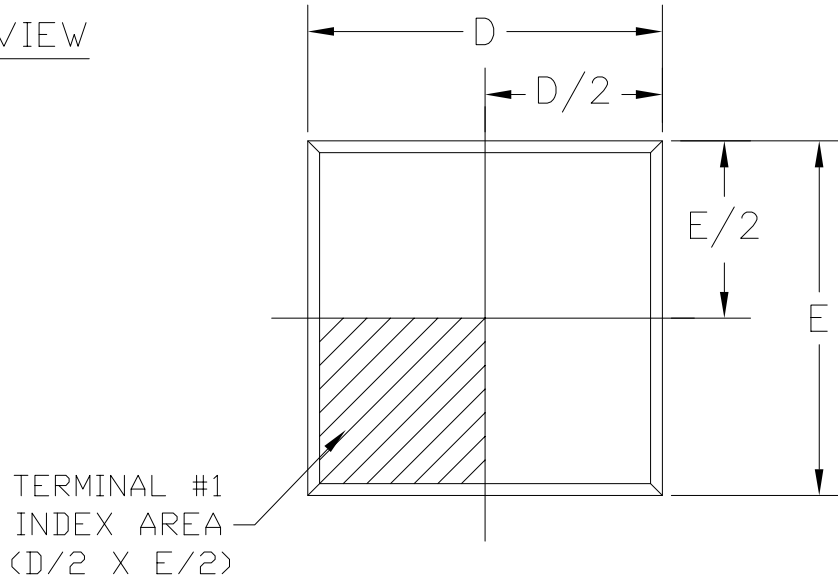
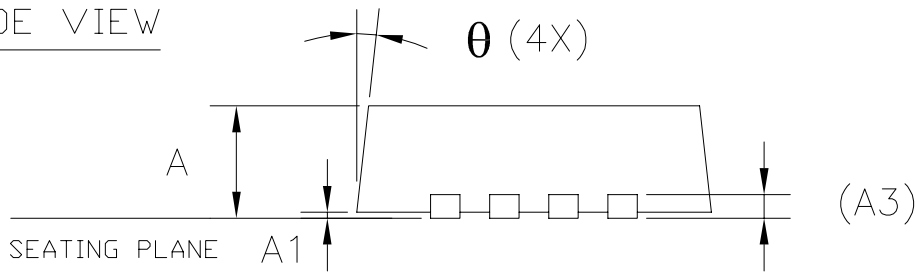


REVISION HISTORY			
REV.	DISCRIPTION	DATE	APP'D
A	DRAWING ORIGINATION - ECN# 1342-03.	10/17/13	AD
B	UPDATE FORMAT TO COMBINE ALL QFN PACKAGE OUTLINE DRAWINGS INTO POD-00000003.	10/29/13	AD
C	ADD 12LD 3X3 QFN PACKAGE OUTLINE. ADD 40LD 6X6 (OPTION 3) QFN PACKAGE OUTLINE. ADD 48LD 7X7 (OPTION 2) QFN PACKAGE OUTLINE. ADD 44LD 7X7 TQFN PACKAGE OUTLINE.	06/19/14	PC

