



Packaging

Product Specification

PS007230-0812



Warning: DO NOT USE THESE PRODUCTS IN LIFE SUPPORT SYSTEMS.

LIFE SUPPORT POLICY

ZILOG'S PRODUCTS ARE NOT AUTHORIZED FOR USE AS CRITICAL COMPONENTS IN LIFE SUPPORT DEVICES OR SYSTEMS WITHOUT THE EXPRESS PRIOR WRITTEN APPROVAL OF THE PRESIDENT AND GENERAL COUNSEL OF ZILOG CORPORATION.

As used herein

Life support devices or systems are devices which (a) are intended for surgical implant into the body, or (b) support or sustain life and whose failure to perform when properly used in accordance with instructions for use provided in the labeling can be reasonably expected to result in a significant injury to the user. A critical component is any component in a life support device or system whose failure to perform can be reasonably expected to cause the failure of the life support device or system or to affect its safety or effectiveness.

Document Disclaimer

©2010 by Zilog, Inc. All rights reserved. Information in this publication concerning the devices, applications, or technology described is intended to suggest possible uses and may be superseded. ZILOG, INC. DOES NOT ASSUME LIABILITY FOR OR PROVIDE A REPRESENTATION OF ACCURACY OF THE INFORMATION, DEVICES, OR TECHNOLOGY DESCRIBED IN THIS DOCUMENT. ZILOG ALSO DOES NOT ASSUME LIABILITY FOR INTELLECTUAL PROPERTY INFRINGEMENT RELATED IN ANY MANNER TO USE OF INFORMATION, DEVICES, OR TECHNOLOGY DESCRIBED HEREIN OR OTHERWISE. The information contained within this document has been verified according to the general principles of electrical and mechanical engineering.

Z8, Z80, Z8 Encore!, Z8 Encore! XP, Z8 Encore! MC, eZ80, eZ80Acclaim!, eZ80Acclaim*Plus!*, and ZNEO are trademarks or registered trademarks of Zilog, Inc. All other product or service names are the property of their respective owners.

Table of Contents

Marketing Drawings	1
Marketing Outline, 8-Lead PDIP	2
Marketing Outline, 18-Lead PDIP	3
Marketing Outline, 20-Lead PDIP	4
Marketing Outline, 28-Lead PDIP	5
Marketing Outline, 40-Lead PDIP	6
Marketing Outline, 48-Lead PDIP	7
Marketing Outline, 64-Lead PDIP	8
Marketing Outline, 28-Lead Plastic Chip Carrier	9
Marketing Outline, 44-Lead Plastic Chip Carrier	10
Marketing Outline, 68-Lead Plastic Chip Carrier	11
Marketing Outline, 84-Lead Plastic Chip Carrier	12
Marketing Outline, 80-Lead Plastic Quad Flatpack	13
Marketing Outline, 100-Lead Plastic Quad Flatpack	14
Marketing Outline, 144-Lead Quad Flatpack	15
Marketing Outline, 32-Lead LQFP	16
Marketing Outline, 44-Lead LQFP	17
Marketing Outline, 64-Lead LQFP	18
Marketing Outline, 64-Lead LQFP	19
Marketing Outline, 100-Lead LQFP	20
Marketing Outline, 144-Lead LQFP	21
Marketing Outline, 8-Lead SOIC	22
Marketing Outline, 18-Lead SOIC	23
Marketing Outline, 20-Lead SOIC	24
Marketing Outline, 28-Lead SOIC	25
Marketing Outline, 20-Lead SSOP	26
Marketing Outline, 28-Lead SSOP	27
Marketing Outline, 48-Lead SSOP	28
Marketing Outline, 144-Lead BGA	29
Marketing Outline, 8-Lead QFN	30
Marketing Outline, 20-Lead QFN	31
Marketing Outline, 28-Lead QFN	32
Marketing Outline, 32-Lead QFN	33
Marketing Outline, 44-Lead QFN	34
ZHX1810	35
ZHX1820	36
Packing Quantity	37
Package Migration	38
18/20-Lead PDIP Migration	38
28-Lead PDIP Migrations	39
40/44/48-Lead Migration	40
100/144-Lead Migration	41

Marketing Drawings

For the latest updates on the following package drawings, please contact Zilog Customer Service at zservice@zilog.com.

Plastics

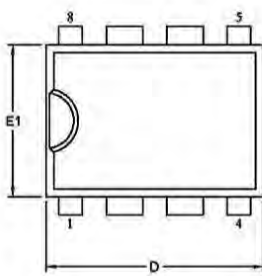
Lead Type	Part Number
Marketing Outline, 8-Lead Plastic DIP	MKT71C1177-00
Marketing Outline, 18-Lead Plastic DIP	MKT71C0002-00
Marketing Outline, 20-Lead Plastic DIP	MKT71C0719-00
Marketing Outline, 28-Lead Plastic DIP	MKT71C0004-00
Marketing Outline, 40-Lead Plastic DIP	MKT71C0005-00
Marketing Outline, 48-Lead Plastic DIP	MKT71C0006-00
Marketing Outline, 64-Lead Plastic DIP	MKT71C0009-00
Marketing Outline, 28-Lead Plastic Chip Carrier	MKT71C1172-00
Marketing Outline, 44-Lead Plastic Chip Carrier	MKT71C1001-00
Marketing Outline, 68-Lead Plastic Chip Carrier	MKT71C1000-00
Marketing Outline, 84-Lead Plastic Chip Carrier	MKT71C1003-00
Marketing Outline, 80-Lead Plastic Quad Flat Pack	MKT71C1151-00
Marketing Outline, 100-Lead Plastic Quad Flat Pack	MKT71C1153-00
Marketing Outline, 144-Lead Quad Flat Pack	MKT71C1163-00
Marketing Outline, 32-Lead LQFP (7 x 7 x 1.4 mm)	MKT71C1202-00
Marketing Outline, 44-Lead LQFP (10x10x1.4mm)	MKT71C1182-00
Marketing Outline, 64-Lead LQFP (10X10X1.4MM)	MKT71C1167-00
Marketing Outline, 64-Lead LQFP (14x14x1.4mm)	MKT71C1176-00
Marketing Outline, 100-Lead LQFP	MKT71C1159-00
Marketing Outline, 144-Lead LQFP	MKT71C1173-00
Marketing Outline, 8-Lead SOIC	MKT71C1178-00
Marketing Outline, 18-Lead SOIC	MKT71C1156-00
Marketing Outline, 20-Lead SOIC	MKT71C1164-00
Marketing Outline, 28-Lead SOIC	MKT71C1154-00
Marketing Outline, 20-Lead SSOP	MKT71C1168-00
Marketing Outline, 28-Lead SSOP	MKT71C1180-00
Marketing Outline, 48-Lead SSOP	MKT71C1190-00
Marketing Outline, 144-Lead BGA (13X13 MM, 1.0 MM Pitch LBGA))	MKT71C1193-00
Marketing Outline, 8-Lead QFN (5 x 6 x 0.9 mm)	MKT71C1203-00
Marketing Outline, 20-Lead QFN (5 x 5 x 0.9mm)	MKT71C1206-00
Marketing Outline, 28-Lead QFN (5 x 5 x 0.9mm)	MKT71C1204-00
Marketing Outline, 32-Lead QFN (5 x 5 x 0.9mm)	MKT71C1205-00
Marketing Outline, 44-Lead QFN (7 x 7 x 0.9mm)	MKT71C1198-00

IrDA

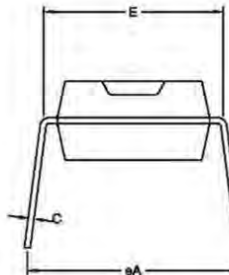
ZHX1810
ZHX1820

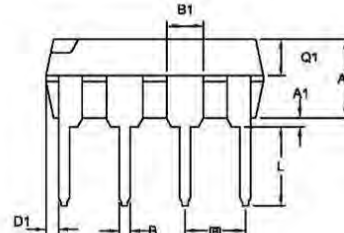
Marketing Outline, 8-Lead PDIP

REVISIONS				
CN#	LTR	DESCRIPTION	DATE	APPROVED
20935	C	To conform with Jedec and subcon's ref dim. Jedec's D1 dim is 0.005"	06-29-06	M. Fonte




SYMBOL	MILLIMETER		INCH	
	MIN	MAX	MIN	MAX
A1	0.38	0.81	0.015	0.032
A2	3.25	3.81	0.128	0.150
B	0.38	0.53	0.015	0.021
B1	1.40	1.65	0.055	0.065
C	0.20	0.30	0.008	0.012
D	9.02	9.78	0.355	0.385
E	7.62	8.26	0.300	0.325
E1	6.10	6.80	0.240	0.280
e	2.54 BSC		0.100 BSC	
eA	7.87	9.14	0.310	0.360
L	3.18	3.43	0.125	0.135
Q1	1.40	1.65	0.055	0.065
D1	0.46	-	0.018	-





CONTROLLING DIMENSIONS : MM.

SIGNATURE AND DATE			532 Race Street, San Jose, Calif., 95126-3432	
DRWN	M.N.GALICIA 6-6-06		MARKETING OUTLINE, 8 LEAD PDIP	
DRFTG	CUK			
APVD	E.L.GHUA CC			
		SIZE	DRAWING NO.	ISSUE
		A	MKT71C1177-00	D

UNCONTROLLED WHEN PRINTED UNLESS STAMPED 'CONTROLLED COPY' IN RED BY DOCUMENT CONTROL.

SCALE		SHEET 1 OF 1
-------	--	--------------

Marketing Outline, 18-Lead PDIP

REVISIONS		
ISSUE	DESCRIPTION	DATE
J	Use updated form with IXYS logo.	

SYMBOL	MILLIMETER		INCH	
	MIN	MAX	MIN	MAX
A1	0.51	0.81	.020	.032
A2	3.25	3.68	.128	.145
B	0.38	0.53	.015	.021
B1	1.14	1.65	.045	.065
C	0.23	0.38	.009	.015
D	22.35	23.37	.880	.920
E	7.62	8.13	.300	.320
E1	6.22	6.48	.245	.255
e	2.54 BSC		.100 BSC	
eA	7.87	9.40	.310	0.370
L	3.18	3.81	.125	.150
Q1	1.47	1.65	.058	.065
S	0.89	1.65	.035	.065

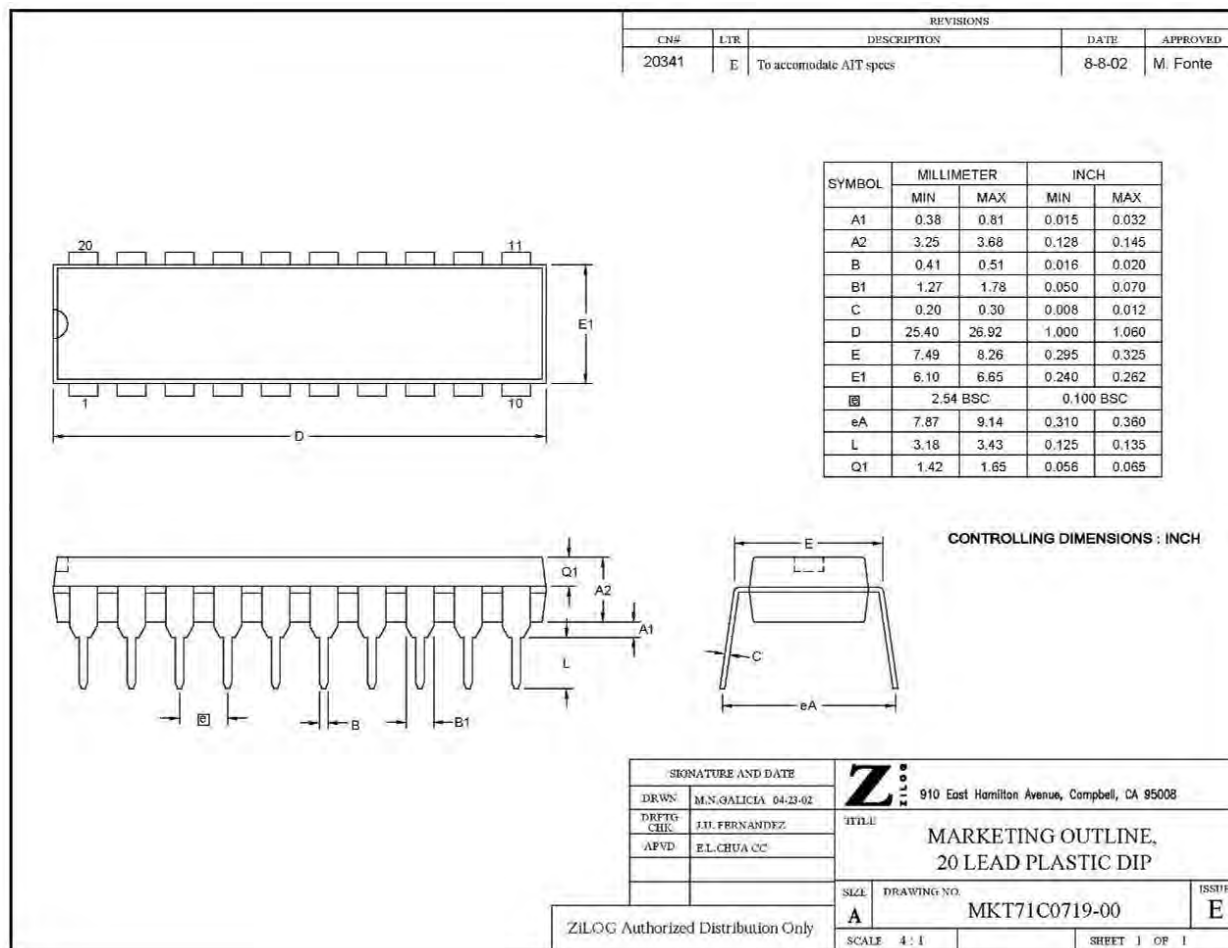
CONTROLLING DIMENSIONS: INCH

SIGNATURE AND DATE		zilog An IXYS Company	1590 Buckeye Drive Milpitas, CA 95035-7418
DRWN	M.N.Galicia 5-5-11		
DRFTG CHK		TITLE MARKETING OUTLINE, 18 LEAD PLASTIC DIP	
APVD	E.L.Chua		
SIZE		DRAWING NO.	ISSUE
A		MKT71C0002-00	J

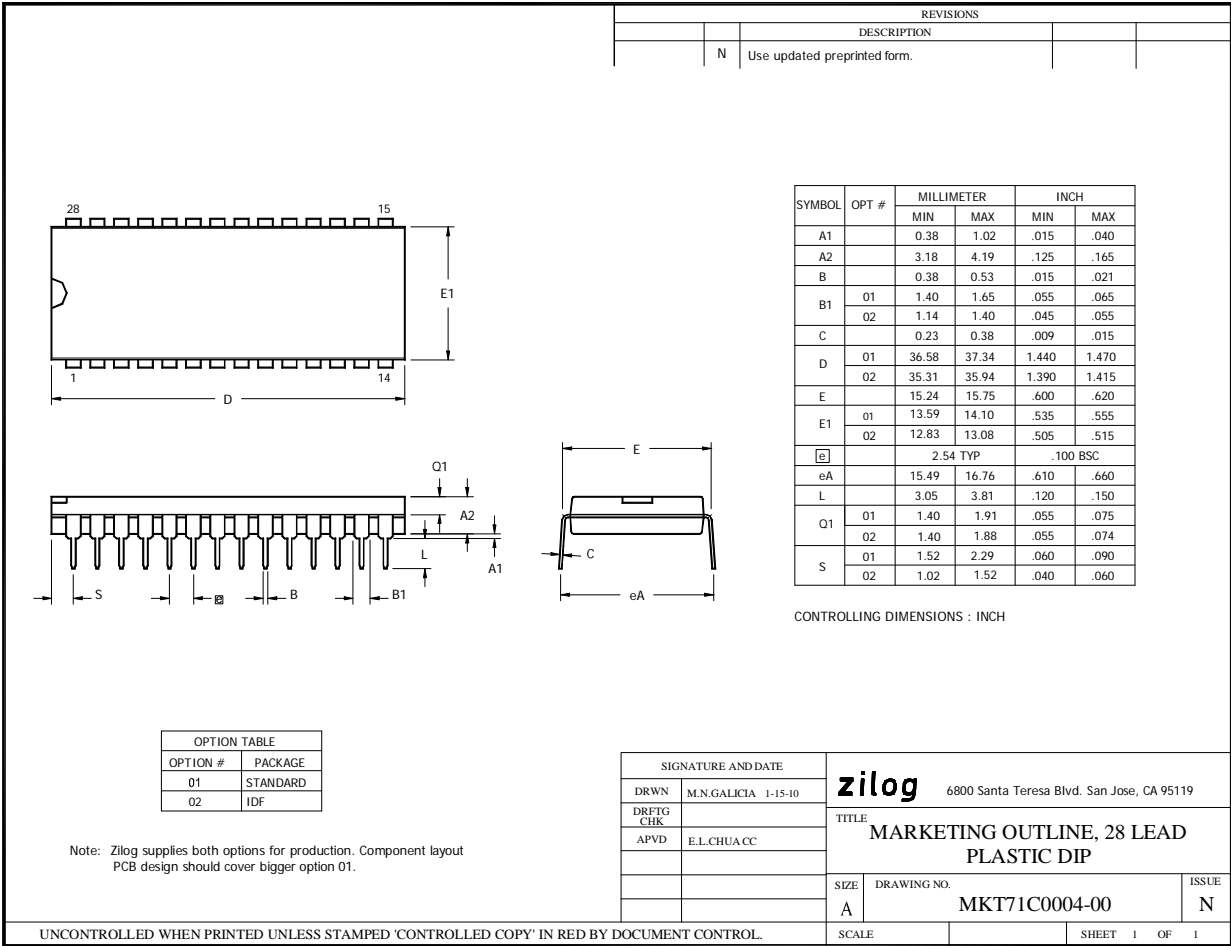
UNCONTROLLED WHEN PRINTED UNLESS STAMPED 'CONTROLLED COPY' IN RED BY DOCUMENT CONTROL

