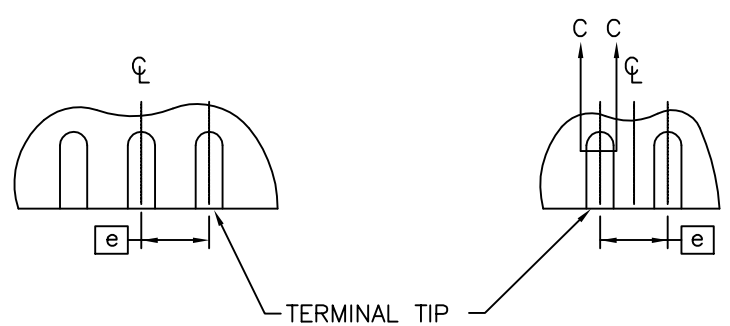
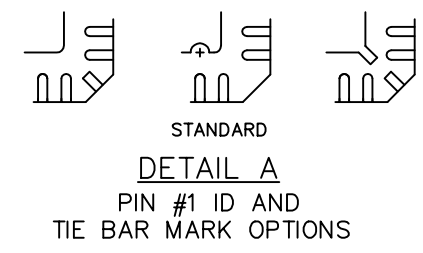
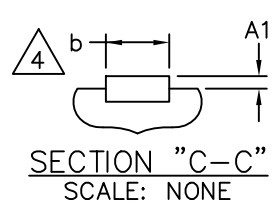


BOTTOM VIEW



FOR ODD TERMINAL/SIDE

FOR EVEN TERMINAL/SIDE



TITLE:
PACKAGE OUTLINE,
16, 20, 24L QFN 4x4x0.85 MM

APPROVAL
DAVID YOUM
8/30/09

DOCUMENT CONTROL NO.
21-0106

REV. 1/2
G

NOTES:

1. DIE THICKNESS ALLOWABLE IS 0.305mm MAXIMUM (.012 INCHES MAXIMUM).
2. DIMENSIONING & TOLERANCES CONFORM MUST TO ASME Y14.5M. - 1994.
3. N IS THE NUMBER OF TERMINALS.
Nd IS THE NUMBER OF TERMINALS IN X-DIRECTION &
Ne IS THE NUMBER OF TERMINALS IN Y-DIRECTION.
4. DIMENSION b APPLIES TO PLATED TERMINAL AND IS MEASURED BETWEEN 0.20 AND 0.25mm FROM TERMINAL TIP.
5. THE PIN #1 IDENTIFIER MUST BE EXISTED ON THE TOP SURFACE OF THE PACKAGE BY USING INDENTATION MARK OR INK/LASER MARKED. DETAILS OF PIN #1 IDENTIFIER IS OPTIONAL, BUT MUST BE LOCATED WITHIN ZONE INDICATED.
6. EXACT SHAPE AND SIZE OF THIS FEATURE IS OPTIONAL.
7. ALL DIMENSIONS ARE IN MILLIMETERS.
8. PACKAGE WARPAGE MAX 0.05mm.
9. APPLIED FOR EXPOSED PAD AND TERMINALS.
EXCLUDE EMBEDDING PART OF EXPOSED PAD FROM MEASURING.
10. MEETS JEDEC MO220; EXCEPT DIMENSION "b".
11. THIS PACKAGE OUTLINE APPLIES TO PUNCHED QFN (STEPPED SIDES).
12. MARKING SHOWN IS FOR PACKAGE ORIENTATION REFERENCE ONLY.
13. ALL DIMENSIONS APPLY TO BOTH LEADED (-) AND PbFREE (+) PKG. CODES.

SYMBOL	COMMON DIMENSIONS			NOTE
	MIN.	NOM.	MAX.	
A	0.80	0.85	0.90	
A1	0.00	0.01	0.05	
A2	0.00	0.65	0.80	
A3	0.20 REF.			
D	4.00 BSC			
D1	3.75 BSC			
E	4.00 BSC			
E1	3.75 BSC			
θ	0°	-	12°	
P	0.24	0.42	0.60	

SYMBOL	PITCH VARIATION B			NOTE	SYMBOL	PITCH VARIATION C			NOTE	SYMBOL	PITCH VARIATION D			NOTE
	MIN.	NOM.	MAX.			MIN.	NOM.	MAX.			MIN.	NOM.	MAX.	
ⓐ	0.65 BSC				ⓐ	0.50 BSC				ⓐ	0.50 BSC			
N	16			3	N	20			3	N	24			3
Nd	4			3	Nd	5			3	Nd	6			3
Ne	4			3	Ne	5			3	Ne	6			3
L	0.50	0.60	0.75		L	0.50	0.60	0.75		L	0.30	0.40	0.50	
b	0.23	0.28	0.35	4	b	0.18	0.23	0.30	4	b	0.18	0.23	0.30	4

PKG. CODE	EXPOSED PAD VARIATION					
	D2			E2		
	MIN.	NOM.	MAX.	MIN.	NOM.	MAX.
G1644-1	1.95	2.10	2.25	1.95	2.10	2.25
G2044-3	1.95	2.10	2.25	1.95	2.10	2.25
G2044-4	1.55	1.70	1.85	1.55	1.70	1.85
G2444-1	1.95	2.10	2.25	1.95	2.10	2.25



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