



Packaging

Product Specification

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Ordering Codes

Orders placed for ZiLOG components must include the component part number as shown in Figure 1, Figure 2 (page 2), or Figure 3 (page 3). The part number in Figure 1 consists of a “Z,” followed by a six-character alphanumeric product identifier, a two-letter package designator, a three-digit speed designator, a letter identifying the operating temperature range, and a letter identifying the environmental flow. If the component is a ROM device, an “R” follows the environmental flow designator with a four-character alphanumeric special lot code.

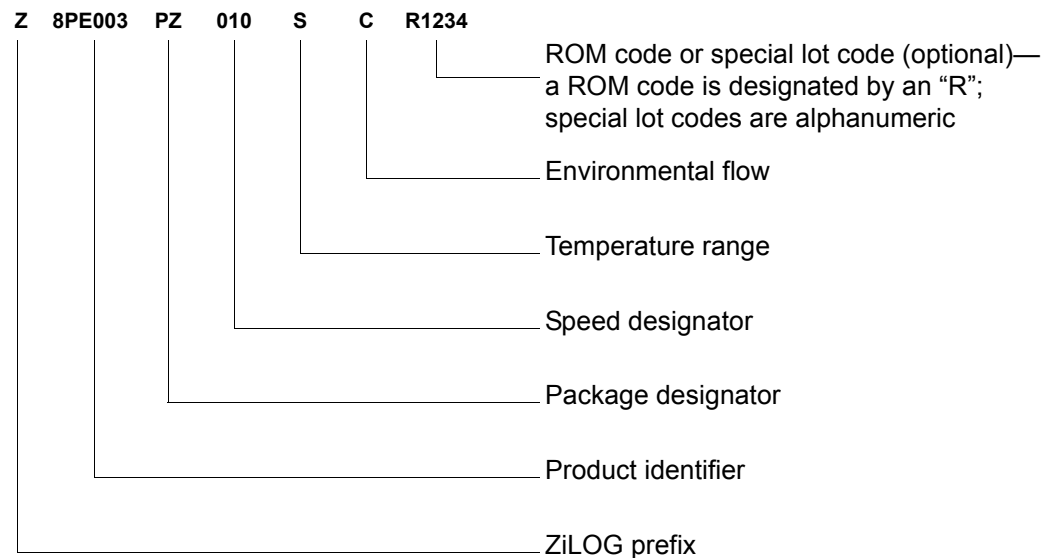


Figure 1. Current Part-Numbering Scheme

Package Designators

- AZ = Low-Profile Quad Flat Package
- FZ = Plastic Quad Flat Package
- HZ = Shrink Small Outline Package
- NA = Low-Profile Ball Grid Array (LBGA)
- NP = Ball Grid Array—Plastic
- PZ = Plastic Dual In-Line Package
- QN = Quad Flat No Lead (QFN)
- SZ = Small Outline Integrated Circuit
- VZ = Plastic Leadless Chip Carrier

Temperature Range

E = Extended Temperature: $-40\text{ }^{\circ}\text{C}$ to $+105\text{ }^{\circ}\text{C}$

S = Standard Temperature: $0\text{ }^{\circ}\text{C}$ to $+70\text{ }^{\circ}\text{C}$

Environmental Flow

C = Plastic Standard

D = Plastic Stressed

G = Green Package

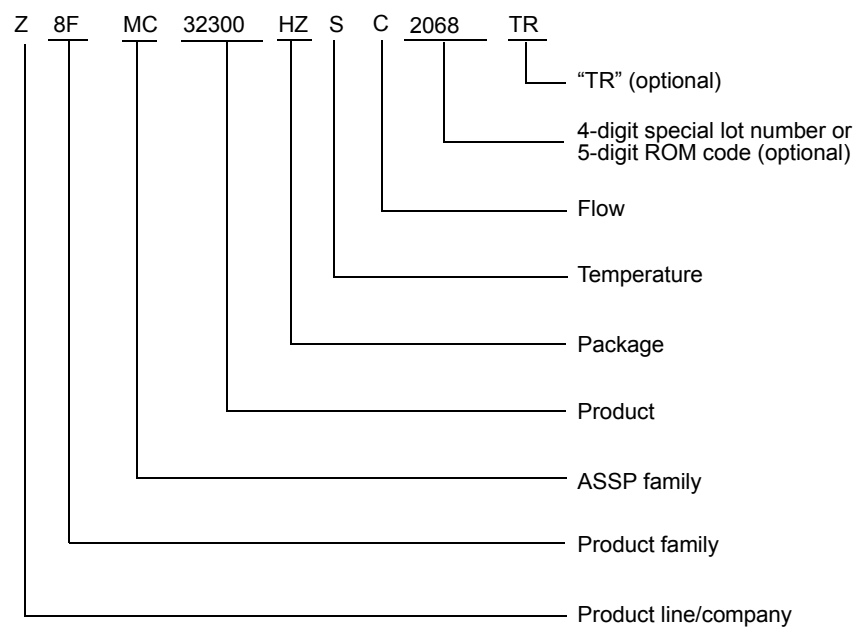


Figure 2. Motor Control Part-Numbering Scheme

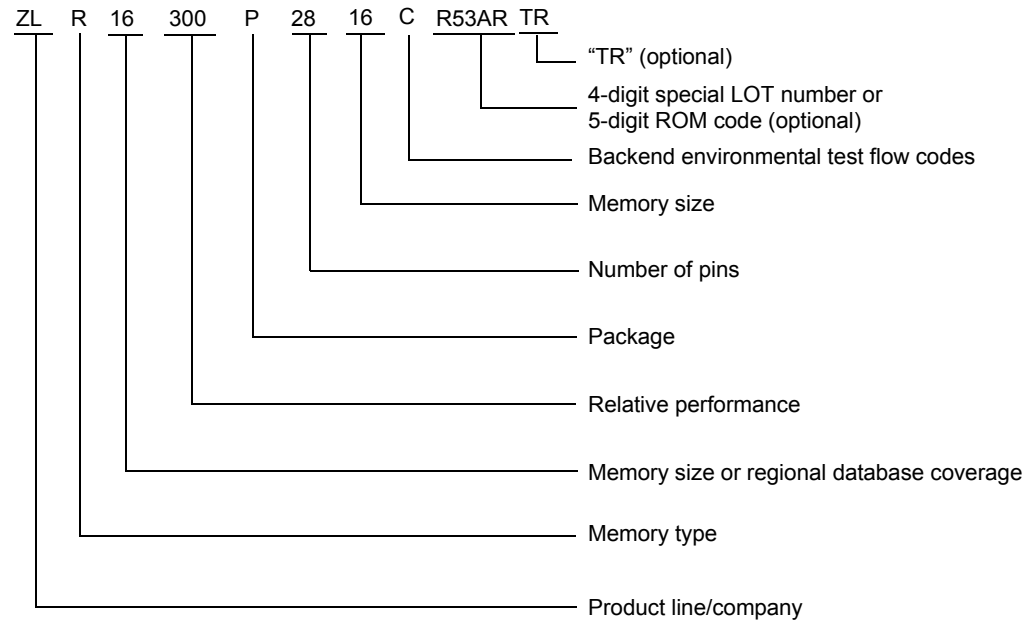


Figure 3. IR Part-Numbering Scheme

Figure 4 shows the previous part-numbering scheme. The previous part number consisted of a "Z," followed by a five-character alphanumeric product identifier, a two-digit speed designator, a letter identifying the package, a letter identifying the operating temperature range, and a letter identifying the environmental flow. If the component is a ROM device, an "R" follows the environmental flow designator with a four-character alphanumeric special lot code.

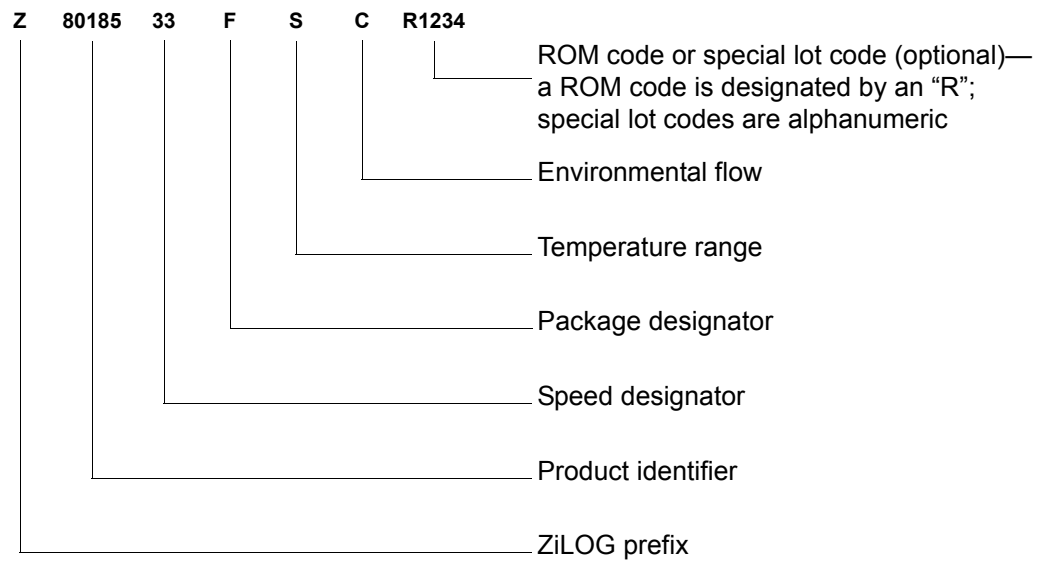


Figure 4. Previous Part-Numbering Scheme

Package Designators

- A = Low-Profile Quad Flat Package
- F = Plastic Quad Flat Package
- H = Shrink Small Outline Package
- P = Plastic Dual In-Line Package
- S = Small Outline Integrated Circuit
- V = Plastic Leaded Chip Carrier

Temperature Range

Same as previous. See page 2.

Environmental Flow

Same as previous. See page 2.

Tape, Reel, Tray, and Tube Counts

Lead Type	Unit Packing Quantity	Tape and Reel	Dry Pack
PDIP 8 LEAD	50/RAIL		
PDIP 14 LEAD	25/RAIL		
PDIP 18 LEAD	20/RAIL		
PDIP 20 LEAD	18/RAIL		
PDIP 22 LEAD	17/RAIL		
PDIP 28 LEAD	15/RAIL		
PDIP 40 LEAD	10/RAIL		
PDIP 48 LEAD	8/RAIL		
SDIP 42 LEAD	15/RAIL		
SDIP 52 LEAD	10/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 44L 10 x 10 x 2.0	96/TRAY	750/REEL	960/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 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

Lead Type	Unit Packing Quantity	Tape and Reel	Dry Pack
SOIC 8L 150 mil	96/RAIL		9600/BAG
SOIC 18L 300 mil	40/RAIL	2000/REEL	1000/BAG
SOIC 20L 300 mil	38/RAIL	1800/REEL	950/BAG
SOIC 28L 300 mil	27/RAIL	1800/REEL	1080/BAG
SSOP 20L 5.3 mm	67/RAIL	2000/REEL	1675/BAG
SSOP 28L 5.3 mm	47/RAIL	2000/REEL	1175/BAG
SSOP 48L	30/RAIL	1000/REEL	1200/BAG
144 LBGA 13 X 13	160/TRAY		

Solderability

Unless otherwise noted, the solderability uses MIL-STD-883C Method 2003.5, eight hours steam age.

Mark Permanency (For Ink Mark)

Unless otherwise noted, the following applies:

3X soak into Alpha 2110 at 63–70 °C

30 seconds duration each soak

Mech. brush after each soak

Plastic Dual In-Line Packages (PDIPs)

ZiLOG offers 8-lead (Figure 5), 14-lead (Figure 6 on page 8), 18-lead (Figure 7 on page 9), 20-lead (Figure 8 on page 10), 22-lead (Figure 9 on page 11), 28-lead (Figure 10 on page 12), 40-lead (Figure 11 on page 13), and 48-lead (Figure 12 on page 14) PDIPs.

► **Note:** ZiLOG does not recommend this package for new designs. ZiLOG recommends using the 8-lead SOIC package (Figure 30 on page 32) instead.

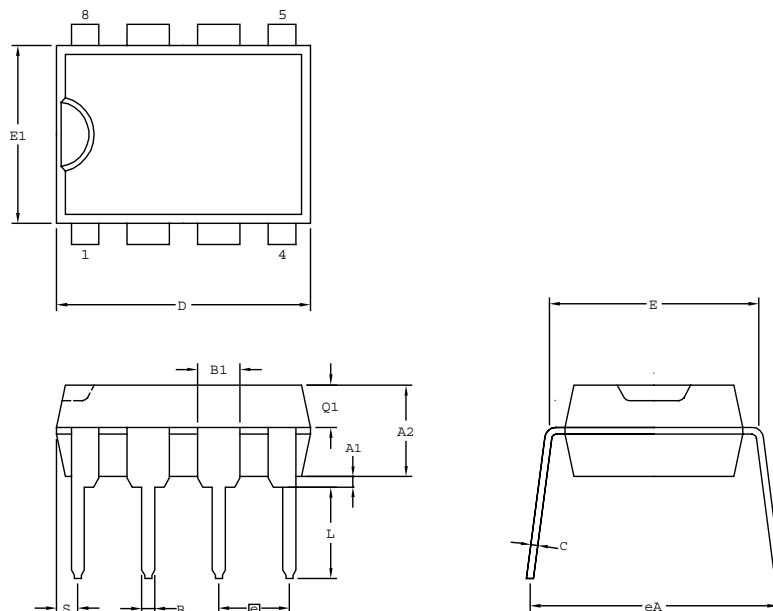
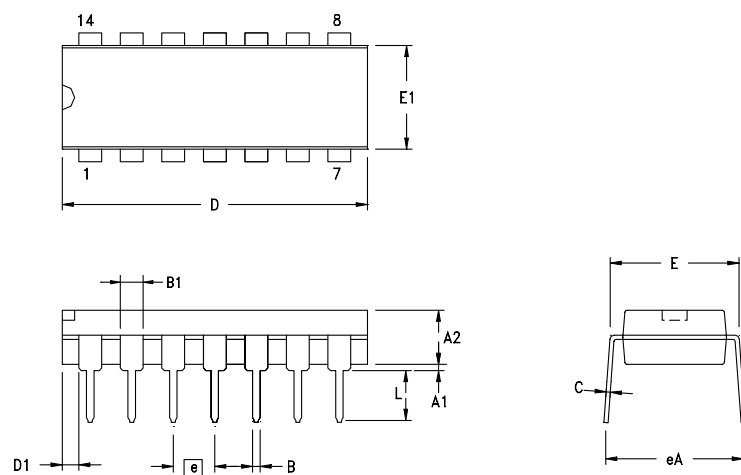


Figure 5. 8-Lead Plastic Dual In-Line Package

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	6.60	0.240	0.260
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
S	0.64	0.89	0.025	0.035

CONTROLLING DIMENSIONS : MM.

► **Note:** ZiLOG does not recommend this package for new designs.

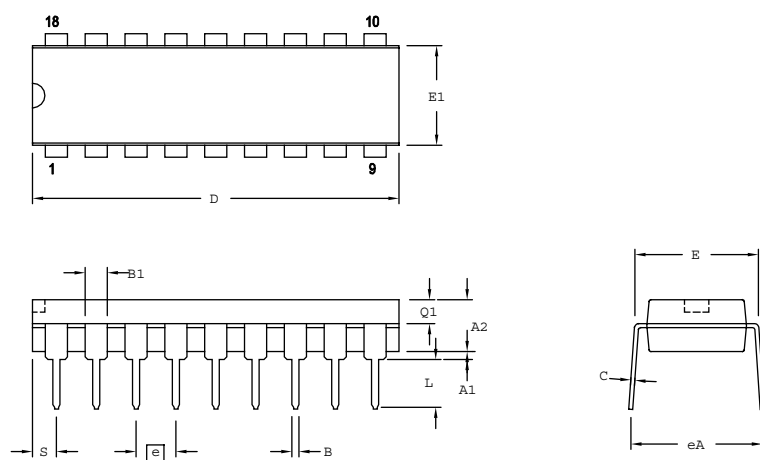


SYMBOL	MILLIMETER		INCH	
	MIN	MAX	MIN	MAX
A1	0.38	—	.015	—
A2	3.25	3.43	.128	.135
B	0.36	0.53	.014	.021
B1	1.14	1.78	.045	.070
C	0.20	0.36	.008	.014
D	18.67	19.69	.735	.775
E	7.62	8.26	.300	.325
E1	6.22	6.48	.245	.255
e	2.54	BSC	.100	BSC
eA	7.87	9.14	.310	.360
L	3.18	3.81	.125	.150
D1	1.27	—	.005	—

CONTROLLING DIMENSIONS: INCH

Figure 6. 14-Lead Plastic Dual In-Line Package

► **Note:** ZiLOG does not recommend this package for new designs. ZiLOG recommends using the 20-lead SOIC package (Figure 32 on page 34) or 20-lead SSOP (Figure 34 on page 36) instead.

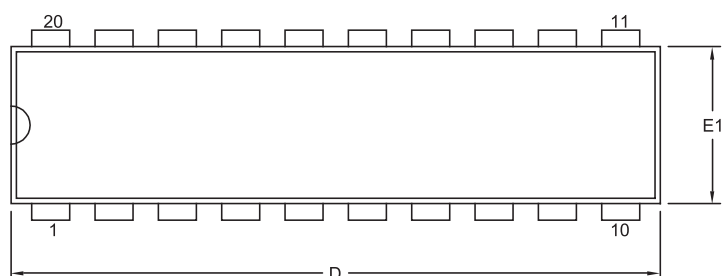


SYMBOL	MILLIMETER		INCH	
	MIN	MAX	MIN	MAX
A1	0.51	0.81	.020	.032
A2	3.25	3.43	.128	.135
B	0.38	0.53	.015	.021
B1	1.14	1.65	.045	.065
C	0.23	0.38	.009	.015
D	22.35	23.37	.880	.920
E	7.62	8.13	.300	.320
E1	6.22	6.48	.245	.255
e	2.54 BSC		.100 BSC	
eA	7.87	9.40	.310	0.370
L	3.18	3.81	.125	.150
Q1	1.47	1.65	.058	.065
S	0.89	1.65	.035	.065

CONTROLLING DIMENSIONS : INCH

Figure 7. 18-Lead Plastic Dual In-Line Package

- **Note:** ZiLOG does not recommend this package for new designs. ZiLOG recommends using the 20-lead SOIC package (Figure 32 on page 34) instead.