SCALE		SHEET 1 OF 1
-------	--	--------------

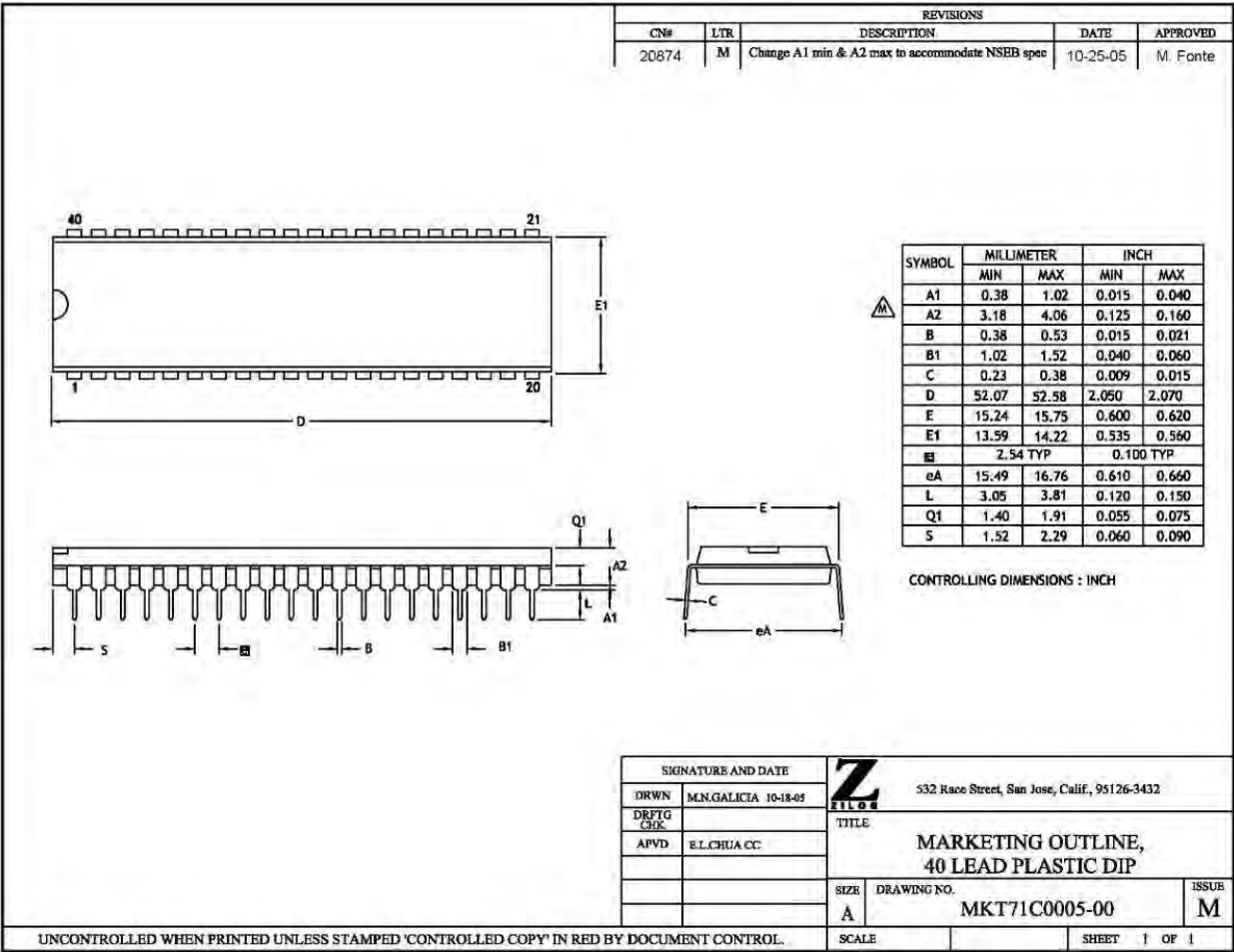
Marketing Outline, 20-Lead PDIP



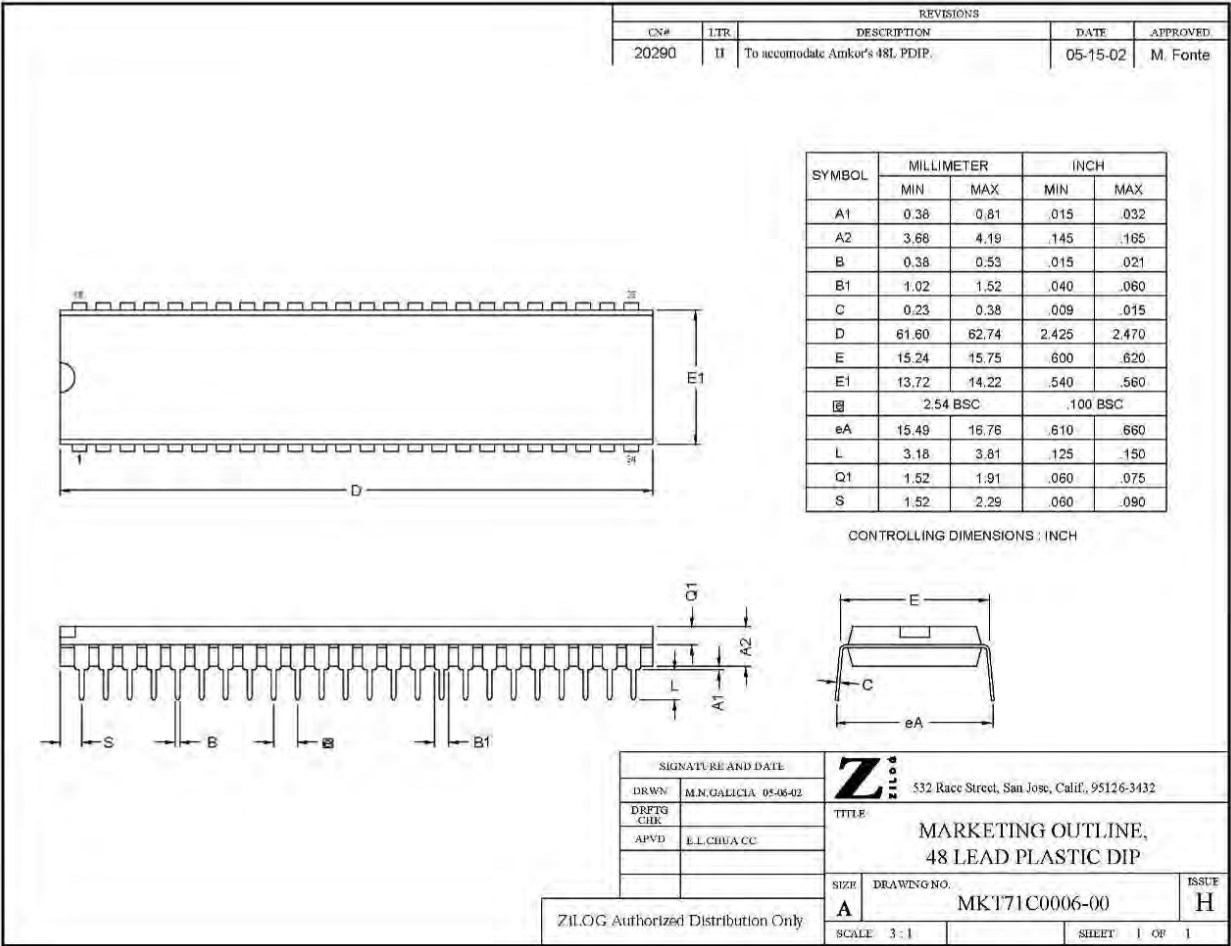
Marketing Outline, 28-Lead PDIP



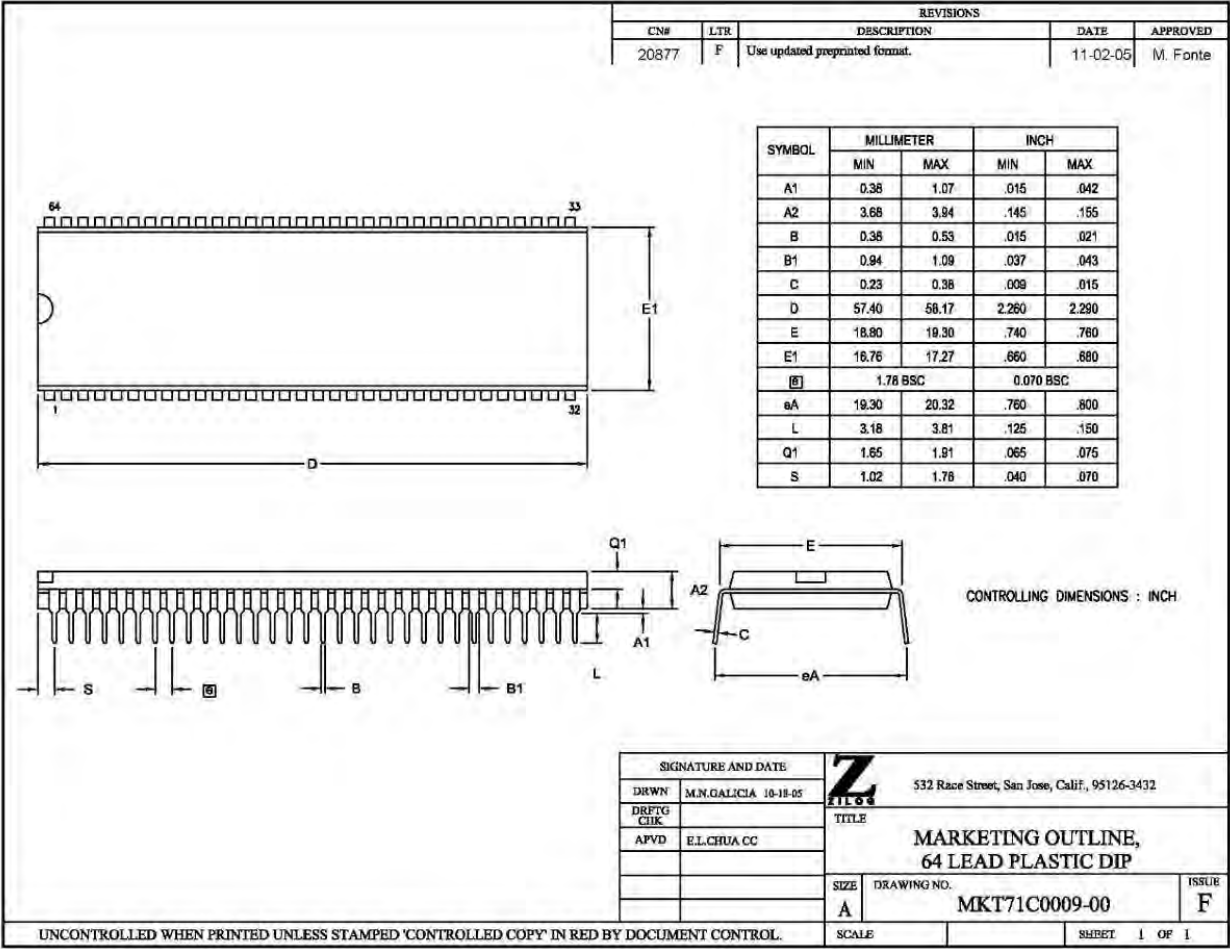
Marketing Outline, 40-Lead PDIP



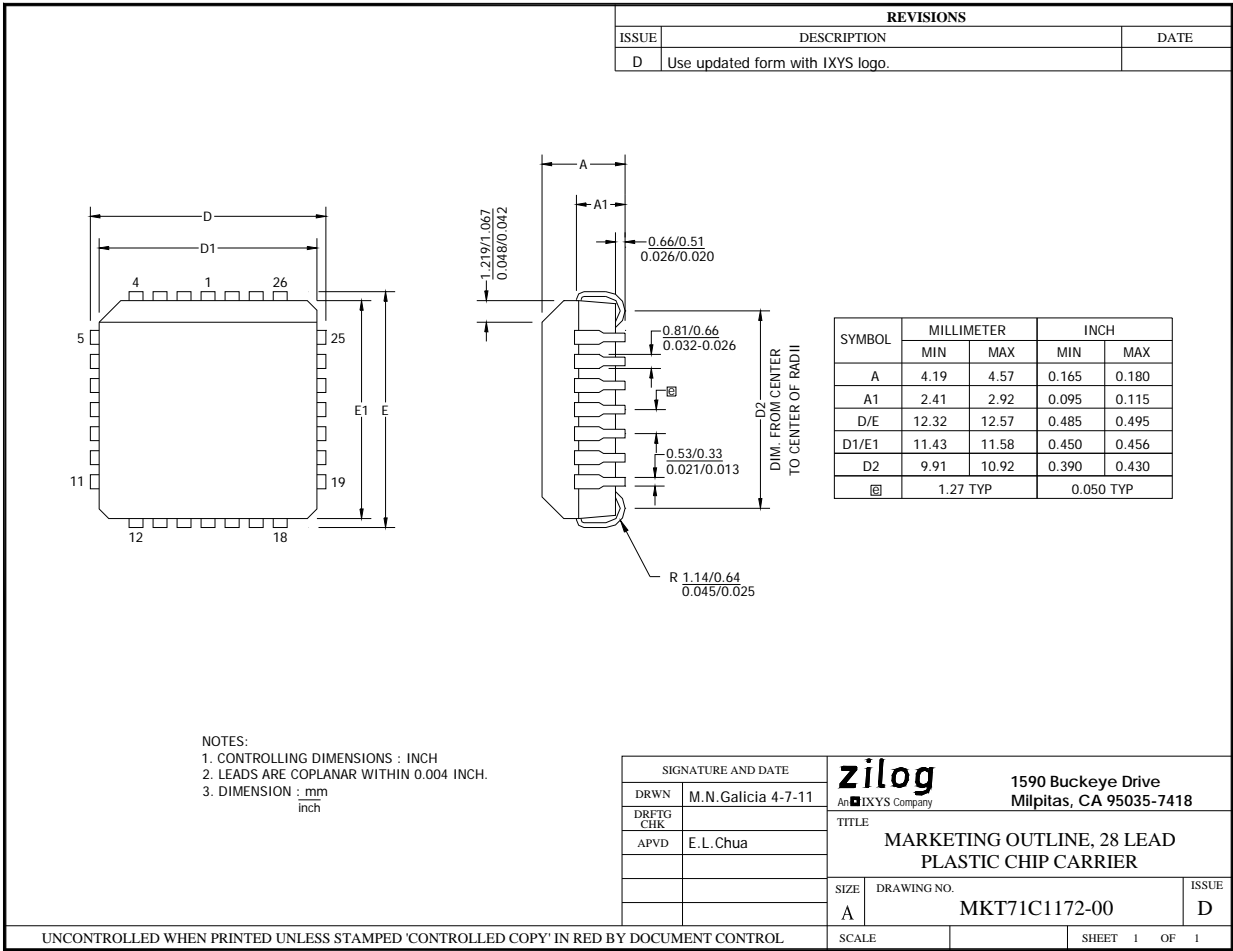
Marketing Outline, 48-Lead PDIP



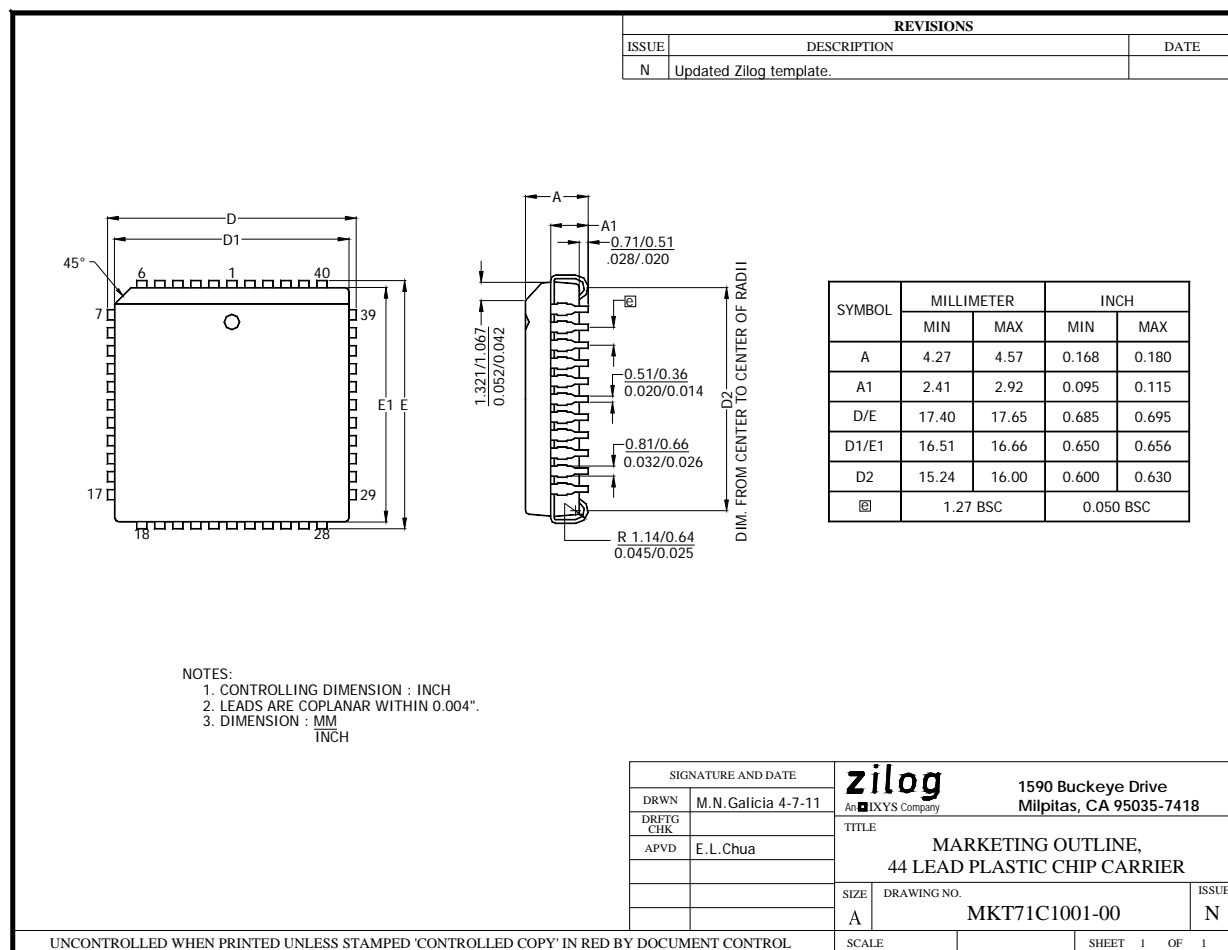
Marketing Outline, 64-Lead PDIP



