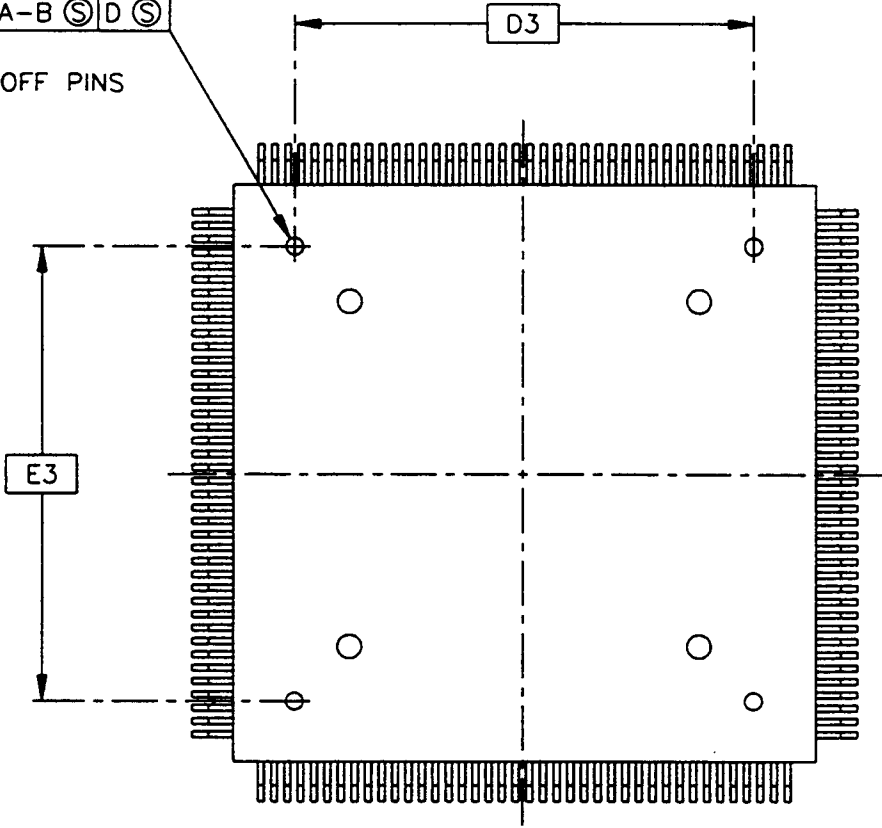
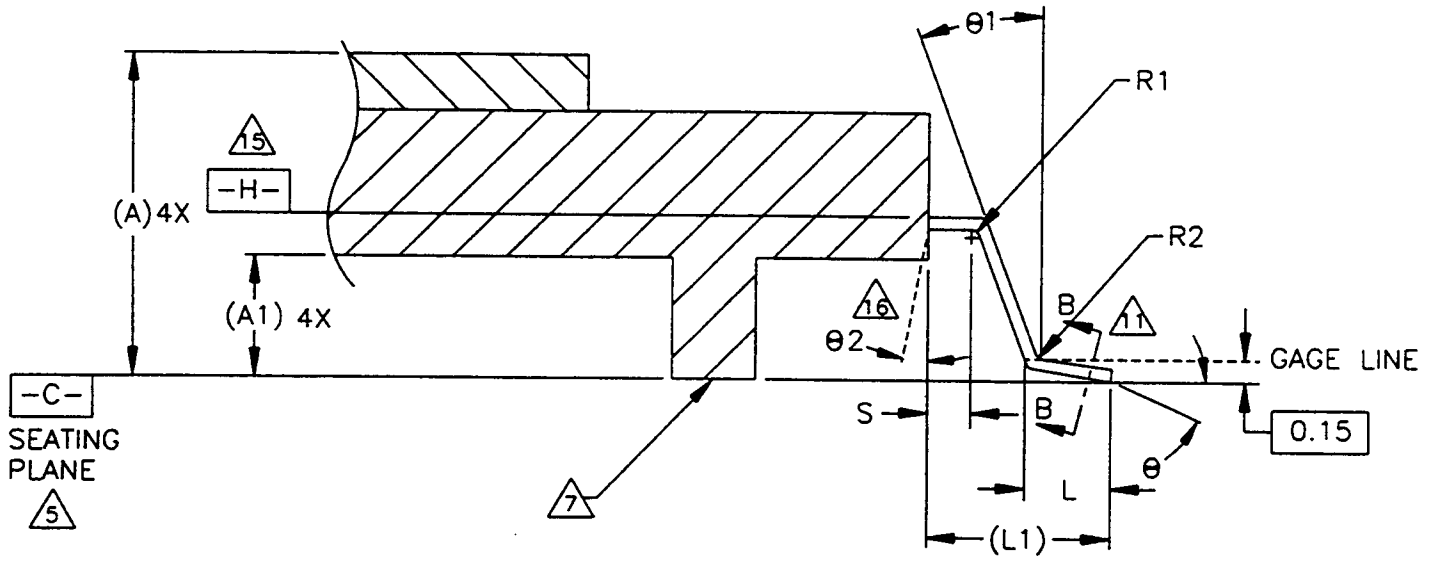