SYMBOL	MILLIMETER		INCH	
	MIN	MAX	MIN	MAX
A1	0.38	0.81	0.015	0.032
A2	3.25	3.68	0.128	0.145
B	0.41	0.51	0.016	0.020
B1	1.27	1.78	0.050	0.070
C	0.20	0.30	0.008	0.012
D	25.40	26.92	1.000	1.060
E	7.49	8.26	0.295	0.325
E1	6.10	6.65	0.240	0.262
Ⓢ	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	1.42	1.65	0.056	0.065

CONTROLLING DIMENSIONS : INCH

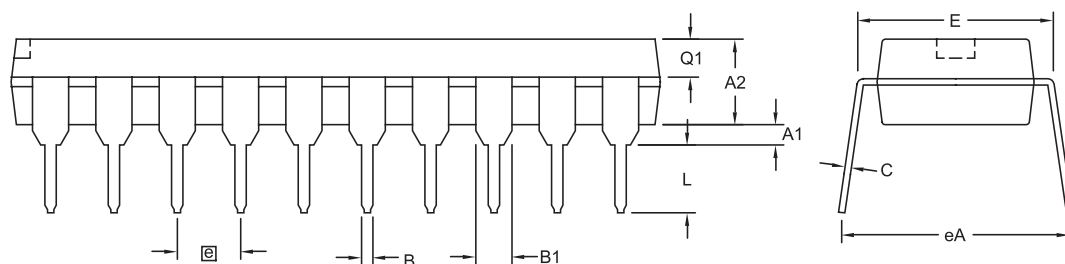
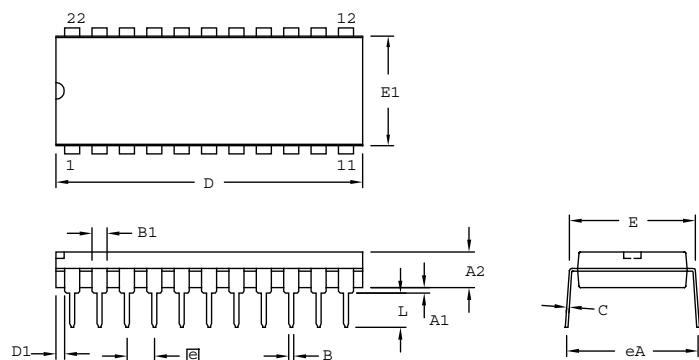


Figure 8. 20-Lead Plastic Dual In-Line Package

► **Note:** ZiLOG does not recommend this package for new designs.

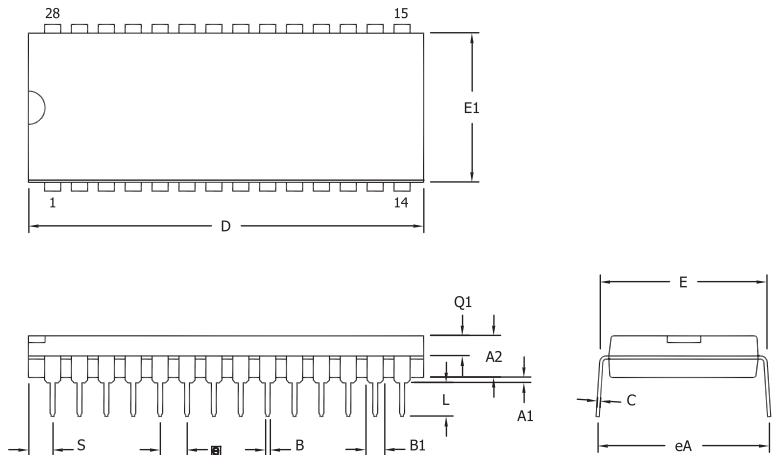


SYMBOL	MILLIMETER		INCH	
	MIN	MAX	MIN	MAX
A1	0.38	1.02	0.015	0.040
A2	3.68	3.94	0.145	0.155
B	0.36	0.56	0.014	0.022
B1	1.14	1.65	0.045	0.065
C	0.23	0.38	0.009	0.015
D	27.60	28.45	1.065	1.120
E	9.91	10.80	0.390	0.425
E1	8.38	9.40	0.330	0.370
e	2.54 BSC		0.100 BSC	
eA	10.67	11.94	0.420	0.470
L	2.92	4.10	0.115	0.160
D1	0.13	-	0.005	-

CONTROLLING DIMENSIONS: INCH

Figure 9. 22-Lead Plastic Dual In-Line Package

► **Note:** See preferred package migration on page 53.



SYMBOL	OPT #	MILLIMETER		INCH	
		MIN	MAX	MIN	MAX
A1		0.38	1.02	.015	.040
A2		3.18	4.19	.125	.165
B		0.38	0.53	.015	.021
B1	01	1.40	1.65	.055	.065
	02	1.14	1.40	.045	.055
C		0.23	0.38	.009	.015
D	01	36.58	37.34	1.440	1.470
	02	35.31	35.94	1.390	1.415
E		15.24	15.75	.600	.620
E1	01	13.59	14.10	.535	.555
	02	12.83	13.08	.505	.515
e		2.54 TYP		.100 BSC	
eA		15.49	16.76	.610	.660
L		3.05	3.81	.120	.150
Q1	01	1.40	1.91	.055	.075
	02	1.40	1.88	.055	.074
S	01	1.52	2.29	.060	.090
	02	1.02	1.52	.040	.060

CONTROLLING DIMENSIONS : INCH

OPTION TABLE	
OPTION #	PACKAGE
01	STANDARD
02	IDF

Note: ZILOG supplies both options for production, Component layout
PCB design should cover bigger option 01.

Figure 10. 28-Lead Plastic Dual In-Line Package

► **Note:** See preferred package migration on page 54.

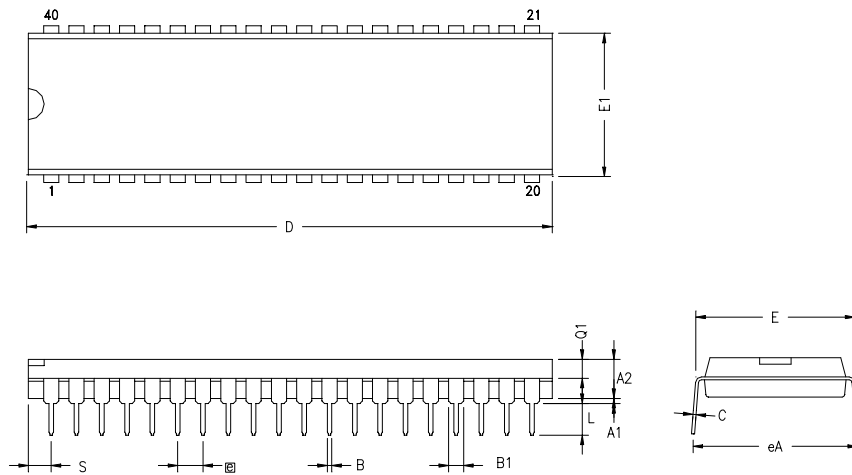


Figure 11. 40-Lead Plastic Dual In-Line Package

SYMBOL	MILLIMETER		INCH	
	MIN	MAX	MIN	MAX
A1	0.51	1.02	.020	.040
A2	3.18	3.94	.125	.155
B	0.38	0.53	.015	.021
B1	1.02	1.52	.040	.060
C	0.23	0.38	.009	.015
D	52.07	52.58	2.050	2.070
E	15.24	15.75	.600	.620
E1	13.59	14.22	.535	.560
⌀	2.54 TYP		.100 TYP	
eA	15.49	16.76	.610	.660
L	3.05	3.81	.120	.150
Q1	1.40	1.91	.055	.075
S	1.52	2.29	.060	.090

CONTROLLING DIMENSIONS : INCH

► **Note:** ZiLOG does not recommend this package for new designs.

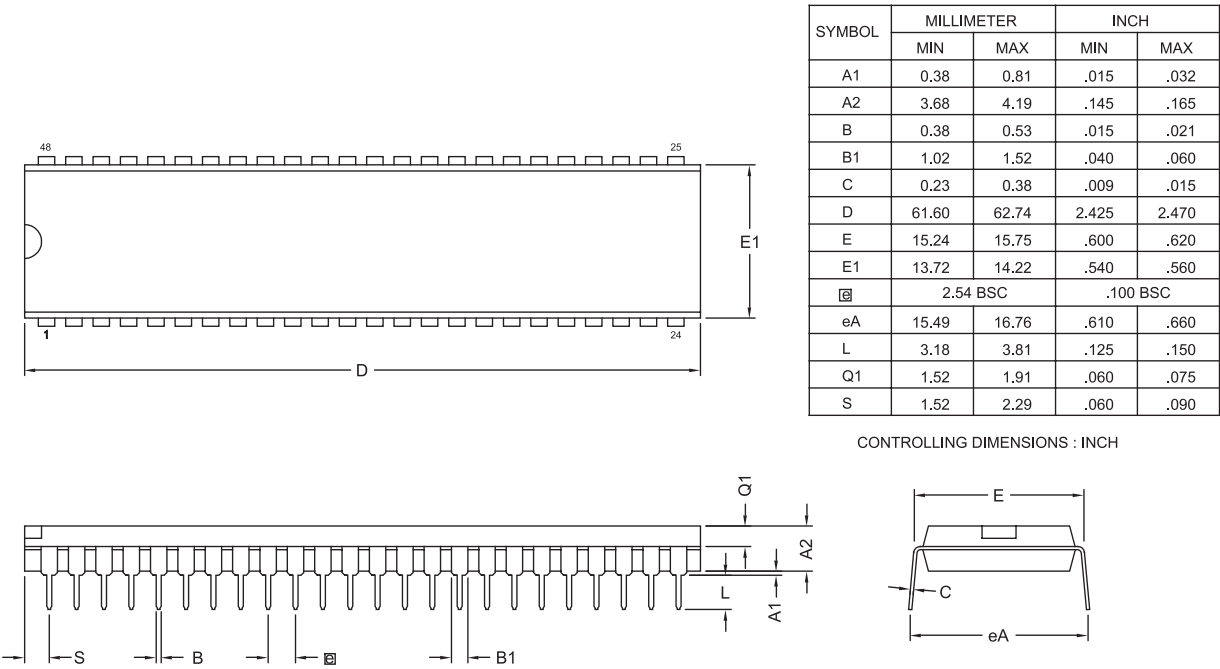
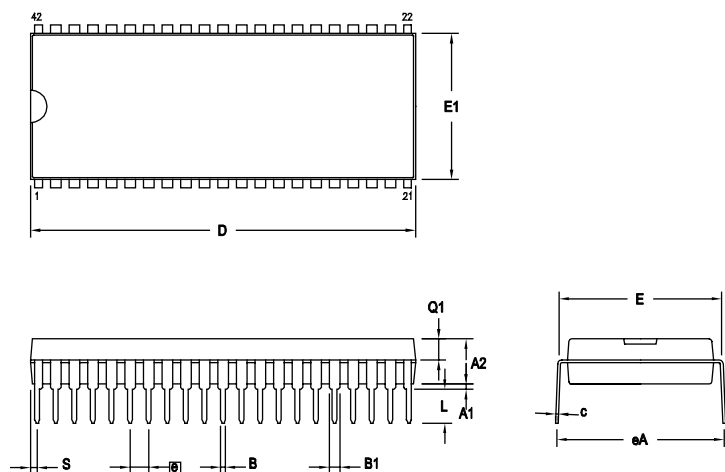


Figure 12. 48-Lead Plastic Dual In-Line Package

Shrink Dual In-Line Packages (SDIPs)

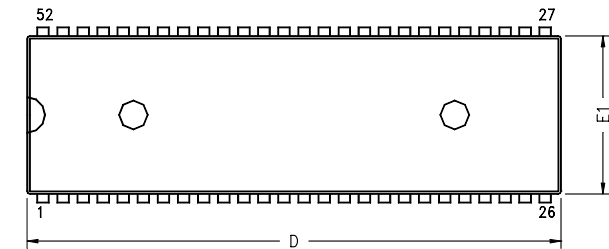
ZiLOG offers 42-lead (Figure 13), 52-lead (Figure 14 on page 16), and 64-lead (Figure 15 on page 17) SDIPs.



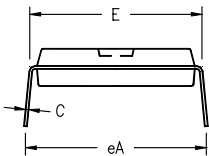
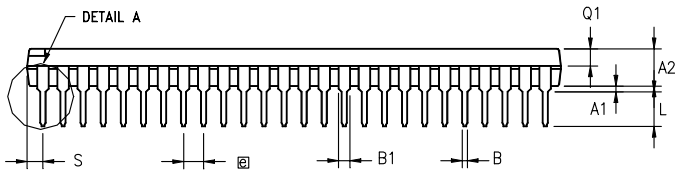
SYMBOL	MILLIMETER		INCH	
	MIN	MAX	MIN	MAX
A1	0.51		0.020	
A2	3.25	3.94	0.128	0.155
B	0.38	0.56	0.015	0.022
B1	0.89	1.14	0.035	0.045
C	0.20	0.30	0.008	0.012
D	36.70	36.96	1.445	1.455
E	15.24	15.75	0.600	0.620
E1	13.59	13.97	0.535	0.550
Ⓢ	1.778 TYP		.070 TYP	
eA	15.49	17.02	0.610	0.670
L	3.05	3.43	0.120	0.135
Q1	1.40	1.91	0.055	0.075
S	0.51	0.76	0.020	0.030

CONTROLLING DIMENSIONS : INCH

Figure 13. 42-Lead Shrink Dual In-Line Package



SYMBOL	MILLIMETER		INCH	
	MIN	MAX	MIN	MAX
A1	0.51	—	0.020	—
A2	3.25	3.94	0.128	0.155
B	0.38	0.53	0.015	0.021
B1	0.89	1.14	0.035	0.045
C	0.23	0.38	0.009	0.015
D	—	47.50	—	1.870
E	15.24	15.75	0.600	0.620
E1	13.72	14.10	0.540	0.555
e	1.778 TYP		.070 TYP	
eA	15.49	16.76	0.610	.660
L	3.05	3.68	0.120	0.145
Q1	1.40	1.91	0.055	0.075
S	0.64	1.78	0.025	0.070



CONTROLLING DIMENSION IN INCH

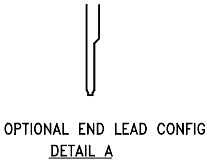
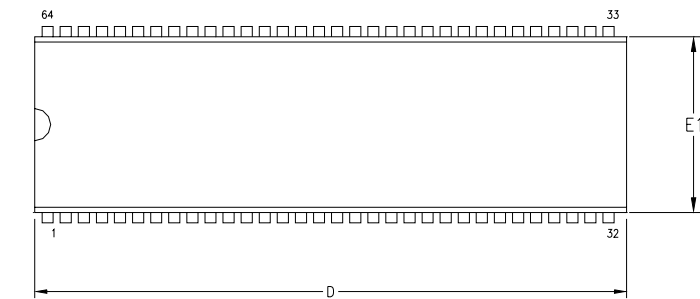


Figure 14. 52-Lead Shrink Dual In-Line Package

► **Note:** ZiLOG does not recommend this package for new designs.



SYMBOL	MILLIMETER		INCH	
	MIN	MAX	MIN	MAX
A1	0.38	1.07	.015	.042
A2	3.68	3.94	.145	.155
B	0.38	0.53	.015	.021
B1	0.94	1.09	.037	.043
C	0.23	0.38	.009	.015
D	57.40	58.17	2.260	2.290
E	18.80	19.30	.740	.760
E1	16.76	17.27	.660	.680
□	1.78 BSC		0.070 BSC	
eA	19.30	20.32	.760	.800
L	3.18	3.81	.125	.150
Q1	1.65	1.91	.065	.075
S	1.02	1.78	.040	.070

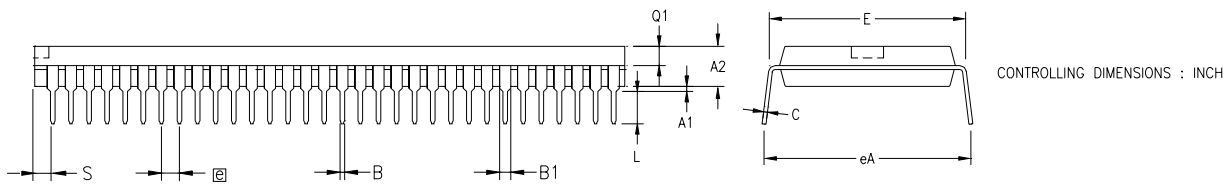


Figure 15. 64-Lead Shrink Dual In-Line Package

Plastic Leaded Chip Carriers (PLCCs)

ZiLOG offers 28-lead (Figure 16), 44-lead (Figure 17 on page 19), 68-lead (Figure 18 on page 20), and 84-lead (Figure 19 on page 21) PLCCs.

► **Note:** See preferred package migration on page 53.