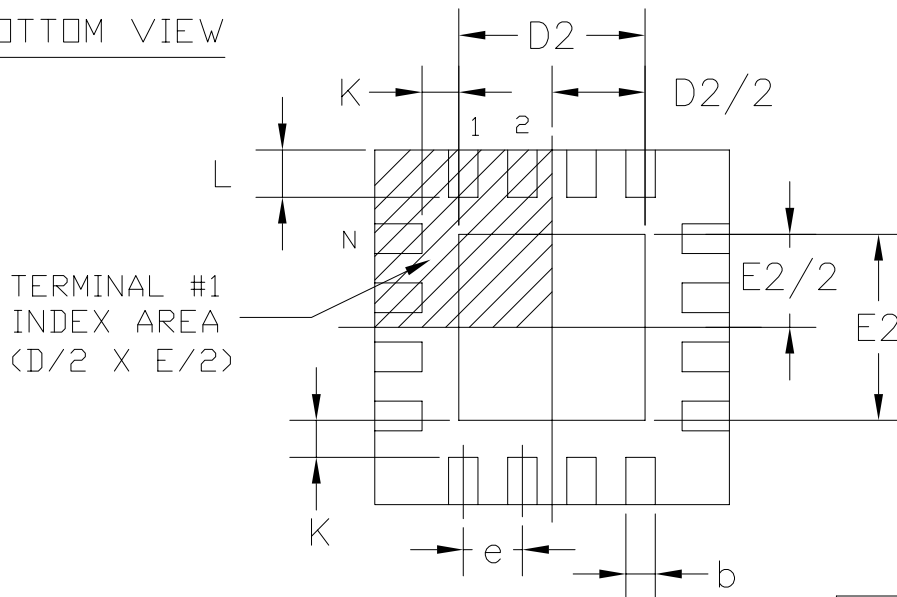
TOP VIEW



SIDE VIEW



BOTTOM VIEW



REVISION HISTORY			
REV.	DESCRIPTION	DATE	APP'D
A	DRAWING ORIGINATION - ECN# 1342-03.	10/17/13	AD
B	UPDATE FORMAT TO COMBINE ALL QFN PACKAGE OUTLINE DRAWINGS INTO POD-00000003.	10/29/13	AD
C	ADD 12LD 3X3 QFN PACKAGE OUTLINE. ADD 40LD 6X6 (OPTION 3) QFN PACKAGE OUTLINE. ADD 48LD 7X7 (OPTION 2) QFN PACKAGE OUTLINE. ADD 44LD 7X7 TQFN PACKAGE OUTLINE.	06/19/14	PC

12LD 3x3 QFN JEDEC MO-220 Variation VEED-5.1						
SYMBOLS	DIMENSIONS IN MM (Control Unit)			DIMENSIONS IN INCH (Reference Unit)		
	MIN	NOM	MAX	MIN	NOM	MAX
A	0.80	0.90	1.00	0.032	0.035	0.039
A1	0.00	0.02	0.05	0.000	0.001	0.002
A3	0.20 REF			0.008 REF		
b	0.18	0.25	0.30	0.007	0.010	0.012
D	3.00 BSC			0.118 BSC		
D2	1.30	1.45	1.55	0.051	0.057	0.061
E	3.00 BSC			0.118 BSC		
E2	1.30	1.45	1.55	0.051	0.057	0.061
e	0.50 BSC			0.020 BSC		
L	0.30	0.40	0.50	0.012	0.016	0.020
K	0.20	—	—	0.008	—	—
Ø	0"	—	14"	0"	—	14"
N	12			12		
ND	3			3		
NE	3			3		

16LD 3x3 QFN (OPTION 4) JEDEC MO-220 Variation VEED						
SYMBOLS	DIMENSIONS IN MM (Control Unit)			DIMENSIONS IN INCH (Reference Unit)		
	MIN	NOM	MAX	MIN	NOM	MAX
A	—	—	1.00	—	—	0.039
A1	0.00	0.02	0.05	0.000	0.001	0.002
A3	0.20 REF			0.008 REF		
b	0.18	0.25	0.30	0.007	0.010	0.012
D	3.00 BSC			0.118 BSC		
D2	1.60	1.70	1.80	0.063	0.067	0.071
E	3.00 BSC			0.118 BSC		
E2	1.60	1.70	1.80	0.063	0.067	0.071
e	0.50 BSC			0.020 BSC		
L	0.30	0.40	0.50	0.012	0.016	0.020
K	0.20	—	—	0.008	—	—
Ø	0"	—	14"	0"	—	14"
N	16			16		
ND	4			4		
NE	4			4		

24LD 4x4 QFN (OPTION 2) JEDEC MO-220 Variation VGGD-8						
SYMBOLS	DIMENSIONS IN MM (Control Unit)			DIMENSIONS IN INCH (Reference Unit)		
	MIN	NOM	MAX	MIN	NOM	MAX
A	—	—	1.00	—	—	0.039
A1	0.00	0.02	0.05	0.000	0.001	0.002
A3	0.20 REF			0.008 REF		
b	0.18	0.25	0.30	0.007	0.010	0.012
D	4.00 BSC			0.157 BSC		
D2	2.20	2.45	2.60	0.087	0.096	0.102
E	4.00 BSC			0.157 BSC		
E2	2.20	2.45	2.60	0.087	0.096	0.102
e	0.50 BSC			0.020 BSC		
L	0.30	0.40	0.50	0.012	0.016	0.020
K	0.20	—	—	0.008	—	—
Ø	0"	—	14"	0"	—	14"
N	24			24		
ND	6			6		
NE	6			6		

