



DOCUMENT TITLE:
PACKAGE OUTLINE, 8, 12 & 16L, THIN QFN, 3X3X0.75 MM

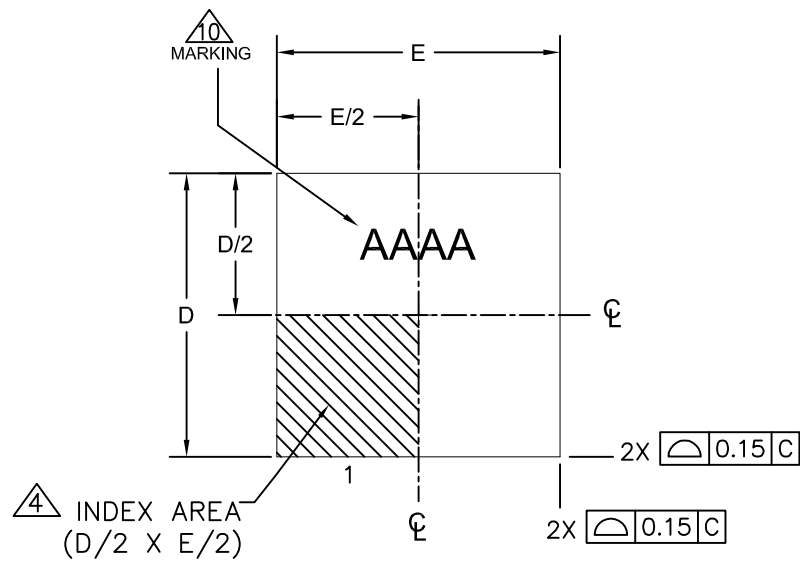
DOC ID # 21-0136 NEW REV: O

ECN#: HQ-14-0487 EFFECTIVE DATE: 02/20/2014

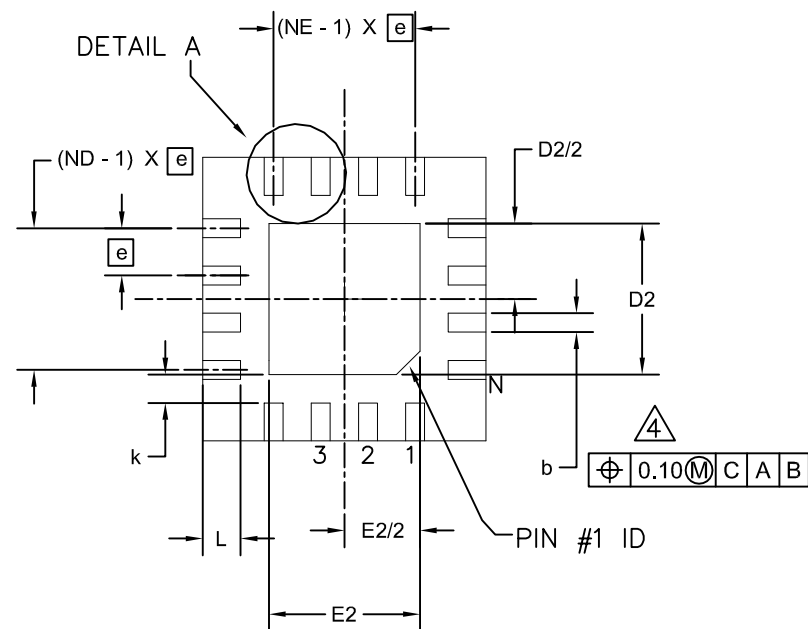
ORIGINATOR: AURELIO GIRON

MOST RECENT CHANGES

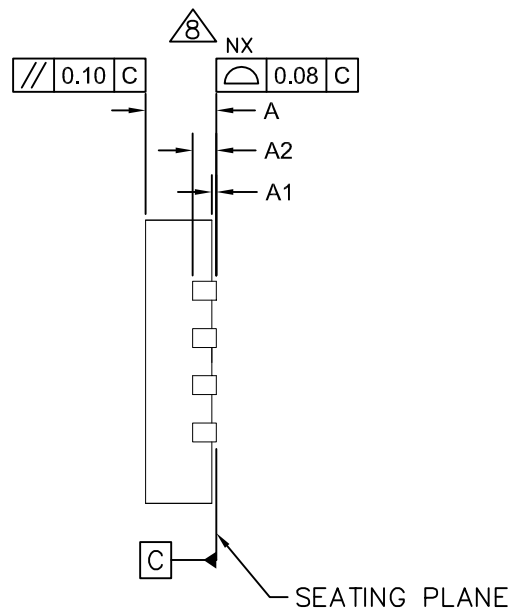
FROM	TO
REV N. T1233-4: LEAD LENGTH (L): MIN 0.45MM; NOM 0.55MM; MAX 0.65MM T1633-5: LEAD LENGTH (L): MIN 0.3MM; NOM 0.4MM; MAX 0.5MM	T1233-4: LEAD LENGTH (L): MIN 0.35MM; NOM 0.45MM; MAX 0.55MM T1633-5: LEAD LENGTH (L): MIN 0.25MM; NOM 0.35MM; MAX 0.45MM