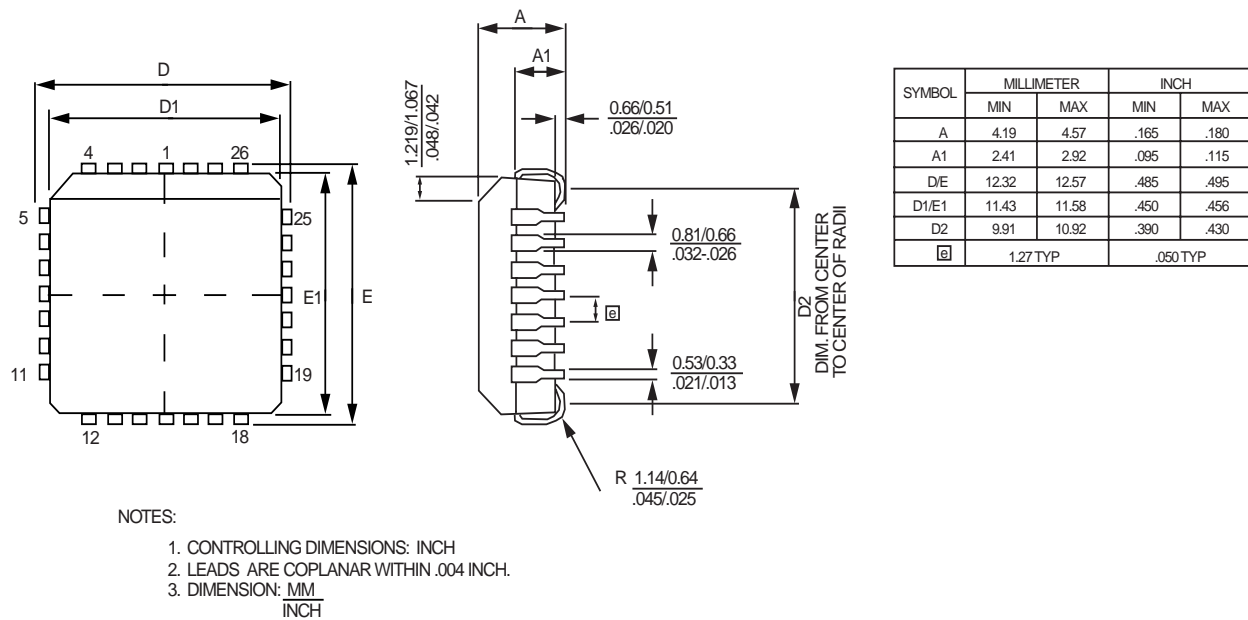


Figure 16. 28-Lead Plastic Leaded Chip Carrier

► **Note:** See preferred package migration on page 54.

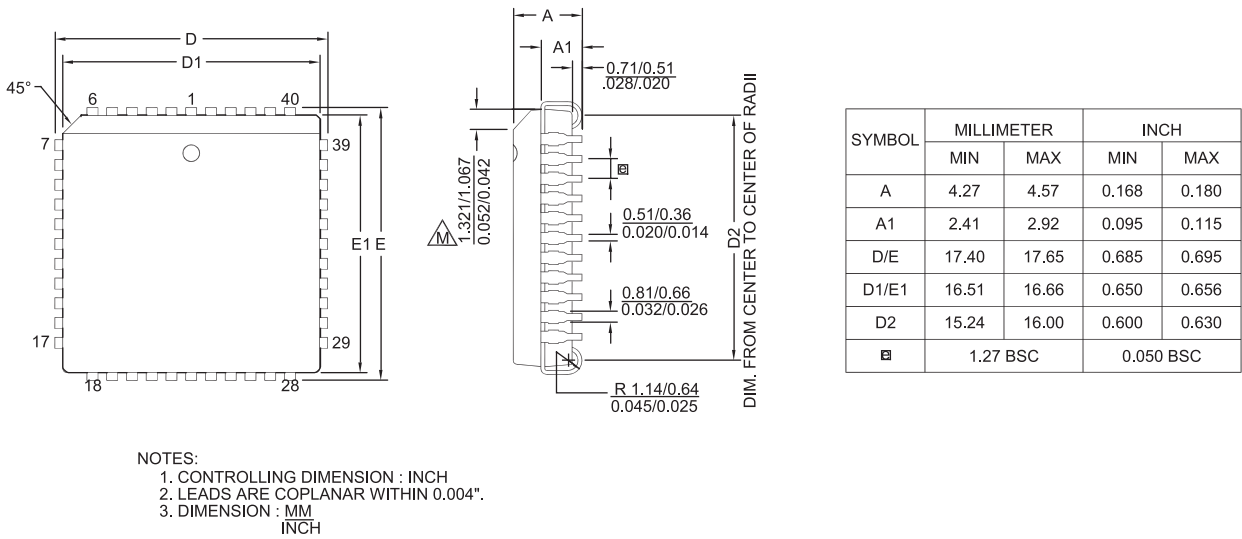
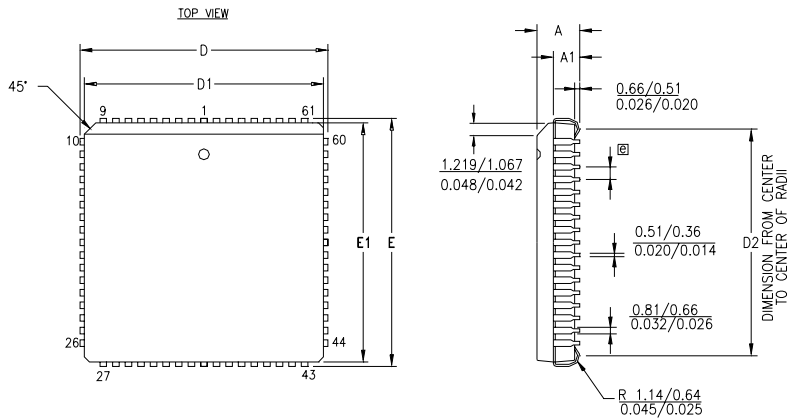


Figure 17. 44-Lead Plastic Leaded Chip Carrier



SYMBOL	MILLIMETER		INCH	
	MIN	MAX	MIN	MAX
A	4.32	4.57	.170	.180
A1	2.43	2.92	.095	.115
D/E	25.02	25.40	.985	1.000
D1/E1	24.13	24.33	.950	.958
D2	22.86	23.62	.900	.930
[e]	1.27 BSC		.050 BSC	

NOTE:
1. CONTROLLING DIMENSIONS : INCH.
2. LEADS ARE COPLANAR WITHIN 0.004 IN. RANGE.
3. DIMENSION : $\frac{\text{MM}}{\text{INCH}}$.

Figure 18. 68-Lead Plastic Leaded Chip Carrier

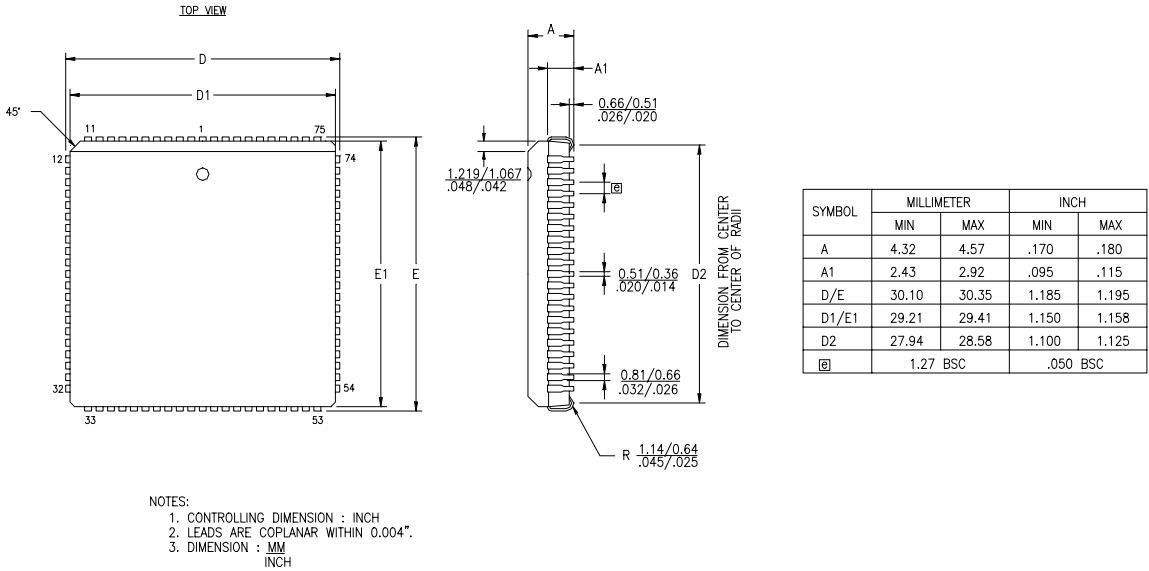


Figure 19. 84-Lead Plastic Leaded Chip Carrier

Low-Profile Quad Flat Packages (LQFPs)

ZiLOG offers 44-lead (Figure 20), 64-lead (Figure 21 on page 23 and Figure 22 on page 24), 100-lead (Figure 23 on page 25), and 144-lead (Figure 24 on page 26) low-profile quad flat packages.

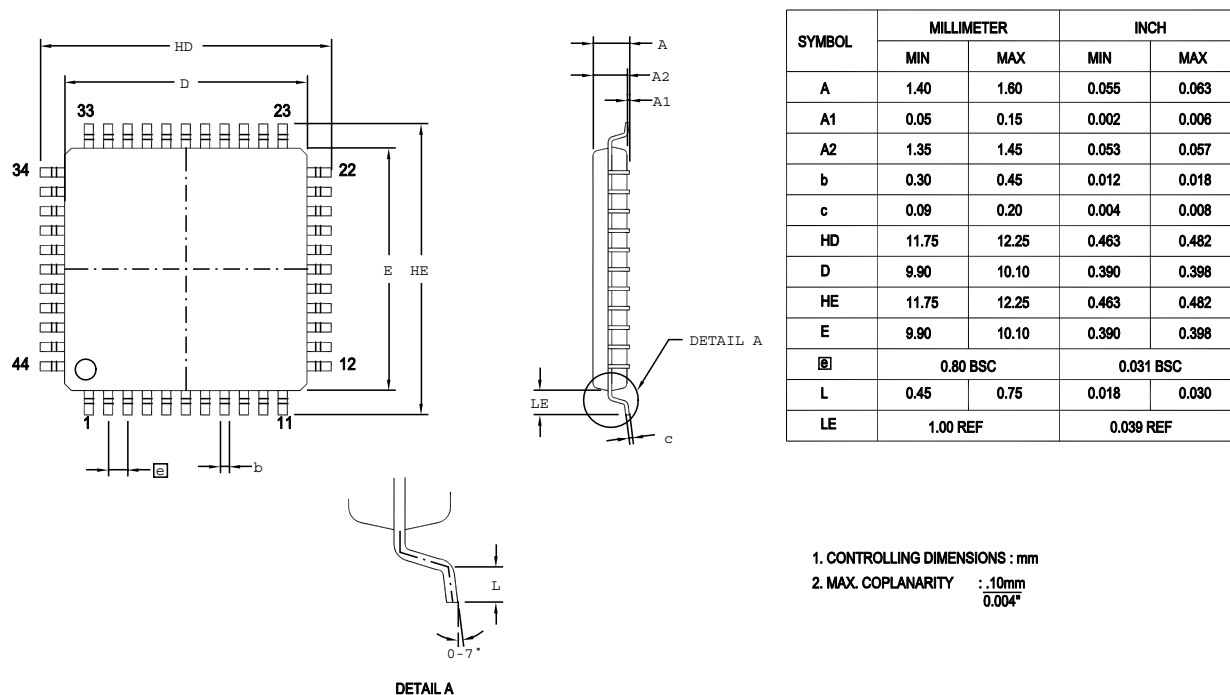
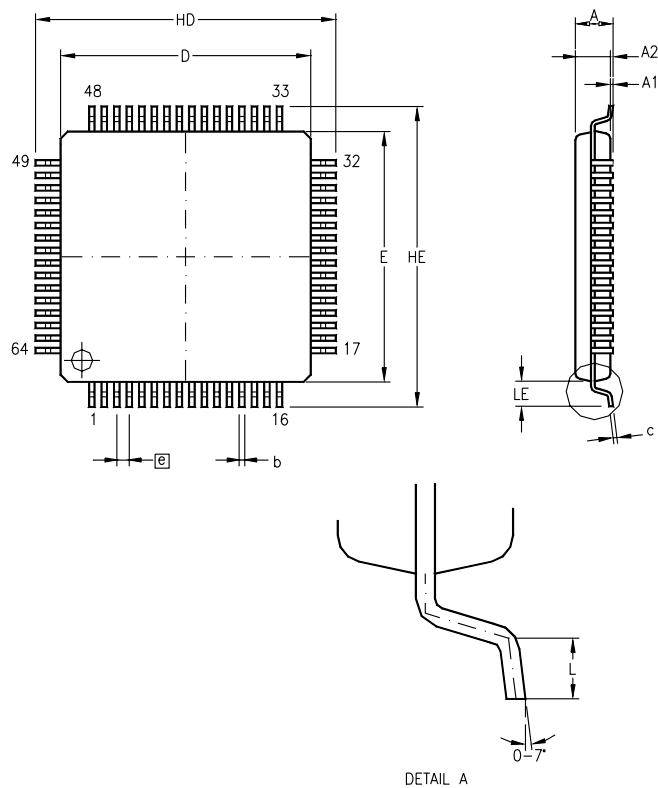


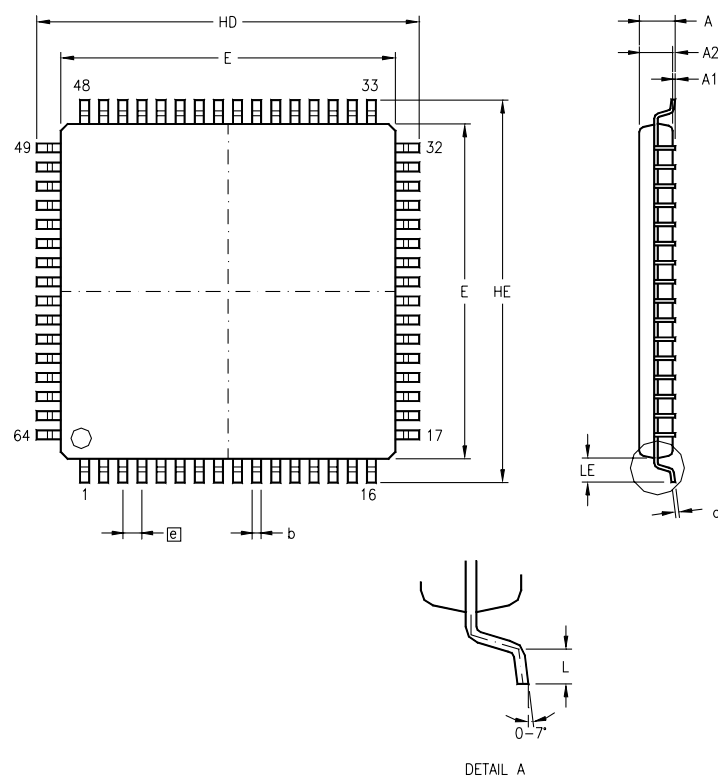
Figure 20. 44-Lead Plastic Low-Profile Quad Flat Package (10 x 10 x 1.4 mm)



SYMBOL	MILLIMETER		INCH	
	MIN	MAX	MIN	MAX
A	1.40	1.60	0.055	0.063
A1	0.05	0.15	0.002	0.006
A2	1.35	1.45	0.053	0.057
b	0.17	0.27	0.007	0.011
c	0.09	0.20	0.004	0.008
HD	11.75	12.25	0.463	0.482
D	9.90	10.10	0.390	0.398
HE	11.75	12.25	0.463	0.482
E	9.90	10.10	0.390	0.398
ⓐ	0.50 BSC		0.0197 BSC	
L	0.45	0.75	0.018	0.030
LE	1.00 REF		0.039 REF	

1. CONTROLLING DIMENSIONS : mm
2. MAX. COPLANARITY : $\frac{.10\text{mm}}{0.004"}$

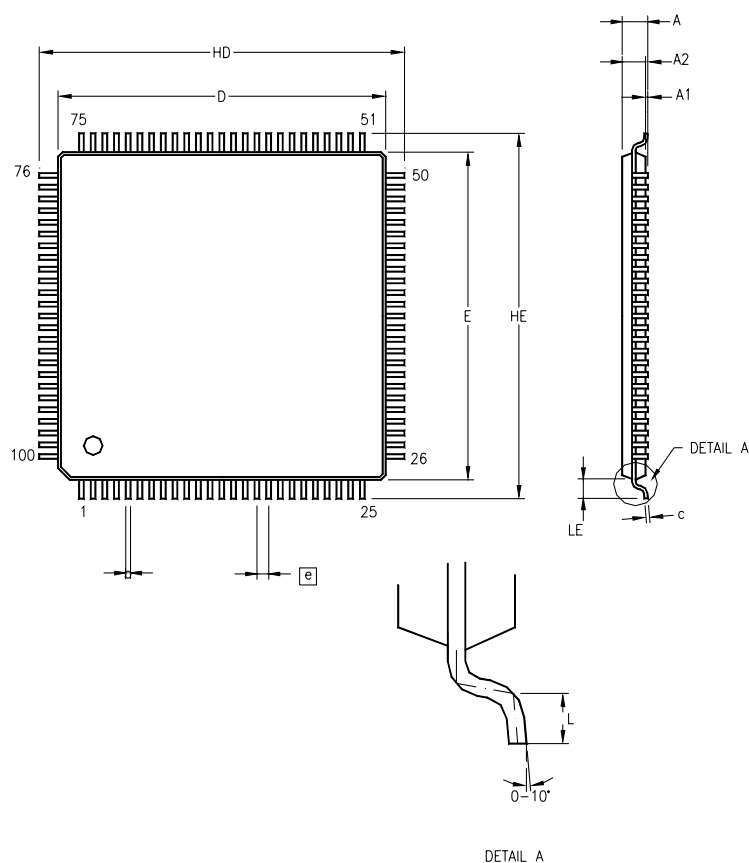
Figure 21. 64-Lead Plastic Low-Profile Quad Flat Package (10 x 10 x 1.4 mm)



SYMBOL	MILLIMETER		INCH	
	MIN	MAX	MIN	MAX
A	1.40	1.60	0.055	0.063
A1	0.05	0.15	0.002	0.006
A2	1.35	1.45	0.053	0.057
b	0.30	0.45	0.012	0.018
c	0.09	0.20	0.004	0.008
HD	15.80	16.20	0.622	0.638
D	13.90	14.10	0.547	0.555
HE	15.80	16.20	0.622	0.638
E	13.90	14.10	0.547	0.555
ⓐ	0.80 BSC		0.031 BSC	
L	0.45	0.75	0.018	0.030
LE	1.00 REF		0.039 REF	

1. CONTROLLING DIMENSIONS : mm
2. MAX. COPLANARITY : .10mm
0.004"

Figure 22. 64-Lead Plastic Low-Profile Quad Flat Package (14 x 14 x 1.4 mm)