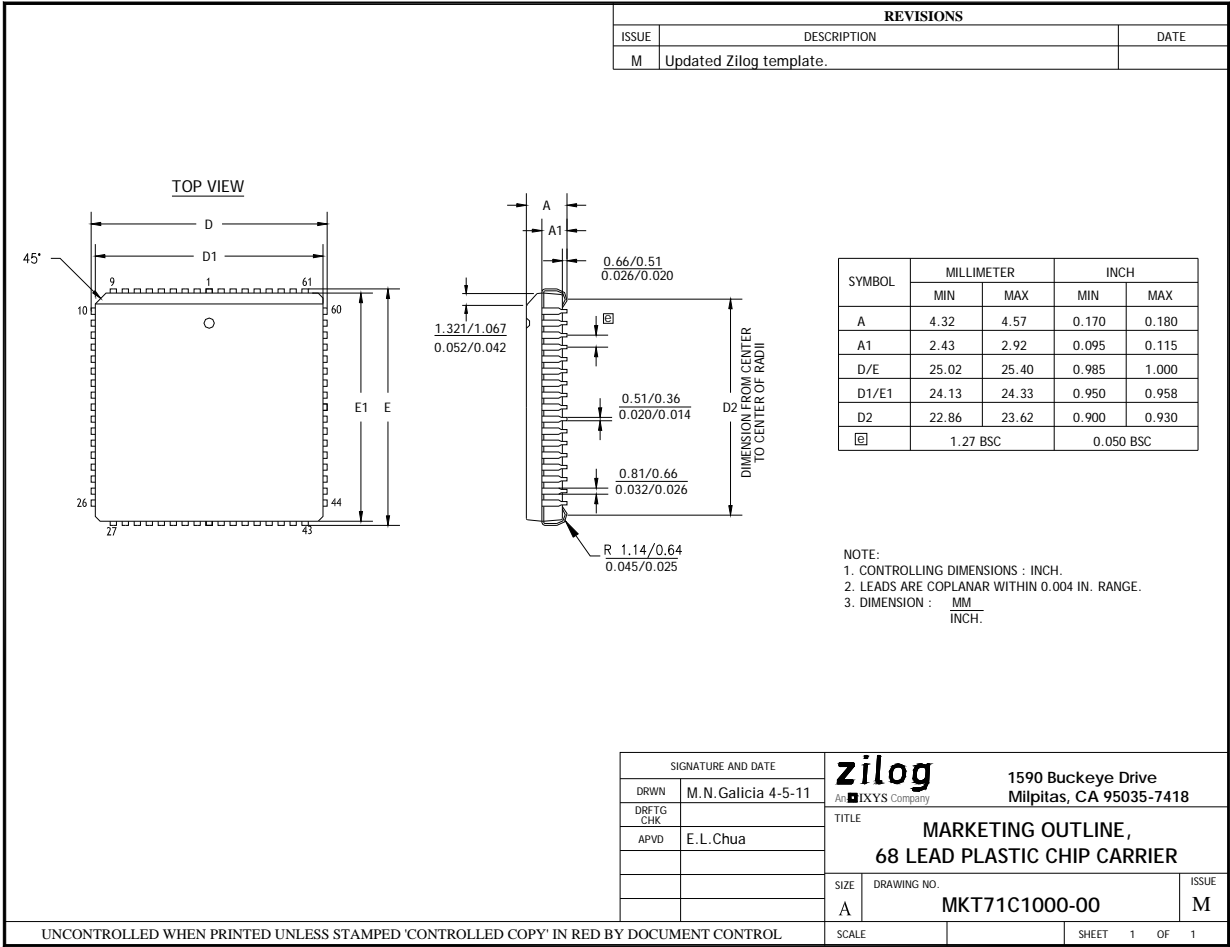
Marketing Outline, 28-Lead Plastic Chip Carrier



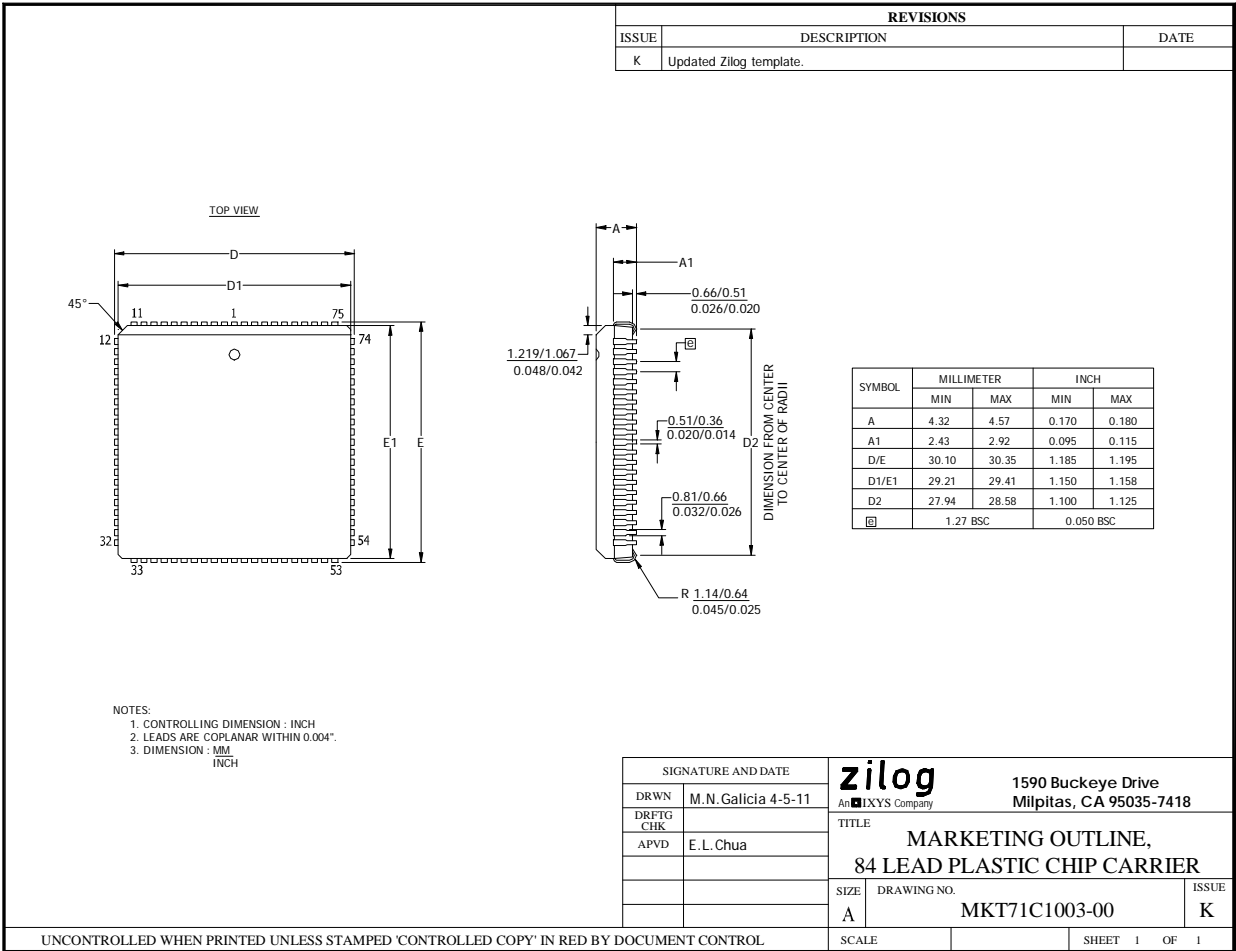
Marketing Outline, 44-Lead Plastic Chip Carrier



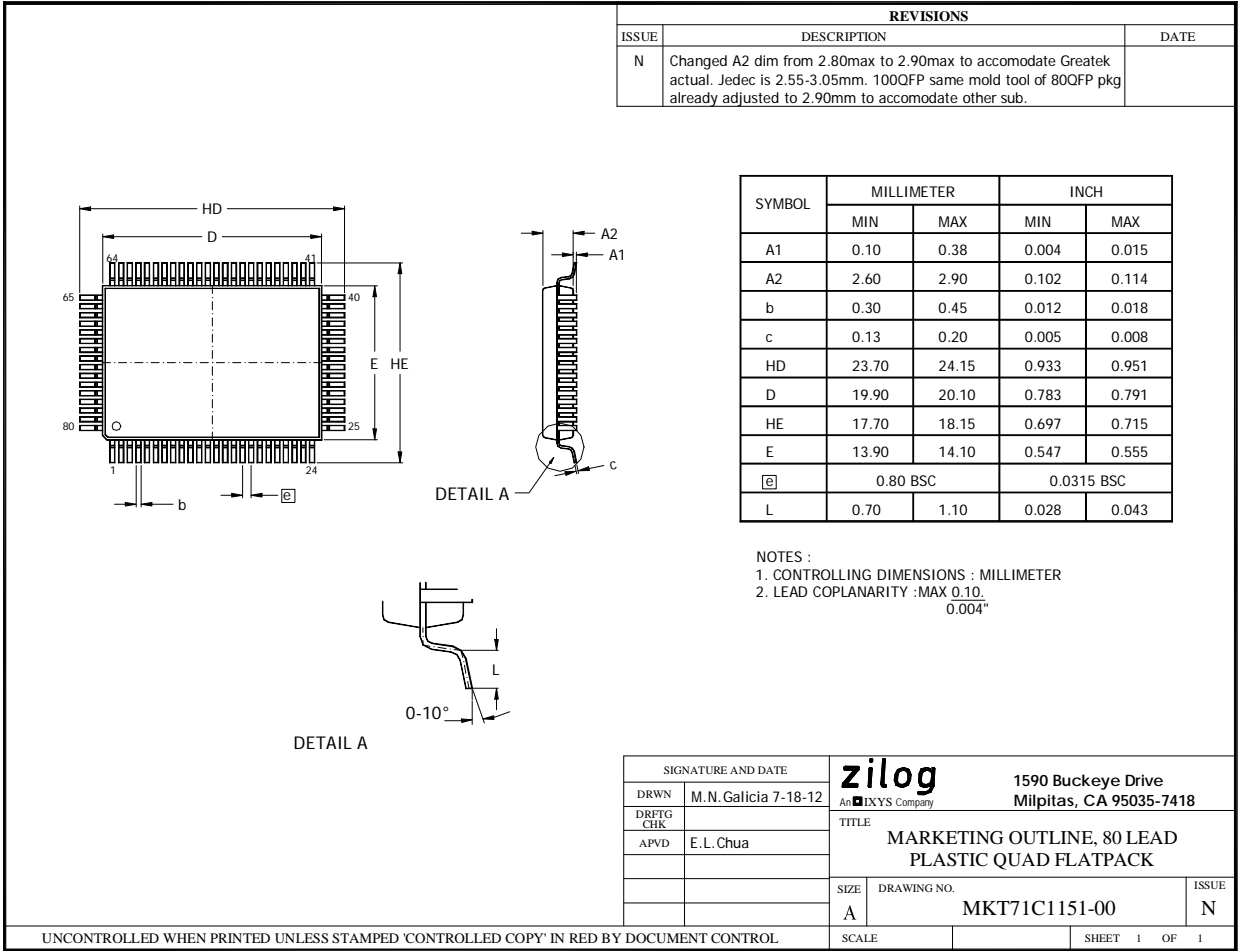
Marketing Outline, 68-Lead Plastic Chip Carrier



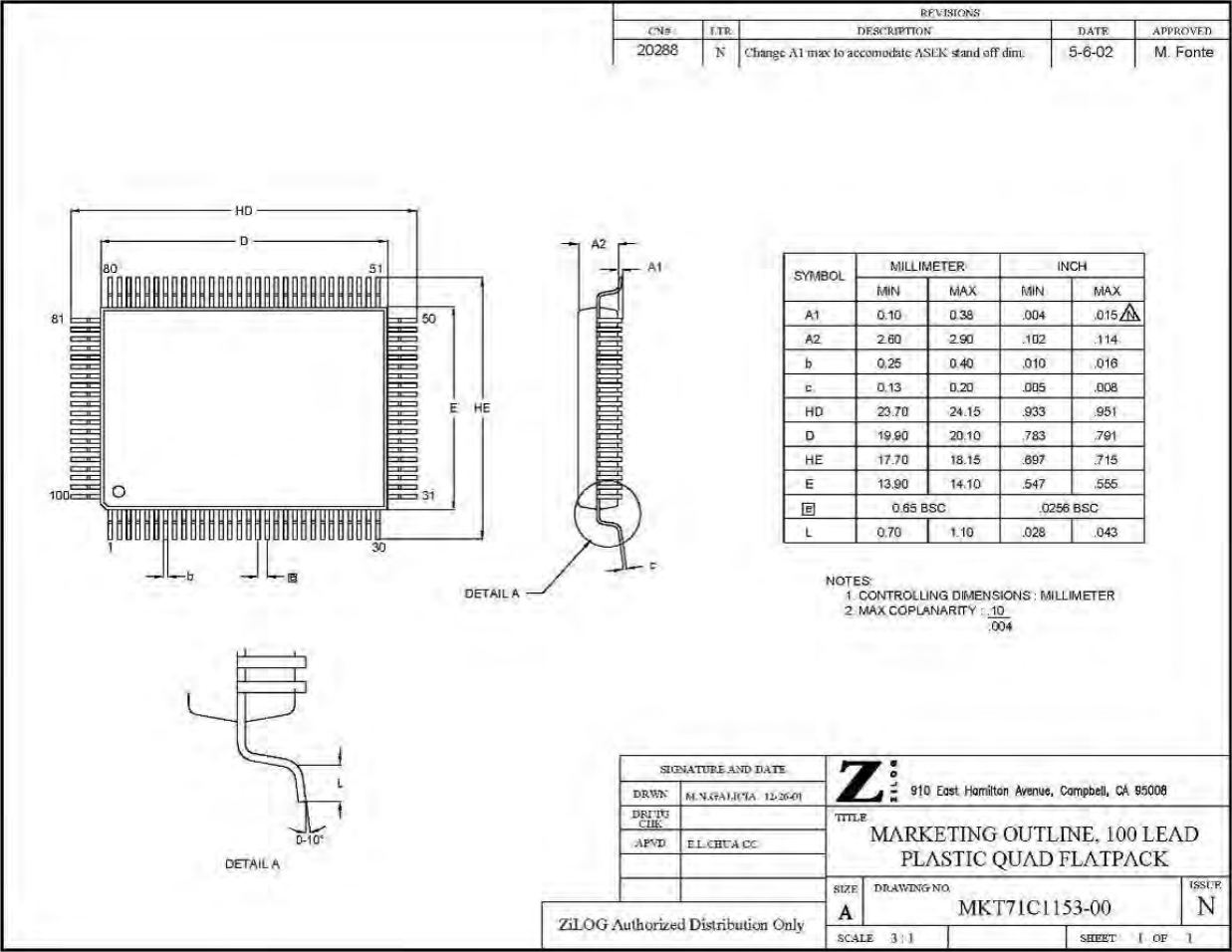
Marketing Outline, 84-Lead Plastic Chip Carrier



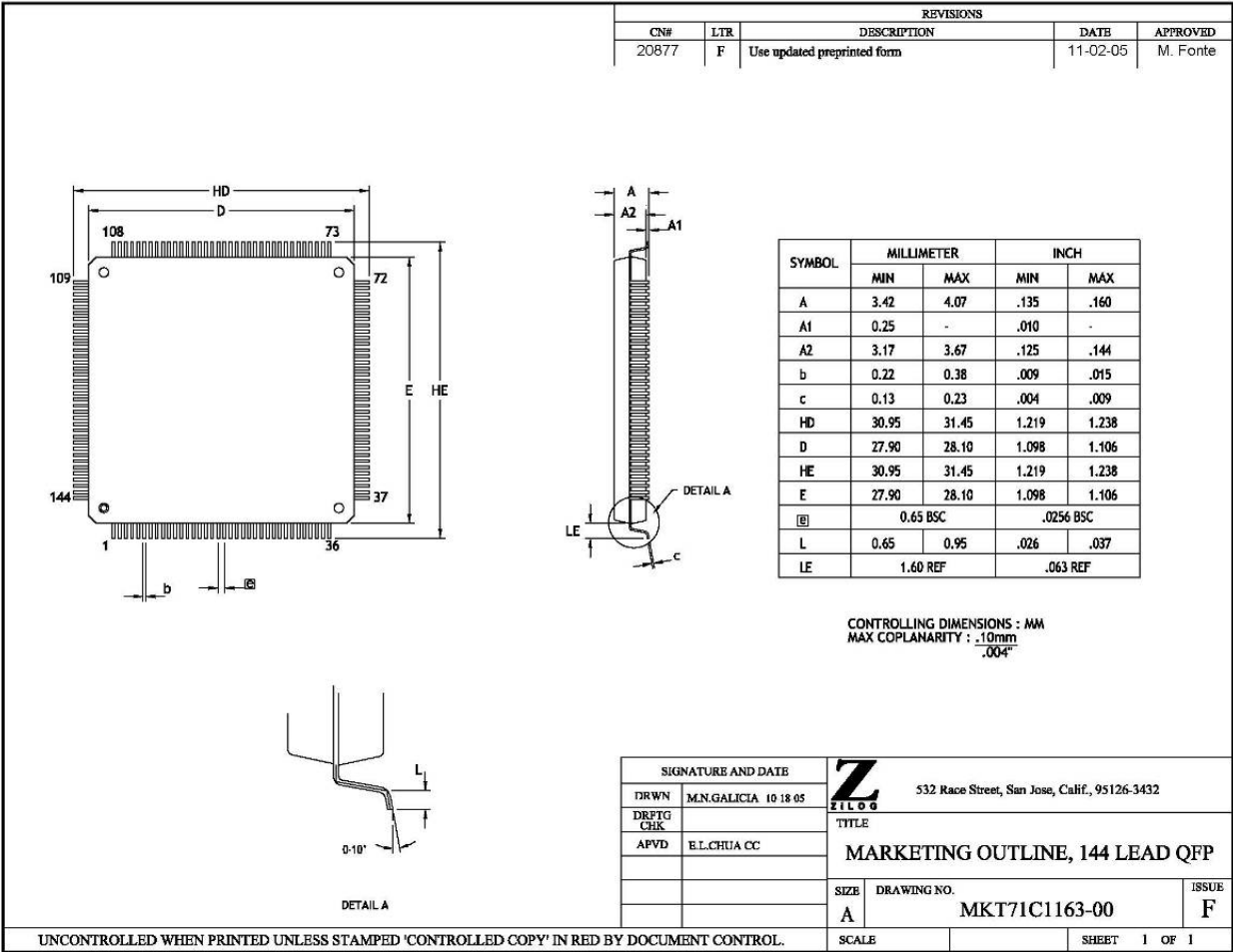
Marketing Outline, 80-Lead Plastic Quad Flatpack



