

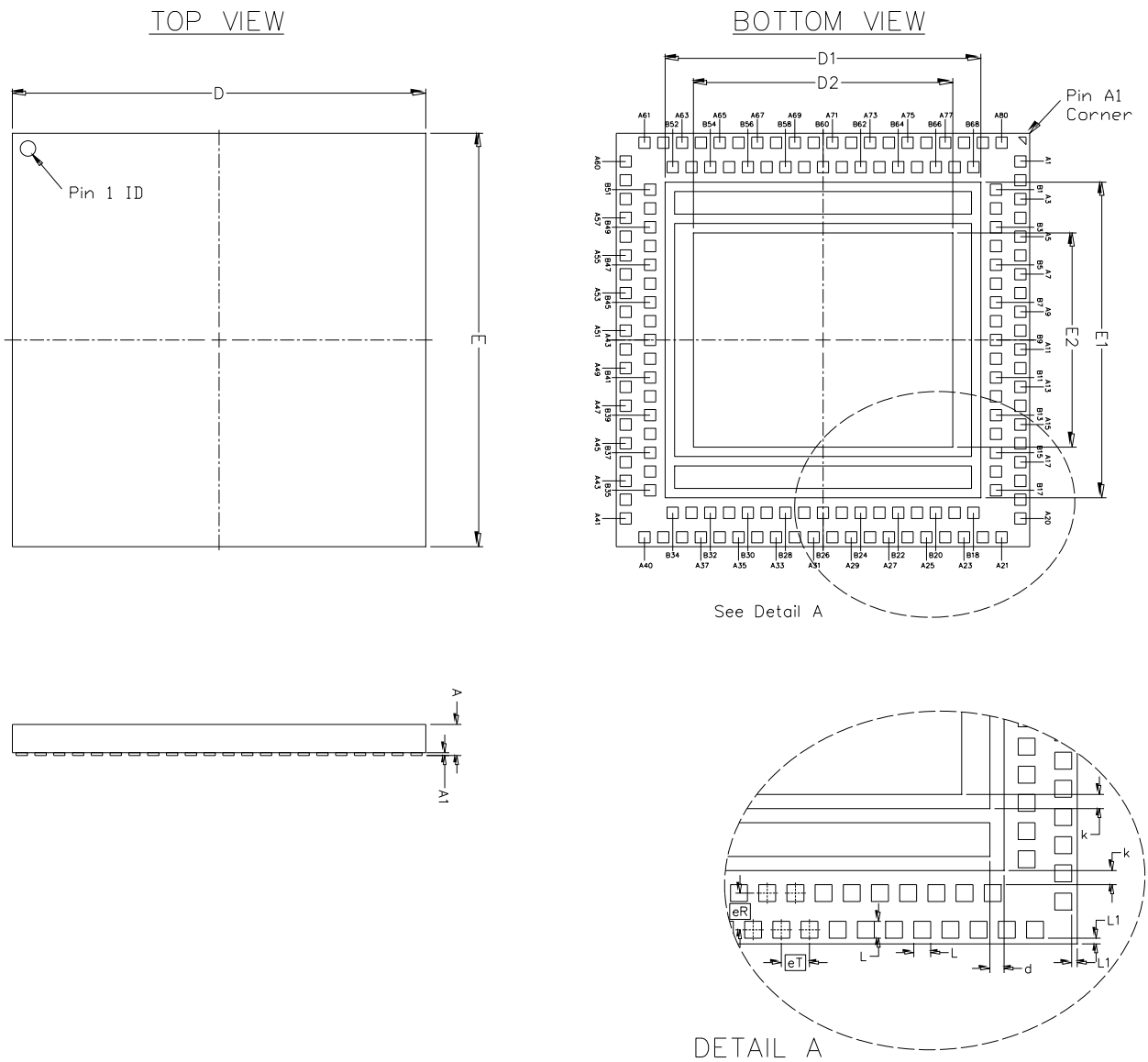
148-Pin Quad Flat No-Lead Package (QFN) - Wire Bond - A:0.80

- All dimensions and tolerances conform to ASME Y14.5M – 1994.
- Controlling dimension is in millimeters.
- Pin 1 may be indicated by an ID dot, or a special feature, in its proximity on package surface.

Note: The QFN is designed for use in thin PCB applications only (0.8 mm or 32 mils). It should not be used with PCBs above 0.8 mm or 32 mils thick due to differences in coefficients of thermal expansion between the PCB and the package.

Package Information	
Description	Specification
Ordering Code Reference	N
Package Acronym	QFN
Leadframe Material	Tape
Lead Finish (plating)	Pb-free: NiAu
JEDEC Outline Reference	MO-247 Variation: BWQQB
Lead Coplanarity	0.003 inches (0.08mm)
Weight	0.22 g (Typ.)
Moisture Sensitivity Level	Printed on moisture barrier bag

Package Outline Dimension Table			
Symbol	Millimeters		
	Min.	Nom.	Max.
A	0.70	0.75	0.80
A1	0.00	0.01	0.05
D	11.00 BSC		
D1	8.35	8.40	8.45
D2	6.85	6.90	6.95
E	11.00 BSC		
E1	8.35	8.40	8.45
E2	5.65	5.70	5.75
L	0.25	0.30	0.35
L1	0.05	0.10	0.15
k	0.20	-	-
d	0.20	0.25	0.30
eT	0.50 BSC		
eR	0.65 BSC		

Package Outline

Document Revision History

Table 1 shows the revision history for this document.

Table 1. Document Revision History

Date	Version	Changes
June 2011	1.0	Initial release
May 2012	2.0	Include Dimension "k" and "d" in the dimension table. Updates the Package Outline Drawing in Page 2.
June 2013	3.0	Update dimension "d" in Package Outline Drawing at page 2.
July 2013	4.0	Update the Note at first page.



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