SYMBOL	MILLIMETER		INCH	
	MIN	MAX	MIN	MAX
A	1.35	1.60	.053	.063
A1	0.05	0.20	.002	.008
A2	1.30	1.50	.051	.059
b	0.15	0.26	.006	.010
c	0.10	0.20	.004	.008
HD	15.85	16.15	.624	.636
D	13.90	14.10	.547	.555
HE	15.85	16.15	.624	.636
E	13.90	14.10	.547	.555
e	0.50 BSC		.0197 BSC	
L	0.35	0.65	.014	.026
LE	0.90	1.10	.035	.043

1. CONTROLLING DIMENSIONS : MM
2. MAX COPLANARITY : $\frac{.10\text{mm}}{.004}$

Figure 23. 100-Lead Plastic Low-Profile Quad Flat Package

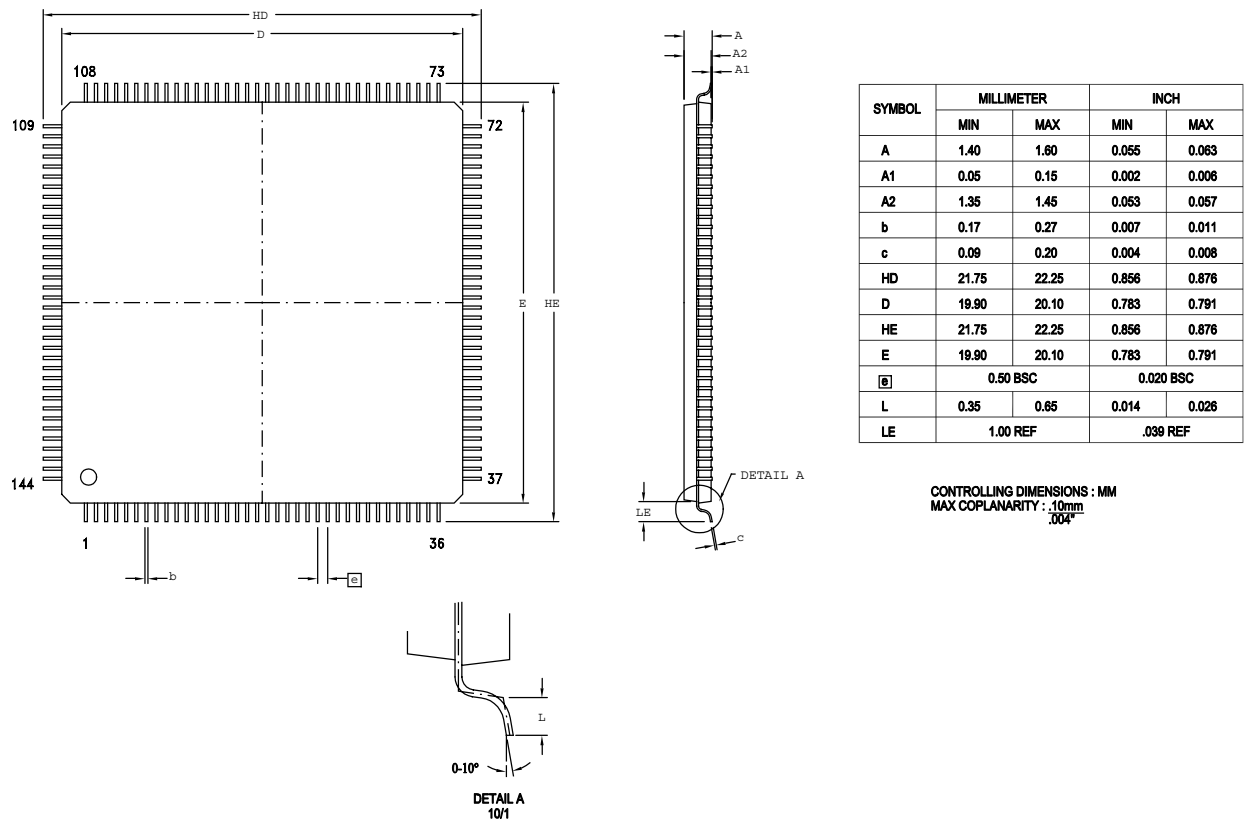


Figure 24. 144-Lead Plastic Low-Profile Quad Flat Package

Plastic Quad Flat Packages (QFPs)

ZiLOG offers 28 (Figure 25), 44-lead (Figure 26), 80-lead (Figure 27 on page 29), 100-lead (Figure 28 on page 30), and 144-lead (Figure 29 on page 31) plastic QFPs.

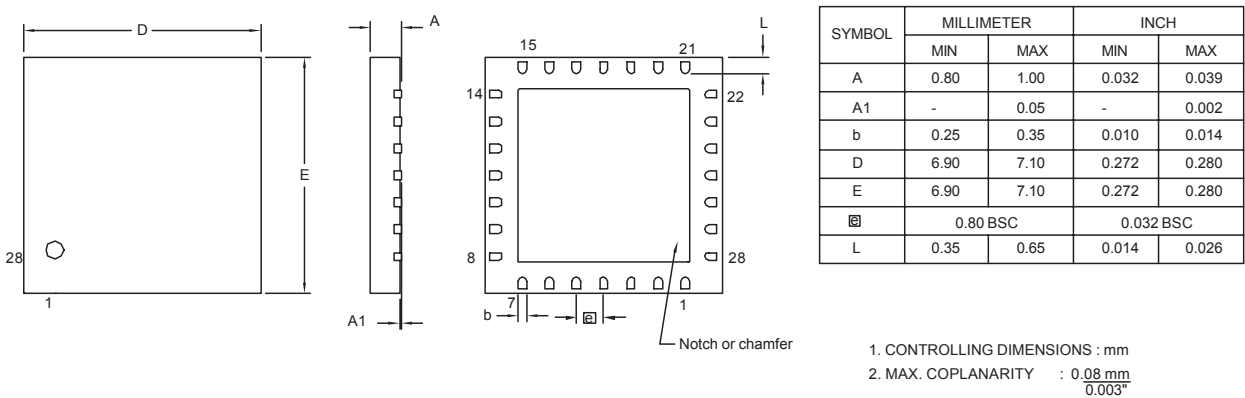


Figure 25. 28 Plastic Quad Flat Package (No Lead)

► **Note:** ZiLOG does not recommend this package for new designs. ZiLOG recommends using the 44-lead LQFP (Figure 20 on page 22) or 48-lead SSOP (Figure 36 on page 38) instead. The 44-lead LQFP is a drop-in replacement for the 44-lead QFP; no board layout changes are needed for this switch. See preferred package migration on page 54.

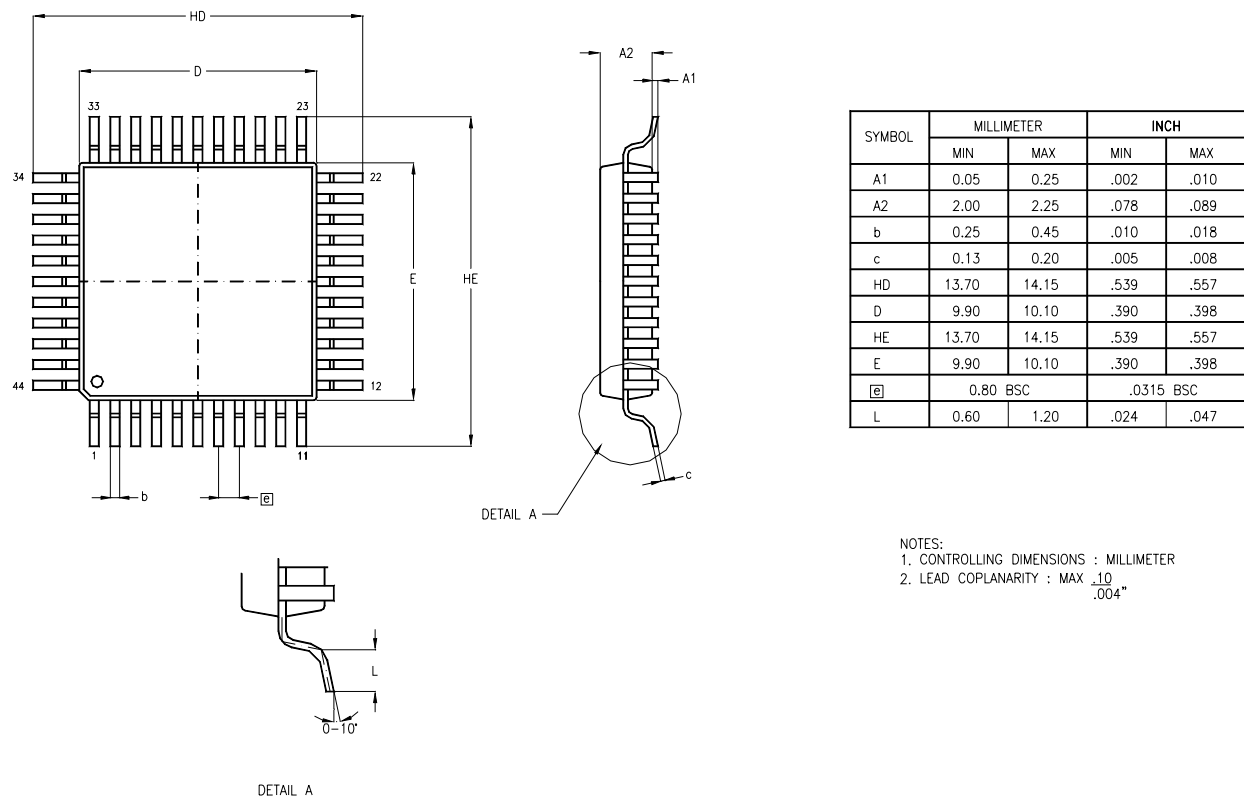
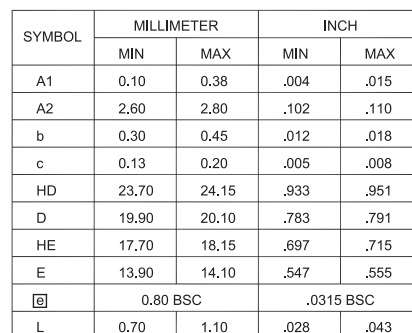


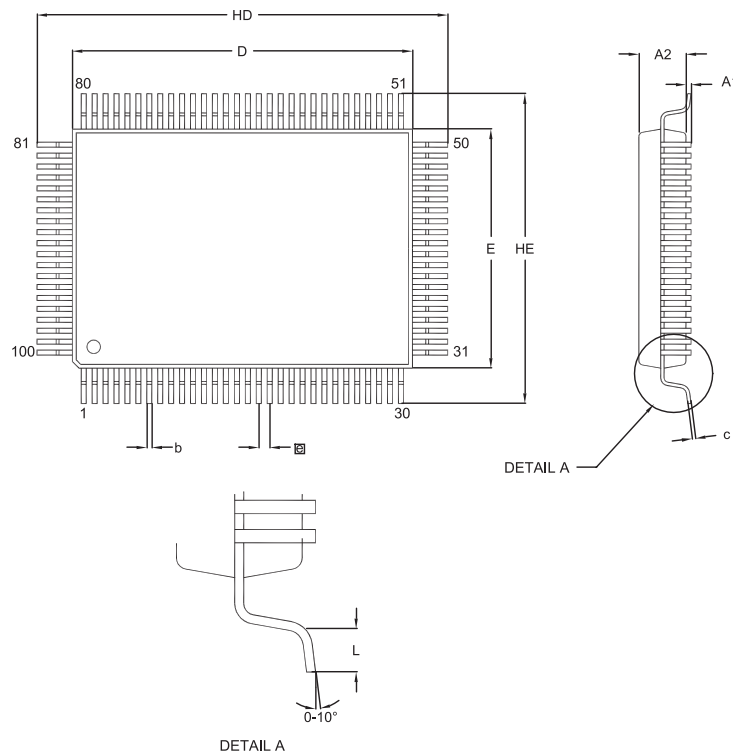
Figure 26. 44-Lead Plastic Quad Flat Package



NOTES:
1. CONTROLLING DIMENSIONS : MILLIMETER
2. LEAD COPLANARITY : MAX $\frac{.10}{.004}$ "

Figure 27. 80-Lead Plastic Quad Flat Package

► **Note:** ZiLOG does not recommend this package for new designs. See preferred package migration on page 55.



SYMBOL	MILLIMETER		INCH	
	MIN	MAX	MIN	MAX
A1	0.10	0.38	.004	.015 Δ
A2	2.60	2.90	.102	.114
b	0.25	0.40	.010	.016
c	0.13	0.20	.005	.008
HD	23.70	24.15	.933	.951
D	19.90	20.10	.783	.791
HE	17.70	18.15	.697	.715
E	13.90	14.10	.547	.555
\square	0.65 BSC		.0256 BSC	
L	0.70	1.10	.028	.043

NOTES:
1. CONTROLLING DIMENSIONS : MILLIMETER
2. MAX COPLANARITY : $\frac{.10}{.004}$

Figure 28. 100-Lead Plastic Quad Flat Package

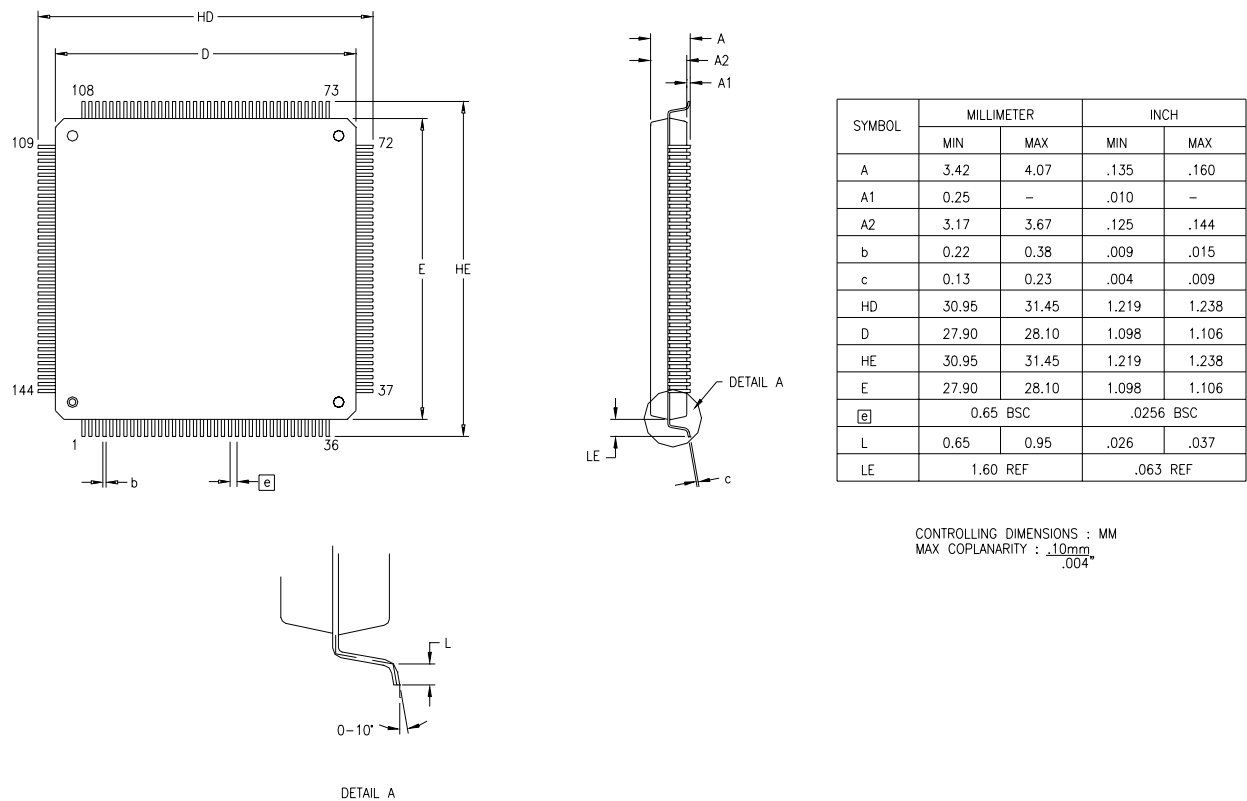
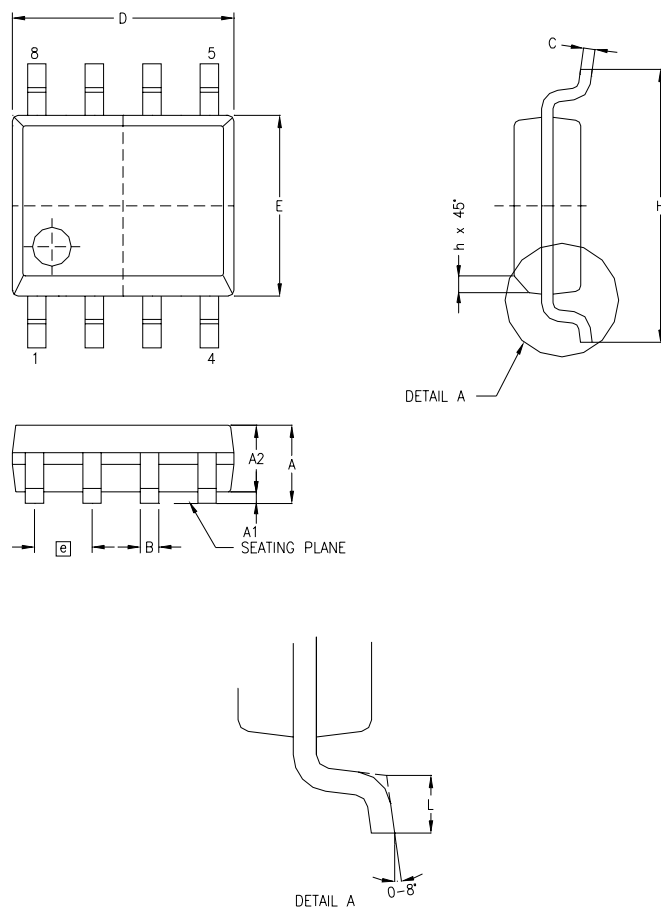


Figure 29. 144-Lead Plastic Quad Flat Package

Small Outline Integrated Circuits (SOICs)

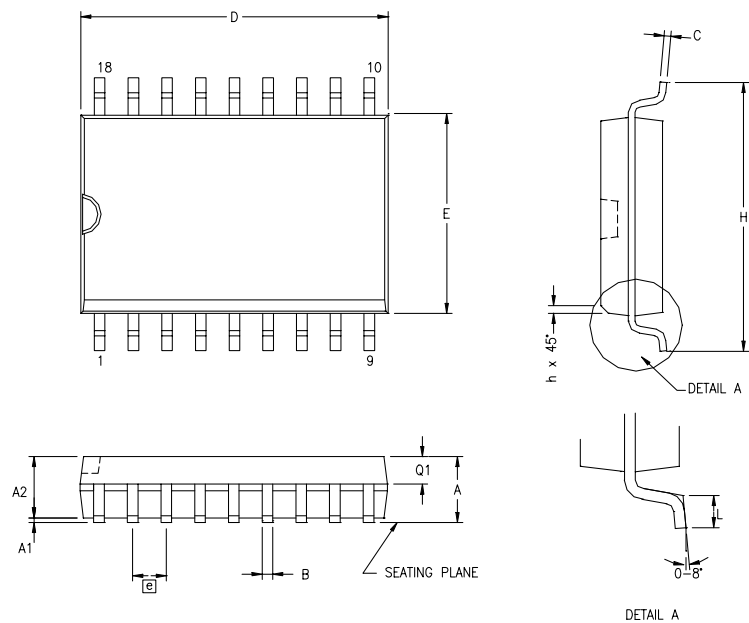
ZiLOG offers 8-lead (Figure 30), 18-lead (Figure 31 on page 33), 20-lead (Figure 32 on page 34), and 28-lead (Figure 33 on page 35) SOICs.