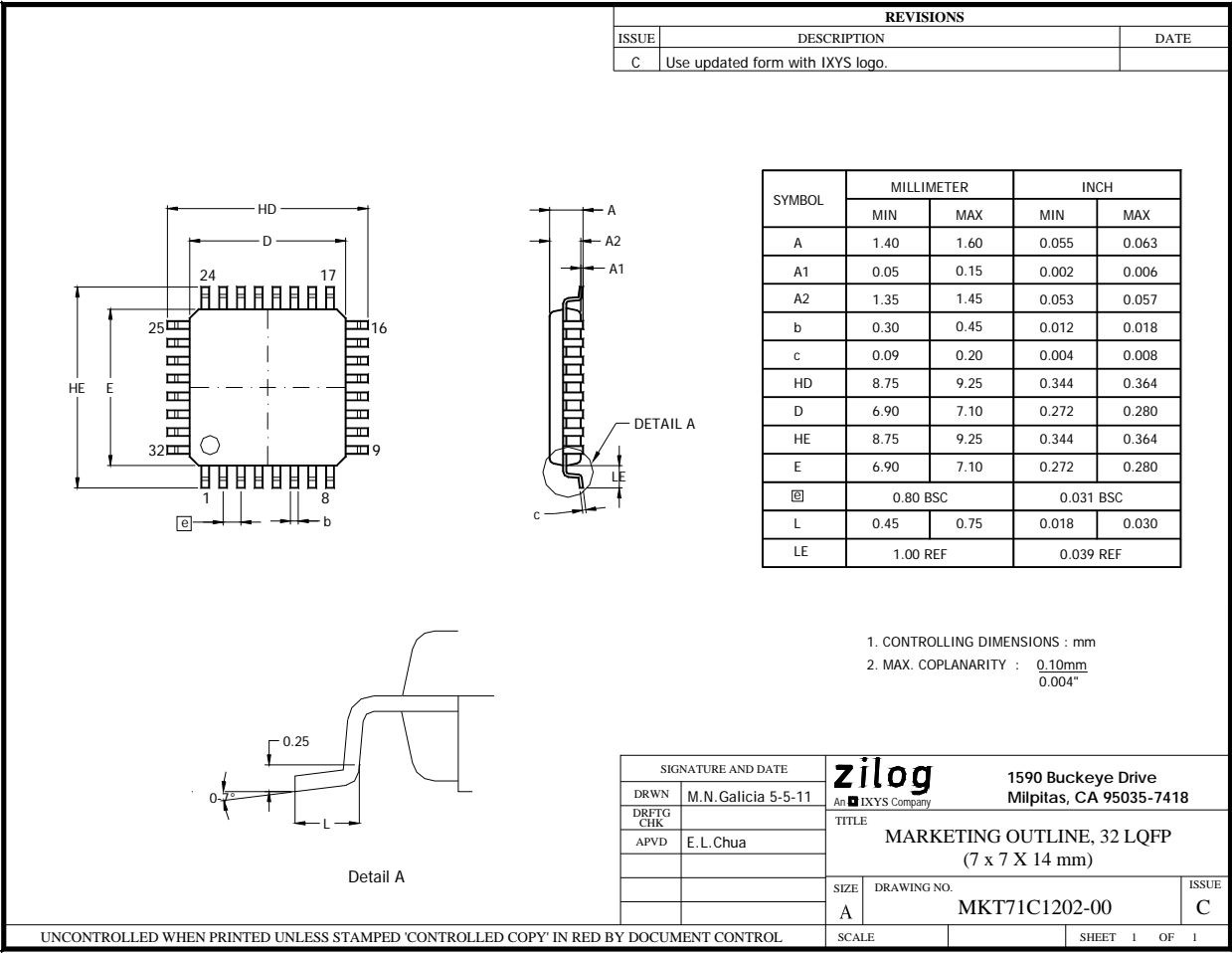
Marketing Outline, 100-Lead Plastic Quad Flatpack



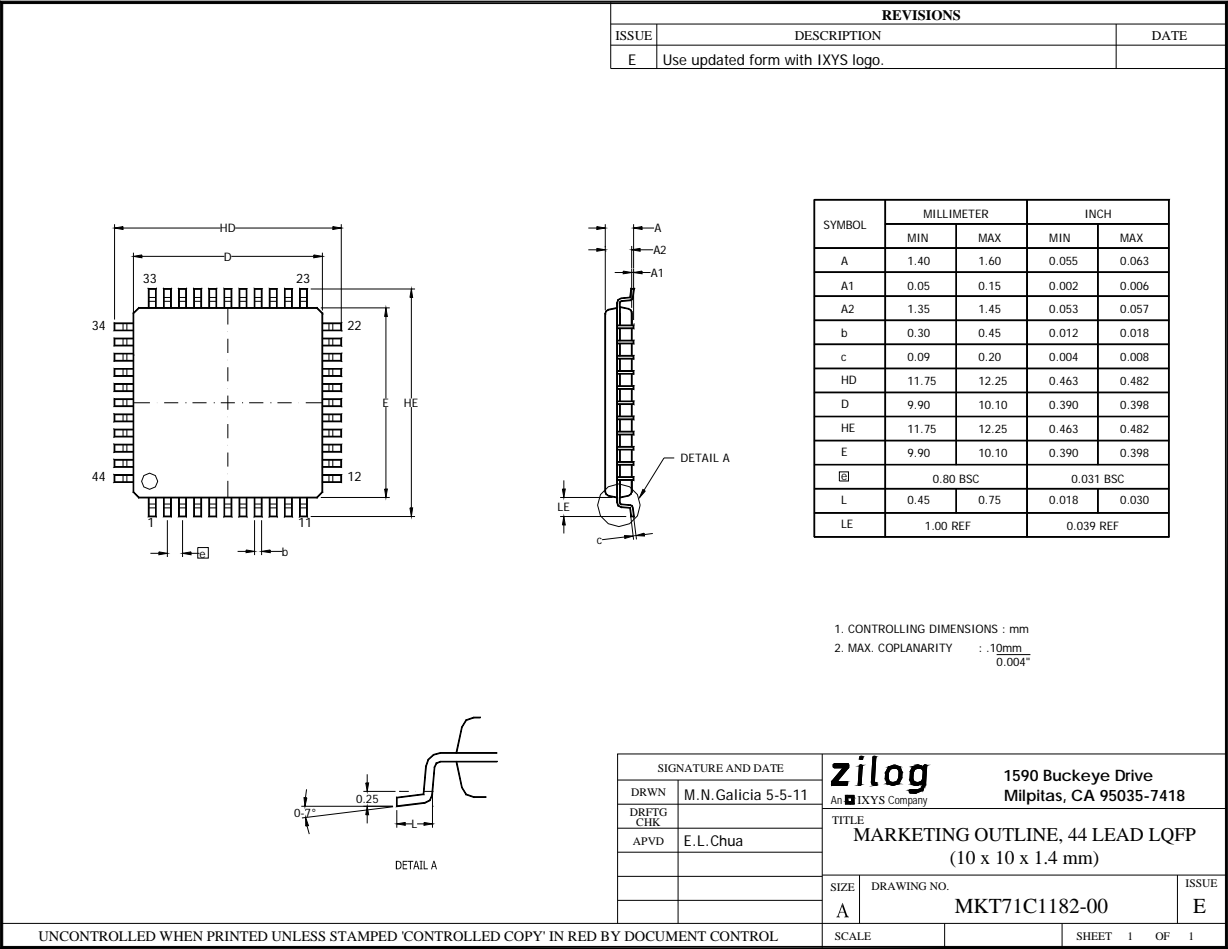
Marketing Outline, 144-Lead Quad Flatpack