16LD 3x3 QFN (OPTION 1) JEDEC MO-220 Variation VEED-4						
SYMBOLS	DIMENSIONS IN MM (Control Unit)			DIMENSIONS IN INCH (Reference Unit)		
	MIN	NOM	MAX	MIN	NOM	MAX
A	0.80	0.90	1.00	0.032	0.036	0.039
A1	0.00	0.02	0.05	0.000	0.001	0.002
A3	0.20 REF			0.008 REF		
b	0.18	0.25	0.30	0.007	0.010	0.012
D	3.00 BSC			0.118 BSC		
D2	1.50	1.65	1.80	0.060	0.065	0.071
E	3.00 BSC			0.118 BSC		
E2	1.50	1.65	1.80	0.060	0.065	0.071
e	0.50 BSC			0.020 BSC		
L	0.35	0.40	0.45	0.014	0.016	0.018
K	0.20	—	—	0.008	—	—
Ø	0"	—	14"	0"	—	14"
N	16			16		
ND	4			4		
NE	4			4		

16LD 4x4 QFN JEDEC MO-220 Variation VGGC-4						
SYMBOLS	DIMENSIONS IN MM (Control Unit)			DIMENSIONS IN INCH (Reference Unit)		
	MIN	NOM	MAX	MIN	NOM	MAX
A	0.80	0.90	1.00	0.032	0.036	0.039
A1	0.00	0.02	0.05	0.000	0.001	0.002
A3	0.20 REF			0.008 REF		
b	0.25	0.30	0.35	0.010	0.012	0.014
D	4.00 BSC			0.157 BSC		
D2	2.20	2.40	2.60	0.087	0.094	0.102
E	4.00 BSC			0.157 BSC		
E2	2.20	2.40	2.60	0.087	0.094	0.102
e	0.65 BSC			0.026 BSC		
L	0.45	0.55	0.65	0.018	0.022	0.026
K	0.20	—	—	0.008	—	—
Ø	0"	—	14"	0"	—	14"
N	16			16		
ND	4			4		
NE	4			4		

28LD 5x5 QFN (OPTION 1) JEDEC MO-220 Variation VHHD-3						
SYMBOLS	DIMENSIONS IN MM (Control Unit)			DIMENSIONS IN INCH (Reference Unit)		
	MIN	NOM	MAX	MIN	NOM	MAX
A	0.80	0.90	1.00	0.032	0.035	0.039
A1	0.00	0.02	0.05	0.000	0.001	0.002
A3	0.20 REF			0.008 REF		
b	0.18	0.25	0.30	0.007	0.010	0.012
D	5.00 BSC			0.197 BSC		
D2	3.50	3.65	3.80	0.138	0.144	0.150
E	5.00 BSC			0.197 BSC		
E2	3.50	3.65	3.80	0.138	0.144	0.150
e	0.50 BSC			0.020 BSC		
L	0.35	0.40	0.45	0.014	0.016	0.018
K	0.20	—	—	0.008	—	—
Ø	0"	—	14"	0"	—	14"
N	28			28		
ND	7			7		
NE	7			7		

16LD 3x3 QFN (OPTION 2) JEDEC MO-220 Variation VEED						
SYMBOLS	DIMENSIONS IN MM (Control Unit)			DIMENSIONS IN INCH (Reference Unit)		
	MIN	NOM	MAX	MIN	NOM	MAX
A	0.80	0.90	1.00	0.032	0.036	0.039
A1	0.00	0.02	0.05	0.000	0.001	0.002
A3	0.20 REF			0.008 REF		
b	0.20	0.25	0.30	0.008	0.010	0.012
D	3.00 BSC			0.118 BSC		
D2	1.60	1.70	1.80	0.063	0.067	0.071
E	3.00 BSC			0.118 BSC		
E2	1.60	1.70	1.80	0.063	0.067	0.071
e	0.50 BSC			0.020 BSC		
L	0.25	0.30	0.35	0.010	0.012	0.014
K	0.20	—	—	0.008	—	—
Ø	0"	—	14"	0"	—	14"
N	16			16		
ND	4			4		
NE	4			4		