SYMBOL	MILLIMETER		INCH	
	MIN	MAX	MIN	MAX
A	1.55	1.73	0.061	0.068
A1	0.10	0.25	0.004	0.010
A2	1.40	1.55	0.055	0.061
B	0.36	0.48	0.014	0.019
C	0.18	0.25	0.007	0.010
D	4.80	4.98	0.189	0.196
E	3.81	3.99	0.150	0.157
[e]	1.27 BSC		.050 BSC	
H	5.84	6.15	0.230	0.242
h	0.25	0.40	0.010	0.016
L	0.46	0.81	0.018	0.032

CONTROLLING DIMENSIONS : MM
LEADS ARE COPLANAR WITHIN .004 INCH.

Figure 30. 8-Lead Small Outline Integrated Circuit



SYMBOL	MILLIMETER		INCH	
	MIN	MAX	MIN	MAX
A	2.40	2.65	0.094	0.104
A1	0.10	0.30	0.004	0.012
A2	2.24	2.44	0.088	0.096
B	0.36	0.46	0.014	0.018
C	0.23	0.30	0.009	0.012
D	11.40	11.75	0.449	0.463
E	7.40	7.60	0.291	0.299
Ⓜ	1.27 BSC		0.050 BSC	
H	10.00	10.65	0.394	0.419
h	0.30	0.50	0.012	0.020
L	0.60	1.00	0.024	0.039
Q1	0.97	1.07	0.038	0.042

CONTROLLING DIMENSIONS : MM
LEADS ARE COPLANAR WITHIN .004 INCH.

Figure 31. 18-Lead Small Outline Integrated Circuit

► **Note:** For a smaller footprint, ZiLOG recommends using the 20-lead SSOP package (Figure 34 on page 36) instead.

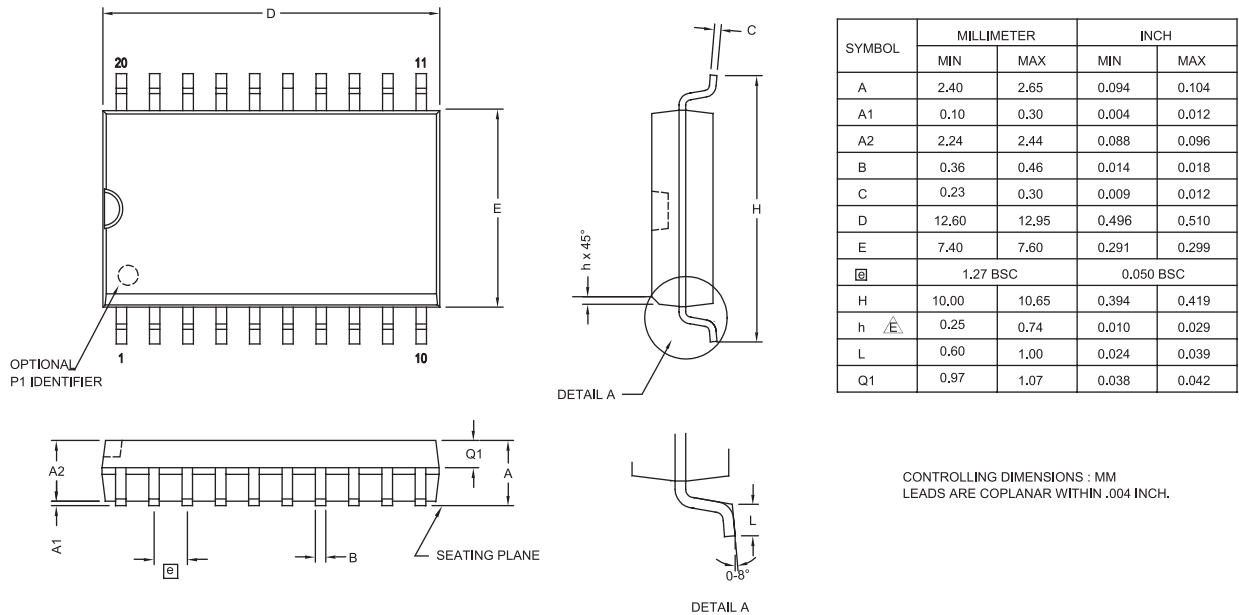


Figure 32. 20-Lead Small Outline Integrated Circuit

► **Note:** For a smaller footprint, ZiLOG recommends using the 28-lead SSOP package (Figure 35 on page 37) instead.

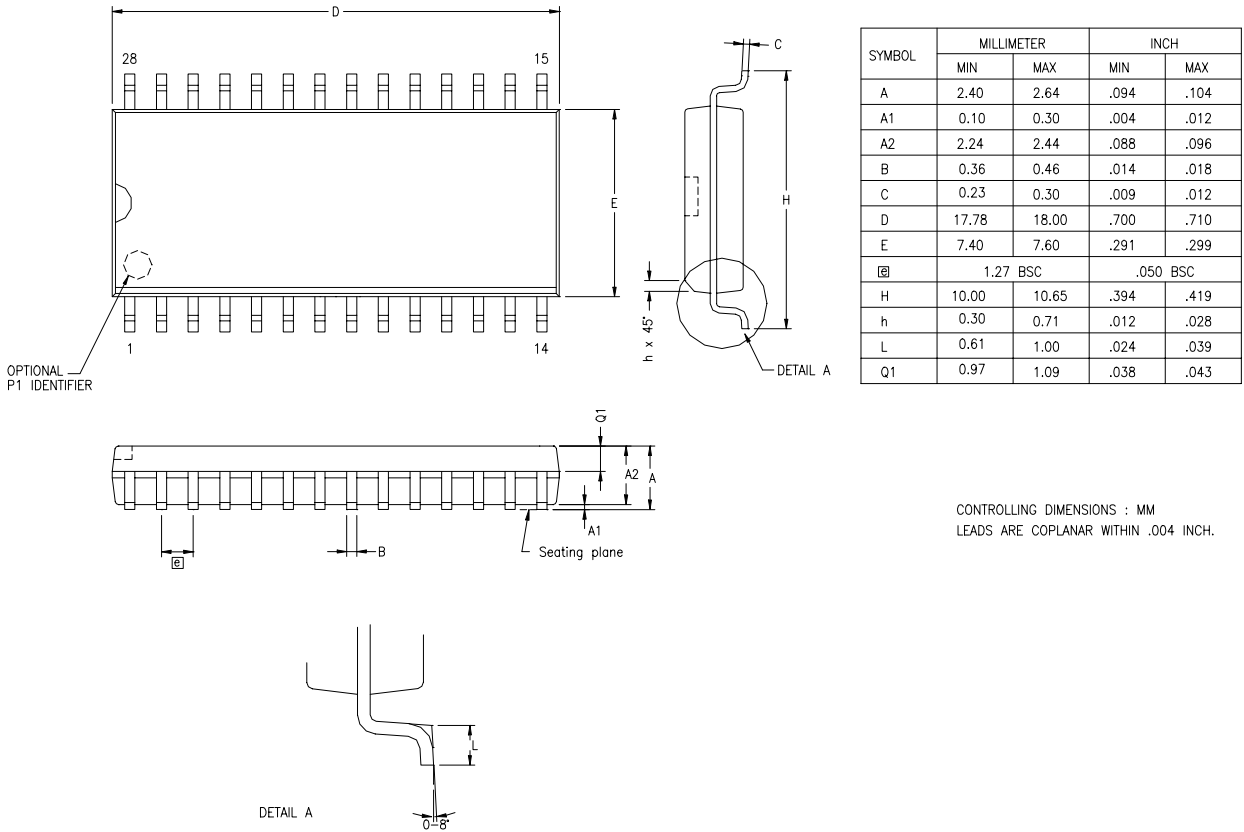


Figure 33. 28-Lead Small Outline Integrated Circuit

Shrink Small Outline Packages (SSOPs)

ZiLOG offers 20-lead (Figure 34), 28-lead (Figure 35 on page 37), and 48-lead (Figure 36 on page 38) SSOPs.

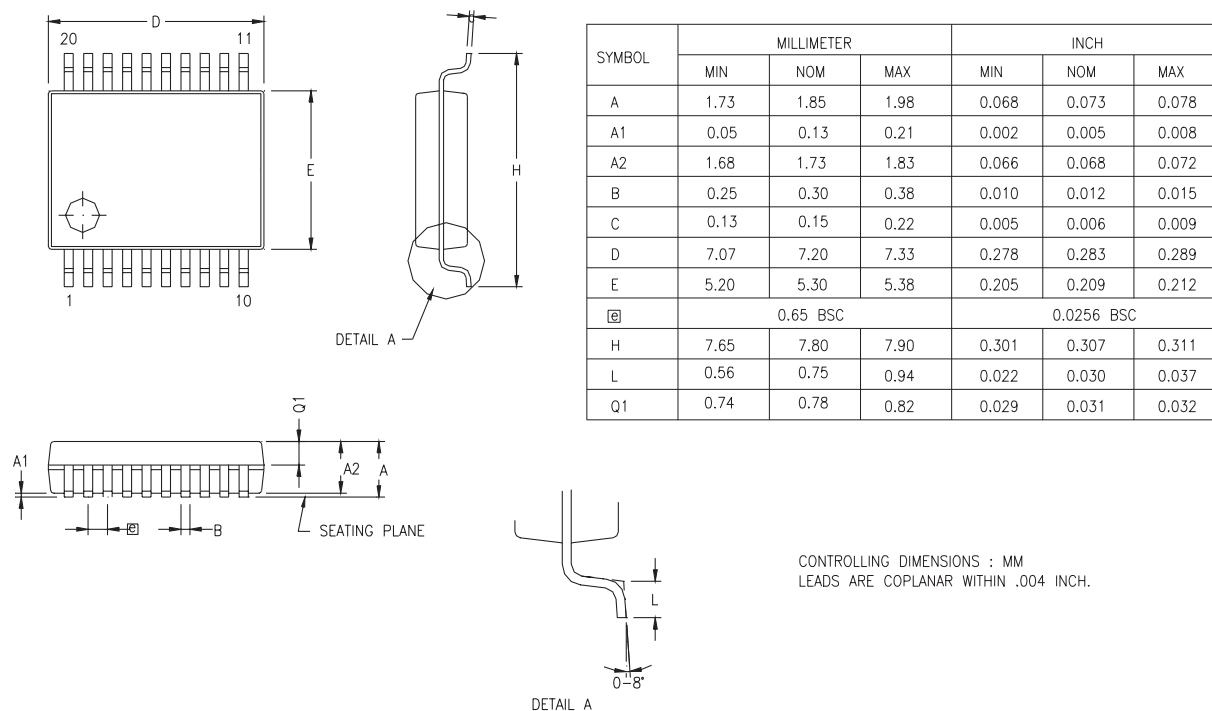


Figure 34. 20-Lead Shrink Small Outline Package

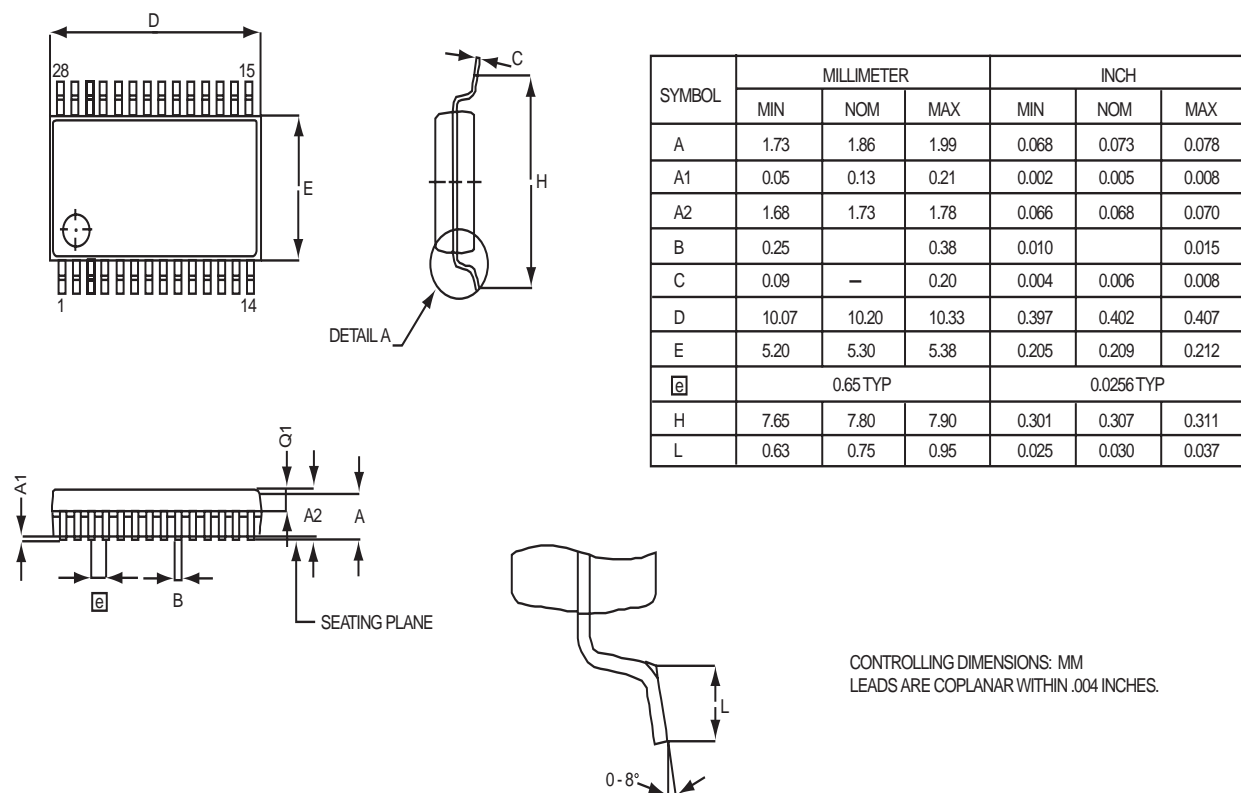
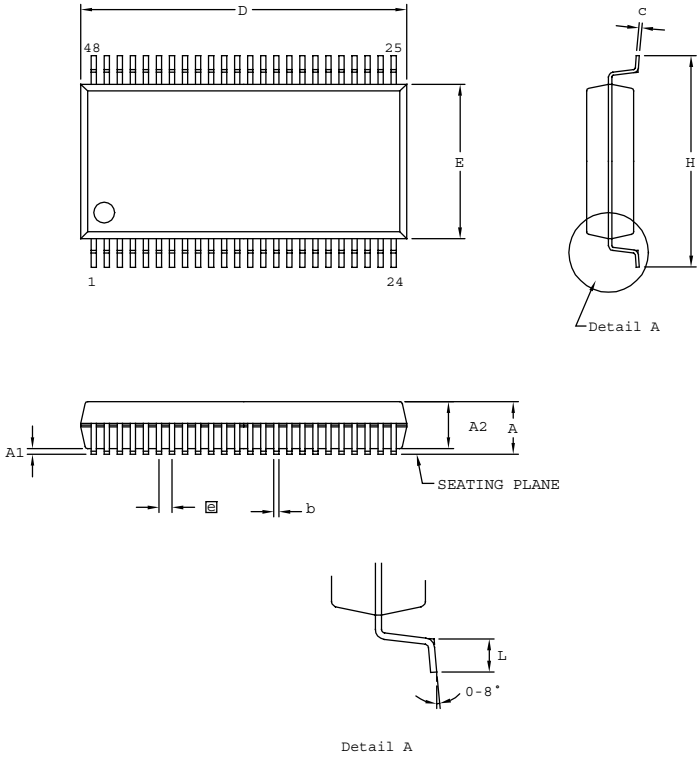


Figure 35. 28-Lead Shrink Small Outline Package



SYMBOL	MILLIMETER		INCH	
	MIN	MAX	MIN	MAX
A	2.41	2.79	0.095	0.110
A1	0.23	0.38	0.009	0.015
A2	2.18	2.39	0.086	0.094
b	0.20	0.34	0.008	0.0135
c	0.13	0.25	0.005	0.010
D	15.75	16.00	0.620	0.630
E	7.39	7.59	0.291	0.299
ⓐ	0.635 BSC		0.025 BSC	
H	10.16	10.41	0.400	0.410
L	0.51	1.016	0.020	0.040

CONTROLLING DIMENSIONS : MM
LEADS ARE COPLANAR WITHIN .004 INCH

Figure 36. 48-Lead Shrink Small Outline Package

Low-Profile Ball Grid Array

ZiLOG offers a 144-lead low-profile ball grid array package (Figure 37).