Ø P1 (4X)
⊕ Ø0.25 M C A-B S D S
△ △ STANDOFF PINS

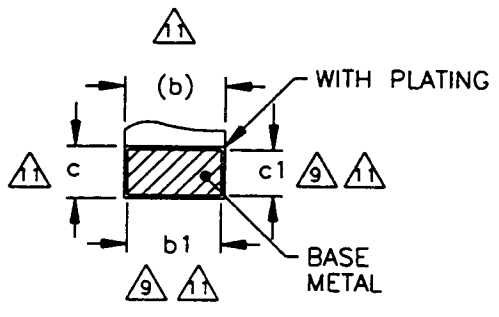


VIEW A-A
(BOTTOM VIEW)

JEDEC SOLID STATE PRODUCT OUTLINE	TITLE TFH - PQFP-G / TQHS THIN QUAD HEATSPREADER FAMILY REGISTRATION	ISSUE A	DATE OCT 1995	MO-173	SHEET 2/8
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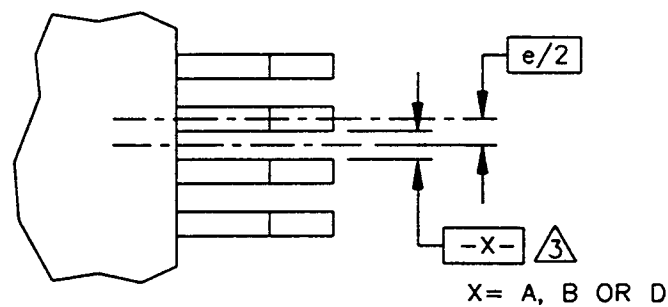


SECTION A-A



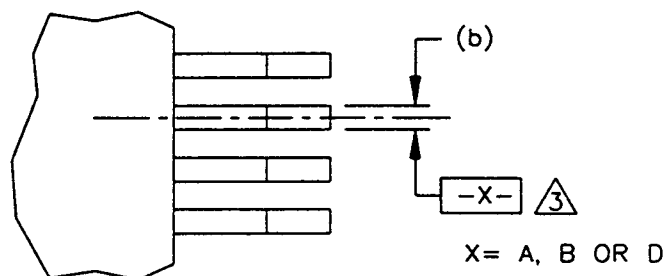
SECTION B-B

JEDEC SOLID STATE PRODUCT OUTLINE	TITLE TFH - PQFP-G / TQHS THIN QUAD HEATSPREADER FAMILY REGISTRATION	ISSUE A	DATE OCT 1995	MO-173	SHEET 3/8
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EVEN LEAD SIDES