20LD 4x4 QFN JEDEC MO-220 Variation VGGD-5						
SYMBOLS	DIMENSIONS IN MM (Control Unit)			DIMENSIONS IN INCH (Reference Unit)		
	MIN	NOM	MAX	MIN	NOM	MAX
A	0.80	0.90	1.00	0.032	0.035	0.039
A1	0.00	0.02	0.05	0.000	0.001	0.002
A3	0.20 REF			0.008 REF		
b	0.18	0.25	0.30	0.007	0.010	0.012
D	4.00 BSC			0.157 BSC		
D2	2.50	2.65	2.80	0.098	0.104	0.110
E	4.00 BSC			0.157 BSC		
E2	2.50	2.65	2.80	0.098	0.104	0.110
e	0.50 BSC			0.020 BSC		
L	0.35	0.40	0.45	0.014	0.016	0.018
K	0.20	—	—	0.008	—	—
Ø	0"	—	14"	0"	—	14"
N	20			20		
ND	5			5		
NE	5			5		

28LD 5x5 QFN (OPTION 2) JEDEC MO-220 Variation VHHD-3						
SYMBOLS	(Control Unit)			DIMENSIONS IN INCH (Reference Unit)		
	MIN	NOM	MAX	MIN	NOM	MAX
A	0.80	0.90	1.00	0.032	0.035	0.039
A1	0.00	0.02	0.05	0.000	0.001	0.002
A3	0.20 REF			0.008 REF		
b	0.18	0.25	0.30	0.007	0.010	0.012
D	5.00 BSC			0.197 BSC		
D2	3.15	3.25	3.35	0.124	0.128	0.132
E	5.00 BSC			0.197 BSC		
E2	3.15	3.25	3.35	0.124	0.128	0.132
e	0.50 BSC			0.020 BSC		
L	0.45	0.55	0.65	0.018	0.022	0.026
K	0.20	—	—	0.008	—	—
Ø	0"	—	14"	0"	—	14"
N	28			28		
ND	7			7		
NE	7			7		

16LD 3x3 QFN (OPTION 3) JEDEC MO-220 Variation VEED						
SYMBOLS	DIMENSIONS IN MM (Control Unit)			DIMENSIONS IN INCH (Reference Unit)		
	MIN	NOM	MAX	MIN	NOM	MAX
A	0.80	0.90	1.00	0.032	0.036	0.039
A1	0.00	0.02	0.05	0.000	0.001	0.002
A3	0.20 REF			0.008 REF		
b	0.20	0.25	0.30	0.008	0.010	0.012
D	3.00 BSC			0.118 BSC		
D2	1.60	1.70	1.80	0.063	0.067	0.071
E	3.00 BSC			0.118 BSC		
E2	1.60	1.70	1.80	0.063	0.067	0.071
e	0.50 BSC			0.020 BSC		
L	0.33	0.38	0.43	0.013	0.015	0.017
K	0.20	—	—	0.008	—	—
Ø	0"	—	14"	0"	—	14"
N	16			16		
ND	4			4		
NE	4			4		

24LD 4x4 QFN (OPTION 1) JEDEC MO-220 Variation VGGD-6						
SYMBOLS	DIMENSIONS IN MM (Control Unit)			DIMENSIONS IN INCH (Reference Unit)		
	MIN	NOM	MAX	MIN	NOM	MAX
A	0.80	0.90	1.00	0.032	0.036	0.039
A1	0.00	0.02	0.05	0.000	0.001	0.002
A3	0.20 REF			0.008 REF		
b	0.18	0.25	0.30	0.007	0.010	0.012
D	4.00 BSC			0.157 BSC		
D2	2.50	2.65	2.80	0.098	0.104	0.110
E	4.00 BSC			0.157 BSC		
E2	2.50	2.65	2.80	0.098	0.104	0.110
e	0.50 BSC			0.020 BSC		
L	0.35	0.40	0.45	0.014	0.016	0.018
K	0.20	—	—	0.008	—	—
Ø	0"	—	14"	0"	—	14"
N	24			24		
ND	6			6		
NE	6			6		