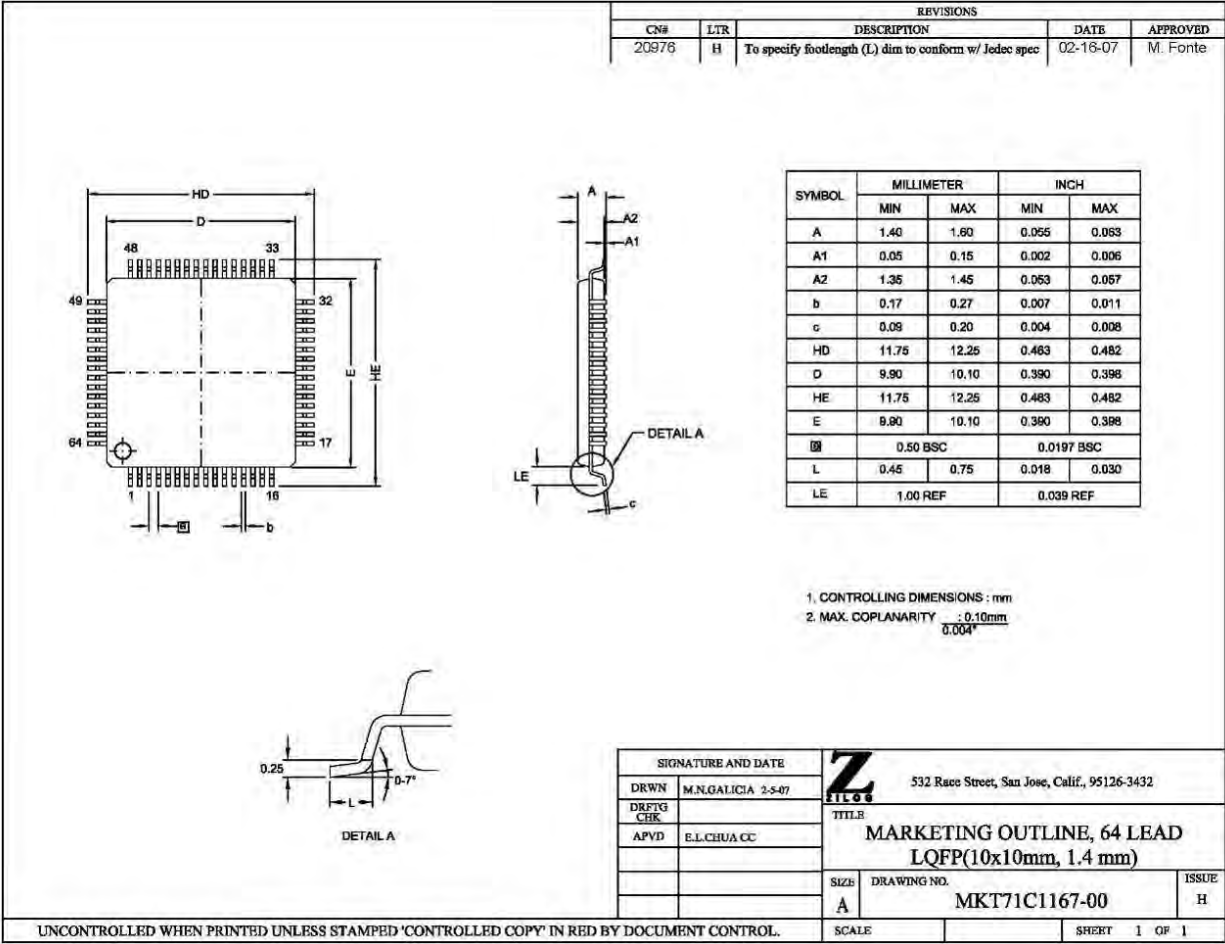
Marketing Outline, 32-Lead LQFP



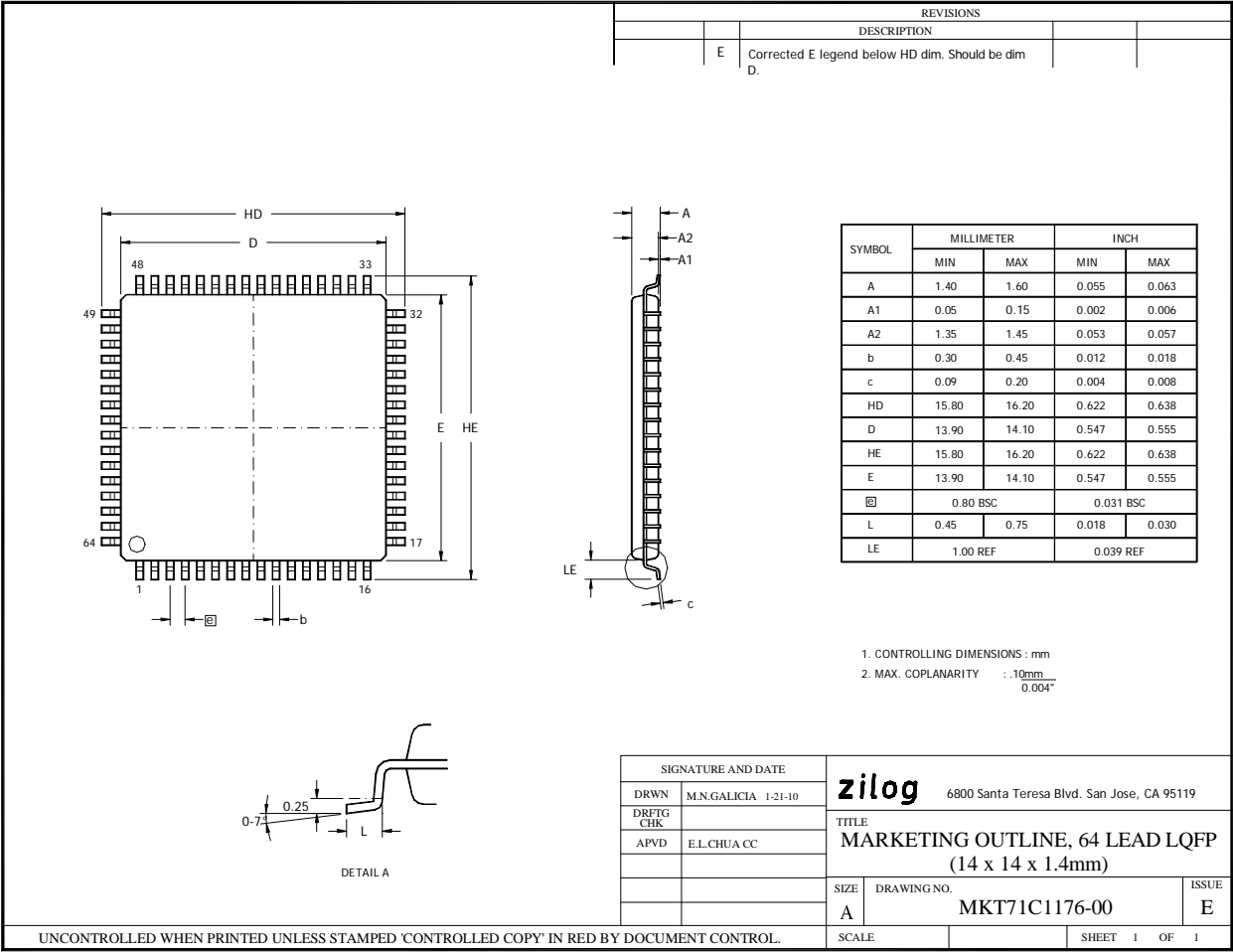
Marketing Outline, 44-Lead LQFP



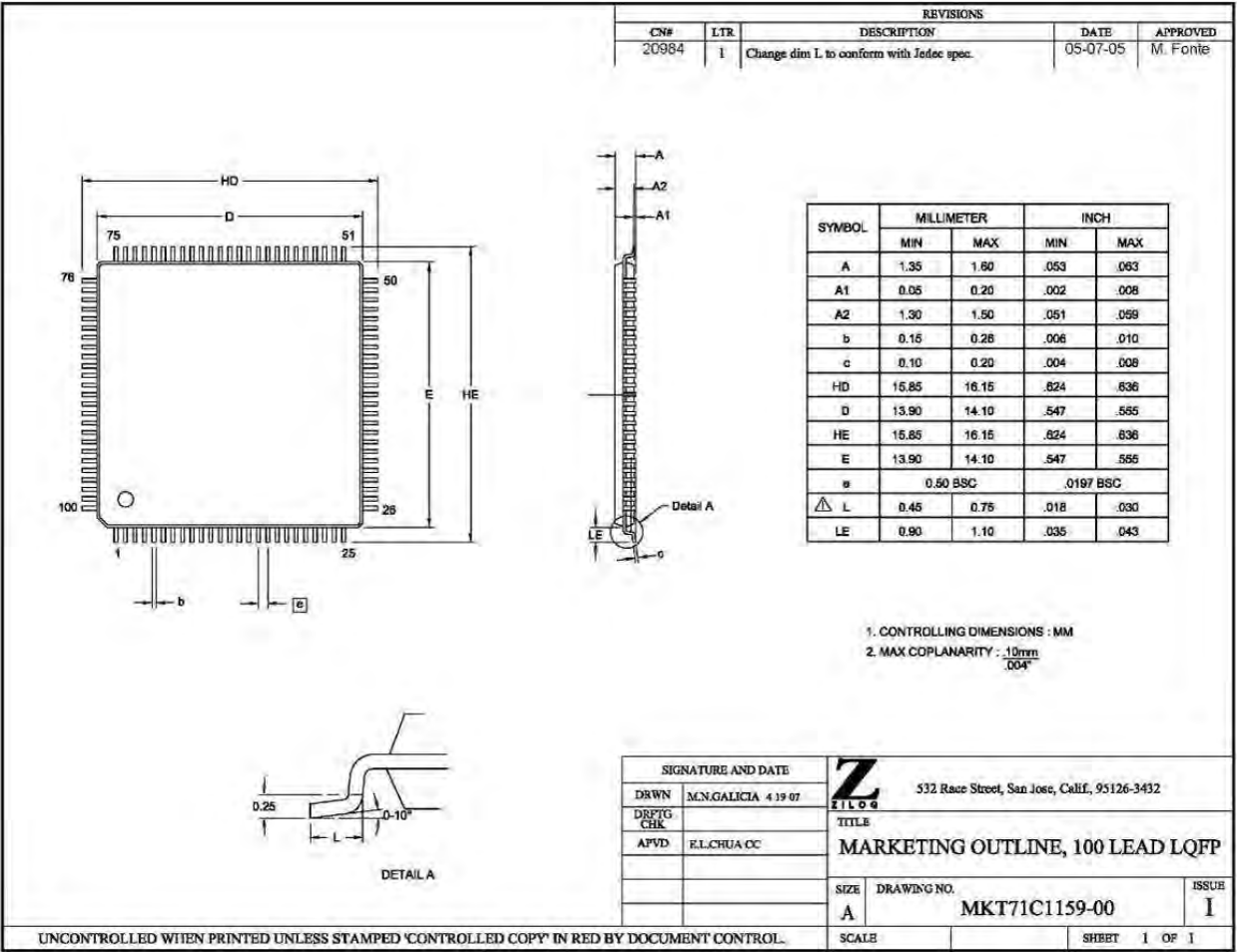
Marketing Outline, 64-Lead LQFP



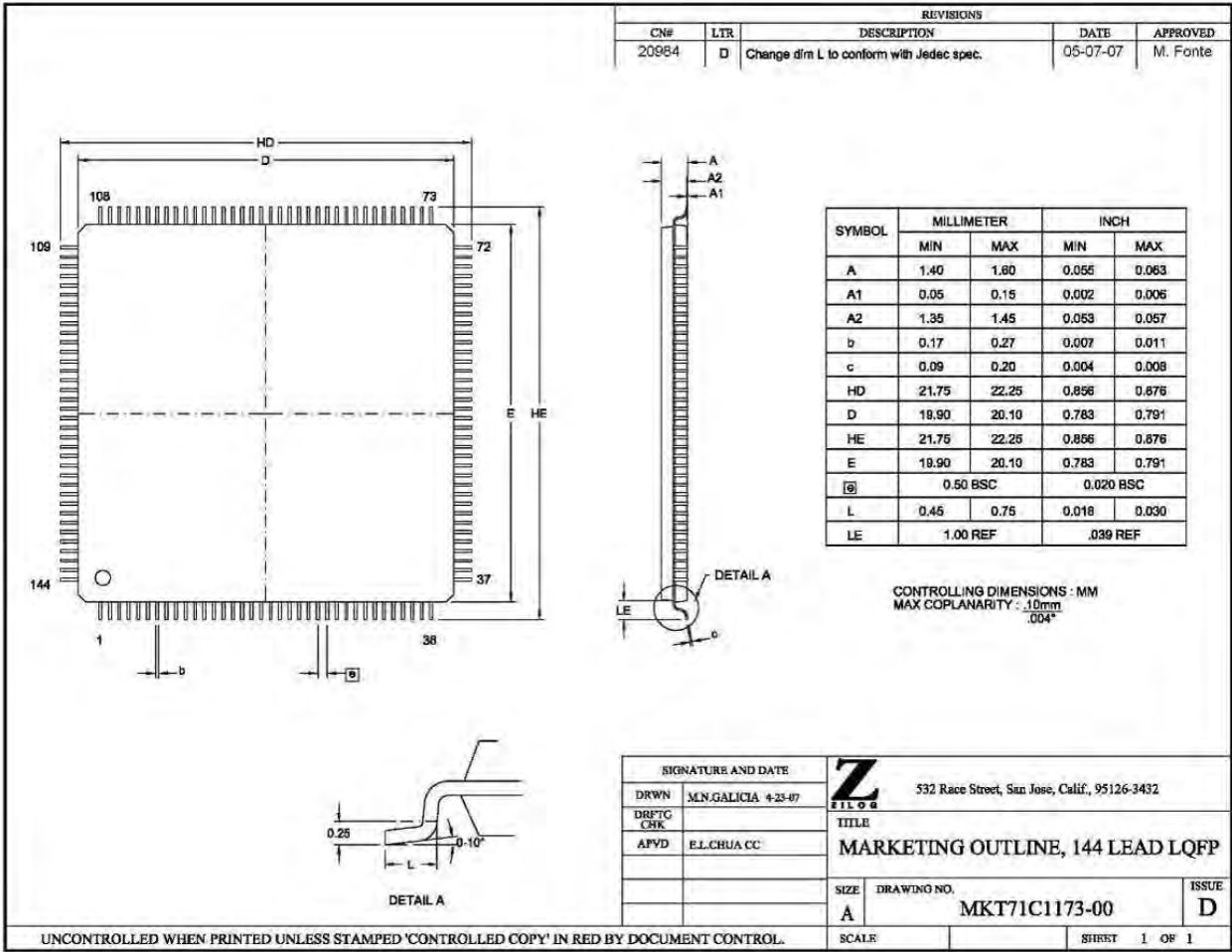
Marketing Outline, 64-Lead LQFP



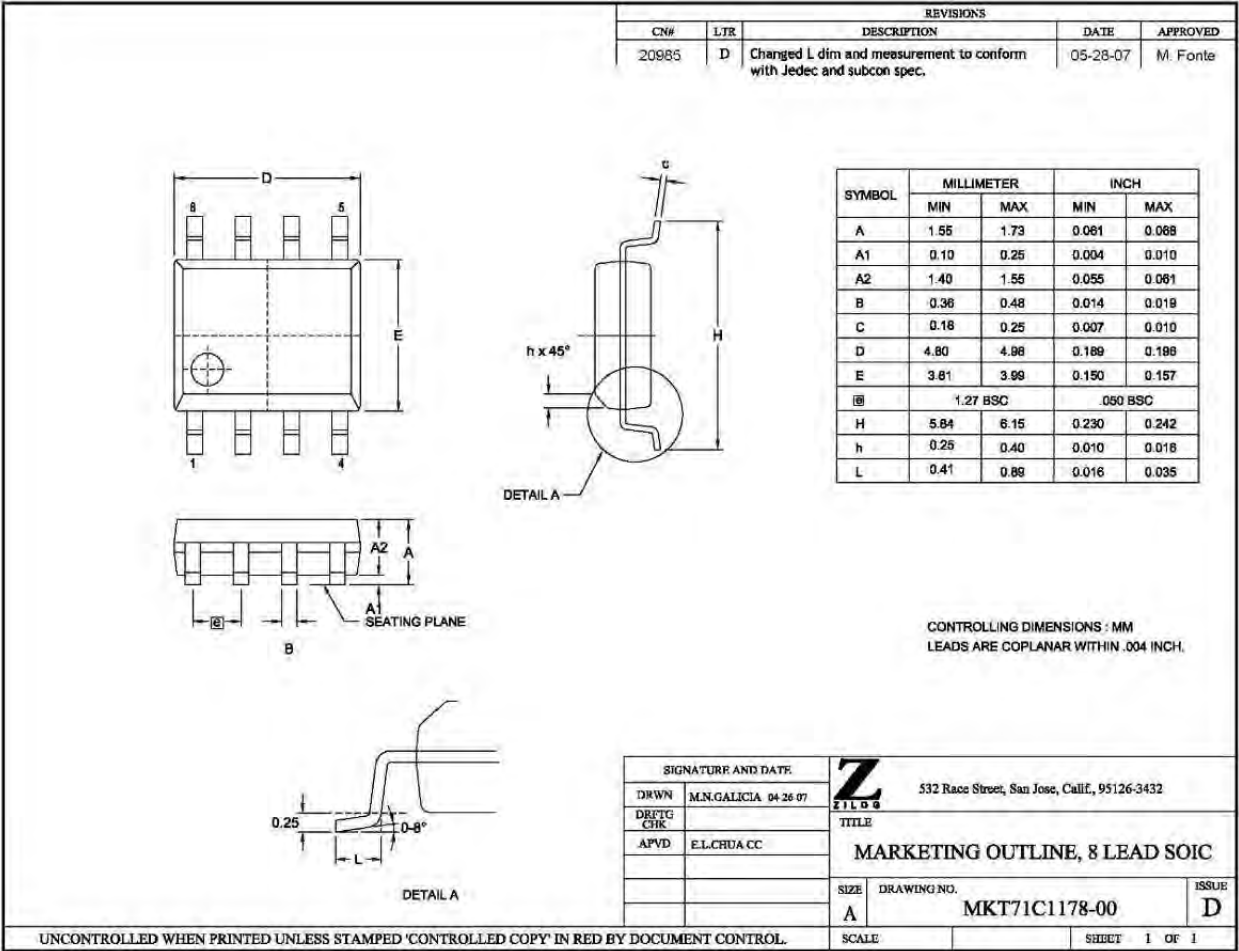
Marketing Outline, 100-Lead LQFP



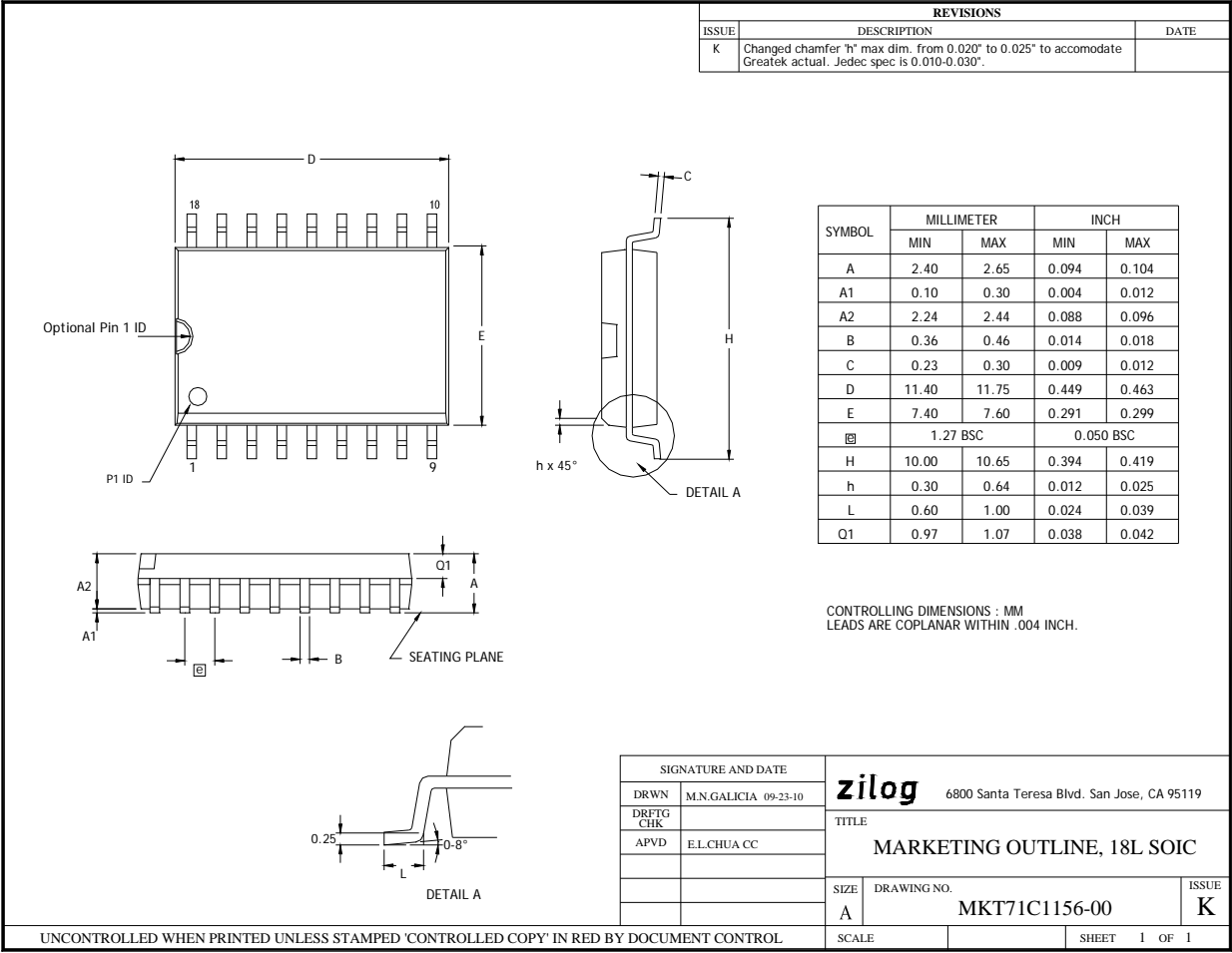
Marketing Outline, 144-Lead LQFP