TOP VIEW



ODD LEAD SIDES

TOP VIEW

DETAIL A

JEDEC SOLID STATE PRODUCT OUTLINE	TITLE TFH - PQFP-G / TQHS THIN QUAD HEATSPREADER FAMILY REGISTRATION	ISSUE A	DATE OCT 1995	MO-173	SHEET 4/8
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S Y M B	Common Dimensions			N O T E S
	MIN	NOM	MAX	
A	---	---	1.60	
A1	0.25	---	---	
A2	0.95	1.10	1.25	
A3	---	---	0.5	
A4	0.5	---	1.0	
L	0.45	0.60	0.75	
L1	1.25	1.30	1.35	
ØP1	0.85	0.90	0.95	5, 7
ØP2	1.15	1.25	1.35	8
R1	0.08	---	---	
R2	0.08	---	0.20	
S	0.30	0.40	0.50	
Θ	2°	5°	8°	
Θ1	20°	25°	30°	
Θ2	11°	12°	13°	16
c	0.02	0.035	0.045	11
c1	0.02	---	0.04	11

Common Tolerances		
	0.5MM	0.4MM
aaa	0.20	0.20
bbb	0.20	0.20
ccc	0.10	0.10
ddd	0.08	0.07

SUMMARY TABLE			
BODY SIZE	LEAD PITCH	LEAD COUNT	VARIATION
28 X 28	0.50	208	AA
	0.40	256	AB
32 X 32	0.50	240	BA
	0.40	296	BB
40 X 40	0.50	304	CA
	0.40	376	CB

JEDEC SOLID STATE PRODUCT OUTLINE	TITLE TFH - PQFP -G / TQHS THIN QUAD HEATSPREADER FAMILY REGISTRATION	ISSUE A	DATE OCT 1995	MO-173	SHEET 5/8

S Y M B O L	VARIATIONS							
	AA			N O T E	AB			N O T E
	MIN	NOM	MAX		MIN	NOM	MAX	
D		30.60 BSC.				30.60 BSC.		
D1		28.00 BSC.				28.00 BSC.		
D2		15.90 BSC.				15.90 BSC.		
D3		20.95 BSC.				20.95 BSC.		
D4	5.0	---	10.5		5.0	---	10.5	
E		30.60 BSC.				30.60 BSC.		
E1		28.00 BSC.				28.00 BSC.		
E2		15.90 BSC.				15.90 BSC.		
E3		20.95 BSC.				20.95 BSC.		
E4	5.0	---	10.5		5.0	---	10.5	
N	---	208	---		---	256	---	
e		0.50 BSC.				0.40 BSC.		
b	0.17	0.22	0.27	11	0.13	0.180	0.230	11
b1	0.17	---	0.265	11	0.13	---	0.225	11
NOTE	1, 2							
REF	11-403							
ISSUE	A							

S Y M B O L	VARIATIONS							
	BA			N O T E	BB			N O T E
	MIN	NOM	MAX		MIN	NOM	MAX	
D		34.60 BSC.				34.60 BSC.		
D1		32.00 BSC.				32.00 BSC.		
D2		17.10 BSC.				17.10 BSC.		
D3		22.15 BSC.				22.15 BSC.		
D4	6.0	---	11.5		6.0	---	11.5	
E		34.60 BSC.				34.60 BSC.		
E1		32.00 BSC.				32.00 BSC.		
E2		17.10 BSC.				17.10 BSC.		
E3		22.15 BSC.				22.15 BSC.		
E4	6.0	---	11.5		6.0	---	11.5	
N		240				296		
e		0.50				0.40		
b	0.17	0.22	0.27	11	0.13	0.180	0.230	11
b1	0.17	---	0.265	11	0.13	---	0.225	11
NOTE	1, 2							
REF	11-403							
ISSUE	A							

JEDEC SOLID STATE PRODUCT OUTLINE	TITLE TFH - PQFP -G / TQHS THIN QUAD HEATSPREADER FAMILY REGISTRATION	ISSUE A	DATE OCT 1995	MO-173	SHEET 6/8
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S Y M B O L	VARIATIONS							
	CA			N O T E	CB			N O T E
	MIN	NOM	MAX		MIN	NOM	MAX	
D	42.60 BSC.				42.60 BSC.			
D1	40.00 BSC.				40.00 BSC.			
D2	20.40 BSC.				20.40 BSC.			
D3	25.45 BSC.				25.45 BSC.			
D4	7.00	---	15.00		7.00	---	15.00	
E	42.60 BSC.				42.60 BSC.			
E1	40.00 BSC.				40.00 BSC.			
E2	20.40 BSC.				20.40 BSC.			
E3	25.45 BSC.				25.45 BSC.			
E4	7.00	---	15.00		7.00	---	15.00	
N	304				376			
e	0.50 BSC.				0.40 BSC.			
b	0.17	0.22	0.27	11	0.13	0.180	0.230	11
b1	0.17	---	0.265	11	0.13	---	0.225	11
NOTE	1, 2							
REF	11-403							
ISSUE	A							

