Anadigm Inc
2036 N Gilbert Road, Ste 2-417
MESA, AZ, 85203, USA
Phone +1 480 422 0191
Fax: +1 480 659 3511

To : Anadigm Customers
From : Anadigm Inc
Date : 10th May, 2010

Subject: AnadigmVortex, 5volt FPAA package change notification
Products effected AN221E04, AN220E04, AN121E04 and AN120E04.

Dear Valued Customer,

For the Past 8 years Anadigm has encapsulated all 5 volt FPAA integrated circuits into a 44 pin MQFP package with dimensions 10x10x2mm.
During the past three years this package has become increasingly difficult to source to the point where Anadigm has been forced into making a change to the package

Effective immediately all 5 volt FPAA products will be supplied in 44 pin LQFP packages with dimensions 10x10x1.4mm.
Detailed mechanical drawings for the Old and new packages are attached to the letter for your comparison.

Anadigm sincerely believes that this change will have very low impact upon any FPAA user. The new package has the same footprint and pin position.

To clearly identify the change and package difference the device part No. and part markings have been change as follows.

MQFP device (to be obsoleted)	LQFP device (pin for pin replacement)
AN221E04-E2-QFPTY	AN221E04-E3-QFPTY
AN221E04-E2-QFPTR	AN221E04-E3-QFPTR
AN221E04-E2-QFPSP	AN221E04-E3-QFPSP
AN220E04-E2-QFPTY	AN220E04-E3-QFPTY
AN220E04-E2-QFPTR	AN220E04-E3-QFPTR
AN220E04-E2-QFPSP	AN220E04-E3-QFPSP
AN121E04-E2-QFPTY	AN121E04-E3-QFPTY
AN120E04-E2-QFPTY	AN120E04-E3-QFPTY

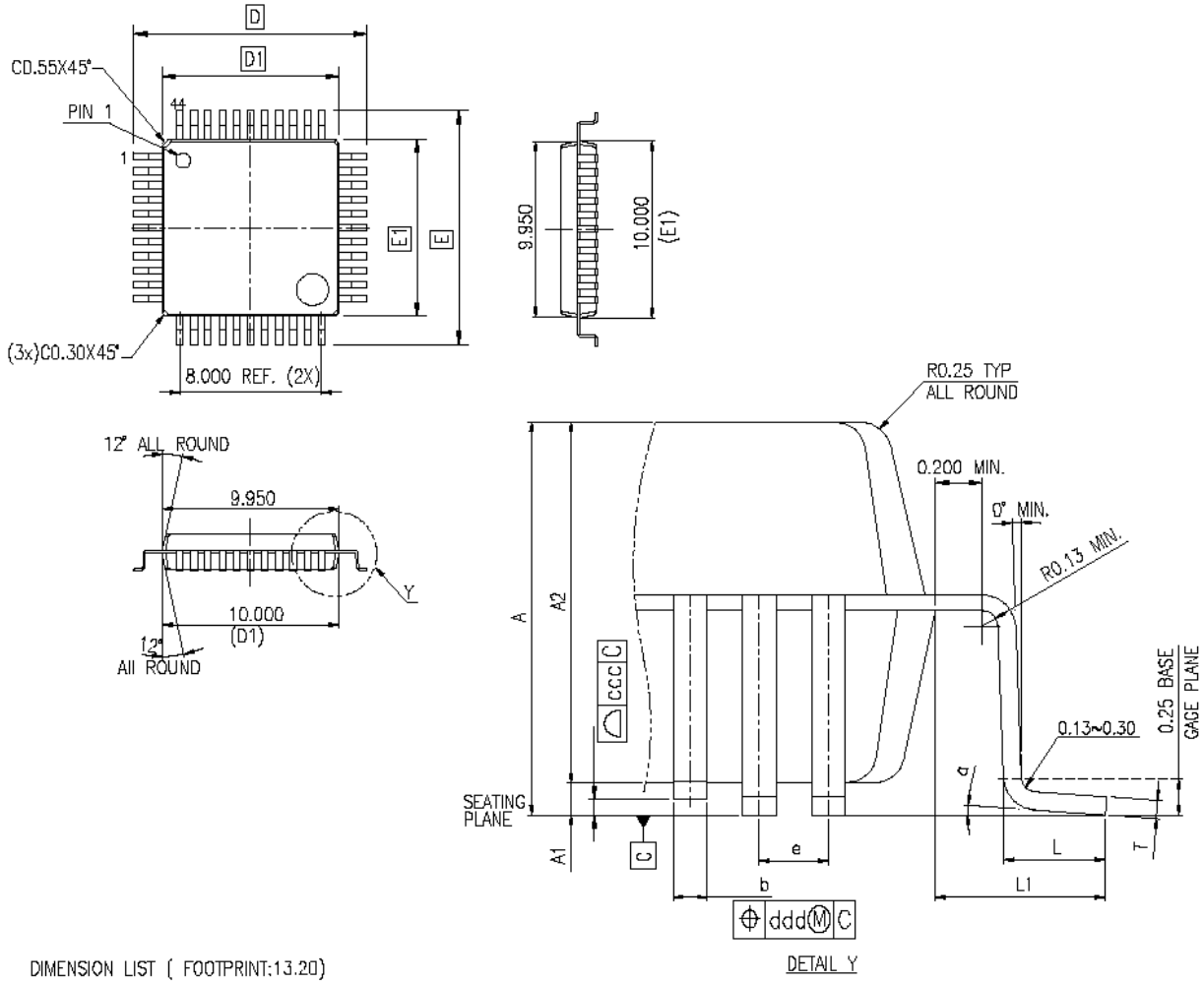
Simon Dickinson
C.O.O Anadigm Inc
simon.dickinson@anadigm.com