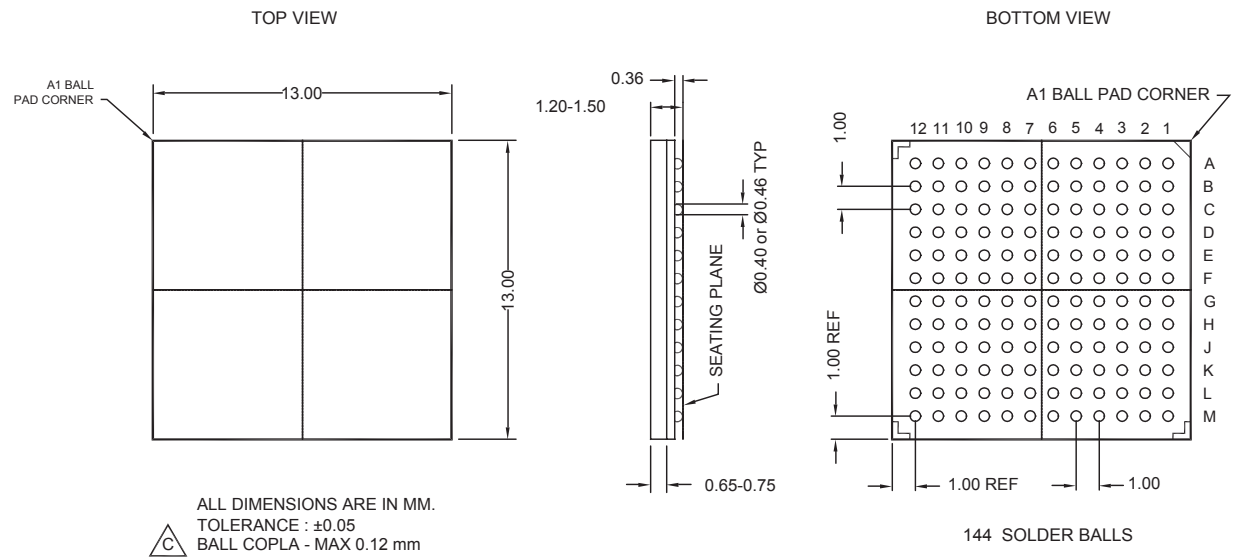


Figure 37. 144-Lead Low-Profile Ball Grid Array



Transceiver Packages

ZiLOG offers the ZHX1000 (Figure 38 on page 41), ZHX1010 (Figure 39 on page 42), ZHX1201 (Figure 40 on page 43), ZHX1203 (Figure 41 on page 44), ZHX1403 (Figure 42 on page 45), ZHX1810 (Figure 43 on page 46, Figure 44 on page 47, and Figure 45 on page 48), ZHX1820 (Figure 46 on page 49), ZHX2010 (Figure 47 on page 50), and ZHX3403 (Figure 48 on page 51) transceiver packages.

Quantity: 1,000 pieces per reel.

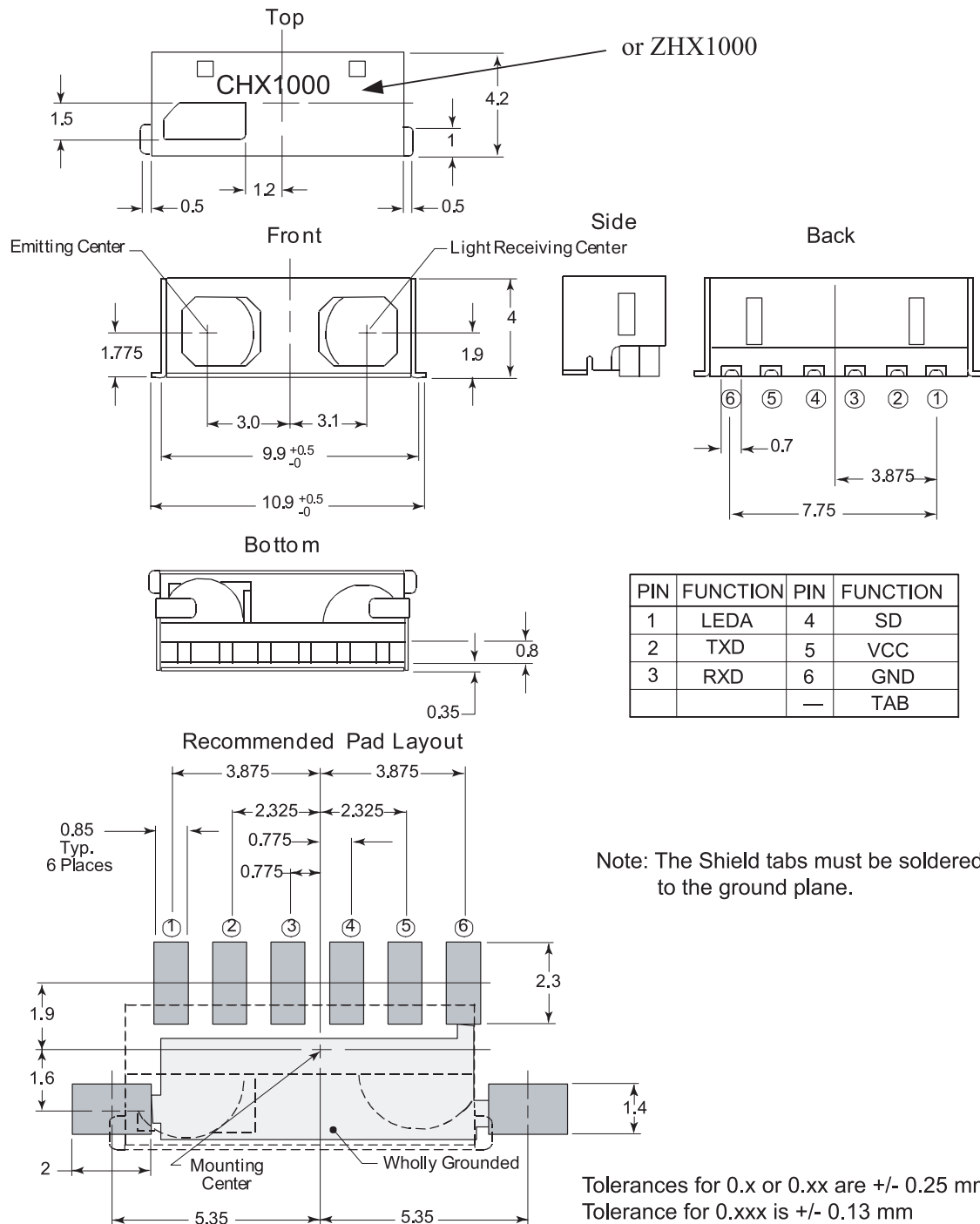


Figure 38. ZHX1000 Transceiver

Quantity: 2,000 pieces per reel. For details, see MAC8000.

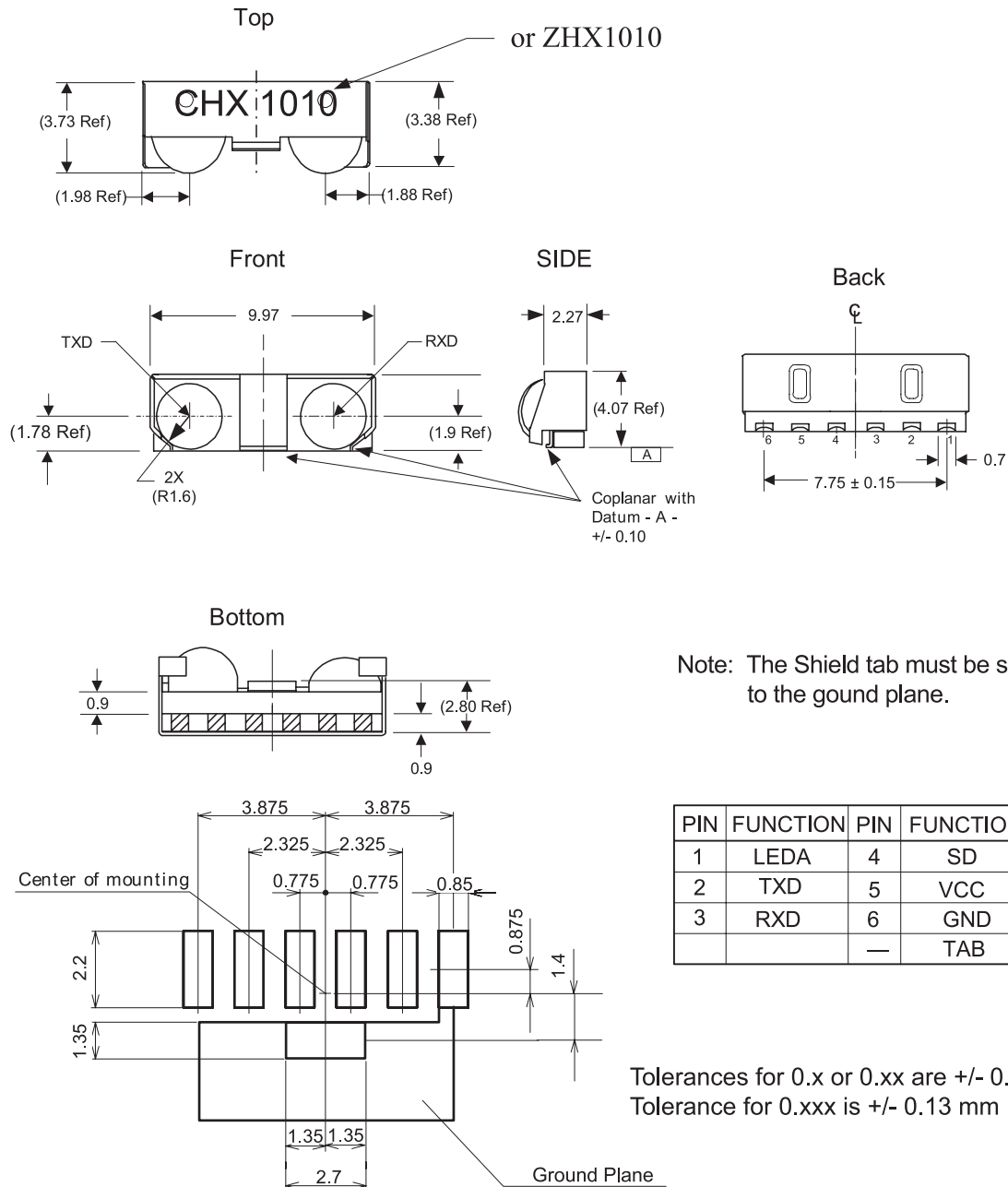


Figure 39. ZHX1010 Transceiver

Quantity: 3,500 units per reel. For details, see MAC8000.

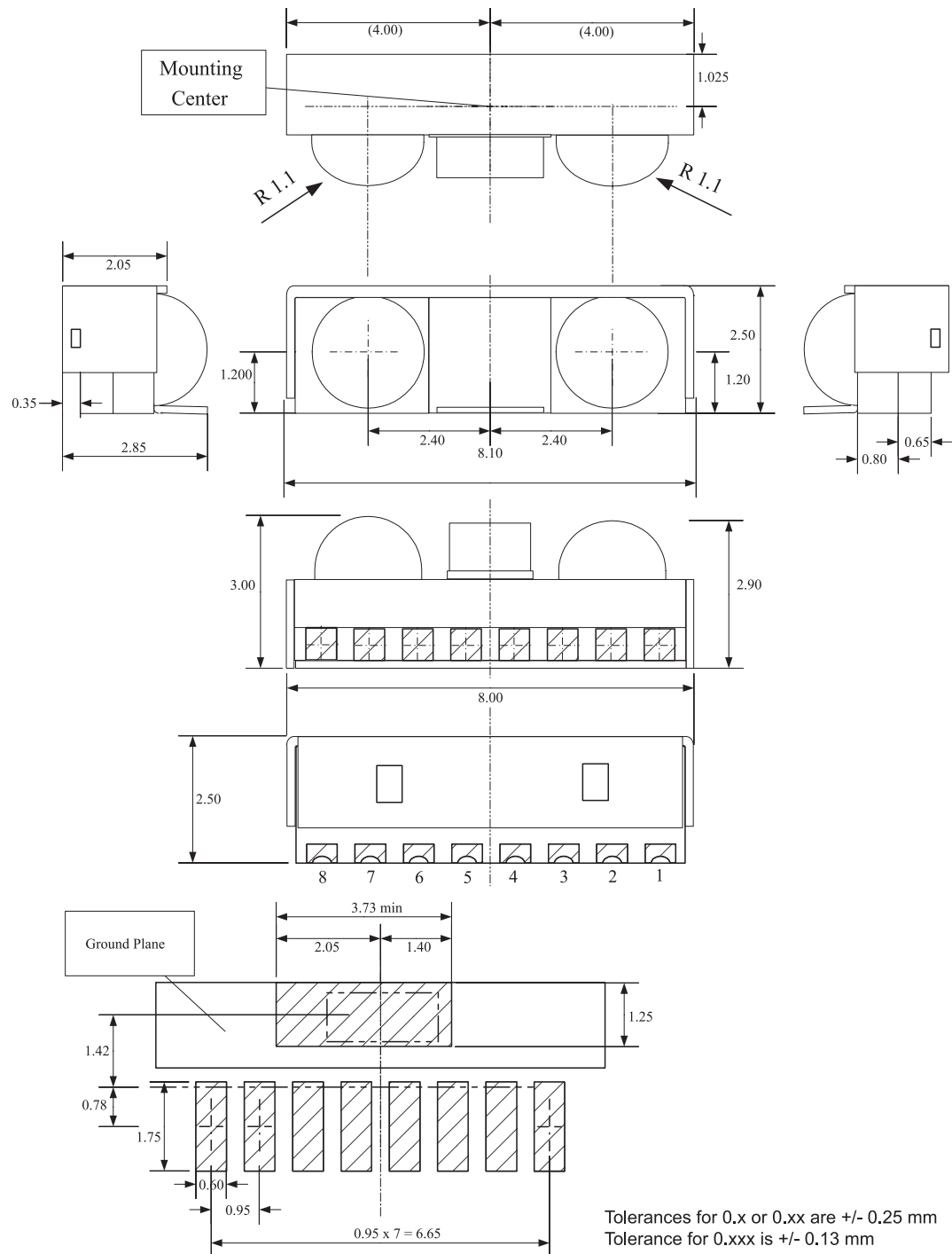
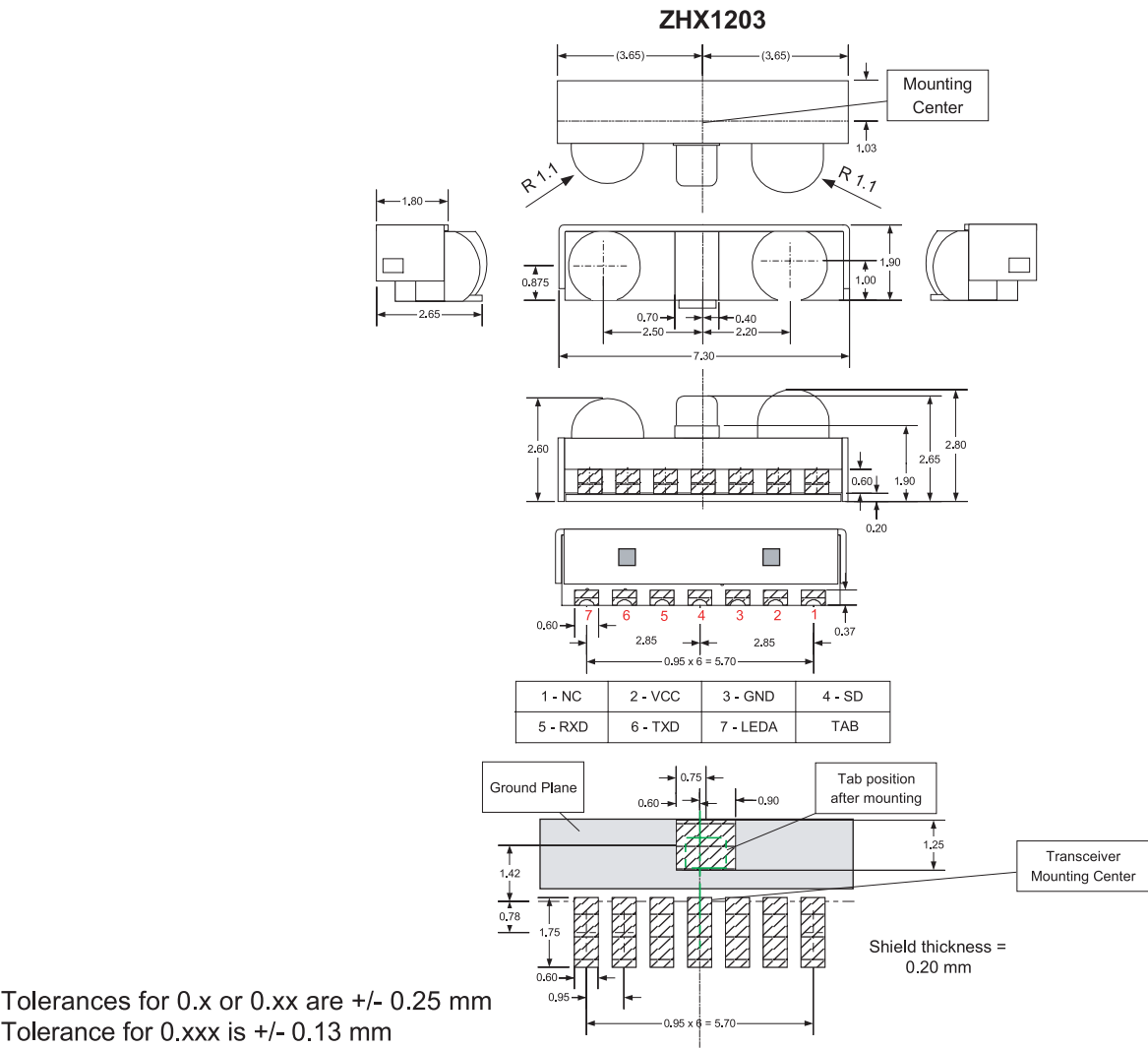