JEDEC SOLID STATE PRODUCT OUTLINE	TITLE TFH - PQFP -G / TQHS THIN QUAD HEATSPREADER FAMILY REGISTRATION	ISSUE A	DATE OCT 1995	MO-173	SHEET 7/8
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NOTES:

1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M-1982
2. ALL DIMENSIONS ARE IN MILLIMETERS.
3. DATUMS [A-B] AND [D] TO BE DETERMINED AT DATUM PLANE [H]
4. NOMINAL POSITION OF LEADS IS COINCIDENT WITH STANDOFF PINS
5. DATUM [C] IS THE SEATING PLANE AND IS DEFINED BY THE STANDOFF PINS
- SEE APPLICATIONS NOTE.
6. PIN 1 CORNER MUST BE IDENTIFIED BY CHAMFER, INK MARK, METALLIZED MARKINGS, INDENTATION OR OTHER FEATURE OF PACKAGE BODY, LID OR INTEGRAL HEATSLUG. THE PIN 1 IDENTIFIER MUST BE LOCATED WITHIN THE ZONE INDICATED.
7. END OF STANDOFF PIN MAY BE RADIUS OR FLAT.
8. OPTIONAL THROUGH HOLES FOR LOCATING IN SHIPPING TRAY.
9. LEAD MATERIAL NORMALLY COPPER OR COPPER ALLOY.
10. EXACT SHAPE OF EACH CORNER IS OPTIONAL
11. THESE DIMENSIONS APPLY TO THE FLAT SECTION OF THE LEAD BETWEEN 0.10MM AND 0.25MM FROM THE LEAD TIP.
12. DIMENSIONS D1 AND E1 DO NOT INCLUDE MOLD PROTRUSION. ALLOWABLE PROTRUSION IS 0.25mm PER SIDE. D1 AND E1 ARE MAXIMUM PLASTIC BODY SIZE DIMENSIONS INCLUDING MOLD MISMATCH.
13. DIMENSION b DOES NOT INCLUDE DAMBAR PROTRUSION. ALLOWABLE DAMBAR PROTRUSION SHALL NOT CAUSE THE LEAD WIDTH TO EXCEED THE MAXIMUM b DIMENSION BY MORE THAN 0.08mm. DAMBAR CAN NOT BE LOCATED ON THE LOWER RADIUS OR THE FOOT. MINIMUM SPACE BETWEEN PROTRUSION AND AN ADJACENT LEAD IS 0.07mm FOR 0.4mm AND 0.5mm PITCH PACKAGES
14. HEATSPREADER
15. DATUM [H] IS COINCIDENT WITH THE LEAD AND HEATSPREADER WHERE THE LEAD EXITS THE PACKAGE BODY
16. OPTIONAL DRAFT ANGLE FOR MOLDED PACKAGE

APPLICATION NOTE:

PACKAGE SEATING PLANE IS DEFINED BY STANDOFF POSTS. NOMINAL POSITION OF LEAD TIPS IS COINCIDENT WITH SEATING PLANE. COPLANARITY IS DEFINED AS A BILATERAL TOLERANCE ZONE ABOUT THE NOMINAL POSITION. DURING BOARD MOUNT OPERATIONS LEADS WHICH FALL BELOW THE SEATING PLANE ARE PUSHED INTO ALIGNMENT ON CONTACT WITH THE MOUNTING SURFACE. LEADS ARE SUFFICIENTLY COMPLIANT TO ALLOW THE PACKAGE TO BE PLACED ON THE PCB WITHOUT RESISTANCE

JEDEC SOLID STATE PRODUCT OUTLINE	TITLE TFH - PQFP -G / TQHS THIN QUAD HEATSPREADER FAMILY REGISTRATION	ISSUE A	DATE OCT 1995	MO-173	SHEET 8/8
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