32LD 5x5 QFN (OPTION 1) JEDEC MO-220 Variation VHHD						
SYMBOLS	DIMENSIONS IN MM (Control Unit)			DIMENSIONS IN INCH (Reference Unit)		
	MIN	NOM	MAX	MIN	NOM	MAX
A	0.80	0.90	1.00	0.032	0.036	0.039
A1	0.00	0.02	0.05	0.000	0.001	0.002
A3	0.20 REF			0.008 REF		
b	0.18	0.25	0.30	0.007	0.010	0.012
D	5.00 BSC</					

REVISION HISTORY			
REV.	DISCRIPTION	DATE	APP'D
A	DRAWING ORIENTATION - ECU# 1342-03.	10/17/13	AD
B	UPDATE FORMAT TO COMBINE ALL QFN PACKAGE OUTLINE DRAWINGS INTO POD-00000003.	10/29/13	AD
C	ADD 12LD 3X3 QFN PACKAGE OUTLINE. ADD 40LD 6X6 (OPTION 3) QFN PACKAGE OUTLINE. ADD 48LD 7X7 (OPTION 2) QFN PACKAGE OUTLINE. ADD 44LD 7X7 TQFN PACKAGE OUTLINE.	06/19/14	PC

32LD 5x5 QFN (OPTION 2) JEDEC MO-220 Variation VHHD						
SYMBOLS	DIMENSIONS IN MM (Control Unit)			DIMENSIONS IN INCH (Reference Unit)		
	MIN	NOM	MAX	MIN	NOM	MAX
A	0.80	0.90	1.00	0.032	0.036	0.039
A1	0.00	0.02	0.05	0.000	0.001	0.002
A3	0.20 REF			0.008 REF		
b	0.18	0.25	0.30	0.007	0.010	0.012
D	5.00 BSC			0.197 BSC		
D2	3.75	3.80	3.85	0.148	0.150	0.152
E	5.00 BSC			0.197 BSC		
E2	3.75	3.80	3.85	0.148	0.150	0.152
e	0.50 BSC			0.020 BSC		
L	0.35	0.40	0.45	0.014	0.016	0.018
K	0.20	—	—	0.008	—	—
θ	0°	—	14°	0°	—	14°
N	32			32		
ND	8			8		
NE	8			8		

40LD 6x6 QFN (OPTION 3) JEDEC MO-220 Variation VJJD-5						
SYMBOLS	DIMENSIONS IN MM (Control Unit)			DIMENSIONS IN INCH (Reference Unit)		
	MIN	NOM	MAX	MIN	NOM	MAX
A	0.80	0.90	1.00	0.032	0.035	0.039
A1	0.00	0.02	0.05	0.000	0.001	0.002
A3	0.20 REF			0.008 REF		
b	0.20	0.25	0.30	0.008	0.010	0.012
D	6.00 BSC			0.236 BSC		
D2	4.80	4.90	5.00	0.189	0.193	0.197
E	6.00 BSC			0.236 BSC		
E2	4.80	4.90	5.00	0.189	0.193	0.197
e	0.50 BSC			0.020 BSC		
L	0.30	0.40	0.50	0.012	0.016	0.020
K	0.20	—	—	0.008	—	—
θ	0°	—	14°	0°	—	14°
N	40			40		
ND	10			10		
NE	10			10		

56LD 8x8 QFN (OPTION 1) JEDEC MO-220 Variation VLLD						
SYMBOLS	DIMENSIONS IN MM (Control Unit)			DIMENSIONS IN INCH (Reference Unit)		
	MIN	NOM	MAX	MIN	NOM	MAX
A	0.80	0.90	1.00	0.032	0.035	0.039
A1	0.00	0.02	0.05	0.000	0.001	0.002
A3	0.20 REF			0.008 REF		
b	0.18	0.25	0.30	0.007	0.010	0.012
D	8.00 BSC			0.315 BSC		
D2	6.00	6.15	6.25	0.236	0.242	0.246
E	8.00 BSC			0.315 BSC		
E2	6.00	6.15	6.25	0.236	0.242	0.246
e	0.50 BSC			0.020 BSC		
L	0.30	0.40	0.50	0.012	0.016	0.020
K	0.20	—	—	0.008	—	—
θ	0°	—	14°	0°	—	14°
N	56			56		
ND	14			14		
NE	14			14		