Figure 40. ZHX1201 Transceiver

Quantity: 3,500 pieces per reel



Tolerances for 0.x or 0.xx are +/- 0.25 mm
Tolerance for 0.xxx is +/- 0.13 mm

Figure 41. ZHX1203 Transceiver

Quantity: 3,500 pieces per reel

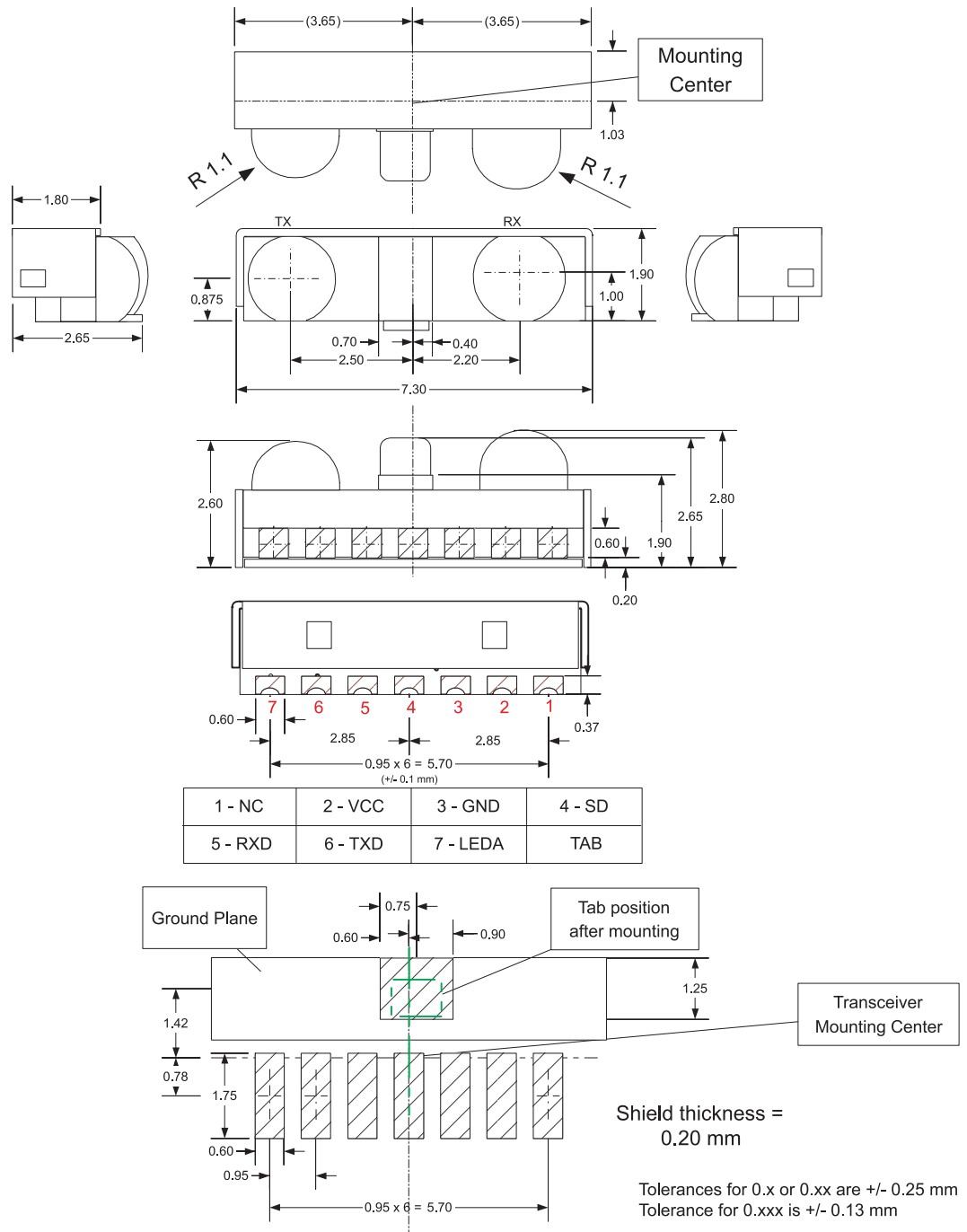


Figure 42. ZHX1403 Transceiver

In order to achieve the lowest possible costs and lead times, ZiLOG maintains multiple assembly facilities. The mechanical drawings for the ZHX1810 transceivers are shown in Figure 43, Figure 44, and Figure 45. These devices, which show minor mechanical differences, are functionally equivalent in every way and meet all ZiLOG and IrDA standards and specifications. Although reels are never mixed, ZiLOG reserves the right to ship from either facility in order to meet delivery requirements. When designing an IrDA subsystem, the user is advised to allow mechanical clearance for all versions of the IrDA transceiver.

Quantity: 2,000 pieces per reel

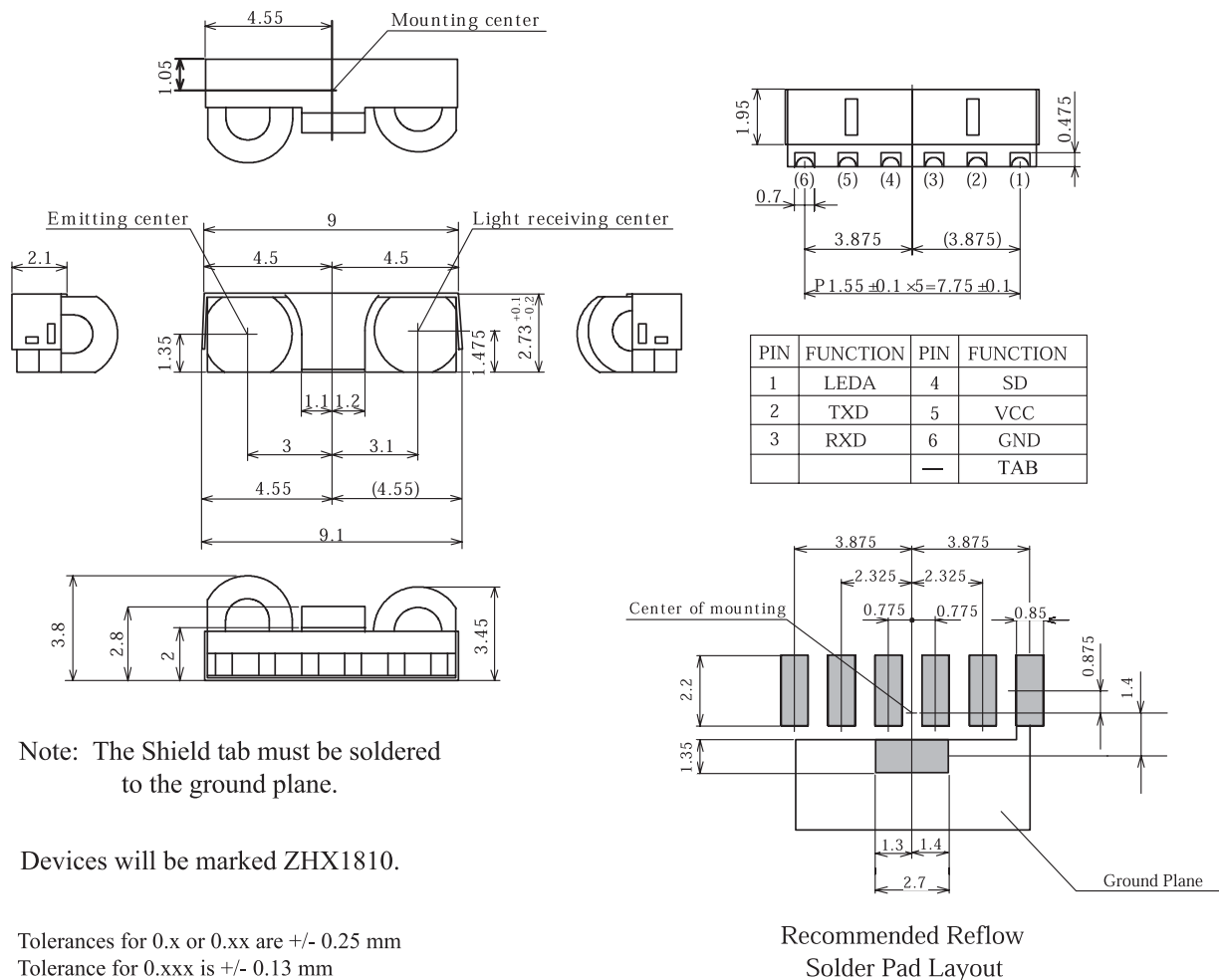
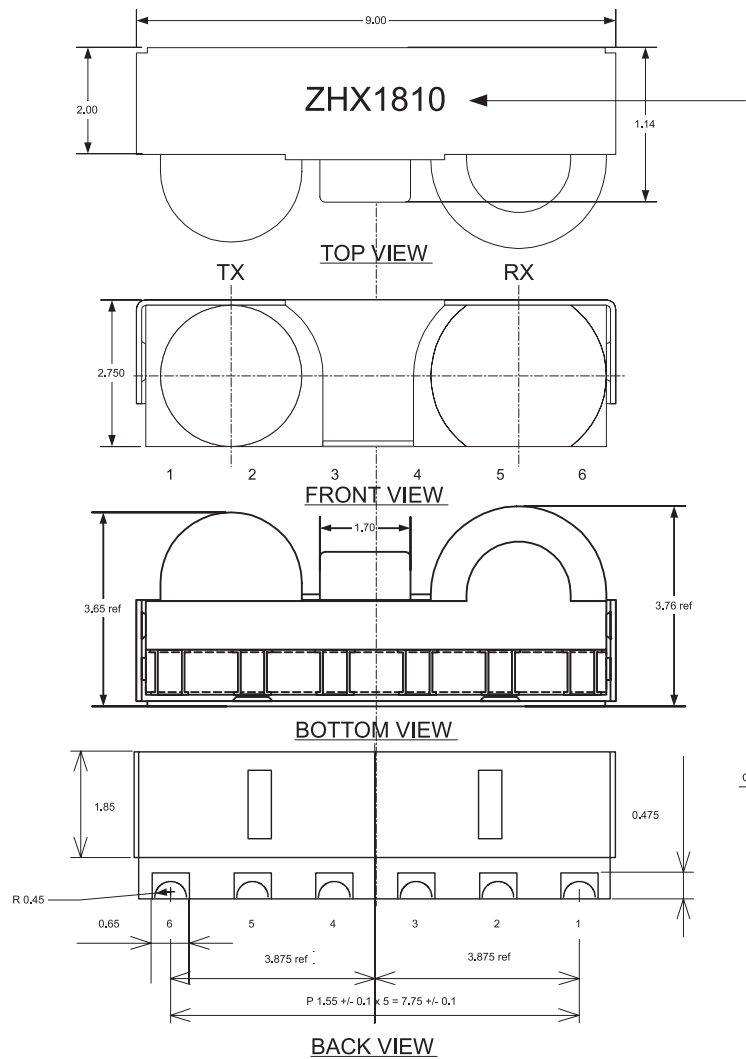


Figure 43. ZHX1810 Transceiver

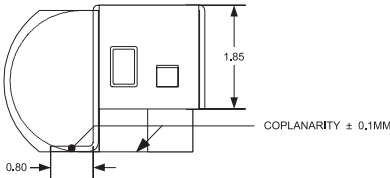
Quantity: 2,000 pieces per reel



Notes:

Marking can be either embossed
or using permanent black ink -
Font - Arial.

SIDE VIEW



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

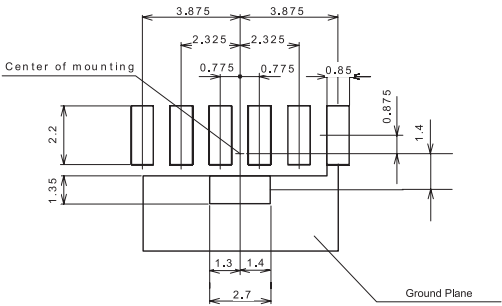


Figure 44. ZHX1810 Transceiver

Quantity: 2,000 pieces per reel

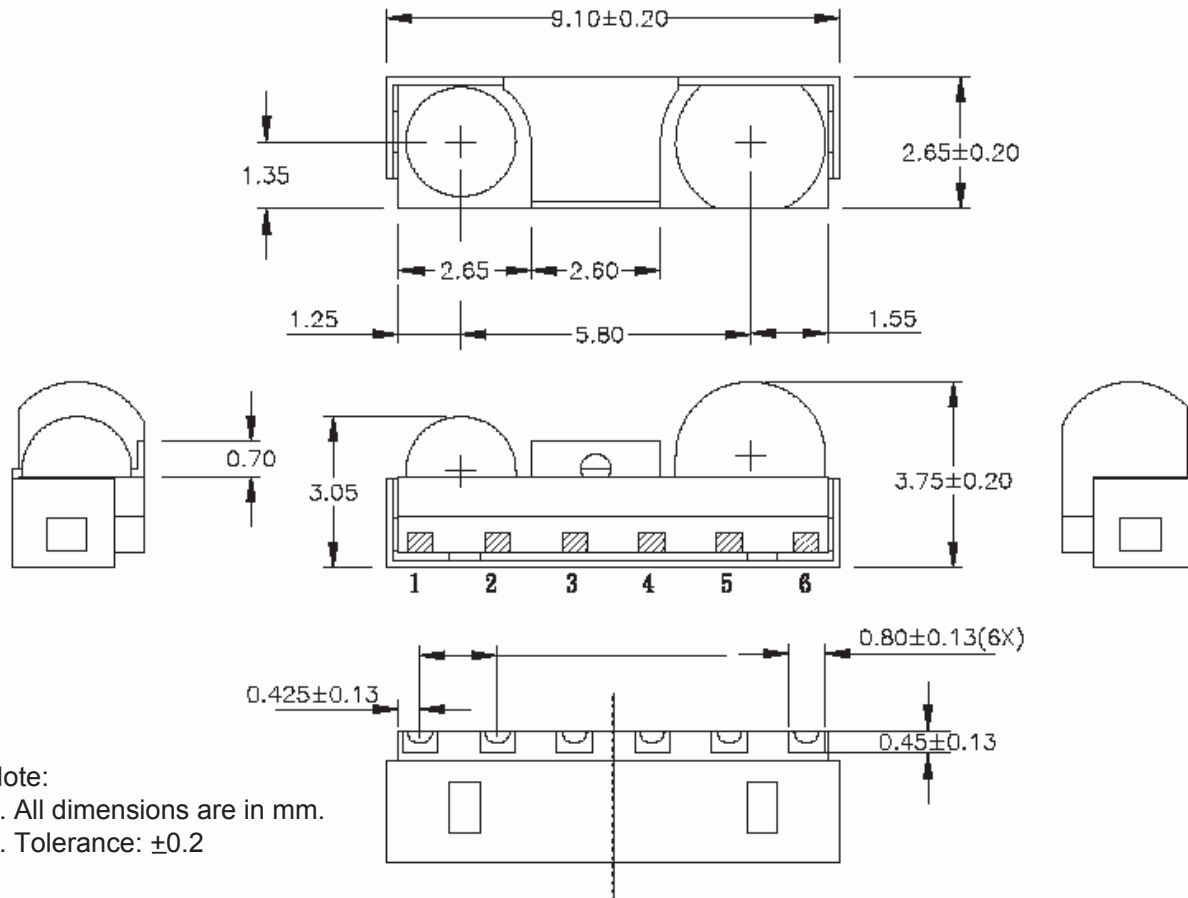


Figure 45. ZHX1810 Transceiver

Quantity: 2,000 units per reel. For details, see MAC8000.