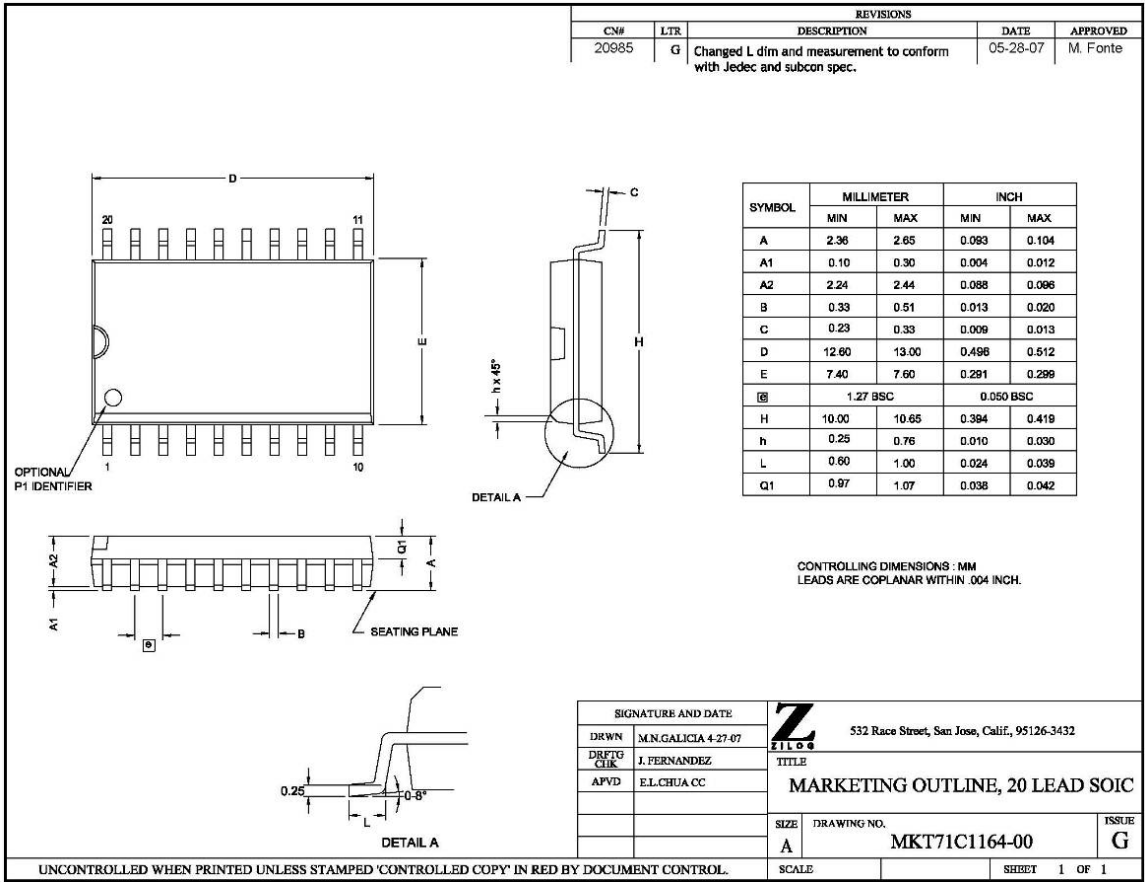
Marketing Outline, 8-Lead SOIC



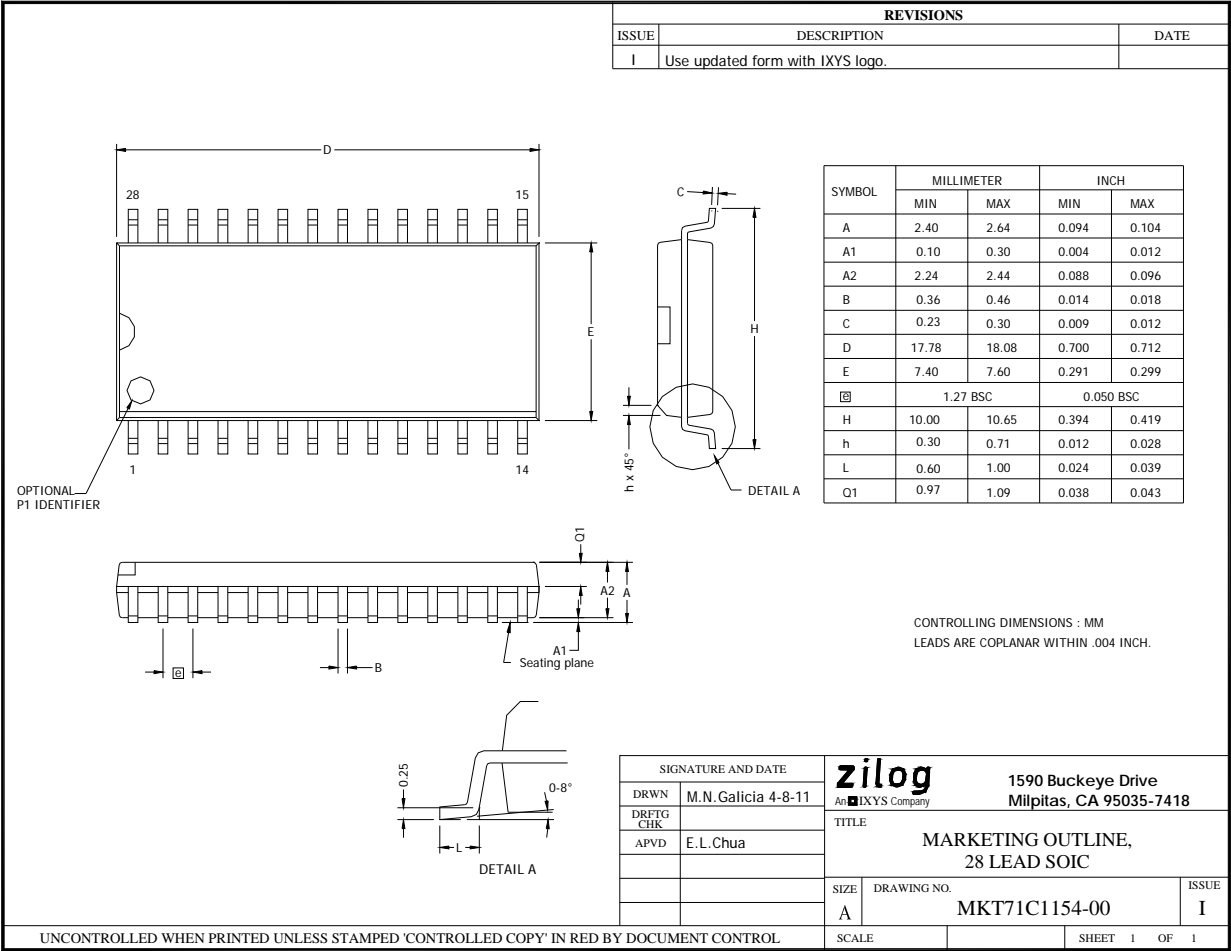
Marketing Outline, 18-Lead SOIC



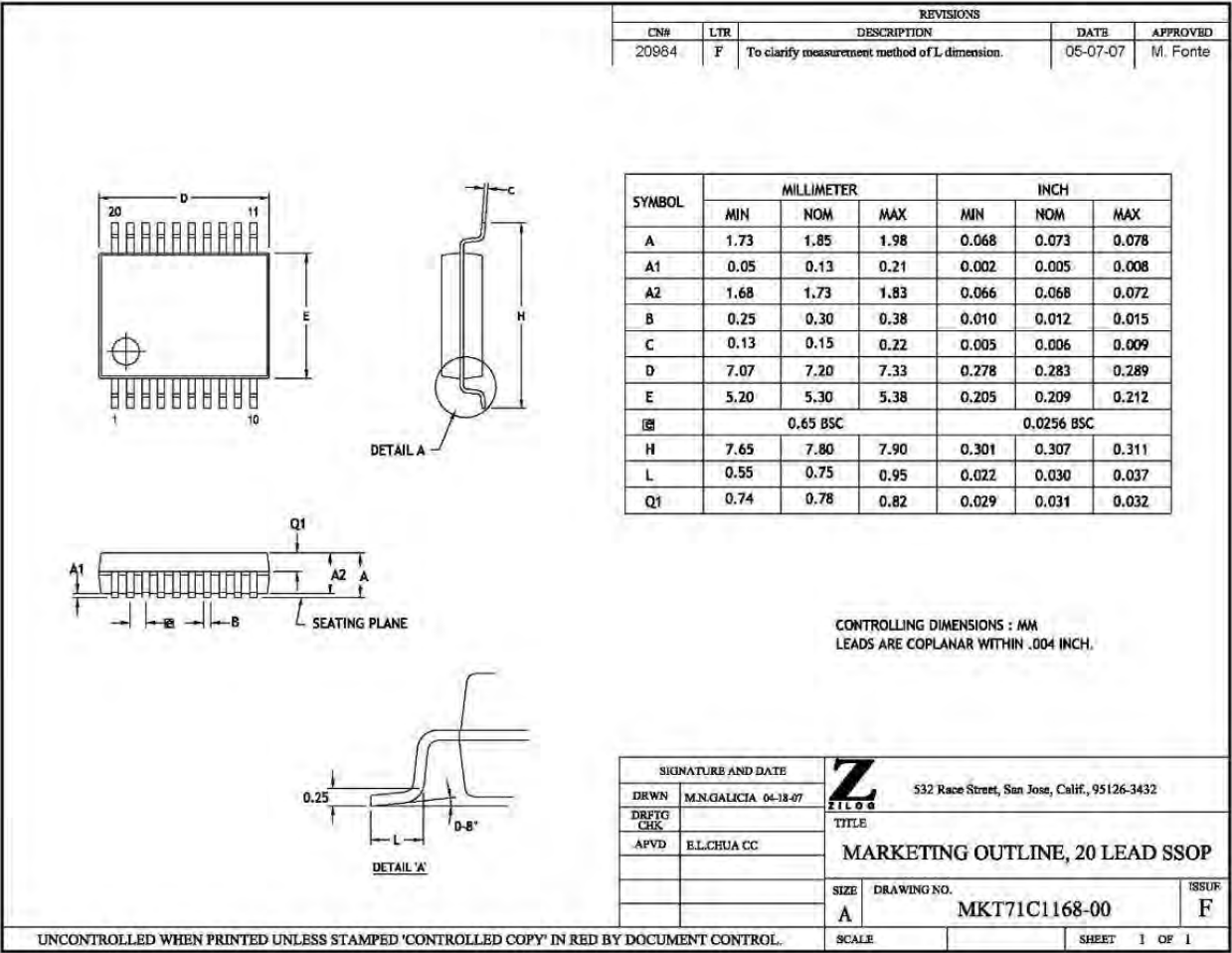
Marketing Outline, 20-Lead SOIC



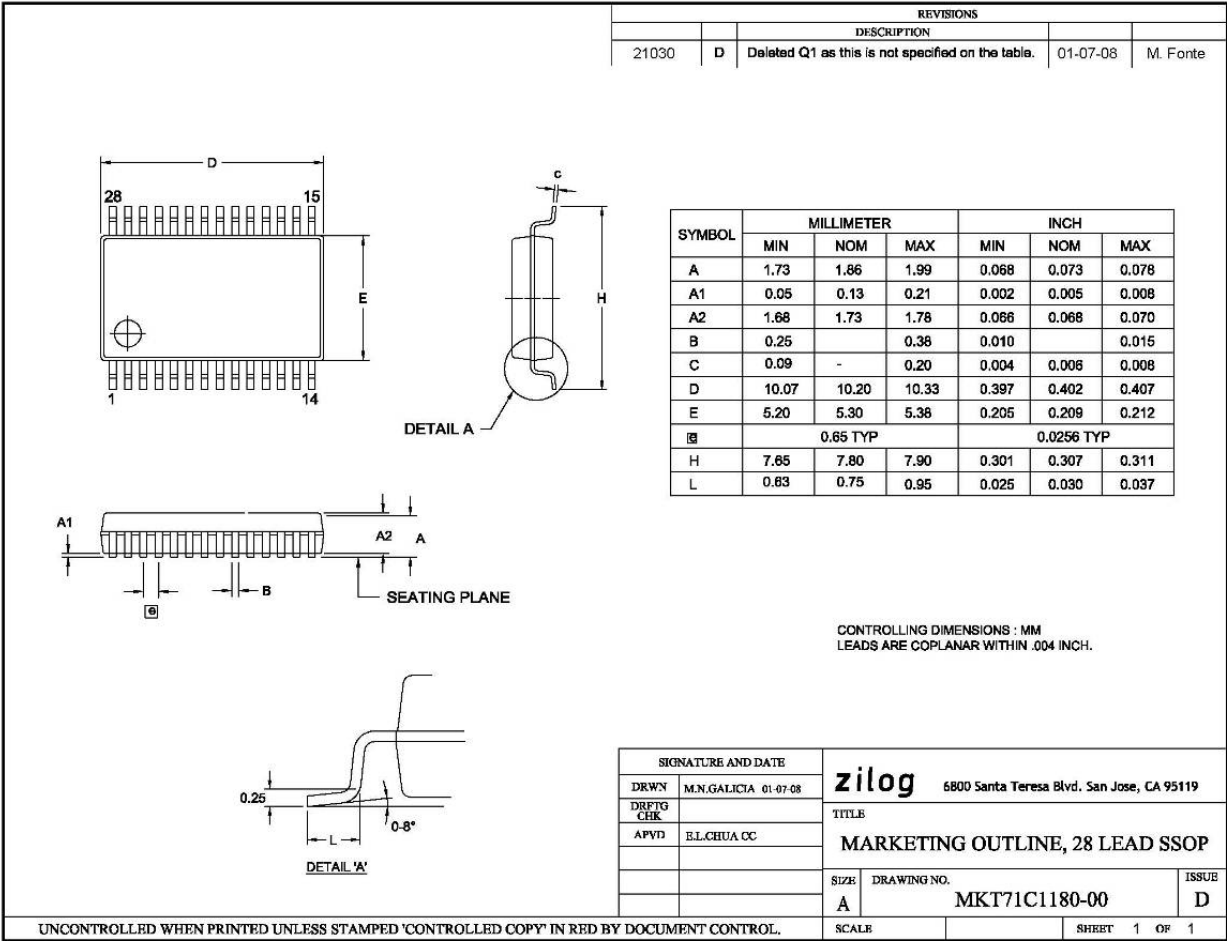
Marketing Outline, 28-Lead SOIC



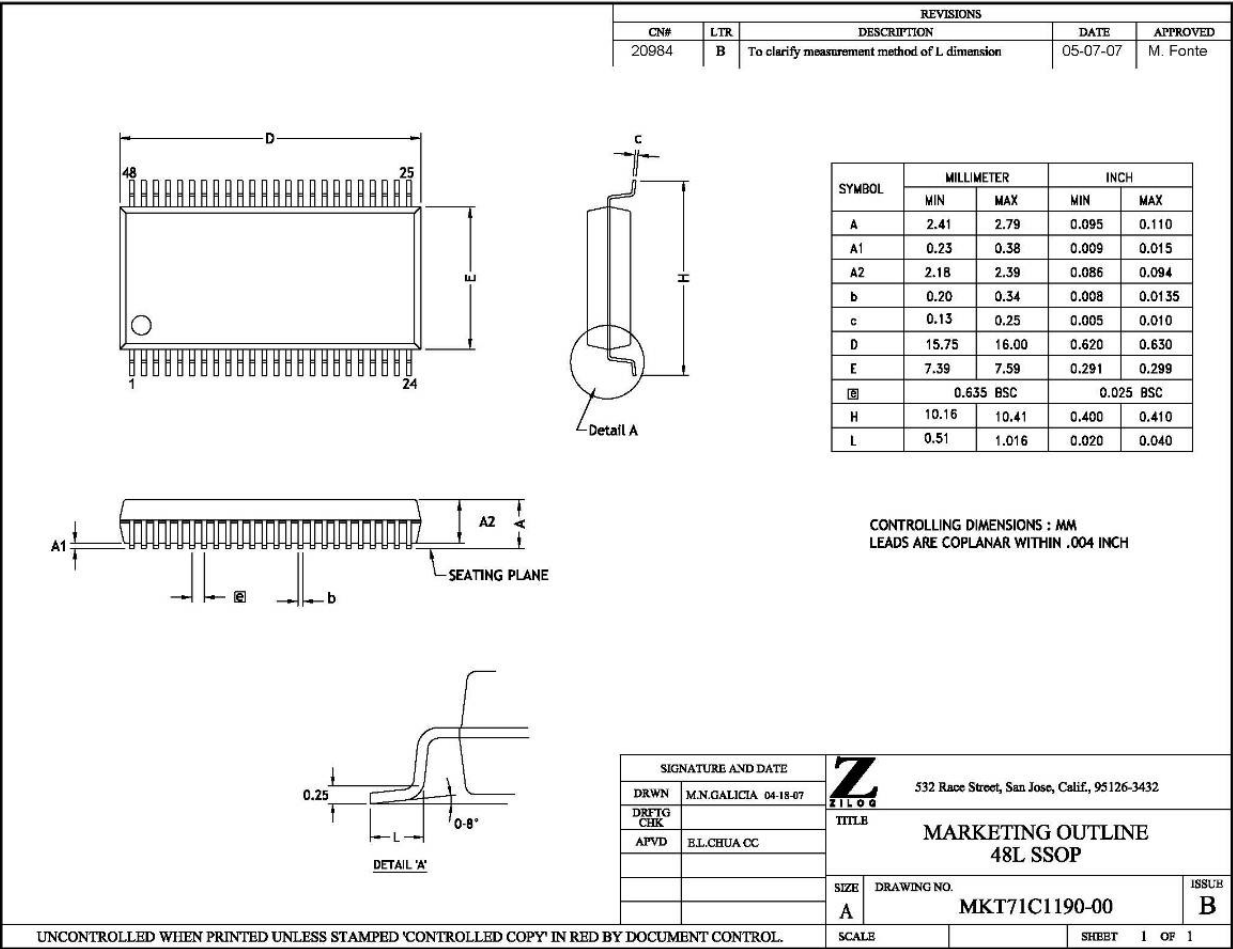
Marketing Outline, 20-Lead SSOP



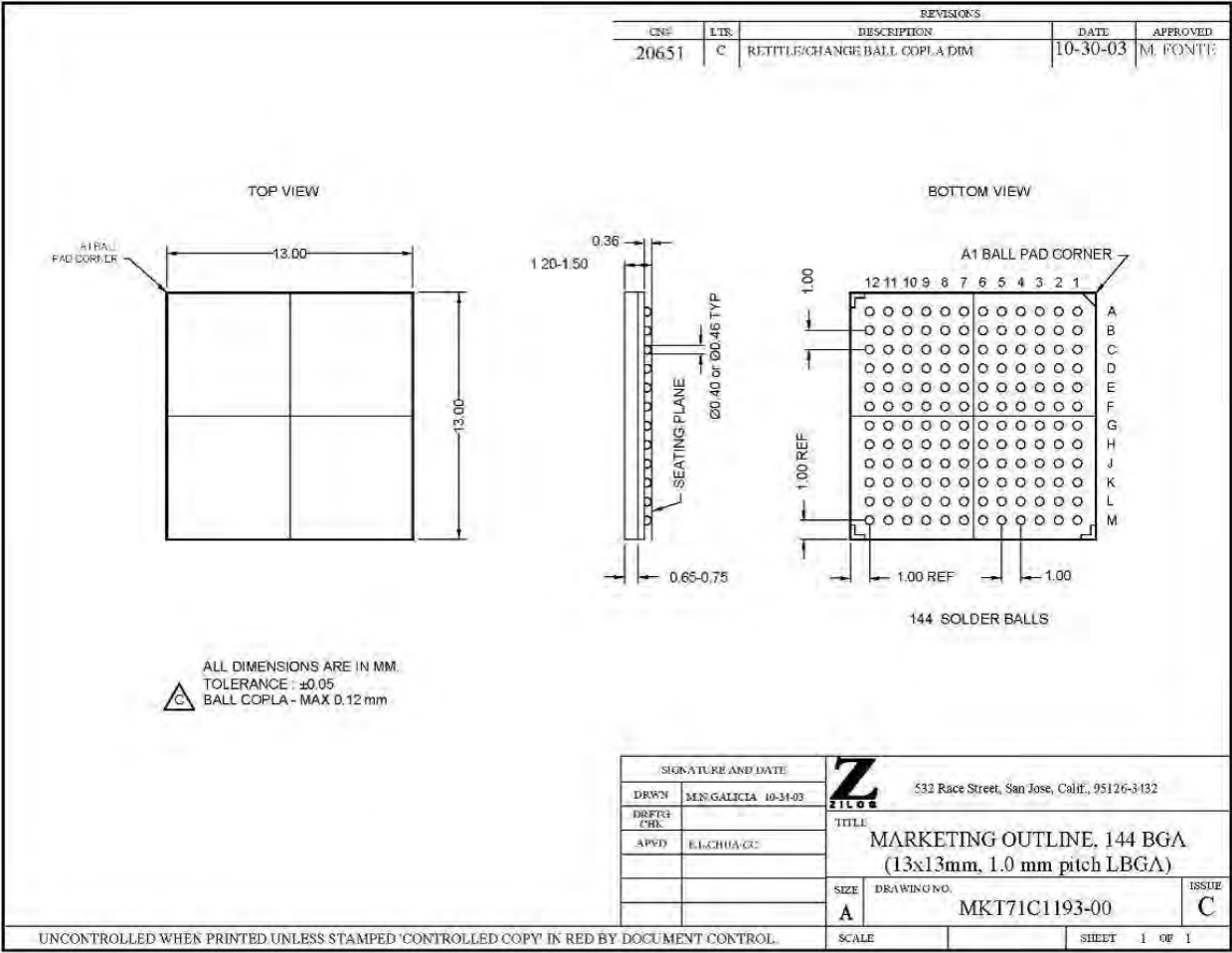
Marketing Outline, 28-Lead SSOP



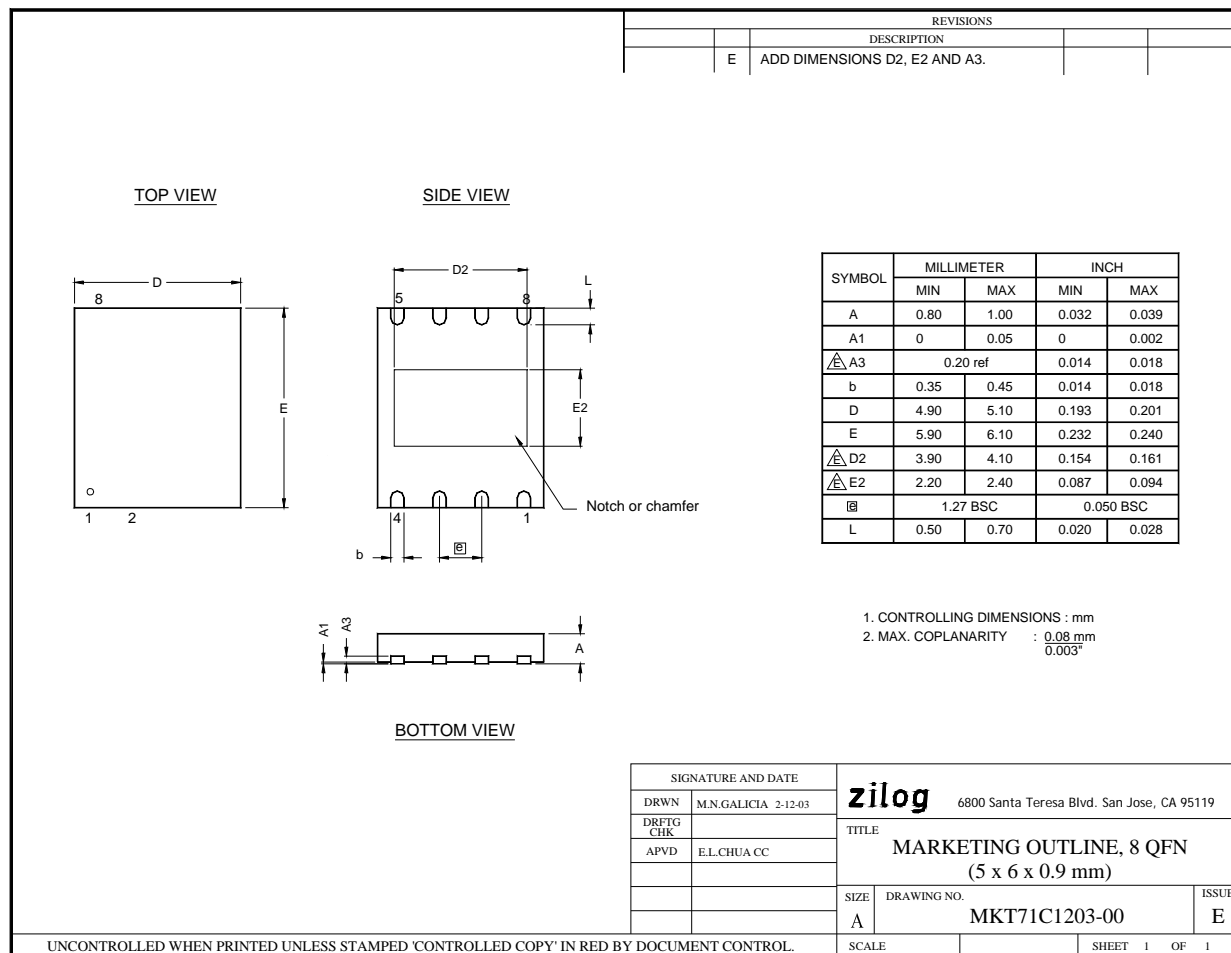