32LD 5x5 QFN (OPTION 3) JEDEC MO-220 Variation VHHD-4						
SYMBOLS	DIMENSIONS IN MM (Control Unit)			DIMENSIONS IN INCH (Reference Unit)		
	MIN	NOM	MAX	MIN	NOM	MAX
A	0.80	0.90	1.00	0.032	0.035	0.039
A1	0.00	0.02	0.05	0.000	0.001	0.002
A3	0.20 REF			0.008 REF		
b	0.18	0.25	0.30	0.007	0.010	0.012
D	5.00 BSC			0.197 BSC		
D2	3.50	3.65	3.80	0.138	0.144	0.150
E	5.00 BSC			0.197 BSC		
E2	3.50	3.65	3.80	0.138	0.144	0.150
e	0.50 BSC			0.020 BSC		
L	0.35	0.40	0.45	0.014	0.016	0.018
K	0.20	—	—	0.008	—	—
θ	0°	—	14°	0°	—	14°
N	32			32		
ND	8			8		
NE	8			8		

44LD 7x7 TQFN JEDEC MO-220 Variation WKKD						
SYMBOLS	DIMENSIONS IN MM (Control Unit)			DIMENSIONS IN INCH (Reference Unit)		
	MIN	NOM	MAX	MIN	NOM	MAX
A	0.70	0.75	0.80	0.028	0.030	0.032
A1	0.00	0.02	0.05	0.000	0.001	0.002
A3	0.20 REF			0.008 REF		
b	0.18	0.25	0.30	0.007	0.010	0.012
D	7.00 BSC			0.276 BSC		
D2	5.00	5.10	5.20	0.197	0.201	0.205
E	7.00 BSC			0.276 BSC		
E2	5.00	5.10	5.20	0.197	0.201	0.205
e	0.50 BSC			0.020 BSC		
L	0.50	0.55	0.60	0.020	0.022	0.024
K	0.20	—	—	0.008	—	—
θ	0°	—	14°	0°	—	14°
N	44			44		
ND	11			11		
NE	11			11		

56LD 8x8 QFN (OPTION 2) JEDEC MO-220 Variation VLLD						
SYMBOLS	DIMENSIONS IN MM (Control Unit)			DIMENSIONS IN INCH (Reference Unit)		
	MIN	NOM	MAX	MIN	NOM	MAX
A	0.80	0.90	1.00	0.032	0.035	0.039
A1	0.00	0.02	0.05	0.000	0.001	0.002
A3	0.20 REF			0.008 REF		
b	0.18	0.25	0.30	0.007	0.010	0.012
D	8.00 BSC			0.315 BSC		
D2	6.30	6.40	6.50	0.248	0.252	0.256
E	8.00 BSC			0.315 BSC		
E2	6.30	6.40	6.50	0.248	0.252	0.256
e	0.50 BSC			0.020 BSC		
L	0.30	0.40	0.50	0.012	0.016	0.020
K	0.20	—	—	0.008	—	—
θ	0°	—	14°	0°	—	14°
N	56			56		
ND	14			14		
NE	14			14		


40LD 6x6 QFN (OPTION 1) JEDEC MO-220 Variation VJJD-5						
SYMBOLS	DIMENSIONS IN MM (Control Unit)			DIMENSIONS IN INCH (Reference Unit)		
	MIN	NOM	MAX	MIN	NOM	MAX
A	0.80	0.90	1.00	0.032	0.035	0.039
A1	0.00	0.02	0.05	0.000	0.001	0.002
A3	0.20 REF			0.008 REF		
b	0.18	0.25	0.30	0.007	0.010	0.012
D	6.00 BSC			0.236 BSC		
D2	4.50	4.65	4.80	0.177	0.183	0.189
E	6.00 BSC			0.236 BSC		
E2	4.50	4.65	4.80	0.177	0.183	0.189
e	0.50 BSC			0.020 BSC		
L	0.35	0.40	0.45	0.014	0.016	0.018
K	0.20	—	—	0.008	—	—
θ	0°	—	14°	0°	—	14°
N	40			40		
ND	10			10		
NE	10			10		