Attached: Package outline drawings

MECHANICAL AND HANDLING

The AN221E04 comes in the industry standard 44 lead MQFP package.
Dry pack handling is recommended. The package is qualified to MSL3 (JEDEC Standard, J-STD-020A, Level 3). Once the device is removed from dry pack, 30°C at 60% humidity for not longer than 168 hours is the maximum recommended exposure prior to solder reflow. If out of dry pack for longer than this recommended period of time, then the recommended bake out procedure prior to solder reflow is 24 hours at 125°C.

MQFP Package. Devices Manufactured 2002 to 2009. (See page 18 for new LQFP package devices manufacture from 2010).



DIMENSION LIST (FOOTPRINT:13.20)

S/N	SYM	DIMENSIONS	REMARKS
1	A	MAX. 2.450	OVERALL HEIGTH
2	A1	MAX. 0.500	STANDOFF
3	A2	2.000±0.200	PKG THICKNESS
4	D	13.200±0.250	LEAD TIP TO TIP
5	D1	10.000±0.100	PKG LENGTH
6	E	13.200±0.250	LEAD TIP TO TIP
7	E1	10.000±0.100	PKG WIDTH
8	L	0.880±0.150	FOOT LENGTH
9	L1	1.600 REF.	LEAD LENGTH
10	T	0.130~0.230	FRAME THICKNESS
11	a	0~7°	LEAD FLAT ANGLE
12	b	0.300~0.450	LEAD WIDTH
13	e	0.800 BASE	LEAD PITCH
14	ccc	0.100	FOOT PLANARITY
15	ddd	0.100	FOOT POSITION

NOTES :

S/N	DESCRIPTION		SPECIFICATION
1	GENERAL TOLERANCE.	DISTANCE	±0.100
		ANGLE	±2.5°
2	MATTE FINISH ON PACKAGE BODY SURFACE EXPECT EJECTION AND PIN 1 MARKING.		Ra1.5~2.5um
3	ALL MOLDED BODY SHARP CORNER RADII UNLESS OTHERWISE SPECIFIED.		MAX. R0.200
4	PACKAGE/LEADFRAME MISALIGNMENT (X, Y):		MAX. 0.127
5	TOP/BTM PACKAGE MISALIGNMENT (X, Y):		MAX. 0.127
6	DRAWING DOES NOT INCLUDE PLASTIC OR METAL PROTRUSION OR CUTTING BURR.		
7	COMPLIANT TO JEDEC STANDARD: MS-022		