Marketing Outline, 48-Lead SSOP



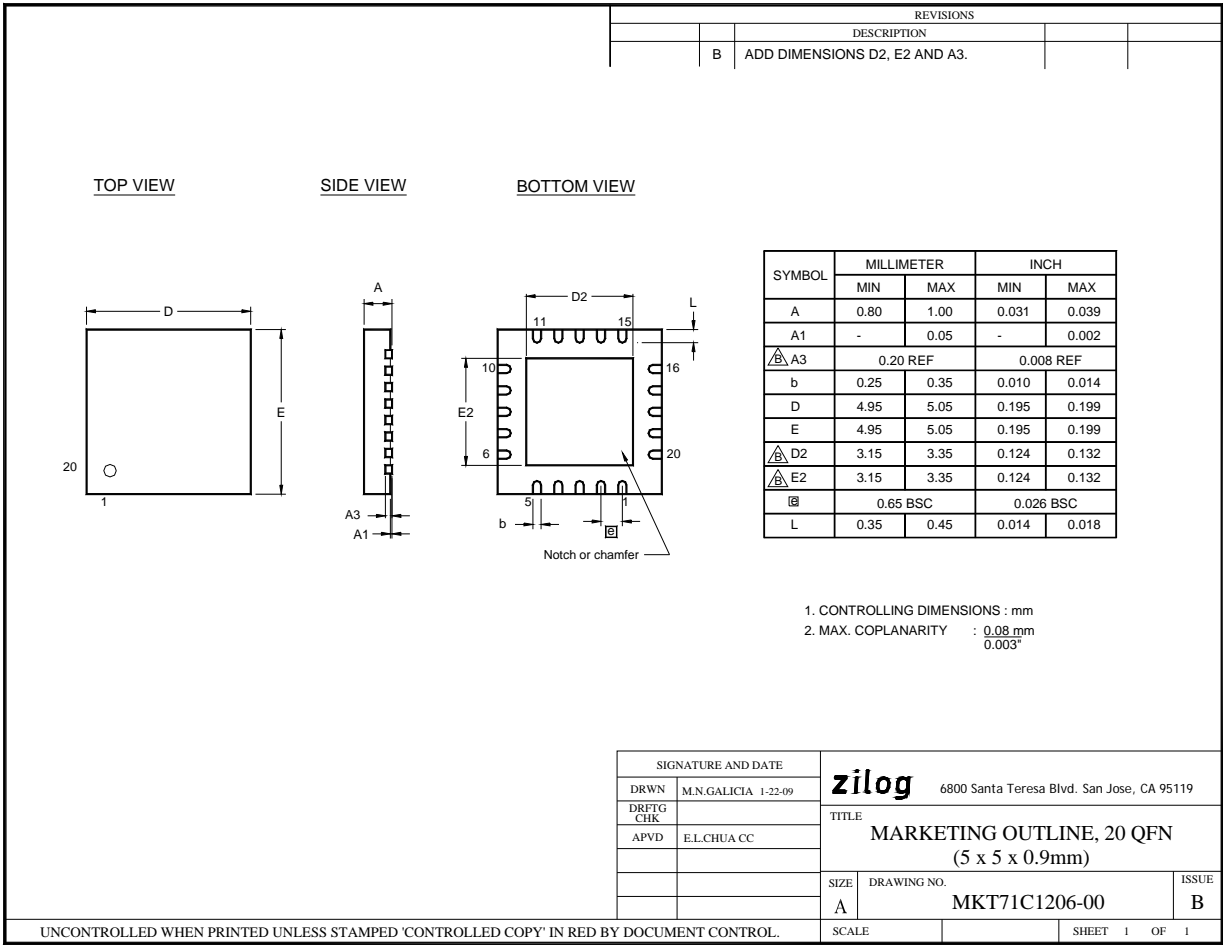
Marketing Outline, 144-Lead BGA



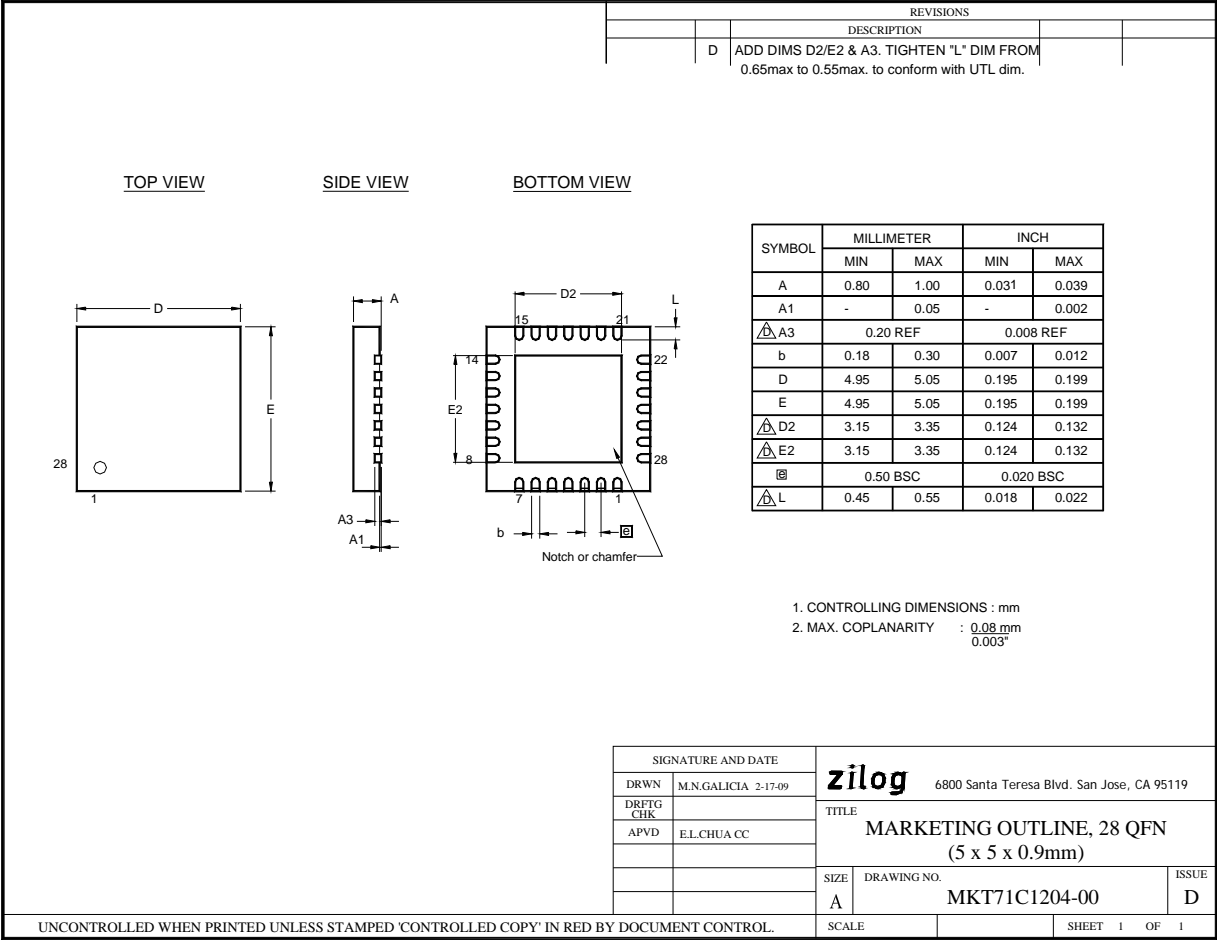
Marketing Outline, 8-Lead QFN



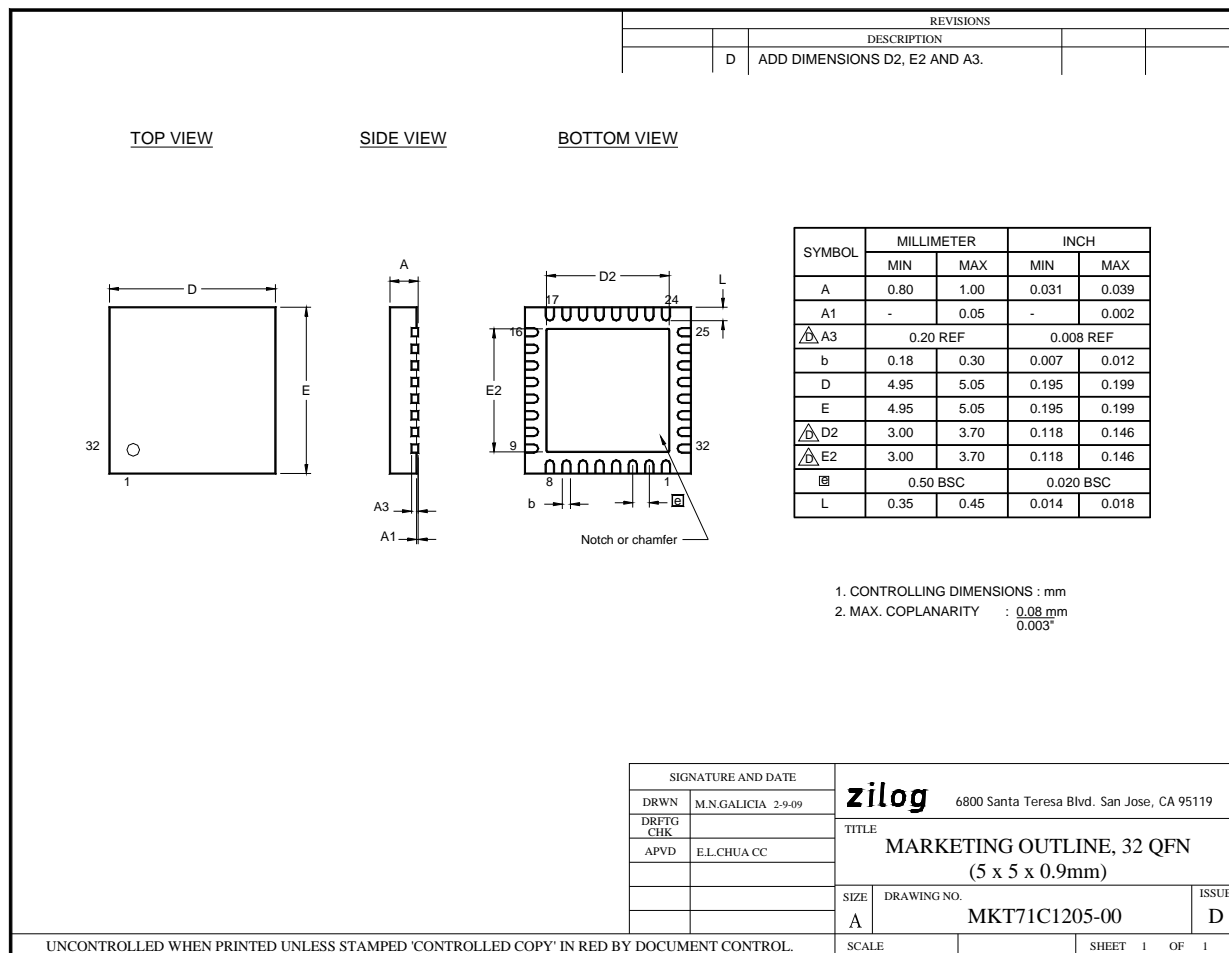
Marketing Outline, 20-Lead QFN



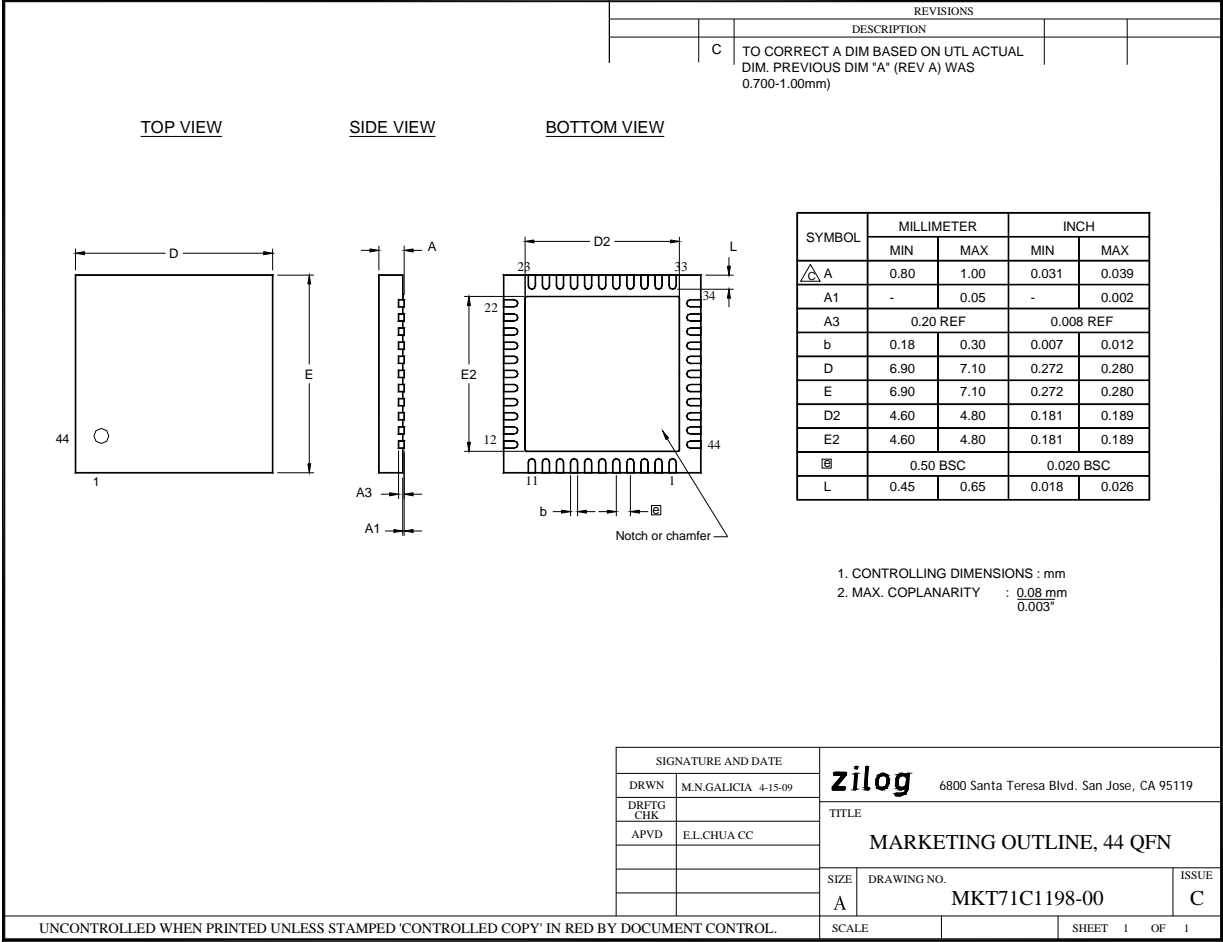
Marketing Outline, 28-Lead QFN



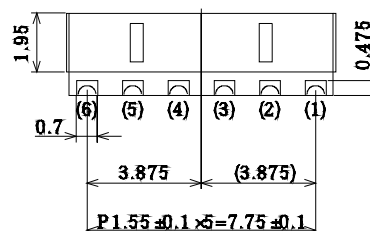
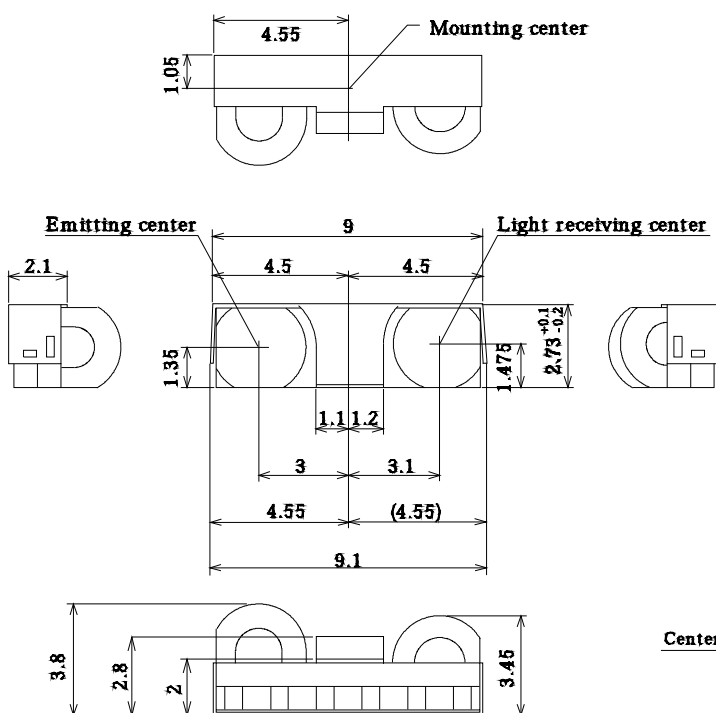
Marketing Outline, 32-Lead QFN