48LD 7x7 QFN (OPTION 1) JEDEC MO-220 Variation VKKD-4						
SYMBOLS	DIMENSIONS IN MM (Control Unit)			DIMENSIONS IN INCH (Reference Unit)		
	MIN	NOM	MAX	MIN	NOM	MAX
A	0.80	0.90	1.00	0.032	0.035	0.039
A1	0.00	0.02	0.05	0.000	0.001	0.002
A3	0.20 REF			0.008 REF		
b	0.18	0.25	0.30	0.007	0.010	0.012
D	7.00 BSC			0.276 BSC		
D2	5.50	5.65	5.80	0.217	0.222	0.228
E	7.00 BSC			0.276 BSC		
E2	5.50	5.65	5.80	0.217	0.222	0.228
e	0.50 BSC			0.020 BSC		
L	0.35	0.40	0.45	0.014	0.016	0.018
K	0.20	—	—	0.008	—	—
θ	0°	—	14°	0°	—	14°
N	48			48		
ND	12			12		
NE	12			12		

64LD 9x9 QFN JEDEC MO-220 Variation VMMD						
SYMBOLS	DIMENSIONS IN MM (Control Unit)			DIMENSIONS IN INCH (Reference Unit)		
	MIN	NOM	MAX	MIN	NOM	MAX
A	0.80	0.90	1.00	0.032	0.035	0.039
A1	0.00	0.02	0.05	0.000	0.001	0.002
A3	0.20 REF			0.008 REF		
b	0.18	0.25	0.30	0.007	0.010	0.012
D	9.00 BSC			0.354 BSC		
D2	7.50	7.65	7.80	0.295	0.301	0.307
E	9.00 BSC			0.354 BSC		
E2	7.50	7.65	7.80	0.295	0.301	0.307
e	0.50 BSC			0.020 BSC		
L	0.35	0.40	0.45	0.014	0.016	0.018
K	0.20	—	—	0.008	—	—
θ	0°	—	14°	0°	—	14°
N	64			64		
ND	16			16		
NE	16			16		

40LD 6x6 QFN (OPTION 2) JEDEC MO-220 Variation VJJD-5						
SYMBOLS	DIMENSIONS IN MM (Control Unit)			DIMENSIONS IN INCH (Reference Unit)		
	MIN	NOM	MAX	MIN	NOM	MAX
A	0.80	0.90	1.00	0.032	0.035	0.039
A1	0.00	0.02	0.05	0.000	0.001	0.002
A3	0.20 REF			0.008 REF		
b	0.20	0.25	0.30	0.008	0.010	0.012
D	6.00 BSC			0.236 BSC		
D2	4.30	4.40	4.50	0.167	0.173	0.179
E	6.00 BSC			0.236 BSC		
E2	4.30	4.40	4.50	0.167	0.173	0.179
e	0.50 BSC			0.020 BSC		
L	0.30	0.40	0.50	0.012	0.016	0.020
K	0.20	—	—	0.008	—	—
θ	0°	—	14°	0°	—	14°
N	40			40		
ND	10			10		
NE	10			10		

48LD 7x7 QFN (OPTION 2) JEDEC MO-220 Variation VKKD-4						
SYMBOLS	DIMENSIONS IN MM (Control Unit)			DIMENSIONS IN INCH (Reference Unit)		
	MIN	NOM	MAX	MIN	NOM	MAX
A	0.80	0.90	1.00	0.032	0.035	0.039
A1	0.00	0.02	0.05	0.000	0.001	0.002
A3	0.20 REF			0.008 REF		
b	0.18	0.25	0.30	0.007	0.010	0.012
D	7.00 BSC			0.276 BSC		
D2	5.10	5.20	5.30	0.201	0.205	0.209
E	7.00 BSC			0.276 BSC		
E2	5.10	5.20	5.30	0.201	0.205	0.209
e	0.50 BSC			0.020 BSC		
L	0.35	0.40	0.45	0.014	0.016	0.018
K	0.20	—	—	0.008	—	—
θ	0°	—	14°	0°	—	14°
N	48			48		
ND	12			12		
NE	12			12		

 <small>A New Direction in Mixed-Signal</small>	EXAR CORPORATION		
	QFN PACKAGE OUTLINE		
Packaging Approval:	Drawing No: POD-00000003		
By: PC	Date: 06/19/14	Revision: C	Sheet: 3 OF 3