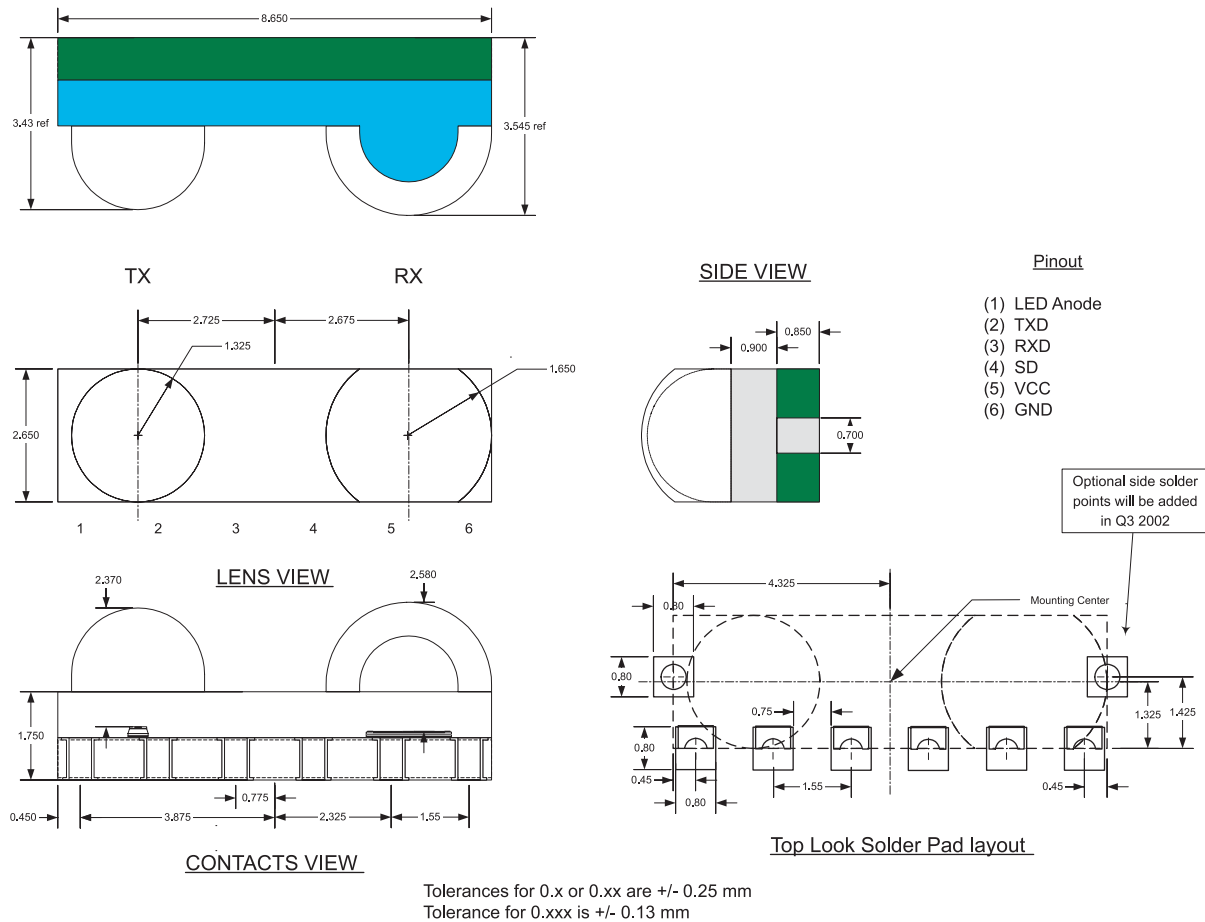


Figure 46. ZHX1820 Transceiver

Quantity: 2,000 pieces per reel

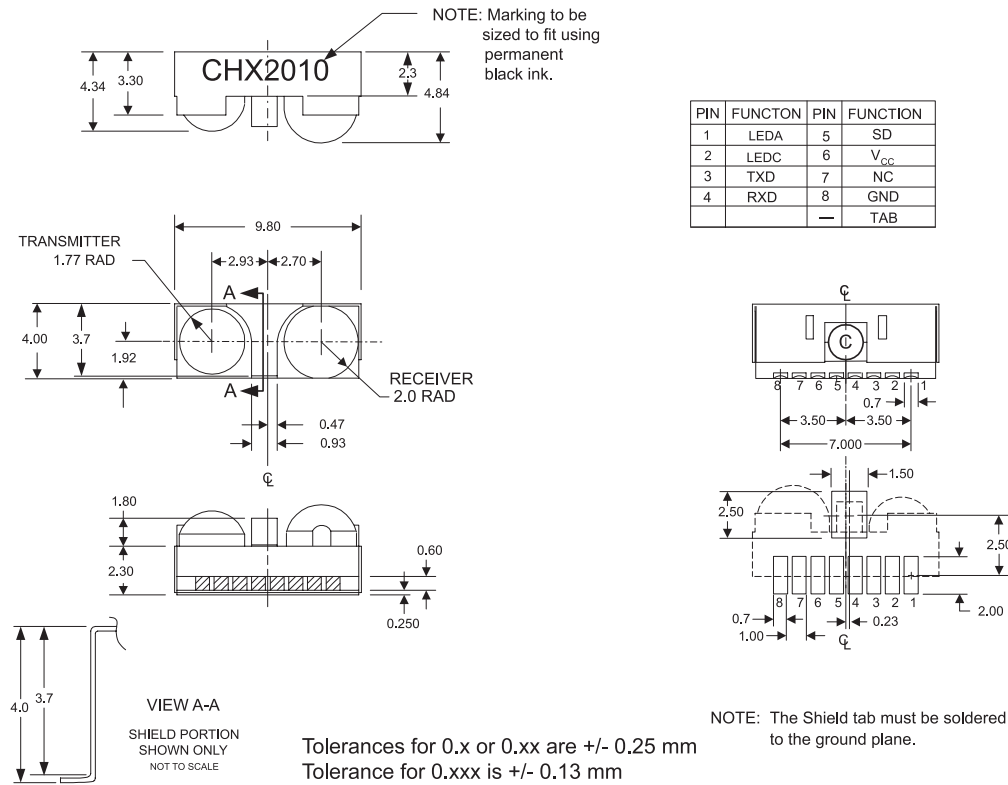


Figure 47. ZHX2010 Transceiver

Preferred Package Migration

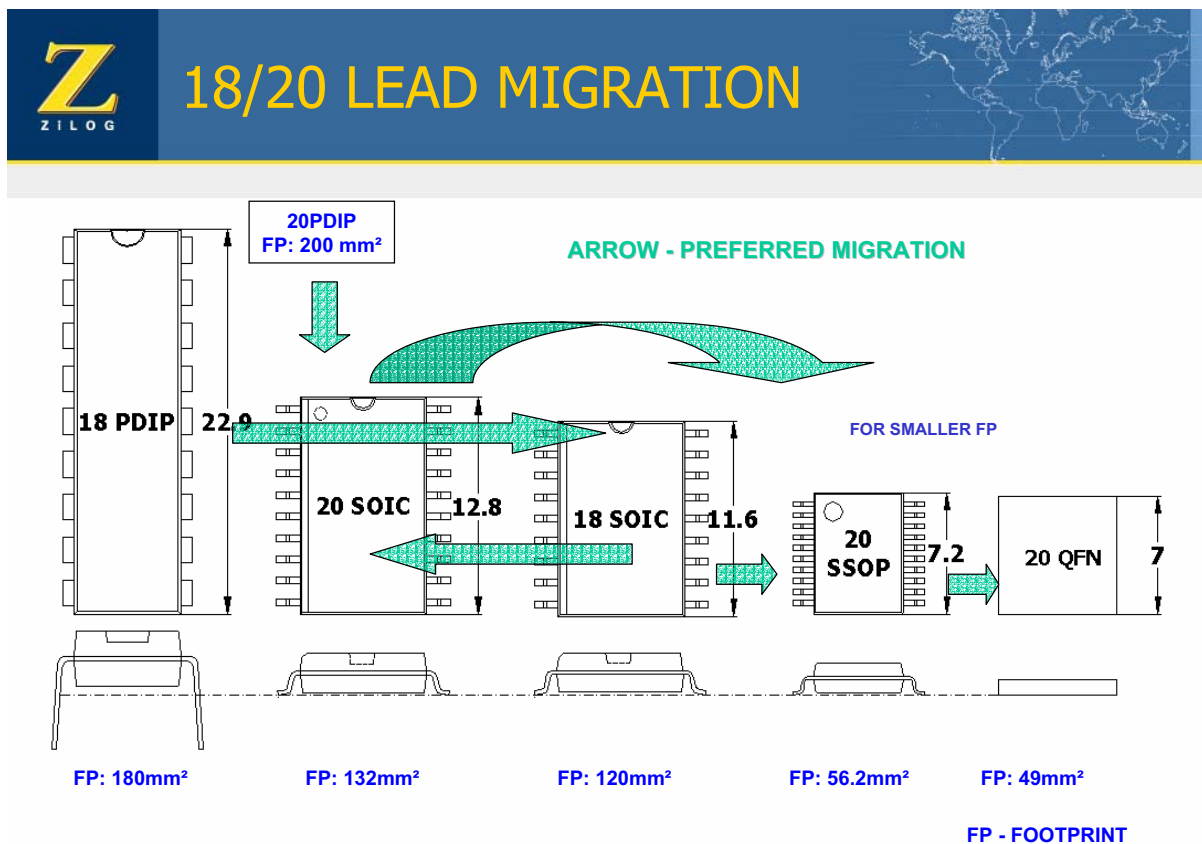


Figure 49. 18/20-Lead Migration

Z Z I L O G 28 LEAD MIGRATION

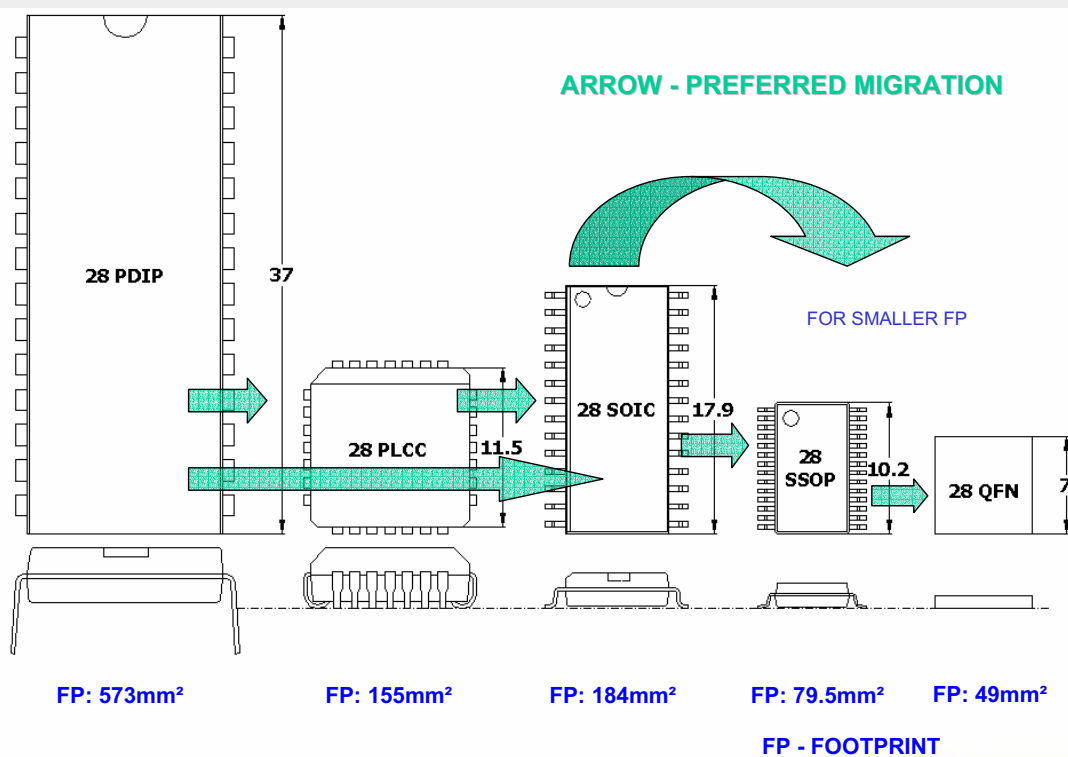


Figure 50. 28-Lead Migration

40/44/48 LEAD MIGRATION

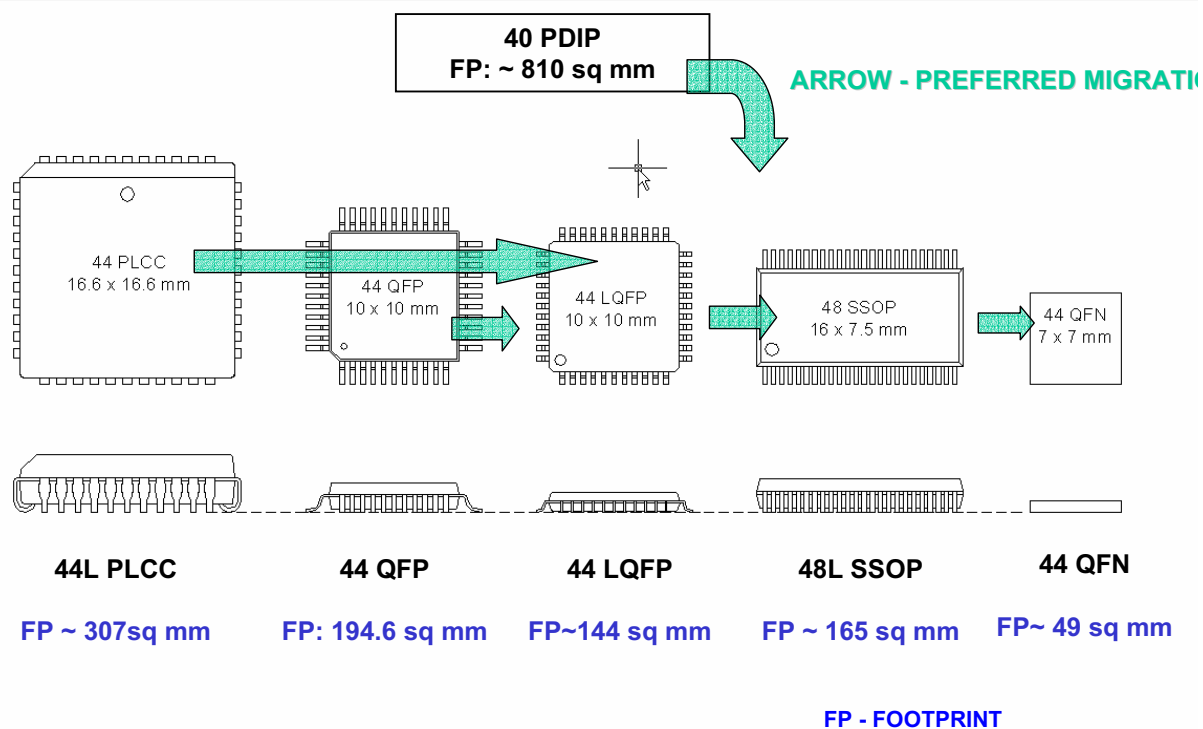


Figure 51. 40/44/48-Lead Migration

Z Z I L O G 100/144 LEAD MIGRATION

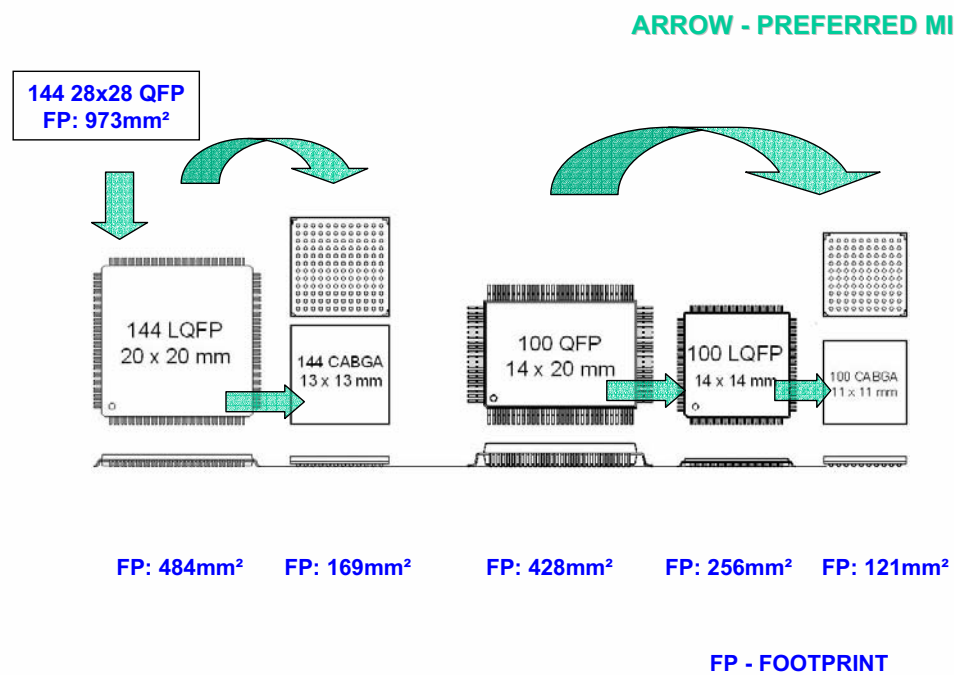


Figure 52. 100/144-Lead Migration

Change Log

The following change notices have been incorporated into this document:

Date	Control Number	Drawing Number
8/22/00	51015	MKT71C1177-00
8/23/00	19026	MKT71C0002-00
8/23/00	16970	MKT71C1172-00
8/24/00	51671	MKT71C1188-00
8/24/00	51989	MKT71C1190-00
8/24/00	51672	MKT71C1189-00
10/25/00	52592	MKT71C1187-00
10/25/00	52667	MKT71C1153-00
12/5/00	52855	MKT71C1191-00
1/26/01	52951	MKT71C1187-00
1/26/01	52958	MKT71C1159-00 MKT71C1167-00 MKT71C1173-00 MKT71C1176-00 MKT71C1182-00 MKT71C1186-00
5/14/02	N/A	MKT71C0101-00 Rev. OBS MKT71C0110-00 Rev. OBS MKT71C0115-00 Rev. OBS MKT71C0116-00 Rev. OBS MKT71C0119-00 Rev. OBS MKT71C0123-00 Rev. OBS MKT71C0124-00 Rev. OBS MKT71C0130-00 Rev. OBS MKT71C0133-00 Rev. OBS MKT71C0181-00 Rev. OBS MKT71C0183-00 Rev. OBS MKT71C0184-00 Rev. OBS MKT71C0185-00 Rev. OBS MKT71C0196-00 Rev. OBS MKT71C0199-00 Rev. OBS MKT71C0803-00 Rev. OBS MKT71C0804-00 Rev. OBS MKT71C0805-00 Rev. OBS MKT71C0806-00 Rev. OBS MKT71C0807-00 Rev. OBS



Date	Control Number	Drawing Number
5/15/02	N/A	MKT71C1001-00 Rev. M MKT71C1153-00 Rev. N MKT71C1164-00 Rev. E MKT71C1192-00 Rev. A MKT71C1193-00 Rev. A
5/16/02	N/A	MKT71C0006-00 Rev. H MKT71C1151-00 Rev. L
8/23/02	N/A	MKT71C0719-00 Rev. E
6/9/03	N/A	MKT71C1189-00 Rev. OBS MKT71C1193-00 Rev. B
9/8/03	N/A	MKT71C0004-00 Rev. M
11/12/03	N/A	MKT71C1192-00 Rev. OBS MKT71C1187-00 Rev. OBS MKT71C1193-00 Rev. C
6/9/04	20712	N/A
6/9/04	20721	MKT71C1160-00 Rev. OBS MKT71C1169-00 Rev. OBS MKT71C1174-00 Rev. OBS MKT71C1175-00 Rev. OBS MKT71C1183-00 Rev. OBS MKT71C1186-00 Rev. OBS MKT71C1188-00 Rev. OBS MKT71C1191-00 Rev. OBS
8/16/04	20720	MKT71C1194-00 Rev. A



Customer Feedback Form

If you note any inaccuracies while reading this product specification, please copy and complete this form, then mail or fax it to ZiLOG (see *Return Information*, below). We also welcome your suggestions!

Customer Information

Name	Country
Company	Phone
Address	Fax
City/State/Zip	email

Return Information

ZiLOG
System Test/Customer Support
532 Race Street
San Jose, CA 95126-3432
Fax: (408) 558-8300

Problem Description or Suggestion

Provide a complete description of the problem or your suggestion. If you are reporting a specific problem, include all steps leading up to the occurrence of the problem. Attach additional pages as necessary.