Marketing Outline, 44-Lead QFN



ZHX1810



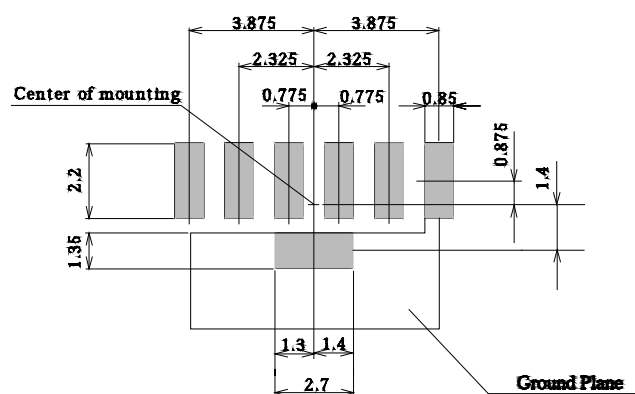
PIN	FUNCTION	PIN	FUNCTION
1	LEDA	4	SD
2	TXD	5	VCC
3	RXD	6	GND
		—	TAB

Note: The Shield tab must be soldered to the ground plane.

Devices will be marked ZHX1810.

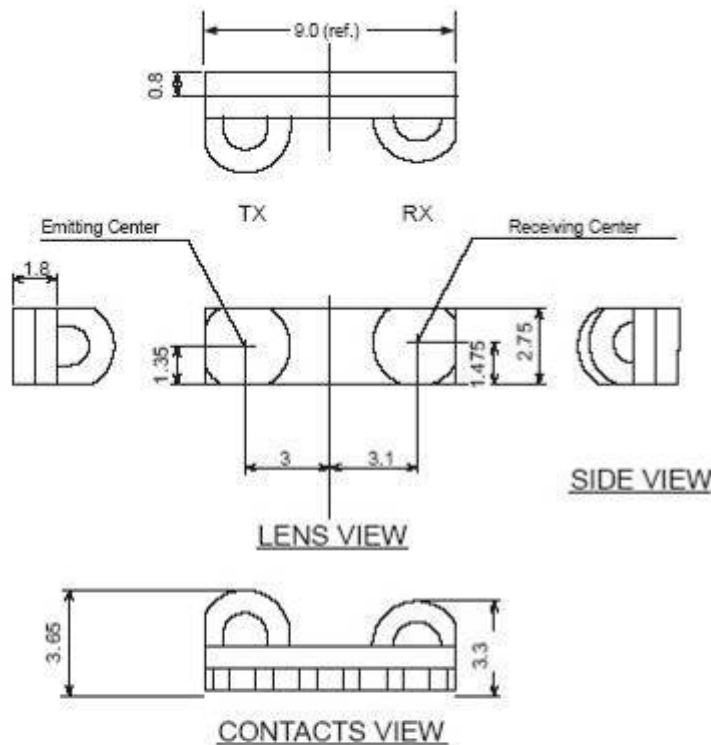
Tolerances for 0.x or 0.xx are +/- 0.25 mm

Tolerance for 0.xxx is +/- 0.13 mm



**Recommended Reflow
Solder Pad Layout**

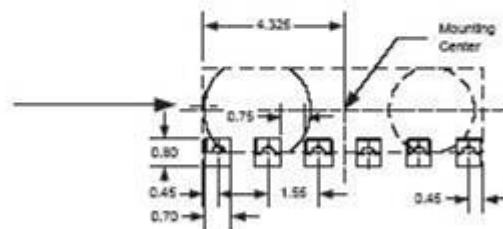
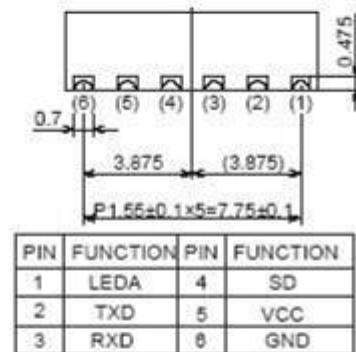
ZHX1820



This style does not have side solder vias

Units: mm
Tolerance: +/- 0.2

Note that this style has a larger emitter lens than receive lens



Top Look Solder Pad layout

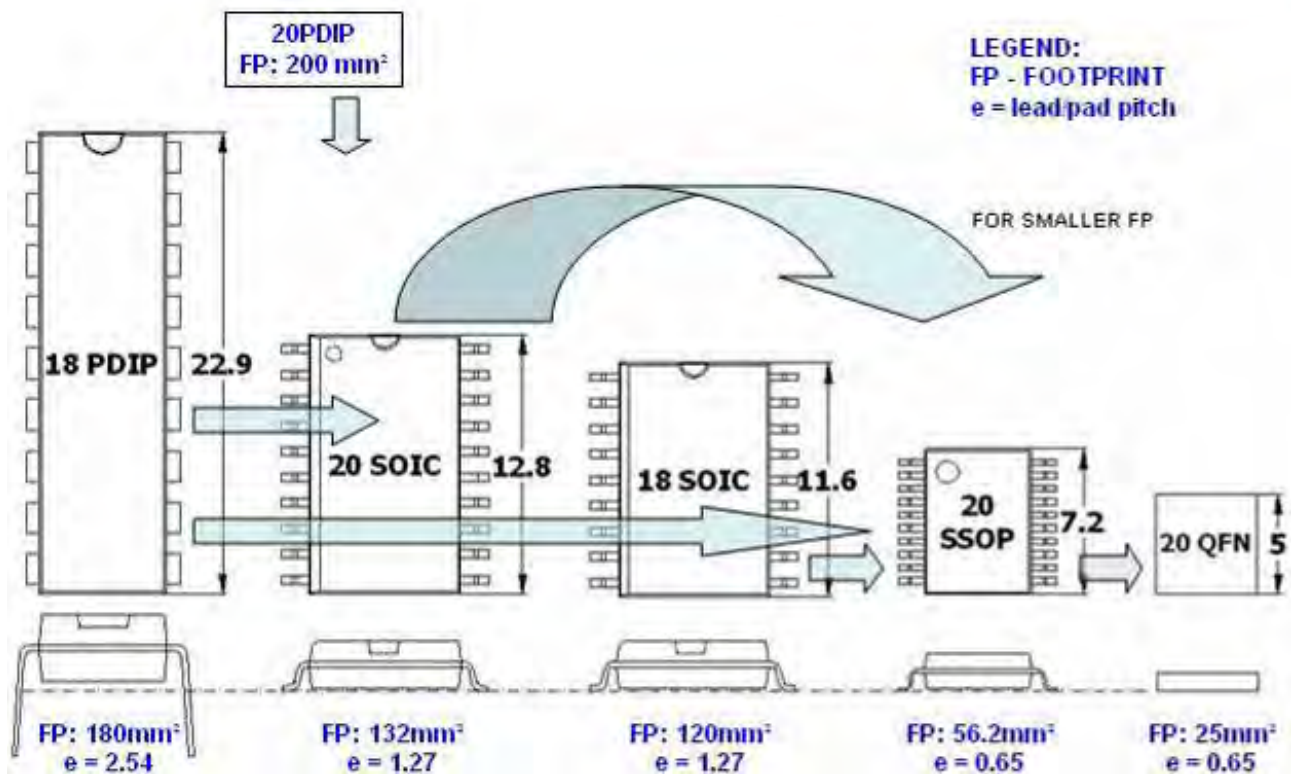
Packing Quantity

Unit Packing			
Lead Type	Quantity	Tape & Reel	Dry Pack
PDIP 8 LEAD	50/RAIL		
PDIP 18 LEAD	20/RAIL		
PDIP 20 LEAD	18/RAIL		
PDIP 28 LEAD	15/RAIL		
PDIP 40 LEAD	10/RAIL		
PDIP 48 LEAD	8/RAIL		
SDIP 64 LEAD	8/RAIL		
PLCC 28 LEAD	39/RAIL	750/REEL	936/BAG
PLCC 44 LEAD	25/RAIL	500/REEL	500/BAG
PLCC 68 LEAD	20/RAIL	250/REEL	400/BAG
PLCC 84 LEAD	15/RAIL	250/REEL	225/BAG
QFP 80L 14 x 20 x 2.7	66/TRAY	450/REEL	660/BAG
QFP 100L 14 x 20 x 2.7	66/TRAY	450/REEL	660/BAG
QFP 144L 28 x 28 x 3.42	24/TRAY		240/BAG
LQFP 32L 7x7x1.4	250/TRAY	2000/REEL	2500/BAG
LQFP 44L 10 x 10 x 1.4	160/TRAY	1500/REEL	1600/BAG
LQFP 64L 10 x 10x 1.4	160/TRAY	1500/REEL	1600/BAG
LQFP 64L 14 x 14 x 1.4	90/TRAY	1500/REEL	900/BAG
LQFP 100L 14 x 14 x1.4	90/TRAY	1500/REEL	900/BAG
LQFP 144L 20 x 20 x 1.4	60/TRAY		600/BAG
SOIC 8L 150 mil	96/RAIL	3000/REEL	
SOIC 18L 300 mil	40/RAIL	2000/REEL	
SOIC 20L 300 mil	38/RAIL	1700/REEL	
SOIC 28L 300 mil	27/RAIL	1700/REEL	
SSOP 20L 5.3 mm	67/RAIL	2000/REEL	
SSOP 28L 5.3 mm	47/RAIL	2000/REEL	
SSOP 48L	30/RAIL	1000/REEL	
144 LBGA 13 X 13	160/TRAY		1600/BAG
QFN 8L 5x6x0.9	490/TRAY		4900/BAG
QFN 20L 5x5x0.9	490/TRAY		4900/BAG
QFN 28L 5x5x0.9	490/TRAY		4900/BAG
QFN 32L 5x5x0.9	490/TRAY		4900/BAG
QFN 44L 7X7	260/TRAY	3000	2600/TRAY
IRDA			
ZHX1810		2000/REEL	
ZHX1820		2000/REEL	
For SRTR packing requirement		500/REEL	

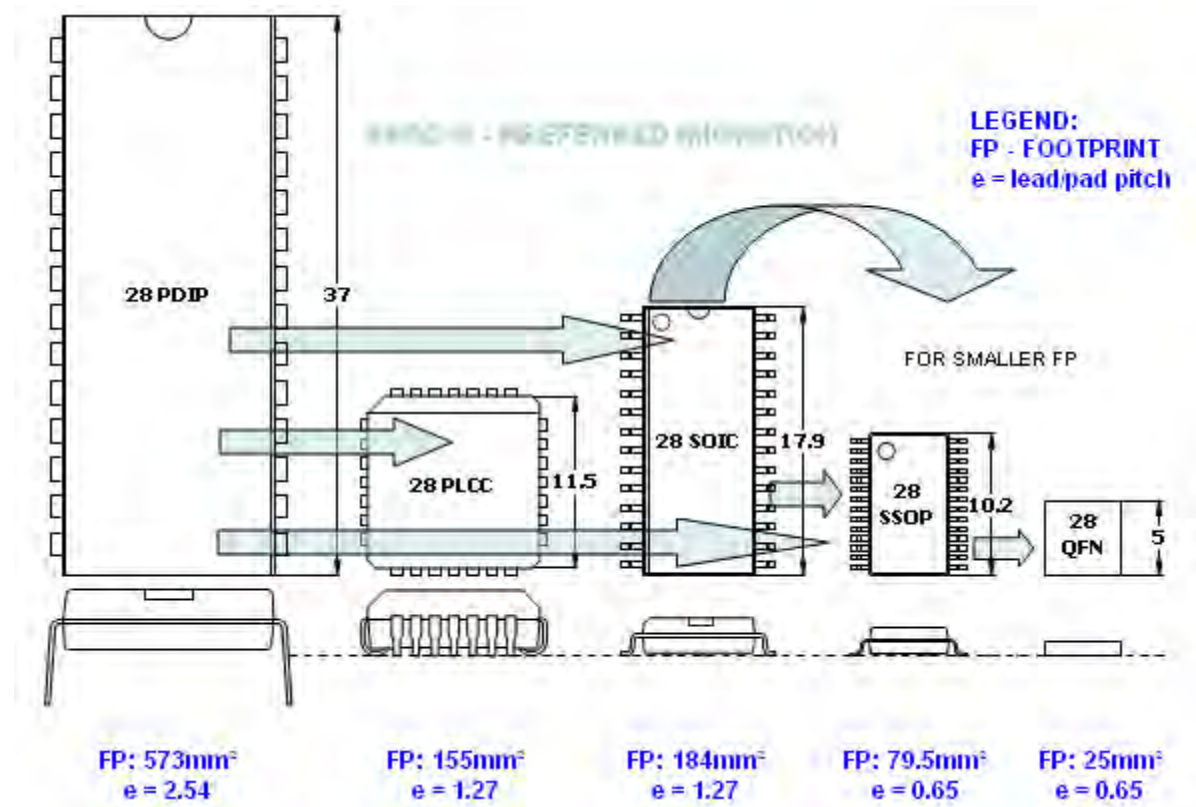
Package Migration

18/20-Lead PDIP Migration

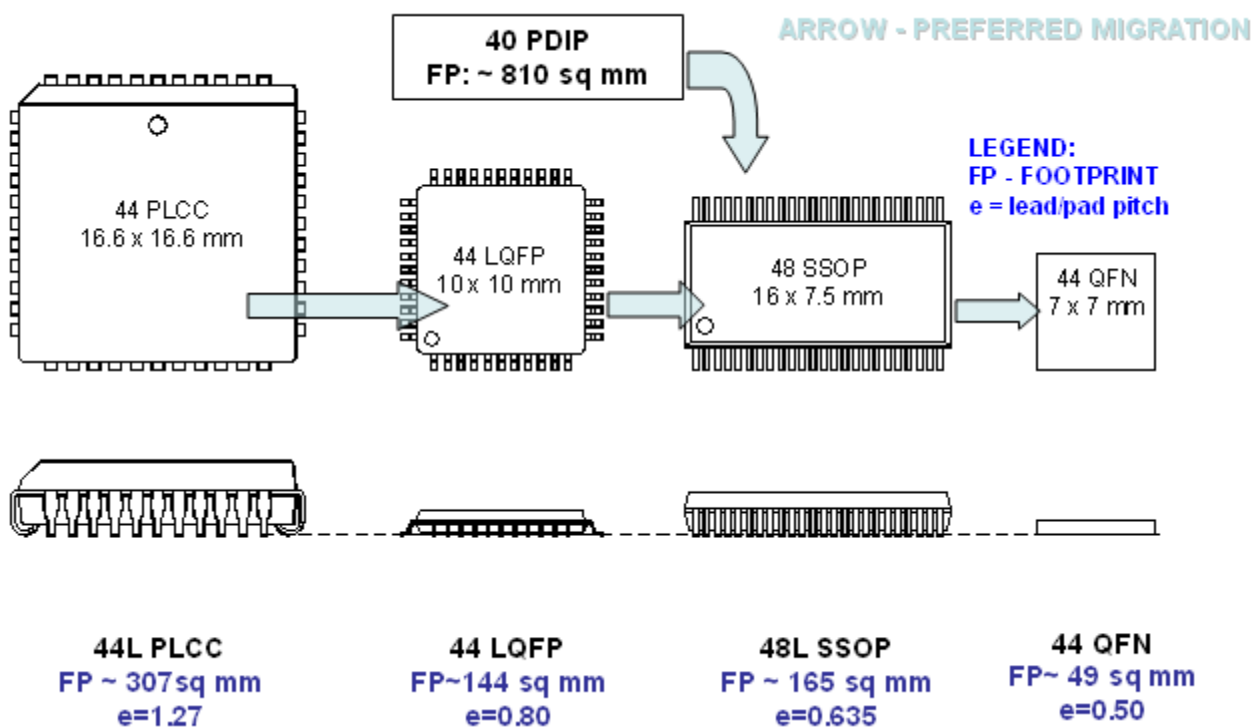
Arrow: Preferred Migration



28-Lead PDIP Migrations



40/44/48-Lead Migration



100/144-Lead Migration