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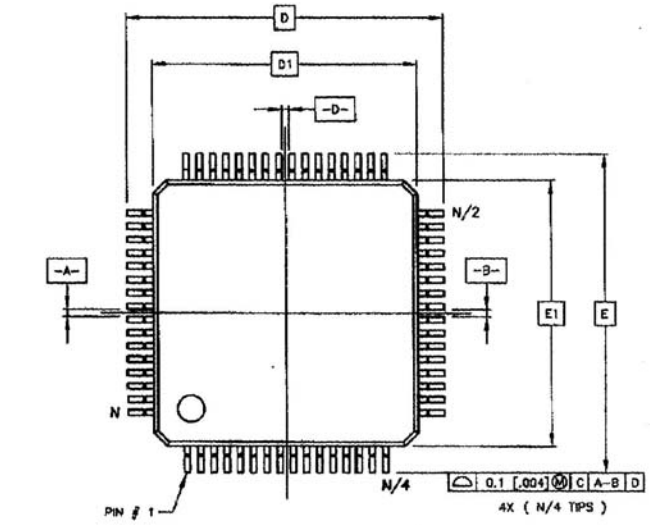
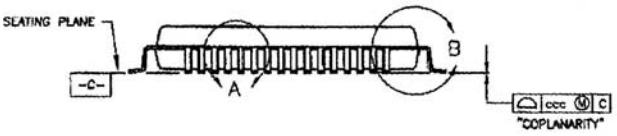
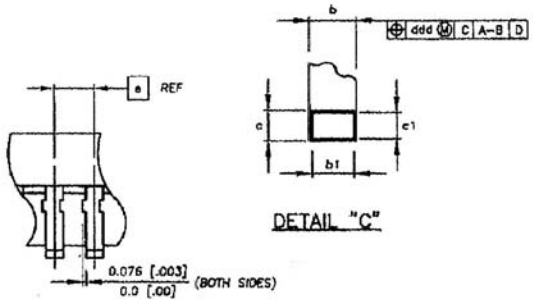
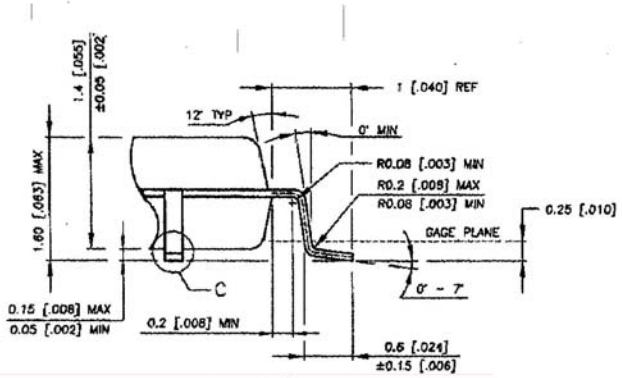
LQFP Package. devices manufacture from 2010 (See page 17 for older MQFP package Devices Manufactured 2002 to 2009.).









NOTES :

1. DIMENSIONS D1 AND E1 DO NOT INCLUDE MOLD PROTRUSION. ALLOWABLE PROTRUSION IS 0.25 [.010] PER SIDE. D1 AND E1 ARE MAXIMUM PLASTIC BODY SIZE DIMENSIONS INCLUDING MOLD MISMATCH.
2. THE TOP PACKAGE BODY SIZE MAY BE SMALLER THAN THE BOTTOM BODY SIZE BY AS MUCH AS 0.15 [.006].
3. DRAWING CONFORMS TO JEDEC MS-026 REV. D.
4. COTROLLING DIMENSION IN MM.

SYMBOL	10x10		
	MIN	NOM	MAX
D	11.8	12	12.2
	.464	.472	.480
D1	9.9	10	10.1
	.390	.394	.398
E	11.8	12	12.2
	.464	.472	.480
E1	9.9	10	10.1
	.390	.394	.398
b	0.3	0.37	0.45
	.012	.015	.018
b1	0.3	0.35	0.4
	.012	.014	.016
c	0.09		0.2
	.004		.008
c1	0.09		0.16
	.004		.006
e	0.8 / .031		
ccc	0.10 / .004		
ddd	0.20 / .008		
N	44		
N/2	22		
N/4	11		