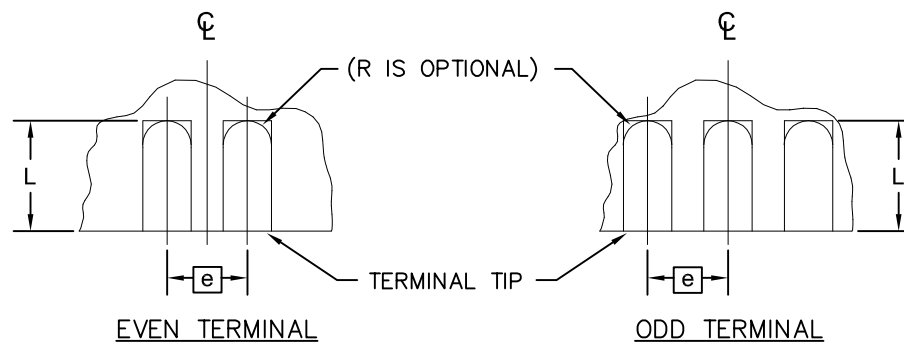
TOP VIEW



BOTTOM VIEW



SIDE VIEW



DETAIL A



TITLE:
PACKAGE OUTLINE,
8, 12, 16L THIN QFN, 3x3x0.75mm

APPROVAL
Jerald Lee
02/20/2014

DOCUMENT CONTROL NO.
21-0136

REV. 0 1/2

PKG	8L 3x3			12L 3x3			16L 3x3		
REF.	MIN.	NOM.	MAX.	MIN.	NOM.	MAX.	MIN.	NOM.	MAX.
A	0.70	0.75	0.80	0.70	0.75	0.80	0.70	0.75	0.80
b	0.25	0.30	0.35	0.20	0.25	0.30	0.20	0.25	0.30
D	2.90	3.00	3.10	2.90	3.00	3.10	2.90	3.00	3.10
E	2.90	3.00	3.10	2.90	3.00	3.10	2.90	3.00	3.10
e	0.65 BSC.			0.50 BSC.			0.50 BSC.		
L	0.35	0.55	0.75	0.45	0.55	0.65	0.30	0.40	0.50
N	8			12			16		
ND	2			3			4		
NE	2			3			4		
A1	0	0.02	0.05	0	0.02	0.05	0	0.02	0.05
A2	0.20 REF			0.20 REF			0.20 REF		
k	0.25	-	-	0.25	-	-	0.25	-	-

EXPOSED PAD VARIATIONS								
PKG. CODES	D2			E2			PIN ID	JEDEC
	MIN.	NOM.	MAX.	MIN.	NOM.	MAX.		
TQ833-1	0.25	0.70	1.25	0.25	0.70	1.25	0.35 x 45°	WEEC
T1233-1	0.95	1.10	1.25	0.95	1.10	1.25	0.35 x 45°	WEED-1
T1233-3	0.95	1.10	1.25	0.95	1.10	1.25	0.35 x 45°	WEED-1
T1633-2	0.95	1.10	1.25	0.95	1.10	1.25	0.35 x 45°	WEED-2
T1633-2C	0.95	1.10	1.25	0.95	1.10	1.25	0.35 x 45°	WEED-2
T1633F-3	0.65	0.80	0.95	0.65	0.80	0.95	0.225 x 45°	WEED-2
T1633FH-3	0.65	0.80	0.95	0.65	0.80	0.95	0.225 x 45°	WEED-2
T1633-4	0.95	1.10	1.25	0.95	1.10	1.25	0.35 x 45°	WEED-2
T1633-4C	0.95	1.10	1.25	0.95	1.10	1.25	0.35 x 45°	WEED-2
T1633MK-5	0.95	1.10	1.25	0.95	1.10	1.25	0.35 x 45°	WEED-2

EXPOSED PAD VARIATIONS										
PKG. CODES	D2			E2			L			PIN ID
	MIN.	NOM.	MAX.	MIN.	NOM.	MAX.	MIN.	NOM.	MAX.	
T1233-4	0.95	1.10	1.25	0.95	1.10	1.25	0.35	0.45	0.55	0.35 x 45°
T1633-5	0.95	1.10	1.25	0.95	1.10	1.25	0.25	0.35	0.45	0.35 x 45°
T1633-5C	0.95	1.10	1.25	0.95	1.10	1.25	0.25	0.35	0.45	0.35 x 45°

NOTES:

1. DIMENSIONING & TOLERANCING CONFORM TO ASME Y14.5M-1994.
2. ALL DIMENSIONS ARE IN MILLIMETERS. ANGLES ARE IN DEGREES.
3. N IS THE TOTAL NUMBER OF TERMINALS.
4. THE TERMINAL #1 IDENTIFIER AND TERMINAL NUMBERING CONVENTION SHALL CONFORM TO JESD 95-1 SPP-012. DETAILS OF TERMINAL #1 IDENTIFIER 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 0.20 mm AND 0.25 mm FROM TERMINAL TIP.
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. COPLANARITY APPLIES TO THE EXPOSED HEAT SINK SLUG AS WELL AS THE TERMINALS.
9. DRAWING CONFORMS TO JEDEC MO220 REVISION C. T1233-4, T1633-5 AND T1633-5C WITH CUSTOM LEAD DIMENSION.
10. MARKING SHOWN IS FOR PACKAGE ORIENTATION REFERENCE ONLY.
11. NUMBER OF LEADS SHOWN ARE FOR REFERENCE ONLY.
12. WARPAGE NOT TO EXCEED 0.10mm.
13. ALL DIMENSIONS APPLY TO BOTH LEADED (-) AND Pb FREE (+) PARTS.

-DRAWING NOT TO SCALE-

 maxim integrated™			
TITLE: PACKAGE OUTLINE, 8, 12, 16L THIN QFN, 3x3x0.75mm			
APPROVAL Jerold Lee 02/20/2014	DOCUMENT CONTROL NO. 21-0136	REV. O	2/2

REVISION HISTORY

REV	CHANGES MADE	DATE	INIT.
A	ECN #HQ-02-1524. INITIAL RELEASE INTO DOCUMENT CONTROL	03/28/02	GP
B	NO RECORD OF REV. B	**	**
C	ECN #HQ-02-4827. PACKAGE CODES CHANGED TO "T" FROM "GT.	01/17/03	ND
D	ECN #HQ-04-2694. COSMETICS CHANGES IN DRAWING. TITLE CHANGED.	02/26/04	RDEL
E	ECN #HQ-04-3852. NEW PKG. CODES ADDED TO EXPOSED PAD VARIATIONS TABLE. DOWN BONDS COLUMN ADDED TO THIS TABLE.	03/26/04	JD
F	ECN # HQ-05-8494. UPDATED PKG. CODES BASED ON CURRENT STATUS	09/01/05	RDEL
G	ECN # HQ-06-0656. 8L DATA ADDED.	01/20/06	PP
H	ECN # HQ-06-5354. CHANGE DWG TITLE, REMOVE DOWNBOND FROM TABLE.	09/28/06	RDEL
I	ECN # HQ-07-B436. EXPOSED PAD VARIATIONS TABLE UPDATED.	03/15/07	GP
J	ECN # HQ-10-1649. DALLAS LOGO REMOVED FROM TITLE BLOCK.	08/18/10	GP
K	ECN # HQ-11-0598. ADDED ENTRY FOR T1633-1. CANCELED	03/27/11	MM
L	ECN #HQ-12-0868. ADD NEW PACAKGE CODE: T1633MK-5.	04/24/12	AG
M	ECN # HQ-13-0652. New pkg. code added for Copper Wire option	03/20/13	AG
N	ECN#: HQ-13-2244. Add new package code for copper wire bonding.	09/30/13	Ag
O	ECN HQ-14-0487 The revision is made to correct the dimension L values of T1233-4 and T1633-5/5C	02/20/14	AG

Maxim Integrated		TITLE: PACKAGE OUTLINE, 8, 12 & 16L, THIN QFN, 3X3X0.75 MM	
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